



E-BOOK SERIES 03/2021

THE WORLD POLICY FORUM

THE GLOBAL SOLUTIONS DIALOGUE / On Urbanization and  
Infrastructure / sustainable responses to the COVID-19 pandemic

# INTERSECTING

Pierre ACHARD / Aziza AKHMOUCH / Dorothée ALLAIN-DUPRE  
Dirk ASSMANN / Harun BADAKHSI / Oriol BELLOT / Gautam  
BHAN / Rakan BIN DOHAISH / Luca BIZZARRI / Daniel BRIDGE  
Nicolas J.A. BUCHOUD / Milindo CHAKRABARTI / Caroline CHAL  
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GALAL / Gunnar HARTMANN / Gérard HÉGRON / Nella Sri  
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SONOBE / Nicolaos THEODOSSIOU / Albert TING / Amber TING  
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NEW DIALOGUES PUBLISHER

Image Source: Francesca Palumbo, intensive care nurse, after a twelve hour shift without a break at the San Salvatore Hospital in Pesaro, Italy. March 19, 2020. Image by Alberto Giuliani. <https://scotiabankcontactphoto.com/alberto-giuliani-san-salvatore/>

“At the end of my shift I run away to lock myself in the house, hoping to leave everything outside the door. Instead, the suffering faces of my patients are there to stare at me, the voices of their relatives resonate in my head. I knew I had chosen a job that throws pain at you, but I was not prepared for this, for an illness that devastates the heart more than the face. I think back at the hands of the patients who, while I intubate them, squeeze mine. They seek courage in order to face the fear. Without them knowing just how much courage I find in their gesture. I grit my teeth; I look at my colleagues. And I tell myself that everything will be fine, because I am strong.”

– Francesca Palumbo, intensive care nurse at the San Salvatore Hospital in Pesaro, Italy



# INTERSECTING

the Global Solutions Initiative (GSI) in cooperation with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Nicolas J.A. BUCHOUD, Gunnar HARTMANN, Holger KUHLE (eds.)



Which of the Sustainable Development Goals (SDGs) have gained importance since the beginning of the pandemic?

Image Source: Ferry crossing Butterworth and Georgetown, Penang, Malaysia. Image by Nicolas J.A. Buchoud, all rights reserved ©.

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2 \_ intersecting informality, prosperity, communities

3 \_ intersecting distribution, inclusion, infrastructure

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Nicolas J.A. BUCHOUD, Global Solutions Fellow, President of the Grand Paris Alliance for Sustainable Investments, Paris, France

“To build up and support a human-centred infrastructure and global common goods, which focus on community building and solidarity in and between societies, is critical. To this end we need strong coalitions between governments and civil society.”

– Dennis J. SNOWER, Global Solutions Initiative (GSI), Berlin, Germany



Image Source: Construction of the suspension bridge between Vladivostok and Russky Island, ahead of the 2012 APEC Summit in Russia. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Dennis J. SNOWER  
President, Global Solutions  
Initiative (GSI)  
Berlin, Germany

## Foreword

Dear friends and partners in global problem solving,

2020 has proven the urgent need for a holistic approach for addressing global challenges. International cooperation and multilateralism are the precondition for problem solving. Therefore, I am grateful to address you in this book directly. I wish especially to thank Nicolas Buchoud for his outstanding engagement in the process and the GIZ for making this book possible.

The decoupling of economic and social progress in and between societies, the decoupling of technological and environmental progress and the decoupling of societal progress, wealth and health are main factors fostering global crises such as the current pandemic while placing great strain on efforts to solve challenges collectively. As long as societies are divided and the opportunities between social groups are unequally distributed this problem will remain.

At the same time the intensive scientific exchange to tackle COVID-19 and the rapid development of a vaccine proves that we have great power and opportunity if we work in solidarity. One learning of the current crises is certainly that we need to have a new understanding of wealth. Our societies and economies will only become resilient and sustainable if we integrate environmental and social aspects in our thinking, in our measurement and in our action. We must overcome the growth-oriented thinking which measures wealth solely in terms of GDP as well as the business focus on shareholder value. With the recoupling dashboard, unveiled in 2020, the GSI has proposed an alternative which reimagines our measurement of prosperity and thus our picture of social wellbeing to include crucial environmental and social factors. We welcome you to join us as we develop this new tool together.

To build from these lessons into a more sustainable and resilient future we need to agree on a future multilateralism which overcomes silo-mentalities, opens itself for a multi-stakeholder approach and guarantees a diversity of stakeholders in the decision-making process, and accepting the global power-shifts which have taken place in the last decades. A holistic approach for the future can't be a western approach.

The trend towards sustainability and resilient societies is not only deeply integrated in international governmental thinking i.e. the G20, but is also fostered more and more by private investors and thought leaders in business, who are shifting towards a long-lasting perspective instead of short-term objectives. To build up and support a human-centred infrastructure and global common goods which focus on community building and solidarity in and between societies is critical and to this end we need strong coalitions between governments and civil society.

It is encouraging that the current Italian G20-Presidency and its related engagement groups (in particular the T20) and the upcoming Indonesian and Indian Presidency share this perspective and encourage the civil society to engage in the G20-process. So, let's strengthen our common efforts!

I am both delighted about and grateful for this project, which is powered by the GIZ and the Global Solutions Initiative. Together we will continuously work on global problem solving by integrating regional and local perspectives to realize the Sustainable Development Goals and the Paris Agreement on Climate Change.

Yours,  
Dennis J. Snower

President Tsai Ing-wen is shown from the chest up, wearing a white surgical mask and glasses. She has short dark hair and is wearing a dark jacket with a yellow collar. She is holding a green microphone. The background features a world map with red and blue outlines. To the right, there are some blurred numbers and text, including "912,27", "45,95", "5.04%", and "180".

“We risk a massive reversal of the ecological and societal gains already made since the Sustainable Development Goals (SDGs) of the Agenda 2030 were adopted. The COVID-19 pandemic only further stresses out the importance of urbanization for the future of international relations.”

– Dirk ASSMANN, Deutsche Gesellschaft für Internationale Zusammenarbeit, Bonn, Germany

Image Source: Wikimedia Commons. April 2, 2020. President Tsai Ing-wen inspects the Central Epidemic Command Center. Image by Office of the President. [https://pt.wikipedia.org/wiki/Ficheiro:04.02\\_49726568957\\_66543b616e\\_o.jpg](https://pt.wikipedia.org/wiki/Ficheiro:04.02_49726568957_66543b616e_o.jpg)



Dirk ASSMANN  
Director General, Sectoral  
Department at Deutsche Ge-  
sellschaft für Internationale  
Zusammenarbeit (GIZ)  
Eschborn, Germany

## International cooperation for the urban age

Dear Ladies and Gentlemen,

Urban development plays already an increasing role in international development cooperation, but the pandemic will make this more important. Since the beginning of the pandemic, mainly cities and urban communities, including wealthy global cities, suffer from cascading challenges of higher public expenditures, delayed investments, and plummeting revenues, with consequences on large segments of the industry such as the building and construction sector, transport and mobility or tourism and culture. If the urban recovery process in the world is not managed to be sustainable and green, there is a risk of following hardly reversible development paths, with severe negative effects for future generations and the planet.

At the same time, the many economic stimulus packages present a historic opportunity to shape the megatrend

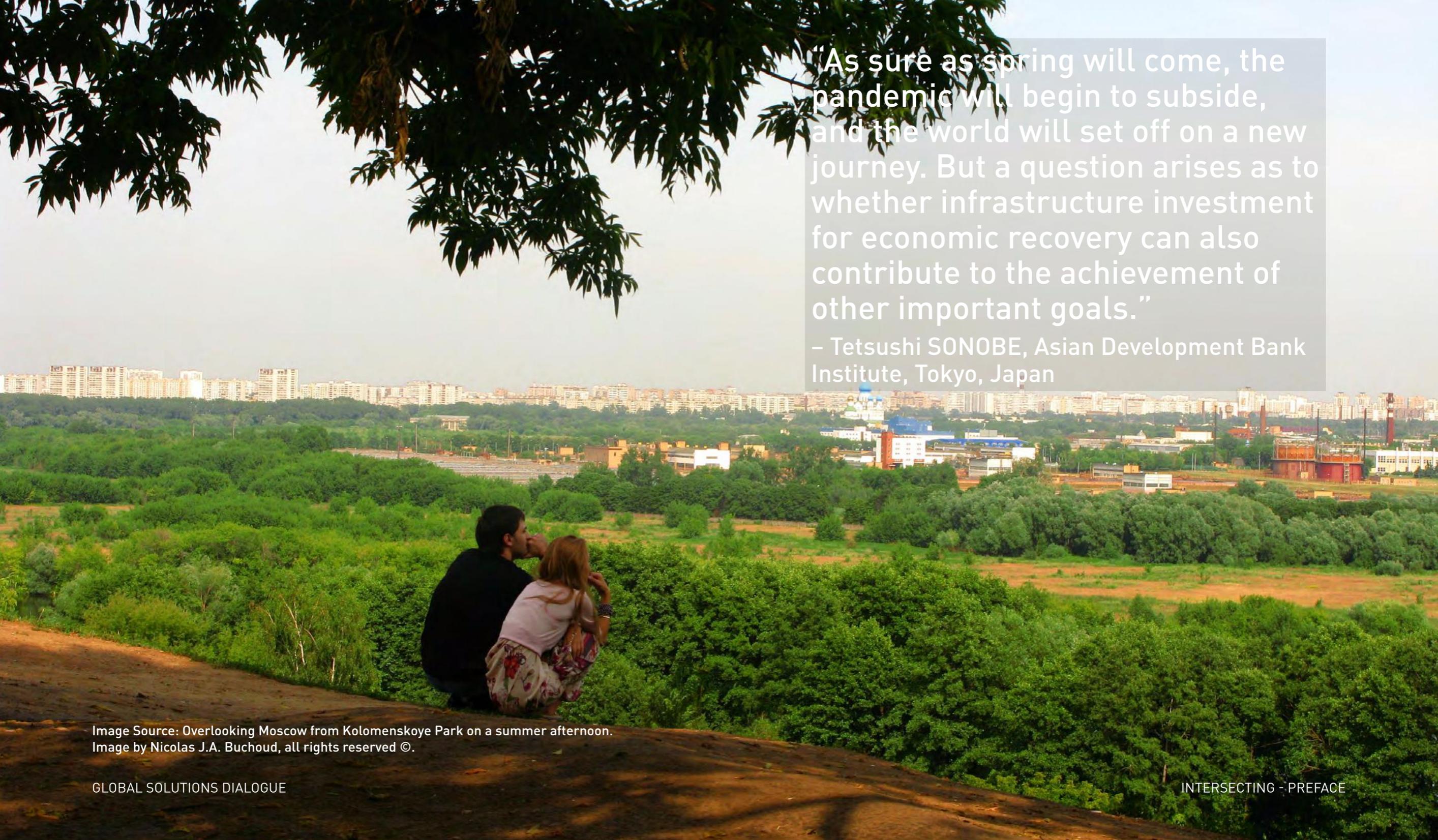
of urbanization and to effectively tackle climate change at local level, contribute to poverty reduction and green economic development. GIZ is a leading Technical Assistance agency, aims to contribute to this with focus on the alignment of the recovery measures for post-Covid-19 future with the needs derived from the SDG's and the Paris Climate Agreement.

We know from GIZ's daily work that the political will at the national level for a targeted approach to urban development and urbanization varies greatly. National urban development policies are an important tool achieving policy coherence, coordinating relevant actors and levels of government, and ultimately ensuring effective use of resources for sustainable urban development. At the same time, at GIZ, we experience that the universal designs for solutions need to be reconciled with the diversity of local contexts and the power of local actors. There are rarely on size fits all solutions. We see for example how universal infrastructure designs proved ineffective for specific local conditions. The importance of and the way in which urban development is handled also depends, among other things, on the degree of decentralization (i.e. the transfer of decision-making powers and resources to subnational levels), financial autonomy and on the political will of the respective countries to recognize the role of cities as key development actors. In this respect, it is shown that it is the ability of local decision makers and implementers to solve problems in dealing with the effects of the COVID-19 pandemic that counts, an

evidence has emerged on which we all need to build.

At the local level, the focus of GIZ is on strengthening municipalities and urban operating companies in the planning, financing and implementation of measures for sustainable and climate-friendly urban development. When it comes to infrastructure development, our experience shows that poorly planned projects that are not adapted to local conditions and needs do not deliver the desired results, burden the budget and limit the financial scope for urban investment over many years. Cities must therefore be able to prepare independently meaningful projects for sustainable urban development in such a way that they are financially viable and sustainable to manage.

Given the current crises caused by the Covid-19 pandemic, we risk a massive reversal of ecological and societal gains already made since the Sustainable Development Goals (SDG) of the Agenda 2030 were adopted. Against the background of the COVID-19 pandemic, the importance of urbanization is reinforced once again. To list Urbanization and Urban Development as an overarching funding category of the Development Assistance Committee's (DAC) would reflect the major role urbanization has for the effectiveness of the future development cooperation and would help monitor achievements made on SDG11 – Sustainable Cities and Communities.

A couple is sitting on a dirt path on a hill, looking out over a vast green landscape. In the distance, a city skyline is visible under a hazy sky. The foreground is dominated by the dark, silhouetted branches of a tree. A semi-transparent grey box in the upper right corner contains a quote in white text.

“As sure as spring will come, the pandemic will begin to subside, and the world will set off on a new journey. But a question arises as to whether infrastructure investment for economic recovery can also contribute to the achievement of other important goals.”

– Tetsushi SONOBE, Asian Development Bank Institute, Tokyo, Japan

Image Source: Overlooking Moscow from Kolomenskoye Park on a summer afternoon.  
Image by Nicolas J.A. Buchoud, all rights reserved ©.



Tetsushi SONOBE  
Asian Development Bank  
Institute (ADBI)  
Tokyo, Japan

## 2021: Building forward better in developing economies

In 2020, I have stayed home like a groundhog.

On February 2 every year, the world-famous groundhog, Punxsutawney Phil in Pennsylvania, emerges reluctantly from its burrow to prognosticate whether the winter will last for six more weeks or end early. In this coming February, I may find vaccines still unavailable for six more months and retreat to the safety of my burrow. I know, however, that I should seriously think about what the new normal should be and how it can be achieved since, as sure as spring will come, the COVID-19 pandemic will begin to subside, and the world will set off on a new journey. Here, I concentrate on the future of developing economies, my special field.

To begin with, developing economies need economic recovery. Leading macroeconomists' prognostication is that public infrastructure investment is more effective for the

recovery of developing economies than monetary stimulus, fiscal transfers, and government spending on goods and services because infrastructure investment increases both the aggregate demand and the production capacity of the economy. But a question arises as to whether infrastructure investment for economic recovery can also contribute to the achievement of other important goals.

Development economists, who travel across the developing world frequently, would answer that the best way is to develop medium-sized and smaller cities that serve as satellites of existing large cities. Large cities in developing countries are excessively congested, chaotic, extremely inconvenient, and very different from large cities in developed countries. In theory, the central district of a large city should be the most productive place in an economy because of the benefits of agglomeration effects, and it should be the main stage for structural transformation of an economy because it provides a more conducive environment for newly emerging industries than other places. In reality, the excessive congestion prevents new industries from emerging as they cannot find a place in the central business district which remains occupied by old industries: the latter cannot find an alternative place promising profits enough for relocation.

Satellite city development, which addresses these problems, is a necessary investment in a prosperous future. The relocation of old industries will also save many workers

from wasting hours morning and evening every day in commuting. Reduced commuting time unleashes their human capability and creativity, boosting economic growth. Satellite city development must be a planned urbanization. In the recent decades, people in developing economies have experienced rapid urbanization, but it was an unplanned urban expansion. It does not live up to their expectation of better life because it is not accompanied by basic infrastructure. A majority of people in expanded cities has very poor access to arterial roads, central water supply, and sewerage systems, schools, and hospitals. Unplanned urbanization has failed to meet basic human needs. In addition, the COVID-19 pandemic has highlighted the digital divide that has arisen from the lack of digital infrastructure outside the central business district. Note also that unplanned urbanization is energy inefficient and causing environmental problems.

Satellite city development or in other words, polycentric urbanization, will contribute greatly to the realization of a greener, more inclusive, and more prosperous future if satellite cities are developed successfully. For the successful development of satellite cities in the coming decade, what is needed is not to duplicate the new towns experience from Japan or Europe in the 1960's and 1970's nor to revive the centralized planned delivery of large scale social housing estates from the post-world-war two era. Human capital development should come first. Both workers and entrepreneurs of the relocating old industries should acquire digital, marketing, managerial, quality-control, and other

skills that the post-COVID-19 era requires. I wish 2021 to be the first year for a successful new generation of satellite city development and Building Forward Better in developing economies.

“Cities cannot fix the magnitude of pre-crisis and new challenges on their own. They need to work with national and global stakeholders to contribute to well-being, transition to a low-carbon and climate resilient economy, and drive inclusive growth.”

– Aziza AKHMOUCH, Organization for Economic Cooperation and Development, Paris, France



Image Source: A mural in the old city of Georgetown, Penang, Malaysia. Image by Nicolas J.A. Buchoud; all rights reserved ©.



Aziza AKHMOUCH  
Head of Division, Cities,  
Urban Policies and  
Sustainable Development,  
Organization for Economic  
Cooperation and  
Development (OECD)  
Paris, France

### **The COVID-19 and the Global Solutions Dialogue: catalyst towards inclusive, green and smart cities for global well-being?**

Pandemics have always triggered rethinking of urban paradigms, and COVID-19 is no exception. Our latest OECD Report on COVID & Cities argues that this crisis has not revealed anything new about our structural vulnerabilities, but acted as a magnifying glass, trend accelerator and catalyst for change at local, national and global levels. Cities have always been places of creativity, experimentation, agility and innovation, and to ensure this will be the case again, we should draw lessons at least three domains to go smart, green and inclusive.

First, the digital revolution, notably the large-scale teleworking experience, can minimise pressure on local services, land, housing prices and natural resources. Going forward, we should revisit our relationship to time and chrono-urbanism to stop doing the same thing, at the same

time in the same place such as piling up in crowded transportation and traffic jam to start work at 9am. We should upscale multi-purpose infrastructure and make better use of empty offices where people will no longer work every day. And we should we revive our downtowns to remain attractive in this new context of remote working.

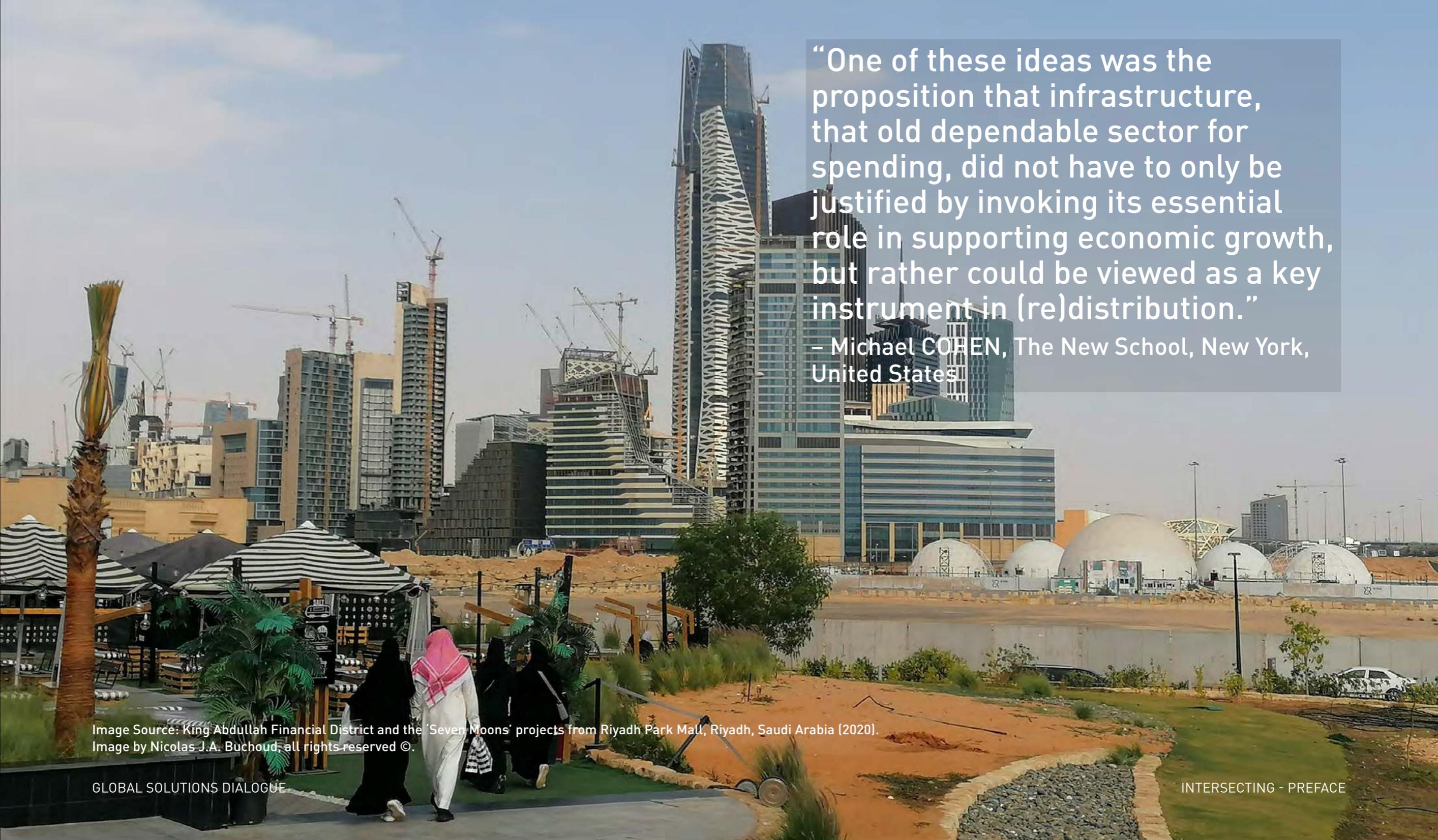
Second, the increased environmental awareness induced by the combined “Greta Effect” and the “Zoom Effect”, and the rediscovery of local loops and proximity, provide a unique opportunity to accelerate the ecological transition, which seems socially and politically more acceptable today than just a year ago. Recovery packages should build on this momentum to enhance green and circular cities, create jobs, reduce CO2 emissions (renewable energy, cycling, walking), prepare communities for climate risks (floods, heats), improve urban environmental quality (air pollution, biodiversity) and promote energy efficiency.

Third, the growing citizen discontent requires renewing the social contract to strengthen local governance. The crisis disproportionately impacted vulnerable populations such as women, youth, migrants, the homeless and the elderly. Going forward, fixing the inequality issue will be the hot potato for city leaders. They should adapt urban design, reclaim public space, and ensure immediate access to amenities while securing safety and health for all their residents for a more quality urbanisation and greater territorial cohesion.

In light of the above considerations, only place-based and people-centered solutions can help build back better cities and fight inequality. For example, for the digital transformation to deliver benefits for all, we must address the 'digital divide' through upscaling our investments. Rethinking clean forms of urban mobility (e.g. cycling, walking, etc.) also requires managing the distributional effects across specific places (i.e. suburban and low-density urban areas) and people (i.e. elderly, families with children, disabled etc.).

Cities cannot fix the magnitude of the challenge on their own and need to work with national and global stakeholders to contribute to well-being, transition to a low-carbon and climate resilient economy, and drive inclusive growth.

Throughout 2020, the Global Solutions Dialogues provided a unique platform for exchange, based on an innovative and open format, to share best practices and common solutions to common problems. In that sense, it was a major catalyst for change towards urban paradigms that can help achieve better quality of life while preserving productivity, social inclusion and the environment.



“One of these ideas was the proposition that infrastructure, that old dependable sector for spending, did not have to only be justified by invoking its essential role in supporting economic growth, but rather could be viewed as a key instrument in (re)distribution.”

– Michael COHEN, The New School, New York, United States

Image Source: King Abdullah Financial District and the 'Seven Moons' projects from Riyadh Park Mall, Riyadh, Saudi Arabia (2020).  
Image by Nicolas J.A. Buchoud, all rights reserved ©.



Michael COHEN  
Director, Doctoral Program in  
Public and Urban Policy  
Professor of International  
Affairs, The New School  
New York, United States

### From networks to the Global Solutions Dialogue: designing a new space for global solutions

The Global Solutions Dialogue represents a promising step in expanding the dialogue on urgent global issues. Having participated in UN “expert working groups”, World Bank task forces, civil society encounters and debates, and hundreds of meetings discussing “the need for new directions in development” over many years, I was surprised and delighted with the online dialogues organized during the second half of 2020. Two aspects of these dialogues deserve particular attention: the participants and the content of the discussions.

First, the participants represented a notable diversity of origins, disciplines, and institutions from around the globe. Unlike many international events where people “preach to the converted”, it was not at all clear from the convening of these dialogues who would take the lead and how others would react. Sharing the table has become an increasingly

important dimension of global debates. As we New Yorkers say, “If you are not at the table, you’re on the menu”. This important and provocative cautionary note suggests that representation is an essential part of global debates. It is the opposite of “leave no one behind”, which has become a mantra in the global community, even if many “globalists” continue to exclude divergent and critical voices from important debates.

Secondly, the content of the dialogues was also important, even if some participants took some “predictable” positions reflecting their institutions. Rather than stick to old formulae and time-worn and perhaps stale recommendations, participants were seeking to find the “frontier” in the debate. What was new? How did it relate to current practice? What were the obstacles it would face? And how could political coalitions be organized to overcome those obstacles?

One of these ideas was the proposition that infrastructure, that old dependable sector for spending, did not have to only be justified by invoking its essential role in supporting economic growth, but rather could be viewed as a key instrument in distribution. The phrase “infrastructure for distribution” had a new ring to it, suggesting that participants might see whether trying out new combinations of “development language” might actually provoke some new thinking.

But words are not enough, so the real challenge implied by the Global Solutions Dialogue is to try out these ideas in real situations, in diverse geographies and scales, with different social structures, income levels, and political cultures. Some of these ideas might actually “have legs” and prove to be useful in designing and implementing change. If so, the Global Solutions Dialogue will have been a moment(s) when it was possible to see the outlines of the footprints of the future.



“Intersecting is not just a book about cities or infrastructure. Built across months long dialogues and ad hoc panels, Intersecting’s seventy original contributions and hundred curated photographs are a visual reflection on a major crisis our urban age and its aftermath.”

– Nicolas J.A. BUCHOUD, Global Solutions Initiative, Paris, France

Image Source: In the outskirts of Atlanta, the United States.  
Image by Nicolas J.A. Buchoud, all rights reserved ©.



Nicolas J.A. BUCHOUD (ed.)  
Global Solutions Initiative  
Paris, France

## INTERSECTING's first edition: building a compass for recovery

The pandemic is over (isn't it?)

When we first initiated the Solutions Dialogues<sup>1</sup> in the spring of 2020, which would become INTERSECTING, the World Health Organization reported 10 million COVID-19 cases and half a million dead across the globe. A year later, as we are publishing *Intersecting*, the Coronavirus Update Live reports more than 115 million cases and 2,5 million dead. At the beginning in spring 2020, it was all about coping with massive lockdowns across the globe. Then it was about exchanging good practices to mitigate the crisis. Then it was about subnational governments showcasing their role for future post-pandemic recovery scenarios. Then it was all about cities as 'the epicentre of the crisis'. The OECD coined the successful notion of an 'asymmetric crisis.'<sup>2</sup> The Urban 20 communiqué then called for 'cooperation with all levels of government'.<sup>3</sup>

Much has been said about cities and the pandemic, but often as quickly forgotten. It is unclear what we have learned from the crisis and yet, we have moved from research to large scale industrialization of vaccines. The race for post pandemic leadership has started for good, but moving from good intentions to a global roadmap of sustainable urban recovery will require coherent and accountable institutional frameworks and implementation mechanisms.

Fostering more aligned cooperation is on the agenda of the Italian Presidency of the G20 in 2021. Investing and investing in the infrastructure of a new sustainable economy, which INTERSECTING calls for, will require continuous engagement in 2022-2023.

## Warnings, complacency, urban blindness

Few countries and institutions, including local governments and their advocacy networks, have admitted how little prepared they were to cope with the pandemic. The global community has consolidated scarce and random knowledge from the management of previous diseases such as SARS, MERS or Ebola, a situation accurately described by the Center for International and Strategic Studies in 2019 as a 'cycle of complacency'.<sup>4</sup>

The New Urban Agenda celebrated at the Habitat III Summit in Quito in 2016 was silent about pandemic risks and to that

extent, has lost relevance. In 2020, as the pandemic was unfolding rapidly in China with signs of global expansion, there was not much about pandemic risks on the agenda of the World Urban Forum X taking place in Abu Dhabi. The Forum's official Declaration remained equally silent.<sup>5</sup> The final report of the Forum edited in September 2020 even continued to routinely quote 'cities are key enablers of the world's sustainable future (...) while supporting a new era of health, liveability and economic growth.'<sup>6</sup>

As cities and billions of urban dwellers have been hard hit by the pandemic's many impacts, we have to question the reasons for such collective blindness! INTERSECTING believes that knowledge generation and distribution are the cornerstone of future good government, which builds on reassessing the structure of contemporary urbanization.

### Cities in the future

In 2017, the G20 Health Ministers acknowledged that 'the global interconnectedness of societies, businesses and governments means that an infectious disease risk anywhere can become a health risk everywhere – with far-reaching humanitarian, social, political, economic and security consequences.'<sup>7</sup> Yet, the G20 Leaders did little to build coordinated response afterwards.

In 2019, it was already too late to listen to the warnings of the Global Preparedness Monitoring Board and we moved

in no time from 'A world at Risk' to 'A World in disorder', with mappings of the global health system organization displaying a lot of confusion.<sup>8</sup>

Infrastructure investments are thought to be a key to recover from the crisis. Yet a decade of rebuilding growth through connectivity after the 2008 global financial crisis has painstakingly exposed people to the pandemic. Multiple pleas for 'cities' to implement more sustainable pandemic responses could just add more complexity to clogged global decision mechanisms.

The global lockdown of the Spring 2020 has allowed for an instant photography of our interconnected world. Following the SARS, MERS and Ebola pandemics, the COVID-19 has forced us to break routines at a massive scale. INTERSECTING's exploration warns that painting in shiny green and inclusive colors the same institutional and networking patterns as before the crisis will quickly fall short.

To govern future urbanization processes, we need to decide how the potential and innovative power of cities will be used to decouple human development and access to urban infrastructure from threats from viruses, bacteria, climate change and social inequality, which will certainly be recurring in the future. We also need to be aware of underlying social factors that may support a revival of multilateral agendas or, on the contrary, weaken them. Cities are places of change and innovation. They are also the places where resentment, distrust and protests against the restrictions

of public life are exposed and articulated.

INTERSECTING is a call to revive the public domain as an essential common good, which goes through intertwined physical and digital space. As the world looks towards harmonized carbon pricing and biodiversity losses assessments, 'we must chart a new course for digital governance' (D. Snower). The value of data will be even more critical as national and local governments around the globe are experiencing rising debt levels.

INTERSECTING's first edition: also a reflection on cognitive infrastructure

In an address to the World Health Assembly in May 2020, the Secretary General of the United Nations called for a serious global 'wake-up call.' In July 2020, he edited an inter-agency policy-brief about cities and the COVID-19. In 2021, he is preparing a keynote address highlighting the role of cities in the future multilateral order.<sup>9</sup>

One of INTERSECTING's main finding is that lethality of the virus is redoubled by a knowledge and even a cognitive crisis accelerated by the development of the digital space. Therefore, solutions are to be found at the edges. At the intersections of disciplinary and policy borders. At the intersections of short and long term. At the intersections of community and global scales. At the intersections of systems, institutions and cultures. At the intersections of

think tanks and infrastructures, of entrepreneurship and society. Otherwise, what lessons from biotechnologies and vaccine development could we ever learn to serve for better policy-making in the urban age?

INTERSECTING is, above all, a collective achievement. It is the result of the cooperation of over 100 contributors, of a dedicated international and intergenerational editorial team, of highly supportive and engaged knowledge partners and of the unequivocal encouragements of the Global Solutions Initiative. Consolidated in a changing and volatile environment, this first edition of INTERSECTING reflects a year of often overnight research, debates, discussions, exchanges, backed and marked out by the intermediary release of several notes, articles, reports, and policy-briefs for the T20 Saudi Arabia and the T20 Italy, the U20, the Global Solutions Journal.<sup>10</sup>

Starting with 'disease' and reaching out to 'agendas' INTERSECTING is a series of 70 carefully crafted contributions, within five sections and fifteen themes. INTERSECTING was built as a compass or even as an astrolabe, pointing out to multidimensional combined social, political, infrastructural and scientific challenges and recovery options.

INTERSECTING is not a book about cities. Or about infrastructure. Or about the COVID-19 crisis. It is certainly not a report. It is an original, visual, exploration and reflection on a major crisis our urban age, one of profound MUTATIONS.<sup>11</sup>

We have made the choice to illustrate the book with over 100 actual, original, full page photographs. They allow for an easy and rapid circulation. They also remind us of the unique richness and diversity of urban world, as well as of the spatial magnitude of urbanization impacts. May this be the beginning of an editorial adventure supporting the Re-Coupling priorities.

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2. OECD Policy responses to Coronavirus (COVID-19) – Cities policy responses. <http://www.oecd.org/coronavirus/policy-responses/cities-policy-responses-fd1053ff/>
3. Communiqué from the Urban 20 (U20), October 2, 2020, Riyadh, <https://www.urban20riyadh.org/sites/default/files/2020-10/U20%202020%20Communique.pdf>
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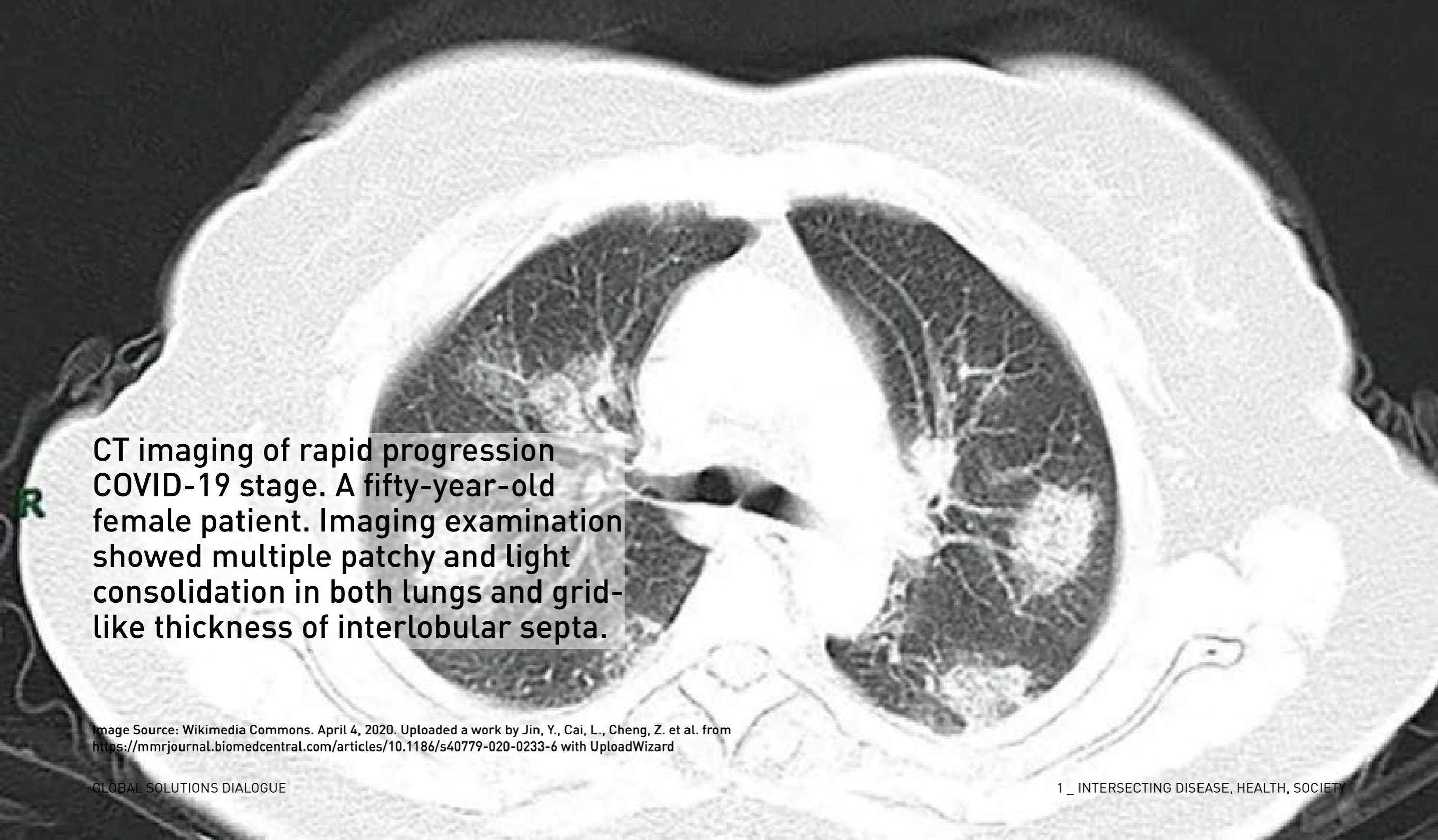
# Intersecting as a collective compass for recovery.

Image Source: A sea and aerial landscape over the North Sea between Amsterdam and Leeds. Image by Nicolas J.A. Buchoud, all rights reserved ©.

# acknowledgments

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Nicolas J.A. BUCHOUD, Gunnar HARTMANN,  
Holger KUHLE (eds.)



**CT imaging of rapid progression COVID-19 stage. A fifty-year-old female patient. Imaging examination showed multiple patchy and light consolidation in both lungs and grid-like thickness of interlobular septa.**

Image Source: Wikimedia Commons. April 4, 2020. Uploaded a work by Jin, Y., Cai, L., Cheng, Z. et al. from <https://mmrjournal.biomedcentral.com/articles/10.1186/s40779-020-0233-6> with UploadWizard

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## 1.0. The invisible city

Nicolas J.A. BUCHOUD, Gunnar HARTMANN, Holger KUHLE (eds.)

## 1.1. The space of disease

Gunnar HARTMANN, New Dialogues, Berlin, Germany

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Milindo CHAKRABARTI, O.P. Jindal Global University, Sonipat, India

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A medic in mobile testing facility collects the nasal sample of a devotee for COVID-19 testing during 'Magh Mela', in Prayagraj, Uttar Pradesh, India.

– the editors

Image Source: Courtesy of PTI Photo. <https://www.outlookindia.com/photos/topic/covid-19-test/107419/1?photo-253983>



Nicolas J.A. BUCHOUD (ed.)  
Global Solutions Initiative  
Paris, France



Gunnar HARTMANN (ed.)  
New Dialogues  
Berlin, Germany



Holger KUHLE (ed.)  
Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ),  
Berlin, Germany

## The invisible city

Let's be clear from the very beginning. There is no simple causal link between the rapid spread of the COVID-19 virus and cities urban design per se. Patterns of jobs location

and metropolitan mobility systems have played a role in the spread of the pandemic, but many other factors did, from indoor health management to the organization and funding of health and social infrastructure. Similarly, there is no simple causal link between rapid urban growth and the extent of urban problems. Urban problems did not come up 'naturally' from urbanisation, that would be intrinsically negative. Policy and growth choices, along with social organization can significantly influence the disease's spread and local and global responses.

Throughout the 19th and 20th centuries, cities have been the cradle of tremendous socio-political and infrastructural transformations. Combined economic, political and health and sanitation issues gave birth to contemporary urbanism. Social perspectives have been embedded in urban design and urban planning, developing housing and sanitation services and infrastructure as common public goods. The 21st century was meant to become the 'urban' and the 'metropolitan century' but the COVID-19 pandemic has brutally disrupted two decades of celebration or urbanization. The health crisis reveals a deeper crisis of public urban health models. Somehow, we have taken public health for granted, leaving our societies largely unprepared to respond to global infectious diseases, despite the availability of new technology in cities. The COVID-19 crisis has illustrated differences between regions of the world in managing the pandemic. It has mostly highlighted common challenges. Since the early 1990's, networked infrastructure systems

have built interconnected (mega)regions and formed the backbone of growth, but since the 2008 global financial crisis, revenue distribution has become growingly unequal. Over the time, the combined urban and infrastructure systems have growingly fragmented major natural habitats, with impacts on all ecosystems worldwide. In this context, the COVID-19 pandemic resonates as a major wake-up call, following the disclosure of climate and global warming risks by the International Panel on Climate Change (IPCC) and of biodiversity losses by the International Panel on Biodiversity and Ecosystem Services (IPBES).<sup>1</sup> We have obviously not only reached limits of growth, we have locked them in cities and their infrastructure.

In the past months, cities have responded to health risks by breaking out their routines and opening up for large-scale experimentation, such as (re)organizing public space, services and regulations but lessons from past pandemics show the 'space of disease' goes way beyond neighborhoods' limits and temporary solutions. We believe that real opportunities lie within the fog of the pandemic to revisit inefficiencies, gaps and flaws of contemporary urban policymaking, including infrastructure investment and maintenance choices. Living with the pandemic has taught us that the problem requires a new approach from established expert bodies and better science-society interface. For instance, while it was initially assumed that virologists or epidemiologists should decide on school closures, it quickly became obvious their expertise was not self-sufficient. There is a need for health expertise and public health solu-

tions that build on a wider range of disciplines, calling for a conscious planetary health strategy, as our urban age faces many other risks than infectious diseases.

Investing in a comprehensive global overview of the pandemic is key. Leveraging urban and digital infrastructure to combat the COVID-19 has worked better (so far) in some regions of the world, such as South-East Asia, than others. More innovative digital services have been created in Kenya or India to mitigate the social impacts of the crisis. Whereas it is too early to see any new urban typology emerging from the pandemic, valuable lessons can be derived from changes in hospital and vaccination facilities design. Addressing the indoor air-quality issue could be another a game changer in construction engineering with far reaching consequences on future urban landscapes. Urban players and decision makers have much to learn, not just from each other's, but from others out of their spheres and networks, INTERSECTING disease, health and society. There are many lessons to draw from the social and digital interactions during the crisis and how the public realm has been fragmented. The G20 work on health risks and health coverage in 2017 and 2019 could help reshape our interconnected urban world and mobilize human and financial resources towards global resilience to future pandemics. Such an effort cannot bypass cities and citizens.

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“While disease describes a body’s pathological state, space of disease is the spatio-temporal condition that allows disease to come into existence.”

– Gunnar HARTMANN, New Dialogues, Berlin, Germany

Image Source: Wikimedia Commons. Ukraine evacuates Ukrainian and foreign citizens from Wuhan at the Kharkiv International Airport, border clearance for 94 people arriving by special flight from China. February 20, 2020. Image by Державна прикордонна служба України. [https://fr.m.wikipedia.org/wiki/Fichier:Ukraine\\_evacuates\\_Ukrainian\\_and\\_foreign\\_citizens\\_from\\_Wuhan\\_16.jpg](https://fr.m.wikipedia.org/wiki/Fichier:Ukraine_evacuates_Ukrainian_and_foreign_citizens_from_Wuhan_16.jpg)



Gunnar HARTMANN (ed.)  
New Dialogues  
Berlin, Germany

## The space of disease

When an epidemic occurs, whether moving rapidly or slowly, its impact can be more devastating than any war. Unlike in the aftermath of a war, however, the fabric of a city remains largely intact even after an epidemic has run its course. Besides the loss of numerous people and the memories of those who survived, there is no trace of physical destruction within the city. Traces of an epidemic emerge only later. On a time scale of years, a disease leaves traces within ill bodies, but on a time scale of decades and centuries, a disease leaves traces within our urban practices, which in turn shape and reshape our cities. The outbreak of the ongoing COVID-19 pandemic made vividly apparent the role of space as an agent of medical-therapeutic measures against disease.

While disease describes a body's pathological state,<sup>1</sup> space of disease is the spatio-temporal condition that allows disease to come into existence. Conceptually speaking, a space

of disease both preconditions a disease and holds it in place for a certain time. For example, in the case of the bubonic plague in Europe, the space of disease persisted for over five centuries. It relied on a number of intermediate hosts operating over great distance, that is, the flow of countless rats (carriers of bacteria-infected fleas) that eventually linked the Mongolian steppes with European cities.<sup>2</sup> Once the space of disease expanded to include these cities, the bubonic plague was transformed from a chronic disease in rodent colonies to an epizootic disease, eventually becoming an epidemic disease in human settlements. The space of disease for the plague encompassed a vast realm, from the pathways of the Silk Roads to the cramped quarters of the European cities.

Medicine's aim, now as always, is directed toward not only diagnosing and treating disease in the body, but also apprehending and, if at all possible, dismantling the space of disease; the latter requires interventions beyond the discipline of medicine. The human body remains the primary beneficiary of medical research and practice. Yet, if our built environment allows various spaces of disease to form, treating individual bodies seems like an endless task. In the late nineteenth century, medicine developed greater means to find disease-related evidence, i.e., with advances in microbiology.<sup>3</sup> Although physicians continue to view the human body as an autonomous and operationally closed system, such evidence suggests that the body is interacting with its environment in ways that are not always obvious.

By shifting ever so slightly the focus of medical diagnostics from bodily symptoms to body risk factors, medicine can frame a great number of spaces of disease. Diagnostics originally directed entirely toward the body's abnormal pathological condition accordingly have started to expand in the course of clinical medicine to include the spatio-temporal precondition of a disease. Medicine's investigations and interventions now encompass not only the physical body, but also its genetic history, its social climate, and its environmental context.

Bodies moving, interacting, and coming into physical contact with one another, as well as the mining or growing of materials to be moved, joined with other materials, and consumed or reshaped to suit a human purpose, are all processes of increasingly meshed complexity. Historically, disease has flourished in environments that emerge out of this blending process. Because urbanization relied on large concentrations of bodies and a vast amount of material flows, it generated spatial conditions that led to the proliferation of disease. Therefore cities were the first places that formed unprecedented habitats for diseases.<sup>4</sup> Even as certain urban conditions allowed diseases to become endemic, however, the outcome of urbanization, the city, also gave rise to organized medicine with its greater treatment efficacy.

Although the majority of the widespread diseases that European cities have encountered over the last three hundred

years are highly treatable by medicine today, the spatial measures that were once essential to countering these epidemics still form the conceptual base upon which numerous spatial devices continue to operate, especially during the COVID-19 pandemic. While various spaces of disease were subject to continuous change, the spatial concepts themselves persisted. Rather than ascribing these spatial concepts to medical requirements alone, their implementations were instead a form of urban defense.

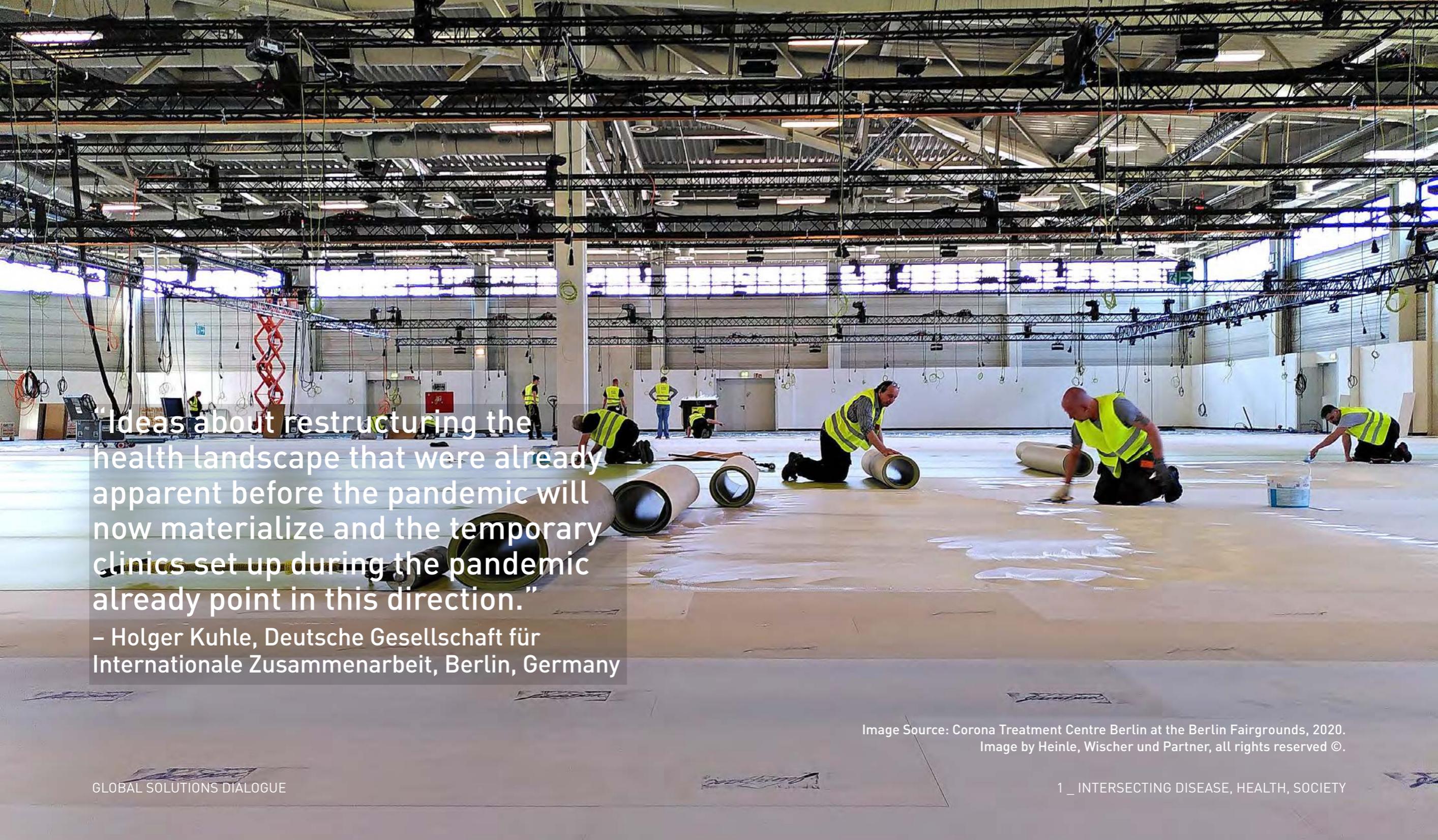
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“Ideas about restructuring the health landscape that were already apparent before the pandemic will now materialize and the temporary clinics set up during the pandemic already point in this direction.”

– Holger Kuhle, Deutsche Gesellschaft für Internationale Zusammenarbeit, Berlin, Germany

Image Source: Corona Treatment Centre Berlin at the Berlin Fairgrounds, 2020.  
Image by Heinle, Wischer und Partner, all rights reserved ©.



Holger KUHLE (ed.)  
Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ),  
Berlin, Germany



Gunnar HARTMANN (ed.)  
New Dialogues  
Berlin, Germany

### Pre-pandemic signs of changing urban health landscapes

The world's public was impressed by the speed with which, already in the face of SARS, the Xiaotanshan Hospital in Beijing was built in just seven days. After the outbreak of COVID-19, the same thing happened with the Huoshenshan Hospital in Wuhan in 2020. Technically, this was made possible by construction from prefabricated modules. What happened here is that these facilities became the centres of local medical emergency management, the costs of which were covered by the central government. Integrated into these clinics were test and research laboratories, warehouses for medical products. It is the author Laura Spinney

who takes a closer look at these breathtaking developments and describes current trends in her article "Hospitals without walls: the future of healthcare."<sup>1</sup>

The world was equally impressed with the rapid response capacity in Singapore and Hong Kong. Instead of rapidly building clinics, they had learned the lessons of the SARS epidemic since 2003 and converted existing clinics. This includes, among other things, the ability to convert all patient rooms in hospitals into intensive care rooms, with techniques to stop germs "migrating" between rooms. Medical historian Mark Honigsbaum<sup>2</sup> points out that in other rich countries, such as the US or the UK, which have historically given themselves very high scores on the Global Health Security Index,<sup>3</sup> the infrastructure was not prepared for the pandemic. These countries were very focused on an Ebola model of epidemics. Here, there was a strong reliance on mobilising specialists, sending them to the site of the outbreak and ending it there quickly and effectively. In Western countries, the cultural memory of experiencing an epidemic was no longer active. Here, people were very focused on the virus. In Honigsbaum's view, this goes back to the 19th century with the discoveries of Robert Koch and Louis Pasteur. There seemed to be no room for also paying attention to the ecological context and socio-medical issues that are crucial for the transmission and spread of pathogens.

This approach from the 19th century to the causes of disease is also reflected in the way hospitals are built. The

already mentioned author Laura Spinney<sup>4</sup> describes how, in Pasteur's and Koch's times, Western countries favoured the 'pavilion' construction of hospitals, when infectious diseases still caused the most deaths and ventilation was very important. With the advent of antibiotics, in many places the "pavilion" design of hospitals has given way to the "hospital as office tower" model. In the interest of efficiency, specialist departments were spatially clustered, and antibiotics were relied on alongside hygiene.

Debates about how to rethink these developments are likely to intensify in the future insofar as evaluations of COVID-19 might show that novel viral diseases require a return to earlier spatial concepts of urban hospitals. The COVID-19 pandemic has hit the United Kingdom comparatively particularly hard. By end of January 2021, with 100,162 deaths registered the country has had the fifth-highest death toll globally (after the US, Brazil, India and Mexico), a figure higher than the country's entire civilian death toll in World War II. The epidemiologist and senior fellow at the King's Fund, a think-tank focused on healthcare, Veena Raleigh, points to a number of factors, but says: 'The UK also went into the pandemic with an under-sourced health system following years of austerity cuts.'<sup>5</sup>

It remains to be seen what these conditions will mean for the pace of development of urban health services after the pandemic. Spinney expects that ideas about restructuring the health landscape that were already apparent before the

pandemic will now materialize and the temporary clinics set up in the United Kingdom during the COVID-19 pandemic already point in this direction. Before the COVID-19 pandemic, spatial reorganisations of urban health services and hospitals were being considered, not least due to the digitalisation, which is now being implemented more radically, as expected, over the pandemic. Spinney points to London, where St. Mary's Hospital was considering shifting more resources from inpatient to outpatient treatment. She quotes James Kinross of St. Mary's Hospital as saying that they are now considering "offering parts of the outpatient treatments right outside the hospital"<sup>6</sup> after the pandemic. A specialist centre digitally embedded in the city, with facilities to respond quickly to infectious diseases, is emerging as the hospital of the future. When it comes to other signs and trends of urban health services that already exist before the pandemic, it is also worth looking at that very city. Here, as in other urban centres of the Global North with a density of diverse ethnic and cultural populations, therapies that do not originate from Western modern medicine have become part of the omnipresent service offer.

Regarding the broader context of London, HRH the Prince of Wales has stated on several occasions his belief 'that there is a great deal to be gained from complementary treatments. Alas, even something as practical as osteopathy or acupuncture still sits on the sidelines under the heading 'alternative', inviting suspicion among the public and arousing a kind of angry derision from the mainstream

medical profession.’<sup>7</sup> In London, the promoters and providers of such complementary therapy include in particular the traditional naturopathy such as Ayurveda, which has many users in India, Nepal and Sri Lanka where either a department of the national health ministry or a ministry on its own is in charge of development, propagation and certification. Traditional Chinese medicine is also among them. Against the background of the current interest in questions of pandemics, it is worth remembering how acupuncture was discovered and exported to the West by French doctors in Tianjin during 1902 for the treatment of cholera.<sup>8</sup>

There is often controversy about the potential that exists in intersecting between the developments of modern Western medicine and naturopathic (indigenous) healing practices. At the same time, there are bridge-builders who are taking up the trends of health practices within the large urban migration locations. For instance, the Steinbeis Transfer Institute for Complementary Methods in Berlin has worked on natural and cultural medicine from the Global South and is dedicated to the academisation of health professions and research into health cultures.<sup>9</sup> This is INTERSECTING pioneering.

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“The principle of modular structures and flexibility seem to be suitable for dynamic scenarios, such as a pandemic, i.e., we have to develop structural concepts that endure the change.”

– Edzard SCHULTZ, architect and partner at Heinle, Wischer und Partner, Berlin, Germany

Image Source: Corona Treatment Centre Berlin at the Berlin Fairgrounds; Heinle, Wischer und Partner, 2020. Image by Nordsonne Identity, all rights reserved ©.



Aleksandra SHULEVSKA  
New Dialogues  
Heinle, Wischer und Partner  
architects  
Berlin, Germany

## THE PANDEMIC AND ITS IMPACTS ON HEALTHCARE DESIGN

Due to its expertise in healthcare architecture, in March 2020 our office Heinle, Wischer und Partner was asked to create a new typology for a treatment center for COVID-19 and to simultaneously build one with great urgency. Later on we were also commissioned to build 6 vaccination centers throughout the city.

As an architect on the Corona Treatment Center Berlin (CTCB) team, I was directly a part of Berlin's utilization of spatial means to tackle the COVID-19 pandemic and take control over its spreading. Reflecting on this experience, as a researcher on the topic of Spaces and Disease at New Dialogues and as a citizen of Berlin, I can differentiate three main stages of dealing with the new coronavirus: Confining, Preventing and Treating COVID-19.

