

# 2

## ILS-Working Paper



**Corona 2020 and beyond:**

### **Embracing Uncertainty in Spatial Planning, Urban Management and Design**

**Research Group on Spatial Planning  
and Urban Development**

This working paper was developed by the scientific staff of the Research Group on Spatial Planning and Urban Development at the Institute for Regional and Urban Development Research in April 2020.

**The authors:**

Polívka, Jan (Prof. Dr.)  
Reimer, Mario (Dr.)  
Cozzolino, Stefano (Dr.)  
Eichhorn, Sebastian  
Fleischer, Janne Jakob  
Fox-Kämper, Runrid  
Goede, Paul  
Kummel, Olivia (Dr.)  
Leyser-Droste, Magdalena  
Lübker, Susanne  
Monkenbusch, Franziska  
Pehlke, David  
Schulwitz, Martin  
Specht, Kathrin (Dr.)  
Stark, Martin (Dr.)  
Stroms, Peter  
Wilms, Stefan

## Content

### Page

<b>Three Key Challenges for Cities and Regions during the COVID-19 Crisis: Consequences for Urban Life and Emerging Planning Tasks</b>	<b>4</b>
<b>FIRST: The high vulnerability of public life and urban-related functions to external disruptions</b>	<b>5</b>
▶ <b>Effects:</b> Increased consolidation in the service and retail sectors, with noticeable effects on built environment	<b>5</b>
▶ <b>Upcoming planning tasks:</b> Making planning rules and norms more flexible to support self-management and spontaneously developed practices	<b>6</b>
▶ <b>We call for</b> an expansion of the legal possibilities for renovating and converting existing buildings, including a variety of functions, more flexible use options, a greater integration of sustainability aspects, and a long-term perspective through adaptive concepts	<b>7</b>
<b>SECOND: The amplification of instabilities and vulnerabilities by reinforcing divergent dynamics in space</b>	<b>7</b>
▶ <b>Effects:</b> The slowdown of urban and regional growth and strengthening of spatially and functionally selective developments	<b>7</b>
▶ <b>Upcoming planning tasks:</b> Maintaining the central role of the public sector in spatial development, land use, and urban development to ensure social cohesion in the area	<b>8</b>
▶ <b>We encourage</b> the establishment of action plans to pursue issues of fair and sustainable land use and development	<b>8</b>
<b>THIRD: Organizational and capacity shocks to urban systems and infrastructures</b>	<b>8</b>
▶ <b>Effects:</b> Skepticism about urban lifestyles and environments	<b>9</b>
▶ <b>Upcoming planning tasks:</b> Strengthening the role of engagement in civil society and multi-actor partnerships (i.e., public, private, and socially supported partnerships)	<b>9</b>
▶ <b>We therefore call for</b> the development of joint resources of different civil society actors to cover basic services in the settlement area at local level in order to make the areas resilient and sustainable in the long term	<b>10</b>

## Three Key Challenges for Cities and Regions during the COVID-19 Crisis: Consequences for Urban Life and Emerging Planning Tasks

***Since we are dedicated to what we call adaptive urban systems, the mission of the ILS Spatial Planning and Urban Design Research Group is to support regions, municipalities, and communities in enhancing their ability to react to diverse driving forces, including global pandemics. In collaboration with our partners from the planning practice, we plan to accomplish this mission by raising these regions' level of adaptability and flexibility in terms of the physical, functional, and societal components of their systems.***

Since the onset of modernity, our societies and cities have become highly operational by perfecting infrastructural connectivity, spatial and functional diversification, and specialization. While reducing production costs via economies of scale and standardization, urban development has aimed at ubiquity rather than the flexibility of choice, production, and use of resources. Multilayered provision of standardized social and technical services has allowed growth benefits to spread throughout society more or less equally. Spatial and urban planning, design, and architecture have contributed to this equal distribution of benefits by implementing urban forms of scale efficiency, including the division of functions. Tailored and stable infrastructures have made people independent of weather conditions, for example. The model of modern efficiency has become both the precondition and the consequence of scale-based growth. However, from a long-term development perspective, this model is strongly dependent on internal stability as well as a predictable set of external conditions, which are seen as such which can be planned. In this model, innovation and flexibility have become highly institutionalized so that they can be incorporated into the planned system. Therefore, this model can only incorporate resources and settings effectively for known phenomena and challenges. Sophisticated political ethics and infrastructural standards have been developed to prevent military/trade wars and blackouts, and infrastructural protection against natural disasters, such as flooding and epidemics, has been established.

