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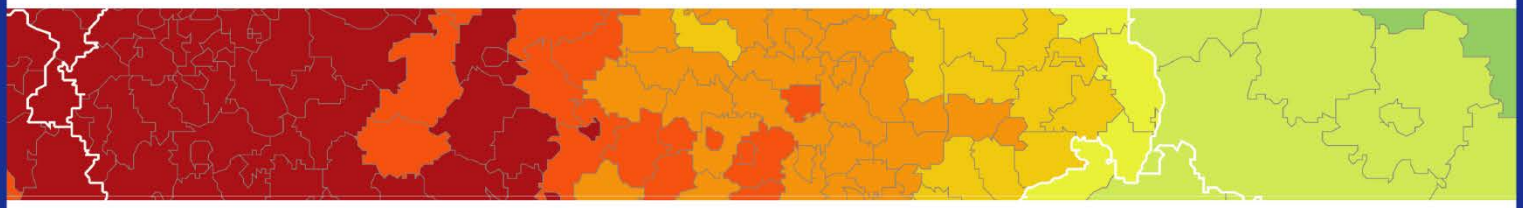

MISTA
Metropolitan Industrial Spatial Strategies & Economic Sprawl

Targeted Analysis

Annex 1
Synthesis Report

Annex 1 – Synthesis Report

This targeted analysis activity is conducted within the framework of the ESPON 2020 Cooperation Programme.

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Abbreviations

AA	Agglomeration Areas
ARDECO	Annual Regional Database of the European Commission
COVID-19	Coronavirus disease 2019
DG REGIO	Directorate General for Regional and Urban Policy
EC	European Commission
ELFS	European Labour Force Survey
ESPON	European Territorial Observatory Network
ESPON EGTC	ESPON European Grouping of Territorial Cooperation
EU	European Union
EU 15	European Union countries that were member states prior to 2004 (incl. UK)
EU 13	European Union countries that joined after 2004
FDI	Foreign Direct Investment
FUA	Functional Urban Area
GDP	Gross Domestic Product
GVA	Gross Value Added
HR	Human Resources
IAB	Institut für Arbeitsmarkt- und Berufsforschung, Die Forschungseinrichtung der Deutschen Bundesagentur für Arbeit (Institute for Employment Research, The Research Institute of the German Federal Employment Agency)
ICT	Information and communication technologies
ISTAT	Istituto Nazionale di Statistica (Italian National Institute of Statistics)
JRC/EC	Joint Research Centre of the European Commission
LAU	Local administrative units
KIBS	Knowledge intensive business services
LQ	Location quotient
MISTA	Metropolitan Industrial Spatial Strategies & Economic Sprawl
MR	Metropolitan Regions
NACE	Nomenclature of Economic Activities for Statistics
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development
POLIMI	Politecnico di Milano
R&D	Research and Development
SME	Small and medium-sized enterprises
SBS	Structural Business Statistics
SWOT	Strengthens, Weaknesses, Opportunities and Threats
US	United States
WIFO	Austrian Institute of Economic Research
WIOD	World Input Output Database
1st Metros	First-tier metropolitan regions

1 Introduction: approach and definitions

The MISTA (Metropolitan Industrial Spatial Strategies and Economic Sprawl) project aimed to develop an understanding of the current contrasted and complex relationship between the city and industrial land, manufacturing and productive activities. The project does so through producing an updated and critical understanding of how the sector has evolved over the last decades across Europe and in particular in large urban areas.

The project intends to support (re-)developing a strategic relationship with manufacturing and production systems within the contemporary urban economy and life. In this perspective, the project aims at considering critically the complex debate on the consequences of deindustrialization and changing of the urban economic base. In doing so it heavily builds on the experiences of the seven stakeholder cities/urban areas: Berlin, Oslo, Riga, Stuttgart, Turin, Vienna and Warsaw.

The pan-European project team that has conducted the research was led by the Politecnico di Milano (POLIMI / Italy) and supported by the Austrian Institute for Economic Research (WIFO / Austria), the Metropolitan Research Institute (MRI / Hungary) and the LATITUDE – Platform for urban research and design (Brussels). The multi-disciplinary brought together expertise in urban geography, urban and regional economics, urban planning and design and specific expertise on manufacturing in cities.