## CONFINING COVID-19

First mechanism of defense against the unknown disease was implementing a concept of confinement with the aim of slowing down the spreading of the new virus. This defense mechanism gives the medical profession the necessary time to find a suitable treatment – cure, as well as a preventive vaccine. Confinement is a spatial principle of protection through restriction of movement, where organized medicine utilizes space to protect the unaffected by containing the disease and by restricting the movement of the infected.<sup>1</sup>

In Germany confining interaction measures were enforced on various scales reaching from national and regional to the urban level. The movement through the lines of defense, set by the concept of confinement was regulated with a 14-day quarantine, which is the period of communicability of COVID-19. The flow of potential COVID-19 patients in Berlin on the urban scale was regulated with a procedure, based on minimizing physical contact. The primary administrative regulation - the AHA-rule (Abstand, Hygiene, Alltagsmaske; German for distance, hygiene, everyday mask) is another defending mechanism by spatial means. The minimum distance of 1.5 m between humans was implemented into every aspect of society and all the scenarios which didn't allow that, were forbidden. As a consequence of the spatial restrictions in human interaction, some spaces within the city were left unused and available for a temporary adaptation into spaces of defense against COVID-19.

The CTCB was set up with the objective to reduce potentially the shortage of clinical care by taking over the COVID-19 patients who do not primarily require intensive care. Due to the temporary nature of the project and the time frame for execution it was decided on a host-building - the Berlin Fairgrounds. The location of the fairgrounds was chosen because it offers very specific logistical conditions and big column-free exhibition halls, which are not in use for the time being.

With the CTCB, Berlin created a centralized isolation area with a strict cordon, completely restricted to visitors, meant to spatially separate the contagious from the uninfected. A new building typology was developed with a very flexible structure based on a standard module. Considering the unpredictable situation, i.e., the building and design process running alongside the clinical reasoning process, the flexibility of this new typology was crucial. Even though the CTCB has not been put to use yet, its modular configuration has been a testing ground for time-limiting scenarios by medical staff. With that the city is evaluating its fast spatial response and learning how to improve it for future scenarios.

### PREVENTING COVID-19

During the confining stage, medicine has been developing a vaccine against the new coronavirus. The second defending mechanism of the city is the one of preventing COVID-19, where spatial measurements play a role in the efficiency of

its implementation. As part of this mechanism, Berlin set up 6 vaccination centres, a central vaccination logistic unit and a centralized storage area for the vaccine. Because the Corona Vaccination Centres Berlin (CVCB) were urgent and with a temporary character, the same spatial principle as for the CTCB was applied i.e., utilizing host spaces, which at the moment are out of use e.g., airports, concert halls etc. As of January 2021, three of the six vaccination centres have been put in use, with more to be opened as the production of the vaccine increases.

### TREATING COVID-19

Handling COVID-19 would ultimately mean adapting our future to the treatment against this disease, without referring anymore to temporary solutions of defense, but to permanent solutions of treatment. When a cure for COVID-19 will be available, an appropriate spatial concept within hospitals will enable the COVID-19 treatment to become a regular practice. The entire experience of the COVID-19 pandemic calls for an adaptation of the typical hospital structure to one that is flexible enough to quickly answer unexpected scenarios.

<https://newdialogues.com/berlin-and-covid-19/>

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“We were asked for our expertise and we used the momentum to do what should be done in the future and what we have been preaching for years: modular thinking in hospital construction!”

- Edzard SCHULTZ, architect and partner at Heinle, Wischer und Partner, Berlin, Germany

Image Source: Vaccination Centre Berlin - Velodrom Arena 1. Heinle, Wischer und Partner, 2021. Image by Konstantin Boerner, all rights reserved ©.



Hamed KHALIDI  
New Dialogues  
Berlin, Germany

## FUTURE PERSPECTIVES ON INDOOR AIR QUALITY

Over the last four decades, the growing proliferation of chemical pollutants in consumer and commercial products, the tendency towards tighter building envelopes, reduced ventilation to save energy and pressures to defer building services to reduce costs and energy, have fostered indoor air quality (IAQ) problems in most of the built-up environments in cities.

According to a recent report by the World Health Organization (WHO, 2019), ambient air pollution was responsible for 4.2 million deaths (out of these, almost 300,000 were children under the age of 5 years). A further 3.8 million deaths were attributable to Indoor Air Pollution, out of which almost 250,000 were children under the age of 5 years.

Preliminary reports during the current COVID-19 pandemic have shown the direct effects of long-term exposure to air pollution and the resulting higher mortality rates.

A preliminary study from Harvard University showed that people living in a higher level of air pollution over the past 15–17 years have a substantially higher COVID-19 mortality rate, i.e. one unit increase in long-term average exposure to fine particulate matter ( $1 \mu\text{g}/\text{m}^3$ ) is associated with a 15% increase in COVID-19 mortality rate on average in the analysis.<sup>1</sup> More data and research are needed to study the correlation between COVID-19 and other pollutants.

Architects and designers play a significant role at building inception in determining the long-term health effects of its users.<sup>2</sup> Current building policies in India are extremely fragmented in terms of recommending IAQ standards. While significant strides have been taken towards implementing 'green building' norms and policies, IAQ remains a serendipitous result rather than a design objective through these norms. This article recommends improving IAQ through building policies via a three-fold approach.

First, in terms of education, improving awareness and active participation in the design fraternity can go a long way to effectively identifying and curbing poor IAQ. Building health is seldom fully integrated into the design scheme, and most infrastructure is seen as an 'add-on' serving the purpose of affordability or building standard certifications. This kind of short-sightedness often leads to vulnerability of building infrastructure, which inadvertently causes long-term health problems for its occupants.

Second, there is ample scope for better regulations, as the fragmented approach of IAQ assessment has led to overlapping standards that are perceived more as design obstacles, and often lead to poorly-planned indoor spaces. Better regulations and reforms that can be localised and adapted to the local climate and context would be crucial in alleviating design hindrances, as well as catering to occupancy health.

Third, local and state-level subsidies through support from local and state legislations and governments would help to inspire innovation. As a case in point, such examples include KfW subsidies in Germany<sup>3</sup>, state incentives across the US<sup>4</sup>, BCA Green Mark incentives in Singapore<sup>5</sup>, etc. Besides these three approaches, a general inter-disciplinary approach to design is also crucial towards ensuring better indoor spaces. Planning for health and the efficient use of resources means creating a more holistic collaborative approach towards building engineers and medical experts.

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A satellite image of Northern India, showing a thick, greyish-brown layer of smog covering the region. The smog is most dense in the northern and central parts of the image, obscuring the underlying terrain. The surrounding areas show a mix of green vegetation and brownish-yellow land. The Himalayan mountain range is visible in the upper right portion of the image, with some snow-capped peaks. The overall scene illustrates the extent of air pollution in the region.

“According to a recent report by the World Health Organization (WHO, 2019), ambient air pollution was responsible for 4.2 million deaths (out of these, almost 300,000 were children under the age of 5 years). A further 3.8 million deaths were attributable to Indoor Air Pollution, out of which almost 250,000 were children under the age of 5 years.”

– Hamed KHALIDI, New Dialogues, Berlin, Germany

Image Source: Smog over Northern India. August 2017. Image by NASA Earth Observatory.



Kamilla NIGMATULLINA  
Saint Petersburg  
State University  
Russian Federation

## FROM PANDEMIC TO INFODEMIA

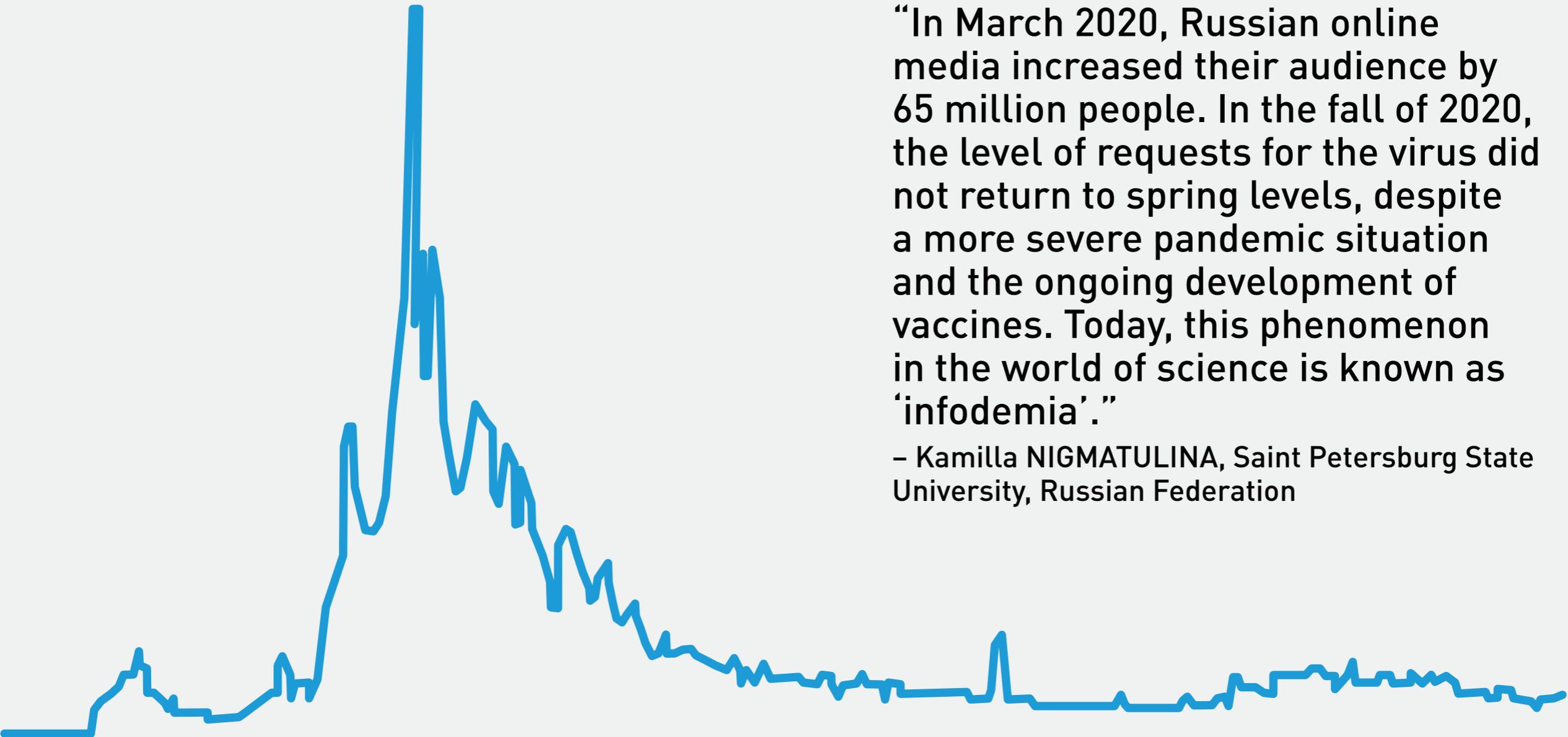
In March 2020, Russian online media increased their audience by 65 million people. People searched for information about the virus, symptoms, remedies and statistics for the regions of Russia. But this interest quickly subsided, because it was important for people not to receive information promptly, but to relieve tension - to laugh at the situation of self-isolation, discuss possible scenarios for the development of events in the Russian context, get support and reassure themselves with understandable explanations. Despite this, the Russian media turned out to be unprepared for a stream of new readers and offered low-quality information and unverified experts. This is not about fakes, but about a general decline in the quality of the work of professional journalists. Two main directions of publications were related to the pandemic situation and ways to engage yourself in self-isolation. Over time, both have exhausted their potential, and other social issues received less coverage. Finally, by June, the topic of coronavirus smoothly flowed

into amendments to the Constitution and voting for the country's new main law. In the fall of 2020, the level of requests for the virus did not return to spring levels, despite a more severe pandemic situation. Today this phenomenon in the world of science is known as "infodemia."

It was not a surprise that people mostly searched for memes, humor, and positive stories, because they needed getting rid of fear and a stress relief. The interest of the audience of Russian media and social networks in memes and humor has always been quite strong, but the infodemia exposed this trend even more clearly. The largest and most popular flash mob was the #Isolation movement, when Facebook users recreated painting masterpieces at home and became heroes of famous plots. The flash mob not only did not end in the fall of 2020 but was also embodied in a printed album of selected works with comments by an art critic. The movement became famous not only in Russia and abroad, the initiative was taken up by the world's leading museums and photo banks. Its Russian creator, Ekaterina Brudnaya-Chelyadinova, did not expect such a viral effect; today a separate article on Wikipedia is devoted to the flash mob. Along with grassroots initiatives a lot of official effort went into social media activism. In Russian social networks, both international and own hashtags with calls to stay at home spread quite quickly. The analytical company BrandAnalytics carried out measurements by hashtags on March 30. It turned out that in just one day the hashtags "better at home", "stay at home", "be at home",

“choose a home, not a disease”, “stop coronavirus”, “ wear a mask, it saves lives” 23 thousand posts were published (for 81.2 million messages in general on social networks), and 77% of them were pictures. Some of the pictures were distributed by accounts associated with the state project Stopcoronavirus. At the end of March, the United Russia party launched the hashtag #Thankyoudoctors with a call to photograph yourself with a piece of paper and a written phrase on it. The flash mob was supported by famous people. In November 2020, the #don'tgetsick call became the official hashtag.

Finally, professional media got into a complicated situation – their obligation was to provide information and analytics; however, this did not meet audiences' expectations. Successful media practices have been all about creating a space for the audience to communicate and empathize. The easiest way is online bars and online parties, more complex options are photography contests, virtual tours, e-sports tournaments, social photo projects. Among the latter, one can name a photo project of the “Poster” outlet, where graduates of Tomsk schools were photographed in dresses that they never managed to wear to the presentation of diplomas, or a photo project of the NGS55 media (Omsk) about doctors before and after the coronavirus working shift. The Village media has launched an outdoor social advertising featuring doctors' daily statements to draw attention to their daily work. This is how the media helped people cope with their fears and gave space to speak out.



“In March 2020, Russian online media increased their audience by 65 million people. In the fall of 2020, the level of requests for the virus did not return to spring levels, despite a more severe pandemic situation and the ongoing development of vaccines. Today, this phenomenon in the world of science is known as ‘infodemia’.”

– Kamilla NIGMATULINA, Saint Petersburg State University, Russian Federation

Image Source: Google search about Coronavirus in Russia in 2020. Illustration redrawn from screen shot (12/07/2020).



Nikolay RODOSKY  
Saint Petersburg  
State University  
Russian Federation

## SOCIAL MEDIA AS A PHARMAKON

Social media became a large part of our everyday life. There is no doubt that in a situation as dangerous and unpredictable as the COVID-19 pandemic situation social media might play a very significant role — either positive or negative. Our goal here is to estimate what are the most notable aspects of social media which can be crucial during the pandemic.

To start with let us address the dark side of social media which is fraught with danger. Social media became a very effective tool for spreading fake news and misinformation regarding the COVID-19 pandemic. The official website of Europol states it clear that misinformation regardless of its origins and objectives “only gains traction if the public share it through social media.” The reason why fake news spread so quickly can be traced up to search algorithms and page ranking. Geert Lovink mentioned that “nowadays an altogether new phenomenon is causing alarm: search

engines rank according to popularity, not truth.”<sup>1</sup> Moreover, MIT professor Sinan Aral states that “false news were 70 percent more likely to be retweeted and false news travel about six times faster than true news online.”<sup>2</sup>

In September 2020, one of the recent and alarming fake publications is the so-called “Letter from Belgian Doctors” which was posted on the docs4opendebate platform and has been immediately translated into several languages, including Russian. In a month, more than 15 thousand signatures supporting the letter were collected. In the letter, people claiming to be Belgian medical doctors criticize the quarantine measures and suggest to treat the COVID-19 infection like a simple seasonal flu, since mortality statistics (as they say) are allegedly overstated by the governments. This misinformation is particularly dangerous as it implies a lot of scientific terms and links to numerous medical papers (for example to “The Lancet”, one of the most respected medical journals). Thankfully, the arguments of the letter were investigated by a group of Russian journalists from “Meduza” and scientists and were declared insolvent.<sup>3</sup>

As for the fake news originated from Russia, we may recall the case of Polina Golovushkina who claims to be a Russian living in Lombardy, Italy. In March 2020, an alarming letter presumably written by Polina emerged in Russian social media. According to its text, elderly patients in Italy are denied treatment, as the government prefers to spend resources on young people, and medical workers “die like

flies". This kind of fake news can be extremely dangerous and misleading, as reliable data, mostly gleaned from the media, is intertwined there with obvious exaggeration and fraud. Even "Lenta.ru" which is one of the most popular Russian language online resources with over 600 thousand visitors daily took "Polina's letter" at face value.<sup>4</sup> These two fake letters were distributed via social media such as Facebook and may be seen as perfect examples of a collective mind (or "hive mind" as it is sometimes called) acting in a self-destructive manner. We may recall Jaron Lanier here stating that "the information system which informs the collective [should be] filtered by a quality control mechanism that relies on individuals to a high degree."<sup>5</sup>

Whether we like it or not but it is up to us to somehow find a perfect balance between multiple times proven thesis that hushing up the problem leads to disaster<sup>6</sup> and the warning that an excess of information can be just as harmful as a lack of it.<sup>7</sup>

Social media also can be incomparably useful when it comes to mapping and urban technologies. We may recall such projects like Kenyan open source software application Ushahidi and Indian digital citizen identification system Aadhaar. Ushahidi, which is used to collect large amounts of information and visualize data, have been creating more than 200 interactive maps on its hosted service to collect and share information about the virus spreading in the area, to organize local communities, and to make sure

that those who need supplies, food, or help are connected to those who can give it. Aadhaar technology on the other hand is believed to be enormously helpful in the distribution of the COVID-19 vaccine to each and every Indian citizen.<sup>8</sup>

In Russia, the largest IT-corporation Yandex took certain steps meant to overcome the pandemic crisis. For example, in Yandex.Maps application, the "City" section was drastically changed. Also, Yandex.Maps created a map indicating the foci of the spread of the virus in real time. It also has developed a constantly updating statistics web page showing infestations, recoveries, and deaths in the area. From now on Yandex collects and shares here different solutions that should help in the situation of social distancing.<sup>9</sup> Yandex.Food, which is a delivery service started to remind to wash one's hands to each customer.<sup>10</sup> Moreover, Yandex is forming a fund for financial support of drivers and couriers of its services. The money will go to those who have contracted the coronavirus or are quarantined due to contact with patients.<sup>11</sup>

We can conclude that during the pandemic situation "social media is providing life-giving connection as well as kindness and compassion at a time when there are almost no other means to communicate."<sup>12</sup>

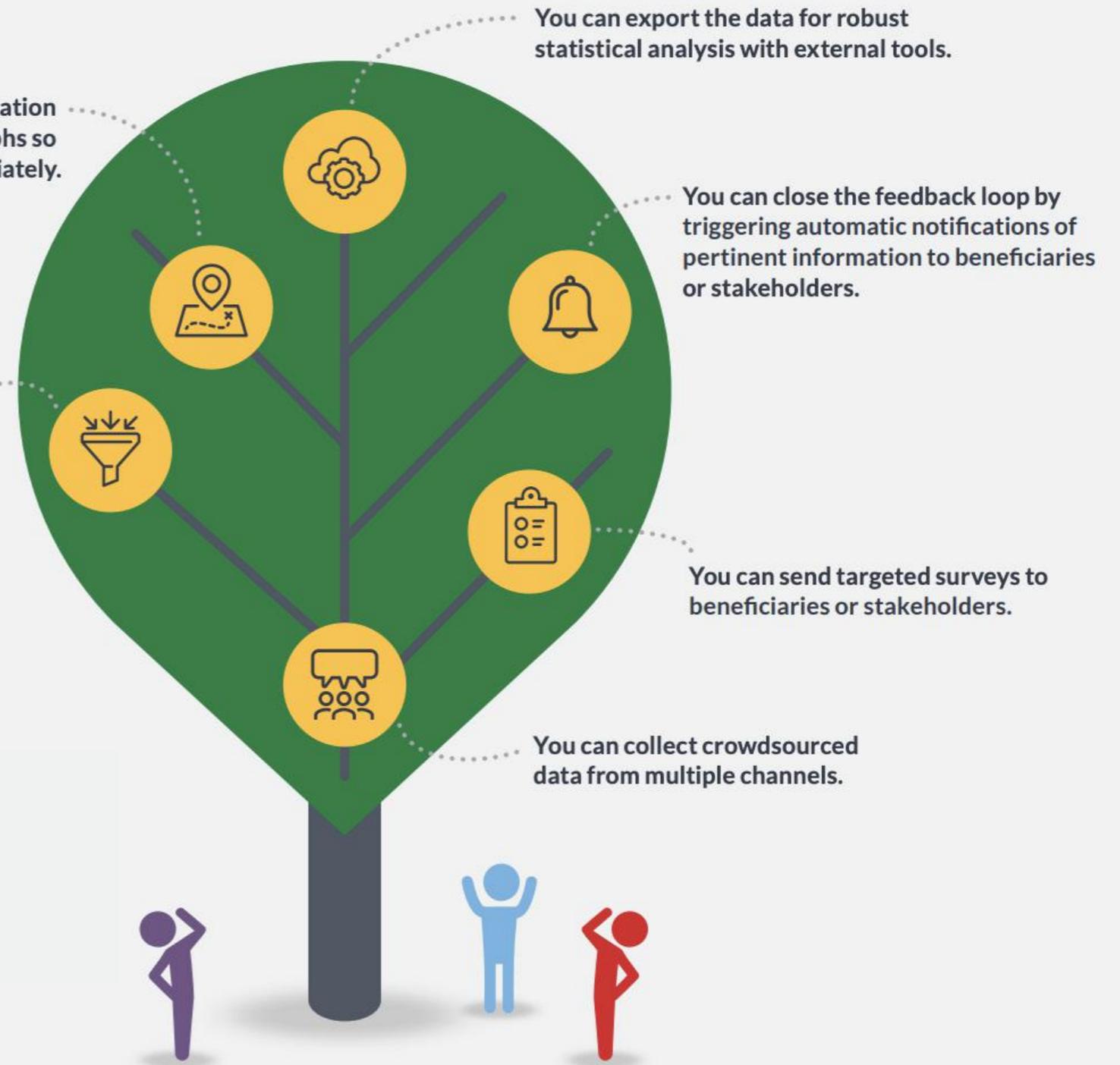
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“Social media can be incomparably useful when it comes to mapping and urban technologies to mitigate the COVID-19 impacts. The Kenyan open source software application Ushahidi and the Indian digital citizen identification system Aadhaar are very good examples.”

– Nikolay RODOSSKY, Saint Petersburg State University, Russian Federation

Image Source: Illustration of the Kenyan open source software application Ushahidi.

[https://lh3.googleusercontent.com/GfKH0Cw\\_mNc4nDN0EVXHa\\_P1W3VSdT8KzmHRJWFLVpPx6yZSJles4y\\_4TldWferoWXodX2k8eL0uaxEywljTFbLbB\\_YCsK9awOJKrA3P6PpMCfsrk1Hdo7iGUq3nd90yKoq6yUe](https://lh3.googleusercontent.com/GfKH0Cw_mNc4nDN0EVXHa_P1W3VSdT8KzmHRJWFLVpPx6yZSJles4y_4TldWferoWXodX2k8eL0uaxEywljTFbLbB_YCsK9awOJKrA3P6PpMCfsrk1Hdo7iGUq3nd90yKoq6yUe)





Mihai TODER-PASTI  
Young Global Changer of  
Global Solutions Initiative  
Bucharest, Romania

## We are more connected than ever and feel lonelier than ever. Can COVID-19 be a wake-up call?

Engaging the disengaged should be a top priority for us to build resilient communities. The drift started before COVID-19, but now is the time to start fixing it. We may still have time.

I was born in a small town of around 10.000 inhabitants before the smartphone and internet era. We used to play outside every night, go swimming in the nearby river, and run in the forest. Besides reading and rarely TV, everything was physical and collective. Everybody knew everybody; our parents met almost daily. It was a vibrant and strong community of kids, parents and neighbours. We felt safe, taken care of, and we supported ourselves in the face of adversity. This reality was around 2000, a long time ago.

More than a decade later, in 2015 The Independent talked about The loneliness epidemic,<sup>1</sup> citing various studies about

loneliness, showing how social pain is as real a sensation for us as physical pain.<sup>2</sup> Research has shown loneliness impacts on health in a greater way than smoking or obesity, but loneliness is still a taboo subject we are just starting to discuss. My birthplace, having around the same population, already seemed empty. As the job and school ended, everyone went home, to log out from this life and log in the e-social life. I've experienced this happening more and more wherever I travelled around the world. Phones and Laptops are replacing people, being an escape router that ends up disconnecting us from reality. Back then it was a choice, now is not one anymore.

Years later, while the COVID19 took the world by storm, and evolved from an epidemic to a pandemic, we may see the effects of our long term loneliness, while still being able to appreciate the positive side of social media and digitalisation during this time. The question is, what will happen after the lockdown, are we going to reconnect offline, to remain in the digital space? To escape virtual reality and re-engage with our families and friends and neighbours, we'll need a lot of collective effort.

The way you feel affects the way you behave and exist in society. When you are disengaged you care less, you vote less, to become less of a proactive citizen. You start to lock yourself inside your home and after that inside yourself. We have a lot of work to put into creating and maintaining the social fabric in the big cities today, in this digitalised world

affected by a pandemic. This social aspect is, in my opinion, the only way to create long-lasting resilient communities, addressing our addiction to e-devices and fighting climate change.

For the last 10 years, I coordinated in total more than 900 young people, volunteers, future engineers and architects in designing and building two of the most sustainable homes in the world and trying to create better cities. With Global Shapers, we started a project to put PVs in a neighbourhood to bring people together, to create a small community. Linking people at city-level starts by connecting people in their immediate space.

The COVID19 pandemic is both a health and a societal problem. We could have been more resilient if we had addressed the epidemic of loneliness sooner. Luckily for us, it is not too late, and we can use this global event as a spotlight to address mental issues and loneliness, two problems existing long before the pandemic. We can change the story and we have to.

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2. Social pain and physical pain: shared paths to resilienc - 2012, PMCID: PMC4869967



“The question is, what will happen after life in confinement? Are we going to reconnect offline or remain in the digital space? To escape virtual reality and re-engage with our families, friends and fellow citizens, we’ll need a lot of collective effort.”

– Mihai TODER-PASTI, Young Global Changer, Bucharest, Romania

Image Source: Light and shadow in the world of Covid. A body only covered by a white shroud, supported by the cot and bathed by rays of light. Credit: Eduardo López Moreno, Mexico 2020.



Albert TING  
CX Technology & Lawrence  
S. Ting Memorial Foundation  
Taipei, Taiwan



Amber TING  
Andover, Massachusetts  
the United States

### Taiwan's resilient public health system: leveraging urban and digital infrastructure to combat COVID-19

Taiwan is a technological powerhouse with a highly urbanized population of 23 million. The greater Taipei metropolitan area is densely settled by 7 million people.<sup>1</sup> According to the International Institute for Management Development (IMD), Taiwan's economy was the 11th most digitally competitive in 2020.<sup>2</sup> Taiwan's sophisticated urban and digital public health infrastructure allowed it to combat COVID-19 effectively. In January 2020, Johns Hopkins University predicted that Taiwan would be the second-highest country/region at risk of experiencing a

breakout due to its proximity (110 kilometers away) and linkages (c. 700 flights a week) to mainland China.<sup>3</sup> However, as of January 12th, 2021, Taiwan's case count remains at an extraordinary low of 838 – with 58 domestic cases and 7 fatalities.<sup>4</sup>

### Centralized Command Enables Decisive Early Actions

Decisive early government action was key in preventing the spread of COVID-19. Back in 2003, Taiwan suffered one of the highest Severe Acute Respiratory Syndrome (SARS) fatality rates with 73 deaths.<sup>5</sup> As a result, in 2005, a framework for the Central Epidemic Command Center (CECC) was established.<sup>6</sup> On December 31st, 2019, a month before the World Health Organization (WHO) declared a Public Health Emergency of International Concern, Taiwan notified the WHO of its concerns, began onboard health inspections of aircraft passengers from Wuhan, and stockpiled respirators and N95 masks.<sup>7</sup> Before COVID-19 reached Taiwan, the CECC was activated on January 20th, 2020. After, on February 25, 2020, Taiwan's legislative body passed The Special Act for Prevention, Relief, and Revitalization Measures for Severe Pneumonia with Novel Pathogens and granted the center sweeping executive power.<sup>8</sup> The center made a necessary decision to ban healthcare professionals from traveling abroad to prevent pathogen importation into the healthcare system.<sup>9</sup> By late March, the CECC also limited foreign tourists from entry.<sup>10</sup> Careful management allowed Taiwan to maintain air links to major US, European and Asian cities throughout 2020.

## World-Class Digital Contact Tracing w/ Mandatory 14-Day Self Quarantine

While standardizing travel and quarantine procedures, authorities took advantage of vacant urban hotels, municipal administrative resources, and digital healthcare infrastructure. National Health Insurance's Medi-Cloud digital platform (with real-time patient records, claims, and fee deductions) was integrated with Immigrations and Customs databases, so healthcare providers could see patients' complete travel history along with health records.<sup>11</sup> In late January of 2020, this allowed for case identification.<sup>12</sup>

Travelers bound for Taiwan are required to quarantine for 14-days.<sup>13</sup> At customs, they download the Quarantine System for Entry app, which triangulates their location via reception towers as part of the Digital Fence System, created by officials alongside telecom companies.<sup>14</sup> At the municipality level, officials call quarantining households daily, furnishing them with food and supplies, and noted turned-off phones.<sup>15</sup> If someone breaks quarantine, local civil affairs departments and police are notified immediately, and officials trace further contacts.<sup>16</sup> Using mobile phone location data, coupled with in-person interviews and CCTV footages, healthcare officials rigorously trace all patient contacts. Each case means an average of 25 people undergo quarantine. About 400,000 people took part in mandatory 14-day self quarantines during 2020. Remarkably, the non-compliance rate is approximately 0.3%.<sup>17</sup>

## Facemasks Stop Local Transmissions

Early adoption of facemasks reduced local transmissions. The CECC limited facemask exports on Jan 24th, 2020, and temporarily nationalized the production chain on Jan 30th, 2020.<sup>18</sup> The Ministry of Economic Affairs worked with 26 local manufacturers to set up 60 production lines in 1 month<sup>19</sup> and increased daily facemask production from 1.8 million per day to 20+ million per day in a record 4 months' time.<sup>20</sup> Military reservists were brought in for midnight shifts to ensure 24/7 production.<sup>21</sup> Taiwan quickly became the world's second-largest facemask supplier.<sup>22</sup> Starting in March 2020, the CECC partially lifted bans and subsequently returned control of production facilities to private entities.<sup>23</sup>

Authorities leveraged existing urban and digital infrastructure to rapidly prototype a mask distribution system. On February 6th, over 6,500 pharmacies were supplied with requisitioned masks. Residents could present their national health insurance cards for 2 masks per week, later 10 per two weeks<sup>24</sup>, at a price of NT\$5 per mask (c. US\$ 15 cents) (later reduced to NT\$4 per mask) at these outlets.<sup>25</sup> When long lines formed, authorities swiftly took advantage of Taiwan's urban layout, dotted with convenience stores, and tasked a further 11,500 convenience stores including 7-11 and Family Mart stores to distribute facemasks 24/7/365.<sup>26</sup> In the final iteration, residents can order adult or kid-sized masks online, retrieve them 24/7, send them overseas to relatives, or

donate them to international humanitarian efforts.

During the pandemic, digital innovation was encouraged. Ministries worked with Taiwan's active hacktivist community on a "rapid, iterative and bottom-up process."<sup>27</sup> Armed with government open data, netizens, coders, and AI/Blockchain start-ups used distribution ledger technology to design interactive maps with chatbots and real-time stock levels of facemasks in distribution outlets to put a stop to panic buying.<sup>28</sup>

### **Effective Communication Strategy Generates High Level of Public Trust**

From late January through early June of 2020, the CECC held daily press conferences.<sup>29</sup> The Minister of Health and Welfare personally provided updates in infection numbers and advice. The daily 2 pm show became one of the highest-rated television programs in Taiwan. Officials used social media outlets like Facebook, Line, and Twitter to connect with younger populations.<sup>30</sup> They sometimes released self-mocking memes to combat misinformation with humor.<sup>31</sup> In addition, online platforms like vTaiwan allowed youths and netizens to voice, upvote, and communicate policy expectations to officials, health experts, and business leaders.<sup>32</sup> This brought a degree of transparency to decision-making and helped officials gain public trust.

### **Resulting in an Extraordinarily Low Case Count of 838 in Taiwan as of January 12th, 2021**

In conclusion, decisive early actions and transparent

leveraging of digital public health and urban infrastructure enabled Taiwan to 1) set up a world-class contact tracing program; 2) enforce effective 14-day self quarantines; and 3) manufacture then widely distribute facemasks to stop local transmission. Instead of becoming the second-highest country/region at risk of a major outbreak, by working with its public, Taiwan enjoyed a run of 253 days free of local transmissions during 2020, and successfully contained COVID-19 with an extraordinarily low total case count of 838 as of January 12th, 2021.<sup>33</sup> Nonetheless, COVID-19 has been a humbling lesson for all of humanity. Taiwan needs to continue to be vigilant in its public health defenses to ensure the wellbeing and safety of its residents.

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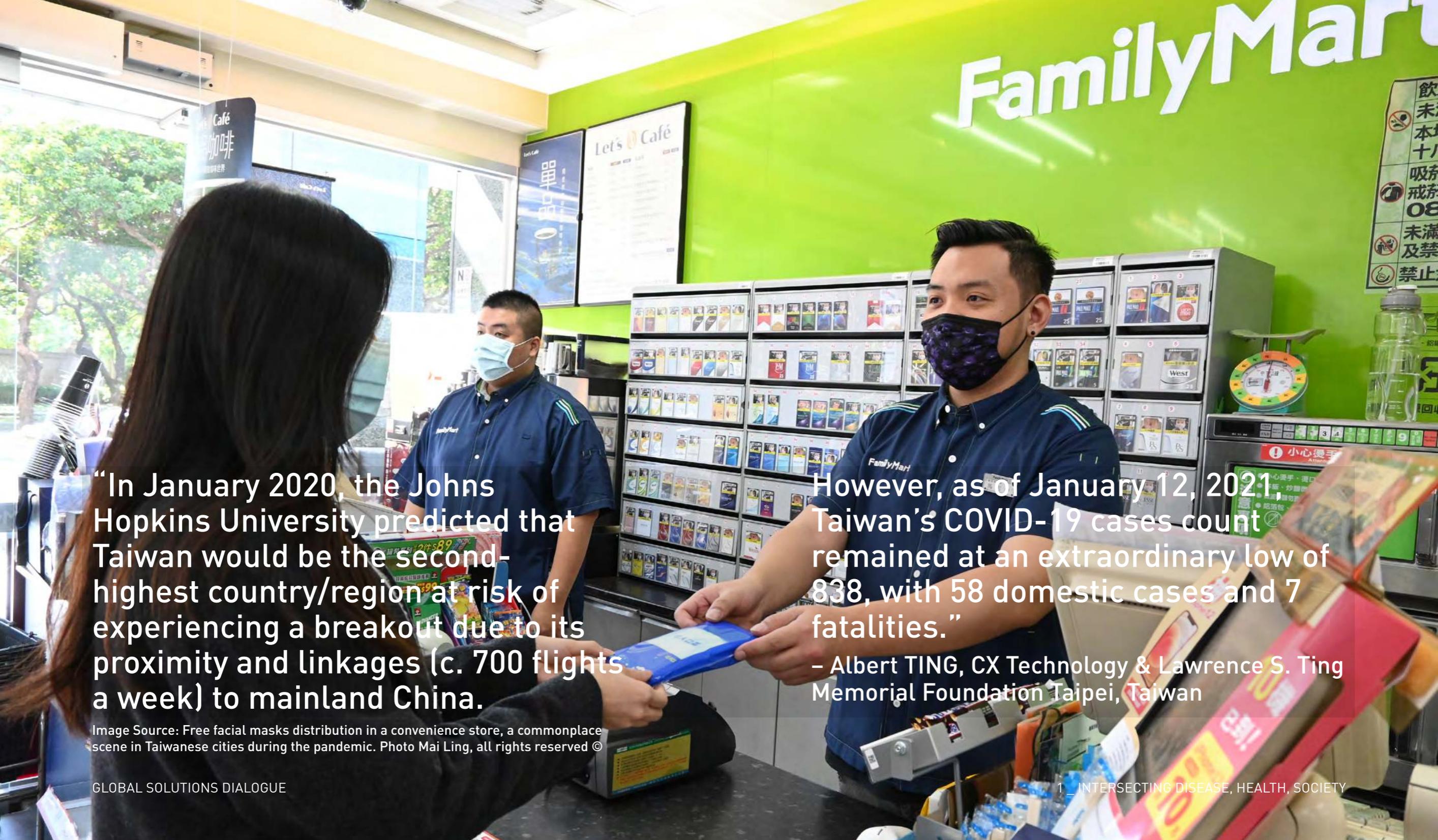
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FamilyMart

“In January 2020, the Johns Hopkins University predicted that Taiwan would be the second-highest country/region at risk of experiencing a breakout due to its proximity and linkages (c. 700 flights a week) to mainland China.

However, as of January 12, 2021, Taiwan’s COVID-19 cases count remained at an extraordinary low of 838, with 58 domestic cases and 7 fatalities.”

– Albert TING, CX Technology & Lawrence S. Ting Memorial Foundation Taipei, Taiwan

Image Source: Free facial masks distribution in a convenience store, a commonplace scene in Taiwanese cities during the pandemic. Photo Mai Ling, all rights reserved ©



Tolullah ONI  
University of Cambridge  
MRC Epidemiology unit  
the United Kingdom

## Planetary health: refreshing the perspective one year after the COVID-19 pandemic outbreak

Health is everybody's business. That much has become apparent over the year 2020 as the Sars CoV-2 virus spread across the globe. The consequent pandemic, disproportionately playing out in cities, caused whole-of-society disruption with its tragic consequences on health and livelihoods and with all sectors explicitly tasked with creating health and reducing disease risk.

This unprecedented challenge to orthodoxy can be unsettling and overwhelming. However, there has been a rapid increase in social experimentation and solution design to mitigate the immediate short-term effect of the pandemic and public health response. To achieve long term inclusive health, this embrace of innovative solutions will need be extended to re-calibrate systems for health, bringing more diverse innovators into the health and health-adjacent urban sectors.

Achieving population health will also require a focus on urban areas because:

Rapid urbanisation, particularly across Africa and Asia, is characterised by a growing number of people are living in dense informal settlements with unsafe human settlements and inadequate waste and water infrastructure that increase disease vulnerability and the risk of transmission and persistence of infectious and non-communicable disease.

The large sprawl of these rapidly growing settlements is pushing the boundaries of human settlements and contributing to re-emergence of infectious disease and zoonotic disease transmission as human and animal environments intersect in new ways.

COVID-19 has revealed significant flaws in our existing urban infrastructure, with systems that reduce resilience to food insecurity and streets that prioritize motorised traffic making physical activity for leisure or travel unsafe in many cities.

These urban flaws can be considered to influence health and perpetuate inequalities along four dimensions: Exposure, Vulnerability, Consequence and Access to care.

Of these four dimensions, access to care is perhaps the most intuitive as considering health in urban infrastructure

most often conjures consideration of access to adequate healthcare infrastructure. It is worth considering that beyond geographical access, it is critical that urban infrastructure planning activities consider other domains of access including appropriateness and accommodation (to ensure the social and cultural needs of the population are served).

Our improved understanding of the epidemiology of the pandemic also revealed that vulnerability to severe disease and death is associated with exposures like air pollution and co-morbidities like obesity (at the end of 2020, COVID-19 mortality rates were more than ten times higher in countries where overweight prevalence exceeds 50% of adults compared with countries where overweight prevalence is below 50% of adults (<https://www.worldobesity.org/resources/resource-library/covid-19-and-obesity-the-2021-atlas>)). Beyond individual choice, we know that obesity prevalence is associated with the food environment and access to safe space for physical activity. And yet, in many particularly deprived parts of the UK, urban planning and development is not sufficiently considered a route to improving population health resilience resulting in inequitable access to healthy foods and public spaces.

While the initial rhetoric at the start of the pandemic was that we are all in this together, across the world, we have noted that certain population groups were more likely to be exposed to the virus. A better understanding of the modes

of transmission of the virus revealed that household transmission comprised a significant source of infection. As such people living in poor quality, overcrowded housing were much more likely to be exposed to the virus. In the UK, this population group was much more likely to be deprived, from minority ethnic groups, and household members were much more likely to work in public facing essential work.

Furthermore, the fabric of the urban form plays a role in how communities shoulder the consequence of movement restriction measures to curtail the spread of the disease. The differential ability of individuals to abide by the spatial measures to mitigate risk such as self-isolation due to overcrowded households, built environments not conducive for social distancing, safe physical activity or embracing active modes of travel such as walking or cycling, and precarious livelihoods bearing severe economic consequences of lockdowns have exposed inequalities and systemic social, economic and environmental governance flaws in desperate need of repair and re-design for health and equity.

Despite these easily recognisable opportunities to improve health through integrating health considerations in urban design, the fact that these urban sectors are rarely or never held accountable for population health means that this opportunity is rarely embraced. For example, a radical reform of the planning system was announced to build more homes as part of pandemic recovery in the UK, bypassing normal planning requirements of minimum

space, ventilation and lighting requirements and the need to consult local authorities or communities about what development they want (<https://www.ft.com/content/3f7a55c9-6757-4a73-9d50-962212d3d379>). The association between these very built environment characteristics and health is illustrated by research from Wales conducted over a 10 year period that found that improvements to housing quality was associated with an almost 40% reduction in emergency hospital admissions (<https://jech.bmj.com/content/jech/early/2018/06/20/jech-2017-210370.full.pdf>).

Creating inclusive sustainable health in cities will therefore require a focus on systems for health, an umbrella term for factors and systems that determine health. Within this umbrella, the healthcare system, a necessary and vital component, is part of the broader systems of health that influence health such as urban development. Critical to the effectiveness for such a systems approach is embedding accountability mechanisms for health, cognisant of the disconnect in time and space between urban exposures and health outcomes.

The interconnected nature of the systems that influence health and the planet mean that policies that target one part of the system to create health may have unintended second-order consequences on other parts of the system that could be deleterious to health. This complexity highlights the importance of taking a planetary health approach to shaping cities, cognisant that disruptions in the delicate

balance between human health, human activities in the built environment and the natural ecosystems we depend upon have significant implications for health and sustainability.

It is important that the timely and responsive commitments to addressing the acute manifestation of the consequence of systems failures, demonstrated in the emergency responses to the COVID-19 pandemic, are extended with the same degree of urgency to health foresight.<sup>6</sup> In the long term, health foresight endeavours should aim to address the social, economic, political and ecological emergencies that contribute to current and future health emergencies. It is vital that we grapple with complex evolving realities and environments that increase risk of persistence of old, and emergence of new diseases, and the delicate balance between human and ecological wellbeing. In so doing, we quickly realise that:

We cannot address this or any future health or environmental emergencies without addressing their social, economic and political determinants.

Response cannot be restricted to the health sector but instead a whole-of-society approach required, with unprecedented collaboration and cooperation across sectors, cities, countries and regions.

It is as short sighted to focus on urban development at the

detriment to health, as it is to focus on health at the detriment to ecological boundaries. From unprecedented collaboration between sectors (including transport, housing, business and health) to transformational adaptations in our work and study patterns over incredibly short periods, it has become apparent that initiatives previously considered unthinkable or radical have emerged as sensible and even popular strategies and policies. This is a lesson in what is possible when the situation is considered sufficiently urgent. And because health does not trickle down from good intentions, it will be crucial to develop robust data and metrics to measure the impact of innovative urban policies and strategies on human and planetary health.

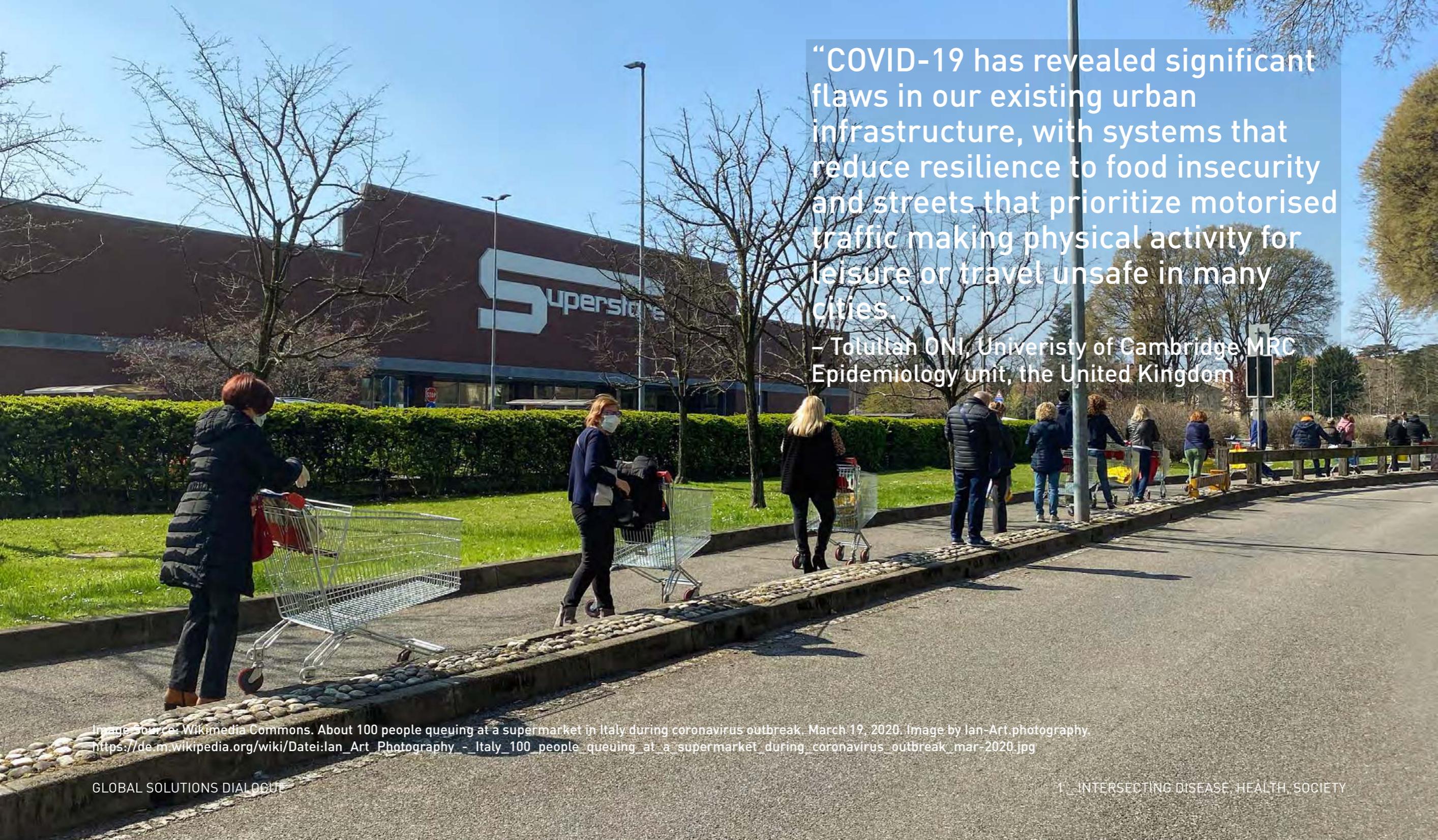
While COVID-19 presents a new and acute health emergency, we would be remiss to not consider the sustained health emergencies that have plagued (particularly low and middle-income) countries for a long time. As such, efforts to build resilient and inclusive systems for health should consider that many of the shocks and stressors that drive acute and protracted health emergencies arise out of intentional choices by actors across sectors from local to global. Therefore, critical to building resilience is not simply adaptation to cope with shocks and stressors as an endpoint, instead confronting the upstream choices and decisions that weaken resilience by driving the system towards disease and ecological disruption. In this context, efforts to build resilient systems for health would focus on strengthening the ability of systems (and all actors within these systems)

to create sustainable, sustained and inclusive human and planetary health.

Since the COVID-19 pandemic was declared, the world has witnessed unprecedented collaboration across society to fight the pandemic. For the first time in modern times, health has become everyone's business. This momentum, with its tragic impact of human lives worldwide, presents an opportunity to build on this cooperation and collaboration beyond reacting to the pandemic to accelerate innovative efforts to future-proof health by reducing vulnerability to, and mitigate impacts of future pandemics, challenging the boundaries of social possibility towards a re-imagined future.

Beyond addressing the immediate health emergency, post-COVID-19 planning and re-set requires that we focus on long-term solutions. There must not be another return to business as usual. We need to start building robust, inclusive systems that account for all the social determinants of communicable and chronic diseases, which will continue to plague the poorest and most marginalized communities around the world.

1. <https://qz.com/africa/1839019/covid-19-how-to-plan-for-africas-next-health-emergency/>  
[https://link.springer.com/referenceworkentry/10.1007/978-3-030-05325-3\\_106-1](https://link.springer.com/referenceworkentry/10.1007/978-3-030-05325-3_106-1) <https://www.weforum.org/agenda/2020/05/here-s-how-science-diplomacy-can-help-us-contain-covid-19/>



“COVID-19 has revealed significant flaws in our existing urban infrastructure, with systems that reduce resilience to food insecurity and streets that prioritize motorised traffic making physical activity for leisure or travel unsafe in many cities.”

– Tolullah ONI, Univeristy of Cambridge MRC Epidemiology unit, the United Kingdom

Image Source: Wikimedia Commons. About 100 people queuing at a supermarket in Italy during coronavirus outbreak. March 19, 2020. Image by lan-Art photography. [https://de.m.wikipedia.org/wiki/Datei:lan\\_Art\\_Photoaphy\\_-\\_Italy\\_100\\_people\\_queuing\\_at\\_a\\_supermarket\\_during\\_coronavirus\\_outbreak\\_mar-2020.jpg](https://de.m.wikipedia.org/wiki/Datei:lan_Art_Photoaphy_-_Italy_100_people_queuing_at_a_supermarket_during_coronavirus_outbreak_mar-2020.jpg)



“We cannot address this or any future health or environmental emergencies without addressing their social, economic and political determinants. It is as short sighted to focus on urban development at the detriment to health, as it is to focus on health at the detriment to ecological boundaries.”

– Tolullah ONI, Univeristy of Cambridge MRC Epidemiology unit, the United Kingdom

Image Source: Fragile permafrost, overlooking Yakutsk on a late spring day, Yakutia, Russian Federation. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Milindo CHAKRABARTI  
O.P. Jindal Global University  
Sonapat, India

## Global resilience to future pandemics: A tentative action plan

### Vulnerabilities galore

The present pandemic has forced the global humanity into an uncharted territory at an unimaginably and unmanageably high speed. It has increased our vulnerability in a way that spares none, differences in income, wealth, education and other social and political parameters notwithstanding. This crisis is showing up at a time when other potential sources of vulnerability like climate change, environmental and ecological degradation and inequality are simultaneously raising their ugly heads. An observed link across these different sources of vulnerabilities is being suggested from many corners including the Secretary General of the United Nations who called for an “effective delivery of global public goods.”

### Global Public Investments to create resilience

How to ensure “effective delivery of global public goods” (GPGs) that could reduce vulnerability? A small detour! We would argue that we got to take care of not only provision of GPGs but also protecting the global commons, that is, the planetary ecosystem. The latest Human Development Report 2020 emphatically underscores the crisis of human vulnerabilities at planetary scale and calls for linking human development to pressure on the planet earth. We may club these two into Global Social Goods (GSG).

Delivery of GSGs calls for global public investments (GPI). Investments would mean setting aside resources available for present consumption and to help generate income in future including that for the future generations as well. Such investments will help achieve SDGs within its stipulated time frame – an aspiration already made uncertain due to the onset of pandemic. While most of the SDGs call for provision of GPGs, some also are directed towards protecting the global commons – SDGs 6,7, 13 and 14 along with SDG 11. One common feature binds all these SDGs. Achievement of all these SDGs would ensure benefit to the entire humanity and the planet earth. In technical terms, all these efforts will generate positive externalities to Homo sapiens and other living species as opposed to the present practices of producing private goods for individual consumption that often generate negative externalities for many to benefit a small section of the humanity. Thus a necessary feature of GSGs would be to create positive externalities for the planet

and all its living inhabitants who are symbiotically linked to one another for sustained existence. It is doubtful if private investments that mostly look for selfish approaches to profit maximization, even with the prospect of inflicting negative externalities on others, would be a natural partner in facilitating GPI. There is no absurdity in assuming that resources for GPI would have to be forthcoming mostly from public sources in tandem with the altruists.

### **Mobilizing resources**

Obviously, GPI would call for mobilization of considerable resources. A simple back of the envelope calculation suggests that if all the countries agree to annually contribute 0.28% of their GNI, i.e., an amount equivalent to the GNI generated in a day, US\$ 240 bn can be accumulated annually (using estimates of global GNI at current prices in 2019). This fund may be utilized to invest to provide GSGs, like Intellectual Property Rights (IPR) -free technology and knowledge to eradicate poverty, hunger and infectious diseases among others. Protection of natural ecosystems may also be facilitated. As the funds are accumulated, they may be invested towards contributions to achievement of the SDGs. Needless to add, these resources are to be invested in providing only GSGs that have global footprints. Social Goods to be provided at local, national or regional levels would call for further and separate investments as they would cater to the need of a particular geographical region and may not necessarily correspond to the issues in global vulnerability, if not even add to possible regional conflicts.

There should be complete separation between public goods identified to be provided at the global level and those created at the level of a particular region.

### **GPI to tackle potential future pandemics**

The flow of GPI so generated may be allocated for taking care of a number of global issues. Given the experiences of the present pandemic and keeping in mind the possible risks of future pandemics a part of the GPI may be spent for (i) early detection of threat of pandemics (ii) development of protective measures – vaccines, health infrastructure and logistics – to minimize the lethal impact of the pandemic and (iii) stabilization of the resultant shocks – economic and social – in the shortest period of time. Such funds may support collaborative research by a network of laboratories in developing vaccines at short notice followed by their swift production and distribution. A part of the funds accumulated may also be set aside for creating a corpus for global pandemic insurance fund for use to reduce the potential increase in vulnerability. Some resources may also be reserved for creating a basic minimum health care facilities in countries lagging behind in terms of their basic health infrastructure. Obviously, these measures are to be so created as to be accessible to the global population on an equal term in an inclusive manner. GPIs also have to be participatory.

G20 Summit in Japan called for Universal Health Coverage. With an annual potential kitty of 240 billion US\$ elaborat-

ed above, a fraction of the same would be good enough to achieve universal health coverage for all by 2030. It is estimated that there will be a USD 176 billion gap in the meeting the health-linked SDGs in 54 poorest countries.<sup>1</sup> The overall research and development spending in the pharmaceutical industry being 186 billion U.S. dollars globally in 2019,<sup>2</sup> a part of the GPI may also be devoted to meet the R&D expenditure required to provide IPR-free necessary drugs and vaccines to combat infectious diseases with potentials to turn into pandemics. GPI in protecting the planet would also prevent spread of zoonotic diseases responsible for pandemics. Properly handled, the proposed GPI fund can take care of providing many of the GSGs and help achieve the SDGs as desired.

### **GPI and Global Basic Income**

Recent discussions on global basic income have attracted attention of global policy makers, UN included.<sup>3</sup> It suggests providing annual basic income support to every individual to generate purchasing power in the hands of individuals to help them consume a basic minimum basket of private goods. GPI, on the other hand, with its intention to provide public goods that are non-excludable in consumption, calls for investments in global social goods that can, in effect, enhance the productive capacity and hence the income potential of every individual on a sustained basis.

### **Some scalable experiments**

The initiative by India to create a COVID 19 Emergency Fund with voluntary contributions from SAARC member countries may serve as an example of an effort in progress. Another initiative by India and France in creating International Solar Alliance to support utilization of solar power potential in the sunshine countries located in the tropical region can be cited as an effort towards this direction. The experiences of IBSA (India, Brazil, South Africa) Fund may also be scaled up to a global level.

1. <https://openknowledge.worldbank.org/bitstream/handle/10986/31930/138096.pdf?sequence=4&isAllowed=y>

2. <https://www.statista.com/statistics/309466/global-r-and-d-expenditure-for-pharmaceuticals/#:~:text=In%202019%2C%20research%20and%20development,186%20billion%20U.S.%20dollars%20globally.&text=Pharmaceutical%20R%26D%20includes%20all%20steps,and%20all%20clinical%20trial%20stages.>

3. <https://digitallibrary.un.org/record/842173?ln=en>

“The present pandemic, although not the first one in the past decades, has forced a global humanity into an uncharted territory at unmanageably high speed. It is time to think about the delivery of Global Social Goods and a global resilience and response plan to future pandemics.”

– Milindo CHAKRABARTI, O.P. Jindal Global University, Sonipat, India

Image Source: The Gara-Bashi base camp and station at the Elbruz, Kabardino-Balkarie Republic, Russian Federation, overlooking the Orth Nenskre Glacier in Georgia. Image by Nicolas J.A. Buchoud, all rights reserved ©.