Nevertheless, this high level of rationalization, specialization, and functional diversification has proven to be extremely inflexible in the face of unpredictable threats. The efficiency of our infrastructures is based on a narrow understanding of their functional embeddedness into complex urban systems. These infrastructures serve a limited number of urban functions – or even just one – thus lacking compatibility to serve within the system more broadly. The buildings in residential, industrial, and retail areas lack flexibility of use and adaptability to demographic and structural developments. In this sense, the adaptation of our cities and regions to the challenges of climate change and energy transition requires the flexibilization of infrastructures to a significant degree.

Nowadays, due to the current issue of climate change, the example of urban water management and its supply network is mentioned quite often. But, in fact, it is necessary to rethink all manmade urban infrastructures and other manufactured physical parts. Rather than viewing the entities, institutions, and artefacts within cities as unilateral means of providing and disseminating public services and connecting producers and consumers, these infrastructures should be reimaged as a learning, flexible system with multiple functions and redundant roles. Consequently, maintaining both the ubiquity and flexibility of human, material, and spatial resources will allow us to respond to a pandemic on a local level in a coordinated, fast, and effective manner.

Defining the most effective overall scenario and development targets may not be the best way to predict, plan, and implement the future of cities. We need to embrace ambiguity in the development perspective of settlement systems and depart from the very narrow understanding of functionality, materiality, and revenue. Since the 1990s, spatial planning has been dedicated to an incremental system based on small steps toward primary, basic values. In the future, a more fundamental approach to these steps and systemic changes might be required, as well as read-

justments in planning strategies and their targets. However, embracing an adaptive, resilient planning system does not mean generating ad-hoc actions without an overarching target. Rather, planning targets based on the results of sectoral efficiency will need to be re-defined to those based on creating and maintaining a complex, emerging urban system to open up as many opportunities as possible for creativity, possibilities, and explicit change.

For urban planning and management, this challenge can be re-formulated as fundamental tasks of change—basically, change in how we think about planning and running our cities. To be able to address current and future disruptive threads with the necessary innovations and adjustments, we urgently need move away from a focus on the modern efficiency of monofunctional structures to the sustainability, resiliency, and flexibility of multifaceted, redundant urban environments.

As a global crisis, the COVID-19 pandemic is hitting our cities and surrounding regions and is affecting urban society. Hence, we expect the following three main interrelated effects, which generate immediate questions that demand attention from spatial planners.

### **FIRST: The high vulnerability of public life and urban-related functions to external disruptions**

The pandemic's effects, together with their countermeasures (e.g., lockdowns and social-distancing), are impacting various factors upon which urban life is based: for example, people's social lives, freedom of movement, progress, and exchange of knowledge and information, as well as the circulation of resources and goods on which cities depend. The most visible immediate effects are the decline of public life in cities and the high vulnerability of services and retail structures within the social infrastructure that depend on face-to-face contact, travel, and tourism.

The decline of public life is also becoming evident in many publicly relevant activities, such as urban restaurants, cultural shows, and sport events, which have all been cancelled. We expect the consequences of the pandemic to last for several months, with a lasting effect on the variety of these activities and services and urban life itself. The following questions arise: what differences will we see in businesses and the provision of services in a post-COVID-19 city, and what influence will these changes have on the urban landscape?