2 Empirical analysis

The first aim of the MISTA project was to provide an empirical overview of the development of industry in European urban agglomerations focusing particularly on trends over the last 30 years. Such an analysis requires a range of sources of comparable data. This can include: regionally disaggregated level data for functional metropolitan regions; data at a disaggregated sector level; longitudinal data for the medium and long term and data comparable across EU-countries. No such database was available and/or "ready to use" that met all these requirements.

The MISTA project team decided to use a variety of data sets according to the specific research topics analysed. For an EU level overview, the focus was on harmonised data from the Regional Accounts and Regional Business Demography for employment and GVA. These allow for the analysis of long-term sectoral trends the period 1995 to 2017. By contrast, for the analyses at a disaggregated sectoral level, data from the European Labour Force Survey (ELFS) and the European Structural Business Statistics (SBS) were used. In particular the SBS provided information on the development of employment at a NACE 2-digit sectoral level, while the ELFS was used to depict more recent educational and occupational employment trends in the production sector of metropolitan regions.

Urban regions, defined by settlement or interdependence parameters, usually cross political-administrative boundaries or sometimes fall short of them which makes it difficult to analyse them. European comparisons based on city regions from an administrative point of view therefore run the risk of being massively distorted. Consequently, the MISTA-project team decided to focus on city regions based on functional delineations. These include the city as a local administrative unit as well as the surrounding travel-to-work-area (commuting zone).

To define the scope of production activities, the project team engaged in discussions with the seven stakeholder cities and a review of the European data sources. The result involved focusing on the following sectors (and NACE groups): transport and logistics (NACE H), wholesale and storage (NACE 46 + 45), competitive production (NACE C), production for local markets (also NACE C), material services including building sector (NACE F), general workshops, repair services (NACE 95).

3 Industry in the city: Trends, Forecasts and Scenarios.

The MISTA project found a number of well-founded economic arguments showing that industry remains an important sector for economic development in urban centres. Among the most notable aspects: the special role of industry in driving research and development (innovation); the capacity to improve productivity and thus wage growth; and the strong forward and backward (input-output) linkages provided by industry. Based on the empirical research, urban regions and not just cities, need to be used as a frame of reference to understand industrial systems and larger production processes. Urban regions play an important role in the production system of the EU in general. More than half (54%) of the workforce in European industry (or 19.8 million people) is employed in metropolitan regions and almost two thirds (64%) of the industrial output of the whole European Union is generated in these regions.

The empirical research corroborates previous work indicating a substantial decline in the employment and Gross Value Added (GVA) share in cities since the 1970's. It, however, adds to these results by documenting that, irrespective of the regional level considered, since 1995 there has been a clear long-term de-industrialisation trend for employment in industry but not for gross value added. A decomposition analysis of employment growth of industry in European metro regions, conducted in the project indicates that the bulk of the decline in employment in industry in the period 1990 to 2017 has been due to a substantial increase in labour productivity and thus industrial upgrading rather than "true de-industrialisation". Indeed, productivity increases can explain the total employment loss in this sector in most cities. The effects of "true de-industrialisation" (i.e., a decline of production GVA in cities), by contrast, are often balanced out by additional effects stemming from the growth of metropolitan areas or countries.

This said there are also important differences in the development of productive activities between and within metro regions. For example, within metropolitan regions, production has in general favoured the urban fringes, as industry developed more favourably in the wider metro environs than in the metropolitan core. Therefore, over time intra-metropolitan specialisation has increased alongside the advantages of the metro centres for knowledge-intensive services and of the wider environs for industry production. Despite this, core metro regions remain to be central locations for a modern industry. On the one hand, the increasingly integrated nature of service and manufacturing functions in industrial value chains using "hybrid" and servo-industrial production methods, implies that the industry located in the wider metro region has to rely on the complementary industry-related services located in the metropolitan cores for market success. On the other hand, the changing tastes and lifestyles of consumers (such as increased environmental concerns in urban cores and increased tastes for customisation and individualisation through consumption) and the still growing population in urban cores, has increased the demand for activities related to the implementation of the circular economy and supply of public goods as well for largely small-scale customised productions that has to be satisfied by nearby producers in city centres.