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## 2.0. Unlocking the COVID-19 from cities

Nicolas J.A. BUCHOUD, Global Solutions Initiative, Paris, France

## 2.1. A second apartheid: On South African cities and the pandemic consequences on informal settlements

Warren SMIT, African Center for Cities, Cape Town, South Africa

## 2.2. Southern urbanism and collective life

Gautam BHAN, Indian Institute for Human Settlements (IIHS), Bangalore, India

## 2.3. A grounded response to COVID-19: On informal civil society and support

Thai NGUYEN, Young Global Changer of Global Solutions Initiative, University of Groningen, the Netherlands

## 2.4. The people's plan for the Royal Docks

Daniel BRIDGE, Royal Docks, London, the United-Kingdom

## 2.5. Resilience from theory into practice. Elements from the Milan experience

Piero PELIZZARRO, Municipality Milan, Italy

## 2.6. Food baskets and baskets of indicators: Actions by Casa Fluminense's network in the outskirts of Rio de Janeiro

Luisa FENIZOLA and Vitor MIHESSEN, Casa Fluminense, Rio de Janeiro, Brazil

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## 2.7. Reshaping cities' development: Preliminary signs of a post-pandemic urban culture

Luca BIZZARRI, Regional Government of South Tyrol, Bolzano, Italy

## 2.8. A constitutional perspective: labour market and inclusive urbanization in post COVID-19 India

Amitabh KUNDU, Research and Information Systems for Developing Countries (RIS), India

## 2.9. Regional integration and cooperation as a response to the crisis: an Indonesian and ASEAN perspective on urbanization, inequality, informality and sustainability

Riatu MARIATUL QIBTHIYYAH and Teuku RIEFKY, University of Indonesia, Jakarta, Indonesia

## 2.10. Human capital as a sustainable infrastructure: towards an eighteenth sustainable development goal?

John NEWBIGIN, Ambassador for the Creative Economy to the Mayor of London, the United Kingdom



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“The infrastructure in the most successful projects are people. Social capital generates community resilience and well-being more than financial capital but it also produces value and financial outputs.”  
– Michael COHEN, New School, New York, the United States

Image Source: Rice ATMs have been created in Vietnam by private entrepreneurs to provide free, safe distribution of rice to the poor and lower income households and individuals, during the pandemic. The system was endorsed by local governments and it and rapidly and successfully expanded from Ho Chi Minh City to other cities in the country and in the Asean region throughout 2020.  
<https://vnanet.vn/en/anh/vna-photos-1027/covid-19-hanoi-unveils-rice-atm-machine-for-underprivileged-people-4598743.html>



Nicolas J.A. BUCHOUD (ed.)  
Global Solutions Initiative  
Paris, France

## UNLOCKING THE COVID-19 FROM CITIES

The COVID-19 pandemic has escalated into multiple socio-economic challenges in a world interconnected by cities. It has circulated within cities along local and regional infrastructure systems supporting the economy. In the absence of preventative and curative strategies, the World Health Organization, supported by national governments, has urged people to adopt social distancing measures but this approach has had many drawbacks.

Social distancing does not apply for communities depending on street-life. Social distancing does not apply for people and households depending on informal economy, whereas it is a predominant feature of the global urban economy. Social distancing does not apply for workers who have to commute within metro-areas, meaning for hundreds of millions who have been more severely exposed to health risks not because of the place they live but because of jobs and housing distribution.<sup>1</sup>

International organizations and national governments have often considered that cities were to implement centralized sets of solutions of social distancing and other sanitary protocols, bypassing local decision-making and overlooking communities' resilience. Now that vaccines distribution has started, the role of subnational governments in contributing to recovery plans is critical, as over 60% of the global gross domestic product comes from less than 1,000 cities and metropolitan areas of +500,000 inhabitants.

It is urgent to unlock the COVID-19 from cities, recognizing the risks of enlarged social divides that could lead to possible new forms of sanitary apartheid. Anticipating the foreseeable post pandemic crises with increased poverty and social inequality, there is need to acknowledge pre-crisis discrepancies. As the semantics and pragmatism of green sustainability are highly developed, the standards for social sustainability, have eroded. In light of the extent of informality, solutions and policies that reduce the waste of social capital and human resources are to be privileged. It's about coevolution of the human social interaction and the environment, but not about a kind of simplistic destructive or even constructive win-win relationship.

As patterns of agglomeration inequalities are repeated locally across the globe, the urban socio-economic consequences of the pandemic have to be addressed globally by national and local governments together with international institutions, otherwise the post COVID-19 crisis financial

deficits will be redoubled by deeper social losses and chronicle institutional instability. Because poverty, which in many cities is particularly related to informality, is only one side of polarization, it is worth not losing sight of the other end: wealth. Cities are places where wealth and poverty sit starkly side by side. In many countries, wealth is concentrated primarily in large cities. They serve the purpose of businesses, social commoditization, the availability of infrastructures, security as well as outward representation. The analysis of both poverty and wealth makes the overall view of social reality possible. This is required, in turn, as basis for understanding the impact and interlinking different policy areas in order to reduce poverty with support of the contributions of both poor and rich households.

It is not all about inequities and injustice. It is also a lot about human capital and people's plans for the future. Well-managed, large scale urban development and urban regeneration projects could become catalysts of integration and participation. Some cities have smartly built upon existing resilience strategies to draw participatory plans for the future and maximise the benefits of digital tools for food and welfare distribution. There are also signs of post-pandemic urban culture emerging from within the crisis, which could be streamlined by the acknowledgement of a new sustainable development goal incorporating culture and creative economy. This would be a clever way to both revive the 2030 Agenda and to strengthen local voices.

Inclusive urbanization depends on many factors, some of them beyond the immediate reach of cities alone. Labour markets will play a critical post COVID-19 'constitutional' role, entailing wealth and welfare distribution at national and regional levels. The introduction of new rights for basic services to all, such as in India, is a promising policy-response reaching out to families and people, including migrant workers. Regional integration and cooperation in key regions for the world economy such as the ASEAN, could bring more long-term benefits than individual national strategies by upscaling new social and welfare standards through structural reforms. We can no longer rely on urban production systems that have been self-reliant on endless growth through global connectivity.

1. For example, in mid-September 2020, São Paulo, which accounts for 12% of the population of Brazil, had 25% of the deaths; Buenos Aires, 33% of the population of Argentina, 60% of the deaths, and Mumbai, 8% of the population of India, 10% of deaths. Source: Financing Cities' Recovery from Covid-19 and Preparing for Future Shocks, U20 Special Working Group on Covid-19 and Future Shocks, Sept. 2020

“Global poverty reduction had started to slow down significantly by 2015, echoing research underlying that the COVID-19 pandemic caught off-guard a planet with many prevailing socio-economic and environmental combined fragilities.”

– Nicolas BUCHOUD, Global Solutions Initiative, Paris, France

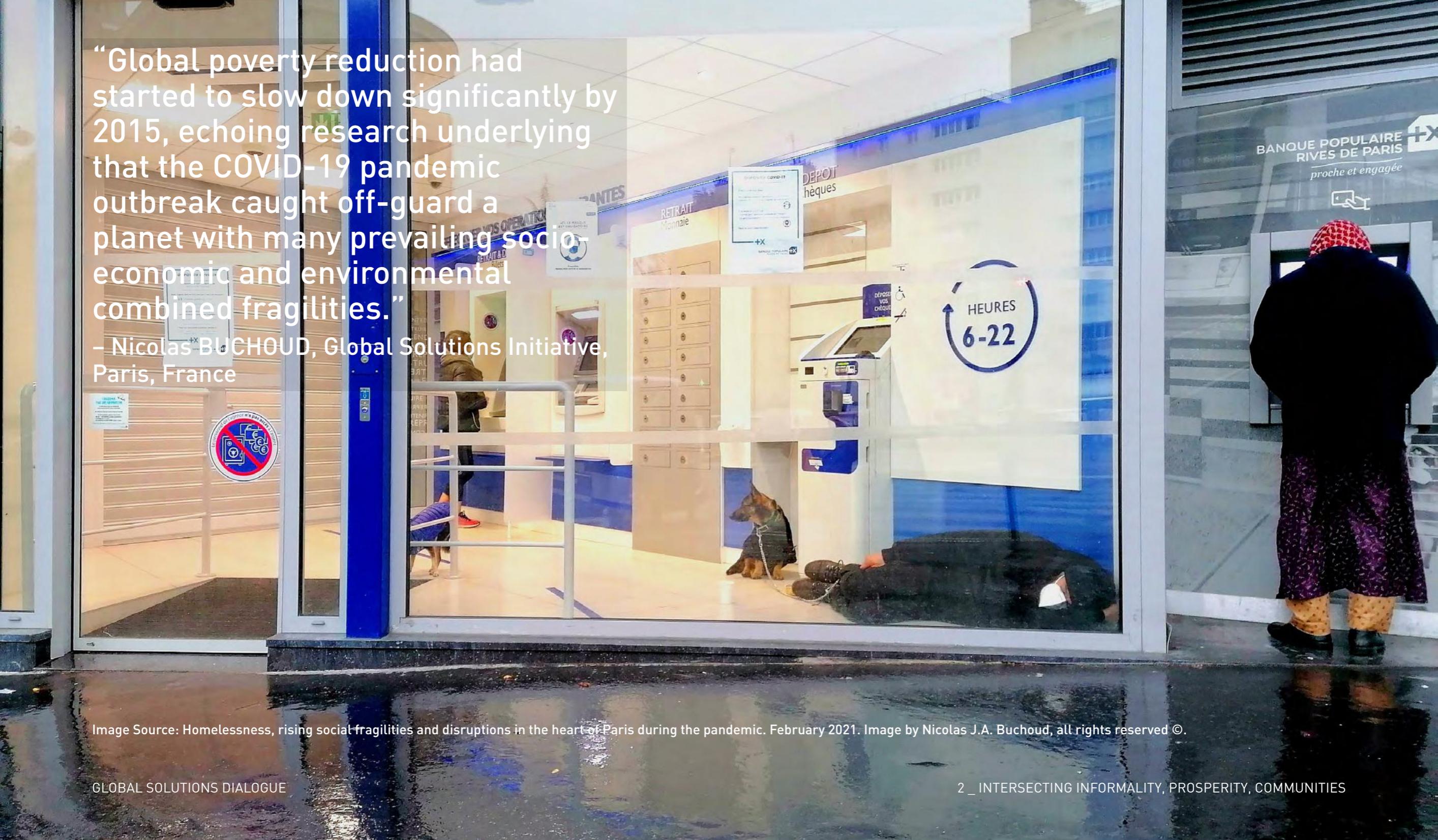


Image Source: Homelessness, rising social fragilities and disruptions in the heart of Paris during the pandemic. February 2021. Image by Nicolas J.A. Buchoud, all rights reserved ©.

“In many countries, wealth is concentrated primarily in large cities. They serve the purpose of business, social commoditization, the availability of infrastructures, security as well as outward representation. The analysis of both poverty and wealth makes the overall view of social reality possible.”

– Holger KUHLE, Deutsche Gesellschaft für Internationale Zusammenarbeit, Berlin, Germany

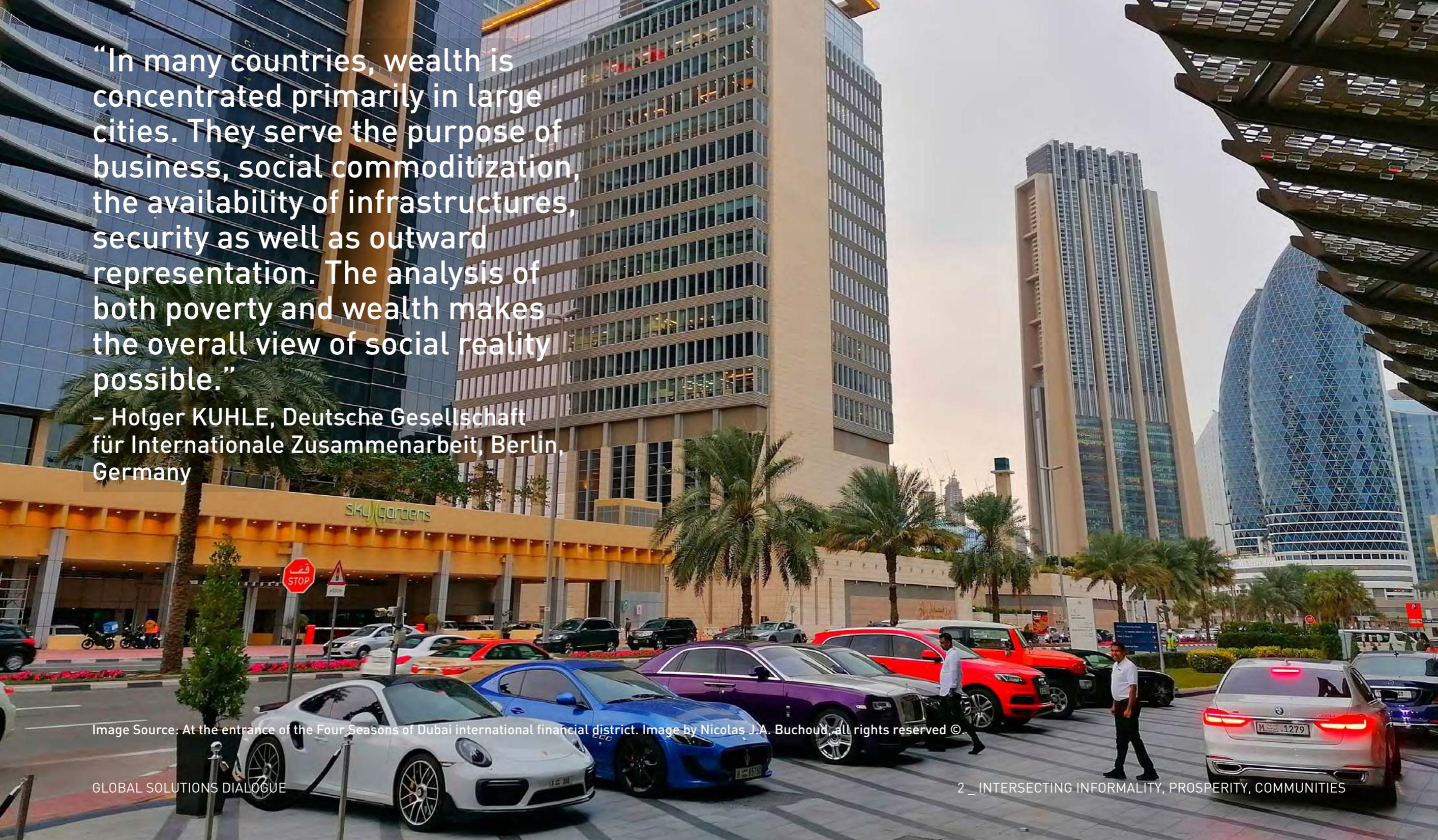


Image Source: At the entrance of the Four Seasons of Dubai international financial district. Image by Nicolas J.A. Buchoud, all rights reserved ©



Warren SMIT  
African Center for Cities  
Cape Town, South Africa

## A second apartheid: On South African cities and the pandemic consequences on informal settlements

Epidemics deepen and expose existing social inequities. Informal settlements, which are settlements in which residents do not have legal security of tenure or adequate infrastructure, are an important part of African cities, accommodating more than 60% of the urban population of sub-Saharan Africa.

How will, and how should, COVID-19 shape our cities into the future? The danger is that it will shape our cities in the same way that previous epidemics have shaped our cities.

History teaches us that the usual response to epidemics has been the demolition of slums and relocation of residents to the urban periphery, combined with the establishment of new gated enclaves for the middle and upper classes, thus increasing social polarization.

There are multiple possible future urban trajectories: we will see the demolition of slums? new urban strategies on urban sprawl? a greater concern for more effective social safety nets? will communities be included in the decision-making process?

In order to be able to evaluate the impact of interventions in informal settlements and monitor progress, it is essential that disaggregated data on health and socio-economic indicators in informal settlements are regularly collected with the help of residents themselves. Through participatory upgrading processes we can help create cities that are safer, more resilient and more equitable.

Epidemics deepen and expose existing social inequities. The global pandemic has occasioned an impulse to think in monumental terms – totality, catastrophe, portal. This essay commits to a different reading that stops the rush of planning and forecasting, projecting and forecasting. It offers collective life as an analytic that keeps the focus on the ways in which the urban majority is trying to survive and cope within structures of inequality that now bear both the new imprint of COVID-19 while equally holding the continuities of older forms of distancing and exclusion.

The COVID-19 pandemic has certainly done this in African cities, with informal settlements, where the poorest residents of cities live, generally being the areas of African

cities with the highest incidence of COVID-19. Informal settlements, which are settlements in which residents do not have legal security of tenure or adequate infrastructure, are an important part of African cities, accommodating more than 60% of the urban population of sub-Saharan Africa.

For example, in Cape Town, which has had about 74,000 cases of COVID so far, the highest levels of COVID-19 is found in the two districts with the highest concentrations of informal settlements: Khayelitsha (8,247 cases in an area with a population of about 400,000 people) and Klipfontein (9,063 cases in an area with a population of about 380,000 people). These two districts have incidence rates of over 2,300 cases per 100,000 people, compared with an average rate of 1,693 cases per 100,000 people for the rest of Cape Town. That's more than 35% higher.

The reasons for the higher incidence of COVID-19 in informal settlements is that residents of informal settlements are particularly at risk of infectious diseases as it is impossible to practice social distancing in overcrowded conditions, and the lack of adequate water supply and sanitation means that practicing good hygiene practices is extremely difficult. Informal settlements have limited access to economic opportunities, limited opportunities for safe physical activity and healthy food options, and high levels of depression and stress. The net result is that the environment of these areas is not conducive to good health or healthy

lifestyles.

How will, and how should, COVID-19 shape our cities into the future? The danger is that it will shape our cities in the same way that previous epidemics have shaped our cities.

History teaches us that the usual response to epidemics has been the demolition of slums and relocation of residents to the urban periphery, combined with the establishment of new gated enclaves for the middle and upper classes, thus increasing social polarization. For example, in Cape Town, the influenza pandemic of 1918-1919, led to a new South African Public Health Act and Housing Act “to ameliorate the wretched housing conditions of the poorer classes” (Central Housing Board, 1920). These new policies essentially encouraged the demolition of slums and relocation of people to new housing areas, for example, it directly led to the establishment of Langa, segregated township for black Africans beyond the edge of Cape Town. On the flip side of the coin, the influenza epidemic also led to the development of Pinelands on the outskirts of Cape Town, a segregated “garden suburb” for middle-class people, based on the ideas of Ebenezer Howard (in his 1898 book, “The Garden Cities of Tomorrow”) about healthy residential areas. Pinelands had (and still has) broad tree-lined streets and detached villas, and, as per Howard’s philosophy, was meant to have “Pure air and water. Good drainage. Bright homes & gardens. No smoke. No slums”. Similar processes to these in Cape Town occurred in numerous other cities in

Africa during the course of the twentieth century.

We need to make sure that this does not happen again. On the one hand there need to be strategies to prevent urban sprawl and urban fragmentation. On the other hand there needs to be upgrading of informal settlements. The COVID-19 pandemic highlights the urgency of upgrading informal settlements so as to reduce the risk of infectious disease in these high-risk areas and reduce social inequities. Processes to upgrade informal settlements and provide residents with sufficient amounts of sufficient living space and adequate services need to be participatory, with a range of accompanying social and economic development programs to improve people's lives and reduce their vulnerability to risks (for example, through the establishment of social safety nets and mechanisms such as basic income grants).

It is important to reduce overcrowding through these upgrading processes, but this could be done through the provision of multi-storey housing, there do not necessarily need to be large-scale relocations of residents.

A key precondition for informal settlement upgrading is that informal residents and other marginalized groups are included in decision-making processes, as it is essential that the residents of informal settlements themselves are involved in decision making about the upgrading of the areas where they live and work.

In order to be able to evaluate the impact of interventions in informal settlements and monitor progress, it is essential that disaggregated data on health and socio-economic indicators in informal settlements are regularly collected with the help of residents themselves. Through participatory upgrading processes we can help create cities that are safer, more resilient and more equitable.

“History teaches us that the usual response to epidemics has been the demolition of slums and relocation of residents to the urban periphery, combined with the establishment of new gated enclaves for the middle and upper classes, thus increasing social polarization.”

– Warren SMIT, African Center for Cities, Cape Town, South Africa

Image Source: Divided urbanism still remains common in South Africa, even for newer planned communities (here, the Cosmo project in Johannesburg). Image by Nicolas J.A. Buchoud, all rights reserved ©.



Gautam BHAN  
Indian Institute for Human  
Settlements (IHS)  
Bangalore, India

## Southern urbanism and collective life

Worldwide, countless initiatives led by cities, communities, NGOs, and citizens have helped people dealing with the socio-economic consequences of the COVID-19 crisis. However, they have rarely been connected with or supported by government's initiatives.

COVID-19 affects people of all social geographies. It's different from cholera and malaria, the so-called poor people's diseases, which further marginalise and criminalize the poor. The kind of community that has been hit the most by the pandemic is the proportion of the population that cannot work from home such as janitors, bus drivers, nurses, street cleaners and so on. These are also often people who are living in overcrowded conditions and multi-generational households.

When the pandemic started, everyone was convinced that density would be the matchstick for the corona virus to

spread. Informal settlements all over the world, places like Dharavi as one of the most densely populated areas in the world, were expected to perform the worst. However, the opposite seems to occur, because there is another form of density within the informal settlements, which is the density of social connections and networks. Practices of reporting, isolation and sanitation were community-designed and new infrastructure was created for them. The community manages the pandemic at the street level.

If communities are actually given the resources to leverage the social density that they require and to mitigate the accompanying challenges of spatial density, these informal communities are able to actually self-regulate themselves. That is, when communities can come up with solutions rather than the constraints, a shift in scale occurs. For example, in terms of isolation, the unit of spatial isolation is the communal street rather than the private home. In terms of sanitisation, the unit of sanitisation is the public water tank rather than washing hands. In terms of restricting of movement, this meant that the local community controls the various entry and exit points of their streets.

In India, the reporting of COVID-19 cases to the government was done via the community level. It was not done through the government surveyors and the municipal health inspectors. Community resilience works when reporting respects people's privacies and the control of the reports is shifted back to the community. Some of these community-based

organizations have been the intermediaries between the state and the community. During the COVID-19 pandemic completely informal community-level organization at the street level popped up everywhere and filled the gap where there is no underlying formal organisation.

<https://www.societyandspace.org/articles/the-pandemic-southern-urbanisms-and-collective-life>

A health worker wearing a blue cap, a light blue surgical mask, and white gloves is using a handheld yellow device to screen a woman. The woman is wearing a light blue top and a colorful orange and red floral sari. They are in a narrow, cluttered alleyway with other people in the background. The scene is dimly lit, suggesting an indoor or shaded outdoor environment.

“There is another form of density within the informal settlements, which is the density of social connections and networks. Practices of reporting, isolation and sanitation were community-designed and new infrastructure was created from them. The community manages the pandemic at the street level.”

– Gautam BHAN, Indian Institute for Human Settlements, Bangalore, India

Image Source: A health worker screens for symptoms of COVID-19 in Dharavi, one of Asia’s biggest slums in Mumbai. The number of people infected with the coronavirus in India rose by another 80,000 and is near Brazil’s total, the second highest in the world. Image by AP Photo/Rafiq Maqbool.



Thai NGUYEN  
Young Global Changer of  
Global Solutions Initiative  
University of Groningen  
the Netherlands

### **A grounded response to COVID-19: On informal civil society and support**

The COVID-19 pandemic has posed serious consequences beyond medical concerns at local, national, and global scale (Slater, 2020; Weible et al., 2020). Most national governments have formulated and implemented policy responses, drawing from both existent and makeshift framework(s), to various degrees of efficiency and success. However, efficient crisis handling still requires coordination between government and other actors, such as citizens, civil society including community and nongovernmental organizations, and other network partners (Kapucu, 2006). Much research is still needed to understand how such coordination actually materialises. Understandably, formal NGOs might benefit from a higher level of interaction with institutional actors. Still, the pandemic has also highlighted the responsiveness of local community-led initiatives, as observed, for instance, in Hong Kong by Wan et al. (2020), Latin American cities by Duque Franco et al. (2020), or in

China by Hu and Sidel (2020) and Miao et al. (2021).

Thus, to address community resilience, as defined by the main themes of this e-book, requires better understanding of how informal civil society, particularly community-based groups and/or initiatives, as opposed to formal NGOs, can contribute to the resilience of the community in terms of not only medical but also livelihood security, such as food and hygiene, support. White and Banda strongly argued for the capacity of civil society to “bolster defence from the ground up” (2009: 111). Civil society, especially those of grassroots nature, have an edge over institutional actors in terms of (i) providing legitimisation for difficult policy choices via raising awareness, (ii) functioning as a channel for community-based knowledge, providing a clearer picture of human and technical needs and capacities, (iii) providing on-the-ground aid, (iv) identifying gaps in regulation, pressing for compliance, and advocating for change and (v) contributing to policy making process.

Echoing these propositions, there are examples where community-led initiatives have provided much needed on-the-ground aid and ensured compliance with measures. Hong Kong networks of District Councillors, local organisations and shop owners coordinated masks sharing events, using local knowledge to identify and prioritize groups with higher level of exposure risk (Wan et al., 2020).

In China, the pandemic has led to an increase of volunteers, most of whom were mobilised at their own will, albeit in a state-led manner (Miao et al., 2021). The assistance provided by the volunteers ranged from offering pandemic-related support for special need children and families to employing ridesharing platforms to support emergency patient transport, material delivery, rescue, and logistics (ibid., 3). That said, the ability to contribute to regulation and policy remains limited. Looking at bottom-up initiatives in Latin America, Duque Franco et al. (2020) concluded that these initiatives provided valuable help to informal settlements in terms of food security, hygiene, accommodation, and income. Their findings, however, did indicate efforts to influence political participation through preparing analysis and recommendation for local and national governments.

The ability to identifying gaps in regulation is exemplified by One Egg a Day (OEAD),<sup>1</sup> a volunteer group in Vietnam. In the process of providing food and other necessities to workers of informal economy as well as homeless people, the group has used their presence on Facebook to advocate for recognition of such population in the formal systems, since the lack of such recognition have prevented this group from citizenship's benefits. This drawback has been somewhat exacerbated by social distancing measures and the growing discourse on digitalisation that occasionally forgoes the privileged-ness of technological access.

The discussed examples have highlighted how informal civil society, i.e., community-led or volunteer-based groups, have responded to the pandemic in a grounded and practical manner, or in other words, fulfilling roles (i) to (iii) in broad terms, with a touch on (vi) and (v). An effective coordination, as mentioned earlier, requires these groups to increase their capacity in all roles, particularly (vi) and (v). The question is, then, how can other government and formal NGO actors can contribute to building such capacity without overreliance on citizen volunteerism (Bovaird, 2007) or abrogation of the state's own responsibility (McLennan et al., 2016)?

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“Efficient crisis handling requires coordination between government and other actors, such as citizens, civil society including community and non-governmental organizations, and other network partners.”

– Thai NGUYEN, University of Groningen, the Netherlands



Image Source: Distribution of healthy food packages for traditional art performers who were impacted by the pandemic, as a part of ICCN program Aksi Bersama Bantu Sesama (Solidarity Act) for Covid-19 pandemic mitigation. Image Source: Indonesia Creative Cities Network (ICCN). Rescue packet in Indonesia. Image by ICCN, all rights reserved ©.



Daniel BRIDGE  
Co-authored by  
Robert Baffour-Awuah  
Royal Docks  
London  
the United-Kingdom

centre of growth for London. Over the last two years of the programme, the Royal Docks Team (RDT), a joint initiative from the Mayor of London and Mayor of Newham, has been exploring ways that decision making around investment can be democratised. These efforts aim to address imbalances in power relations and socio-spatial inequalities caused by historic patterns of investment in the area, and establish a sustainable response to Covid-19.

## The people's plan for the Royal Docks

1. 2021 will present major tests for London's Covid recovery ambitions. Not only is the city coming to terms with the impacts of the pandemic, it will also need to reconfigure its position as a world city outside of the European Union.

London's communities, its civil society organisations and other sub-city level partners will need to play a leading role in recovery plans. It is in the neighbourhoods that these groups and individuals live and work where the impacts of the pandemic have been most acutely felt. They are also the places where the ingenuity, enthusiasm and networks reside that can build back neighbourhoods and cities on an equitable basis.

The Royal Docks Enterprise Zone regeneration programme is one of the most significant urban transformation projects in Europe. For at least the next twenty years, the area will see major investment, helping to transform the area as a

2. The Royal Docks sits within Newham, a local authority area in East London, and one of the most diverse and deprived parts of the UK. At one point during the height of the first wave of Covid-19, Newham had the worst mortality rate of any local authority in England and Wales.

The Royal Docks were once the largest enclosed docks in the world. During the late 19th and 20th centuries, the docks were the gateway for cargo from around the world. In 1981, after the decline in dock activity, the national government created a development corporation that had responsibility for regenerating the Royal Docks, particularly focussed on infrastructure investment.

These early investment projects were geared towards creating the conditions for private sector development. There was some success in this approach. London City Airport and the ExCeL Exhibition Centre are two major organisations that were established in the Royal Docks during and just after that early phase of investment.

Despite these positives, early investment was criticized for not involving local communities in decision making. New roads and railways resulted in social-spatial severance and didn't deliver the community and social infrastructure that communities had articulated through the People's Plan for the Royal Docks - a document that captured the spirit of local community activism through alternative proposals for a post-industrial Royal Docks.

When the RDT was established in 2017, it was envisaged as a predominantly development focused vehicle that would accelerate private sector led investment in the area. While this is still one of the team's priorities, it was clear that to avoid the mistakes of the past, and achieve the maximum possible socio-economic benefit for the area, a more balanced approach was needed.

3. The Royal Docks sits not only at the intersection of significant regional growth corridors, but also at the juncture of policies that place communities at the heart of regeneration. In addition to the Mayor of London's Good Growth agenda, Newham's Community Wealth Building strategy is part of a growing global movement and the first of its kind to be rolled out in London. Embedded across the Council's work, it aims to build an inclusive economy, tackle poverty, race and gender inequality, and address the climate emergency. Newham's Covid recovery strategy adopts a similarly progressive approach - it is the first London Borough to place Health and Wellbeing metrics at the heart

of measuring prosperity and economic recovery.

A Communities Strategy for the Royal Docks Delivery Programme responds to this policy landscape, capitalising on the Royal Docks status as an Enterprise Zone to galvanise innovation and be a place for purpose driven investment. As a project whose success is dependent on driving investment, this poses both a challenge and an opportunity.

A two-person Communities Team works across the Programme to integrate outcomes for communities into each of the RDTs strategic work streams. Work to co-develop a Communities Strategy with stakeholders and communities was set to begin when the pandemic broke out. Responding to local demand, the Team convened regular multi-stakeholder video-calls providing a forum for local and city authorities, businesses, developers, education institutions and community organisations to support each other in their Covid response.

Amid the crisis new neighbourhood networks formed, producing an 'infrastructure of care.' Multi-stakeholder collaborations supported the rapid construction of the NHS Nightingale emergency hospital; created a makerspace to produce PPE equipment and coordinated local food and essentials distribution by patching gaps in supply chains. This opened a new horizon of possibilities for how multiple stakeholders might work together post-covid, in a long-term project place-based transformation, built on resil-

ience and shared prosperity.

This experience affirmed the role of the RDT as a convenor and coordinator. It also facilitated multi-stakeholder co-development of the Communities Strategy with a shared Vision, Principles and Guidelines which include co-design and capacity building, and four key approaches:

Knowledge: Facilitate the transfer of knowledges

Relations: Cultivate collaborative relationships

Innovation: Catalyse experiments and learning

Leadership: Influence investment and decision-making

4. The priority for the RDT over the next five years is to ensure the needs and ambitions of communities can support sustainable infrastructure projects. As highlighted above, the docks maritime history and early wave of infrastructure investment left a legacy of urban fragmentation.

Over the next five years major transport infrastructure projects will open in the Royal Docks, including a new river tunnel crossing and a high speed rail project. In 2019, the RDT began working with a wide range of local partners, architects and planners, to develop design guides that would provide overarching guidance for investment in the public realm.

Using the opportunity to pilot a co-design approach, the guides were developed using human-centred design

methodologies which emphasised local people's everyday experiences of public spaces. Community organisations and residents built their capacity to contribute in informed and creative ways to an urban design process that will determine the look and feel of their neighbourhoods. The Guides are intended to serve as tools for local stakeholders and community groups to commission their own public realm projects.

The challenge now is to transform the outcomes from this and other community centred processes into governance and accountability mechanisms. Within complex stakeholder and land-ownership environments, like the Royal Docks, 'reconstituting urban governance networks' is difficult to achieve. However, through detailed decision and influence mapping, the RDT is exploring how to use their position to either support new spaces for communities to have an equal voice with other local stakeholders, or to shift power within existing structures to facilitate more balanced outcomes from investment decisions.

This is just the start of a new chapter in the journey for the Royal Docks. Like similar neighbourhoods across the globe, Covid-19 has badly impacted the area but the strong links and new relationships that communities and different stakeholders formed to support their neighbours through the crises have provided clear examples of ways to create new partnerships that build resilient places for the future.

“The challenge now is to transform the outcomes from this and other community centred processes into governance and accountability mechanisms. Within complex stakeholder and land-ownership environments, like the Royal Docks.”

– Daniel BRIDGE, Royal Docks London, the United-Kingdom

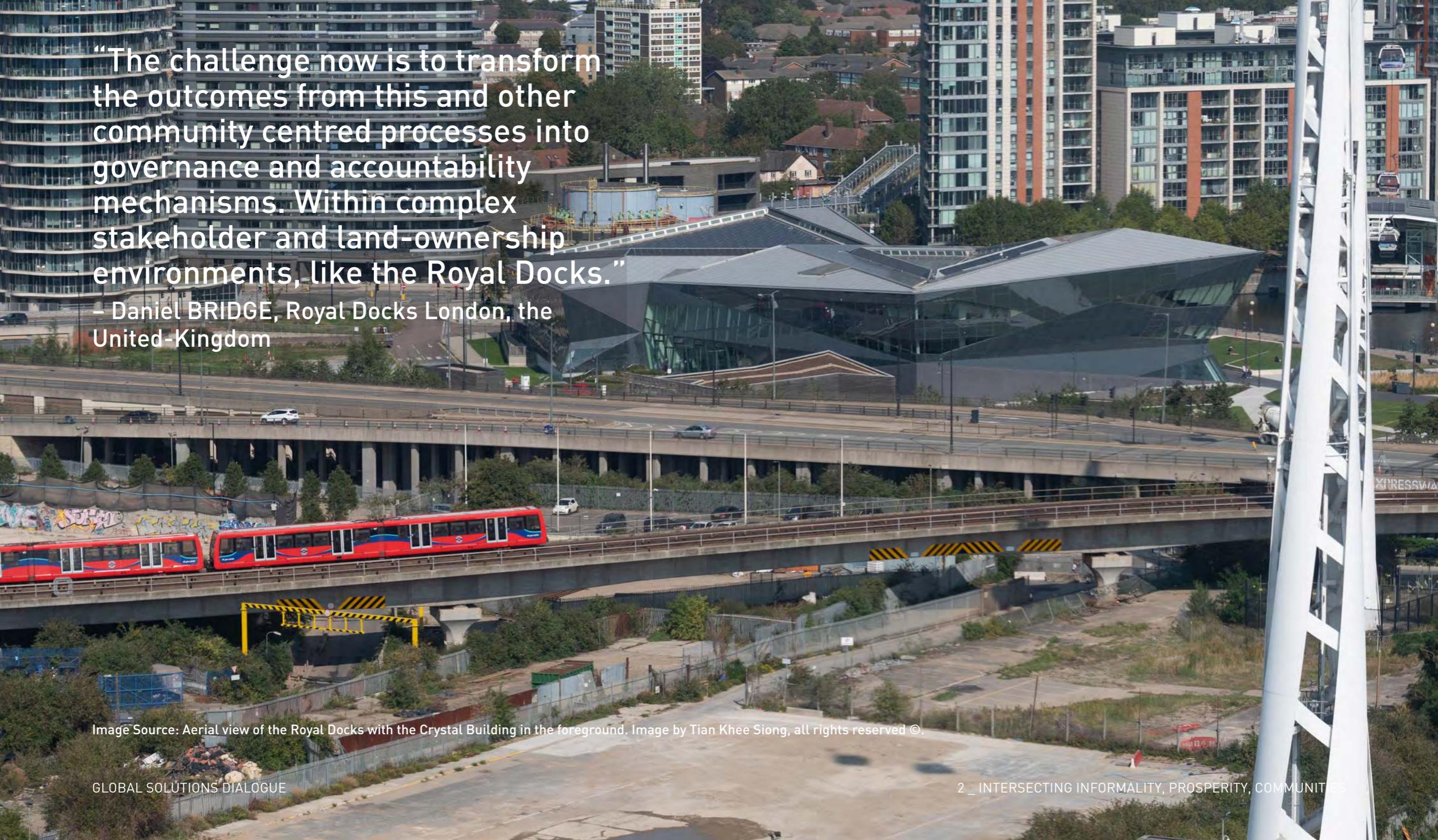


Image Source: Aerial view of the Royal Docks with the Crystal Building in the foreground. Image by Tian Khee Siong, all rights reserved ©.



Piero PELIZARRO  
Municipality  
Milan, Italy

### **Resilience from theory into practice. Elements from the Milan experience**

Resilience is about scaling up existing responses to meet new needs in times of crisis. Our experience in Milan is very a practical one: To be resilient means to be able to deliver in an emergency situation. The foundations for this resilience were built in the past years are based on three long-term strategies.

#### **digital infrastructures (top-down)**

Three years ago, Milan has launched a “digital agenda” to improve our external digital services to the people. During the pandemic, the municipality was able to serve more people that way.

#### **food initiative via food app (bottom-up)**

The Milanese were able to move up to 1 million meals per day (basic needs), connecting to the local farmers, which had been mapped. Some of these initiatives begin to turn

into new services – new business for the new normal.

#### **mobility**

During the lockdown, the restrictions of access to public space have just highlighted how precious public space as a common resource is. Over the last two months, Milan municipality has launched two initiatives: “open street” and “open square.” Both initiatives follow the logic of tactical urbanism that allows to test and to explore potential new conditions for public space. One outcome was 40 km long bike line that was rather quickly implemented.

When an emergency comes, we don’t have to reinvent the wheel, but we need to scale what we already have to the new needs. As a municipal institution, we do not have the time to discuss all the options; instead we have to quickly respond to the demands.

For future studies to come, we need to look further into the unpredictable in order to find solutions on how to act and to better manage these situations. We ought to incorporate in to these studies the higher risks for our community, like climate change and pandemics.



<https://twitter.com/pieropelizzaro>



“Resilience is about scaling up existing responses to meet new needs in times of crisis. In Milan, the foundations for the pandemic resilience were built in the past years and they are based on three long-term strategies.”

– Piero PELIZZARO, Municipality Milan, Italy



Image Source: <https://twitter.com/demescope/status/1344666562444341249/photo/1>



Image Source: Wikimedia Commons. April 19, 2020. A food basket for the needy hung in Bologna, Italy, during the COVID-19 crisis. Image by Pietro Luca Cassarino. <https://www.flickr.com/photos/184568471@N07/49797489096/>



Luisa FENIZOLA  
Casa Fluminense  
Rio de Janeiro, Brazil



Vitor MIHESSEN  
Casa Fluminense  
Rio de Janeiro, Brazil

### Food baskets and baskets of indicators: Actions by Casa Fluminense's network in the outskirts of Rio de Janeiro

In light of the United Nations Sustainable Development Goals, Rio de Janeiro-based NGO Casa Fluminense, which brings together people and organizations to promote a more equal, democratic and sustainable metropolis, has been working with grassroots organisations to localize the SDGs and build Local Agendas in the outskirts of the Rio de Janeiro Metropolitan Area.

The process of developing a diagnosis of challenges faced by residents and choosing the priorities to be tackled

was undertaken in 2020 and led by black women and/or LGBTQI+ people from organisations in five different locations with support from Casa Fluminense. The diagnosis incorporated technological innovations, including the use of online questionnaires and digital communication tools, and the digital collection and analysis both of official and of citizen generated data (CGD).

After diagnosis and discussions, actionable solutions and targets were proposed and documented in the form of Agendas and will be used to influence public policies and strategies. This resulted in the Santa Cruz 2030 Plan, the 2030 Commitment Letter for Basic Sanitation in Maré, and the Japeri, the Queimados and the São Gonçalo 2030 Agendas, which were all pre-launched online last year. They are unprecedented in their respective territories and will greatly contribute to the public discussion around social justice at local - and potentially at national - level.

Immediate actions in response to the pandemic have gone side-by-side with the elaboration of the Agendas - all five grassroots organizations had to reorganize their activities in 2020 to coordinate distribution of basic food baskets during the pandemic in order to support families in their territories. Engaging people in the discussion about sustainable development demands their nutritional and health needs are properly met.

Casa Fluminense, as a supporting organisation, raised and

distributed financial resources to local organisations, destined both for the immediate purchase of food, cleaning and personal hygiene materials (making it possible to assemble and deliver around 30,000 baskets), as well as for fostering political incidence in their territories. The strengthening of grassroots organizations is sought not only for its political impact, but also for the potential income that might be generated from the promotion of local development and solidarity economy.

Casa Fluminense is currently seeking resources for the improvement and multiplication of the agendas, which will include the distribution of printed materials. Despite technological advances, this is important in face of the low levels of digital literacy and access to speedy internet in these territories, in addition to promoting trust in the work developed and ownership by local residents. Elaboration of the booklet “How to Make a Local Agenda” is also expected in 2021 to multiply the impacts of the efforts carried out in 2020, which will present guidelines for building new documents aligned with the SDGs and the expansion of a culture of citizen participation and monitoring of public policies.

“We need to adapt from Western social security models to locally serviced security. Driven by models that are already on the ground, it should strengthen the solutions people have already put in place for themselves.”

– Amy JADESIMI, Ladol Free Zone, Nigeria

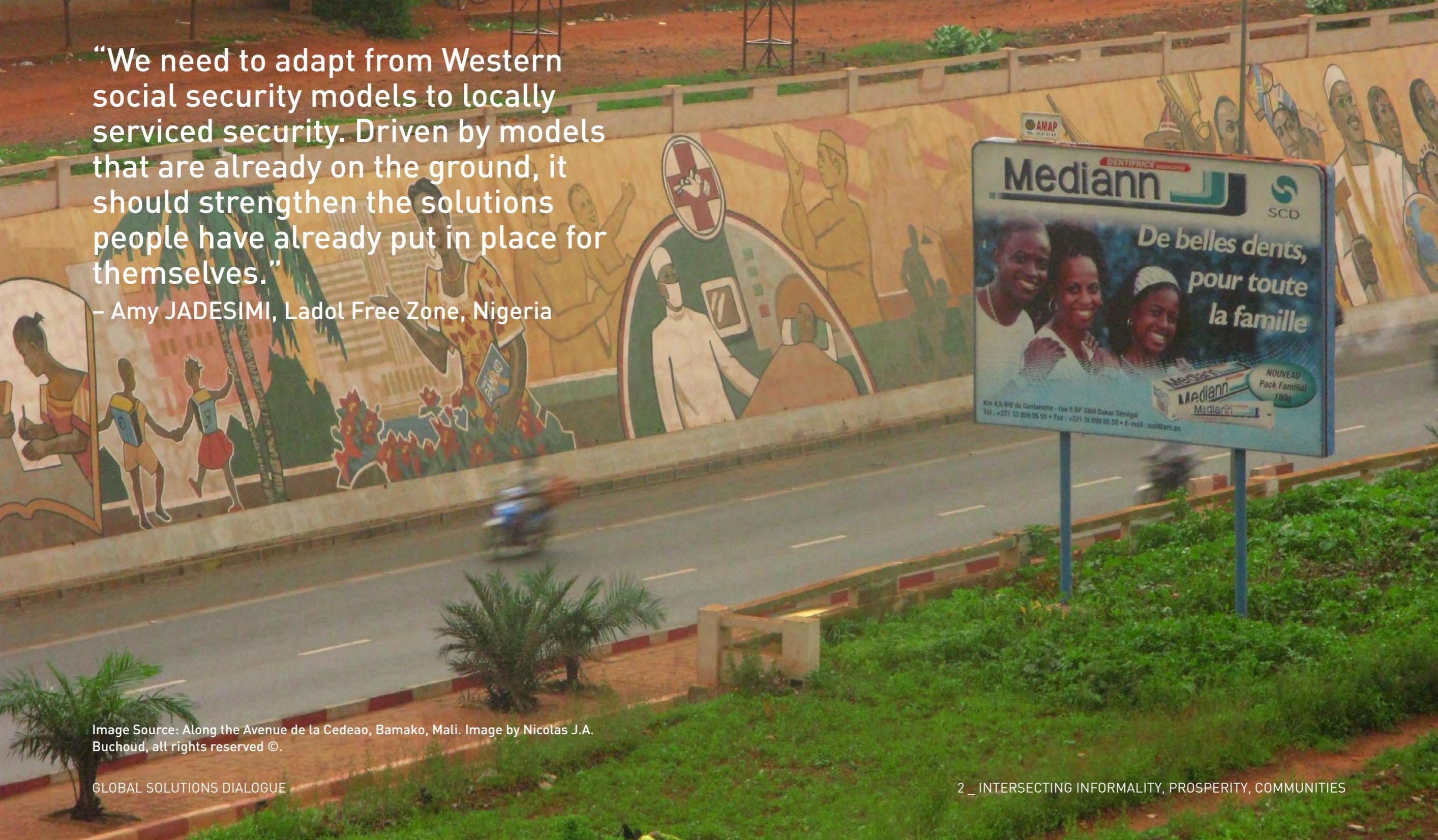


Image Source: Along the Avenue de la Cedeao, Bamako, Mali. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Luca BIZZARRI  
Regional Government of  
South Tyrol  
Bolzano, Italy

### **Reshaping cities' development: Preliminary signs of a post-pandemic urban culture**

The performance of urban culture in the traditional sense is one of the losers of the pandemic restrictions, lockdowns and closures. During confinement, the body continued to be fed, but the food of the mind, the urban culture as practice of social encounter with the others, the strangers, with art and performance, was neglected. Bookstores were left open during the second wave, but cinema, theatres and exhibitions are banned. For festival organizers, theatre directors, museum curators, guide speakers and many others, they have paid a heavy price this year for the fight against the Covid-19 virus. It is, in the moment, the triumph of series and television. In these days, we do not know to fear for the after pandemic, should we fear to see people get used to no longer frequenting these public places of public culture? But what can already be predicted against this background: Culture will play an important role for the post-pandemic time. It is conducive to the fact that culture

has been seen since a while already playing an increasing role in the development of urban contexts.

In several cities, investment in the culinary infrastructure and charisma has increased, mostly with the intention of attracting tourists and increasing the attractiveness of international competition for locations. Cultural policy, its institutions and processes, has thus also taken an increasingly important position. This shows that, to the extent that urban cultural policy can play an influential role during the post-pandemic period, culture will become a meaningful, creative and intergenerational force of general “recovery” in the coming years.

Cultural policy has a formal, administrative, financial and managerial dimension. In order to mobilize them for an animating recovery culture, the UNESCO recommendations called Culture 2030 are offering a very promising scheme. In the year 2019, UNESCO has launched the Culture 2030 Indicators with the aim of integrating and influencing the Sustainable Development Goals. This already makes the Culture 2030 recommendations so important for the post-pandemic recovery that it is supposed to meet the demands of sustainable development. The 22 Indicators aim to complete the international strategy on sustainable development designing a fundamental role of culture as main driver for (re)shaping new scenarios and encouraging positive changes through processes, skills and above all social cohesion. Thematic areas will cover the essential aspects

of local development culture based and especially Environment & Resilience, Prosperity & Livelihoods, Knowledge & Skills and Inclusion & Participation.

It seems very probable that through the lenses of the post-pandemic perspective urban realities and opportunities will be rediscovered in terms of improvement of living, working, dwelling, producing and experiencing updated forms of community. In this way culture will have an essential stake for assuring social interaction, the open building and encounter of identities and solidarity. Cultural policy following the Culture 2030 Indicators would strengthen these up-coming re-appropriations of spaces and practices of social interaction in a meaningful manner.

From the perspective of medium sized cities in Italy it seems very likely that the re-appropriations of spaces will weave together both the urban and (their surrounding) rural cultural practices. This twist seems very probable considering the growing curiosity over the pandemic period and the before increasing open-mindedness on a shift from the urban-rural divide to a new urban-rural cultural nexus. Preliminary signs have already become visible before the pandemic, the reactivation of inland abandoned villages in Italy where new methods and new social and professional relations have been experimented and more and more noted in the public. There is for instance the project La Rivoluzione delle Seppie<sup>1</sup> (The Revolution of Cuttlefishes in Calabria, South Italy) where the engagement of local

people – and among them migrants, locals, national and international students – has shed light on a strong identity of the village following the renovation of public spaces, cultural events and workshops initiated by the community. In the same direction goes the project Camposaz<sup>2</sup> (Trentino, North Italy) where the local community plays an active role in shaping the space through living in together with temporary professional residents from outside. Again, the project Farm Cultural Park<sup>3</sup> (Favara, Sicily, South Italy) boosted some years ago the idea that local development through culture is not just possible but even desirable if this practice brings new people and a new idea of living in the smallest villages which can attract exciting cultural international highlights.

1. <https://larivoluzionedelleseppie.org/>

2. <https://www.camposaz.com/>

3. <https://www.farmculturalpark.com/>



“Culture will have an essential role to ensure future social interaction and foster solidarity at the crossroads of individual and social group identities. Post-COVID-19 reappropriation of spaces and practices of social interaction will be a powerful driver for sustainable development.”

– Luca BIZZARRI, Regional Government of South Tyrol, Bolzano, Italy

Image Source: Association Camposaz Italy. All rights reserved ©.



Amitabh KUNDU  
Research and Information  
Systems for Developing  
Countries (RIS), India

### **A constitutional perspective: Labour market and inclusive urbanization in post COVID-19 India**

In the past two decades, the infrastructure finance gaps have been high on the agenda of developing countries, such as in India, in a context of rapid urban growth and messy urbanization accelerating such trends as shrinking cities or premature de-industrialization. The federal government has launched several initiatives in the immediate past years focusing on environmental and climate change parameters, as illustrated by the climate smart city initiative.

Yet, the demand side has rarely been taken into consideration by those programs, whereas the issue of inclusivity has not been a priority. In fact, in most cities or rural centres that have benefited from new infrastructure investments, density has not been going up and migration flows have not accelerated.

The COVID-19 crisis has triggered a paradigm shift. Since March/April 2020, there has been an increasing emphasis on investing into smaller and medium-size industries that can attract labour (labour-intensive industries) and generate employment (and therefore supporting poorer parts of the population). However, the crisis has also illustrated many shortcomings in transforming ambitions into reality. Furthermore, the priority given to recovery has allowed for many restrictions of workers' rights.

### **Measuring informality**

As India experienced lockdowns and large amounts of migrants wanted to go back to their rural communities, they did not have any transport. In fact, the central government had no idea how many citizens had moved from one district to another. A report from the ministry of urban development issued in 2015 used migration data (moving from district to district) from 2001 (!) and not 2011 for which census data was available.

It was only with the crisis that the ministry of labour constituted a committee to look at the vulnerable sections of the population, i.e., their access to income, sustainable livelihood, also basic amenities.

### **Suspension of worker's rights**

Different states and different state governments have been differently affected by this pandemic. States that are more affected want to push up the recovery process by liberaliz-

ing the labour laws and introducing more flexibility. Some acts have been paused for duration up to 1.000 days.

### **Restrictions in the labour market**

Due to high unemployment rates, several state governments have put restrictions on the migration coming from other states, with public and private jobs reserved to the local population. This trend is to some degree a disturbing trend, since it destroys the national labour market and it is unconstitutional (no restrictions against interstate mobility).

### **New rights for basic services (for all?)**

In September 2020, the federal government passed significant labour reforms and rights to basic facilities including all sections of the population, including the unorganized workers and the migrant population. However, many questions remain, like will there be restrictions for home-based workers etc. The long-term achievements of the labour movement should not be lost due the impact of the pandemic.



**Migrant workers, returning from their native places, stand in queues to get tested for COVID- 19 after they arrived in the city of Thane, Maharashtra, India.**

**– the editors**

Image Source: [https://images.outlookindia.com/public/uploads/gallery/20201019/Covid\\_1\\_20201019\\_402\\_602.jpg](https://images.outlookindia.com/public/uploads/gallery/20201019/Covid_1_20201019_402_602.jpg) Courtesy of PTI Photo/R Senthil Kumar



Riatu MARIATUL QIBTHIYYAH  
University of Indonesia  
(LPEM-UI)  
Jakarta, Indonesia



Teuku RIEFKY  
University of Indonesia  
(LPEM-UI)  
Jakarta, Indonesia

## Regional integration and cooperation as a response to the crisis: an Indonesian and ASEAN perspective on urbanization, inequality, informality and sustainability

### Long-Term Impacts of Covid-19 on Sustainable Development

The United Nations have adopted the 2030 Agenda for Sustainable Development since 2015, in which they committed to set a long-term goal on a sustainable path for people, planet, peace, partnership, and prosperity. The year 2020 should be marked as a kickstart of one decade of SDGs action where countries all around the world work together ac-

celerating efforts and sustainable solutions to the biggest challenges, ranging from eradicating poverty and reducing gender inequality, to addressing climate change. Yet, in only a brief period of time, the Covid-19 has wreaked havoc on all efforts to achieve the 2030 Agenda for Sustainable Development. A report from the UN Conference on Trade and Development (UNCTAD) finds that the Covid-19 pandemic has reversed much of the economic and social progress already made towards SDG achievement.

The economic damage brought by this pandemic is widely assessed and represents the largest economic shock the world has experienced in decades. Despite the extraordinary efforts of governments to counter the economic downturn with fiscal and monetary policy support, the World Bank in the report of Global Economic Prospect January 2021 envisions a 4.3% contraction in global GDP in 2020, with the most vulnerable countries will be far worse off. Over the longer term, the deep recessions triggered by the pandemic are expected to leave lasting scars through higher poverty and inequality, lower investment, and erosion of human capital through job losses and lower skills. According to the World Bank in the Poverty and Shared Prosperity Report 2020, the pandemic could raise the number of people living in extreme poverty by around 88 and 115 million in 2020. The crisis has exposed harsh and profound inequalities in our societies and is further exacerbating existing disparities within and among countries.

Another research conducted by UN Department of Economic and Social Affairs (UN DESA) predicts that around 1.6 billion workers in the informal sectors, which is half of the global workforce, may be significantly affected by the Covid-19 crisis. Notably, the income of informal workers worldwide was estimated to have dropped by 60%, and up to 81% in some regions. The crisis has also significantly increased the vulnerability of the world's one billion slum dwellers, who have already suffered from inadequate housing and limited or even no access to basic infrastructure and services. Moreover, women and children are also bearing the brunt of the crisis. The crisis is creating circumstances that have already contributed to a surge in reports of violence against women and girls, where cases of domestic violence have increased by 30% in some countries. Meanwhile, prolonged absence from school also results in lower retention and graduation rates and therefore worsens learning outcomes for children.

### Overcoming the challenges of urbanization: Indonesia and ASEAN Context

The rapid urbanization has been playing significant role in Indonesia's transformation story from rural to urban economy. Today, over half Indonesians live in cities and it is expected to grow even faster in the future. Unfortunately, the increase in urbanization has not been supported by ample infrastructure development. Insufficient infrastructure coupled with population explosion has caused a wide range

of urban problems, ranging from social to environmental issues. Many people came to cities to find a livelihood due to the limited job opportunities in their village, but the number of job opportunities in cities grew slower than the urban population growth. As a result, unemployment rate of urban population is now two times higher than in rural area. This condition leaves many newcomers vulnerable to poverty. Further, the rising population puts pressure on existing infrastructure and land availability as the development of several industrial parks and new towns has converted green and agricultural areas into megacity. It brings many environmental issues, particularly in the capital city of Indonesia, Jakarta, which lies in a lowland area. The massive land conversion has caused the regular annual flooding in Jakarta.

A study from World Bank in 2019 has found that Indonesia has not benefitted as much from urbanization as other countries as 1 percent growth in urban population is only correlated with 4 percent GDP growth, while the number can be reached to 10 percent for China and 7 percent for Thailand. Even though the impact is relatively small, urbanization has contributed to the overall rise of living standards. However, the benefits have not been shared equally due to the lack of skill-matching of the migrants that leads them to poverty. The inequality issue is even rising currently due to the health crisis during the spread of Covid-19 pandemic. The crisis has affected many economic sectors negatively. A lot of businesses have seen revenue

losses, and subsequently, made many employees have lost their jobs. One of the main issue that is associated with the urbanization during the health crisis is the informality in Indonesia's labor market. Indonesia is one of the countries with high number of informal workers. Indonesia's informal employment rate is 44.1 percent where urban areas contribute 60 percent to total informal employment. This is the most vulnerable community to poverty as many of them came from lower income household. Further, they tend to have limited access to jobs opportunity as they have lower levels of education. Thus, the lack of access to social protection coverage in informal workers will only leave the bleaker condition in Indonesia's livelihood during this crisis.

Other ASEAN countries are also struggling with informality, particularly in Brunei Darussalam, Lao PDR, Malaysia, and Thailand as these countries' urban areas also contribute more to total informal employment (ASEAN Secretariat, 2019). ASEAN leaders did adopt the regional action plan in 2016 to start working together in resolving the informality in ASEAN by establishing the informal employment database. However, the current time of crisis calls for a stronger commitment from this region to construct the long-awaited structural reform agenda for informal sectors in the efforts of sustainable recovery.

## **National Spending Reformulation and Regional Cooperation in Addressing Inequality**

To respond to a potentially deep wound left by the Covid-19 crisis, integration and coordination are needed more than ever. In terms of building back the society and economy towards a better, more sustainable path, it is not enough to conduct traditional policy formulation and implementation, heavily revolving around efficiency optimization. Inequality is a massive fault line built even before the pandemic and is cracking even deeper due to the pandemic. Thus, a more thorough emphasis on accommodating the groups of people most damaged by the pandemic is of utmost importance in regard to the agenda of building back better.

Accommodating the most affected groups of people and narrowing gap inequality gaps needs concrete steps in terms of policy formulation. One way is to implement budget refocusing and reallocation by the government towards more equitable budgetary purposes, such as education, health, and ICT. Regarding education, the government needs to secure education as a top priority and address inefficiencies in education spending. National authorities, central government in coordination with subnational and/or local level, also need to focus on addressing learning losses particularly for marginalized groups, provide support for teaching professionals, offer skills for employability programs, while strengthening international coordination to protect foreign aid for education. ICT plays a key role in

rising inequality to education, which has been shown more blatantly during the ongoing crisis. Thus, national leaders need to put emphasis in their policy and budget allocation towards building better ICT infrastructure to ensure an equitable and just distribution of quality education across population.