► **Effects:** The acceleration of consolidations in the service and retail sectors, leading to functional re-settings and locational changes

Many of the existing functional structures we take for granted in urban settings will take time to recover after the COVID-19 crisis, or they may not re-appear at all. Depending on the length and intensity of the crisis and its effects, the delivery of certain services will diminish or will be replaced by new ones. These conditions may endanger the existence of small cities in particular, as well as secondary and local centers, leading to significant changes in the local and decentralized availability of services and goods. Traditional shopping—including street retail—will become weaker; together with the decline of local services, we will not only see an increase in chain stores and digitalization, as widely established services are backed by global capital, lobbyists, and support, but we will also see an increase in alternative and niche services.

Areas lacking basic services may contribute to rising inequality in the quality of life within cities and regions. All of these shifts will be accompanied by space and built environment-related effects, including higher rates of vacancies. Business closures, together with the overall negative economic effects during and after the crisis, may suddenly limit the diversity and innovation capacity of cultural and social life.

This applies in particular to urban food systems. The vulnerability of these systems is particularly evident in several areas: in the loss of basic supplies for poorer population groups (food banks, school meals, etc.), in securing the harvests grown in the region by eliminating seasonal workers, in restricting the use of community gardens, especially in public spaces, and many other areas.

In the near to distant future, the vitality of the creative and arts sector will provide a chance for new and alternative business models to emerge, as well as service concepts, based on innovations and current market demands, but will need a systemic support to develop.

► **Upcoming planning tasks:** Flexibilization and the broadening of planning rules and norms to assist self-managed support and spontaneously evolving practices

To overcome this challenge in urban planning, we suggest the flexibilization of rules and norms regarding the reuse and refurbishment of existing buildings and public spaces for new uses, such as for start-ups and new businesses. Investment support for refurbishment and functional adjustment linked to both commercial and local social businesses, especially in existing buildings, will hasten the renewal of cities and the vital diversification of urban life.

For recovery from (and future encounters with) unexpected disruptive events, urban planning must tailor the city toward resilience via ubiquity, flexibility, and complexity. Planners must acknowledge that, on the one hand, settlement functions still need to be well planned, equipped and managed to endure challenges. On the other hand, it is not possible to attain self-reliance by running urban functions as atomized, mono-structural (sectoral-specific) systems.

Embracing uncertainty means introducing flexibility and multifunctionality and thinking about urban

structures and infrastructures as artefacts of changing meanings, functions, necessities, and forms. This means we must radically rethink planning rules to guarantee higher levels of flexibility, thus enabling systems and functions disadvantaged by the crisis to re-evolve. However, this does not mean that we should pursue the diminution of rules or a laissez-faire approach as a planning strategy. Rather, it means that we should target flexibility in urban design, buildings, and land-use rules to enlarge our capacity to accommodate abrupt needs for adaptation—whether to new circumstances or to unpredictable discoveries. In times of crisis, as well as in times of structural or demographic change, this strategy would help us address infrastructural issues. Multifunctional spaces would help support the emergence of new initiatives and businesses, allowing them to address the settlement issues and contribute to their recovery, diversity, and, therefore, resilience. The required flexibility in a city and its design could be supported, among other things, by new density of functions, a development structure that is conducive to a mixture of functions, and a fairer physical design of streets and neighborhood squares that is more adaptable in terms of use. Climatic and environmental issues are at the forefront of promoting the health and usability of public spaces.

► **We therefore encourage** joint research and practice initiatives in spatial planning and urban design, as follows:

1. We should look into broadening the possibilities for refurbishing and reusing existing buildings, including developing technical solutions for temporary uses and supporting a universal standard of refurbishment for more flexibility.
2. We should develop rules and standards enabling various uses of a structure at different times without the necessity of completely replacing it. It makes sense to have rooms and buildings that

offer space for different uses, meeting the different demands of a thriving city; this would contribute, among other things, to the establishment of start-ups, social services, cultural offerings, or professions, thus offering broader opportunities. Buildings with multipurpose spaces could easily be repurposed in cases of emergency. For instance, it should become a standard practice to equip the ground floors of residential or large-scale buildings (such as schools or exhibition fairs) with infrastructure preparations that would allow these spaces to serve as hospitals or senior care centers in an emergency.

3. We should focus on using flexibility as a means of reducing long-term material efforts. Therefore, to ease negative environmental effects of settlements and foster sustainability, we should build resilient structures for climatic, demographic and other types of changes, too.