Metropolitan regions provide a range of locational advantages for activities within the production process, which lead to very different development perspectives. For instance, according to the results of the MISTA project, recent growth trends indicate a return of certain forms of production to city regions, as some production sectors have been growing more rapidly in urban regions than in the European average. Although this tendency starts from a rather low level (as more rapidly growing sectors account only for 14% of total employment), this return of production to cities is not restricted to logistics, utilities and some high-tech industries, but also applies to some divisions in consumer goods production and other less technology intensive sectors. These sectors are mainly affiliated with the hand-crafted, design-oriented, high-quality production for local high-income demand.

Even within manufacturing activities remaining in urban regions, research results do not conclude that a complete loss of locational advantages for metro regions. Rather, recent growth trends suggest substantial changes in the functional specialisation of urban manufacturing. Thus, manufacturing employment in metro areas has been more strongly affected than other regions by the general trend towards an increasing share of high-skilled employment in recent years, and an outstanding feature of the employment structure of urban manufacturing is a lower share of employed with a medium (upper secondary or vocational) education. As a consequence, manufacturing in urban regions is a more important employer for both high-skilled and low-skilled workers than in other EU regions. Furthermore, the occupational structure of manufacturing in metro regions is much more tertiarised than in other regions. As a result of increasing functional specialisation, European cities' employment in production is much more strongly focused on service occupations than in other regions.

Given these results, it can therefore be expected that the following sectors and branches are likely to experience notable growth rates in urban regions in the future:

1. **Utilities and logistics sectors**, whose development is mainly influenced by the growing urban populations and the increased desire of these populations for public services and mobility.
2. **High-tech and high skilled manufacturing branches**, whose development is mainly driven by the locational advantages of cites as high wage locations that, however, also provide strong location advantages for technological innovations.
3. **Consumer oriented branches with a high degree of product differentiation,** who also profit from population growth as well as the increased desire of consumers for differentiated but locally produced good

In addition, even within manufacturing sectors that do not fall into these categories, both an increased regional and functional specialisation within production activities can be expected. This on the one hand should lead to an increasing number of service and high skilled jobs in urban regions (and in particular in their urban cores). On the other hand, this should also lead to a continuously higher growth of most production activities in the environs of urban regions rather than in their core.

4 Learning from case studies

The MISTA project has developed a comparative analysis of the seven stakeholder metropolitan areas resulting in Case Study Reports. These reports include information from a range of sources: 1) desk research, 2) interviews with stakeholders between November 2019 and February-March 2020, 3) 3-digit NACE data analysis of the main trends of the industrial activities in the stakeholder regions and 4) the *futures workshops* conducted with local stakeholders in October-November 2020.

Although all the case study cities are affected by the same macro-trends of globalisation in the last decades, there are substantial differences in their earlier history of economic development. Stuttgart and especially Turin can be classified as cities dominated by one strong industrial sector, namely the automotive sector, and their local economies are interdependent. Berlin and Vienna have more diversified economies which also have gone through changes, partly due to the collapse of socialism – having a direct effect on East Berlin while changing the position of Vienna from marginally to a centrally located European city. The political shift from socialism to capitalism had direct and dramatic effects on the development of Riga and Warsaw. Oslo is the only city which did not have such abrupt changes in urban development.

From a comparative analysis, the results of the case studies can be summarised as below:

1. **Competition vs available space for foundational activities**. The stakeholder cities (each located within larger metropolitan areas across Europe) are all undergoing similar restructuring of their economies that result in a decreasing share of manufacturing in employment. However, this restructuring process, under increasing growth pressure in most of the seven cities, has different spatial and structural consequences, which is linked to the differences in the competition for industrial land. In those stakeholder areas where the growth pressure is lower and brownfield areas available (such as Turin), the major challenge is making the local industry more competitive. In areas where there are no land reserves and the growth pressure is intense, manufacturing may leave the urban core causing deficiencies with regard to foundational activities (such as food production) and lack jobs for the lower skilled (like Oslo).
2. **Strengthening the core activities versus diversification**. The manufacturing profile of the core cities and the agglomerations are in most cases different. There is a potential of strengthening the links between inside and outside of core city productive activities which may be able to increase the knowledge base of the metropolitan area. There are different strategies to do that, either to strengthen the core activities of the metropolitan areas (what happens in Stuttgart or Turin) or create a more dispersed economic structure based on small scale manufacturing sectors with high growth potential (as in Oslo or Vienna).
3. **Dependence on strong metropolitan governance**. Seen from outside, the metropolitan scale is the most viable operational scale for industrial activities. This does not reflect residents and employees that often operate at a local scale, the municipal scale. The clustering of municipalities within the metropolitan area complicates governance. A metropolitan scale is necessary to address innovation and retain basic industrial functions close to cities and within the metro areas.
4. **Finding smart local strategies.** Several good initiatives were identified in the stakeholder cities. Some of these functioned at am metropolitan level, ensuring more