Strengthening the integration within ASEAN region is needed more than ever as the uncertainty of pandemic might worsen the condition of each member. However, it is feared that the aforementioned forms of regional cooperation could lead to other important issues, such as social welfare and the environment, being neglected. It is thus an important matter to establish regional initiatives that are also promoting sustainable development, starting with paying more attention to issues of informality in the labor market. According to the ASEAN Report (2019), informal employment in eight of the 10 ASEAN countries (excluding Singapore and the Philippines, which have no data) reaches nearly 57.5 million workers across the accommodation and food service sectors, wholesale and retail trade, transportation, and construction.

The Covid19 pandemic is having a disproportionate crippling effect on the livelihoods of millions of people in informal jobs over those who are formally employed. These people face additional difficulties adapting to this condition, given the various restrictions imposed by the government to contain the spread of the virus. In this case, effective

policy responses must reach them and their families quickly to prevent them from falling (deeper) into poverty. In the short-medium term, we talk about policy responses such as establishing public works programs for informal workers and expanding social assistance programs. In the long run, strengthening regional cooperation by reviewing, scaling up, and adapting existing policies and systems to accelerate the transition from informal to formal workers is also necessary because this is related to the basics of the Southeast Asian labor system itself. One that can be done is facilitating these informal workers to get assistance in the form of skills development.



“In the long run, strengthening regional cooperation by reviewing, scaling up, and adapting existing policies and systems to accelerate the transition from informal to formal workers is necessary, as it relates to the basics of the Southeast Asian labor system itself.”

– Riatu MARIATUL QIBTHIYAH, University of Indonesia, Jarkarta, Indonesia

Image Source: A meeting of ASEAN countries in preparation for the 'United Nations Year of Creative Economy for Sustainable Development' in 2021. Bali, Indonesia in 2020. Image by Nicolas J.A. Buchoud, all rights reserved ©.



John NEWBIGIN  
Ambassador for the  
Creative Economy to  
the Mayor of London  
the United Kingdom

### Human capital as a sustainable infrastructure: Towards an eighteenth Sustainable Development Goal?

As COVID has triggered multiple crises across the world, leaving health services struggling to cope and businesses struggling to survive, it's the resilience, creativity and solidarity of communities that has taken the strain, from the 'Jerusalema' dance challenge to food banks for the self-isolating. There's clear evidence that, even if they are poor or marginalised, communities with the strongest social and cultural infrastructure have done better than their neighbours in terms of saving lives and livelihoods. While finance capital and the formal economy have been disabled, social capital and the informal economy have come to the rescue.

None of this is the product of COVID but the pandemic has pushed it to the centre of the stage. What are the implications for public policy and public investment? If the intangible cultural networks of an apparently disorganised community turn out to have provided the most durable in-

frastructure and the most practical and nimble responses to a rapidly changing crisis, might they not also have a role to play in tackling the long queue of crises that stretch ahead of us – climate change, environmental degradation, youth unemployment, growing inequalities of wealth and opportunity?

This is not to entertain some romantic myth about the innate wisdom of the community, but to point out that it would be foolish to ignore the evidence that COVID has placed in front of us. The accelerating pace of urbanisation means the growth of informal communities is sure to continue, and informal communities tend to generate informal economic activity, which is already estimated by the ILO to account for 60% of all economic activity globally, despite being massively constrained by lack of skills, lack of finance, lack of access to markets and by oppression, corruption and criminality. Furthermore, the rapid evolution of digital technologies and machine learning is cutting swathes through traditional labour markets. And while we can expect this 'Fourth Industrial Revolution' to generate new jobs and require new skills, the period of transition is likely to be at least as painful as in previous technology revolutions and youth unemployment is already becoming a global crisis.

It's worth considering a UN report of 2013 into the global creative economy, highlighting scores of case studies from urban communities, mainly in the global South, that observed that it was becoming impossible to disentangle eco-

conomic activity from cultural activity. Cultural and creative businesses are central to most neighbourhood economies, and most of them are in or on the fringes of the informal sector – whether it’s festivals, food, music, sport, fashion, traditional artisanal crafts or digital content production and distribution on smart phones. And most of those activities, by their nature, are dependent on the creative, social, emotional and manual skills that are beyond the capacity of artificial intelligence and likely to remain so for some decades to come. These jobs may look vulnerable, and in an obvious sense they are, but they are also strangely ‘future-proofed’ in a way that is untrue of an increasing number of apparently secure jobs in logistics, retail, finance, health and the law – to name but a few. If we cross-reference that with the fact that the creative industries are generating jobs faster than almost any other sector in every region of the world – South as well as North – then we begin to square the circle between informal community, informal economy and the creative energy that feeds and is fed by culture, heritage and aspiration. That same UN report concluded that the most effective policy interventions in poorer urban communities were those that started by “looking at the community’s assets and capabilities, not its needs”.

Those assets are human capital or, if you prefer, social and cultural capital that provide a basis for addressing issues of rights, dignity, identity and access as well as livelihood. The economic driver is entrepreneurship from within the community rather than job creation from outside. The challenge

for public policy is that it’s more about ‘how’ than ‘what’. A phrase that came up in one of our Global Solutions dialogues was “Process affects outcome” and the truth of that observation is seen both in the failure of many grand public regeneration projects for urban communities and the success of much spontaneous community response to COVID.

It’s no accident that several hundred cities around the world now like to style themselves as ‘creative’, by which is meant not just a focus on their cultural institutions and creative industries, though they may be part of the story, but a creative and inclusive approach to developing and implementing policies – engaging citizens in a way that promotes good planning and growth but also aims to address social equity, emotional well-being, environmental sustainability, civic identity and pride.

During the pandemic there has been a lot of talk about new ways of managing the global economy in the future – a ‘new normal’. Here are two suggestions for how we might begin to shape a new normal that works better than the old one.

The first would be to regard the informal economy with more respect, looking at its “assets and capabilities” rather than its shortcomings. While many workers, especially women, may find themselves in the informal sector because of circumstances beyond their control, there are many for whom it works – not because they want to evade tax and regulation but because it allows a flexibility and a

measure of control that suits them. In the same way that governments find it difficult to engage with the creative industries because they are so dominated by informal partnerships of lone entrepreneurs and micro businesses, the informal economy appears messy and inconsequential to many planners, politicians and government administrators who long for the relative simplicity of the 20th century industrial economy – big units of production, stable company structures and an easy-to-trace flow of goods and services. The 21st century economy seems to be less and less like that. The little guys are getting on with surviving and it's the very big guys – the platform operators and their spin-offs - who are the ones evading tax and regulation.

A second suggestion relates to the fact that 2021 is designated by the UN as the year of the creative economy's contribution to the Sustainable Development Goals. But there's an anomaly at the heart of this excellent idea – the contribution of the creative economy is as much cultural as economic, yet access to cultural activity and freedom of creative expression are not specifically included in the SDGs at all. There are oblique references to the role of culture in education, mental health and emotional wellbeing but why not tell it like it is: - participation in culture is the glue that holds any society and every community together – without it there is no community and without community there can be no real sustainability, given the impact we humans now collectively have on our planet.

A good place to start building a 'new normal' would be a recognition that there is no infrastructure more fundamental than culture, no form of capital investment more productive than investment in human capital and no better place to start policy planning than by looking at a community's assets and capabilities rather than its needs.

“A good place to start building a ‘new normal’ would be a recognition that there is no infrastructure more fundamental than culture, no form of capital investment more productive than investment in human capital and no better place to start policy planning than by looking at a community’s assets and capabilities rather than its needs.”

— John NEWBIGIN, Creative economy to the mayor of London, the United Kingdom

Image Source: ‘Comedies’ intersecting on the Piazza Dante in Naples, Italy. Image by Nicolas J.A. Buchoud, all rights reserved ©.

**distribution**  

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**inclusion**  

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**infrastructure**

**3**

# distribution

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# inclusion

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# infrastructure

**3.0. Beyond the one size fits all financial scheme for infrastructure investment projects**  
Holger KUHLE, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Berlin, Germany

**3.1. Changing trends and new priorities in the global infrastructural space**  
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**3.3. Infrastructure planning for interstate and intrastate mobility in India after the lockdown**  
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# infrastructure

## 3.6. Urban waste management during the pandemic: a brief outlook

Caroline CHAL, Syctom, the Greater Paris Metropolitan agency for waste management, Paris, France

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## 3.9. The COVID-19 crisis: business responses and policy implications

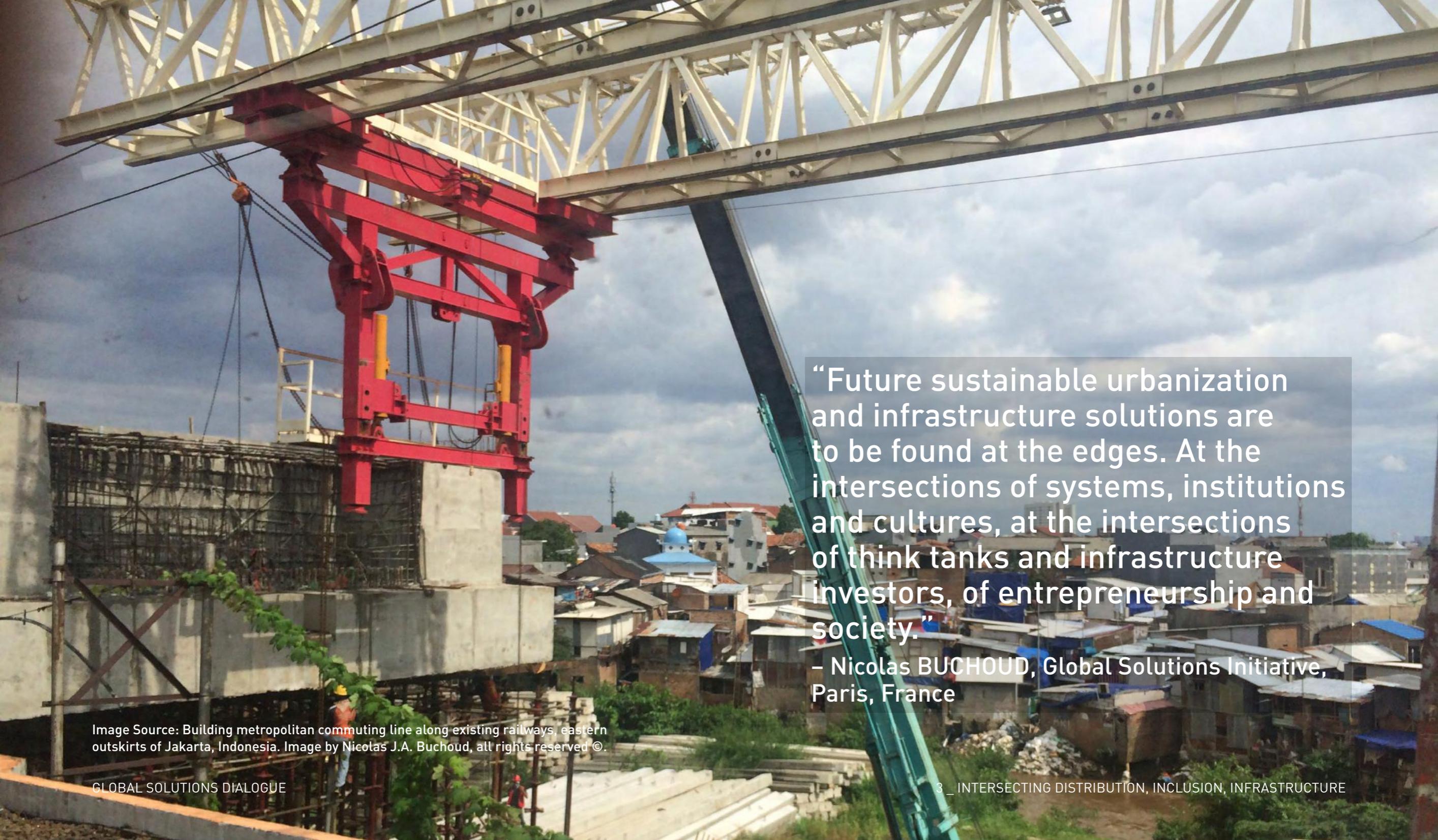
Hang DANG MINH, Young Global Changer of Global Solutions Initiative, Canberra, Australia

## 3.10. Sustainable infrastructure isn't just about an outcome, but also who has a say in it

Holger KUHLE, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Berlin, Germany

## 3.11. The way forward is 'Infrastructure for Distribution': Recovering from COVID-19 from the Bottom Up

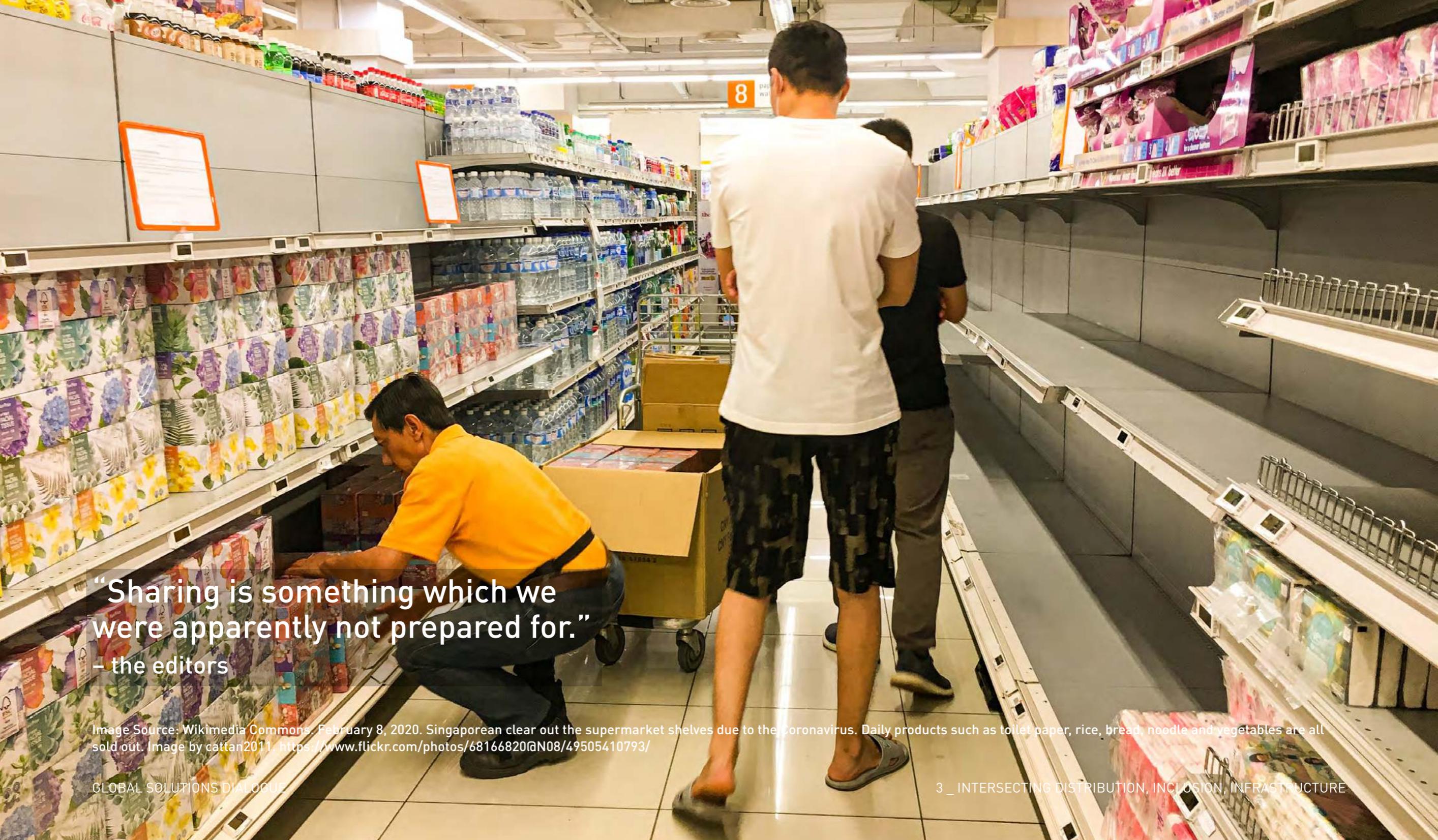
Michael COHEN, The New School, New York, the United States



“Future sustainable urbanization and infrastructure solutions are to be found at the edges. At the intersections of systems, institutions and cultures, at the intersections of think tanks and infrastructure investors, of entrepreneurship and society.”

– Nicolas BUCHOUD, Global Solutions Initiative, Paris, France

Image Source: Building metropolitan commuting line along existing railways, eastern outskirts of Jakarta, Indonesia. Image by Nicolas J.A. Buchoud, all rights reserved ©.



“Sharing is something which we were apparently not prepared for.”  
– the editors

Image Source: Wikimedia Commons, February 8, 2020. Singaporean clear out the supermarket shelves due to the coronavirus. Daily products such as toilet paper, rice, bread, noodle and vegetables are all sold out. Image by cattan2011. <https://www.flickr.com/photos/68166820@N08/49505410793/>



Holger KUHLE (ed.)  
Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ),  
Berlin, Germany

### **Beyond the one size fits all financial scheme for infrastructure investment projects**

In post-pandemic times, both the demand for infrastructure financing will grow and the supply of financing for recovery will increase. For demand and supply to lead to more sustainable urbanization, a key factor will be the appropriate financing instruments for cities, whereas the COVID-19 pandemic is playing is both disrupting existing plans and pushes for rapid changes in the global infrastructure space.

How important it is to choose financing instruments carefully is shown symptomatically by the financing of hospitals, which are essential for health care. Experience shows that public-private partnership models (PPP) can be suitable for financing hospital buildings, but not for operating health care and the use of infrastructure for healing and care. Experiences show the need to assess the impact of PPPs on uses as well as how citizens and consumers will be impacted on the future. As an example, PPPs on the

electricity sector have not worked well in Australia as it led to increased prices even if the market is competitive and users can switch between providers. Successful PPP cases in Australia were in areas where the government didn't deliver revenue return. Whereas the COVID-19 rapid expansion has showed high levels of unpreparedness in countries and cities, the pandemic has also highlighted underinvestment in social infrastructure, especially in the past decade. In a recovery perspective, it is critical that emergency relief spending and vaccine purchase do not overcome the need for more structural reforms in the health and do not overshadow the need to develop a new generation of more sustainable infrastructure systems.

INTERSECTING argues that the way forward should be to privilege investments in 'infrastructure for distribution' starting at city and regional level. This has several consequences, starting by prioritizing recovery from the bottom-up, and not in a top-down manner. How citizens can play a role in defining infrastructure investment priorities is a condition to balance national, centralized choices, with direct impacts in many fields, from intra-urban to inter-state mobility, such as in India to waste and sanitation.

Whereas 'green technologies' are targeted to leverage more investments to reach out to the Sustainable Development Goals, projects find more easily finance where the return on investment is proven, rather certain and not stretched too far out into the future. In this context, the

'green bonds' model is considered to be promising, inspired by the North-American and Anglo-Saxon financial culture where municipal bonds (and notes) are extensively used for capital-raising needs. Yet, green and municipal bonds cannot become a universal tool that easily, in particular in the COVID-19 context. For instance, in Berlin, the issuance of green bonds requires a special authorization from the parliament and careful evaluation. In addition, from a debt management perspective, green bonds are only sensible if interest rates are lower than that on straight debt and if the issuance of green bonds does not adversely affect liquidity in the straight bond market.

The era of low interest rates might continue after the peak of the current COVID-19 pandemic, but the lack of institutional capacity and of broad legislative foundation to frame the use and benefit of bonds accordingly remains a challenge in many cities and regions. Pre-pandemic existing differences within the infrastructure finance landscape from region to region might even get deeper and increase the contrasts between infrastructure investment capabilities among countries and cities. In 2020, the G20 has issued a new 'InfraTech' agenda meant to supplement the 2019 Quality Infrastructure Investments (QII) principles and engage private and institutional investors in bridging the global infrastructure finance gaps. Region-specific knowledge should be produced in order to make tailored-made banking and investment possible and avoid that InfraTechs further enlarge pre-crisis digital divides.

As the pandemic highlights the importance of being more flexible with infrastructure finance, INTERSECTING raises the call to move on carefully with the development of new technological and financial models, taking into account the fragile financial situation of many subnational governments, and such side-effects as the decline in public transportation ridership due to fear of contagion. In principle, tailor-made, contextualized financing would offer more flexibility to meet specific local situations. Yet it would request overcoming several barriers, starting with the knowledge gaps within financial institutions on the specificities of cities and urban regions. More flexibility also requires expertise at municipal and national levels to decide on which financial schemes are the most suitable, especially in more uncertain market and financial conditions.

The effectiveness of financing and investments depends heavily on the existing capacities both within the private and public sector to choose, mix and structure the appropriate instruments, along transparent sustainability priorities. In many cities, these capacities are even more constrained by the divergence of financial resources to urgent social and health priorities. Public investment management assessment centres, which exist in some countries, could support subnational governments to select the best financing instruments, assess their effectiveness and ensure the accountability of their impact.



“Differences between infrastructure investment capabilities, in particular financial and digital innovation, could well increase imbalances between and within countries and cities in the post pandemic context.”

– Holger KUHLE, Deutsche Gesellschaft für Internationale Zusammenarbeit, Berlin, Germany

Image Source: Development of the tramway infrastructure network in Casablanca, Morocco. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Lori-Benita KERR  
Global Infrastructure Facility  
(GIF), the World Bank  
Washington D.C.  
the United States

## Changing trends and new priorities in the global infrastructural space

Globally, the infrastructure investment rationale is changing, along four main directions:

### 1. Infrastructure operation and resilience

Resiliency is no longer only an issue of how infrastructure could be made resilient, e.g., more climate-resilient, but about how infrastructure could make communities resilient, e.g., navigate through climate changes shocks.

### 2. Infrastructure as a system (and no longer as an addition of assets)

Connectivity & digital: role of communication through digital infrastructure is booming, a trend only accelerated by the Covid19 pandemic. It is about how the work gets done, including new ways of remote working. The sector is poised (ready for) growth. Integrated and spatial planning infrastructure as system includes nature-based solutions while

taking a long-term view on infrastructure, i.e., maintenance in terms of life cycle (this also refers to infrastructure resiliency).

### 3. Infrastructure governance

Infrastructure investment is largely a public issue. Improving infrastructure efficiency is critical, especially as public funding is becoming even more constrained across developing countries due to Covid-19. If private investment gains importance, governance issue will also become more complex, with a rising involvement of local governments.

### 4. Private investments

ESG (environmental, sustainable governance), Climate Finance, and lately, the SDGs (sustainable development goals) provide a number of common criteria in support of sustainability for capital markets. The G20 quality infrastructure investment principles, now including a broader focus on sustainability, are becoming part of the dialogue.

Q: What's the link to global government?

A: There is a growing recognition of subnational governments and cities within the infrastructural space, which means increasing the dialogue how to work with cities in recognition of urbanization. Cities are becoming a strategic theme in the infrastructure world.

Q: What's the balance between digital and physical assets?  
How fast is it changing?

A: Main conversations still focus primarily on physical infrastructures, like energy, transport, sanitation, etc. Due to the Covid-19, the conversations have flipped 180 degrees with an unprecedented focus on digital infrastructure. There is a specific focus within the World Bank on the subject of digital connectivity – that kind of sector hadn't been there before.

Q: What's the ratio between public and private investment?  
How does this relate to the city?

A: Data points are 83% from the public sector. 17% are from private investment. Climate policy initiatives and in particular climate finance have been a forerunner in connecting a number of global institutions and initiatives with cities in the past decade.

Q: The problem in the developing world right now is the fact that there are not enough physical infrastructures for digital communication. This creates an inequality in terms of access to education, information, etc. Does the World Bank have an overview of various developing countries to achieve the standard of digital infrastructure?

A: Digital data development practice group within the World Bank would have data on that. Universal access to digital broadband to everyone is becoming a global priority.



HELP STOP THE SPREAD OF  
COVID-19  
ESSENTIAL TRAVEL ONLY

“Main conversations within the global infrastructure space focused until very recently primarily on physical infrastructure, like energy, transport, sanitation, etc. Due to COVID-19, the conversations have flipped 180 degrees with an unprecedented focus on digital infrastructure.”

– Lori-Benita KERR, World Bank, Washington, United States

Image Source: Wikimedia Commons. March 28, 2020. COVID-19 highway sign in Toronto, March 2020.

Image by EelamStyleZ. [https://commons.wikimedia.org/wiki/File:COVID-19\\_highway\\_sign\\_in\\_Toronto,\\_March\\_2020\\_\(cropped\).jpg](https://commons.wikimedia.org/wiki/File:COVID-19_highway_sign_in_Toronto,_March_2020_(cropped).jpg)



Dorothee ALLAIN-DUPRE  
Organization for Economic  
Cooperation and  
Development (OECD)  
Paris, France



Yingyin WU  
Organization for Economic  
Cooperation and  
Development (OECD)  
Paris, France

### Sustainable infrastructure in regions and cities for post-COVID-19 recovery

Investing in sustainable and resilient infrastructure in regions and cities is a critical element of post-pandemic rebuilding. The regional and local impact of the COVID-19 crisis is highly heterogeneous, with significant implications for policy responses and investments for recovery. For example, large urban areas have been hard hit, but within them deprived areas are more strongly affected than less deprived ones.

The OECD policy paper *The territorial impact of COVID-19: Managing the crisis across levels of government* (4th edition, OECD, 2021 forthcoming) illustrates this regionally differentiated impact. The policy paper calls for a territorial approach to policy responses on the health, economic, social, fiscal fronts, as well as very strong inter-governmental coordination.

The crisis also shed light on the pre-existing territorial disparities in access to infrastructure, notably health and digital infrastructure. For example, remote regions in the OECD see a decreasing rate in hospital beds per 1000 inhabitants of 22%, much higher than the all-region average of 6%. By 2018, regions close to metropolitan areas were equipped with almost twice as many hospital beds per 1 000 inhabitants than remote rural regions.

For digital infrastructure, the urban-rural gaps are also significant. The OECD study showed that 56% of rural households have access to fast broadband (>30 Mbps), in comparison to over 85% in urban areas. If no strong policy actions taken, these metropolitan-rural divides could be even amplified post COVID-19 in a context of tight fiscal constraints (OECD, 2020).

Subnational governments are responsible for almost 60% of total public investment across the OECD, and almost 40% around the world (OECD, 2020 forthcoming; OECD/UCLG, 2019). Regions and municipalities are at the frontline of the

crisis management and recovery, but they face significant challenges in delivering infrastructure investment, with a dangerous “scissors effect” of rising expenditure and falling revenues. According to a survey jointly conducted by the OECD and the European Committee of the Regions (CoR) with 300 subnational representatives in the European Union, 63% of respondents stated that the impact of the crisis on subnational governments is strong (OECD, 2020). To achieve a successful COVID-19 recovery, subnational public investment should not be sacrificed like after the 2008 crisis. Since then, it took seven years for subnational public investment to recover to the 2008 level.

Post-COVID-19, governments also need to invest in infrastructure to meet the substantial need to “build back better”, i.e. building more resilient regions and cities in order to cope with future shocks, regardless their nature. This includes infrastructure investment that focus on addressing climate change, facilitating digital transition, enhancing healthcare, etc.

Subnational governments have a critical role to play in investing in sustainable and resilient infrastructure, which is essential for post-pandemic rebuilding. The OECD is developing a Handbook on delivering sustainable infrastructure for post-COVID-19 recovery, which will also support the work of the G20 on quality infrastructure (OECD, Forthcoming). The Handbook provides concrete recommendations and examples on effective governance of infrastructure,

mobilisation of financial resources, as well as subnational governance and finance in infrastructure, in order to achieve key objectives such as low carbon transition, resilience, regional inclusiveness, and sustainable development. Regarding subnational infrastructure investment, some of key messages include:

Regions (states and provinces) and municipalities need to incorporate long-term objectives in their investments for recovery. They should focus on green and digital priorities as top priorities, but also on building more resilient health systems and investing in social housing to reduce disparities across and within regions.

The capacity of subnational governments in financing and implementing infrastructure is key for effective implementation of the recovery strategies. One important perspective is that subnational governments need to integrate infrastructure investment priorities in broader regional or local development strategies, instead of investing in a solely sectoral-oriented siloed fashion. National governments should provide corresponding support to strengthen the capacities of subnational governments to design and implement public investment projects. While many public investment projects can be launched in the short-term, care must be taken not to focus on speed as the only criteria, and to avoid atomising investment funding into a myriad of small projects. Intermediate levels of government – regions, states, provinces – should be included in national investment recovery

strategies.

Subnational governments should optimise and diversify their financial resources for infrastructure investment. They should optimise the use of public funding resources (e.g. national grants, taxes and fees), including to explore innovative instruments such as land-value capture mechanisms. Subnational governments also need to mobilise the private sector and institutional investors for applicable infrastructure projects through appropriate financial mechanisms.

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“Investment in sustainable infrastructure is a key piece of post-pandemic rebuilding. Governments need to invest strategically to build more resilient regions and communities in the wake of COVID-19. This implies a change in the investment-mix and a stronger focus on preparing for future shocks, including the climate-related crises.”

– Dorothee ALLAIN-DUPRE, Organization for Economic Cooperation and Development, Paris, France



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Image Source: Wikimedia Commons. Coronavirus infection prevention tips banner, Jongno, Seoul, South Korea, February 22, 2020. Image by Bonnielou2013. [https://commons.wikimedia.org/wiki/File:Coronavirus\\_Jongno\\_1.jpg](https://commons.wikimedia.org/wiki/File:Coronavirus_Jongno_1.jpg)



Amitabh KUNDU  
Research and Information  
Systems for Developing  
Countries (RIS)  
New Delhi, India

### Infrastructure planning for interstate and intrastate mobility in India after the lockdown

Onslaught of the Pandemic in India rendered a large segment of the migrants jobless and homeless who got concentrated in slums and relief camps in and around a few large cities. They were provided shelter, basic infrastructure and other amenities by the central and state governments. The latter required them to register with the local authorities for arranging transport and other facilities for those who wanted to return back home as also for connecting them with entrepreneurs who needed employment.

For a large segment of migrants, Covid19 was a city affliction and an escape to their village was a sanctuary. Public awareness about the virus unfortunately was tinged with social media frenzy. Any person testing positive was seen as a leper by even the “educated people “ and could, therefore, expect help from none. Unfortunately, safe and manageable protocol for interstate travel was missing for

those who wanted to return to take care of farm activities or for emotional healing from the dread of the disease. The situation, however, has changed in six months and many are returning back to the cities with the corona stigma becoming much less.

Planning infrastructure for an exit plan and containment strategy for different regions and districts of India on the face of increasing number of infections and fatalities, the numbers crossing 80,000 and 1400 respectively, is a real challenge. The impossibility of implementing social distancing norms in large cities is understandable. About 35 per cent of the households live in one room units and 40 per cent have to depend on community facilities for drinking water and toilets. Any restriction on the mobility of slum dwellers can only increase social proximity and density of interaction - people standing in queues or sitting in large groups. They live not in their houses but on the streets and common spaces. All these are responsible for an alarming rise of infection in slums and low income areas, the mega cities becoming the major hot spots.

Infrastructural planning must be done for providing basic amenities to migrants who have stayed back in the cities and for addressing their socio economic and physical vulnerabilities. Given the high disparity in income and employment opportunities across regions and rural/urban areas, only 15 to 20 per cent of the returnee migrants would stay back, despite the best efforts by their states to absorb

them. Given the pace of unlocking the economy, efforts are being made to bring them back. However, there are risks in putting them once again into the ghettos and congested localities and keeping them dependent on community services for survival. Massive investments are required to improve infrastructure and basic amenities including health-care, education, drinking water and sanitation for them and other segments of vulnerable population, to guarantee the basic human rights as envisaged under SDG as also to sustain the process of economic recovery without further health shocks.

There is a need simultaneously to put back the regional economies into full swing, besides linking them up with the metro based economy. The state level authorities can monitor the location and travel details of the returnee migrants through district level officers and village panchayats by giving them health certificates, attached to the Aadhar (identity) cards. Mobility within and across districts will have to be normalised for ensuring labour supply at places of demand - construction sites, mandis and district industrial centres.

Importantly, this is already taking place through individual initiatives but this has to be institutionalized and coordinated for ensuring adherence to the norms of seating capacity, social distancing, pricing etc. State buses and state subsidies for taking commuters and other persons will have to be planned since private operations may not be feasible in certain routes due to distancing norms. It would be unreal-

istic to hope that no new infections would occur but these would be few, less than if there is an influx of migrants to large cities, as witnessed in recent years.



“Infrastructural planning must be done for providing basic amenities to migrants who have stayed back in the cities and for addressing their socio economic and physical vulnerabilities.”

– Amitabh KUNDU, Research and Information Systems for Developing Countries, New Delhi, India

Image Source: Migrant workers waiting for transportation on a cold winter day in the Russian Far East. Image by Nicolas J.A. Buchoud, all rights reserved ©



Sachin CHATURVEDI  
Research and Information  
Systems for Developing  
Countries (RIS)  
New Delhi, India

### **Infrastructure priorities and health: Diversion of resources? A commentary**

Collaborative efforts of G20 countries to promote and support quality infrastructure and regional connectivity since the G20 Japan in 2019 have confirmed the role of infrastructure development to support growth, a core issue within the G20 since its early years. As it was well assessed by the G20 Development Working Group in 2020, the Covid-19 pandemic outbreak has strongly impacted national and global investment priorities, but containing the disease should not overshadow the needs to develop a new generation of sustainable infrastructure systems.

The Covid-19 crisis has triggered a significant diversion of resources towards emergency health and economic relief spending. It has raised investments in health (and social) infrastructure as a new priority. As countries are now racing towards vaccine development and campaigning, the much-needed allocation of resources towards public health

infrastructure might be poised to last, in a context where the economy is affected by lockdowns and cascading socio-economic impacts, including decline of fiscal revenues which are even more severe at subnational levels.

Whereas the commitment to develop the quality infrastructure stock should be reinforced to provide wider and better access to opportunities and services for more people, the diversion of public resources to handle sudden health emergencies has blurred global governance perspectives and national investment agendas. Infrastructure are enablers of industrial development, including industry 4.0 and high value innovation but a year of Covid-19 pandemic has contributed to a decline of investments in support of development, also weakening the delivery of the 2030 Agenda. Spendings for emergency relief and buying vaccine have put a lot of strain on public budgets, but without clear vision about the return on those investments and their spillover effects.

In the past years, the G20 has worked effectively towards more effective public-private partnerships to develop a global sustainable infrastructure agenda. Priorities have been about bringing in access, equity and inclusion through infrastructure projects, with a particular focus on land value capture and the development of urban peripheries, a major topic in many emerging economies such as in India. We believe that South-South cooperation could help maximize the benefits of public-private partnerships through

more tailored infrastructure projects also aiming at enhancing sustainable regional development. Such reflections could serve as a benchmark for the development of health infrastructure in a post Covid-19 perspective.

We should build on the legacy of the G20 Japan to further develop technology leverage for quality infrastructure and reinforce how sovereign bonds can help leverage investments for sustainable infrastructure in developed and emerging countries alike. Notwithstanding the Covid-19 crisis, the issue of urban infrastructure is becoming more and more important globally, as the quality of urbanization processes depend not only on local and regional specificities but also to the countries' level of indebtedness. Along with urbanization at metropolitan and regional or even mega-regional scales, multi-infrastructure maritime corridors (including investments in ports, the development and protection of coastal areas, ocean protection and resources valuation etc.) is another category of investments that requires long-term high, level financial commitments from the public and the private sector. Such priorities should not be overshadowed by the Covid-19 pandemic crisis.

Along with South-South cooperation, the G20, notably the G20 Development Working Group as well as other arenas such as the T20, should enhance triangular cooperation, channeling technical, capacity-building and financial support towards resilient, efficient (quality), sustainable infrastructure and urbanization investments, noting that the role

of technologies and their financing will require even more attention in a post-pandemic perspective with potential benefits and new challenges in developed and emerging countries all alike. Urban infrastructure choices will play a critical role in attracting investments in the coming months and years. This will require upscale global cooperation and coordination to turn them into a driver for a new sustainable economy.

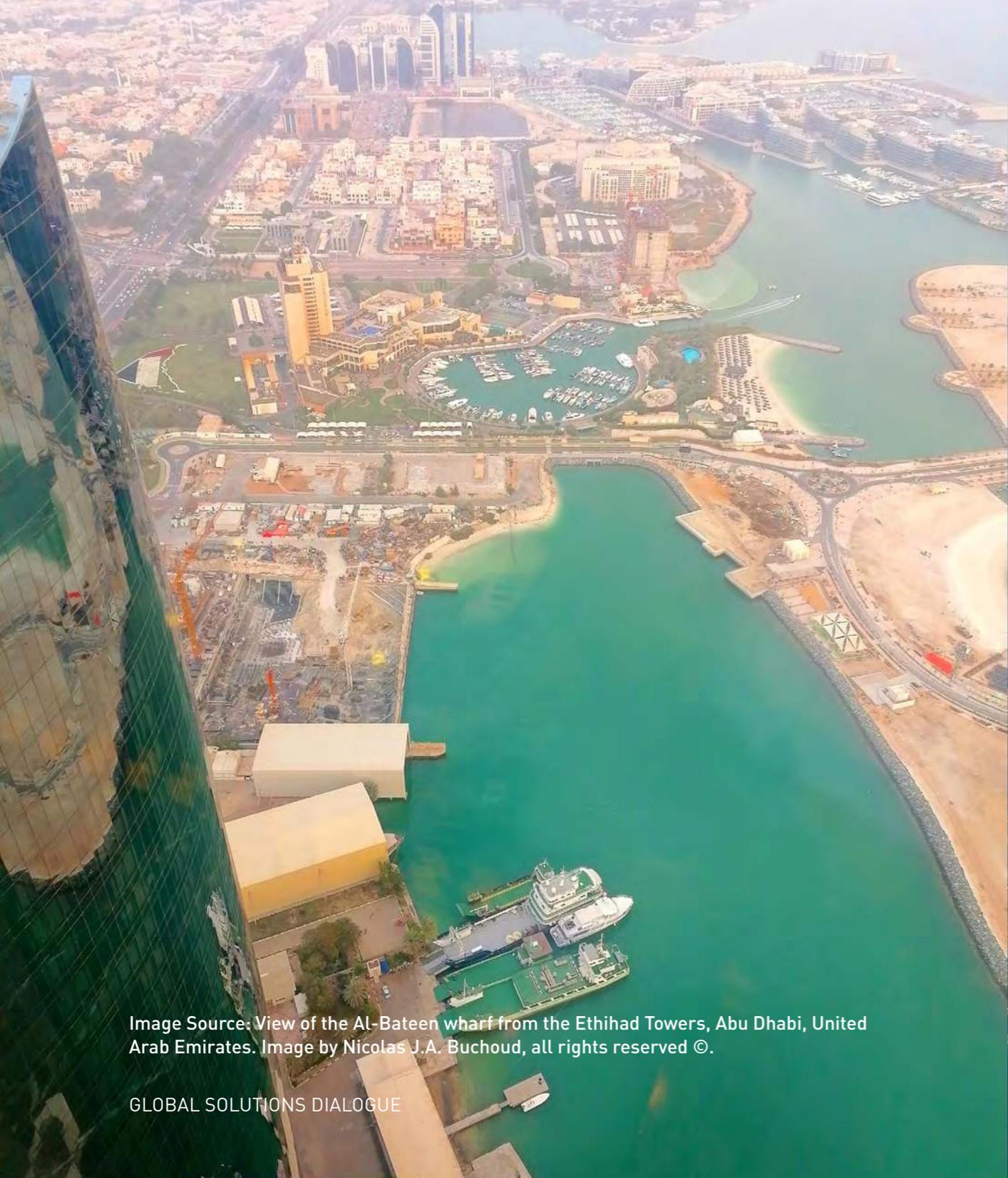


Image Source: View of the Al-Bateen wharf from the Ethihad Towers, Abu Dhabi, United Arab Emirates. Image by Nicolas J.A. Buchoud, all rights reserved ©.

“COVID-19 should not overshadow the needs to develop a new generation of large scale, sustainable infrastructure systems.”  
– Sachin CHATURVEDI, Research and Information Systems for Developing Countries, New Delhi, India



Image Source: Integrated development in the region of Seoul, South Korea. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Rakan BIN DOHAISH  
G20 Saudi Arabia  
Infrastructure Working  
Group (IWG)  
Riyadh, Saudi-Arabia

### About the G20 InfraTech agendas. An insight

Infrastructure investments will play a significant role in supporting post Covid-19 economic recovery with a focus on sustainable development and resilience but this will mean redoubled efforts from both developed and developing countries. Even before the pandemic outbreak, the Global Infrastructure Hub projected the global infrastructure financing gap would reach 15 trillion by 2040, which remains significant. To improve infrastructure financing in terms of quality and quantity, the Saudi G20 Presidency worked on two main priorities which have been reinforced by the Covid-19 crisis.

#### Utilizing the benefits of technology for infrastructure

Building on the Quality Infrastructure Investment principles issued by the G20 Japan, the G20 in 2020 has further recognized the benefits of most technology uptake in infrastructure including reducing time to build, increasing return on investments, lowering operation and maintenance costs

and delivering better social, economic and environmental outcomes to meet the Sustainable Development Goals.

To increase the uptake of technology in infrastructure sectors and maximize its benefits, the G20 has issued an InfraTech Agenda, endorsed by G20 leaders, finance ministers and central bank governors at the G20 Leaders' summit in Riyadh in November 2020. The Agenda is also supported by several international organizations. It is a high-level policy guidance for national authorities and the international community to advance the adoption of new and existing technology in infrastructure to fully reap its multiple benefits. The InfraTech Agenda should enable governments to save money and make more informed decisions and enhance governance.

The conclusion of this work is a set of nineteen recommendations along six priority areas:

1. Leverage InfraTech to enhance economic efficiencies and mobilize private - sector investment to promote growth and fiscal sustainability;
2. Promote technologies that foster inclusivity, sustainability, resilience, and good governance;
3. Accelerate innovation and economic dynamism in InfraTech related industries to support economic recovery and growth;
4. Foster a robust data ecosystem to improve resilience and better inform infrastructure planning, operation, maintenance, and investment decisions;

5. Develop agile and flexible policy tools that promote potential growth, productivity and innovation while mitigating risks;
6. Promote national and international cooperation in R&D and knowledge – sharing.

**Box: a definition of InfraTech**

Infrastructure technology, or InfraTech, can be described as the integration of material, machine and digital technologies across the infrastructure lifecycle. At its broadest definition, InfraTech can be considered any technology that impacts the development, delivery, and ongoing operation of infrastructure. This may include technologies used to define the strategic requirements of infrastructure or enable data-driven decision-making, innovations in finance and funding that support the commercial management of an asset, or technologies integral to the relationship a customer has with infrastructure services. From a policy perspective, it is important to make the distinction between the design of technologies in the operations of infrastructure planning and delivery versus the integration of technologies into the structures themselves, which changes the nature of infrastructure assets from simple inanimate objects to dynamic information systems. (Source: G20 Infrastructure Working Group – G20 Riyadh InfraTech Agenda)

**Continuing the work of the G20 Roadmap Infrastructure as an asset class with a focus on improving regulatory framework for the private sector participation.**

The G20 Roadmap Infrastructure as an asset class was issued by the G20 Argentina in 2018. In 2020, the Infrastructure Working Group looked at strengthening regulatory frameworks to enhance private sector investment in infrastructure. It is now commonly assumed that public investment in infrastructure will not be enough to meet key infrastructure economic and development objectives, a trend which has been reinforced by the Covid-19 crisis. Thus, it is essential for countries to improve the use of available resources and upgrade private sector participation in infrastructure investment.

The Saudi G20 presidency has engaged with more over a hundred institutions, investors and asset managers globally, to release the G20-OECD report on the collaboration with institutional investors and asset managers on infrastructure in July 2020.<sup>1</sup> The report includes several proposals to create and enable a better environment for private sector investments in infrastructure, based upon:

- a long term strategic and collaborative approach to enhance the supply of the bankable infrastructure projects;
- the promotion of a fair and transparent investment framework and strong regulatory institutions that are able to attract private sector investment.

The report has issued over thirty policy proposals, which should further be explored and developed by the G20 Italy throughout 2021.

1. <http://www.oecd.org/daf/fin/private-pensions/Collaboration-with-Institutional-Investors-and-Asset-Managers-on-Infrastructure.pdf>



“Building on the Quality Infrastructure Investment (QII) principles issued by the G20 Japan, the G20 in 2020 has further recognized the benefits of most technology uptake in infrastructure.”

– Rakan BIN DOHAISH, G20 Saudi Arabia Infrastructure Working Group, Riyadh, Saudi-Arabia

Image Source: Dense built environment and complex infrastructure systems intersecting in the Shimbashi central district of Tokyo, Japan.  
Image by Nicolas J.A. Buchoud, all rights reserved ©.



Caroline CHAL  
Syctom, the Greater Paris  
Metropolitan agency for  
waste management,  
Paris, France  
with Nicolas J.A. BUCHOUD

### Urban waste management during the pandemic: A brief outlook

Before the Covid-19 pandemic outbreak, it looked like nothing would prevent urbanization, driven by agglomeration economics interconnecting global cities and metropolitan regions, to continue thriving. One year later, the picture has changed but waste management remains as a sensitive and underfunded issue as before the crisis. Yet, aligning local and global initiatives to support circular economy could help put the 2030 Agenda back on track.

Lockdowns, curfews and other restrictions have highlighted the need for more open and public space for all in cities, for more justice in access to nature within and beyond city limits. The crisis has impacted office and retail real estate markets in major cities from London to Paris or Tokyo, as teleworking and e-commerce have developed rapidly. The pandemic has highlighted the deep encroaching of inequalities of revenue and well-being across metropolitan areas,

and revived the attractiveness of small or medium sized cities. In the developing world (and in developed countries alike), the crisis has crudely revealed many deficits in social infrastructure and safety nets, in particular for informal economic sectors. It has exposed many of the workers in the waste management sector, most often in the informal economy, to more risks and vulnerabilities, while the growth of urban waste has not been reversed.<sup>1</sup> As global urbanization is in crisis, leading public and private urban stakeholders have a historic responsibility to review how infrastructure and service delivery can contribute to health safety and to social and economic resilience, with waste management as an immediate priority.

Cities generate about 1.3 billion tons of solid waste per year, a volume that will increase to 2.2 billion tons by 2025 and will double in lower-income countries in the next 20 years, a trend that has not been affected by the Covid-19 pandemic. In many developing and emerging economies, the mismanagement of solid waste has been polluting land, water and air, thus leading to spread of disease and generation of greenhouse gases. Whereas waste management has long been held as a local problem to be solved locally, with international cooperation barely compensating for the lack of capacity building or sustainable revenue models, we can no longer go on like this. The call for more sustainable urban management and urban development has been echoed by the Urban 20 Riyadh Declaration, which has rightly pointed out to a universal right for urban sanitation and

waste management.<sup>2</sup>

In response to the Covid-19 health challenge, the global community has managed to adapt and even create vaccines in less than twelve months. Rapid improvement in technology, innovation for cleaning products and many service industries have found new ways to serve their customers. Cities and subnational governments should take this opportunity to convince global leaders, in particular through the G20, to allocate more resources on urban sanitation and waste management learn from the current adaptation, in 5 directions:

1. Technology can enable the development of low-cost, scalable solutions but it requires governments to engage with markets, to support fragile secondary markets for recycling, to incentivize the private sector down to a community level. This must be complemented by an enabling ecosystem including better regulations and innovative financing to attract private investment.
2. Development assistance such as through international or decentralized cooperation should be optimized to including local issues from early project design stage. Assistance from multilateral and bilateral donors and philanthropic organizations should value capacity building more thoroughly, which could be done by systematically including leading public and private metropolitan agencies in charge of waste management and sanitation in cooperation frameworks. Waste management is not just about general principles. It is about concrete implementation, know-how, and managing challenging business models.

3. Cities are unique social and economic ecosystems to pool resources and experience, and to implement partnerships ensuring that sanitation, drinking water supply, energy supply, waste collection and treatment are being effectively and efficiently delivered to all.

4. SDG 17: Another complementary way to support new partnerships and enabling ecosystems across local and global scales, public and private and community stakeholders would be to include urban waste and sanitation management as a key objective of the seventeenth sustainable development goal (SDG 17 is about reviving partnerships for sustainable development).

5. Circular economy, including sustainable waste management and their financing should be a continued priority for joint international and city-to city cooperation within the G20, as Rome and Milan are jointly chairing the Urban 20 in 2021.

1. The massive lockdowns and repeated confinements across the globe such as in Paris, have initially led to a drop in the production of waste, but it has gradually been erased. There is even growing evidence that disposable masks and other material to further prevent Covid-19 contagion are not finding their way to waste treatment.

2. U20 Mayors Communiqué 2020. Resolution n°18 'Adopt a universal right of access to urban sanitation and waste management for all while promoting 'zero waste societies', in recognition that waste rarely pays for itself and progress towards circular economy is slow but critical, in particular in rapidly urbanizing regions' <https://www.urban20riyadh.org/sites/default/files/2020-10/U20%202020%20Communique.pdf>

See also the research paper issued by the U20 on Urban waste and sanitation for all. <https://www.urban20riyadh.org/sites/default/files/2020-09/Urban%20Sanitation%20and%20Waste%20Management%20for%20All.pdf>



“Cities generate about 1.3 billion tons of solid waste per year, a volume that will increase to 2.2 billion tons by 2025 and will double in lower-income countries in the next 20 years. A trend that has not been affected by the COVID-19 pandemic.”

– Caroline CHAL, Syctom, Paris France

Image Source: 'Trucking material from the garbage field'. A child playing in the neighborhood of Babakan Siliwangi in Bandung, West Java, Indonesia, before a joint municipal and community clean-up initiative. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Irina KARAPETYANTS  
Russian University of  
Transport (RUT)  
Moscow, Russian Federation

### Transport infrastructure in a pandemic and post-pandemic time: Losses, challenges and uncertain changes

Transport's ramified infrastructure, which meets the basic needs of man and society in mobility, belongs to the sphere of the service economy, which has suffered significantly due to the restrictions on communications and the closure of national and regional borders because of the Covid19 crisis. Although the Covid-19 pandemic is far from over, it will have lasting impacts on the management and investments in moving goods and people. In the conditions of huge losses in the transport sector of the economy, the costs of the continuing stagnation of the traditional transportation system are clearly visible.<sup>1</sup> First of all, they are measured in terms of significant decrease in the volume of freight and passenger traffic. The impossibility of its complete restoration, even after 4-5 years, on the previous scale determines the essence of the subsequent necessary qualitative changes in the industry. Among them – reducing the production of vehicles for global markets, their technological modern-

ization in the direction of increasing environmental friendliness, energy efficiency, reducing the cost of services, implementation of digital management, autonomization of use, introduction of sanitary safety standards, transformation of infrastructural and logistic support of modal shifts in the utilization of certain modes of transport and redistribution of flows in the organization of traffic, decline of financial resources supporting the operation of traditional transport facilities.

Despite the fact that, for example, the EU countries decided in March 2020 on the free continuous cross-border transportation of goods, the traffic load indicators are low due to the temporary or final closure of a number of industrial enterprises which is a result of the economic lockdown. Meanwhile, the need to expand stocks at terminals and, accordingly, an increase in demand for equipped warehouses is increasing. A significant narrowing of the range of transported goods in favor of inclusion in the main flow and supply chain of food and medical goods also affected a certain transformation of the transport and logistics infrastructure and their equipment. State support measures adopted in many countries for operators representing various modes of transport cover, inter alia, covering payments exclusively for the use of existing ground infrastructure.

The decisions taken during the spread of the first and second launch (wave) of the coronavirus aimed social distancing and affected the impossibility of moving towards

achieving sustainable development in the implementation of task 11.2. SDG 11 - “Expanding public transport in cities”. From 60 to 90% of urban residents stopped using public transport.<sup>2</sup> With moving online most of a significant number of citizens either working or studying, transport has shifted from the daily necessities of life to the area of increased risks of COVID 19. Against this background, sales of private cars as safer means of personal mobility have increased in many of countries. For example, in Russia, it was about 7% percent compared to the last 2019. Such trends also do not contribute to the achievement of environmental sustainable development goals.<sup>3</sup>

In the context of the pandemic crisis and the reallocation of public resources, financing targets for modernizing transport infrastructure have decreased in many countries. Due to budget deficits and falling revenues, many transport projects are postponed indefinitely. For example, in North Carolina (USA), the Department of Transportation was forced to postpone more than 100 projects worth \$ 2.2 billion in 2020. Infrastructure investment in South Africa is down 5.4% this year.<sup>4</sup> As a result of the sequestration of the financial plan for the implementation of the transport part of the comprehensive plan for the modernization and expansion of the backbone infrastructure for the period up to 2024 in the Russian Federation, investment in infrastructure decreased by almost 2 times.<sup>5</sup>

At the same time, the Covid-19 pandemic has stimulated the development of digital infrastructure, logistics servers, and unmanned vehicles, in the context of the implementation of contactless modes of life and the organization of work processes. Transport infrastructure is also changing with the expansion of preventive health measures through. Modern vehicles and transport facilities, given the uncertainty of the final end of the pandemic, must necessarily be equipped with appropriate disinfection equipment. As the movement (flow) of people and goods is listed among the key five economic sectors most affected by the pandemic crisis (KPMG 2021), further development of transport infrastructure will be difficult and contradictory.<sup>6</sup>

The positive forecast is that transport will be in the focus of political programs for financial support of key sectors of the economy in the post-view period as well. Negative factors are determined by the close dependence of the development of transport infrastructure on the rapid recovery of many sectors of the economy, the banking system, and commercial activity of business, which for the next 5 years forecast of a decline in world GDP by 5.3%, seems problematic. In addition, a significant reduction in the demand for passenger transportation is expected due to a decrease in the income of the population, the continuation of the policy of organizing a significant part of professional activity in a remote format, and the emergence of new models of citizens’ behavior in relation to routes, forms and types of mobility.



# АВТОМОБИЛЬНЫЕ ДОРОГИ РОССИИ

“Due to the COVID-19 crisis, sales of private cars as safer means of personal mobility have increased by 7% in Russia in the last quarter of 2020 as compared to 2019. Such trends do not contribute to the achievement of the SDGs.”

– Irina KARAPETYANTS, Russian University of Transport, Moscow, Russian Federation



Image Source: Map of the federal road system connecting the Russian Federation and central Asia by 2030, Rosdor NII institute, Moscow.  
Image by Nicolas J.A. Buchoud, all rights reserved ©.



Jörn MEYER  
Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ)  
Kiev, Ukraine

## Financing urbanization and the return of the nation state

The 21st century belongs to cities. Without enough investments into their development the needs of the exponentially growing population will not be met. Nor will millions of people receive the chance to improve their lives. The challenge is simple – more investments in cities – the solution very complex. Various levels, actors and factors are involved, besides that every national and local context is unique. Surely, cities need to be in the driver's seat of development, since they are directly confronted with challenges and implement solutions. Logically, they should also be in charge when it comes to public and private investments. This may include a more extensive provision of grants or direct access to external financing supported with guarantee mechanisms.

The focus on cities, however, is only one side of the coin when it comes to financing a sustainable local and global future. The other decisive side is the national level, also in

times of urbanization and globalization.

Fact one: We must be aware that all we build and structure today will last for the coming decades thus determining our future developing path. There is a closing window of opportunity to set development on the right track.

Fact two: Cities in developing countries and emerging economies are rarely ready for mobilizing, accessing and managing vast amounts of financing – not to mention preparation of concrete investment projects. Most cities do not have the right to access external finance, not even in local currency. They lack autonomy and legal frameworks, capacities, own resources and experience. In best case scenarios, it may take two to three decades to fill these gaps in legislation, governance and financial market development

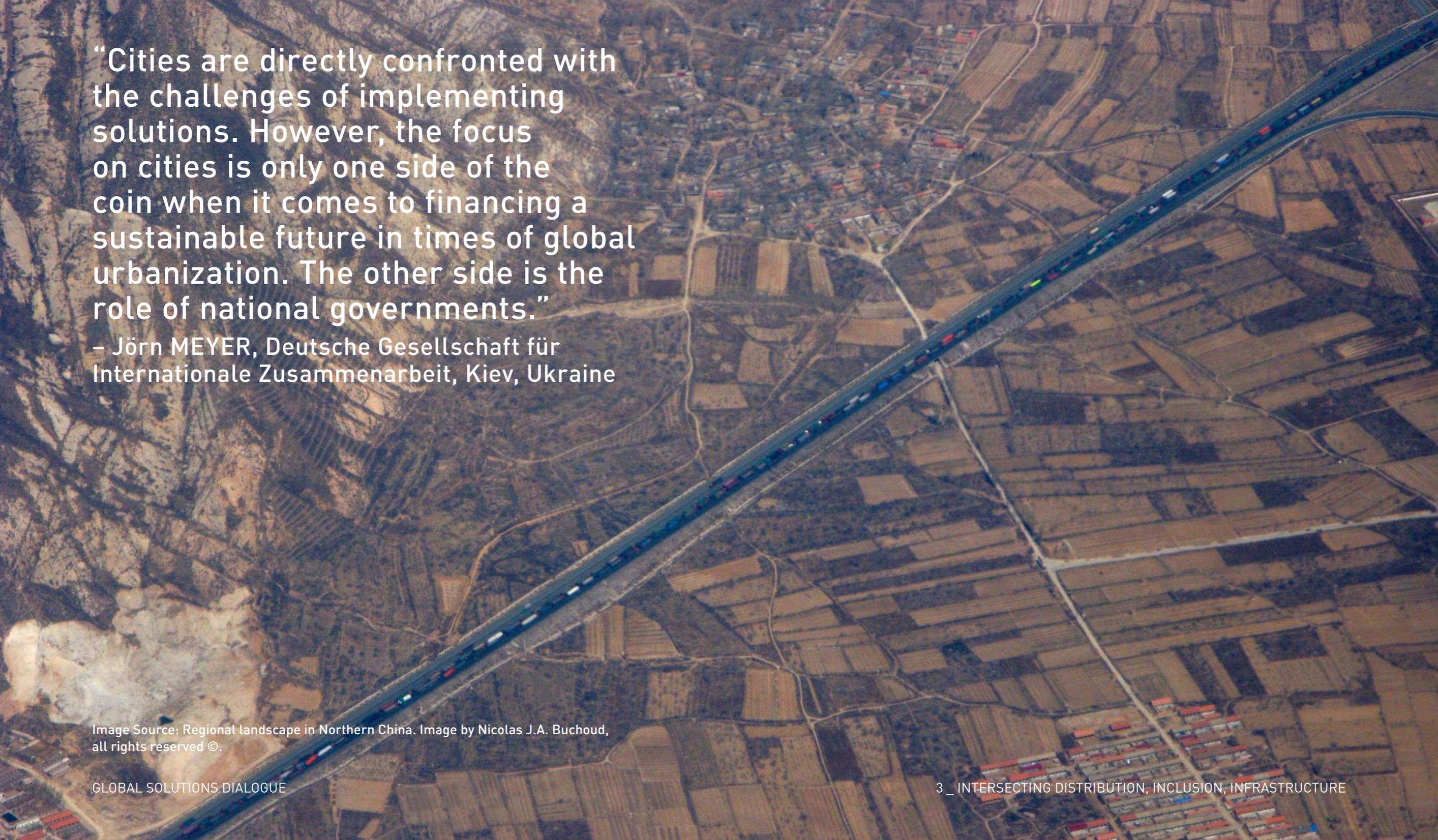
Fact three: Nation states are the major provider for subnational financing. Fiscal transfers from the national level are indispensable for municipal budgets. Within international financial cooperation, development banks and funds generally channel their money through national governments to cities. Few exceptions cannot alter this clear status.