## **SECOND: The amplification of instabilities and vulnerabilities by reinforcing divergent dynamics in space**

The COVID-19 crisis has impacted the dynamics of settlement space development by destabilizing local and global markets and the location of functions in space. This could generate serious long-term effects on the instability of urban and regional development and result in spatially selective slowdowns and shifts within different segments of the real estate market.

- ▶ **Effects:** The slow-down of general urban and regional growth and the contribution to spatially and functionally selective developments

The economic shutdown related to COVID-19 is hitting cities after they have experienced years of growth. At the same time, the pandemic is occurring amid struc-

tural changes to urban areas as a reaction to climate change and the subsequent need to adjust to new environmental conditions within the housing crisis, which emerged after decades of privatization and liberalization. Re-urbanization and peripherization, as well as the consequences of demographic changes, have not yet been sufficiently addressed in planning or its implementation. The spatial and functional imbalances caused by these trends will remain and will most likely be amplified by local authorities' lower capacity to implement solutions. While the market pressure causing the rise of land prices may selectively loosen within urban regions, the demand for affordable housing and social services will either remain at its high pre-COVID-19 levels or grow even greater. The trend to house global capital in safe investment areas may strengthen the ongoing process of globally selective movement of investments. In sum, urban and regional development will most likely experience disruptive effects and an increase in intraregional diversification. In addition to growing social disparities in space, a consequent growth of diversity in real estate-related challenges such as bad maintenance, overcrowding and vacancies will become more likely to be seen.

- ▶ **Upcoming planning tasks:** Maintaining the central role and strong drive of the public sector in spatial development and land use management tasks

While spatial disparities and market volatilities may grow after the COVID-19 crisis, the current challenges of regional and urban development may remain and rather intensify. In this situation, the fiscally induced losses in regard to municipalities' ability to act must not lead to further privatization and liberalization of planning. As a response in urban planning, we suggest support for and the intensification of the public role in the development and implementation of innovative concepts, in basic care, housing, and land development.



Addressing the issue of uneven development caused by different locally differing contexts will remain a crucial task for spatial planning in unsure times, as people are shaken by different crises and challenges. Therefore, besides a differentiated approach in various spatially (and otherwise) characterized settlement settings, the introduction and long-term implementation of strategies on fundamental topics will remain crucial. These include the management of adaptive processes for settlement re-adjustment and flexibilization, especially when related to the issues of demographic, structural, environmental, and climatic changes. Transport management, just and sustainable land use and development, and the vitality of neighborhoods and cities, as well as housing shortage, will remain at the top of the agenda in post-COVID-19 spatial planning. More than before, spatial planning will depend on public engagement in these issues, as other actors, such as the private sector, will be struggling with discontinuities and changes.

► **We encourage** the following joint activities for research and spatial planning in urban design:

1. Enhancing knowledge of and solutions for the local effects of the global multifaceted crisis in different settlement spaces and in urban, suburban, and regional settings that are particularly affected by structural changes or a supply shortages in social infrastructure and housing; and
2. Developing action plans to continue to address issues of just and sustainable land use and development, transport management, the vitality of neighborhoods and cities, and housing provision.

### THIRD: Organizational and capacity shocks to urban systems and infrastructures

The COVID-19 crisis has delivered an organizational and capacity shock to our urban systems and infrastructures, as it has demanded an immediate shift of resources toward a supply of specialized goods to build capacities to provide protection for people, especially certain vulnerable groups. More importantly, there will soon be a need to provide care to an unknown and increasing number of individuals and firms who may be trapped in a state of socio-economic emergency. While the COVID-19 crisis is characterized by a clear top-down process with regard to federal or state regulations, the power relation will shift in favor of cities after the crisis. What short- or medium-term strategies have the cities planned? How do the approaches differ between the cities? Do the cities react in a similar way, or are there systematic differences in their approaches?