balanced development of different functions and modernisation of industry. Smarter use of financial incentives, planning and taxation tools and making the process of spatial planning and economic development more participative on local and metro level might lead to more favourable results in terms of keeping and modernising industry.

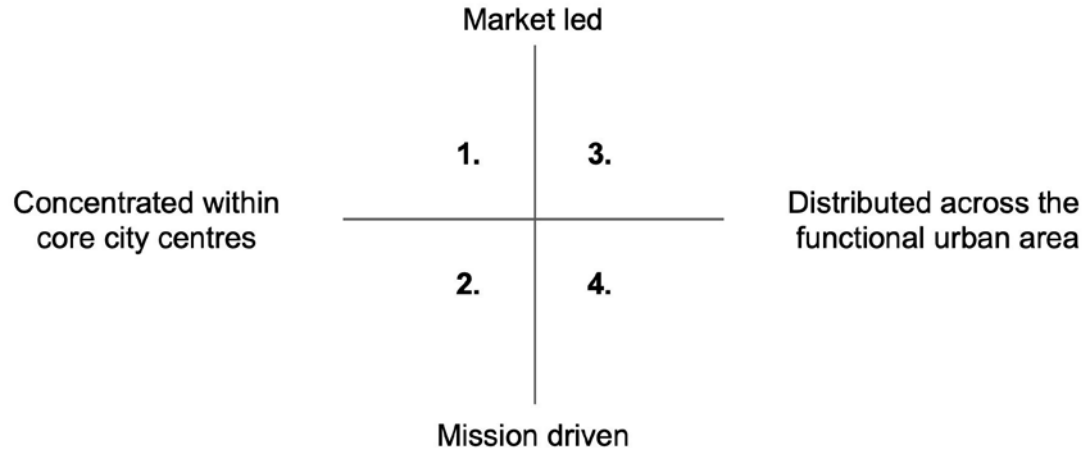
5 The role of the public sector: four policy scenarios

The public sector has a large role to play in stimulating and shaping the local economy, which is particularly under-appreciated when dealing with issues that do not follow market trends or a popular political narrative. The analysis phase of the project found that public authorities needed to be convinced and motivated from within and this drive needed to be shared amongst local and regional public authorities. As noted in section 3, above, urban regions are the operational scale for industrial activities. Without alignment of public authorities within a larger urban region, the impact of the public sector is likely to be limited or risk conflict.

The MISTA project developed scenarios to help gauge where public authorities stood and to help define their ambitions. The scenarios are aimed at supporting stakeholders to develop 'strategies' for industrial areas and to manage economic sprawl. As each of the seven cities has very different spatial challenges, local economies and governance conditions, it was very challenging to define suitable but transferable recommendations. The futures workshops held with the stakeholder cities (held between September and November 2020) and the development of an Atlas of Inspirational Cases were used to test and explore these scenarios. The scenarios are based on two simple questions:

1. **What is the role of the public sector?** Should the public sector be providing leadership or aligning local actors defining missions? Or should the public sector be providing the most suitable conditions for leadership and initiatives from outside of the public sector to address these challenges by allowing the market to flourish?
2. **What is the scale of action?** Should action be driven by strong city cores that can align their tax base, their high-skilled workers and research organisations? Or should the focus lie on metropolitan regions, where space is more affordable, where accessibility and transport costs are lower, where labour costs may be more affordable and where there is a lower likelihood of conflict between land uses?

Figure 5.1: The two axes that define the policy scenarios.



Source: ESPON MISTA (2020).