To sum up: Cities must act now but the world cannot wait for them to be ready for action. It needs more than “just” strengthening cities. Nation states must take over a stronger role towards urban development, such as mobilizing more earmarked financing for cities. Since they are part-

ners for international finance, why not use this role more for urban development? And why not extend this mobilization beyond ODA also including private investments, who are essential for meeting the demands?

Economic prosperity, climate change or actions in the COVID-19 crisis, many national measures can only be implemented locally. Still, the missing recognition of the urban importance remains one major obstacle. The local level may even be perceived in competition to the national. A global effort is needed to raise the recognition of cities, starting with (re-)defining the role of nation states. It needs a final consensus that cities are decisive for national and global agendas. Where national reluctance prevails, the international community like the G20 may incentivize action in the right direction.

Enthusiasm that a sustainable world needs sustainable cities versus skepticisms that cities cannot meet this demand calls for a pragmatic twin-track approach: First, cities are supported on all levels and in all issues. Second, a more active role of the nation state is claimed and incentivized. Clear is: Cities need to be in the driver seat, but until they learn how to drive, the nation state needs to take over the wheel. Eventually, both are in the same car.

An aerial photograph showing a multi-lane highway stretching diagonally across a rural landscape. The landscape is characterized by a patchwork of brown and tan agricultural fields, some with distinct patterns. A small village with several buildings is visible in the upper right quadrant. The highway has multiple lanes in both directions, with visible lane markings and some vehicles. The overall scene is captured from a high angle, providing a clear view of the infrastructure and the surrounding terrain.

“Cities are directly confronted with the challenges of implementing solutions. However, the focus on cities is only one side of the coin when it comes to financing a sustainable future in times of global urbanization. The other side is the role of national governments.”

– Jörn MEYER, Deutsche Gesellschaft für Internationale Zusammenarbeit, Kiev, Ukraine

Image Source: Regional landscape in Northern China. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Hang DANG MINH  
Young Global Changer of  
Global Solutions Initiative  
The Australian National  
University  
Canberra, Australia

### The COVID-19 crisis: Business responses and policy implications

The unprecedented COVID-19 pandemic has affected workers and businesses in every economy around the world both in the short run and long run. A World Bank report finds that 84% of respondents in its enterprise survey report a sale drop between 60% and 75% on average in the first four weeks after the peak of the outbreak.<sup>1</sup> 94% of the global workforce is living in countries with some sort of workplace closures in place that creates disruption to business operation.<sup>2</sup>

In response, most firms adjust workforce such as hiring freeze, furlough, reducing wages and working hours, and layoffs. Firms in accommodation sector has the highest probability of granting leaves (52%) and reducing wages (32%). With respect to firm size, large firms are more likely to furlough and lay off workers than small-and-medium enterprises (SMEs) by approximately 15% and 9% respective-

ly. Past research find that small firms may have more flexibility in adjusting to downturn quickly by exploiting market niche and less relying on formal credits than larger firms, thus less subject to sunk costs.<sup>3</sup> However, SMEs are likely to be more vulnerable to financial constraints and have less cash at hands to cover the costs during the crisis compared to larger firms even in advanced economies.

Firms also respond by promoting working-from-home. In the US, researchers find that roughly 42% of the labour force is working from home fulltime because of the pandemic, representing over two-third of economic activities.<sup>4</sup> In an ILO policy brief, studies estimate jobs that can be done remotely is over 26% for Argentina, between 20% and 34% for Uruguay, 24% for Italy, 28% for France, 29% for Germany, 25% for Spain, and 31% for the UK.<sup>5</sup>

Digital transformation allows firms to access new channels of selling and advertising products and reaching a broader customer base. The OECD reports that COVID-19 is accelerating e-commerce market expansion to new firms, customers and more diverse product type from luxury goods to essential necessities, and the shift is likely to be long-lasting.<sup>6</sup> The surge in e-commerce activities were significant across regions including Europe, North America and Asia-Pacific during the first half of 2020. However, the uptake in e-commerce differs among countries, e.g. the increase in businesses using online platforms ranges from 11% in Ghana to 81% in Indonesia, depending on digital infrastructure

availability.

To build a “better normal”, businesses need government assistance to avoid layoffs, cut costs and invest in technologies. Governments around the world have provided access to finance/tax and other relief in many forms such as direct cash transfer, tax cut, loan extension, etc. as immediate responses to ease financial constraints and improve liquidity, particularly for vulnerable SMEs group. More long-term investments on digital infrastructure, social infrastructure and arrangements are necessary to encourage business digitalization and remote working. Policymakers may also ensure social protection for all, and provide training and skill development for unemployed and marginalized workers. Going forward, governments may combine short-term solutions with long-term structural stimulus to build a more inclusive and resilient economy.

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Image Source: Cellphone and computer repair, connecting people in Bamako, Mali, and in Genoa, Italy. Images by Nicolas J.A. Buchoud, all rights reserved ©



“More long-term investments on digital and social infrastructures and arrangements are necessary to encourage business digitalization and remote working.”

– Hang DANG MINH, The Australian National University, Canberra, Australia



Holger KUHLE  
Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ)  
Berlin, Germany

### **Sustainable infrastructure isn't just about an outcome, but also who has a say in it**

If infrastructure gaps are based on statistical estimates or top-down approaches, they have to rely on oftentimes-incomplete data sources and to make a series of normative assumptions. More often than not, they are incommensurable and say little about regional differences and local contexts such as relevant delivery and institutional regimes, project preparation capacities, or legal and regulatory frameworks. At the same time, while contextually specific studies at smaller scales provide more robust and fine-grained investment figures, it is difficult to extrapolate their investment figures to larger scales. The point is about critical co-constitution of data collection and data per se. In other words, data is laden and not neutral.

Infrastructure investment gaps can be estimated via top down approaches. Departing from normative assumptions about future infrastructure needs it derives the infrastruc-

ture gap by comparing historical and present infrastructure spending to estimates for future investment needs. These analyses estimate the existing capital needs of infrastructure projects based on specific project pipelines derived from market analyses and existing regional capital plans. In comparison to this, bottom-up approaches are contextually specific and mindful of existing public policy, delivery regimes, and infrastructure projects.

The challenge of bottom-up approaches is the requirement of resource intense market analyses, stakeholder capacity and their engagement through sophisticated methodologies, which have pitfalls in their own rights. Considering these challenges, this is the area where the contribution of technical international cooperation remains key.

Supporting municipal governments to play the central role in charting their own financial destinies while they are often co-opted by the prerogatives of central governments or the financial sector is obviously an important domain for international development cooperation. With empowerment from central governments and sufficient internal capacity development to conceive and assess funding options for capital-intensive projects, city leaders can both assist their central governments in delivering on the global agendas like the 2030 Agenda and the Paris Climate Agreement and improving the quality of life for their constituents.

Strengthening urban managers and communities in their

capacity and ability to deal with the interconnections between built environments, digital economy, socio-economic divide and spatial dynamics and in their contextualized derivation of infrastructure and investments needs remains a key area for international development cooperation.

Developing an economic basis and solvency of cities through enabling them to analyze attentively the effects of funding of financial intermediaries to their future budgets is a major task for the near future. It is about the cities capacity to keep or build their sustainable budgets over the time. This relates to the roles of the providers of equity, debt and money at the city, national and the external financiers' level, respectively (including the potential capacity of pension systems). They all have different risk and rewards profiles, timing preferences and determine profoundly a city's capacity of an inclusive and sustainable development over time.

The current pandemic has shown the value of adaptive need infrastructure finance development and the need for building socio-economically resilient cities budgets. The challenge is firstly that in many cities neither one nor the other is given. On the other hand, there is a disconnect between these two. In future, it will be necessary for international cooperation to bridge this gap when supporting cities.



“The challenge of bottom-up approaches for infrastructure investment is the requirement of resource intense market analyses, stakeholder capacity and their engagement through sophisticated methodologies, which have pitfalls in their own rights.”

– Holger KUHLE, Deutsche Gesellschaft für Internationale Zusammenarbeit, Berlin, Germany

Image Source: Intersections: favelas, port city and the Rio Niteroi viaduct, Prefeitura da Cidade do Rio de Janeiro, Brazil. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Michael COHEN  
The New School  
New York, the United States

### **The way forward is ‘infrastructure for distribution’: Recovering from COVID-19 from the Bottom Up**

The COVID-19 crisis has revealed once again the unfairness of global, national, and local economies. The poor in all countries have had higher rates of infection and death than the middle class and the rich, demonstrating that living conditions including overcrowding, the lack of clean water and sanitation, and higher residential densities affect the incidence of the disease. Millions of people living in informal settlements around cities in developing countries have not been able to afford social distancing, staying home from work, or digital commuting. Those with capital have been able to grow their wealth, while the poor are mired in lost jobs, dwindling savings, and declining public economic support which was distributed in the first months of the pandemic. New York has lost more than a million jobs due to the COVID-19 crisis. In Buenos Aires slum dwellers face the impossible choice of staying home to avoid the virus or going to work to be able to provide food

for hungry households.

The governmental response to this double crisis of COVID-19 and the collapse of economies has generally been of two kinds: first, direct immediate aid to victims, either in terms of food, cash payments, or other services, and secondly, through the promise of restarting economies through stimulus packages to support short to medium-term economic recovery. If the first has been a short-term response in many countries, the latter has assumed that restarting growth will take time, with higher public spending contributing to economic multipliers and eventually economic growth. The reality is that stimulus packages have proven to be unaffordable, even in the medium term for rich countries.

The sector most favored in these recovery packages has been infrastructure. The term adopted by the G-20 and other global institutions has been the well-worn slogan of “infrastructure for growth” which goes back to the 1994 World Development Report and the 2010 G20 Seoul Summit which argued for the importance of infrastructure investment action plans. There is little doubt that infrastructure does contribute to growth, as noted by Nobel Laureate Sir W. Arthur Lewis who referred to infrastructure in the 1950s as “social overhead capital”, a necessary input to economic growth. Nonetheless, infrastructure which contributes only to growth is just not enough. Growth is a necessary but not sufficient condition

for an equitable recovery, social progress, or sustainable development. The real challenge is how to improve the unequal distribution of income. The question then is what would be infrastructure for distribution?

Infrastructure for distribution is the idea that the purpose or objective of infrastructure should also be to improve the distribution of income, wealth, or opportunities across society but particularly for the poor who have received a disproportionate impact of the COVID-19 pandemic. An example of infrastructure for distribution could be a water supply system built to provide the quantity and quality of water needed by a specific low-income community. Investing in this system should be labor-intensive rather than capital intensive. The required equipment, such as pipe, should be domestically manufactured pipe and not imported from an industrialized country. It would generate local employment as well as provide water for consumption. This is not very different from the labor-intensive public works programs designed in many countries, from the New Deal in the 1930's in the United States to rural infrastructure programs in India or Mexico.

By paying for the labor to build such a system a project would generate income for the poor who would use it to meet immediate household needs. The income earned by low income people would be quickly consumed and thereby generate immediate economic multipliers in the local economy. If enough income was created and multipliers

activated, it would increase the aggregate demand for goods and services within local economies. That aggregate demand would in turn create new employment that would repeat the cycle.

A sequence of investment, employment, income generation, consumption, and creation of economic multipliers would occur, but not just to increase GDP, admittedly a worthy objective, but rather to expedite the distribution of income to poor communities. This approach contrasts sharply with most infrastructure investment which finances large transportation systems or highways or trunk infrastructure rather than generate immediate expenditure for labor costs that can help poor families meet their needs.

A second example of infrastructure for distribution might be a program to improve environmental management – a green corps – to address a range of environmental problems from pollution to maintenance of green space and other environmental resources. In this case the infrastructure is people. This program could also employ millions of young people who are currently unemployed and thereby generate incomes for this group that has become one of the largest segments of the “precarariat”.

Another example of infrastructure for distribution might be in the field of culture or creative economy where many cultural workers earn low incomes in what they perceive to be limited markets for their creative work, whether in the

plastic arts or in performance. But some local cultural workers in Indonesia and Mexico have learned that the digital sphere has the power to publicize and expand their activities., Most of these workers receive modest incomes for their work, but with logistical support, they are able to expand both activities and earnings.

A key feature of infrastructure for distribution is that it can reflect the demands of users. Unlike conventional infrastructure that has a heavy supply bias, designed by engineers and manufactured in factories, infrastructure for distribution would reflect the preferences of users. It is clearly a bottoms-up approach which contrasts with most heavy investment in infrastructure and the canon of development agencies about “going to scale” in order to make a difference.

Going further, one can also speak of “people as infrastructure” where individual and community capacities can activate community responses to problems. One dimension of this is to consider “participation as infrastructure”, as shown in Buenos Aires where a slum community with prior participatory experience in slum upgrading was able to keep COVID-19 cases and mortality below levels in other neighborhoods.

Considering the notion of infrastructure for distribution opens up space for a wider and more social understanding of how infrastructure can be used to achieve other

objectives. It offers an alternative to the conventional focus on infrastructure financing which is in fact part of the previously described “supply bias” when infrastructure is discussed. Infrastructure for distribution shifts the conversation towards the demand side, towards users, and towards focusing much more on the objective of economic and social progress.

In so doing it also suggests a new infrastructure compact in which communities are happy to contribute to the financing of infrastructure that is designed to meet their needs and not abstract policy notions of productivity or mobility. To ignore this dimension and to continue the conventional focus on financing and public-private partnerships is to miss an important opportunity for policy change and a new beginning. The COVID-19 pandemic provides an opening for new initiatives while recognizing that the pandemic has once again exposed not only the social and economic differences within countries and cities but also the weaknesses of existing policy and investment tools. More of the same is not enough.

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“There are many supply biases  
in providing infrastructure,  
a systematic disregard  
of the demand-side.”

– Michael COHEN, New York, the United States



Image Source: Wikimedia Commons. USNS Comfort arrival into New York Harbor, March 30, 2020. The Comfort arrived in New York City to assist in the COVID-19 response. Image by U.S. Coast Guard, Petty Officer 3rd Class John Q. Hightower. <https://www.flickr.com/photos/navymedicine/49727674192/>

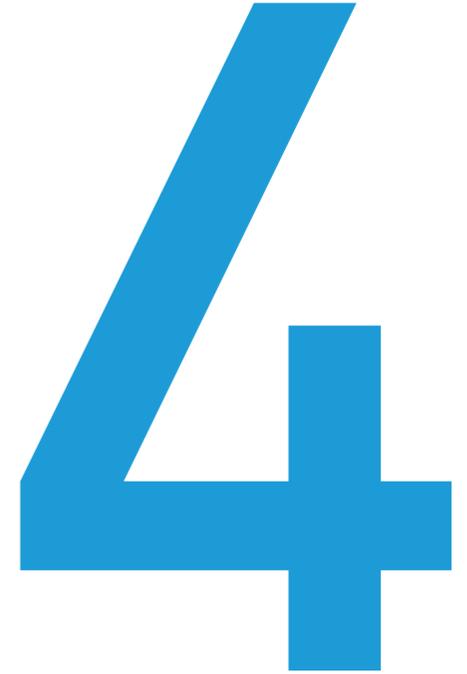
**fragmentation**  

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**generation**  

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**knowledge**



# fragmentation

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# generation

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# knowledge

## 4.0. Complexity: solutions beyond fascination

Susan PARNELL, University of Bristol, the United Kingdom

## 4.1. Why waste a “good” crisis?

Nicolaos THEODOSSIOU, Aristotle University of Thessaloniki, Greece

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Henri DE GROSSOUVRE, Nicolas PREGO, Pierre ACHARD, and Oriol BELLOT, SUEZ, Paris, France

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Daniel MILES, ESI ThoughtLab, Philadelphia, the United States

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## 4.8. Life after COVID-19: a ten points framework

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## 4.9. Towards an economy of well-being supported by new measurements: update on the SAGE framework

Katharina LIMA de MIRANDA, Kiel Institute for the World Economy, Kiel, Germany

## 4.10. Three practical considerations for renewing knowledge generation

Tetsushi SONOBE, Asian Development Bank Institute (ADBI), Tokyo, Japan



“To forge workable alternatives that will transform individual cities and the interconnected settlements where the majority of the world now live, deep knowledge of how the constituent parts of the local, national, regional and global city system work is a non-negotiable point of departure for remaking cities.”

– Susan PARNELL, University of Bristol, the United Kingdom

Image Source: The award winning smart house for Solar Décaathlon Europe competition with hydrogen and solar energy experiment 'Living Lab' installation on the campus of TU Delft, South Holland Province, the Netherlands. Courtesy of prof. Arjan van Timmeren, faculty of architecture. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Susan PARNELL  
University of Bristol  
the United Kingdom

### **Complexity: Solutions beyond fascination**

Finding solutions to the complex urban challenges of our time, not least of which are climate change, biodiversity loss, inequity and COVID-19, demands more than good ideas or political will. We need powerful evidence and analytical capacity to make sure that we claim the opportunities for urban change afforded by the recent crisis. To forge workable alternatives that will transform individual cities and the interconnected settlements where the majority of the world now live, deep knowledge of how the constituent parts of the local, national, regional and global city system work is a non-negotiable point of departure for remaking cities.

Informing practical pathways to transform post COVID cities through translational research (knowledge designed and executed with the intention of change and impact), cannot continue to be done in the traditional narrow disciplinary ways or in the usual over researched places. Trans-

lational urban research demands broadening the global evidence base (African and Asian cities and towns are key sites), sharpening our analytical grasp of the priorities that will trigger lasting and meaningful change in cities (through deepening specialist knowledge and grasping the interconnections of processes) and acknowledging what is likely to stay the same in the functioning of cities because of the fixed physical, natural and political forces.

The post COVID urban research agenda has to hold complexity at its core. Policy relevant urban research at this moment of crisis needs to be 1) global as well as local, 2) abstract (or theoretical) as well as practical and applied and 3) strongly grounded in the past as much as it is oriented to the future city.

1. A global as well as a local research vision for urban risk reduction

The nature of infectious diseases is such that there is a common and connected future that rests on all cities being able to combat the virus. The same common future is true for cities given the global impacts of climate change, biodiversity and inequality. COVID-19, like the other global challenges, underscores what researchers of the last decade have been saying is a global priority for a more resilient urban future – that to ‘leave no city behind’ we need a more inclusive remit of urban research. Reconfiguring the urban

knowledge machine by strengthening research on poor cities as well as cities located in regions including weak research that applies inappropriate theory to local cases, is the critical pathway to living safely into the urban future. For the post COVID urban research community, addressing the global – local scaling of knowledge more systematically and sensitively must be a priority for the next decade.

## 2. Post pandemic urban research that is simultaneously theoretically innovative and practically grounded

There is a once in a generation opportunity in the wake of COVID for urban specialists to come together to engage the issue of ‘the urban future’. The rupture of the pandemic, even more than the pending crisis of climate change, social upheaval or ecosystem collapse, seems to have galvanized a common call to rethink the city; a cry that places urban intellectuals in the unusual position of being able to present new ideas about the way the planetary processes might be re-imagined through cities. To have traction, any credible new urban vision has to be crafted on a city-by-city basis, but it cannot succeed until all cities find the evidence driven pathways that will guide alternative modes of urban functioning that do not compromise the integrity of the global urban system. The conceptual challenge is to explain urban dynamics in ways that are credible across scales, time and context and in relation to the ever evolving pressures of demographic change, economic transition and ecological precarity. The sort of sophisticated research agenda

that illuminates and where necessary points to effective entry points of transformative change demands big ideas, detailed verification capacity and of necessity some large teams with significant resources.

## 3. Post-COVID and the urban palimpsest

The problem in reimagining ‘the urban future’ is that we do not have a blank slate. New pandemic resistant cities will not be built from scratch, old cities must be reconfigured to reduce risk. The urban palimpsest, that inter-connected and layered emergence of urban form and function, is something what we must work with and not ignore. To this end research can inform and even catalyze the things that will ultimately change cities: ideas about the urban, technologies that will allow innovation, new regulation planning and development priorities, fresh investment incentives and patterns and even alternative modes of urban living. Knowing the past and understanding how to insert and manage change processes is complex - demanding local political insights, relevant technical capacity and some inspiration. Navigating the past, present and future of the city to enhance human and natural system well-being can never be achieved through a single specialist form of knowledge or without the active involvement of citizens and the state – making collaborative and interdisciplinary urban research the desired format of the post pandemic world.

The shortcomings of existing urban intelligence must be

confronted even as we begin the post pandemic tasks of building cities back better and an invigorated urban science must be nurtured. The mandate for urban research then is for both an art and a science, a specialist and generalist endeavor, an abstract and concrete practice, and with a local and a global mandate.<sup>1</sup>

#### 4. Additional note from the editors: the next frontiers within us

We are facing the COVID-19 pandemic at a time when humanity has started building an arsenal of techniques, technologies and methods to understand the effects of man-made transformations in climate, biodiversity, social living conditions and health, but the pandemic has increased the pressure in a unique way, redoubled by weeks long lockdowns and months long limitations of travels and contacts. Instead of rushing to conventions, symposiums and other forums, humanity is confronted with itself. When we ask ourselves what is going on with Earth and what the future of our health might look like, one has to ask what is going on with us, with 'our' science, 'our' expansion of urban life, 'our' industry and consumption, 'our' division of wealth and poverty and the changing balance between North and South, East and West...

How we draw conclusions from how knowledge is formed and applied in and among cities during the COVID-19 pandemic could pay off in the future. We need to elevate the

discussion from applying an addition of technical or engineering solutions to question how we generate and apply knowledge in addressing the crisis of increased social inequalities, environmental injustice, digital imbalances, along mega-issues of global warming and biodiversity conservation. The pandemic strikes us severely because humanity finds itself in a tense scientific and political conversation about the possibility of knowledge on changing planetary systems due to previous human trajectories on the one hand and the resulting rational, urgent conclusions on the other. On the one hand, it is about is the characterizing what the 2020 Human Development Report of the United Nations Development Program (UNDP) quoted as 'The Next Frontier: Human Development and the Anthropocene.'<sup>2</sup> This is about realizing we might be at a turning point in history. Then nothing short of a great transformation, in how we live, work and cooperate would be needed to change the path we are on. On the other hand, a rescue and resilience powerful narrative is being developed. It tells that more rapid and wider spread technological innovations will allow humanity to thrive while also respecting the planetary boundaries in order to maintain its own livelihoods.

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2. The Next Frontier: Human Development and the Anthropocene, Human Development Report 2020, United Nations Development Program (UNDP) <http://hdr.undp.org/sites/default/files/hdr2020.pdf>



“The shortcoming of existing urban intelligence must be confronted even as we begin the post pandemic tasks of building cities back better and an invigorated urban science must be nurtured. The mandate for urban research then is for both an art and a science, a specialist and generalist endeavor, an abstract and concrete practice, and with a local and a global mandate.”

– Susan PARNELL, University of Bristol, the United Kingdom

Image Source: The temporary 'POC 21 innovation camp', Château de Millemont, Yvelines District, Ile de France, in the summer of 2015 before the Paris Climate COP21. Image by Nicolas J.A. Buchoud, all rights reserved ©



Nicolaos THEODOSSIOU  
Aristotle University of  
Thessaloniki, Greece

### Why waste a “good” crisis?

2020 will remain in our memories, and in history, for the tragic effects of the global COVID-19 pandemic. Hundreds of thousands of lives lost, huge impact on global economy, unpredictable recession, millions of lost jobs, unprecedented impacts on social everyday life and so many other changes marked the lives of every living person in the planet.

But were all the impacts of the pandemic, completely negative? Perhaps not. During the lockdown, some environmental aspects were actually improved. Air pollution, especially in urban and industrial areas, showed significant signs of recovery. Restrictions in traffic, suspension of operation of industries and changes in so many other air pollution activities, resulted to significant, in many cases, reduction of the recorded air pollution parameters.

Similar observations were recorded regarding other environmental indices as well. Water pollution, both in inland

and seawaters, especially originating from industrial sources, showed trends of reduction. At the same time, pollutants from energy sources showed also signs of stabilization and even minimization, due again to the suspension of operation of energy-consuming industries.

This, observed reduction of environmental stresses, is not expected to have measurable impacts on climate change, due to the limited time of implementation of the restriction measures that caused it. Climate change is a long-term process that is not affected by seasonal changes.

The intergovernmental Panel for Climate Change (IPCC) stated in their latest report that we are only a decade left, before climate change becomes irreversible. Something similar is also stated by the Climate Paris Agreement, the Agenda 2030 and the Sustainable Development Goals. The European Green Deal, and other similar agreements that have been or are in the process of being implemented, demand the de-carbonization process to be completed before the originally agreed 2050.

If one combines the remarks presented above, that is, the signs of environmental recovery due to the restriction measures imposed to control the pandemic and the efforts of international organizations to control and reverse the climate change process, significant convergence can be observed. This means that if we decide to implement, and not necessarily impose, the measures needed to control

environmental degradation and climate change, we still have time to do it. It is late, but not too late.

And we have seen this through one of the most severe global disasters mankind observed, the COVID-19 pandemic. Through the ashes of distraction, hope arises that if we all act in the same direction, we still have the opportunity to save the planet and the future generations.

So, why waste the hopeful signs of the global pandemic? Why waste a “good” crisis?



“As urbanization continues to generate commercial opportunities, ethical dilemmas and ecological challenges, the future configuration of cities is of paramount importance to human flourishing across the globe.”

– Francisco OBANDO and Michael KEITH, Oxford University, the United Kingdom

Image Source: In the southwest outskirts of Nairobi, near Karen district, Kenya.  
Image by Nicolas J.A. Buchoud, all rights reserved ©.



Francisco OBANDO  
Oxford University  
PEAK program  
the United Kingdom



Michael KEITH  
Oxford University  
PEAK program  
the United Kingdom

We see the city as a 'system of systems' and acknowledge cities as open rather than closed systems. An open system, or the parts of a whole, interacts with its environment by exchanging energy, materials and information, changing the structure of the constitutive parts of the system itself. The city assembled has properties that its parts do not have on their own. Cities are always in construction and their mutations exemplify what in systems theory is described as emergence.

PEAK Urban and partner Oxford Martin Programme on Informal Cities (see PEAK website<sup>2</sup>) are comprised of more than 37 research projects conceptualized locally in Oxford, Beijing, Bangalore, Cape Town, Medellin, Addis Ababa, and Delhi by researchers from varying epistemological dispositions with expertise in a range of disciplines from anthropology, medicine and mathematics to econometrics. Each project answers pressing questions in the areas of health, sustainability, growth, migration, informality and others. The projects employ the PEAK Urban framing. They value the power of (P)rediction and leverage opportunities of new data and tools. New datasets and novel tools are used to interrogate existing paradigms and theories concerning how cities function. At the same time, the limitations of prediction in systems that are open and unstable is recognised.

(E)mergence is another key component of PEAK research projects, that are premised on city systems rarely being in equilibrium. As result, novelty comes into the world

## The PEAK urban lens for seeing cities' futures

PEAK Urban is an evolving manifesto (see Keith et al. Cities journal article<sup>1</sup>) of how to examine and investigate the existing and future dynamics and challenges of life in cities, that accounts for complexity. The rigorous and interdisciplinary approach applies a framework to generate knowledge, useful for addressing urban challenges of the 21st century. More than providing solutions, PEAK Urban gives a corrective lens to seeing the interaction of systems in cities more clearly, a critical starting point for practitioners aiming to test interventions from local and national governments or civil society organisations.

through cities. This phenomenon has been described as the propensity of things – infrastructures and objects combine, mutate and generate new urban forms and ways of life.

Attaining an understanding of how new technologies land in place and are (A)dopted also shapes our projects. We recognise that the uptake, value and capture of technologies is vastly different between and even within cities. Exporting technologies from high-income countries to low-and middle-income countries and vice versa can result in varied, uneven and unintended consequences.

The configurations and pathways of (K)nowledge and power into and within the city are important to understand the city. The range of ways of knowing the city and the multiplicity of potential solutions to urban dilemmas must be valorised adequately. Alongside the input of elected officials and appointed professionals, participatory processes have demonstrated the value of including civil society in decision-making processes. Trade-offs existing between the knowledge regimes within a city can result in sub-optimal interventions that focus on affecting parts of the city rather than the city as a whole. Balancing these trade-offs demands both an ability to see the city through different perspectives and scales and to mediate, evaluate and understand such trade-offs.

The PEAK framing does not address a specific urban theme, dynamic or dilemma, rather it provides a way to

interrogate any urban issue productively. For example, the liveability of urban places worldwide has been a matter of public interest for as long as they have existed. The extent to which a city promotes or endangers population health is an important aspect of its liveability and one that the PEAK Urban research programme is working to understand better. There is consensus that certain aspects of cities, including basic services such as sewerage systems, waste collection, provision of potable water, directly contribute to population health. While the known characteristics of cities that contribute to health are growing, they are also increasingly becoming more nuanced.

In 2020 the eyes of the world turned to cities as they have become particularly dangerous places to be, given high densities of people who live and move in close proximity to one another, while physical distancing remained our only effective public health measure against COVID-19. Because PEAK Urban recognizes city systems as complex and open, public health is understood in terms of the interfaces between public health interventions and related systems of urban metabolism, economic dynamics, transport networks and demographic change. The following considerations illustrate how the PEAK framing can be applied to health in cities, expanded upon in a recent book (see *Urban Transformations and Public Health in Emergent City* book<sup>3</sup>).

Experiments in public health advances are constrained by legal consequences and ethical considerations reflecting

diverse urban regimes globally. (P)redictions informed by 'big data', powerful at the scale of the individual, are destabilised at the scale of city populations. Behavioural change is structured by interaction with economic, transport and residential preference systems. Complexity of interacting systems in cities make it possible to know much more in real time about behavioural trends but limits powers of predictions in the long-run.

Urban systems, including culture, nature, infrastructure, behaviour and many more, interact with one another, changing the environment in which health systems operate, in the process of (E)mergence. Changing urban systems are disrupted by technological innovation and scientific advances. For example, cardiac arrest demands swift action and rapid access to defibrillators, now widely distributed and (A)dopted in many high income cities. This changes interfaces between hospital care and community access to new technologies. The optimal distribution of health services in hospital real estate changes as medical technology evolves but real estate moves slower than key medical technologies, destabilising geographies of city health systems.

The organisation of health systems require trade-offs which are evaluated differently by varying types of (K)nowledges – social, medical and natural sciences or by domain – law, politics, economics. Public health makes claims in the name of the city as a whole, liberal democratic societies traditionally privilege the rights of individuals. Throughout

the COVID pandemic the desire to reduce infection rates by restricting the liberties of individuals to move across the city was balanced against the needs of the health of citywide populations. Economic imperatives were at times claimed to be at odds with public health logics, although data over time may demonstrate this assumed trade-off to be illusory.

As urbanization continues to generate commercial opportunities, ethical dilemmas and ecological challenges, the future configuration of cities is of paramount importance to human flourishing across the globe. The term 'peak oil' was coined to communicate that the supply of crude would eventually run out. PEAK urban presents a paradigm to effectively interrogate the future of cities.

Find out more: <https://www.peak-urban.org>

1. <https://www.sciencedirect.com/science/article/pii/S0264275119323716?via%3Dihub>
2. <https://www.peak-urban.org/>
3. <https://www.manchesteropenhive.com/view/9781526150943/9781526150943.xml>
4. <https://www.oxfordmartin.ox.ac.uk/informal-cities/>



“Urbanization and globalization have induced changing social demand for more balanced livelihood and for more inclusion, which cannot be achieved only by cities.”

– Henri DE GROSSOUVRE, Nicolas PREGO, Pierre ACHARD, and Oriol BELLOT, SUEZ, Paris, France

Image Source: The central food market of Chorsu, Uzbekistan, has remained operational during the pandemic. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Henri DE GROSSOUVRE  
Nicolas PREGO  
Pierre ACHARD  
Oriol BELLOT  
SUEZ, Paris, France  
(English version  
by Nicolas J.A. Buchoud)

### Interdependent systems and organizations learning from the crisis: Towards a green recovery in Europe

The interdependence of critical infrastructure, systems and organizations has been accelerated and highlighted by the Covid19 crisis, in particular due to increasing digitization. This is not only true for the development of 'Smart Cities' but also for transformations at work in agriculture and ecosystem services be it about air quality, land or water management.

The health crisis has had little if no impact on smart city projects across the globe, on the contrary. Governments in developed and in emerging countries are even calling in for more digitalization to mitigate risks and ensure continuity of critical infrastructure and supply chains. Private sector players providing infrastructure and IT services, from large multinational companies to MSMEs and startups, are looking for enhanced market opportunities through digital services. Yet meanwhile citizens and urban dwellers are

showing an increasing appetite for environment and health solutions, especially in large metropolitan regions. As they also demonstrate higher reluctance and even resistance to large scale development projects with perceived detrimental consequences on the environment, data management could help reconcile people and technology.

The availability of digital solutions and services such as control centers, secure programming and predictive maintenance, connected objects, has been of strategic importance to ensure continuous service operation of critical infrastructure and services during lockdowns throughout 2020. In the future, major infrastructure operators will be required to provide even more specific technological skills and economic and management know-how for working remotely and strengthen urban resilience. In France, the example of 'On Dijon' has demonstrated the effectiveness of an integrated system of supervision of urban flows (water, waste, energy...) allowing for widespread information and data sharing with communities, especially during lockdowns and peaks of the pandemic. The process has provided quality decision support and concrete monitoring and follow up of actions. As opposed to techno- or security- centric models, smart city projects that reinforce public leverage and response to crisis and therefore, public trust and citizen participation, offer to draw promising lessons from the Covid-19 crisis. As data protection, data mining, data management, have become a major global economic and geopolitical issue,

also reinforced by the Covid-19 crisis context, the European know-how in providing data regulation is critical to support digital inclusion and the protection of common goods.

Digitization might be high on the urban agenda, but as the Covid-19 crisis also calls for a green recovery and low or zero carbon development pathways, rural areas and agriculture should become commonplace in the global digital picture. We view the concept of 'smart rural' not as a copy-paste of urban services in rural, less densely populated and comparatively less accessible and interconnected areas, but as a series of solutions for improving the management of interdependencies between rural and urban spaces and promoting a more systemic and sustainable vision of territorial development.

Transformations in the water or air sectors, in the field of food and agriculture or regarding climate or biodiversity issues, cannot be achieved in urban contexts only.

'Transitions' and 'interdependencies' are two driving forces in achieving more balanced development.

Shortening food supply chains is a typical concern that is high on urbanites' agendas across the global middle classes. Yet, calls for immediate transformation are usually disconnected from the management of rural areas. Agriculture can provide a wide array of ecosystem services beyond food production and have significant impacts on water cycles and other ecosystem services. It is not only about 'feeding the planet' but also about preserving water, soil,

biodiversity and air resources and sequestering carbon to offset CO2 emissions. Scaling-up nature based solutions has to build on understanding how much rural environments can help provide localized ecosystem services with a regional/ global impact. Therefore, it is critical to review the interdependencies between urban and rural environments, starting by setting up an solid economic system of remuneration for environmental services provided by rural environments.

Technological progress can serve environmental priorities through the quantification and certification of services, by enhancing the connection between suppliers and buyers, valuing and certifying the proof of origin of food and other natural products, securing transactions, ensuring their traceability and transparency, etc. Inspired by the complexity and interdependence of natural systems, private sector leaders in the field of water, energy or waste management, often engaged at a global level, should develop new skills in support of sustainable territorial development. One way would be to move from managing and improving the efficiency and resilience of sectoral infrastructure and services to become designer/ producer/ operator of complex territorial digital systems. Achieving such an ambitious transformation would start by connecting already existing digital bricks, in particular the link between marketplaces (including biosecurity and products' traceability), the management of big data, the support to MSMEs to contribute to regional or global value chains. It is

a process than can only be achieved through cooperation and we argue that digital and environmental transitions can build on one another, and help rebalance value creation among urban and rural environments.

Rural environments might show more complexity than urban ones, due to the typical wide number of small and even individual or family enterprises and the fragmentation of territorial governance. Urbanization and globalization have induced changing social demand for more balanced livelihoods and for more inclusion, which cannot be achieved only by cities. We believe that enhancing the value of environmental services in rural contexts could leverage significant revenue and help reinforce shortened food supply chains as reservoirs of jobs and livelihoods. In Europe, the Green Deal should help rethink the role of agriculture and rural areas in line with new economic and environmental expectations priorities. Concretely, building on the example of the European Union Emissions Trading System (ETS) and corresponding carbon market, we could think about the development of a voluntary 'water market', even extending the concept of a 'water footprint' to that of a blue, gray and green' footprint. As a consequence, farmers would no longer be targeted as the only consumers of water. Instead, all stakeholders across the value and supply chains would be concerned, including the food processing industry (food & beverage) and downstream distribution through food chains of hyper or supermarkets. Smart rural is not just about infusing more technology and services in

the agriculture and rural life. It would have a triple benefit in terms of 1) public health and local development (quality affordable food...) 2) environment (sequestration of carbon in the soil and through biomass, reduction of the use of phytosanitary products...) 3) technology development and implementation through satellite imaging, drop irrigation, IoT etc.

The interdependence of infrastructure, systems and organizations should not be feared because it would add new layers of complexity to challenged decision making processes in times of rapid and longer term crisis responses. On the contrary, it is an asset for a deeper ecological transition in a 'federal' and 'subsidiary' way, maximizing the role, recognition and autonomy of its constituents. This is how smart cities and systems like OnDijon have proven resilient, by being integrated but not centralized. As in a human brain, when one network is degraded, another neighboring network usually can take over by creating new connections and ensuring continuous consciousness. The image of a resilient and responsive organicist model would well apply to smart rural. Under these conditions, technological progress used for ecosystem services will contribute to the ecological transition and value creation in a much more comprehensive way.



Image Source: Makati City, Manila. Image by Nicolas J.A. Buchoud, all rights reserved ©.



“The crisis could be a stepping stone towards more sustainable and resilient development models prioritizing commons. Such calls need to be substantiated.”

– Gérard HÉGRON, Université Gustave Eiffel, Paris, France

Image Source: Bamako central district, Mali. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Gérard HÉGRON  
Université Gustave Eiffel  
Paris Marne la Vallée, France  
(with Nicolas J.A. Buchoud)

## New research strategies towards resilient urban mobility and logistics systems

The Covid-19 pandemic visibly impacts livelihoods and lifestyles but as the disease continues to unfold and vaccines are slowly delivered, it is the right time to review what we have actually learned so far towards a low carbon, human centered economy.

Travel restrictions and travel bans have restricted individual mobility but meanwhile, the e-commerce is thriving and goods are being delivered all over the place along with meals and food. Teleworking has been expanded (though not in all sectors), but more people have used individual cars instead of public transportation. Many cities across the globe have seen significant drops of public transit systems passenger numbers. Quite soon after the pandemic outbreak in 2020, there has been voices asserting the crisis could be a stepping stone towards more sustainable and resilient development models prioritizing commons but

such calls would need to be substantiated. As the crisis creates opportunities to rethink urban and regional planning and accelerate the implementation of carbon neutral mobility systems, it is also bringing in new challenges, starting with declining fiscal revenues and therefore, sources of public financing of new projects. We argue that the future depends not only on good ideas but also on our collective ability to invent and implement synergistic combinations of policies across different scales, different economic and industrial sectors and through public-private cooperation.

At national and regional levels, this is the right moment to enforce new limitations of urban sprawl and accelerate brownfields redevelopment. Such sets of policies could be supported by the production of more affordable green vehicles, in particular in suburban peripheries and in less densely populated rural regions.

At the local level, the development of bicycle uses for short distances should be supported by the development of integrated active mobility infrastructure, including comfortable and easy to use multimodal platforms, and systematized Transit Oriented Development. In suburban areas and small and medium size cities, historic urban centers could be revived through the development of local services. On demand and shared mobility services could be expanded in remote and rural areas where mass rapid transit is not viable. The concept of Mobility as a service (Maas) which

has been experienced only in a small number of cities, should become a new normal, enhancing the compatibility between different transportation systems and relying on digital possibilities.

Sustainable mobility is not just about engineering systems but also about how mobility can help tackle territorial and social divides. The lockdowns and confinements implemented since the beginning of 2020 have highlighted deep inequalities between households who could telework while relocating in quiet rural settlements, often benefiting from good social safety nets and unemployment benefits, and those who had no other choice than continue to go to work. In the future, the role of mobility systems in reducing such inequalities will have to be carefully reviewed

Logistics is another major driver of sustainable territorial development. The disruptions of many global supply chains have raised a new interest for relocating high added value activities ensuring regional self-sufficiency such as for health or food. As a consequence, the role and organization of existing logistic platforms might have to be reviewed, a transition towards low or zero carbon business models that has to be carried out by governments but also by private sector stakeholders as part of reinforced corporate social responsibility. Change should happen on both ends of supply chains that is within the organization of multimodal distribution hubs connecting global and national/ regional scales and at a local level, cognizant that the optimization of

last mile distribution circuits can leverage significant levels of CO2 reduction

The transportation sector bears many innovations for a more efficient and more economical mobility such as connected and autonomous navigation systems, geolocation, data processing systems etc. Huge amounts of data and information related to mobility and logistics have been issued since the outbreak of the pandemic. It is therefore urgent that resources are allocated to analyze those data and evaluate the short term and long term impacts of designated innovative solutions. Mobility and logistics observatories and new collaborative applied research managed by higher education and research institutions together with leading public and private stakeholders could provide further evidence supporting new sustainable mobility and territorial development models, as illustrated by the innovative Smart Lab Paris Region.

### **Box. LABILITY – The Smart Lab Paris Region experience**

#### Organisation

The Smart Lab LABILITY is an ephemeral research laboratory set up for the years 2021-2022. Led by Université Gustave Eiffel, the consortium has won a call for proposal launched by the Île de France regional council. Subsidies amount to one million euros, a significant leverage to support innovative and collaborative research aiming at creating new mechanisms of territorial resilience and post-crisis

response.

The Smartlab is a multidisciplinary team of young researchers associated to eight laboratories on economy, management, sociology, land development, applied mathematics and operational research. The socio-economic valuation of the innovations by means of hackathon, experimentations for the proof of concepts, etc., in connection with over a dozen public and private partners is also part of the Smartlab agenda. During the last months of the project in 2022, a strategy for innovations transfer will be set up, including patents, support for start-up development, etc.

#### Background

With the health crisis, public and private regional players must reconcile a rapid and resilient economic recovery with the protection of people's health. To meet these pressing challenges, new ways of managing spatial and social distance need to be implemented within companies and across transport networks. Companies are also encouraged to rethink the spatial and temporal organization of their activities and review their needs for office space in light of telework opportunities.

#### Goals

Ongoing transformations triggered by the pandemic crisis could have multiple and long-term impacts at a regional level, including a reduction in the size of the premises, a disaffection for certain territories (including central ones), increased needs in terms of telecentres (especially in the

outer suburbs) etc. As for transport networks, priority areas are the definition and the implementation of solutions to 1) reduce the risks of contagion, in particular during rush hours, 2) respond to the increase in congestion of the road networks, due in particular to the return of the private car use, and to the growth of the flow of goods generated by e-commerce.

Two research axes will be investigated

- (1) The risks and opportunities associated with the development of teleworking;
- (2) The modalities of a resilient management of transport networks

#### Project impacts

The findings aim at providing technological and digital solutions, levers of action and recommendations to support or influence the transitions towards more resilience to face health crisis and to achieve the sustainable development objectives. Support for public policies will focus in particular on:

- Dynamic load management of transport networks;
- Territorial development, through the management of digital infrastructure, transport and logistics, and land use;
- City planning policies: recommendations to support public decision makers in their telecentre development project, commercial city planning;
- Supervision of teleworking.

The possible applications are also based on recommendations for companies and managers, to strengthen organizational resilience and prevent of psychosocial risks. In terms of technological developments, the project aims at fostering:

- Tactical and operational decision-making tools to monitor pandemics;
- Mass public transit systems that respects health constraints to avoid massive use of private cars, attract passengers to encourage active mobility



“The pandemic has underscored the importance for cities to collaborate not only with the private sector, but also with the academia, in times where the digital divide intensifies.”  
– Daniel MILES, ESI ThoughtLab, Philadelphia, the United States

Image Source: National university examinations taken outdoor in a public square in Tashkent, during the spring of 2020. Image courtesy by the Embassy of the Republic of Uzbekistan in France, all rights reserved ©.



Daniel MILES  
ESI ThoughtLab  
Philadelphia  
the United States

## DISRUPTIONS, DECLINE AND DATA: LEARNING FROM CITIES IN THE CRISIS

In the pandemic era, ensuring a healthy, safe, and prosperous future for citizens is a burning imperative for city leaders. But with city budgets already depleted, it is also their biggest challenge. COVID-19 has served as a stress test for cities as businesses and services were shut down and medical facilities stretched to their limit. It also served as a stress test for cities exposing weaknesses in digital infrastructure, risk management, and continuity planning in cities where risks can cascade suddenly and unexpectedly with far-reaching aftershocks. To understand the top disruptors facing cities today, the impacts that the pandemic has had on cities, and the lessons that cities have learned from the crisis, we surveyed 167 cities across the globe with diverse populations, incomes and level of economic development. The cities cover 82 countries and range in size from 95,000 to over 27 million and are home to over 568 million residents.

The top two disruptors currently facing cities is the pandemic and its repercussions and the associated decline in economic growth and jobs. While it is not surprising that these were the top two disruptors cited by cities, the fact that they were cited by more than twice as many cities as the next closest disruptors – climate change, lack of natural resources, shifting demographics, social unrest, and geopolitical risks and conflict – was.

Our research found that the pandemic has, and will continue to, reshape the urban environment in fundamental ways. Nearly three out of the four cities surveyed believe that the pandemic will cause them to reconsider traditional approaches to urban, planning, use of space, and population density. More than half of the cities believe that the pandemic will permanently change the way that their citizens live, work, socialize, and travel and will cause the city to reconsider mobility and transportation approaches to accommodate the changing behaviors of their citizens. The pandemic has also made clear to cities need to become more agile and resilient and the importance of smart city programs and digital transformation to the future of their city. It also laid bare the need for timely access to data and advanced analytics for running their city, but at the same time many cities lack the access to the necessary data. The economic and social disruption resulting from the pandemic exposed the need for cities to invest more in both digital as well as core infrastructure.



“Because it has always been possible to embrace cybernetics, to build better computers, to invest more in literacy, does not mean that we have been collectively ready for the change.”

– Harun BADAKHSI, Ernst von Bergmann Medical Center, Potsdam, Germany

Image Source: Wikimedia Commons. March 19, 2020. Francesca Palumbo, intensive care nurse, after a twelve hour shift without a break at the San Salvatore Hospital in Pesaro, Italy. Image by Alberto Giuliani. [https://commons.wikimedia.org/wiki/File:Covid-19\\_San\\_Salvatore\\_08.jpg](https://commons.wikimedia.org/wiki/File:Covid-19_San_Salvatore_08.jpg)



Harun BADAKHSHI  
Ernst von Bergmann  
Medical Center  
Potsdam, Germany  
New Dialogues  
Berlin, Germany

## The boring metaphor and multiple realities of digital transformation

“The real,” so Jacques Lacan, “contains an essential multitude of our expectations and introspections that rarely are congruent to the factual objectivity of the one outside reality.” If all those expectations and introspections might be, at some stage, determinants of change or, more likely, obstacles of transformation is here the question. We cannot rely on JL for an answer. What we could do, is to see how deep our love for digital transformation appears. On the level of appearance, there is an option to comprehend the phenomenon we tend to call digital transformation. Those “Bedingungen der Möglichkeit” (GFW Hegel, conditions of possibility) for an all-encompassing change toward a digital culture, infrastructurally solidified by information and communication media technologies \* (ICMT), seem to be present for at least three decades. The presence of a giving technology might not always mean the utilitarian usage on a broad surface of social interactions with all their con-

secutive dynamics in mental spaces of humans and in the superficial tensions of the quotidian life. Nevertheless, the „machine“ of US innovation and their incubators of technological thinking prepare the soil of civilization, at least in the West, for fundamental transformation and trans-substantiation of almost all spheres of life for at least six decades. Because it has always been possible to embrace cybernetics, to build better computers, to invest more in literacy, and to accept real circumstances of possible technology, does not mean that we have been ready for the change.

It exists two formats of obstacles in hindering us to open our think spheres and our body spaces, or vice versa, to the merits of technology, especially to those merits of communication media technology, that evidently improves not only our quotidian life but also our cognitive operations and operability in the same instance. A first type of an obstacle is referring to an epistemic obstacle that seems to represent a primary degree of a problem. Epistemic obstacle reflects the condition of an assemblage of multiple knowledge-related subelements of a highly complex system, as digital information and communication media technology evidently is, that does not seem to fit each other well in the eyes of the potential recipient that we all are supposed to be, and is, in most cases, inducing confusions and misperception in the recipient’s head. No computer represents itself to a technology user in a way that we could, seen anthropologically, call easy going.

The second type of obstacle seems to be independent of the object and subject relationship, even less interdependent than affections and drives. It is a subtle format of intra-subjective bricolage of procedures that begin at the moment of priming. The moment of priming (by the hypermedium) is determined by the degree of juxtaposition to the monster, that monster of calculus that emerges at the mental and cognitive horizon of humans in the very moment of becoming integrated into the confusing web of integrated circuits of the hypermedium, taken in its very core electrical/electronic materiality. Both formats of anxiety, that is the immediate consequence of those obstacles, the epistemic one and the affective one, produce a dynamic state of all-day emergency within the subjectivities. The dynamic state of emergency is stemming from the uncertainty of not being able to cope with the most relevant determinant of our daily life and work spheres, thus computer-derived communication and information technology. The modern man had been conditioned to act competitive and rational and not to be weak toward challenges of science and technology. The most utter effect is the figure of complexity.

Complexity induces fears. Fears evoke more fear.

The computer, the hypermedium of communication, serves as a template of fear. The take-off of the computer from the “local” (site/location), when it became an (metaphorical) agglomerate of connected machines beyond the traditional territorial boundaries of “space.” We may recall those far times, in the first six months of 1994, the number of partic-

ipants (thus humans & computers) to the “global” network of InterNIC rose to 3.217.000 hosts/guests. The conventional response of traditional (analog) media to this event was the allocation of new metaphors that, in the long run, did not help much to comprehend the infrastructure of a new type of technology: cyberspace and information highway. The intertwined matrix of semantic of the digital spheres lies, anyhow, beyond all traditional logic.

In this entanglement of confusing metaphors: space, net, web, local, global, and media-induced terminology of the superhighway and the cyberspace; the ordinary citizen S, S for static, got confused but never became citizen M, M for mobile. Instead, once we observe the slow convergence of digital media technology between 1995 and 2005 and then, out of a sudden, the hyper-acceleration of all phenomena surrounding us after 2005, incl. the previously unimaginable growth rate of velocity in calculation machines, the previously unthinkable ability of these machines to produce virtual images, artificial sounds, and other sensations, it may make fear. The confusing metaphors determine the comprehension of most humans, in the West and now and then in the global South also. Folks have got difficulties with understanding the technology beneath the screen, the other side of the moon (a metaphor?), and their difficulties increase in volume and intensity when the metaphors created mostly by journalists destabilize their *weltanschauung*, a world that begins to vanish beneath their feet. At the point of no return, multiple realities emerge.



“Schools should not be made to compete with Twitter, Snapchat or Tiktok. They should be a safe physical and virtual space where adults share their knowledge and experience to train younger citizens.”  
– Lan-Phuong PHAN, Grand Paris Alliance for Sustainable Investment, Paris, France

Image Source: 'Going to school' (before the pandemic common scenery) in Poblacion district, Makati, Metro Manila, in the Philippines. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Lan-Phuong PHAN  
Grand Paris Alliance for  
Sustainable Investment  
Paris, France

## Schools, how developed countries cope with the COVID-19 crisis and what it tells about them

Where are we standing after a year in the pandemic era

Almost a year into the crisis, after different stages of lockdown and in the midst of the second/third/fourth wave, depending which part of the planet you are living in, with schools and Universities closing for weeks, when not months, faculty members all over the world find themselves DIYing solutions to teach remotely while teens are learning how to actually send an email (picture yourself learning how to use a quill). They all experience massive crashes of official platforms that were meant to offer a safe space within the oh so threatening world wide web, but that were so poorly designed, they could be likened to the 2020 version of a torture instrument. Out of frustration, classes relaunched good old Skype, teachers paid out of their own pocket for a Zoom subscription or accepted to venture into the mysterious world of gamers and registered their stu-

dents on Discord (R.I.P digital privacy and data protection).

Digital millennials, but really?

In the meantime, it appears that too many students cannot attend online courses because they cannot access high speed internet. How did so many supposedly developed countries go analog overnight? What happened to the Digital Natives? What happened to the Start Up Nation ? What happened to the Teen Entrepreneurs who were about to take over just a couple of years ago? Back then, in the pre-COVID era, faculty members were routinely summoned to upgrade their practices and adapt to a world globally ruled by the social media. Twitter was praised as the go to medium to improve our student's spelling. Youtube had become the best way to learn anything, from sciences to history and math. Why spend money on trained and experienced teachers, when there are apps that could allegedly turn anyone into a proficient speaker of multiple foreign languages? Moocs were celebrated as being the answer to the need for knowledge shared by hundreds of thousands of people all across the world. Who even remembers Moocs?

Artificial intelligence, real budget cuts

More seriously, it seems that the promises of self-appointed, tech-cladded experts offered debt ridden governments a perfect excuse to defund education and let school buildings rot to a state of depredation that is hard to fathom. The same encouraged the trend that pushed teachers down

the social ladder and turned a vital public service into yet another constantly disrupted sector, poised to fail. With the COVID, schools suddenly became central and a country like France prides itself in keeping schools open while the country is on severe lockdown.<sup>2</sup> Does this mean governments are realizing how deluded they were to trust it was possible to bet on A.I and electronic devices in order to save on education or does this simply mean that in a time of economic crisis, kids need to be monitored on schoolgrounds while their parents go to work?

An education for the future: rethinking 'public', for good

If anything good should come out of this overwhelming crisis, it should be a real upheaval on education, starting with the very basics: access to clean and safe restrooms for all, windows that can be opened to ventilate rooms properly (please let us seriously reflect on the fact that schools in France are, whenever possible, equipped with anti-suicide windows that you can barely crack open). Depriving children from an education is certainly wrong. Making them spend entire days in cramped, filthy classrooms with little to no access to water, soap or toilet paper is hardly better.