► **Effects:** Feeding skepticism about the urban lifestyle and environment

The COVID-19 crisis revealed how unprepared our urban environments were for a sudden disruption. The effectiveness of urban and regional infrastructural systems was reduced, and the flexibility of these systems was shown to be limited, as they were slow to react and experienced difficulties in coping with sudden changes. As dense, sophisticated, and artificial environments, people may become skeptical about the ability of cities to protect citizens, as cities intensify the effects of disruptive phenomena. Moreover, existing cities have demonstrated their limited possibilities in terms of self-sufficiency and self-organization.

Cities are significant in the freedom of social distancing despite population density. Physical distancing during the COVID-19 crisis has however significantly disabled social interaction. This is especially the



case for public spaces, public transport, and social infrastructure. Local and social engagement is organized differently in less dense areas, where more might be socially interconnected. As after any significant crisis, the administration and management of settlement systems will adjust according to the experiences of the recent pandemic, followed by changes in rules. The question remains how flexible urban societies and their administrations will have to become to be able to embrace major and yet widely unknown disruptive challenges to come. We must ask how cities can adapt to challenges in terms of internal and external organization and existing planning procedures. Since constraints such as physical distancing hinder the fundamental democratic processes of urban and regional development (i.e., participation processes cannot take place), we must ask how urban development can be guaranteed if these basic conditions no longer function; further, we must investigate how these planning processes can be made more resilient.

► **Upcoming planning tasks:** Strengthening the role of engagement in civil society and multi-actor partnerships

To face this challenge by means of urban planning, we suggest a long-term implementation support for program-based alliances between the state, private companies, and civil society. These need to be strengthened to protect the vitality of existing structures and to develop new, more resilient ones when abrupt changes and unexpected challenges arise.

So-called unofficial structures and systems for resource re-distribution, which emerge spontaneously in response to triggers and level out imbalances in basic services, are crucial in times of uncertainty. These ad-hoc structures and systems are based on both commercial and citizen engagement in a pluralistic society. They should not only be appreciated but also actively included in mainstream planning. In

many places, the vitality of urban settlements is or has already been heavily dependent on these structures. In post-modern times, it is not possible for public entities to provide basic services as needed and over all spaces. Both slow structural changes and critical disruptions will most likely hit various locations differently and create a need for differentiated responses according to local and regional contexts. Social capital within a society, which can assist in creating these responses, should become a target of political and fiscal support. The vitality of local systems needs to be fostered as a coalition between civil society and the private and public sectors. Planning in the future needs to recognize stakeholders and actors within these groups and work with them for the provision of crucial infrastructural services, vitality, and, therefore, resiliency in our cities and regions.

► **We therefore encourage** the following topics for future joint activities for research and planning:

1. We must explore reactions to shocks and structures' abilities to react within urban, suburban, and regional settlements. A crucial question is how planning processes can remain effective and democratic at the same time when under stress, without resorting to neoliberal reflexes, to enable a society to participate in solutions.
2. We must explore possibilities for delivering basic services over all spaces of the settlements, also using resources at the local level such as place-making to make the settlement self-relying enough to react to slow and fast changes in terms of institutional and resource flexibility. Understanding the alliances between different stakeholders and change agents and how to implement adaptive strategies is of significant interest, thus needing further conceptual development.



## Imprint

Herausgeber	ILS – Research Institute for Regional and Urban Development Brüderweg 22-24 44135 Dortmund  Telefon +49 (0)231 90 51–0 Telefax +49 (0)231 90 51–155  <a href="http://www.ils-research.de">www.ils-research.de</a> <a href="mailto:poststelle@ils-forschung.de">poststelle@ils-forschung.de</a>  Dortmund, Germany, April 2020 © ILS 2020, all rights reserved  <b>ISSN 2569-6386</b>
Autor/-innen	Prof. Dr. Jan Polívka and the scientific staff of the Research Group on Spatial Planning and Urban Development
Layout	Sonja Hammel
Bildnachweis	AdobeStock/bittedankeschön (front page)

**Corona 2020 and beyond:**

**Embracing Uncertainty  
in Spatial Planning,  
Urban Management, and Design**

**Research Group on Spatial Planning  
and Urban Development**