Four scenarios

Using these two simple questions, cities that are interested in addressing their productive sector are presented with four scenarios and four distinct courses of action. As noted in Figure 1, the vertical axis refers to the question of the role of the public sector. *Market led* refers to providing space and conditions for action, without rigidly stipulating the kinds of activities that the market (or non-public actors) would respond with. *Mission driven* refers to an articulated agenda for the local economy which can be translated into a mix of: land use planning, investment in infrastructure, space, research and education programs, stimulus packages for businesses, instrumentalisation of taxation, business development and so forth (see Mazzucato 2013). In Europe, both market-led and mission driven conditions require the public sector to make some determined decisions regarding land use; the key difference is the level of active participation from the public sector.

The horizontal axis refers to the scale of action. At one extreme is the *city core* which often involves a large local public authority which is far more powerful and richer than the surrounding municipalities, it may contain many important institutions like universities, hospitals and good public transport systems yet is also home to far more complex challenges (such as poverty, inequality, waste treatment issues, pollution, property prices, congestion and so forth). The surrounding municipalities or even region(s) may have very different priorities, histories and mindsets compared to the core city. This is fertile ground for tension. Cities researched in this project, such as Berlin, Vienna and Warsaw, are in this situation.

Focusing policy on the core city may allow ambitions to move faster. But ultimately the cost of land, the possible land use conflicts, the congestion, the environmental regulation and inefficiencies in working in urban areas can outweigh the benefits for businesses (see figure 5.1). Businesses that decide to leave the urban core may not find attractive conditions outside of the city and may be more inclined to move a part or all of their operations offshore. By contrast, governing at the metropolitan scale or functional urban area can provide space to allow businesses to be located on a site that is most affordable, accessible and attractive while not losing access to a larger production system. Yet metropolitan scale governance can be significantly slower, involving local authorities with very different interests and political priorities while being challenging to provide fiscal alignment between the winners and losers. Considering the local circumstances, governance options may be very limited, in other cases public authorities within the core city and surrounding areas may be in a position to make strategic decisions at a metropolitan scale.

Regardless of planning regimes and alignment of local and metropolitan scale public authorities, there is plenty the public sector can do. The four scenarios coupled with inspirational cases (see following section) provide distinct opportunities for policy and planning.

6 Learning from inspirational cases

The MISTA project aims to enhance the capacity to develop forward-looking strategies, innovative policies, effective tools, as well as governance frameworks to deal with the changing nature of the industrial sector and its role in the city. All cities have unique social, economic and spatial conditions that help shape their economies and the results of this research project caution against looking for generic solutions. Defining what to do can be overwhelming for the public sector, however there are many examples of how cities are addressing their local economy through the lens of the industry, industrial activities and production. Observing how other cities are activating can provide a menu of pathways to address the changing role and nature of the industry in the city and help avoid. The Atlas of inspirational cases has been developed to provide a collection of actions that can be made and interpreted according to the local context.

The “Atlas of Inspirational cases” has been a useful tool for discussion and interaction with stakeholders. The Atlas is conceived as a selection of “inspirational stories" able to stimulate knowledge transfer in supporting stakeholder cities in the development of potential strategies, effective tools and innovative policies. These are by no means ready-to use solutions that can be applied directly, but they help identify pre-conditions necessary to implement a certain kind of action. The cases have been collected under four typologies: 1) visions and strategic frameworks; 2) plans and policies; 3) Tools and programs; 4) projects. Each of these are associated with different scales of action, approaches (from planning and policy, to concrete interventions) and investment. As a result of this process, we have identified five key conclusions, noted below.

1) The need of new analytical lens and monitoring tools.

There is an evident and urgent need to restructure the way data is collected to grasp the nature of the contemporary industrial processes and the manufacturing sector. The inspirational cases show a range of efforts initiated by cities across Europe but the impact of any policy, plan or project can be slow while external factors (such as global production trends) can have a large influence on the local economy. Cities must have a strong grasp of how their local economies and production systems operate to ensure they are reactive to external forces and reactive to larger trends.

2) Visions, problem setting and a metropolitan governance: generating new awareness and capacity to react.