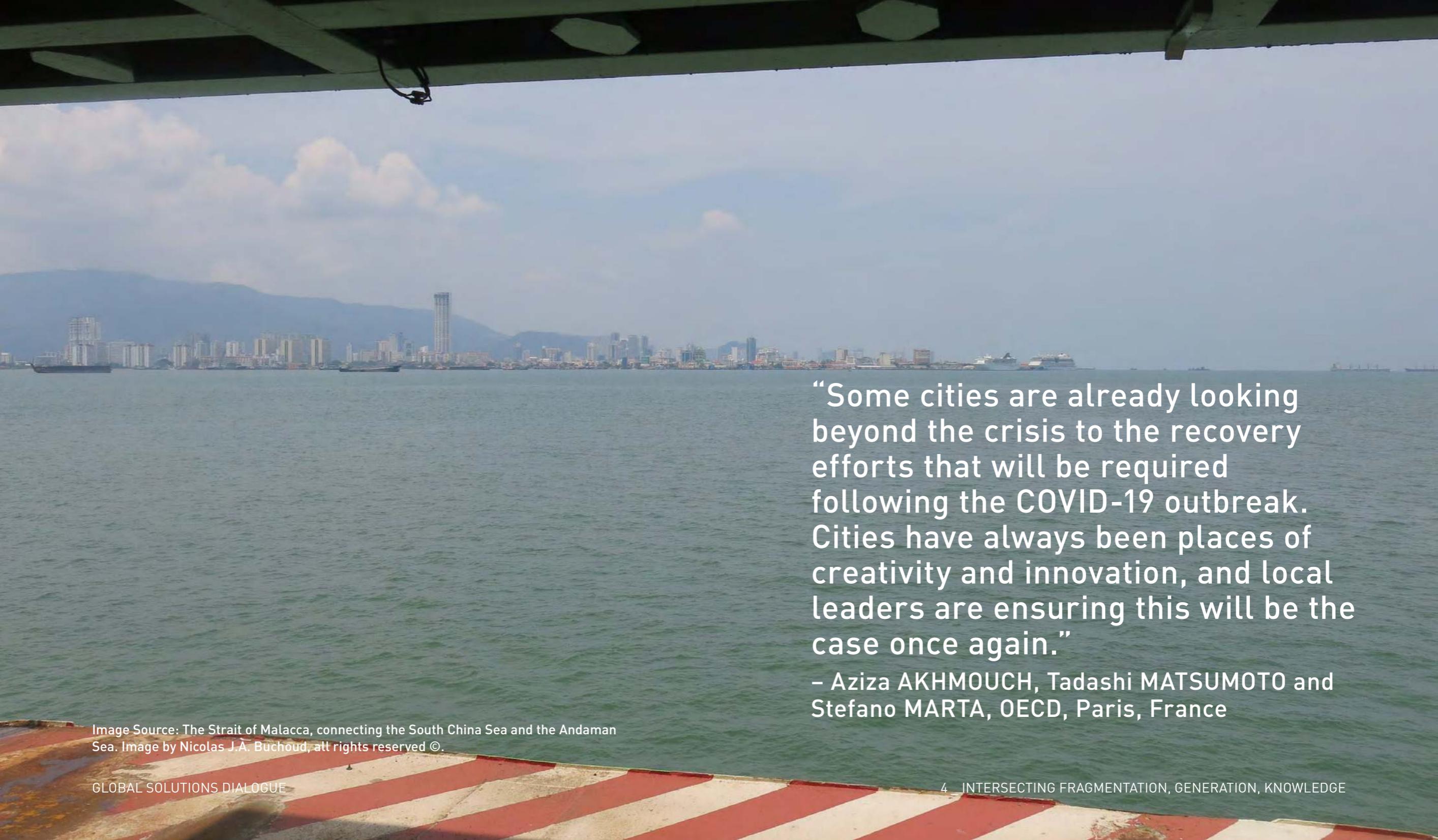
Schools should not be made to compete with Snapchat or Tiktok, they should be a space where adults share their knowledge and experience with younger citizens. How could teachers ever achieve this in an inspiring manner if their own love for knowledge, their own experience of working hard to earn the degrees that allowed them to apply for a

teaching position, put them in a situation where they can hardly afford a decent life and must face unjustified and repeated criticism from the very people and institutions that now call schools essential and require classes to be taught in person, by teachers, not robots.

For this to happen, we must, as responsible citizens, urge our governments to reconsider our priorities and invest in the essential domains that robustly structure our societies and secure the future: healthcare and education. Younger generations are already resenting us of leaving them with a planet that is not quite as green and blue as it should be. Are we ready to face their befitting anger when they find out that we, as a society, accepted that our governments keep cutting credits and sacrificing their education while spending millions of good taxpayer's money on yet another food delivery app?

1. French President Emmanuel Macron coined the term on many occasions in the first months of his term.

2. A curfew is currently in place, but students and faculty members are allowed to maintain their usual routine. During a severe lockdown back in November 2020, schools remained open. In the meantime, universities have remained mostly closed for months.



“Some cities are already looking beyond the crisis to the recovery efforts that will be required following the COVID-19 outbreak. Cities have always been places of creativity and innovation, and local leaders are ensuring this will be the case once again.”

– Aziza AKHMOUCH, Tadashi MATSUMOTO and Stefano MARTA, OECD, Paris, France

Image Source: The Strait of Malacca, connecting the South China Sea and the Andaman Sea. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Aziza AKHMOUCH  
Organization for Economic  
Cooperation and  
Development (OECD)



Tadashi MATSUMOTO  
Organization for Economic  
Cooperation and  
Development (OECD)



Stefano MARTA  
Organization for Economic  
Cooperation and  
Development (OECD)

about progress in developing an effective vaccine, but the near-term outlook remains very uncertain. On the assumption that renewed virus outbreaks remain controlled, and that the prospect of a widely available vaccine towards the end of 2021 helps increase market confidence, a gradual recovery in the global economy should occur in the next two years. After a strong decline this year, global GDP is projected to rise by around 4¼ per cent in 2021, and a further 3¾ per cent in 2022 (OECD, 2020).

Cities are on the frontline of responses to the COVID-19 crisis. They play a key role to implement nation-wide measures, but also provide laboratories for bottom-up and innovative recovery strategies. Moreover, cities' responses to the COVID-19 crisis accelerates the shift towards a new urban paradigm towards inclusive, green and smart cities. By collecting policy responses of 100+ cities, the OECD identifies 10 key lessons from the crisis to build back better cities.

COVID-19 had asymmetrical impacts across territories but many policy responses were place-blind and uniform, highlighting the need for place-based and people-centred approaches. The health crisis turned into a major economic and social shock; and cities' exposure and recovery depends on industrial composition, labour market breakdown and trade openness. The rediscovery of proximity provides a window to shift faster from a target of increasing mobility to one of enhancing accessibility by revisiting public space,

## Life after COVID-19: A ten points framework

The COVID-19 pandemic continues to exert a substantial toll on economies and societies. Prospects for an eventual path out of the crisis have improved, with encouraging news

urban design & planning.

The crisis strikingly exposed inequality across people and places, especially in large cities, where vulnerable groups such as migrants, the poor, women and the elderly were hit hard. The health problem is not related to urban density but rather to structural inequalities and the quality of urbanisation; and the urban premium will likely not turn into an urban penalty as agglomeration benefits continue to prevail. Digitalisation, a major game changer during the crisis, will remain a key component of a “new normal”, although teleworking ability varies both across and within countries. The “Zoom effect” and “Greta effect” accelerated environmental awareness, making the transition towards clean mobility and circular economy more politically and socially acceptable.

COVID-19 bears implications for governance, with citizens’ trust in governments increasing in some countries, especially for local politicians, and decreasing in others. The COVID-19 shock calls for a stronger focus on resilience; preparedness to future shocks requires managing WHO does WHAT at WHICH scale and HOW for more resilient cities. Global agendas such as the SDGs, the New Urban Agenda, and the Sendai Framework are both timely and relevant to reshape planning, policy, strategy and budget from the ground up.

Going Forward

Life after COVID-19 will likely be a life with COVID-19. Beyond the public health emergency to reduce the spread of the virus and protect citizens’ health, the pandemic and its aftermath are prompting cities to rethink how they deliver services, how they plan their space and how they can resume economic growth. Some cities are already looking beyond the crisis to the recovery efforts that will be required following the COVID-19 outbreak. Cities have always been places of creativity and innovation, and local leaders are ensuring this will be the case once again.

The COVID-19 crisis and the responses to it underline the importance and potential of long-term strategies for cities to be more inclusive, greener and smarter in their recovery efforts and the underlying governance and financing needs to enable transformation.

For more information, download our report on COVID-19 and Cities: Impact, Lessons learned and Recovery Strategies available in English, French, Spanish, Portuguese and Japanese

“The next priority is to move towards the implementation of policy-frameworks and solutions that reinforce effectively the social infrastructure of cities, and to do that at all levels, at all scales.”

– Katharina LIMA de MIRANDA, Kiel Institute for the World Economy, Kiel, Germany



Image Source: The 'Summer Fruit Festival' co-organized by 'Love my Salad' community movement in Tumbalong Park, Darling Harbour, Sydney, Australia. Image by Nicolas J.A. Buchoud, all rights reserved ©.



Katharina LIMA de MIRANDA  
Kiel Institute  
for the World Economy  
Kiel, Germany

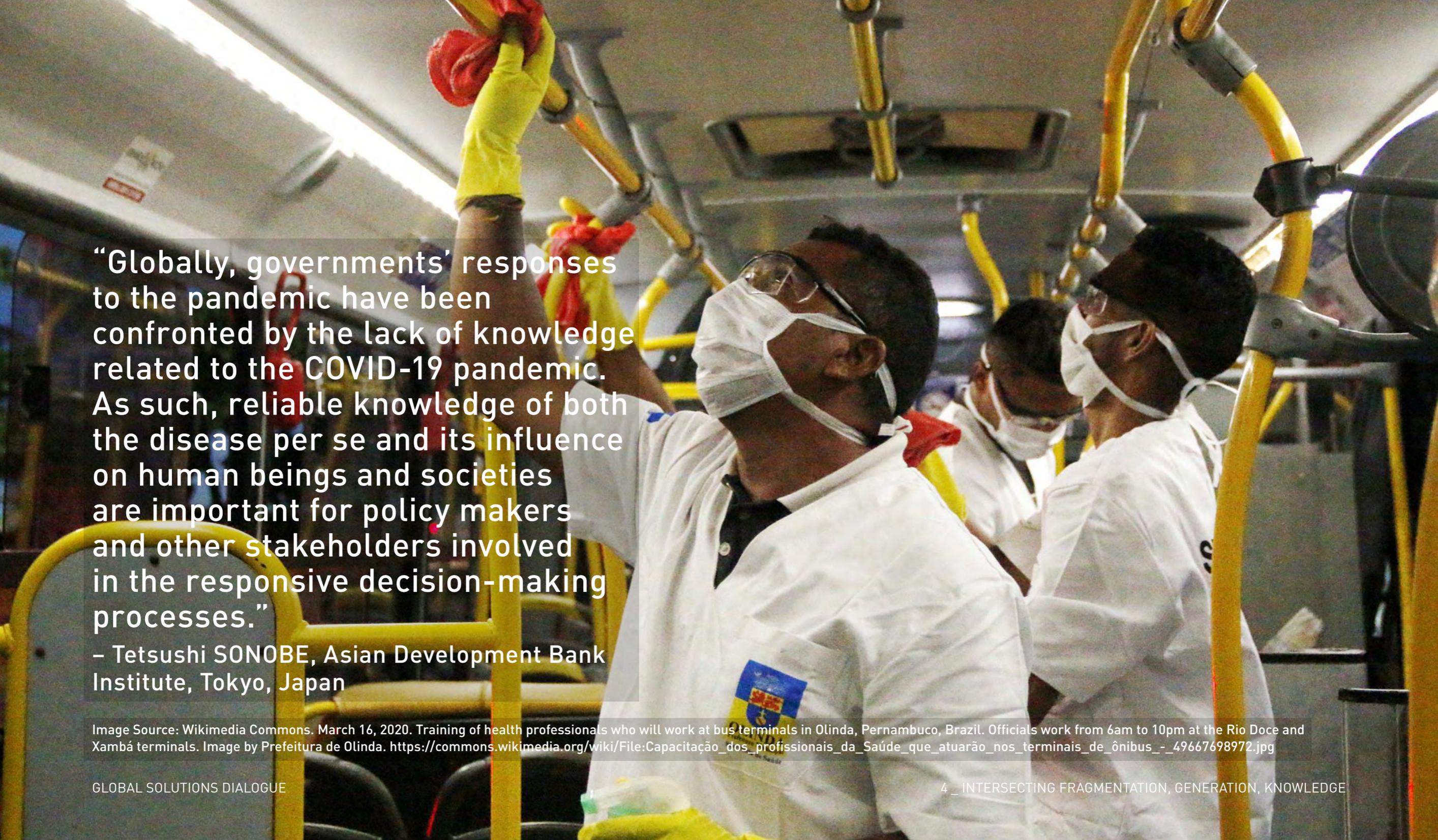
### **Towards an economy of well-being supported by new measurements: Update on the SAGE framework**

The Covid-19 crisis is a highly asymmetric one where cities are the epicenter of the crisis but not the main decision-makers. Different social groups are hit very unequally and there is a high risk of further fragmentation of the society. As the G20 Italian presidency is putting social issues and inclusiveness among its priorities, this is the right time to pay more attention to community resilience as a global question. Tackling the pre-crisis and the new inequalities altogether will require an unconventional combination of theoretical and empirical research. Cities are pivots of the global system and the right places to develop and consolidate common indicators of solidarity and agency. In that context, renewed macro-economics of well-being could also strengthen the implementation and delivery of the global environmental and development goals in lieu of the deadly Covid-19 narrative.

Without a new understanding of how we define prosperity and economic growth, we will neither effectively combat pandemics, climate change nor global poverty. The UN, the OECD, scientists, artists and civil movements have proposed measurements in which the impact on the environment, society and the individual play a significant role and challenge the system of GDP as an indicator of societal wellbeing. Examples of these initiatives include the OECD Better Life Index, the recent formation of an OECD center on Well-Being, Inclusion, Sustainability and Equal Opportunity, the Social Progress Index, which measures the social and environmental health of societies and intends to accelerate social progress, or the Social Impact Index, which measures the social impact of concrete development projects. The Global Solutions Initiative is advancing the Recoupling Dashboard as a tool to measure the wellbeing of societies beyond GDP which illustrates the interrelation between economic prosperity, social prosperity and environmental sustainability.

The underlying SAGE framework challenges the still too common perspective to use GDP as a normative guide for policymaking and endorses a more holistic picture of human wellbeing rooted in a modern, empirical, interdisciplinary understanding of human well-being. Following this new approach the next priority is to move towards the implementation of policy-frameworks and solutions that reinforce the social structure and the social infrastructure of cities, and to do that at all levels. This is important because

human well-being depends on the pursuit and satisfaction of fundamental human needs and value-driven purposes. Humans have evolved motives to socialize (particularly in groups of limited size) and to use their capacities to shape their environment. Consequently, social solidarity and personal agency are fundamental sources of human wellbeing, which need to be taken seriously by policy makers at all levels. In order for a society to thrive its' members need to be able to satisfy their aim for social embeddedness (S), their desire to influence their destiny through their own efforts (A), their basic material needs and wants (G), and their need to remain within planetary boundaries (E). This insight is synthesized in the SAGE framework where the four indexes—SAGE—form a balanced dashboard for evaluating well-being. The recoupling dashboard could be strengthened and enriched with multiple successful examples of community resilience, which remain too often ignored by national and furthermore by global policy-making arenas. This could provide a way-forward in overcoming the COVID-19 pandemic and preparing for future global challenges. To achieve this local governments need to implement measures that strengthen solidarity and agency, for example projects that increase trust and neighborhood support.

The image shows several individuals in white protective suits and face masks, likely health professionals, inside a bus terminal. They are wearing yellow gloves and are engaged in a training exercise, possibly disinfecting or handling a red cloth. The setting is a bus interior with yellow handrails and overhead lighting.

“Globally, governments’ responses to the pandemic have been confronted by the lack of knowledge related to the COVID-19 pandemic. As such, reliable knowledge of both the disease per se and its influence on human beings and societies are important for policy makers and other stakeholders involved in the responsive decision-making processes.”

– Tetsushi SONOBE, Asian Development Bank Institute, Tokyo, Japan

Image Source: Wikimedia Commons. March 16, 2020. Training of health professionals who will work at bus terminals in Olinda, Pernambuco, Brazil. Officials work from 6am to 10pm at the Rio Doce and Xambá terminals. Image by Prefeitura de Olinda. [https://commons.wikimedia.org/wiki/File:Capacita%C3%A7%C3%A3o\\_dos\\_profissionais\\_da\\_Sa%C3%BAde\\_que\\_atuar%C3%A3o\\_nos\\_terminais\\_de\\_%C3%B4nibus\\_-\\_49667698972.jpg](https://commons.wikimedia.org/wiki/File:Capacita%C3%A7%C3%A3o_dos_profissionais_da_Sa%C3%BAde_que_atuar%C3%A3o_nos_terminais_de_%C3%B4nibus_-_49667698972.jpg)



Tetsushi SONOBE  
Asian Development Bank  
Institute (ADBI)  
Tokyo, Japan

### Three practical considerations for renewing knowledge generation

Globally, governments' responses to the pandemic have been confronted by the lack of knowledge related to the Covid-19 pandemic. As such, reliable knowledge of both the disease per se and its influence on human beings and societies are important for policy makers and other stakeholders involved in the responsive decision-making processes. However, "reliable" knowledge, in a scientific and evidence-based sense, requires time and effort. Meanwhile, COVID-19 put pressures on governments for agile solutions. The question is, then, how policy proposals in response to the pandemic can be drafted and delivered in a timely yet substantiated manner?

Medical researchers have quickly developed a variety of hypotheses, tested them with randomized controlled experiments, checked the validity and reproducibility of experiments, and generated a huge quantity of scientific

knowledge that has benefitted hospitals, clinics, and the whole society in the struggle against COVID-19. Peer-reviewed academic journals, including Lancet, Cell, Science, Nature, JAMA, have played the important role of forum of discussions, cross checking, and dissemination of new knowledge.

More and more social research has been published recently, showing a clear effort from social scientists to catch up with the pandemic. That said, social scientists and social sciences journals have been challenged with both empirical and theoretical difficulties. Empirically, social distancing and other human interaction restrictions have been detrimental to social scientists' capacity to observe and generate knowledge. Theoretically, since COVID-19 as a socio-political phenomenon is somewhat unanticipated and multifaceted, to study it as such requires time for researchers to either adapt existing frameworks or build new framework from ethnographic and grounded theory approaches. That is not to mention to the lengthy process of peer-reviewed publishing.

Medical researchers have quickly developed a variety of hypotheses, tested them with randomized controlled experiments, checked the validity and reproducibility of experiments, and generated a huge quantity of scientific knowledge that has provided hospitals, clinics, and the whole society with increasingly better position in fighting COVID-19 => Can't social science researchers and TTs repli-

cate medial counterparts' success?

Peer-reviewed academic journals, including Lancet, Cell, Science, Nature, JAMA, have played the important role of forum of discussions, cross checking, and dissemination of new knowledge. In comparison, social science journals have been very slow, though becoming better gradually.

To this end, think tanks have the potential to fill in this gap of knowledge generation, with fora such as the Global Solutions Dialogue, T20, Global Think Tank Town Hall, etc. can be great complements to academic journals and institutions. The more flexible nature of think tanks allowed more frequent knowledge generation activities and involvement of more players. Both larger and smaller think tanks can collaborate with their own expertise and networks. Such diversity is important for gathering and cross-checking novel ideas. Each think tank participating in such large forum or fora should have its forum or platform connecting researchers, policy makers, public administrators, civil society groups to exchange ideas, opinions and latest information unsocial changes and the progress of research.

With new trends of domestic and global economies emerging from the pandemic, think tanks focusing on infrastructure development and urbanization are taking on a more challenging task than ever. Developing economies are still increasingly urbanized, yet cities in Asia are already too congested and too large [Presenter's Diagram as source].

Urban population in developing Asia was around just 0.4 billion in 1970, while in 2017 this has increased to 1.8 billion. By 2050, 3 billion people will live in cities in the area, according to the Asian Development Outlook 2019 Update of the Asian Development Bank (ADB). Leading this trend is India, followed by, in descending order, China, other Asian developing economies, other developing economies in the world, and developed economies.

The challenge of such urbanization rate can be observed through increasing congestion and unaffordability of housing, measured by the ratio of the median house price in a city to the median income in the city (PIR) [Presentation Diagram as source]. According to the ADB's estimate based on data of 211 cities in 27 developing countries in Asia, this ratio is 10 to 17, depending on population size: more precisely, 13.6, in small cities with population less than 1 million, 10.9 in medium cities with 1 to 5 million, and 17.2 in large cities with more than 1 million. Compared to the average PIR in developed economies, which is around 4, one can safely deduce how unaffordable housing has been in congested cities in developing Asia. In addition, cities are expanding beyond administrative boundaries [Presentation Diagram as source]. In addition, population density is high, and distribution is unequal among a city. Thus, less advantaged part of the population tends to have poor access to artery roads. They have to spend a large amount of time to commute to the center. Their sanitary condition and their access to the internet are also poor. These issues are ex-

acerbated by COVID019, and pushing think tanks to rethink urban infrastructure in a more inclusive way.

### **On Geographical diversification**

Another important trend is geographical diversification of economic activities and efforts to mitigate urban congestion, as well as of global and regional supply chain. The former results from economic or market forces because of increased cost of agglomeration (impacted by social distancing) and lowered cost of working remotely (enhanced by digitalization of working and living styles) after the outbreak of the pandemic. Such forces will make sure this trend gains enough political momentum to be materialized. Thus, the demand for digital infrastructure investment, addressing digital inequalities, and infrastructure investment improving access to clean water and artery road, is going to increase sharply. That said, infrastructure investment is not enough. It must be associated with investment in human capital. The targets of human capital investment, as opposed to popular perception, are not just children, but also adults. Without capacity building, the constructed infrastructure will fail to showcase its real worth, and hence investment in it will have low social returns.

The latter trend stems from that having learned lessons from supply chain disruptions, firms are departing from the conventional supply chain management, which sought

just-in-time deliveries and procuring from the best source, and going to the second and third best as appropriate redundancies. In theory, this trend gives developing countries more chance for industrial development. The realization of this expectation will require infrastructure investment in transportation, communication, and industrial zones and parks, together with human capital investment in both children and adults.

### **On capacity building**

Finally, when it comes to the developing world, making effective policy proposals regarding infrastructure and urbanization requires shedding lights on capacity building, not only its importance but also how to secure the sufficient supply of trainers and instructors. This is probably the only approach to realizing Quality Infrastructure Investment.



“With new trends of domestic and global economies emerging from the pandemic, think tanks focusing on infrastructure development and urbanization are taking on a more challenging task than ever.”

– Tetsushi SONOBE, Asian Development Bank Institute, Tokyo, Japan

Image Source: Wikimedia Commons. March 21, 2020. Thousands of aid packages donated by the People’s Republic of China are unloaded at the Villamor Air Base in Pasay City on March 21, 2020. The donation includes assorted medical supplies, personal protective equipment, and testing kits for coronavirus. TOTO LOZANO/PRESIDENTIAL PHOTO. [https://en.wikipedia.org/wiki/File:China\\_COVID19\\_test\\_kit\\_PH\\_donation\\_8.jpg](https://en.wikipedia.org/wiki/File:China_COVID19_test_kit_PH_donation_8.jpg)

**systems**  

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**solutions**  

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**agendas**

**5**

# systems solutions agendas

## 5.0. Avoiding another wasted decade of growth

Nicolas J.A. BUCHOUD, Global Solutions Initiative, Paris, France

## 5.1. The Global Solutions Summit in 2021: framing the crisis

Markus ENGELS, Secretary General, Global Solutions Initiative, Berlin, Germany

## 5.2. The Sustainable Development Goals (SDGs) after 2020

Stefano MARTA, Organization for Economic Cooperation and Development (OECD), Paris, France

## 5.3. Bridging the gap between global and community resilience to achieve the Sustainable Development Goals

Carmen VOGT, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Bonn, Germany

## 5.4 Cities and infrastructure investment for an inclusive economic recovery

Sarah COLENBRANDER, Overseas Development Institute, London, the United-Kingdom

## 5.5. A participatory process to redefine the Milan City approach towards sustainable development in a pandemic context

Edoardo CROCI, Bocconi University, Milan, Italy

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**5.6. Partnerships for the 2030 Agenda**  
Sébastien DAZIANO, SUEZ, Paris, France

**5.7. Creative solutions to ‘building forward better’**  
Ricky Joseph PESIK, Ministry for Tourism and Creative Economy, Jakarta, Indonesia

**5.8. Enacting creative economy**  
Tita LARASATI, Indonesia Creative Cities Network, Bandung, Indonesia  
Fiki SATARI, Ministry of Cooperatives and SMEs, Jakarta, Indonesia

**5.9. Back to growth? The 2030 Agenda, the G20 and the aftermath of the crisis**  
Nella Sri HENDRIYETTY, Senior Economist, Asian Development Bank Institute, Tokyo, Japan

**5.10. Welfare, social and spatial organization in the post-COVID global urban age**  
Nicolas J.A. BUCHOUD, Global Solutions Initiative, Paris, France; Eduardo LÓPEZ MORENO, UN-Habitat, Nairobi, Kenya

**5.11. Cross border data management and regional value chains: a tentative agenda for recovery through smart urbanization in the ASEAN context**  
Riatu MARIATUL QIBTHIYYAH and Teuku RIEFKY, University of Indonesia (LPEM-UI), Jakarta, Indonesia

## 5.12. Twenty-four months to build and implement a paradigm shift

Nicolas J.A. BUCHOUD, Global Solutions Initiative, Paris, France; Katharina Lima DE MIRANDA, Kiel Institute for the World Economy, Kiel, Germany; Hazem GALAL, PwC Middle East, Dubai, the United Arab Emirates; Luca TRIFONE, Ministry of Foreign Affairs and Municipality of Rome, Italy

systems  
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agendas



“Fostering more aligned cooperation is on the agenda of the G20 Italy in 2021. Moving from good intentions to a global roadmap of urban recovery will require strong and accountable implementation mechanisms and institutional frameworks.”

– Nicolas BUCHOUD, Global Solutions Initiative, Paris, France

Image Source: Wikimedia Commons. February 23, 2020. Italian government task force to face coronavirus outbreak. Image by the Governo Italiano. [https://commons.wikimedia.org/wiki/File:2020\\_coronavirus\\_task\\_force.jpg](https://commons.wikimedia.org/wiki/File:2020_coronavirus_task_force.jpg)



Nicolas J.A. BUCHOUD (ed.)  
Global Solutions Initiative  
Paris, France

## Which growth can we achieve?

Nearly fifteen years ago, the subprime mortgage crisis in the United-States triggered a global financial crisis. It was largely a consequence of real estate finance going wrong, supplying massive quantities of housing nowhere near basic services and urban amenities and mobility infrastructure. Since then, new prudential regulations and global financial, macro-economic governance mechanisms have been entailed by the G20, which has successfully secured the global banking system.

The same G20 has yet devoted much less efforts to address the urban roots of the crisis, whereas massive amounts of constructions have continuously been delivered across the globe without much corresponding urban and infrastructure planning. Then in less than a year in 2020, many social and economic indicators have declined to pre-2010's level, erasing years of growth while the environmental costs are yet to be paid for.

The prediction of what kind of economy will emerge from the pandemic is currently difficult to make but INTERSECTING argues we should not wait to take responsibility and refine our collective understanding of the crisis several causes and of the options that are at our hand. Even if it had a spatial expression, the financial crisis of 2008 could clearly be attributed to actors and processes of financial markets and reforms could be built accordingly and economists' recommendations targeted central banks as saviors to restore confidence in markets. In 2020, the problems caused by the pandemic have affected all sectors. As we perceive urbanization has something to do with the unfolding of the crisis, no single explanation can account for the disruptions it has triggered. Therefore, no sectoral reform could help restore confidence in economic demand and supply after the pandemic. 'Framing the crisis' (M. Engels) depends on our collective ability to align and intersect various factors, from bridging the gaps between global resilience and community resilience, to enact creative economy, to entail stronger partnerships to support the 2030 Agenda, to shape health and welfare policies that fits the dimensions of our urban age, to revive global agreements.

One of INTERSECTING's findings is that cross-border data management and regional value chains could well become the foundations of more active and inclusive regional agendas, including smart urbanization and infrastructure in a wider social and political perspective. In any case, trust is

a critical dimension of all post-COVID-19 options and recovery scenarios, one which has to be (re)built not only in the alleys of global conferences but also in the backstreets of every neighborhoods. Even in the digital society, it is not all about data superhighways, as even the G20 sustainable development agenda that has emerged since 2016 has demonstrated.

The Italian G20 presidency has made clear the local level should become part of post COVID-19 recovery solutions and to tackle longer term environmental challenges, and it has announced the organization of several meetings, including an international summit of environment and energy ministers scheduled in the summer of 2021 in Napoli and connecting with the Urban 20, to make the case for G20 action on urbanization. Even before the pandemic outbreak, more than 80% of the regions in OECD countries were not keeping on track on any of their seventeen sustainable development goals (SDGs). Key report from 2019 and 2020 were pointing out to the pre-pandemic period immense challenges to reach out the targets of the 2030 agenda, including urbanization and infrastructure development as critical issues.<sup>1</sup> Unless coordinated local and global efforts are undertaken to reposition the SDGs at the core of recovery policies, the delivery of the Agenda 2030 will be slowed down for a long time, with rising disparities among local and regional governments hampering global climate and carbon neutrality goals.<sup>2</sup>

Issuing a G20 agenda on urbanization that is effective depends on many factors. Locally, such a move is complicated by the fact that most local government leaders are called to undertake long-term transformative actions and plans that will bear consequences well after their own particular mandate. Therefore, it is not only about understanding the role of infrastructure in building up resilient societies, it is also about creating new forms of productive and transformative partnerships at the confluence of previously unconnected spheres of knowledge and policy. To bridge the gaps between global and community resilience, data should become a public good shared between city governments, urban communities and citizens, by decision makers at national levels and international financial institutions. Digital governance is key to sustain multilateralism in an interconnected urban world, whereas a handful of monopolistic companies are now accumulating data from billions of people around the world.

INTERSECTING is edited at pivotal moment when the reconciliation between the macroeconomic objectives of the G20 and the regional recovery strategies can additionally leverage large scale social and environmental investments and benefits. This is a chance. The development and coordination of data collection and of a shared smart city agenda -including smarter infrastructure systems and mobility services- across key economic regions, such as the ASEAN or Europe could provide a robust leverage and drive the economy out of the crisis in an inclusive and sustainable

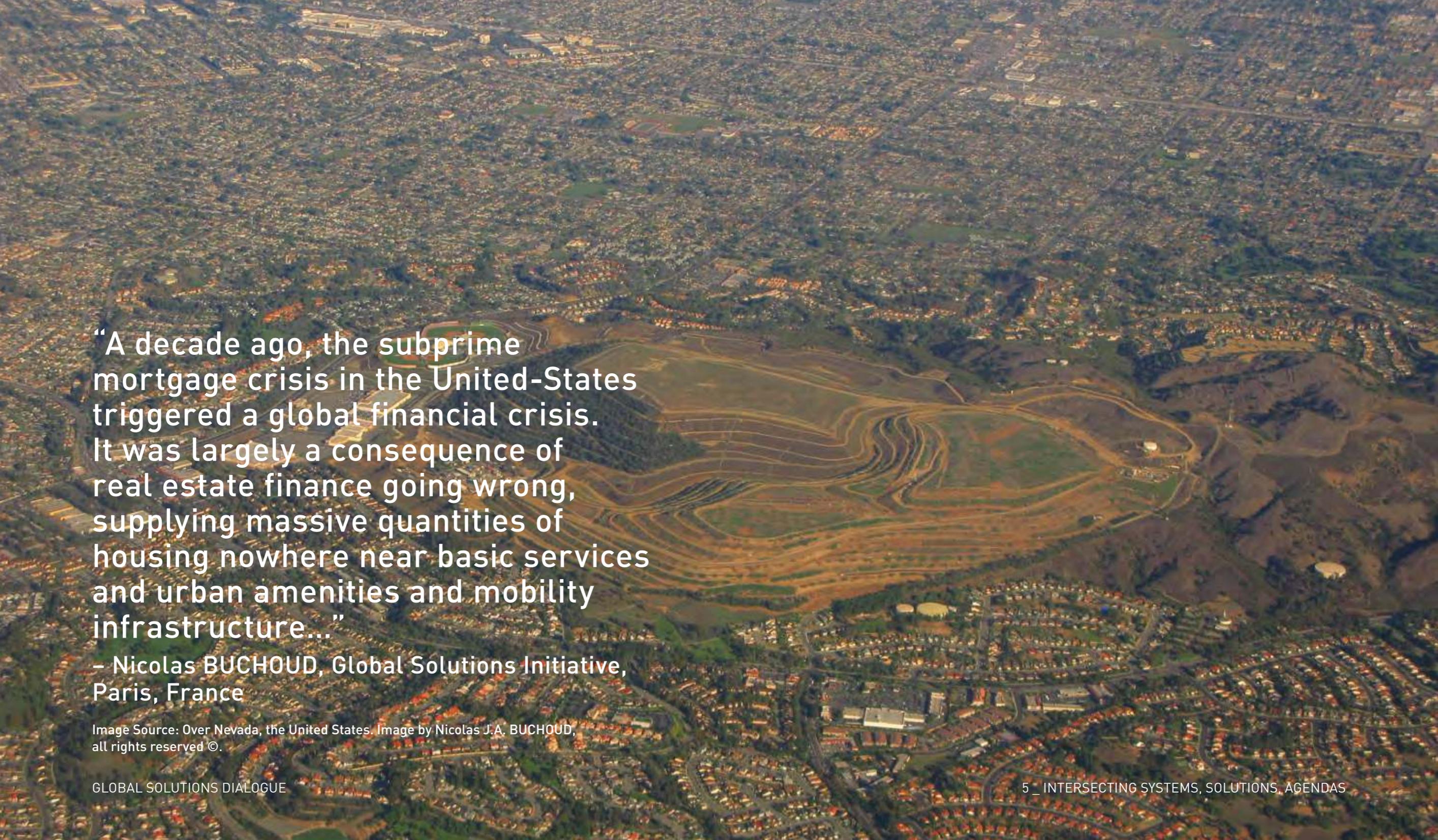
way. But this has to go with creativity. From Milan to Bandung, cities creativity has not been erased by the crisis and prove there can be many creative ways to build the infrastructure of a new sustainable economy. The conjunction of infrastructure for distribution and the development of creative economy is a way to support local communities, create jobs and maximize the inclusion potential of digital services, while taking into account that large segments of labor markets are informal, especially in emerging and lower incomes countries. Improving the articulation between multilevel governance and local responses could help address the vulnerabilities and exposure of poorer communities to pandemics and other global risks. It would also give more leverage to local governments and civil society players to address growing fragmentations within the middle-classes.

The COVID-19 pandemic has added a new challenge to 'recouple economic progress with social progress' and made this historic commitment of the Global Solutions Initiative more pressing and more necessary. The pandemic's aftermath might become one of greater fragmentations, greater inequalities. Addressing the 'Reversals of Fortune' the World Bank has identified in its report of the fall of 2020 requires global thinking but also to develop a common consolidated knowledge of local solutions that have been implemented successfully in the past years, understanding that cities, subnational governments and national governments closely depend on each other. National policies and

the enforcement of future climate, biodiversity or other trade, social and digital global commitments would benefit from redesigning a robust, multilateral new urban agenda.

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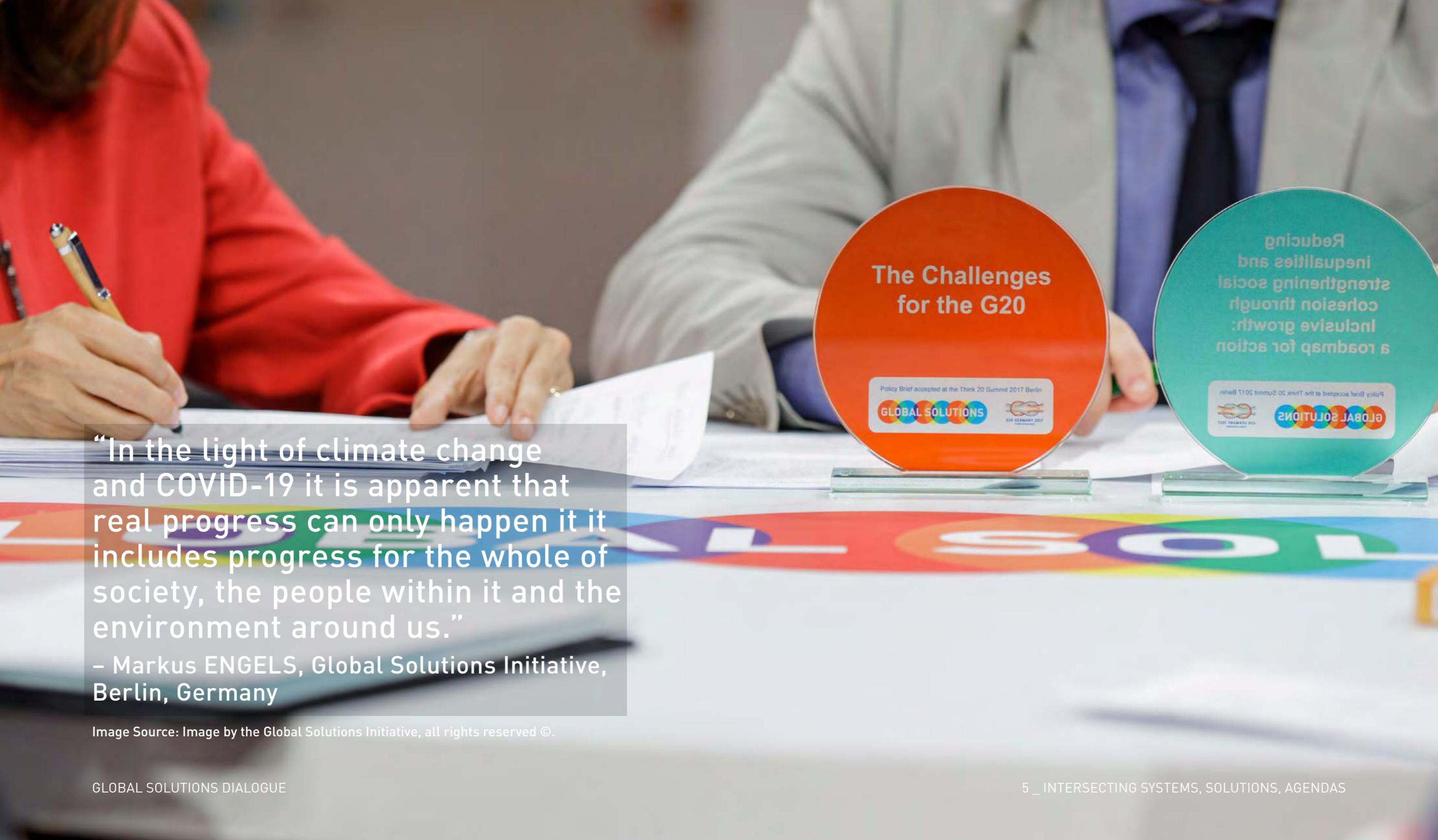
2. Sustainable Development Report 2020, The Sustainable Development Goals and COVID-19, SDSN, Bertelsmann Stiftung, June 30, 2020, [https://s3.amazonaws.com/sustainabledevelopment.report/2020/2020\\_sustainable\\_development\\_report.pdf](https://s3.amazonaws.com/sustainabledevelopment.report/2020/2020_sustainable_development_report.pdf) See and Europe Sustainable Development Report 2020, Meeting the Sustainable Development Goals in the face of the COVID-19 pandemic, SDSN, IEEP, Dec. 08, 2020 [https://s3.amazonaws.com/sustainabledevelopment.report/2020/europe\\_sustainable\\_development\\_report\\_2020.pdf](https://s3.amazonaws.com/sustainabledevelopment.report/2020/europe_sustainable_development_report_2020.pdf)



“A decade ago, the subprime mortgage crisis in the United-States triggered a global financial crisis. It was largely a consequence of real estate finance going wrong, supplying massive quantities of housing nowhere near basic services and urban amenities and mobility infrastructure...”

– Nicolas BUCHOUD, Global Solutions Initiative,  
Paris, France

Image Source: Over Nevada, the United States. Image by Nicolas J.A. BUCHOUD, all rights reserved ©.



“In the light of climate change and COVID-19 it is apparent that real progress can only happen if it includes progress for the whole of society, the people within it and the environment around us.”

– Markus ENGELS, Global Solutions Initiative, Berlin, Germany

Image Source: Image by the Global Solutions Initiative, all rights reserved ©.



Markus ENGELS  
Global Solutions Initiative  
Berlin, Germany

### **The Global Solutions Summit in 2021: Framing the crisis**

I am sure everybody will agree that the COVID-19 challenge will be formative for an entire generation. It has exposed the vulnerability of the modern world, it has underlined the inter-connectivity between societies and it has shown us that something as small as a virus can easily stop the world from turning and the economy from working.

While the COVID-19 crisis delivered more bad news each and every day, killed and debilitated people, widened social gaps and challenged the world economy, it proved at the same time how incredibly powerful a united world society working in cooperation can be: Within weeks, we managed to approve multiple vaccines and organized distribution of vaccines around the world. The G20 pledged not to forget the poorer regions and the EU agreed on a common purchasing policy to make sure that the richest nations could not buy all vaccines at the expense of the poor. These later trends make me optimistic, because COVID-19 highlighted

one thing: that either everybody must be protected against the virus or nobody will be safe. We are all sitting in the same boat in fighting the virus. And obviously it is crucial not to forget that COVID-19 is only one crisis in an orchestra of urgent global challenges like climate change, loss of biodiversity, global inequality, and technological disruption which is changing everything in politics, economy, society, communication and personal relations. All of these challenges, some call them mega-crises, are interconnected and can't be answered as long as people remain in their silo-mentalities. Interconnectivity of crises requires the interconnectivity of thinking!

### **The Global Solution Initiatives (GSI), and its Summit**

The purpose of the non-profit GSI is to support the G20 and its related engagement groups, especially the Think20, the G20's global network of think tanks, which provides research-based policy advice to the G20. It is critical in this respect to overcome silo-mentality, thinking just within disciplines, and to understand the links between the greatest challenges of our days, and some fundamental misconceptions.

Therefore, the Global Solutions Initiative aims to provide a platform for the G20 and other international organizations and to all G20-related engagement groups. It offers a forum for the global civil society to strengthen interna-

tional cooperation and put forward evidence-based and research-based policy recommendations. Within the GSI network the researchers and think tanks discuss their research-based proposals with thought leaders from politics, business and civil society to make sure that the recommendations can be implemented. The Global Solutions Summit, which takes place in Berlin in the middle of every G20 Presidency, was transformed into a digital format in 2020 and reached thousands of participants and brought together 220 panelists from around the world. In 2021 the Summit will take place on May 27-28th and will promote the Italian G20 priorities while building bridges to the upcoming Indonesian and Indian G20 Presidencies in 2022/2023.

Whoever is registered to our network will be informed on a regular basis about the formats for the Summit in 2021, the topics and concepts, and all GSI activities.

### **Recoupling-Narrative of the GSI**

The key narrative of the GSI is “recoupling” which was established by the GSI president Dennis Snower. It argues that there has been a process of decoupling of economic progress and social prosperity, of technological progress and progress in sustainability, and there is a growing gap between wealth and health. This is one reason why globalization is under pressure and why the world is witnessing rising populism and conspiracy theories. To combat this rise

in “me-first” thinking, which is a response to people and societies not seeing the economic progress of nations and companies reflected in their individual and social wellbeing, we must bring these diverging strands back together. It is obvious that there is a need for a recoupled world and for a aligning progress in different areas, including social and environmental progress for the many, not just the few.

COVID-19 has partly exacerbated the gaps in and between societies and therefore it is consistent that the G20 in 2021 is focusing on the overcoming of the social crisis linked to the pandemic, under the framing of “people, planet and prosperity”. Therefore, the Global Solutions Summit in May will underline the need for a great realignment in economy, society and politics and highlight ways to recouple societies and different forms of progress. Empowering people, protecting the planet and ensuring prosperity for all is what recoupling is all about. To do this, it is crucial that a great realignment in multilateralism includes both different local perspectives and regional experience. The regions and cities around the world are dealing with and managing the mega-crises on a daily basis with. As a consequence, we offer the Urban20, the G20 engagement group focused on cities and urbanization, a platform to discuss their global solutions.

There is also a need for a new understanding of the role of basic infrastructure in building up resilient societies. There needs to be a realignment here as well. As the GSI

aims to become a common global good fostering a civil-society-driven multilateralism, it recognizes that societies need sustainable infrastructure as the figurative cement between young and old, different genders, poor and rich, and cities and countryside.

All of these discussions on implementable solutions to global problems that simultaneously envision a recoupled world of empowered individuals within thriving societies will be deepened during the Global Solutions Summit in May 2021.

### **New measurement of wealth, The Great Realignment and digital governance**

One fundamental misconception which leads to a faulty incentive system is a narrow concept of wealth and progress. In the light of climate change and COVID-19 it is apparent that real progress can only happen if it includes progress for the whole of society, the people within it and the environment around us. True resilience requires unity in society as well as individuals ready to handle the rapid change and an environment which is healthy. All of these criteria are neither fulfilled in the growth-orientated concept of GDP nor in the traditional understanding of the purpose of economy and business. We must see the purpose of economies as the gratification of people's needs and the purpose of business as serving demands in the interests of social

progress and social cohesion.

The recoupling dashboard, which was proposed in 2020 by Dennis Snower, Katharina Lima de Miranda and the GSI, addresses this misconception of wealth and progress. It proposes a new measurement of success by bringing together economic growth and wealth on the one hand, and the environment, social impact and empowerment of people on the other. The new measurement is crucial in the context of COVID-19 recovery, as we strive for simultaneous goals including economic stimulation, job creation, climate change mitigation, inequality reduction and multilateral system renewal. Hence, it is important to have a new approach to the question: what is success and wealth?

In this context one must also take into account the situation in the digital world: in a nutshell, just a few companies are accumulating data from billions of people around the world. This neither serves the interest of innovation, because it limits the chances of start-ups and SMEs, nor consumer rights protection or data safety. The issue of digital governance related to ownership of data might further worsen poverty and inequality as the benefits from digitalization are unevenly distributed between the few and the many. Therefore, there is an urgent need for a new digital system. Dennis Snower, together with Paul Twomey, has proposed a new data regime on digital governance which serves to give individuals back control over their own data and is currently being discussed in the EU. The Global Solutions Summit

will widen this discussion and include players from business and civil society to foster recoupling in the digital age.

## Outlook

Digital formats are offering fantastic options to include more stakeholders and diverse perspectives in these discussions around the world. While the Global Solutions Summit in the age pre-COVID-19 could only host around 1,200 participants from around the world, its digital twin in 2021 opened the floor for the highest number of participants in the history of the GSI. This “forced innovation” will remain in 2021 and afterwards and the GSI will upgrade its digital competence while bringing back its physical meetings as soon as possible. We are all eager to meet in person again and have an exchange without a screen between us, but only as soon as this is responsible and in the interest of everyone’s health.



“The Global Solutions Summit of 2021 will underline the need for a great realignment in economy, society and politics and highlight ways to recouple societies and different forms of progress. The GSI aims to become a common global good fostering a civil-society-driven multilateralism.”

– Markus ENGELS, Global Solutions Initiative, Berlin, Germany

Image Source: Celebrating the New Urban Agenda after a decade of urbanization in October 2016. Image by Nicolas J.A. BUCHOUD, all rights reserved ©.



Stefano MARTA  
Organization for Economic  
Cooperation and  
Development (OECD)  
Paris, France

As numerous local and regional governments in Europe are working on territorialized approaches to the SDGs, DDC can be a relevant driver of SDGs localization all the more as local and regional governments should be on the frontline of the implementation of long-term Covid-19 recovery plans. Among the 17 SDGs, SDG 3 (health) and SDG 11 (cities) were the main targets of DCC, making the connection between DCC, SDGs and Covid-19 recovery all the more relevant.

Partnership is another key dimension of DCC, which finds further relevance in the Covid-19 crisis context. In the past decade, the approach has gradually shifted from classical North to South ODA and financial transfers to models based upon knowledge transfer, peer-to-peer and capacity building among local governments. Territorial partnerships models have emerged and illustrate the development of DDC based on a network of actors, with local or regional governments as anchors that catalyse the engagement of civil society and the private sector. This model has been applied in the region of Tuscany in Italy, which has focused its decentralized development cooperation policies upon health and circular economy, in support of partner cities and regions overseas.

The city of New-York is structuring a number of global partnerships through its 'Voluntary Local Review' of the SDGs, a process that has gained in visibility and impact in the past 2 years with over 200 cities aiming at preparing local reviews in addition to the countries national reviews. The

## The Sustainable Development Goals (SDGs) after 2020

Investment is a specific and key aspect of OECD's work on the SDGs, and countries, cities and regions would benefit by referring to the 2030 Agenda in order to recover from Covid-19 pandemic. In this context, we believe that decentralized development cooperation (DDC) is an undervalued asset that could come in support of local government, particularly in developing countries, and could contribute to the local implementation of the SDGs.

Decentralized development cooperation represents only a fraction of annual official development assistance (ODA) with about 6% of the total ODA, but volumes have grown by 25% over the last 15 years, reaching \$2.4 billion as of 2018. In some countries the DCC volumes can be significant, such as in Austria, Canada or Spain, where DDC represents between 23% and 16% of total national ODA.

cities of Bonn in Germany and of Kitakyushu in Japan offer two other good examples of how the SDGs are nurturing and structuring local policies and investments.

The city of Bonn has been using the SDGs to develop and formulate its Sustainability Strategy 2019. In that sense, the SDGs are no longer a rigid framework of 169 targets but a policy-framework that allows to manage trade-offs even between competing priorities such as between increasing and strengthening sustainable mobility and reducing CO2 emissions in the city, providing affordable housing and maintaining the green spaces in the city. Lately, Bonn has also started to use the SDGs as a budgeting tool and to engage the private sector in support of a comprehensive sustainability strategy. The SDGs can provide a universal language that allows to strengthen private-public-partnerships to enhance sustainability. As many local governments, especially in lower-income countries, cannot benefit from the same levels of resources than in developed or some emerging countries, the SDGs should become an accelerator of decentralized cooperation and support.

The city of Kitakyushu in Japan is using the SDG framework to strengthen and value its green economy assets and in particular circular economy, out of a long heavy industries history. The city is using the SDGs to address social and economic challenges such as the need to provide more attractive job opportunities for the youth to meet Tokyo's competition or to provide opportunities to the elder popula-

tion that is left out of job markets.

The Covid-19 crisis will be the real stress test for the SDGs, especially for cities and regions. To recover from the economic shock of the Covid-19 pandemic, local and regional governments will need national and multilateral support to implement sustainable recovery strategies and continue to foster effective decentralized development cooperation. The ability of local and regional governments to cope with the crisis by using the SDGs as a policy-making framework is among the main new challenges that face the 2030 Agenda. Even before the Covid-19 pandemic outbreak, more than 80% of the regions in OECD countries were not keeping on track on any of their 17 goals. Unless coordinated local and global efforts are undertaken to reposition the SDGs at the core of Covid-19 recovery strategies, there are risks that the delivery of the Agenda 2030 is slowed down for a long time, combined with rising disparities among local and regional governments, that might also hamper global climate and carbon neutrality goals.

A group of photographers and videographers are gathered at a summit event. They are using professional cameras on tripods, some with large telephoto lenses. The setting appears to be an indoor event space with a brick wall in the background. A sign with a green arrow and the text "SALA DE EMERGENCIAS" is visible on the wall. The photographers are dressed in business attire, including suits and vests. Some are standing and adjusting their equipment, while others are sitting on white chairs. The overall atmosphere is one of professional media coverage.

“The ability of local and regional governments to cope with the crisis by using the SDGs as a policy-making framework is among the main new challenges that face the 2030 Agenda. Even before the COVID-19 pandemic outbreak, more than 80% of the regions in OECD countries were not keeping on track on any of their 17 goals.”

– Stefano MARTA, OECD, Paris, France

Image Source: The media at the final plenary of the Habitat III Summit in Quito, Ecuador, in October 2016. Image by Nicolas J.A. BUCHOUD, all rights reserved ©.



Carmen VOGT  
Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ)  
Bonn, Germany

### **Bridging the gap between global and community resilience to achieve the Sustainable Development Goals**

Amid the current global pandemic, how we address urban and community resilience has become even more critical. We can assume that the COVID-19 crisis will affect societies and economies not only in the upcoming two years but in the decades to come. Depending on actions taken now, the impact could be significant, including for the achievement of international commitments and sustainability targets or for the social and economic stability in many countries around the globe.

In the past year, we have witnessed in many partner countries how city governments and local actors have been under unprecedented stress during the fight against the pandemic. Unfortunately, the often fragile health, financial, political and social systems in developing countries and emerging economies have been affected disproportionately, amplifying existing inequalities and creating new ones.

As cities and citizens are greatly exposed to the physical, mental, social and economic impacts of the COVID-19 crisis, addressing basic needs and services at community level is as important as addressing the pandemic on global level. As partners and donors, we are asked to rethink how we provide financing and support for inclusive and green recovery to contribute to achieving the Sustainable Development Goals (SDGs) and address the scarcity of resources sharpened by the pandemic. Without the right political will and the integration of SDGs in recovery measures, we face a high risk that economic restarts and stimuli in cities, if not countries, might fail or be pursued at the expense of social and environmental goals. The consequences would be fatal, especially, for informal settlements and workers that are already hit hard due to a lack of sufficient social infrastructure and basic services.

It is, therefore, essential that the most vulnerable benefit directly from recovery programs - for example from quality infrastructure investments spill-over effects. At this moment, only an estimate of 3 to 5 per cent of the USD 12 to 15 trillion international COVID-19 stimulus programs are targeting green initiatives and even fewer amounts are devoted to support for local and community resilience. On this account, together with our partners and commissioning parties, we work towards combining the opportunities of economic stimulus packages with necessary climate resilient, transformative structural reforms to trigger a double dividend and avoid a trade-off between economic growth

and progress on social equality, sustainability and climate goals.

The German Ministry for Economic Cooperation (BMZ), as the main commissioning party of GIZ, has recently introduced a reform concept that constitutes sustainable urban development as a stand-alone field of action, aiming to create climate impact and a green post-COVID-19 future. This reform concept was initiated before the pandemic crisis but has become even more relevant now. It will be reflected in GIZ's priorities and drive forward sustainable urban development projects.

Already now, GIZ provides structural support to the recovery of cities and citizens, by developing capacities, processes and organisations on different fronts, supporting multi-level-governance and fostering the exchange of knowledge. GIZ is present in partner countries and can react to their demands, while maintaining close relations to national ministries and city governments to strengthen the multi-level governance in recovery measures.

GIZ's engagement focuses on the several aspects of urban development, the first of which is evidence-based and participatory planning for the reorientation of the urban development strategies after the pandemic. This includes new political prioritization of green recovery measures and support for the functioning of public services, like mobility,

health, education, buildings, housings, spatial planning, etc. To advance the implementation of the Agenda 2030 in the context of the pandemic, a GIZ project in Ghana for example supports the decentralization reform at the local level while retaining a multi-level approach. This includes data-based development planning for the implementation of the Agenda 2030. Another illustration is the Transformation Fund Agenda 2030, which works towards achieving the SDGs in the Philippines by increasing the participation of relevant stakeholder groups to make COVID-19 stimulus programs more inclusive and sustainable. Further, the Open SDG Club, that is set up in India, addresses the needs of vulnerable groups in the context of reconstruction programs via multi-stakeholder dialogues on recovery plans, the identification of the core principles for inclusive reconstruction and the formulation of political advice on post-COVID-19 reconstruction plans for the Agenda 2030 decade of action.

Secondly, GIZ's engagement includes driving forward sustainable infrastructure development and investments in cities as they present a unique opportunity to combine economic stimulus measures with climate resilient, transformative structural reforms and job creation. An example for this is the C40 Cities Finance Facility (CFF), which develops fit for purpose solutions for its partner cities. As a project preparation facility, the CFF identifies and prepares climate mitigation and adaptation infrastructure projects, strengthens related capacities within city administrations

and disseminates lessons learned and best practices. CFF helps to build a sustainable, low-emission and climate resilient infrastructure project pipeline and is an experienced broker between financial institutions and city governments, supporting cities to access a broader range of financing solutions, including stimulus packages. An illustration of the project's impact can be found in Bogota, Columbia, where it has supported establishing the city's first large scale cycling avenue – one of the city's key response to the COVID-19 pandemic and for a green recovery. Further, the City Climate Finance GAP Fund, which is initiated by BMU and BMZ, similarly addresses the infrastructure investment gap. It will provide technical assistance to cities at an early stage of planning and project preparation to attract financing for sustainable infrastructure.

Considering the entrenched local and national budgets, the lack of infrastructure development and investment, the GAP Fund and CFF realise an important task by enabling local governments to access infrastructure finance. Therefore, it is necessary that a considerable amount of the stimulus packages is directed in sustainable urban development and infrastructure. In this respect, the G20 as well as Multilateral and National Development Banks have a crucial role in deciding on financial resources and mechanisms, by which the local level can be included. They can contribute greatly to coordinated interventions with climate- and social-positive impacts.

Thirdly, GIZ's engagement in urban development revolves around innovation in and for cities. Fostering innovation will remain important during the COVID-19 pandemic and to manoeuvre out of the crisis. Citizen-centred innovation processes with the purpose to co-create digital solutions can increase the resilience of cities and their transformative adaptation to climate change. GIZ focuses on inter alia mainstreaming digital solutions in urban processes and sharing successful models and experiences. An example of this is the initiative #solutionsforcities, and the "Call for Digital Solutions" initiated by the German Federal Ministry of the Interior, Building and Community with the to identify scalable solutions for urban challenges caused by the pandemic. This is an interesting and important field for future dialogues with highly innovative potential.

In summary, GIZ's experience in partner countries and in the area of sustainable urban development shows how city governments and citizens - especially the most vulnerable groups - are under great stress while coping with the pandemic and its short- to long-term impacts. To address their needs and demands in this crisis and increase urban resilience, all current efforts will gain impact from a coordinated approach at global level. The pandemic is an opportunity to revisit inefficiencies, gaps and flaws of contemporary urban policy making and development, including direct infrastructure investments to cities, digital solutions for better services and citizen participation in integrated planning. In this respect, there is a need for new forms of

productive and transformative partnerships, a confluence of so far unconnected knowledge as well as an exchange of data as public good between city governments and urban communities, political decision makers at national level and international financial institutions.

<https://irp-cdn.multiscreensite.com/6f2c9f57/files/uploaded/Cities-SDG-Guide.pdf>



Image Source: In the province of Nairobi, Kenya, and along the Neckar Valley in the Geidelberg-Mannheim metropolitan region, Baden-Württemberg, Germany. Images by Nicolas J.A. BUCHOUD, all rights reserved ©.



“The pandemic is an opportunity to revisit inefficiencies, gaps and flaws of contemporary urban policy making, including direct infrastructure investments to cities, digital solutions for better services and citizen participation in integrated planning.”  
– Carmen VOGT, GIZ, Bonn, Germany



Sarah COLLENBRANDER  
Overseas Development  
Institute  
London, the United Kingdom

But COVID-19 is almost certainly a temporary blow. Urban areas will recover as the threat of the pandemic recedes, whether that happens in a few months or a few years. Cities simply offer too many advantages: the productivity gains that come from sharing knowledge and ideas, the lower costs that come from sharing specialised infrastructure, the social and cultural opportunities that come from meeting a much wider range of people.

## Cities and infrastructure investment for an inclusive economic recovery

### The urban impacts of COVID-19

The early impacts of the COVID-19 pandemic were concentrated in global cities. The connectivity, density and dynamism that make these cities such rewarding places to live and work also facilitated the rapid transmission of the virus. Accordingly, the epicentre of the pandemic shifted from Wuhan, to Milan, to London, New York and Mexico City.

The costs went beyond disease. Jobs and incomes disappeared overnight as governments locked down urban economies. In India, this fuelled the largest migration of people since Partition as millions returned to the countryside, often bringing the novel coronavirus with them. Months of lockdown in tiny apartments without greenspace have inspired a more gradual exodus, as inner-city residents flock to the suburbs or further afield.

### The future of cities

The inevitable revival of cities offers an opportunity to improve living standards for an increasingly urban population. 4.4 billion people live in towns and cities today, and that number will rise to 6.7 billion by 2050. The vast majority of these people live in poverty. Most lack access to basic services such as clean drinking water, sanitation and affordable modern energy, and work in unsafe conditions for inadequate wages. And increasingly, they are battered by the impacts of climate change, such as flooding, heatwaves and storm surge. Landlords have captured most of the gains of agglomeration.

Despite these policy and market failures, urbanisation will continue because cities are sites of economic and social opportunity.

Supporting economic development while mitigating the

climate and biodiversity crises will demand massive investment in sustainable urban infrastructure. Mass transit, stormwater drains, sewers, electricity grids and decent housing are preconditions for healthy, dignified, productive lives. Accordingly, in advance of the G20 leaders' meeting, the International Monetary Fund has called for a collective infrastructure push to create jobs, stimulate growth and address climate goals. The challenge is to ensure that these investments also deliver an inclusive recovery that tackles inequalities and injustices.

### Who gets to decide?

When questions of social justice are being considered in fiscal stimulus packages, they have largely focused on the distribution of costs and benefits. Infrastructure investments can directly create jobs for less-skilled workers; better transport can also improve their access to jobs, while improved energy access can enhance their productivity. Infrastructure investments in water, sanitation and solid waste management can reduce the environmental pollution that disproportionately affects low-income and other marginalised communities.

These outcomes would all lead to more equitable cities. However, 'distributive justice' – that is, a fairer allocation of resources – is not sufficient on its own. 'Procedural justice' – that is, fairer decision-making and dispute resolution

processes – will be equally important to drive an inclusive recovery.

Large infrastructure investments are almost always going to be designed, financed and delivered by powerful players: national and state governments, large engineering firms, commercial banks and institutional investors. But in the end, these systems will be used and paid for by households and small- and medium enterprises, who rarely have a voice in planning or implementation. Exclusionary decision-making processes too often means that infrastructure investments do not meet their needs.

### What are the key ingredients?

A narrow focus on city leadership or project financiers will not deliver an inclusive recovery. These constituencies are rarely interested in projects where they cannot cut a ribbon at the opening ceremony or that do not generate a commercial return on investment. The overwhelming evidence from most countries shows that city leaders, bankers and investors are – for the most part – happy to let low-income and other marginalised communities fall through the cracks.

Therefore, an inclusive recovery driven by green infrastructure investment also needs:

- Local governments with sufficient capacities and resources. Municipal officials have an important role to play in mediating among different interests and crafting a shared vision for the city. They need to work with universities to build the human resources that cities need: planners, architects, engineers, administrators and more.
- A culture of rights and justice. People move to cities in search of opportunity. They want to contribute to urban economies and societies. A culture of rights and justice can create the space for them to pursue those opportunities so that “the right to the city” does not only extend to those who can afford it.
- A far-sighted and coordinated fiscal framework. Urban projects should not just be funded by narrowly defined beneficiaries. A good municipal transport network, for instance, benefits almost everyone in the city by reducing congestion and air pollution while boosting access to jobs and services. These infrastructure projects will also benefit future generations. National and local governments therefore need to look beyond project finance and think about how area-wide tax policies, general obligation debt and land value capture can be used in an integrated way to finance projects that serve the city as a whole.

In the wake of COVID-19, the G20 plans an immense programme of infrastructure investment. We need to understand who will get a say in what kind of infrastructure is built, as well as for whom, when, where and why. Otherwise, the inequalities laid bare by the pandemic will only become more severe.



“In the wake of COVID-19, the G20 plans an immense programme of infrastructure investment. We need to understand who will get a say in what kind of infrastructure is built, as well as for whom, when, where and why. Otherwise, the inequalities laid bare by the pandemic will only become more severe.”

— Sarah COLENBRANDER, Overseas Development Institute, London, the United Kingdom

Image Source: Final voting on the conclusion of the High-Level Political Forum (HLPF) meeting at the United Nations headquarters in New York, in July 2018. Images by Nicolas J.A. BUCHOUD, all rights reserved ©.



Edoardo CROCI  
Bocconi University  
Milan, Italy

### **A participatory process to redefine the Milan City approach towards sustainable development in a pandemic context**

The Mayor of Milan initiated a public consultation to define a strategic approach to redefine policies and measures to relaunch the urban economy, taking into account environmental and social priorities, in a pandemic and post pandemic context. At this purpose seven leading independent institutions were appointed, under the “Fare Milano” project run by a public agency (Milano and partners) owned by the Milan Municipality and the Milan Chamber of Commerce to involve key stakeholders in seven strategic areas. Bocconi University, through its research center GREEN was in charge of the Environmental Transition topic.

In October 2020 four stakeholder consultation sessions were organized at Bocconi premises under the coordination of my research team, on the following topics: 1. Energy Transition, 2 Circular Economy, 3 Digital Innovation, 4 Livable city for all. Forty one top representatives of industry,

academia and NGOs participated, providing inputs to guide the transition.

Overall, the pandemic crisis has put in evidence that is no longer possible to postpone the resolution of pre-existing critical issues and delays, and at the same time has provided evidence of the urgency of changes and innovations. This has imposed a process of acceleration of public and private choices, to which Milan has been able to respond in a flexible and effective way. The persistence of the crisis, however, requires the construction of a strategy of integrated responses also in the medium-long term, which combines environmental quality, economic recovery and social dynamism. A return to the status quo is neither possible nor desirable, but the opportunity for a transition that is based on the attractiveness and inclusiveness of the city must be seized. At the same time, it is necessary to evaluate and manage risks of various kinds (environmental, health, technological, etc.) in order to prevent their harmful impacts and support the transformations of the economic and social fabric.

In this context, digital technologies have increased the efficiency of some processes, but they have also shown that they cannot completely replace the dimension of sociality, which remains an intrinsic human need both in the workplace and in the personal sphere. The vision of the Milan Smart City can combine digital and social innovation by enhancing their respective strengths, to improve the

functioning of the city, redefine and redesign services, create new social centers and communities and redefine new governance and business models, able to maintain the international attractiveness of Milan.

Reports of consultation are here condensed in the following thesis which emerged as transversal to the four sessions:

- Innovate the governance model of the city through the definition of a medium-long term municipal strategic plan
- Reorganize and rethink the districts of Milan as places of socialization, innovation and sustainability
- Plan public policies in an integrated way and at multiple scales
- Create a digital ecosystem and common standards to share data
- Monitor and report the impacts of the measures adopted
- Rethink the relationship between public spaces, the built environment, the mobility system and energy, water, and ICT networks
- Differentiate times of the city in the workplace and school
- Promote the energy transition and reduce the ecological divide
- Make Milan an innovation center for the circular economy and the bioeconomy
- Complete the environmental transition with the elimination of private traffic within the external ring road and the elimination of fossil fuels from heating systems
- Pursue a great symbolic project

## ANNEX

1. Innovate the governance model of the city through the definition of a medium-long term municipal strategic plan, centered on environmental transition as an element capable of combining an increase in environmental and social resilience, improvement of the quality of the environment and reduction of negative externalities, increasing healthiness, safety and urban livability. In this context the contribution of private entities, which can be facilitated by innovative forms of partnership and bureaucratic simplification, can be relevant in order to activate investments, additional to the ones funded by the public administration.

2. Reorganize and rethink the districts of Milan as places of socialization, innovation and sustainability: the neighborhoods of Milan should offer decentralized services in a 15 minutes range, to allow citizens to optimize travel, while at the same time rediscovering a sense of community.

3. Plan public policies in an integrated way and at multiple scales (district, municipality, metropolitan city, etc.), up to considering the urbanized area of regional dimension (which even goes beyond regional administrative borders). In this sense, the concept of urban periphery must be overcome and the provision of services and relations between neighborhoods must be redefined, in order to guarantee widespread quality of environment.

4. Create a digital ecosystem and common standards to share data and increase collaboration between different entities: data platforms fed by a variety of actors should interact and put in connection to stimulate new uses and develop new services, for the benefit of both the Public Administration and citizens. Federated data platforms, also based on the experience of the international EXPO 2015, can support value-added services through apps. Interoperability between systems is a prerequisite at this purpose. This path can lead, in addition to generating new business opportunities also for start-ups, to promote social innovation and reduce the digital divide.

5. Monitor and report the impacts of the measures adopted, in order to make citizens aware of the results of innovation processes, through the definition of clear indicators and communication tools, digital and accessible in real time. Information such as the crowding of public spaces and public transport, the increase in walking, cycling and sharing, the use of digital administration tools can be encouraged through the socialization of knowledge.

6. Rethink the relationship between public spaces, the built environment, the mobility system and energy, water, and ICT networks. The lockdown periods required to review the characteristics of the work and domestic environments, in order to increase both the energy performance (reduction of consumption and micro-generation), and the level of healthiness and comfort, starting from schools and public buildings. The redesign of the built environment also recalls the theme of the re-appropriation of collective and public space, facilitated by tactical urban planning processes.

7. Differentiate times of the city in the workplace and school, to reduce crowding in public transport and traffic congestion. The spread of smart working in recent months has shown how it is possible to adopt flexible working hours, which allow to maintain productivity by reconciling work and personal needs. This “desynchronization” should go hand in hand with a lengthening of city times, with an extension of the hours of basic services and shops.

8. Promote the energy transition and reduce the ecological divide. Energy efficiency of the building stock, the use of renewable sources, associated with storage systems, widespread micro-generation and collective self-consumption - at a condominium and district scale -, together with electrification, represent crucial factors for increasing the quality of air. Electrification also makes it possible to give greater impetus to the spread and use of electric means of transport, which are more efficient and have less impact in terms of emissions. District heating networks can contribute to the reduction of emissions and support the electrification process,

ensuring grid stability and reducing emissions. However, energy requalification and clean means transport are not yet accessible to everyone, often reducing the effectiveness of support policies. In order to make the energy transition more equitable, it is necessary to support the weakest social categories, through refurbishment interventions aimed at public residential complexes and collective services, such as schools, sports facilities, etc.

9. Make Milan an innovation center for the circular economy and the bio-economy. Reuse, recycling and sharing, applied to different supply chains, can become a new paradigm of value generation in the name of sustainability. Milan could become a new innovation hub in this area, enhancing the work of research institutes and universities and encouraging start-ups to attract new investments and businesses. The sharing of spaces, services and tools, assuring sanitation, represents a relevant trend. The digitization and automation of processes offer the availability of data and information which, if properly socialized, can lead to optimization in the use of resources and new applications. It is necessary to upgrade the infrastructure, use tariff and tax levers to encourage virtuous behaviors, train operators and inform citizens to accompany this process. Green procurement rules of the Public Administration can play an important role in this sense. In perspective, the Public Administration could offer guarantee and qualification functions for suppliers and activate One Stop Shops that offer information, training and services to citizens and the business.

10. Complete the environmental transition with the elimination of private traffic within the external ring road and the elimination of fossil fuels from heating systems: progressively Milan mobility should entirely rely on soft mobility and public transport. Air pollution is one of the major problems affecting the city of Milan and a reduction, towards total elimination of private vehicles, is necessary in order to make improvements in that direction. Together with the reduction of fossil fueled vehicles, the elimination of fossil fueled heaters is a fundamental step towards improving the air quality of the city of Milan. The transition to alternative sources for urban heating must therefore be accelerated.

11. Define a green sectoral plan: Nature-based solutions can play an important role in the redevelopment of suburbs and abandoned areas. The creation of new green infrastructures cannot depend almost exclusively on land development taxes and the management and maintenance of green spaces has to be performed professionally. The Municipality should adopt a sectoral plan for green infrastructures. Projects such as “Forestami”, envisioning planting 3 million trees, and “green rays”, envisioning greened cycle lanes from the city center to the outskirts, can insert greenery into a wider urban design and perform relevant environmental functions. The main parks should be managed by park managers with functions of protection and enhancement of the natural capital. Green, pedestrian, and open spaces also constitutes important social places in a pandemic phase.

12. Pursue a great symbolic project. Milan’s environmental transition should make use of one or more major symbolic projects that bring together public and private energies towards a common purpose (also based on the EXPO experience). The reopening of the “Navigli” channels could represent this transition, affecting at the same time the water, mobility and energy systems. The convinced participation of a variety of stakeholders is necessary to develop such ambitious processes.

“Digital technologies have increased the efficiency of some processes, but they have also shown that they cannot replace the dimension of sociality, which remains an intrinsic human need both in the workplace and in the personal sphere.”

– Edoardo CROCI, Bocconi University, Milan, Italy

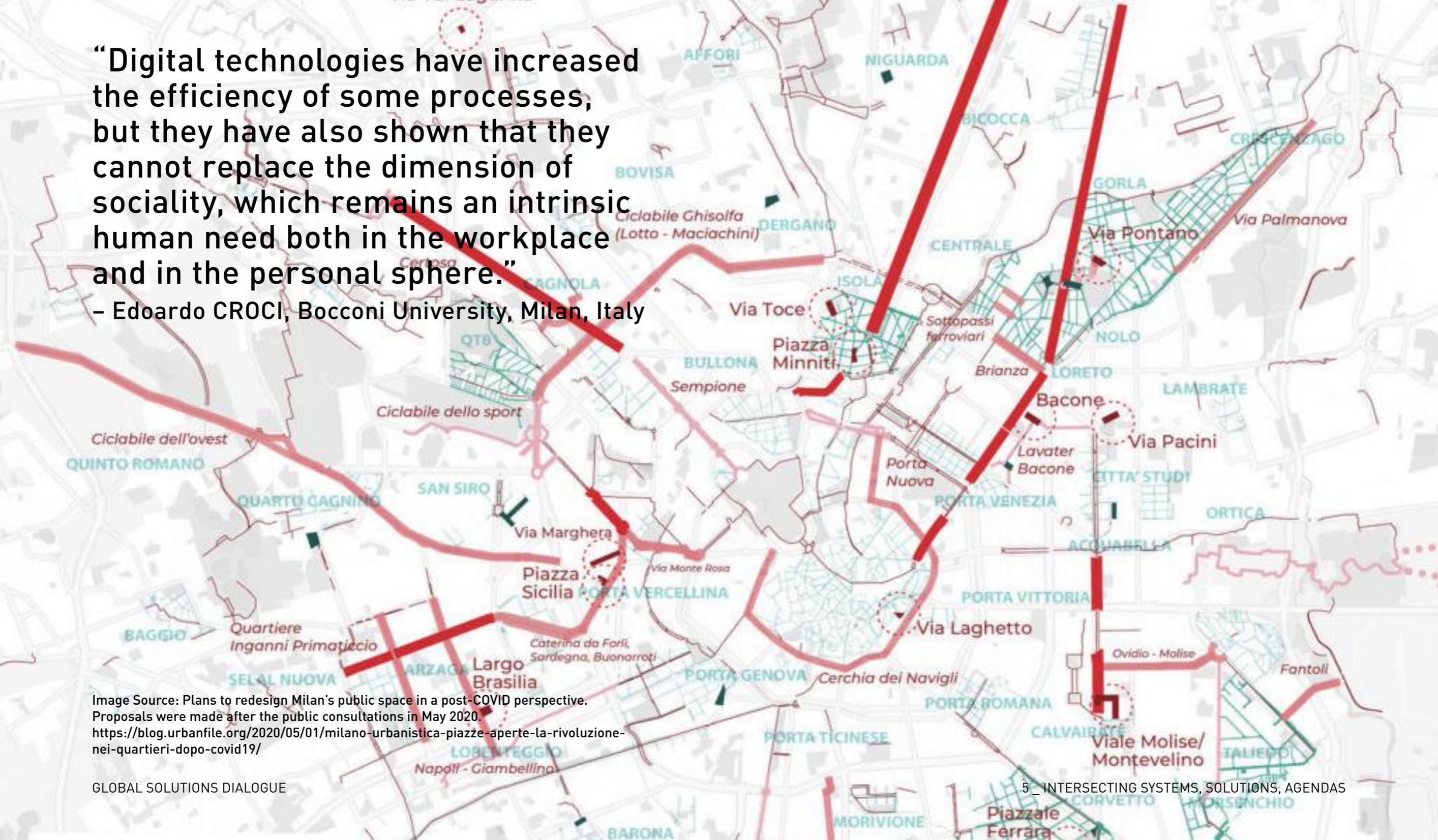


Image Source: Plans to redesign Milan’s public space in a post-COVID perspective. Proposals were made after the public consultations in May 2020. <https://blog.urbanfile.org/2020/05/01/milano-urbanistica-piazze-aperte-la-rivoluzione-nei-quartieri-dopo-covid19/>



Sébastien DAZIANO  
SUEZ  
Paris, France

## Partnerships for the 2030 Agenda

The Covid-19 crisis is the second global major crisis in only a decade, following the financial crisis of 2008. It could prove a more substantial and durable game changer provided Europe steps up to champion multilateralism and environmental innovation.

As it accelerates the digitization in the industry, services and finance, the pandemic questions the economic organization and governance of a rapidly changing world. Asia, especially South-East Asia and China, or Africa, where endogenous growth factors are increasingly important, have not been as brutally and directly impacted by the pandemic as Europe or North America. What might trigger long term geopolitical changes also reinforces the relevance of a coordinated European recovery plan.

From the spring of 2020, voices were raised like that of Joseph Stiglitz pleading that the recovery plans do not serve

as an addition of shock absorbers to the crisis but drive future investments that would be as 'green' as possible. Whereas growth forecasts are quite different among economic sectors, with air transport or tourism much more impacted than other key infrastructure and digital services, global growth is made of interdependence and the Covid-19 crisis highlights the needs for cooperation and coordinated investments of an unprecedented magnitude. Monetary policies that support an abundance of liquidity and low lending rates can help but it will be up to the stimulus plans to strengthen strategic investments in the long run.

Private sector players' ability to work in partnership with regions and cities will be another factor of sustainable growth. Meeting the CO2 reduction imperative depends not only on the adoption and strengthening of environmental criteria in banking and finance. The role of local governments, in particular in large-scale metropolitan regions, will be key to build innovative forms of sustainable public procurements, while also including citizens in change processes.

Moving towards zero carbon mobility and public transportation, improving outdoor but also indoor air quality, are among major local and global public health priorities. In Europe, the crisis has pushed towards more fiscal and economic convergence among the EU members, reflected by the German presidency of the EU in the second half of 2020. As multilateral institutions have been challenged by the

crisis, whereas the 2030 Agenda, the negotiations around the COPs on climate and biodiversity or the G20 remain of tantamount importance. After essentially virtual meetings in 2020, we can only hope that the Italian presidency of the G20, that of the G7 by the United Kingdom, as well as the co-presidency by the United Kingdom and Italy of the COP26 on climate, design a new consensus around shared environmental and socio-economic objectives. The work and reflections of the multiple bodies that coexist within the G20, such as think-tanks, cities, or the private sector, will need to be streamlined around shared priorities to deepen and connect those groups' cross-sectoral proposals with ministers and leaders.

We are at a pivotal moment when the reconciliation between the macroeconomic objectives of the G20 and the regional recovery strategies can leverage environmental investments at unprecedented scale, an opportunity that Europe must seize.

The European Commission Green Deal has defined climate transition as a cornerstone for the Union, but China has also announced its commitment to carbon neutrality by 2060, on the occasion of the 75th anniversary of the United Nations in September 2020. The new administration of President Joe Biden has confirmed the United-States would return to the Paris Agreement. Meanwhile, fifteen countries in the Asia Pacific region have signed a regional trade agreement covering a market of 2.2 billion people and more

than 30% of the world total GDP, making it the designated 'largest trade agreement in the world.' While Asia, the world's leading industrial and exporting region, emerges rather strengthened from the Covid-19 crisis, environmental stakes are economically and politically huge.

The Sustainable Development Goals (SDGs) appear all the more relevant a policy framework as they are well acknowledged not only by national governments, but also by the private sector, local governments, the civil society, research and academia. The way to achieve the SDGs will probably have to be reframed in light of the crisis and multiple finance gaps such as in sustainable infrastructure. Yet, we do need harmonized multilateral drivers should we want to fully overcome the crisis and change growth trajectories.

Profiling recovery plans through climate, biodiversity, social and corporate responsibility priorities can shape sustainable responses to the crisis of Covid-19 and we argue Europe should value its unique assets in the many global negotiations yet to come. As compared to the United States or China, the EU may be lagging behind in fields such as artificial intelligence, IT or biotechnologies, but it does have a competitive advantage in anticipating ecological transition, be it about regulation, norms and standards, industrial and technological innovation, notwithstanding the integration of local governments and the civil society in decision processes.

We should value the potential for cooperation between Europe and the countries of the Asia Pacific zone, including Central Asia, within the G20, bringing together global and national green recovery policies and enhancing the role of European countries in responding to global environment and development challenges. Europe is the cradle of environmental services companies which have become world leaders in key markets of the future. They have in-depth and proven know-how and expertise, in particular for valuing ecosystem services. The European Green Deal is all the more important as most countries also have to cope with the costly obsolescence and lack of resilience of infrastructure systems inherited from the 19th and the 20th centuries.

Existing infrastructure stocks have often locked-in too much carbon intensive development pathways and therefore, governments and private sector leaders should champion a real paradigm shift. Long-term investment in environment and energy related infrastructure, services and technologies should also be designed to support MS-MEs and to transform entire value chains including R&D, construction, equipment, manufacturing, control etc. In return, this would help accelerate the delivery of new, higher value services, based on artificial intelligence and the use of environmental data at the service of many sectors of the economy such as agriculture, industry or services. Implementing a systemic transformation also calls for a better territorial anchoring of large companies and the de-

velopment of new industrial alliances to develop innovation, new jobs, new skills, new scientific and industrial models... and patents. While interactions between human health and the environment are at the heart of post-Covid-19 concerns, better traceability and management of flows and pollution could also contribute to the development of the circular economy at all scales, another field of sustainable growth for which Europe could lead the way forward.

“While interactions between human health and the environment are at the heart of post-COVID-19 concerns, better traceability and management of flows and pollution could also contribute to the development of the circular economy at all scales, another field to develop partnerships for sustainable growth and the 2030 Agenda.”

– Sébastien DAZIANO, SUEZ Paris, France



Image Source: In a salty, heavy metal polluted desert in the former seabed of the evaporated Aral Sea, Republic of Karakalpakstan, Uzbekistan, October 2019.  
Image by Nicolas J.A. BUCHOUD, all rights reserved ©.



Ricky Joseph PESIK  
Ministry for Tourism and  
Creative Economy  
Jakarta, Indonesia

## Creative solutions to 'building forward better'

### Infrastructure and the creative economy agenda

The world conference on creative economy initiated by Indonesia in Bali 2018 proposed a resolution to the United Nations General Assembly declaring creative economy as one of the main focuses of the global economy. Particularly, in Indonesia, the creative sector has been primarily dominated by small and medium enterprises (SMEs). Through economic crises, SMEs have proven to be the most resilient organisations with high survival rate. The UN approved the global agenda that 2021 will be the year of international economy year. In Indonesia, SMEs have shown to overcome the COVID-19 pandemic by taking advantage of digital transformation.

Since early March 2020, Indonesia introduced lockdowns unevenly across the country and created major disruption to SMEs' business operations. As a result, we launched

ideas to explore opportunities to accelerate the digital transformation for SMEs. This is a necessary measure as Indonesia is projected to become the 5th largest economy in the world and the biggest e-commerce market in the region. However, a major issue remains as digital transformation among SMEs in creative sectors varies. Despite the large size of the e-commerce marketplace, the share of local product in Indonesia is currently less than 20%.

The lockdown became the opportunity for us to give incentives for SMEs, especially in creative sectors, to digitally transform and move their businesses to e-commerce platforms. Within three months, there are almost 2 million new SMEs in creative sectors joining e-commerce marketplace. With these results, one of the priorities in Indonesia's pandemic recovery is to accelerate digital transformation of businesses to e-commerce. Another key topic for future agenda is infrastructure distribution. One of highly prioritized post-pandemic responses is digital sovereignty. The key issues to be discussed in the second world conference on creative economy in Bali next year:

- digital transformation and digital sovereignty for SMEs
- how to create a more inclusive global economy
- what collaborations to support SMEs in creative sectors that can provide more inclusive access to finance and fair distribution
- new regulations about the intellectual property right as a guarantee for access to finance (in addition to current creative economy laws in Indonesia and other countries)

“We have launched ideas to explore opportunities to accelerate the digital transformation for SMEs. This is a necessary measure as Indonesia is projected to become the 5th largest economy in the world and the biggest e-commerce market in the region.”

– Ricky Joseph PESIK, Ministry for Tourism and Creative Economy, Jakarta, Indonesia

Image Source: The Art Jog contemporary art fair held in Taman Budaya, Yogyakarta, was not canceled despite for COVID-19 and bringing support to the creative economy sector has been part of COVID-19 mitigation measures in Indonesia. Photo: Courtesy of Art Jog and Ricky Pesik.



Tita LARASATI  
Indonesia Creative Cities  
Network  
Bandung, Indonesia



Fiki SATARI  
Special advisor to the  
Minister for Cooperatives and  
Small & Medium Enterprises,  
Indonesia

## Enacting creative economy

Since its establishment in 2008, Bandung Creative City Forum (BCCF), an independent community hub in Bandung, West Java, has played a significant role in directing the dynamics of the creative economy sector in Bandung and beyond. BCCF's efforts to improve the city through public space interventions and urban-scale prototypes to find solutions for local issues have led to innovations in bureaucracy. BCCF has implemented the design thinking method and the urban acupuncture concept as tools in all its programs to connect government, policy, and citizens. Thanks

to this approach and its track record, the city of Bandung joined the UNESCO Creative Cities Network (UCCN) as a City of Design in 2015. BCCF also contributed to the preparations for the World Conference on Creative Economy (WCCE), held by the Indonesian Agency for Creative Economy (BEKRAF), whose proposal on the International Year of Creative Economy for Sustainable Development was approved and declared by the United Nations General Assembly for 2021. In 2018, BCCF chairperson joined the International Advisory Council of Creative Industries Policy and Evidence Centre (PEC) UK.

In 2015, BCCF initiated the establishment of Indonesia Creative Cities Network (ICCN), which currently connects 220 cities from all over Indonesia through their respective leading independent communities, who are all committed to implement the 10 Principles of ICCN, highlighting keywords such as 'compassionate', 'inclusive', 'solidarity', and 'human rights'. When the Covid-19 pandemic hit, ICCN launched the Solidarity Act program, featuring five task forces that work through the phases of survival & mitigation, recovery, re-establishment, and grow & sustain, aiming to assist ICCN's impacted members and local communities. The activities of the task forces include fundraising, data collection, distribution of PPE and fresh-food packages, online classes for capacity building, re-/up-skilling for creative industries workforces, shifting parts of production lines for traditional liquor to produce hand sanitizer, and so on; all are conducted independently and on a voluntarily basis, us-

ing the strength of the ICCN network that is spread all over the archipelago.

ICCN published “White Paper on the Creative City: The Ecosystem That Creates”, containing an adaptation of ICCN’s 10 Principles to the Indonesian Government’s Key Performance Index as a strategy for mainstreaming culture and the creative economy in a development plan. Part of this strategy is the building of a digital dashboard as a tool for local governments to make decisions and policies based on real-time data of creative economy potentials in their respective areas. In 2020, ICCN became a knowledge partner for U20 (Urban 20/the group of mayors of the G20) in formulating policy recommendations for “The Inclusive Creative Economy and the Future of Work”, including human-centred development and increasing the resilience of the creative economy sector through the creation of inclusive future jobs.

Based on all these experiences, since 2018 BCCF has been working on officiating a creative economy bill for Bandung City. Starting with the bill’s academic script, continued with the legal drafting, followed by a series of hearing sessions with the legislative body, BCCF has been deeply involved throughout the whole process. The bill, which was initiated by an independent community and academic institutions and is supported by the Research & Development Agency of Bandung Municipality, was passed in January 2021. Once effective, the bill guarantees that whoever takes office as

Mayor of Bandung will have to include the creative economy in the city’s development agenda, next to being committed to eight other related main issues, such as creators and IP rights holders, creative hubs, data collection, creative city development, and incentives and financing for the creative economy sector.

Zoom:

Banyuwangi, the biggest regency in Indonesia, is located at most eastern part of Java Island, earning its “The Sunrise of Java” nickname. This rural-dominated regency used to have the stigma of being only a ‘rest area’ for people who are on their way to Bali Island, which is one strait-cross away. However, this and many other stigmas of Banyuwangi, along with its poverty, have become a thing in the past, due to the innovative leadership of Banyuwangi Regent Abdullah Azwar Anas (2010-2020).

His first strategy was to open a convenient access to Banyuwangi by building an airport, which was designed by a renown architect, who applied the vernacular architecture of Banyuwangi that is not only iconic, but also ecologically sound. Expecting the flow of visitors, the regent imposed a regulation that allows only the operations of star hotels and homestay. He also regulated the improvement of local stores and traditional markets, while strictly limiting the development of chain convenience stores and modern shopping malls, in order to promote local brands and prod-

ucts. Regent Anas also built a “public service mall” that provides all residents’ administrative needs in a much more practical way that reduces bureaucracy complexities, time and budget consumption; from basic documents such as ID cards and marriage certificates, to confirmation of social grants and other government programs.

Within the office periods of Regent Anas, Banyuwangi has gone through huge improvements. Between 2010-2019, income per capita increased up to 148%; GDP went up to 157%; domestic tourists multiplied up to 979% and foreign tourists up to 712%. Banyuwangi poverty rate was reduced from 20.9% (2010) to 7.52% (2019); taking Banyuwangi as the best performing place among all Indonesian cities/regencies (2018), and reaching the highest marks for local government performance for four years in a row (2016-2019). Other awards include The Best Indonesian Festival City, The Cleanest ASEAN City in ASEAN Tourism Standard 2018, and UNWTO Award for Public Policy Innovation and Government Management in Tourism Category (2016).

During the pandemic, Banyuwangi equipped its citizens with a digital application that enable anyone to apply for the social fund and to check all beneficiaries, from the central government to the regency level; increased the onboarding of Micro and Small & Medium Enterprises (MSMEs) to digital platform by collaborating with delivery services and e-commerce platforms; assisted all tourist facilities (kiosks, restaurants, hotels, attraction spots, etc.) and

workers (guides, service personnels, etc.) to comply to the health protocol standards, in order to receive “Destination Certificate” from the National Covid-19 Task Force; provided a system for controlling visitors crowd in both tourist destination areas and public service offices. Due to these efforts, Banyuwangi is declared as the safest place in Indonesia for both work and leisure purposes.



“ICCN is an example of emerging new civil society and research organizations. Being endorsed as a knowledge partner for the U20 in 2020 helped us to support the successful introduction of a ‘creative economy bill’ by Bandung municipal government (West Java, Indonesia) in December 2020.”

– Tita LARASATI, Indonesia Creative Cities Network, Bandung, Indonesia

Image Source: The U20 brings together 42 cities in collaborative process, Urban20 Riyadh, October 2020, <https://www.urban20riyadh.org/riyadh-led-urban-20-u20-brings-together-42-cities-collaborative-process>



Nella Sri HENDRIYETTY  
Asian Development Bank  
Institute  
Tokyo, Japan

### Back to growth? The 2030 Agenda, the G20 and the aftermath of the crisis

The Group of Twenty (G20) was born to respond to global crises in 1998 and 2008 and was focused on the financial stability and governance of the global economy. Since the Republic of Korea's presidency in 2010, the G20 has made strong efforts to place development issues in the G20 agenda and established development working groups to facilitate discussions. Since then, development issues have been discussed in many working groups in the G20 and cover cross-cutting issues, such as infrastructure, financial inclusion, agriculture and food security, anti-corruption, climate finance and green finance, and domestic resource mobilization. After the 2030 Agenda was adopted by the United Nations in 2015, the G20 held its 2016 Hangzhou Summit and agreed upon a G20 Action Plan for the 2030 Agenda.

When the world was worried about the impact of a “trade

war” in 2018 and prepared efforts in anticipation for a 10-year cycle of economic crisis, there was an argument whether the G20 should focus only on financial and economic issues. While policy makers have worked hard to cushion economic turbulence by trying to renegotiate commitments and agreements and strengthen consensus, the recent coronavirus disease (COVID-19) pandemic has shut down the global economy. The impact has been tremendous, far greater than the 1998 and 2008 crises, but this time the trigger is global health, an issue that is related more to development and is included in the Sustainable Development Goals (SDGs). The pandemic inevitably answers the question of whether G20 should focus more on financial and economic issues or not.

The G20 needs to synergize with the SDGs 2030 Agenda more than before, because the crisis now is not sourced from financial or economic activities but from global health and depends on vaccines. Therefore, the G20 challenges to implement the 2030 Agenda include not only on how to reinvigorate and reshape implementation but also how to design a rapid, effective response to the pandemic and its socioeconomic aftermath in the spirit of the 2030 Agenda.

Basically, there is no pressure to restructure the SDGs agenda. The agenda includes all aspects needed by countries to fight poverty and inequality. However, the approach for effective implementation and greater efforts on specific issues should be discussed.

Until recently, the G20's role in supporting the SDGs agenda was to facilitate the implementation of the 2030 Agenda by setting up a consensus for G20 members to adopt both a collective and national action approach. The strong contribution of the G20 is to facilitate discussion and coordination among countries institutions that are in charge for the SDGs. Therefore, the G20 provides a platform for countries to interact, share experience, and convene discussions among countries. The limitation of the G20 is that the statements made by it are not binding. However, the G20 can mandate international organizations to create platforms or groups for discussion that can have binding commitments, such as the Automatic Exchange of Information as implemented in the OECD/G20 BEPS framework. With that, the G20 should collaborate with international financial institutions and mandate them to set up guidelines and procedures for countries to achieve the SDGs. The G20 and the institutions chosen must revisit the 2030 Agenda and formulate an approach to fight against the COVID-19 pandemic and its aftermath, including economic recovery and the global health system.

Furthermore, in this COVID-19 related economic crisis, the G20 should focus on finding solutions in specific sectors. There are two areas that are expected to be able to jumpstart the global economy: global stability and local resilience. To create global stability, it is necessary to define global public the goods that need to be jointly supported by all countries. One of the global public goods is global

connectivity. Global stability, together with local resilience (covering health and infrastructure), will become a new model of global growth in the world.

Research also shows that the COVID-19 pandemic creates higher disparities between countries, where rich countries will become richer and poor countries will become poorer. This will be exacerbated as the vaccines that can be provided vary between countries. International arrangement and consensus should be considered to solve this problem.

Human capital is one of the many sectors that has been badly affected by COVID-19. This is not only because of the halt and obstruction of formal education but also the limited development of social characteristics as an impact of social distancing and confinement. Therefore, the first pillar in building sustainable economic growth in the future is rebuilding human capital, which is currently affected by the COVID-19 pandemic.

“The G20 should focus on two areas to jumpstart the global economy: 1) global stability, 2) local resilience, covering health and infrastructure. This could become a new model of growth.”

– Nella Sri HENDRIETTY, Asian Development Bank Institute, Tokyo, Japan



Image Source: On the rooftop in the old Medina of Casablanca, Morocco, fixing satellite antennas. Image by Nicolas J.A. BUCHOUD, all rights reserved ©.



Eduardo LÓPEZ MORENO  
UN-Habitat, Nairobi, Kenya



Nicolas J.A. BUCHOUD,  
Global Solutions Initiative  
Paris, France

## Welfare, social and spatial organization in the post-COVID global urban age

For the first time since the creation of the United-Nations, a unified contribution gathering the efforts and inputs of many UN agencies and programs has showcased a photography of our urban world in 2020.<sup>1</sup> The New Urban Agenda issued at the Habitat III summit in 2016 was completely silent about the risks of pandemics and their consequences and the role that human settlements can play.<sup>2</sup> However in 2020, the United Nations has proven up to the task, calling for ‘an urgent need to rethink and transform cities to respond to the reality of Covid-19 and potential future

pandemics.’ Yet, designing a much-needed urban response to this disease cannot be just about cities, mayors and advocacy networks; it requires to articulate as well a social, institutional and political response. The urban world of the Covid-19 isn’t just one of places or connectivity but that of powerful transformations in various domains, as the recent World Cities Report 2020 highlighted.<sup>3</sup> Rethinking the notion of welfare will depend on physical as much as on social capital investments, supported by new forms of spatial-constitutional organization.

Whereas ‘cities’ are often used as synonymous for sub-national governments, in reality urban geography and the configuration of human settlements has changed faster than institutions and existing categories of city sizes in the past two or three decades. Somehow, it has also outpaced research. The classification of cities in the urban geography of the turn of the millennium defined cities of small, medium size, large or big size. Since then, typologies and classifications have reflected on a new economic geography through mega-regions, urban corridors and city- or metropolitan regions. This new constellation of large scale urban and territorial arrangements remained too much about space and not enough about system connections. As an illustration, the first framework of the planetary boundaries issued in 2009 completely ignored urbanization, whereas urban research from a decade ago barely noticed the rise of a new generation of science of complex systems and their interactions. Despite confirmed economic benefits

and spillovers also applying to rural livelihoods, we argue that agglomeration economics have exposed a global urban system in the making to very high levels of risks and deep vulnerabilities. This is also a consequence of incomplete and partially obsolete forms of political and institutional organization in response to profound economic and societal changes.

Recovering from the Covid-19 through cities, which are the frontline of the response, might only reinforce pre-existing social and economic imbalances and governance flaws, unless 'cities' become part of larger scale coordinated responses. A critical problem that lies ahead of us is that mega-regions and urban corridors have become key drivers of wealth creation, with barely any corresponding political incarnation and institutional organization. Such political entities would indeed largely run counter to national and even to local/mayoral interests if they are not properly integrated. In the absence of new forms of power balance, the 'metropolitan century'<sup>4</sup> has become a loosely governed period with negative impacts at city and country level, in urban but also in rural environments and globally and that should not continue.

We argue that the better responses to the Covid-19 throughout 2020 have been achieved in places where the mega-regional scale plays a primary role and the articulation of cities within this space a secondary but essential intermediation role. This large scale territorial aspect

aligns well with local governments, and in some cases, self-contained local areas and sustainable neighborhoods. In Asia, the emergence of such more mature socio-political urban structure could explain, in part, the relative success of China but also Vietnam, South-Korea or the connected metro areas of Taipei/Taichung/Kaichung in addressing the pandemic and benefiting from a collective sense of social solidarity and empathy and a strong neighborhood based social organization.

As a mega trend, as a series of intertwined social, spatial and economic transformations, urbanization has been a driving force at the crossroads of production and trade systems, jobs and the future of work, wealth distribution, consumption, spatial and societal changes. Yet, aspirations for development and shared prosperity have been overshadowed by a premium for connectivity and mobility with real estate, housing and physical infrastructure as primary goals, a direction that has only been reinforced by the G20 macro-economic response to the 2008 global financial crisis.

Physical and digital infrastructure have taken over social infrastructure but as the world has been urbanizing steadily in the past decades, its cumulative impacts have also triggered an emerging societal substructure made of culture, creativity, innovation, ethnic and cultural diversity, community governance with a global reach, and the development of new productive and cognitive capacities. Therefore,

urbanization deep impacts are also about memory and values, singular and collective identities, the symbolic uses of space, the reevaluation of the soul of a city –another word for sense of place– the development of new cultural-spatial nexus. All this does not happen in one specific city at a time, but across urban regions and neighborhoods in the world, creating the bricks and mortar of future urban culture.

The level of cohesiveness of the mega-regional cultural and economic space within national political and/or regional organizations, could become a relevant indicator for future policy making and a distinctive feature in a post Covid-19 recovery and development perspective. Empirical illustrations seem to confirm that countries suffering from public distrust, discontentment, related conflicts among governance levels and poor metropolitan redistribution may be more acutely affected by the Covid-19 pandemic.

Better articulation of multilevel governance and local responses could dramatically reduce the vulnerabilities and exposure of poor communities to pandemics and other global risks by addressing structural inequality problems that have exacerbated contagion and death tolls. Vulnerability is not just about place but also about mobility and work organization. In the United-States, studies have shown that more than 60% of people infected in New York were blacks and Hispanics, a direct consequence of their exposure to contagion risks in their workplace and while commuting to work across metro areas. In the United-Kingdom,

10 to 15 categories of jobs have been accounting for over 60% of reported cases in 2020. The Covid-19 pandemic highlights that in many cities in developed countries, the vulnerabilities associated to mobility, public transportation and type of work transcend political and territorial boundaries and are more significant than those associated to place in the sense of housing typologies. Empirical evidence tends to be confirmed by growingly consolidated research about the metropolitan imbalances of Covid-19 dynamics. A recent study by Marron Institute of Urban Management of New York University in the fall of 2020 has shown how much the contagion patterns were linked with the spatial distribution of economic activities and flows within multi-county metropolitan areas... 'without an additional and critical institutional layer (...) for the effective management of present and future pandemics.'<sup>5</sup>

Transport and development planning, combined with a notion of welfare and social and political participation, need to be added to the post Covid-19 equation of our global urban age. This would be the very right moment for a third way beyond centralized planning and laissez-faire. In the past twenty years, the benefits of urbanization and connectivity have contributed to support global growth but many national governments, notwithstanding multilateral institutions, have failed at capturing the benefits to reinforce welfare, adding to inequalities in various grounds. In developed and emerging countries alike, the multiplication of new urban and real estate fronts (as a contemporary form of the for-

mer pioneer's fronts) has leveraged indisputable economic benefits but also very low levels of redistribution in the absence of effective regulation, and a poor, unsustainable urban forms.<sup>6</sup> As a consequence, 75% of the cities in the world have become more unequal, meaning that over 2 billion urban dwellers have seen their access to resources, income, public goods growingly restricted, or unfairly distributed. Urbanization has too often prospered in the absence of effective regulation and when governments have not been able to control the use of resources, starting from land, the very notion of shared prosperity and welfare state has been eroded.

While seeking to restore prosperity, empirical evidence shows that with few exceptions, prosperous cities are usually to be found in prosperous regions. This might be a relevant scale to ensure that wealth production and growth are not being captured by narrowing social groups and to scale up development and environment priorities. To foster an economy of well-being, 'health should be in all policies', reviving the Helsinki Statement of 2014<sup>7</sup> and the G20 Health Initiative of 2017<sup>8</sup>. This starts by restoring and developing new welfare capacities across the local/regional political space, articulating larger territories with sustainable neighborhoods and cities.

1. The Covid-19 in an urban world, United Nations Secretary General policy brief, July 2020, [https://www.un.org/sites/un2.un.org/files/sg\\_policy\\_brief\\_covid\\_urban\\_world\\_july\\_2020.pdf](https://www.un.org/sites/un2.un.org/files/sg_policy_brief_covid_urban_world_july_2020.pdf)

2. The New Urban Agenda, <https://habitat3.org/the-new-urban-agenda/> The New Urban Agenda was adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, on 20 October 2016. It was endorsed by the United Nations General Assembly at its sixty-eighth plenary meeting of the seventy-first session on 23 December 2016

3. The Value of Sustainable Urbanization, UN Habitat World Cities Report 2020, <https://unhabitat.org/World%20Cities%20Report%202020>

4. The Metropolitan Century, Understanding Urbanization and its Consequences, R. Ahrendt (dir), OECD, 2015 <https://www.oecd.org/fr/gov/the-metropolitan-century-9789264228733-en.htm>

5. Why pandemics, such as Covid-19, require a metropolitan response, Shlomo Angel and Ajejandro M. Blei, the Marron Institute of Urban Management of New York University, Oct. 2020

6. In Mexico, 8 out of 10 housing units are being produced outside any urban plan.

7. The 8th Global Conference on Health Promotion 'Health in All Policies' was held in Helsinki, Finland from 10-14 June 2013. The meeting builds upon a rich heritage of ideas, actions and evidence originally inspired by the Alma Ata Declaration on Primary Health Care (1978) and the Ottawa Charter for Health Promotion (1986). These identified intersectoral action and healthy public policy as central elements for the promotion of health, the achievement of health equity, and the realization of health as a human right. Subsequent WHO global health promotion conferences cemented key principles for health promotion action. These principles have been reinforced in the 2011 Rio Political Declaration on Social Determinants of

Health, the 2011 Political Declaration of the UN High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases, and the 2012 Rio+20 Outcome Document (the Future We Want). They are also reflected in many other WHO frameworks, strategies and resolutions, and contribute to the formulation of the post-2015 development goals. Source: World Health Organization, April 23, 2014, <https://www.who.int/publications/i/item/9789241506908>

8. Berlin Declaration of the G20 Health Ministers: Together Today for a Healthy Tomorrow, May 20, 2017, <http://www.g20.utoronto.ca/2017/170520-health-en.html>

“The changing configuration of human settlements has challenged institutions (and research) in the past decade. Now is the time to respond and implement new welfare solutions.”

– Nicolas J.A. BUCHOUD, Paris, France, and Eduardo LÓPEZ MORENO, Nairobi, Kenya



Image Source: In the outskirts of Sao Paulo along the highway 116.  
Image by Nicolas J.A. BUCHOUD, all rights reserved ©.



Riatu MARIATUL QIBTHIYYAH  
University of Indonesia  
(LPEM-UI)  
Jakarta, Indonesia



Teuku RIEFKY  
University of Indonesia  
(LPEM-UI)  
Jakarta, Indonesia

### Cross border data management and regional value chains: A tentative agenda for recovery through smart urbanization in the ASEAN context

#### Better Data Collection, Management, and Utilization

Recalibrating national spending in order to achieve higher equality, is one part of the post Covid-19 crisis equation. The other one is improving governance to maximize public spending and investments efficiency.

With all its cataclysm, the ongoing crisis also brought several “blessings in disguise”, one of which is better data collection and management. In Indonesia, before the pandemic, there has been no substantial improvement in terms data availability. During the pandemic, such data has become critically important for the government to channel social assistance and meet the subsistence needs of affected social groups and households. The progress recently made data collection should could serve as a benchmark for better, more efficient policy implementation and budget allocation in the future, provided they are deepened and sustained.

In practice, poor real time and accurate data to support the program implementation have hindered the complete delivery of stimulus programs, in part because of a deficit of coordination between central and local governments. We view three ways to resolve the issue in particular 1) providing real time and accurate data which can be used for a better targeting and planning 2) improving the system by escalating the role of potential contributors, i.e. developing self-report systems, using big data for tracking economic recovery, engaging private sector and community stakeholders to contribute to data updating; and last but not least 3) by making investment in monitoring and evaluation program (LPEM FEB UI, 2020). A comprehensive monitoring and evaluation mechanism can promote fast modification or adaptation of program delivery and at the same, could help in creating job opportunity for the medium skilled workers.

At a regional level, the data governance may help each ASEAN member to monitor the condition and improvement of their sister countries. Cross-border data management within ASEAN such as data for trade may provide suitable tools for arranging economic recovery strategies. Furthermore, cross-border data governance will also increase the transparency and accountabilities for organization's decision. On this term, ASEAN may use the availability of cross-border data to increase cooperation and integration effort between the countries through certain policies. For example, the data may be used to build a firm economic and business framework to enhance the integration in supply chains through the global value chains (GVCs). In terms of trade, this will benefit ASEAN countries since almost countries have a higher trade volume Intra-ASEAN than with other trading partners. In addition, since the trade integration within ASEAN is relatively intense, better data monitor could provide a potential disruption mapping of which cities or areas within ASEAN, in the case of one manufacturer in ASEAN cities is being disrupted. Furthermore, a better data integration and monitoring intra-ASEAN would provide a better recovery tracker of Covid-19 pandemic.

Data management is not a new issue for ASEAN countries as they have built a framework and mechanism for cross-border data governance based on several guidelines presented by OECD, APEC, EU-GDPR, and Standards for Personal Data Protection for Ibero-American States. However, the progress of the framework varies across the

ASEAN region, considering the technological adoption and resources. A recent report from the United Nations (2020) on The Sustainable Development Goals also mentioned that the data gaps still exist in terms of geographical coverage, timeliness, and also level of disaggregation. As the Covid-19 pandemic is affecting most countries, the availability of data has become more important especially in order to produce day-to-day decisions that will affect the well-being of many agents.

As a solid form of institutions, ASEAN may dive deeper to solve the issue and enforcing the cross-data governance through certain mechanisms. Aside from the existing data framework mentioned earlier, ASEAN can also facilitate a distinct forum for resource and knowledge sharing in terms of data management. Any constraints regarding the data management should be reviewed in order to increase the availability across the region. Better data governance both in country scope and region scope will help each of economies to be well-prepared for another sudden shock that may come after. However, several legal issues such as privacy law should not be neglected as standardized and trustworthy data exchange environment is essential. The mechanism proposed above is expected to support each of ASEAN member to overcome negative impacts caused by the pandemic through the establishment of strong and trustworthy data governance.

## Strengthening Regional Value Chain through Smart Cities Integration Across Regions

To integrate cities across ASEAN region into a comprehensive and solid value chain, the development of cities towards a more sustainable urbanization models is crucial. One way to achieve change is by pursuing the agenda of smart cities. Judging from the existing trend, most cities in Indonesia are experiencing rapid development which is resulting in inadequate infrastructure problems. The new developments taking place in the suburbs are called suburbanization and depend on the activities of the city center. Suburbanization has resulted in more densely populated suburbs, where the population and vehicles are experiencing rapid growth without being matched by improvements in transport infrastructure. As a result, travel from the suburbs to the city center has increased, as well as housing demand. Local governments struggle to provide public transportation services and develop new networks. One way to control urban sprawl is to prioritize smarter growth models, especially through sustainable mobility systems, starting by increasing mass rapid transit. Singapore provides one of the most reliable public transportation systems in Southeast Asia through an extensive network of MRT, LRT, and buses that are comfortable, modern, safe, clean, easy to use, reliable, punctual, and well-integrated and is should serve as a benchmark.

Like killing two birds with one stone, developing a sustain-

able transportation system need to be pursued by the development of smart city investments to alleviate the pressure of rising urban population and optimize resources.

On a regional level, a more suitable development planning is also needed to push the agenda of regional integration towards a more sustainable and benefits-all coordination. One potential step to integrate ASEAN Countries is to enhance the connectivity between specific cities or province of countries across the ASEAN region such that it creates a regional value chain. The regional value chain, built by the chain of certain cities/provinces across ASEAN, aims to empower each part of the value chains by complementing each other's' advantage in terms of labor skills, input provisions, and supporting facilities. Several factors needs to takes place to ensure the creation of regional value chain not only comes to a realization but also creates a mutual benefit among parties. Firstly, institutional coordination of a multi-government context, in which the central and subnational level able to accommodate and implement the agenda. Involvement at early phase of subnational level government by the central government, to reflect ownership on a roadmap referring to province or cities that could be developed to fits a certain regional value chain. Secondly, prioritizing cities with a relatively similar stage of development. In addition, national government could provide support in terms of capacity building, technical and financial support to build the required expertise and know-how of subnational institutions.

The development and coordination of data collection and of a common smart city –including smarter infrastructure systems and mobility services- agenda across the ASEAN region could provide a robust leverage to drive the economy out of the crisis in an inclusive and sustainable way.

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Image Source: A worker in the outskirts of Shanghai, China. A student at the ICCN Congress in North Molucas, Indonesia. Images by Nicolas J.A. BUCHOUD, all rights reserved ©.



“The development of a common agenda for smart infrastructure systems and mobility services across the ASEAN could leverage the economy out of the crisis in an inclusive and sustainable way.”  
– Riatu MARIATUL QIBTHIYAH and Teuku RIEFKY, University of Indonesia, Jakarta, Indonesia



Nicolas J.A. BUCHOUD,  
Global Solutions Initiative  
Paris, France



Katharina LIMA de MIRANDA  
Kiel Institute for the World  
Economy  
Kiel, Germany



Hazem GALAL  
PwC Middle East, Dubai  
the United Arab Emirates



Luca TRIFONE  
Diplomatic advisor to the  
Mayor of Rome for the U20  
Sherpa meeting, Italy

## Towards the infrastructure of a new sustainable economy. Twenty-four months to build and implement a paradigm shift

We slipped from 'A World at Risk' to 'A World in Disorder' in just a few months, but the current reversal of fortune looks has more profound roots.<sup>1</sup> That pre-existing pandemic risks warnings have been not been heard is just one of the underlying problems. That nations and international institution have not sufficiently included urbanization as a dimension of multilateralism is another one. The pandemic now directly questions the ability of the G20 to reinvent itself beyond the coordination of rescue packages, among growing consensus that without a new definition of prosperity and economic growth, it will be impossible to effectively combat pandemics, climate change and global poverty. The United-Nations are questioned likewise, all the more as it has previously endorsed a New Urban Agenda that has proved of little relevance in anticipating the pandemic and managing its socio-economic consequences. However, there are indications that reshaping prosperity and welfare might be at our hands.

Convergence among several engagement groups of the G20 is rising to call for coordinated and transformative action. In 2020, the T20 has called for smart decentralization to improve community participation by reconfiguring urban policy. The Urban 20 for safeguarding the planet through national-local collaboration and empowering people to deliver a more equitable and inclusive future. The tryptic of people, planet, prosperity which has shaped the priorities of the

G20 Kingdom of Saudi Arabia presidency has become part of the Italian G20 priorities, with an emphasis on inclusiveness, women empowerment, innovation and knowledge.

Conducting structural reforms is necessary to address the COVID-19 pandemic impacts and to address interconnected deeper crisis factors, in particular:

- highly unequal access to development opportunities provided by physical and digital infrastructure, especially in emerging and lower income countries;
- systemic underinvestment in social infrastructure in a context of rising digitalization and continuous urbanization;
- worsening environmental inequities and risks of widening investment gaps to reach the global environmental and development goals.

Changes will need political steering and doctrinal changes in socioeconomics. For instance, macro-economic models should focus less on 'selfish individuals' and more on the mobilization of people's 'prosocial motives'.<sup>2</sup> This makes the Recoupling Agenda initiated by the G20 German presidency in 2017 and the Quality Infrastructure Investment (QII) principles introduced by the G20 Japan in 2019 even more timely. To build and implement a paradigm shift in institutions and practice, both agendas should 1) be further interconnected, 2) include cities in their granularity and scope, 3) be combined to favor a third-way for entrepreneurship

and free-market, differing from laissez-faire and centralized planning, out of a wealth of diverse urban experiences, enriching the portfolio of global solutions to the crisis.

As social solidarity and personal agency are fundamental sources of human wellbeing, including new measures of well-being into the reporting of national statistics is a priority. The theoretical foundations of the SAGE (Solidarity, Agency, Gain, Environment) framework can be strengthened to assess the socio-economic performances of community resilience, not just countries. Examples from participatory slum upgrading programs resulting in significantly fewer cases of COVID-19 than in other informal communities are good indications.<sup>3</sup> The higher the solidarity within and between groups and individuals, the higher the trust and compliance with socially constraining containment policies, reviving the accuracy of a well-being economy. Among international institutions, the OECD has developed sets of empirical research tools linked with the COVID-19, analysing the impacts of crisis across levels of governments and prioritizing a territorial perspective and the support to micro, small and medium size enterprises. It has used the fresh data provided by the World Observatory on Subnational Government Finance and Investment. Now, the institution is creating a new center on Well-being, Inclusion, Sustainability and Equal Opportunities (WISE) to 'devise policy solutions to the global challenges of inequalities, environmental depletion and climate change'. This goes with an emerging global taxonomy of subnational investment

and debt issues, providing a way to structure future growth along an enduring recoupling narrative. The leverage provided by the G20 can now help build on initiatives such as the Social Progress Index<sup>4</sup> and 'elevate social development to the same priority level as economic prosperity and public health and safety',<sup>5</sup> supplementing standard statistics with more precise, disaggregated data on agency and solidarity, documenting not only average situations but looking at their actual (territorial) distribution.

Using investments to stimulate a green, resilient and inclusive recovery has been a rising thematic in global COVID-19 related literature since the spring 2020, with analysis pointing out to a number of key sectors yielding 'substantial economic dividends, creating millions of jobs, with a great potential to deliver quick, durable and inclusive, health and environmental outcomes' in cities.<sup>6</sup> As we get a sense of the possible components of a 'new sustainable economy' as called for by the Institute for International Political Studies (ISPI) in preparation of the T20 2021, there are other indications in the global infrastructure conversation of how international finance institutions and multilateral development banks could help tackle local gridlocks. The renewal of infrastructure spill-over effects doctrines focusing on local economy support triggered by the T20 Japan in 2019, is one of the ways to connect local and global, public and private assets.