Together with a new understanding of industrial processes and manufacturing, adopting a metropolitan/regional perspective, can contribute to a better awareness of the problem and guide new visions at the scale where industrial processes are most active. The inspirational cases identify the potential for a regional/metropolitan governance framework in developing an integrated territorial strategy, as well as the fragility and complexity of developing a shared vision of the problems to be addressed. Public authorities in core cities are often drivers of

change as they have limited but expensive land. Transcalar alliances are evidently crucial. Translocal deals are crucial anyway in the globalisation of the productive city. In all cases, the public sector is playing a major role in putting forward frameworks.

3) The role of spatial planning: reinventing planning to reinvent the productive city.

Spatial planning can play a crucial role in fostering a new dialogue between the city and industrial activities. This provided a key criterion for selecting the inspirational cases, presenting different interpretations of the role of spatial planning, ranging from a strong regulative approach based on traditional planning functions (like land use regulation and zoning), to the design of spatial patterns to host the industry in the city (including the experimentation of urban regeneration strategies and the design of new industrial functions in the fringes of the urban region). The inspirational cases show how public authorities are looking for a new dialogue between spatial planning and economic actors in order to reduce the communication and knowledge gap and reinforce the co-production of knowledge as the basis for a more efficient planning process. All in all, the inspirational cases show how spatial planning is being reinvented to support a new economic base for the city.

4) Innovative tools to operationalise new relationships between the city and the industry.

A wide range of tools have been developed across Europe to address problems associated with operationalising development in the industrial sector, aimed particularly at high-tech innovation. Examples include agencies (public and private), public-private partnerships, product and business incubators, fiscal tools and new spaces for production (such as business parks or mixed-use development). In the past many of these tools have been profit-driven, yet increasingly tools to address societally motivated outcomes (such as for the circular or foundational economy) are being explored.

5) Innovative urban and architectural design solutions.

The design of innovative functional and spatial solutions is one of the most interesting challenges for both the public and the private sectors. One-off initiatives or pilot projects have been developed during the last decade to contribute to explore new ways of embedding manufacturing within the urban fabric. Pilot projects help showcase the reuse of un- or underused spaces, testing new conditions for coexistence between economic functions and urban life. Functional mix, quality of urban design and open spaces, participation of local entrepreneurs and citizens are ingredients are helping to encourage traditional real-estate dynamics to be more inclusive of manufacturing activities and industrial space. The public sector remains a key player, but new actors are emerging such as universities, the social economy sector, new entrepreneurs.

7 Policy recommendations

The final objective of the MISTA project is to provide policy recommendations for cities engaged in planning and policy for industrial land use, manufacturing and productive activities. The formulation of these recommendations is based on the identification of four problem statements identified during the project.

The literature review, baseline analysis, targeted analysis of the seven cities, the Atlas of inspirational cases, the future workshop activities and scenario elaboration have been crucial for this final step. Despite the focus on seven cities, these recommendations are relevant to most cities in Europe. The seven stakeholder cities represent key actors in metropolitan regions which are in various conditions of growth and development pressure, they include both medium-sized and large cities, they have both strong and weak industrial sectors, they represent both market-driven and mission driven policy dynamics and they represent a range of different relationships between the city scale and the metropolitan area. Finally, it must be noted that neither the recommendations nor the inspirational cases offer a one-size-fits-all solution or a recipe to be adopted by one city or another as such.

1. **Knowledge production.** Cities and metropolitan areas need clear insights on industrial processes and their impact. On a general level, the MISTA Project has shown that more in depth data analysis is needed to underpin strategic decision making regarding the value of production activities within the local economy. Indeed, there is no clear view on the location of different economic activities, their interrelation and their impact on employment, transportation and housing. Within this general perspective, it is suggested that cities and metropolitan areas should constantly remain engaged with their local production activities and processes in order to help facilitate strategic knowledge production and exchange; they should be able to reduce the gap between economic actors and decision makers. On the other hand, metropolitan authorities can support actors and identify space to better contribute to the wider value chain, since the metropolitan scale is fundamental for the effectiveness and success of productive systems.