Lessons learned through climate finance articulating global financial engineering with local and urban perspectives, illustrated by the launch of the City Climate Gap Fund in October 2020 and the work of the Cities Climate Finance Leadership Alliance, could serve as a benchmark in the COVID-19 context. Following this direction, a Special Working Group set up under the Urban 20 Riyadh presidency and co-chaired by the city of Rome and Buenos Aires, has recommended the creation of a Global Urban Resilience Fund, intended to support cities in addressing and mitigating the impacts of future shocks on urban services and key social functions. Although traditional sources of funding such as transfer of national resources and local taxes remains key, cities can facilitate connections across public and private spheres and provide incentives as well as sustainable procurement programs. While cities will not manage to cut through (hyper)complexity just on their own, they are the key places where linkages are experienced to support long-term transformations. Cities can also be place for more effective pandemic and other natural risks preparedness. Similarly, detailed investigation of the preparation of the post 2020 Global Biodiversity Framework conducted by the Urban 20 has allowed to identify several mechanisms to value the role of cities.<sup>7</sup> In 2021, the engagement of a new series of Global Solutions Dialogues on Circular Economy for the period 2021-2023 and that include an urban dimension could strengthen the delivery of the newly launched Global Alliance on Circular Economy and Resource Efficiency.<sup>8</sup>

Since the beginning of 2020, the unfolding of the COVID-19 pandemic has sometimes resonated as a compilation of bad news, spurring distrust and a sense that citizens were losing grasp on decision-making processes, risks that have been illustrated throughout INTERSECTING. Instead, cities could act as promoters, facilitators and enablers connecting the pieces of a reform jigsaw within the G20, devising a new range of multilateral solutions protecting the rights of citizens and the foundations of local democracy, in support of prosperity and well-being. The Urban 20 could be the anchor for the deployment of a cross sectoral G20 Urban Platform under the G20 presidency of Italy, and beyond in 2022-23. Based upon cooperation and partnership, a G20 Urban Platform would be a catalyst for a new growth narrative. It would help mobilize macro-economic instruments and international financial institutions' leverage to consolidate cities and communities' social infrastructure in support of the effective delivery of the global development and environmental goals.

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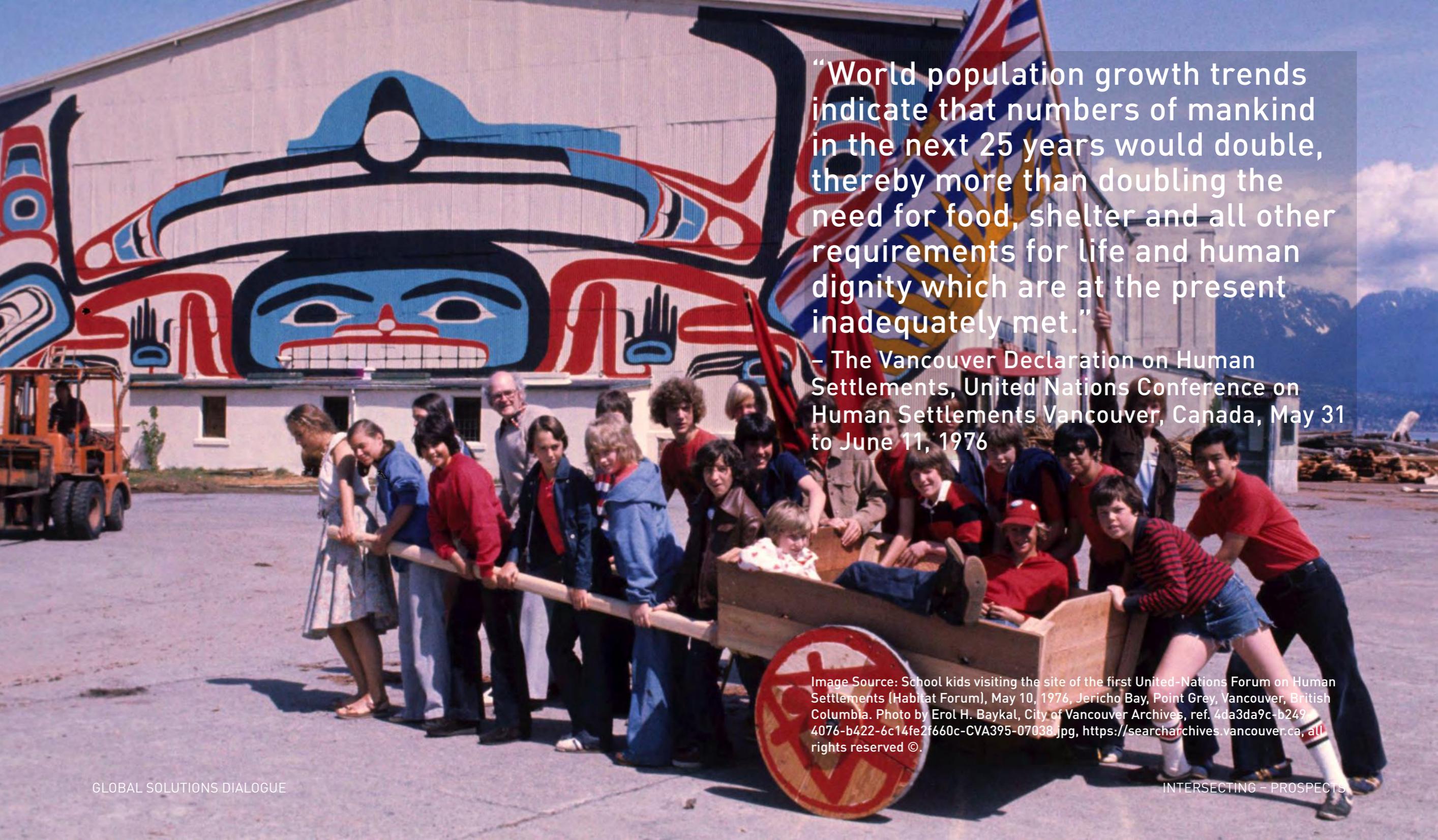
“A G20 Urban Platform could be a catalyst for a new growth narrative, mobilizing macro-economic instruments and international (financial) institutions’ leverage to consolidate cities and communities’ social infrastructure in support of the global development and environmental goals.”

– Nicolas J.A. BUCHOUD, Global Solutions Initiative, Paris, France



Image Source: 10 years before the COVID-19 pandemic outbreak, the Shanghai Expo. Here, the third preparation summit in 2008 during the construction phase, marked the beginning of a decade of accelerated global transformations. Images by Nicolas J.A. BUCHOUD, all rights reserved ©.

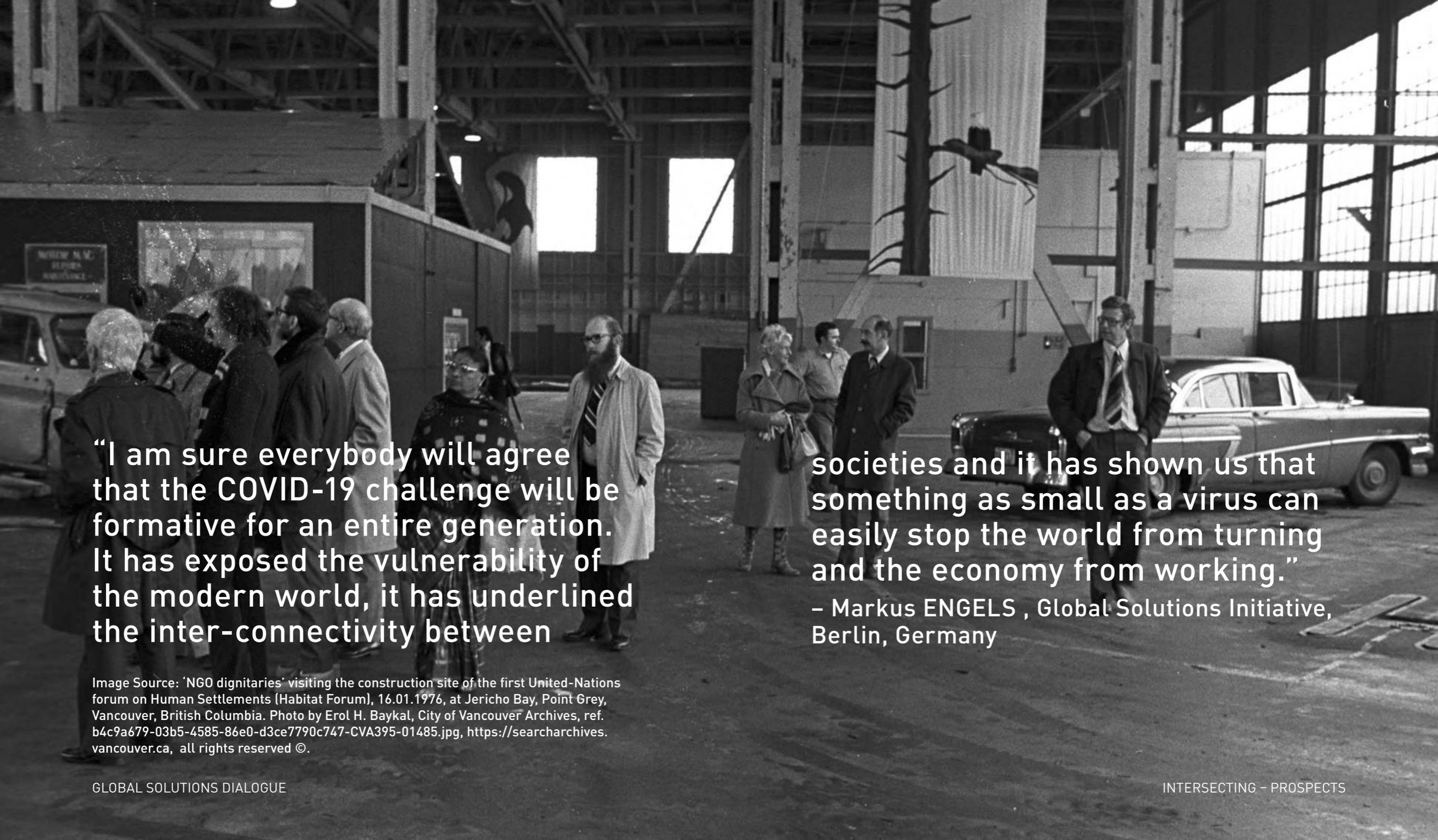
# prospects



“World population growth trends indicate that numbers of mankind in the next 25 years would double, thereby more than doubling the need for food, shelter and all other requirements for life and human dignity which are at the present inadequately met.”

– The Vancouver Declaration on Human Settlements, United Nations Conference on Human Settlements Vancouver, Canada, May 31 to June 11, 1976

Image Source: School kids visiting the site of the first United-Nations Forum on Human Settlements (Habitat Forum), May 10, 1976, Jericho Bay, Point Grey, Vancouver, British Columbia. Photo by Erol H. Baykal, City of Vancouver Archives, ref. 4da3da9c-b249-4076-b422-6c14fe2f660c-CVA395-07038.jpg, <https://searcharchives.vancouver.ca>, all rights reserved ©.



“I am sure everybody will agree that the COVID-19 challenge will be formative for an entire generation. It has exposed the vulnerability of the modern world, it has underlined the inter-connectivity between

societies and it has shown us that something as small as a virus can easily stop the world from turning and the economy from working.”

– Markus ENGELS , Global Solutions Initiative, Berlin, Germany

Image Source: ‘NGO dignitaries’ visiting the construction site of the first United-Nations forum on Human Settlements (Habitat Forum), 16.01.1976, at Jericho Bay, Point Grey, Vancouver, British Columbia. Photo by Erol H. Baykal, City of Vancouver Archives, ref. b4c9a679-03b5-4585-86e0-d3ce7790c747-CVA395-01485.jpg, <https://searcharchives.vancouver.ca>, all rights reserved ©.



“If you review the result, INTERSECTING certainly operates on an intense visual level. It was our early and conscious decision to include subjective photographs – images of specific locations highlighting actual circumstances.”

– Gunnar HARTMANN, New Dialogues, Berlin, Germany

Image Source: A preparation meeting for the first United-Nations forum on Human Settlements (Habitat Forum) of June 1976, Nov. 11, 1975, in Vancouver, British Columbia, Canada. Photo by Erol H. Baykal, b&w acetate negative, 35 mm, City of Vancouver Archives, ref. 3a040fb9-e12b-4c6e-bcfc-b7b86382e859-CVA395-00410.jpg, <https://searcharchives.vancouver.ca>, all rights reserved ©.

# borealis

CITY OF THE NORTH

“For us at GIZ, INTERSECTING makes a lot of sense. It is a great way of re-articulating knowledge and thinking how urbanization, that has silently changed our world in the past decades, could now become a driver for international development cooperation prioritizing sustainable livelihoods.”

– Holger KUHLE, Deutsche Gesellschaft für Internationale Zusammenarbeit, Berlin, Germany

Image Source: Showing the 'Borealis, City of the North' display at Habitat Forum, Jericho Bay, Vancouver, British Columbia, June 1976. Photo by Erol H. Baykal, City of Vancouver Archives, ref. bb1a29b1-eb83-43d0-9f46-f04757956128-CVA395-08734.jpg, <https://searcharchives.vancouver.ca>, all rights reserved ©.

An aerial photograph of the Bay of Napoli, Italy, with Mount Vesuvius in the background. The city of Napoli is visible in the foreground and middle ground, with a large cruise ship docked at the harbor. The sky is blue with some clouds. A semi-transparent text box is overlaid on the left side of the image.

“50 years after the Club of Rome report on growth limits, Napoli will host a G20 meeting of ministers of climate and energy, in July 2021. For the first time in G20 history, this ministerial summit will include a focus on cities and urbanization, as the COVID-19 crisis pushes for bold and pragmatic institutional innovations and to implement them.”

– Nicolas J.A. BUCHOUD, Global Solutions Initiative, Paris, France

Image Source: Overall view of the Bay of Napoli and the Vesuvio from the Chiostru di San Martino, Photo by Nicolas J.A. Buchoud, all rights reserved ©.



Christoph PODEWILS  
trained science journalist,  
Director of Communications  
Global Solutions Initiative  
(GSI), Berlin, Germany



Nicolas J.A. BUCHOUD (ed.)  
Global Solutions Initiative  
Paris, France



Gunnar HARTMANN (ed.)  
New Dialogues  
Berlin, Germany



Holger KUHLE (ed.)  
Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ),  
Berlin, Germany

## A memo to continue the INTERSECTING journey: Towards the true North?

A conversation with Christoph Podewils, trained science journalist and director of communications at the Global Solutions Initiative, with Nicolas J.A. Buchoud, Gunnar Hartmann, and Holger Kuhle.

**Christoph:** What is the main reason for creating INTERSECTING?

**Gunnar:** The e-book gradually emerged from a series of virtual dialogues that began back in the spring of 2020. Back then, all conferences, meetings, gatherings were canceled due to lockdowns and travel bans – literally the majority of scheduled cooperation plans were overthrown by the pandemic. It all looked as if SARS-CoV-2 was engulfing us all into uncharted territories.

I was brought into this project by Holger, who knew about my research on pandemics and my work as publisher of New Dialogues. It did not take long for Holger to convince me to join. In one of our first conversations, I remember that Nicolas presented a proposal for hosting a dialogue series about pandemics and urbanization, i.e., analyzing mid-term and long term impacts of the ongoing crisis while continue to focus on infrastructure investment and financing, refreshing the perspectives on inclusion, spillover effects,

social capital, etc. So our aim was to cooperate across borders, looking at articulations and connections between places, institutions, disciplines, and individuals.

If you review the result, INTERSECTING certainly operates on an intense visual level. It was our early and conscious decision to include subjective photographs – images of specific locations highlighting actual circumstances. We are aware that our approach and consequently the outcome are quite different from a generic report. For us, real people and real places do matter.

**Nicolas:** Several dozens of leading scientists and academics, active civil society active representatives, major think-tanks, investors, experts from very different fields, disciplines, geographic origins etc, have positively responded to our call and joined to contribute. Instead of each one sharing what he or she knows, it was all about learning from others and exploring what knowledge was missing to implement sustainable policies across scales. This became INTERSECTING.

Dialogues played a very important role in defining INTERSECTING and its multi-entry approach, making it different from usual reports or books. Changing the course of global policy-making towards a more sustainable and resource conscious rationale means getting a first-hand understanding of negotiations cycles, power shifts, as well as finer grain change opportunities. There is much to learn from

open dialogue formats, provided two pre-requisites are being met. The first prerequisite is having a driving idea and test it to its limits. For us, it was the role of urbanization as a global geopolitical game changer, with infrastructure investments playing a catalytic role. The second one is to think about policy-making from a cognitive standpoint. In other words, what can we learn from the magnitude and rapidity of ongoing changes in society, politics, how is our knowledge being formed, which could be summarized likewise: what do we know about what we know?

On a more practical note, we used the INTERSECTING momentum to create additional opportunities. We organized and recorded panels all along 2020. We edited policy-papers and notes, such as for the Think-tank 20 (T20), the Recoupling Journal or the Italian Institute for International Political Studies (ISPI), etc. It was also important that the Asian Development Bank Institute and its CEO, dean Sonobe and Aziza Akhmouch the Head of the division for cities, urban policies and sustainable development at the OECD, decided to join GSI and GIZ as INTERSECTING's knowledge partners. INTERSECTING allowed for the creation of a collective momentum reflected by the global launch of the book in Europe, Asia and the Americas simultaneously. Above all, it is a collective work showing the richness and added-value of connecting think-tanks with other organizations and working at cross-roads.

**Holger:** For us at GIZ, INTERSECTING made a lot of sense.

It was a way to continue the GIZ-GSI Solutions Lab on Scaling up sustainable infrastructure investments launched in 2019. It was also a way forward of exchanging our knowledge of implementation with think-tanks about questions of great concern: about how to use urbanization, that had silently changed our world in the past decade, as a dynamic in international development cooperation for a better world. The crisis also sounds as a painful but necessary reminder that many environmental and social problems are pending and have roots in choices that were made, or not, in previous decades. Environmentally sensitive development, giving people their voices, overcoming inequalities are key when thinking about a fair and just recovering from the pandemic, even though the health crisis is far from being over and its effects will be long lasting.

**Christoph:** Why did you chose to focus on urbanization and on infrastructure?

**Nicolas:** What looks like an exceptional and 'unprecedented' crisis is part of a more permanent crisis. The aftershocks of the pandemic will have long lasting effects, many of which remain difficult to estimate. INTERSECTING offers more than a dozen ways to get an understanding of the crisis, starting with 'disease' and moving towards 'agendas'.

Why did the pandemic trigger such as deep shock? How could it get so deeply, so quickly? How is it possible that we,

experts, practitioners, decision makers, with all our background and achievements, were not more prepared than anybody else? How could we witness the unfolding of the pandemic only as spectators? What had gone so wrong in knowledge and policy-making systems that the best think-tanks on the planet were caught completely off-guard? This tells a lot about our collective fragilities.

We decided to focus on urbanization and infrastructure for a simple reason, that is because the crisis is unfolding and resonating in an urban world. Against that background, there are three reasons why we decided to focus on infrastructure.

The first is because infrastructure investments are a major issue at global decision-making level, one of many trillion of dollars/euros/renminbi involving central banks, multilateral financial institutions, public and private investors etc. The designated 'global infrastructure space' is a significant part of the G20 and therefore, any attempt to shape pandemic and post-pandemic responses will go through infrastructure systems.

The second reason is that we are not dealing with simple cause-consequence links, but with system change issues. Focusing on infrastructure is focusing on a series of underlying social, economic, political, technological factor. The urban world of today is largely a consequence of choices, arrangements, and connected phenomena from

the past decade, that is since the 2008 global financial crisis which has seen the birth of the G20 as we know it today. It goes even beyond to the turn of the millennium when the world has turned more urban than rural and it also goes back to the end of the cold-war. Contemporary agglomeration economics as well as environmental governance features have largely been shaped after the fall of the Berlin wall. A number of imbalances such as in CO2 emissions and other planetary boundaries, as well as social issues, such as the development of informality in the world economy, are a direct outcome of thirty years of global changes.

The third factor is that urbanization and infrastructure issues are just about complex system analysis but also about taking very concrete decisions about where, how, and what to invest in, while the pandemic has also repositioned the issue of social infrastructure as a core question, along with physical and digital infrastructure. The future of the 2030 Agenda of the United-Nations and of the sustainable development goals depends on infrastructure choices. In other words, the future of multilateralism depends on cities. The year 2021 will be crucial in many ways, and we believe that Italy, who chairs the G20 and co-chairs the upcoming COP26 on climate, can help the global community enter in a new era.

**Holger:** There is another reason why infrastructure investment matters. In its multidimensional character,

infrastructure investments are THE leverage that can increase exclusion/inequality or on the contrary, make integration/inclusion possible. It is all the more crucial as emerging and developing countries and regions will be where the bulk of new infrastructure assets will be created in the coming two decades. Post pandemic reaction needs infrastructure that maximize redistribution.

Of course, the way we do organize and plan infrastructure is also crucial for tackling climate change. Starting from how to plan cities so they can tackle global warming and become carbon neutral, to manage services such as public transport, power generation and distribution etc.

Last but not least, the valuation of ecosystem services and so called nature-based solutions also depends on infrastructure choices, taking into account existing and sometimes obsolete systems, technological change and how this will shape sustainable urbanization.

**Christoph:** You have made clear that INTERSECTING was built as a 'compass for recovery.' What would be the priorities for a balanced and just recovery?

**Holger:** Fifty years before the COVID-19 pandemic, the singer and composer Joni Mitchell translated into musical notes a very human tendency to destroy the planet, in her famed Big Yellow Taxi. She warned 'that you don't know what you've got til it's gone' which sounds very

contemporary. Mitchell also seems to tell us that when it comes to the planet, it's no different than when it comes to people's hearts: rowing back brings you nowhere.<sup>2</sup>

The reference to the early 1970's makes a lot of sense in a review the COVID-19 context. As these were no easy times and geopolitical risks were high and environmental concerns were rising, action was taken in many directions. The 'The Limits to Growth' report was released in 1972, the same year of the Stockholm world's first conference on the environment. In that same timing, the United Nations Commission for Trade and Development (UNCTAD) successfully pushed for the adoption of universal development assistance (ODA) after the 1968 New-Delhi meeting. The United-Nations also organized the first international conference focusing on human settlements in Vancouver in 1976.

Yet, there is one major difference between then and now. More people are living in the cities of 2021 than there were on the Earth at the time of the Big yellow taxi. While we cannot afford to do less than our predecessors from the 1970's, we need to sharpen our understanding of exactly where we are in order to address recovery options properly.

**Nicolas:** The pandemic has abruptly repositioned public health at the very center of the social, economic and political life, which includes health care and goes much beyond. If in the future, we do not create health, this means

we will create diseases. Intersecting health with various environmental, institutional and technological dimensions is a powerful conceptual shift which goes as far as to reposition the question of equity and justice at the very center of any growth and investment choices. This is no small issue considering that more than 110 million have lost their jobs in less than a year, with labor income dropping by more than \$ 3,5 trillion globally.<sup>3</sup> G20 countries alone have pledged over \$ 11 trillion in support of immediate relief for businesses and households, three times more than during the 2008 global financial crisis.<sup>4</sup> Developed countries provided 5.8% of their GDP in support of labour markets.<sup>5</sup> Now is a time to give an operational content to the One Planet / One Health concepts.

**Holger:** With this book, we have dared the triad of retrospective, contemplation of the present and foresight. In this final note, we want to think further about the assembled, multi-faceted contributions. INTERSECTING is not only for the sake of knowing better. Our aim is to derive some conclusions about application and implementation of local, regional, global sustainable infrastructure and urbanization policies and investments. Given the breadth of the contributions and the uncertainties linked with the COVID-19 pandemic continuous variations, INTERSECTING remains a work in progress.

INTERSECTING the voices of this book make clear that both the understanding of our problems and the answers to

them significantly vary depending on which sets of analytical frameworks we use, which angle, which geographic scope we use. This is an important indication that global urbanization and infrastructure responses to the COVID-19 crisis should benefit from diverse experience and that supporting multilateral agendas cannot mean one size fits all sets of solutions, be it financially, in terms of governance, engineering systems etc. Finding adequate answers to the multiple problems we are dealing with is about INTERSECTING different grids from different disciplines and different perspectives and creating a space for continuous dialogue.

**Christoph:** What's your recommendation to avoid stand-alone solutions in the future? Do you have some examples?

**Nicolas:** Some researchers and observers have recently said the pandemic shows just how smart homo sapiens is. Only he knows how to segment the genome of a virus and how to create new vaccines in record low times. Yet, are we really that smart? While no one can deny the power of biotechnologies and genomics, how this can help improve public health and resilience is another, perhaps even more complicated question and which remains to be addressed.

In the aftermath of the peak of the COVID-19 pandemic, technological and digital solutionism could overcome the need for stronger human and social science. Instead, we

have discovered that we might be closer than we thought to achieving an even more comprehensive cognitive leapfrog, provided we agree to work at the intersections between practice and disciplines.

Looking at frontier technologies and frontier policy-making is the same: none of it is rocket-science. It has a lot to do with supporting collective choices and organizing leadership that aim at creating more public health. For instance, what would be the point of alleviating construction norms if this allows developers to create more housing, therefore creating jobs, but also to create dwellings including rooms with no windows, less ventilation etc.? What would be the point of pushing for expanded trade and commerce if more people fall into poverty and if this means tearing communities apart?

**Holger:** Guaranteeing low-threshold access to health services for all communities, all citizens, including migrant workers, is a guarantee for preventive care and avoid more costly healing solutions. Yet, health coverage is typically coupled to employment, putting individual and family entrepreneurs or freelancers in precarious situations. Providing social and health benefits independently of the employment status should therefore be a priority for national governments as well as all institutions dealing with mitigating the social effects of the crisis. To enlarge the access to social protection, a community-level approach might be a fruitful way forward, by capitalizing on existing

self-organized groups of entrepreneurs, market women and men, or neighborhoods and using them as intermediary entry points to national social security systems. One enabling condition is that these groups would be given the legal and financial status necessary to collect contributions and pay out benefits.

In 2017 and 2019, the G20 has worked on developing a universal health coverage and started to work on recommendations for extended access to health services for all. The pandemic calls for infrastructure investments to focus on how their benefits can include public health, in particular in largescale metropolitan environments where people that have to travel across long distances from home have been much more exposed to health risks. Similarly, civil servants such as health workers or teachers who cannot or are not allowed to work remotely have been greatly exposed to health risks while their revenues depend on national and subnational constrained budgets. Reasoning in terms of 'exposure', 'vulnerability' and 'access' might be a good way to review existing infrastructure portfolio, as the first steps of a new sustainable economy.

**Christoph:** Would you go as far as saying that health should be the cornerstone of future infrastructure investments?

**Nicolas:** INTERSECTING clearly highlights the importance of the infrastructural determinants for health with potential

for negative and positive effects on physical and mental health. Working at the crossroads of infrastructure systems and health systems is no luxury, considering the impacts of the COVID-19 pandemic and potential future threats. Connectivity can no longer go without sanitary prevention.

**Holger:** The relationship between health and infrastructure is not just about healthcare. In addition, we get rid of a false idea, which is that creating new, modern, state of the art infrastructure will have trickle-down effect on health. There is no such thing as health trickling down effect deriving from infrastructure investments. On the contrary, infrastructure programs should be designed in light of connected health circles, starting with healthcare and up to a One Health planetary approach, explicitly designing and financing infrastructure to create health equitably.

Urban infrastructure that reduces non-communicable diseases, including such co-morbidity factors as obesity, while managing rapid urbanization is part of the new pathway the SDG 11 calls for. In the targets and indicators to the SDGs, clean water, healthy nutrition, road safety, public transport, air quality, safe, inclusive, and accessible green and public places and also environmentally and socially sound technologies and industrial processes get a special mention. Part of this was included in the New Urban Agenda in 2016 but this important document missed the point about pandemic risks, showing the need to upscale

health in a more comprehensive and systematic way.

The main infrastructure milestones for city development in the past 150 years had positive but also negative consequences in the long run. The steam, electricity and combustion engine revolutions allowed for the creation of mass-transportation and for the invention of the automobile. Cities got lights and underground trains, trams, elevators and sprawled. Industry and traffic related air pollution, buildings and construction lacking climate resilience capacity and including polluting chemicals, the spatial division between poor and rich, cities and natural habitat fragmented by highways and other networks have increased. Instead, there is a need of infrastructures for people especially for those who cannot escape or buy healthy substitutes, although it is a matter for us all.

As an immediate priority, the implementation of recovery programs and the definition of multilateral priorities such as through the G20 should seek to maximise the opportunities of existing infrastructures to transform it to create and support health and wellbeing.

**Christoph:** INTERSECTING is a lot about cities and communities. How does this fit into a global perspective in pandemic times?

**Holger:** Cities have played a major role in mitigating the impacts of the crisis and help maintain social stability, but

subnational governments investment capacities have been affected by the pandemic while the needs for reinforced social infrastructure have grown. Beyond immediate mitigation strategies, one priority for the future of urban sustainability is to break down existing spirals of socio-economic downturns spurred by decades-long underinvestment in social and human “capital”.

The epic journey of INTERSECTING is just starting and we want to explore new fields, such as the very interesting notion of ‘crisis municipalism’, that is a series of interconnected institutional reforms strengthening local and metropolitan policy-making through revamped multilateral frameworks focusing on the environment, creative economy as well as cross-border data management and regional value chains.

It is critical that people, including the most vulnerable ones, can have a say in future decision-making processes, especially about infrastructure priorities. Building recovery pathways, building the future, should be an opportunity for dialogue between citizens and their representatives at city, regional and national level, airing their views about what has gone wrong and how to improve resilience, welfare, protection, future-oriented policies, etc. There is a way between localism and globalization. Quoting the philosopher Bruno Latour, the issue is not to choose between localism and globalism but to ‘cultivate attachments’, which includes places, culture, traditions,

while, at the same time, to ensure the connectivity to evolving global know how, skills and ways of life.<sup>6</sup>

**Nicolas:** INTERSECTING urbanization with infrastructure in the context of the COVID-19 pandemic highlights the obsolescence of predominant paradigms, such as the one of global cities, as illustrated by the focus of the G20 2021 Development Working Group on secondary cities. Until now and in the past three decades, cities have growingly functioned as open systems and the interweaving of physical and digital infrastructure and services have reinforced the case for complex-system analysis. In the meantime, many other cultural and political factors have been systemically undervalued. It is time to recontextualize the urban question, which socio-economic health issues are also calling for.

The COVID-19 pandemic will probably mark the beginning of an era of turbulences as local, global, regional, metropolitan scales and systems collide, in an era of geopolitical decoupling weakening of multilateral institutions risks. In any case, what we do need to know to build a sustainable urban future requires more than one brain. We believe there is much to learn from biotechnologies scientific and industrial organization and apply it to other fields. The comparison between the functioning of mRNA, those discoveries form molecular biology that have inspired the development of new vaccines against the COVID-19, and the role of cities in shaping our

urban and digital, data driven age could be fruitful. A more solid historical perspective on demographics, urbanization and epidemiology would also be very useful, following the direction of such research as the work on the 'future of the future city'.<sup>7</sup>

While the G20 starts to address urbanization issues at higher level, something we have been repeatedly calling for in the past two years, 2021 is the right year to deepen the intersections between leading policy arenas such as the Global Solutions Initiative and advanced, cross disciplinary knowledge projects such as PEAK<sup>8</sup> at Oxford or the work of Bocconi on the valuation of nature-based solutions and ecosystem services. We hope to engage many highly interdisciplinary research organizations, such as the Bruno Kessler Foundation in Trento province along with think-tanks and forum fostering triangular cooperation in Indonesia and India such as the Research and Information Systems (RIS) for developing countries in New-Delhi. We will also develop and strengthen the links with counterparts in the Americas and of course, in Africa.

**Christoph:** How to ensure that people will have a say in recovery and future investment priorities?

**Holger:** This is a very important and maybe the most important question for local, national and international institutions. People only had very little to say about lockdowns, marking a profound break-up of the usual role

of long public debate in shaping decisions along democratic rules. They had to follow expert recommendations regarding vaccination or tests. The public had to accept, under conditions of extreme uncertainty about the dangers of the pandemic, that there was not a quick fix. The public has witnessed that scientific search as a process of reflection is a never-ending task and that there are ambivalent evidences as knowledge is generated in a series of different disciplines with different languages, schools, positions and correspondingly varying recommendations. We also shouldn't underestimate the impact on societies that faced the pandemic revealing a deep crisis of public urban health models and infrastructures. This might have unnerved many citizens and shaken the public confidence.

As a result, there are challenges and controversies already foreseeable for the near future. When it comes to urban infrastructure, the medium and long-term lessons that are to be drawn should remember: the acceptance and appropriateness depends always from who sits together at the table. Before the pandemic outbreak, many cities and urban settlements in the world were places with limited voice when it comes to engaging infrastructure projects, especially in the context of impactful large scale urban-industrial corridors or mega-regions. Already before the pandemic crisis, it was clear how it is important to keep an eye on questions of trust and the acceptance of knowledge-based, sometimes controversial options for action and decisions.

The digital economy helped limit the impact of the pandemic to livelihoods and to the global economy. At the same time, the unequal distribution of adequate infrastructure and the many pre-vailing gaps in infrastructure development, including sanitation and waste, energy and even internet call for a boost of such investments. While the digital economy seems to be less place-based, it needs thriving urban systems to prosper. The challenge is that unregulated digital investments might become a lottery and will certainly not help invest in infrastructure systems that provide better balance and access to opportunities within metro areas and also address rural sustainable development opportunities.

Fostering digital governance is an overarching priority for the G20 and the future of multilateral relations. One condition for such an arduous undertaking to succeed is to address urbanization at the right decision-making level. It is urgent that the dispersed urbanization and related digitalization initiatives within the G20, such as the G20 Quality Infrastructure, InfraTech, and Infrastructure as an Asset Class agendas, the G20 related smart cities alliance, and diverse sustainable mobility, regional connectivity, communities' well-being, circular economy, land management initiatives across different ministerial and thematic working groups, are interconnected and recoupled with environmental tolerability and social progress.

Ultimately, to achieve a better balance of development,

urban management has to shift from a focus on competitiveness towards cooperation for sustainable development. A few years ago, the political scientist Roman Krznaric described what he quoted as ‘the most original experience in the history of modern democracy’, that is a design-thinking initiative in the small city Yahaba in Japan.<sup>9</sup> Inhabitants were invited to discuss long term investments and their impacts on local tax in an unusual way. They had to put themselves in the shoes of the inhabitants of 2060 and by doing so, they painlessly agreed to see an increase in their water bills to finance long- term investments.

Valuing singular local urban experience to revise urbanization strategies in light of the integrity of global ecological systems could bring a lot in reinforcing citizens engagement as cities around the world are interdependent, and urbanization and urban policy can no longer remain an exclusively domestic matter. How multilateral institutions can build on this paradigm is now on the table of the G20 as well as of the United-Nations. Infrastructure investments, which are managed and regulated globally by international financial institutions, private and institutional investors and national governments could serve as a starting point maximizing the impacts of multilateralism on sustainable urbanization, e.g., on our common sustainable future.

**Christoph:** What are your plans after releasing INTERSECTING?

**Gunnar:** We are currently preparing a third edition of the book, which will be available in a digital and paper format. For autumn 2021, a special GSI event is planned with further explorations and visual material. For 2022, we will continue exploring multiple options to refine the INTERSECTING approach. So, the journey shall continue, hopefully joined by additional voices.

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# authors

# authors



**Pierre ACHARD**  
Food and Beverage Market Director,  
Suez Environment, Paris, France



**Aziza AKHMOUCH**  
Head of Division, Cities, Urban  
Policies and Sustainable  
Development,  
Organization for Economic  
Cooperation and Development  
(OECD), Paris, France



**Dorothée ALLAIN-DUPRE**  
Head of Unit, Unit of Multi-level  
Governance, Public Investment and  
Subnational Finance Centre for  
Entrepreneurship, SMES, Regions  
and Cities (CFE), Organization  
for Economic Cooperation and  
Development (OECD), Paris, France



**Dirk ASSMANN**  
Director General, Sectoral Depart-  
ment at Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ)  
Eschborn, Germany



**Harun BADAKHSI**

Chief Physician, Department Director of Clinical Oncology at the Ernst von Bergmann Medical Center Potsdam, Co-founder of New Dialogues, Berlin, Germany



**Oriol BELLOT**

Projects Director, Suez Agriculture, Barcelona, Catalonia, Spain



**Gautaum BHAN**

Senior Lead, Academic and Research, Indian Institute for Human Settlements (IIHS), Bangalore, India



**Rakan BIN DOHAISH**

Policy lead, G20 Saudi Arabia Infrastructure Working Group, Riyadh, Saudi Arabia



**Luca BIZZARRI**

Head of Unit, Culture Department at Autonomous Province of Bolzano, Italy



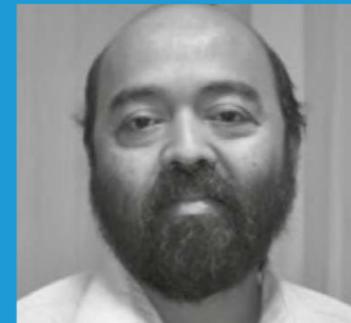
**Daniel BRIDGE**

Program Director, Royal Docks, London, the United Kingdom



**Nicolas J.A. BUCHOUD**

Fellow of the Global Solutions Initiative, co-chair of T20 Italy Infrastructure Investment and Financing taskforce; President at Grand Paris Alliance for Sustainable Investments, Paris, France



**Milindo CHAKRABARTI**

Visiting Fellow, RIS, New Delhi and Professor, O.P. Jindal School of Government and Public Policy, O.P. Jindal Global University, Sonapat, India



**Caroline CHAL**

Head of Institutional Relations, Syc-  
tom, the Greater Paris Metropolitan  
Agency for Waste Management,  
Paris, France



**Sachin CHATURVEDI**

Director general, Research and  
Information Systems for Developing  
Countries (RIS), Member, Board of  
Governors, Reserve Bank of India.  
New Delhi, India



**Michael COHEN**

Director, Doctoral Program in Public  
and Urban Policy, and Professor  
of International Affairs, The New  
School, New York, the United States



**Sarah COLENBRANDER**

Director, Climate and Sustainability  
Programme, Overseas Development  
Institute, London, the United King-  
dom



**Edoardo CROCI**

Senior research fellow, Centre for  
Research on Geography, Resources,  
Environment, Energy & Networks  
(GREEN), Bocconi University, former  
Councilor for Mobility, Transport and  
the Environment for the city of Milan,  
Italy



**Hang DANG MINH**

PhD Candidate in Business and  
Economics, The Australian National  
University, Canberra, Australia,  
Young Global Changer of Global  
Solutions Initiative



**Sébastien DAZIANO**

Senior Vice President, Head of  
Executive cooperation, Public Affairs  
and Security Group, Suez, Paris,  
France



**Henri DE GROSSOUVRE**

Head of foresight and relations with  
think-tanks for Face and Europe,  
Suez, Member of the board, Cercle  
Colbert for territorial governance  
and decentralization, Paris France



**Gilbert DOUMIT**  
Founder, Beyond Group, Beirut,  
Lebanon



**Markus ENGELS**  
Secretary General, Global Solutions  
Initiative (GSI), Berlin, Germany



**Luisa FENIZOLA**  
Associate at Casa Fluminense, Rio  
de Janeiro, Brazil



**Amy JADESIMI**  
Managing director at Ladol Free  
Zone, Lagos, Nigeria



**Hazem GALAL**  
Global leader, cities and local gov-  
ernments, PwC Middle East, Dubai,  
the United Arab Emirates



**Gunnar HARTMANN**  
Architect, urban researcher,  
publisher, Co-founder of New  
Dialogues, Berlin, Germany



**Gérard HÉGRON**  
Senior researcher, Université  
Gustave Eiffel, Paris Marne la Vallée,  
France



**Nella Sri HENDRIYETTY**  
Former deputy director for the G20  
at the Fiscal Policy Agency, Ministry  
of Finance, Indonesia, Senior Econo-  
mist, Capacity Building and Training,  
Asian Development Bank Institute  
(ADBI), Tokyo, Japan



**Irina KARAPETYANTS**  
 Director of Institute of International Transport Communications, Russian University of Transport (RUT), head of the UNESCO chair “Ethics of science and technology, sustainable development and transportation systems”. Moscow, Russian Federation



**Michael KEITH**  
 Principal investigator (PI), PEAK Urban research program, Co-director, Oxford program for the Future of Cities, Oxford University, the United Kingdom



**Lori-Benita KERR**  
 Senior Infrastructure Finance Specialist, Global Infrastructure Facility (GIF), the World Bank, Washington D.C., the United States



**Hamed KHALIDI**  
 Architect from Mumbai, India, based in Berlin, Researcher at New Dialogues, Berlin, Germany



**Holger KUHLE**  
 Policy Advisor, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Strategic Knowledge Partnerships, cooperation with the Global Solutions Initiative, Berlin, Germany



**Amitabh KUNDU**  
 Distinguished Fellow, Research and Information Systems for Developing Countries (RIS), former Professor and Dean of the School of Social Sciences, the Jawaharlal Nehru University, New Delhi, India



**Dwinita (Tita) LARASATI**  
 Industrial designer and cartoonist, Deputy for strategic partnerships, Indonesia Creative Cities Network (ICCN), Chair, Bandung Creative Cities Forum; Lecturer/researcher, Institut Teknologi Bandung



**Katharina LIMA de MIRANDA**  
 Postdoctoral researcher, Kiel Institute for the World Economy, expert on Social and Behavioral Approaches to Global Problems, Kiel, Germany



**Eduardo LÓPEZ MORENO**  
Director, Habitat Office for Mexico and Cuba, Head of Knowledge and Innovation at UN-Habitat in Nairobi, Kenya



**Arun MAIRA**  
Founder, Help Age International, India; Fellow, Global Solutions Initiative



**Riatu MARIATUL QIBTHIYAH**  
Director, Institute for Economic and Social research, faculty of Economics and Business, University of Indonesia (LPEM-UI), Jakarta, Indonesia



**Stefano MARTA**  
Coordinator, Territorial approaches to the SDGs, Organization for Economic Cooperation and Development (OECD), Paris, France



**Tadashi MATSUMOTO**  
Head of Unit, Sustainable Development and Global Relations, Cities, Urban Policies and Sustainable Development Division, Centre for Entrepreneurship, SMEs, Regions and Cities, OECD, Paris, France



**Jörn MEYER**  
Urban expert and advisor, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Kiev, Ukraine



**Vitor MIHESSEN**  
Coordinator at Casa Fluminense, Rio de Janeiro, Brazil



**Daniel MILES**  
COO, ESI ThoughtLab, Philadelphia, the United States



**John NEWBIGIN**

Ambassador for the Creative Economy to the Mayor of London, former chairman of Creative England, Founder, International Advisory Council for Creative Industries Policy & Evidence Centre (PEC), the United Kingdom



**Kamilla NIGMATULLINA**

Associate professor, Head of Digital Media Communications Department, Saint Petersburg State University, Russian Federation



**Thai NGUYEN**

PhD Researcher in Environment and Spatial Planning, University of Groningen, the Netherlands, Young Global Changer of the Global Solutions Initiative



**Francisco OBANDO**

Manager, Oxford Martin Programme on Informal Cities, Oxford University, the United Kingdom



**Tolullah ONI**

Global Public Health Research Programme, Global Diet and Activity Research Group and Network (GDAR), University of Cambridge MRC Epidemiology unit, the United Kingdom



**Susan PARNELL**

Global Challenges Professor in Urban Development, Emeritus Professor at the African Center for Cities (ACC), Member of the Board of the International Institute for Environment and Development (IIED), University of Bristol, the United Kingdom



**Piero PELIZARRO**

Chief resilience officer, Municipality of Milan, Italy



**Ricky Joseph PESIK**

Former special advisor, Minister for digital and creative industries, former deputy CEO of Bekraf, the Indonesian Agency for Creative Economy, Indonesia



**Lan-Phuong PHAN**  
 Secretary general, Grand Paris  
 Alliance for Sustainable Investment,  
 Paris, France and Ho Chi Minh City,  
 Vietnam



**Christoph PODEWILS**  
 Director of Communications  
 Global Solutions Initiative (GSI)  
 Berlin, Germany



**Nicolas PREGO**  
 Vice-president, Global business unit  
 smart & environmental solutions,  
 Suez, Paris, France



**Teuku RIEFKY**  
 Researcher, Institute for Economic  
 and Social research, faculty of Eco-  
 nomics and Business, University  
 of Indonesia (LPEM-UI), Jakarta,  
 Indonesia



**Nikolay RODOSSKY**  
 Phd Student, Head of Digital Media  
 Communications Department, Saint  
 Petersburg State University, Russian  
 Federation



**Fiki SATARI**  
 Special advisor to the Minister for  
 Cooperatives and Small & Medium  
 Enterprises, Indonesia; Chair,  
 Indonesia Creative Cities Network  
 (ICCN); Lecturer/researcher,  
 Padjadjaran University



**Aleksandra SHULEVSKA**  
 Architect at Heinle, Wischer  
 und Partner, Researcher at New  
 Dialogues, Berlin, Germany



**Warren SMIT**  
 Manager of research, African Center  
 for Cities (ACC), Cape Town, South  
 Africa



**Dennis J. SNOWER**  
 President, Global Solutions Initiative (GSI), Professor of Macroeconomics and Sustainability at the Hertie School, Berlin, German



**Tetsushi SONOBE**  
 Dean and CEO, Asian Development Bank Institute (ADBI), former vice president, National Graduate Institute for Policy Studies (GRIPS), Tokyo, Japan



**Nicolaos THEODOSSIOU**  
 Prof. Department of Civil Engineering, Aristotle University of Thessaloniki, Greece, and Chair of United Nations' Sustainable Development Solutions Network – SDSN Black Sea



**Albert TING**  
 Chairman CX Technology & Lawrence S. Ting Memorial Foundation, Taipei, Taiwan



**Amber TING**  
 Andover, Massachusetts the United States



**Mihai TODER PASTI**  
 Founder and CEO of MultiSpace.io – Living Research Lab, Young Global Changer of the Global Solutions Initiative, Bucharest, Romania



**Luca TRIFONE**  
 Diplomatic advisor to the Mayor of Rome for the U20 Sherpa meeting, Italy



**Carmen VOGT**  
 Head of Section, Cities, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Bonn, Germany



**Yingyin WU**

Policy Analyst, Unit of Multi-level Governance, Public Investment and Subnational Finance Centre for Entrepreneurship, SMES, Regions and Cities (CFE), Organization for Economic Cooperation and Development (OECD), Paris, France

# editors, hosts



**Nicolas J.A. BUCHOUD**  
Fellow of the Global Solutions Initiative, co-chair of T20 Italy Infrastructure Investment and Financing taskforce; President at Grand Paris Alliance for Sustainable Investments, Paris, France



**Gunnar HARTMANN**  
Architect, urban researcher, publisher, Co-founder of New Dialogues, Berlin, Germany



**Holger KUHLE**  
Policy Advisor, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Strategic Knowledge Partnerships, cooperation with the Global Solutions Initiative, Berlin, Germany

# editors, hosts

**Members of the hosting team,  
Assistant editors,  
IT and facilitation of dialogues**



**Hang DANG MINH**  
PhD Candidate in Business and Economics, The Australian National University, Canberra, Australia, Young Global Changer of Global Solutions Initiative



**Mihai TODER PASTI**  
Founder and CEO of MultiSpace.io – Living Research Lab, Young Global Changer of the Global Solutions Initiative, Bucharest, Romania



**Thai NGUYEN**  
PhD Researcher in Environment and Spatial Planning, University of Groningen, the Netherlands, Young Global Changer of the Global Solutions Initiative



**Rakesh KASTURI**  
Collaboration and Remote Facilitation Expert, Founder/CEO of sprintdoctor, Berlin, Germany

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**Why sustainable and smart urbanization matters for the G20**  
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## **COVID-19 and the reinforced case for sustainable infrastructure development: mobilizing infrastructure investments as catalysts for net zero and SDG delivery**

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## **The Future of Sustainability: The Role of Global Cities in Shaping a New Sustainable Economy**

Dossier Our Next Green World: Pillars, Trends and Challenges for a Sustainable Future, Commentary by Nicolas J.A. Buchoud for ISPI, the Italian Institute for Political Studies, 12 November 2020  
<https://www.ispionline.it/en/pubblicazione/future-sustainability-role-global-cities-shaping-new-sustainable-economy-27822>

## **Infrastructure Investments and Financing in the G20/T20 Agenda in the Time of the Covid-19 Crisis**

Dossier Towards the Italian G20, Commentary by Nicolas J.A. Buchoud for ISPI, the Italian Institute for Political Studies, 20 November 2020  
<https://www.ispionline.it/en/pubblicazione/infrastructure-investments-and-financing-g20t20-agenda-time-covid-19-crisis-28298>

# links

## **The next infrastructure revolution? Changes behind the scene within the G20**

Commentary by Nicolas J.A. Buchoud, Global Solutions Fellow, Co-chair, T20 2020 Infrastructure Investment and Financing Taskforce, November 2020

<https://www.global-solutions-initiative.org/press-news/the-next-infrastructure-revolution-changes-behind-the-scene-within-the-g20/>

## **Building forward better: the infrastructure of a new sustainable economy, cities in a changing multilateral order**

Panel (Global Solutions Session), December 2020

<https://www.global-solutions-initiative.org/global-solutions-hub/building-forward-better-the-contribution-of-international-cooperation-to-the-urban-responses-to-covid-19/>

## **Cities and the future of growth: Towards an economy of well-being?**

Nicolas J.A. Buchoud, Katharina Lima de Miranda, Hazem Galal, Luca Trifone, ReCoupling Journal, Issue #6, January 2021

[https://www.global-solutions-initiative.org/210114\\_GS\\_journal\\_6.pdf](https://www.global-solutions-initiative.org/210114_GS_journal_6.pdf)

## **Shaping the new frontiers of sustainable (urban) infrastructure: Reviewing the long-term value of infrastructure investments and enabling system change**

Nicolas J.A. Buchoud (dir.), Ryan Bartlett, Edoardo Croci, Paramita Datta Dey, Nicolas Hautiere, Arjan Hijdra, Irina Karapetyants, Lori Benita Kerr, Sergei Kirpotin, Tatiana Kolesnikova, Beatriz Nofal (Consejo Argentino para las Relaciones Internacionales (CARI)), Mariana Silva, Laurin Baptiste Wuennenberg in G20 Insights, November 2020

[https://www.g20-insights.org/policy\\_briefs/shaping-the-new-frontiers-of-sustainable-urban-infrastructure-reviewing-the-long-term-value-of-infrastructure-investments-and-enabling-system-change/](https://www.g20-insights.org/policy_briefs/shaping-the-new-frontiers-of-sustainable-urban-infrastructure-reviewing-the-long-term-value-of-infrastructure-investments-and-enabling-system-change/)

# links

## Global Solutions Dialogues on Economic Responses to COVID-19

<https://www.global-solutions-initiative.org/video/giz-panel-building-forward-better-the-contribution-of-international-cooperation-to-the-economic-responses-to-covid-19/>

Links to the vision statements and insights:

Amy Jadesimi

<https://www.global-solutions-initiative.org/video/keynote-amy-jadesimi/>

Gilbert Doumit

<https://www.global-solutions-initiative.org/video/vision-statement-gilbert-doumit/>

Arun Maira

<https://www.global-solutions-initiative.org/video/keynote-arun-maira/>

A broad perspective on sustainable infrastructure development solutions was at the center of the The Solutions Lab – Scaling for Sustainable Infrastructure launched by the Global Solutions Initiative (GSI) and GIZ (October 2019 – October 2020). It was about to analyze what hinders the broad uptake of sustainable infrastructure solutions and to identify approaches that can be scaled across regions and cities.

<https://emsdialogues.org/solutions-lab>

In particular, the link to the online event “How Integrated Planning Approaches Can Help Build Sustainable and Resilient Infrastructure in a post-COVID-19 World” offers insights into the importance of integrated upstream infrastructure planning, its link to sustainable development and its implementation at national, regional and municipal levels as well as on the practical application of methods, tools and approaches that support implementation, such as systems modelling and capacity assessment tools.

[https://emsdialogues.org/wp-content/uploads/2020/12/The-Solutions-Lab\\_Report\\_Online-Event-Integrated-Upstream-Planning.pdf](https://emsdialogues.org/wp-content/uploads/2020/12/The-Solutions-Lab_Report_Online-Event-Integrated-Upstream-Planning.pdf)

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For image use inquiries, please contact:  
[Nicolas.Buchoud@global-solutions-initiative.org](mailto:Nicolas.Buchoud@global-solutions-initiative.org)

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“Experts are used to converting people on the ground into numbers to feed them into their economic equations. Now, they must listen to the people in the many voices which the people speak.”

– Arun MAIRA, Help Age International, India

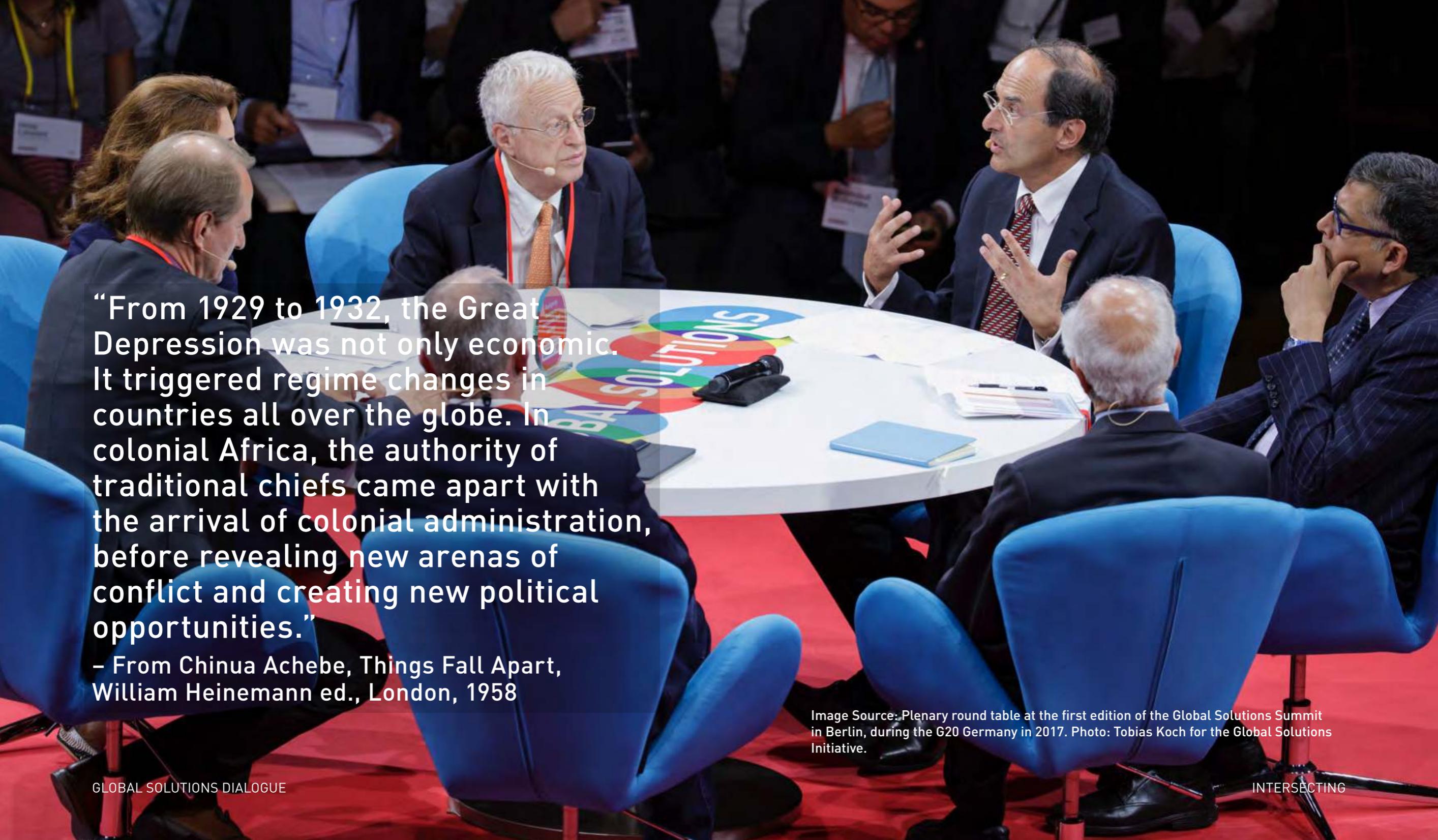


Image Source: Wikimedia Commons. June 19, 2020. Black Lives Matter - Sit In - Occupy Bay Street - College Street - Toronto Police Headquarters, Toronto, Canada. Image by Jason Hargrove. [https://commons.wikimedia.org/wiki/File:Black\\_Lives\\_Matter\\_-\\_Sit\\_In\\_-\\_Occupy\\_Bay\\_Street\\_-\\_College\\_Street\\_-\\_Toronto\\_Police\\_Headquarters\\_-\\_June\\_19,\\_2020\\_-\\_Creative\\_Commons\\_\(50025876838\).jpg](https://commons.wikimedia.org/wiki/File:Black_Lives_Matter_-_Sit_In_-_Occupy_Bay_Street_-_College_Street_-_Toronto_Police_Headquarters_-_June_19,_2020_-_Creative_Commons_(50025876838).jpg)



# Large-scale protest demonstrations against COVID-19 restrictions in Berlin.

Image Source: Wikimedia Commons. August 29, 2020. "Querdenken" against Corona restrictions at Friedrichstrasse in Berlin, Germany.  
[https://de.wikipedia.org/wiki/Datei:29.08.2020\\_Berlin-Friedrichstrasse.JPG](https://de.wikipedia.org/wiki/Datei:29.08.2020_Berlin-Friedrichstrasse.JPG)



“From 1929 to 1932, the Great Depression was not only economic. It triggered regime changes in countries all over the globe. In colonial Africa, the authority of traditional chiefs came apart with the arrival of colonial administration, before revealing new arenas of conflict and creating new political opportunities.”

– From Chinua Achebe, *Things Fall Apart*, William Heinemann ed., London, 1958

Image Source: Plenary round table at the first edition of the Global Solutions Summit in Berlin, during the G20 Germany in 2017. Photo: Tobias Koch for the Global Solutions Initiative.



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