2. **Spatial foresight.** Industrial location factors and urban agglomeration are still partly dependent on 20th century spatial planning principles. But both core cities and metropolitan areas can foster new spatial conditions for dialogue between the industry and the city. In particular, in relation to the core city level, it is suggested that:
    - Core cities should take a strategic position on the most effective use of their industrial land in order to embed manufacturing and productive activities within their local economy.
    - Core cities should be able to enhance a joint dialogue with other municipalities and develop partnerships to facilitate innovation processes in industrial relocation.
    - Local public authorities have limited tools to select and attract production activities that could be beneficial to the city but can have a role in preserving industry space and land in the city for production.
    - Core Cities should use their capacity for dialogue and negotiation to activate or steer the market.

- Pressure on rezoning industrial land should be relieved through intensification, mixed-use buildings and strong zoning controls.
- Cities can develop tools to guarantee better quality spaces for production.
- Redevelopment of brownfield industrial land can be used to modernise links to a city's industrial heritage local economy while also providing space for compatible demands for space.

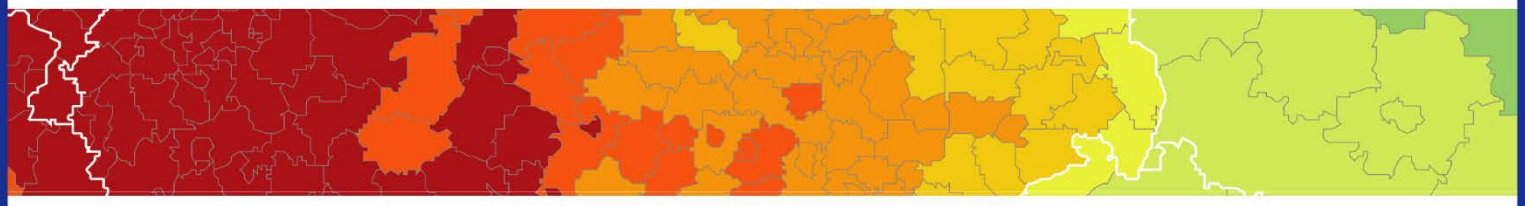
At a metropolitan level, it is suggested that:

- Metropolitan governance can play a crucial role in developing an integrated vision, strategy and services to attract businesses.
- Metropolitan areas should explore new tools to support economic development of industrial land, manufacturing and productive activities.
- Metropolitan areas should support small municipalities providing the knowledge, competencies and resources needed to interpret and implement metropolitan plans.
- Compensation or equalisation mechanisms are needed to reinforce territorial cohesion.
- Metropolitan areas should actively support brownfield regeneration, in order to reduce sprawl and urban blight.

3. **Metropolitan leadership**. Production activities are changing due to global processes (such as digitalisation and the 4th Industrial revolution). Metropolitan policy must guide the process of embracing new technology or supporting the transition of their local economy. Well-functioning metropolitan areas are built on robust organisational structure based on commitment from their local public authorities. They should be frontrunners of (technological) change and develop strategic visions based on new transcalar metropolitan alliances. The economic success of urban regions and metropolitan areas will heavily depend on the prosperity of new manufacturing cycles to address a range of systemic challenges associated with work, resource management, innovation and so on. Likewise, the metropolitan scale is crucial for promoting a more diversified and integrated vision of a local production system, particularly through promoting green technology and social benefits of industrial activities and manufacturing. Metropolitan governance should assist citizens to cope with economic change by gaining new skills and knowledge. Industrial changes require quick adaptation of the labour force. The public sector can also become more reactive to the changing needs of industry, as well as facilitating innovation through linking production processes with numerous forms of education that could be feeding the workforce (and primary/secondary school education, technical colleges, tertiary education and practical professional skills development training). Finally, Industrial development requires suitable conditions for innovation and the metropolitan scale should play a facilitating role, supporting research and development, setting ambitions, reducing bureaucratic and administrative barriers and offering space for experimentation and long-term operations.

4. **Collaboration**. Financial, technical and strategic tools are important success factors for local/metropolitan level strategies for industrial land and productive activities. In

particular, planning and development should be inclusive to a wide range of stakeholders to build institutional capacity. Mission driven projects and alliances can help achieve common goals or vision and concretely activate a broad range of actors to address urban and metropolitan challenges. Public-private partnerships and agencies can play a pivotal role in developing competitive market ready projects. Fair and well-balanced public-private partnerships can be launched, and industry agencies supported to ensure results are relevant to the market and businesses remain competitive.



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