

(re)assembling  
the productive city  
handbook

Mista Team, ESPON 2022

# MAKING

# GROUND







# Foreword

The New Leipzig Charter, approved in December 2020, provides an update to the Chart that was first adopted in 2007 and confirms the role of cities for the future of European Union. This book is the result of a recent research project, funded by ESPON, EGTC, ESPON MISTA, “Metropolitan Industrial Strategies and Economic Sprawl” (<https://www.espon.eu/mista>). The research project aimed at producing knowledge and policy advice aligned with the main principles of this new act of engagement signed by the ministries of the EU member states. According to the new charter cities accept their “transformative power” to support sustainable development, through developing an integrated approach to “just, green and productive dimensions”. These dimensions provide cities with pathways to deal with and deal with social, economic and ecological challenges. This book develops a solid approach to the “productive dimension”, by arguing the need of developing a diversified economy, able to ensure “a sound financial base for sustainable urban development” and by suggesting an approach to economic development strongly integrated with spatial planning.

The new productive city base draws from the emergence of new sectors that are more digital, service oriented, low carbon, knowledge based and connected to their cultural-industrial context. These are revealing new opportunities for the re-integration of production into cities and urban areas, based on the design of new attractive multifunctional spaces and mixed-use neighbourhoods, where people can live, work and recreate. These manufacturing spaces are fully integrated, rather than rejected by cities and urban areas that need their support to grow and work on an everyday basis. The Productive city dialogues, naturally, with the Just city and the Green city. On the one hand, the Productive city is a pillar to provide citizens opportunities to access jobs, resources and a decent life. On the other hand, it contributes to reducing the environmental impact of urbanisation by investing in new technologies for both production and consumption and promoting a circular economy.

The New Leipzig Charter stresses the need to think about cities simultaneously at different scales: building viable and integrated neighbourhood scale; investing in the role of local authorities; and at the city scale to provide leadership through coordination and cooperation. In this respect governance is the central issue to develop new legal frameworks and conditions, new investment capacities, new expertise and skills to steer material and immaterial infrastructure.

Finally, the Charter stresses the role of a renewed “active and strategic land policy and land use planning” and “actively shaping digital transformation”. This requires support from the national and European level through funding, policies and programs concerning urban issues. On a more general and methodological level, the Charter supports the idea of the EU as a learning platform, built through networks and initiatives that enable knowledge exchange and co-production built on good practices and innovative approaches.

This book aims at providing an important contribution to enabling the New Leipzig Charter by providing an interpretation of the “productive city”, including: fresh research showing the link between the city and productive activities; a new awareness of the role of the public sector; and, in particular, a synopsis of innovative approaches for policy-makers and spatial planning. It shows how cities across the EU offer a wide variety of examples of how to create a “productive city” The inspirational cases in this report showcase how cities and urban policies can contribute to that “transformative power of cities for the common good”, as noted in the 2020 Leipzig Chart. The integrated, place-based, participative, multilevel nature of the reflections and considerations noted in this research project present both challenges and possible opportunities.

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# What can be the role of spatial research and why the topic of the productive city is a challenging one?



“Exploring the impact and the relations between production activities and territories is an ongoing pursuit, especially as industrial activities are driven by innovation. This transformative power exerted by the manufacturing sector extends from jobs to land use, from people to places. Cities and their metropolitan areas are constantly under an economic and environmental pressure, in a highly competitive global context – where both individuals and private companies are in the search of stability and good life or work conditions. Research shows that modern productive sectors tend to relocate deeper into the core of metropolitan areas, and they are dependent on an efficient metropolitan governance system. The role of the ESPON Programme is, hence, to analyse the territorial impacts of these trends, particularly in the context of future-proofing cities, and provide solid evidence and advice to decision makers on how to address them through adequate policies and multi-level governance schemes.

With the MISTA project, ESPON provides a unique European-wide, evidence on emerging and projected trends in industrial transformation of the metropolitan areas. And this book uncodifies the main findings of the project, making them accessible to everyone, from planning experts to urban development enthusiasts. It is also an invitation to open a dialogue on productive cities in a wider community of politicians, experts and citizen groups.

MAKING GROUND (re)assembling the productive city handbook creates an easy to access and a ready to use collection of inspirational stories that policymakers can directly use for their spatial and industrial metropolitan strategies. And this is an impactful way for spatial research to bring its contribution.”

**Wiktor Szydarowski**  
— ESPON Director



# Addressing a dilemma: productive or not productive?



“Cities, especially growing ones, are facing a dilemma. On the one hand, they run out of buildable land, so all properties not making money at a competitive rate are bound for redevelopment and transformation. Land once used for production, storage and other physical work fits this description and is often the prime target for new development. Luxury residences and office parks move in, crafts and workplaces that supply our daily lives are driven out. If lucky, they relocate; if not, they go out of business. On the other hand, many arguments can be made to foster and preserve a healthy and diverse local economy as the place for innovation, jobs, or city residents’ convenience. These businesses need affordable, suitable land reserved for and tailored to their needs.

One way out of this dilemma is “thinking out of the box”: which functions benefit from being in very urban, central locations, and which ones can benefit from better access or fewer restrictions in the metro region? And: how can we organize such a theoretical optimum to benefit the entire metropolitan population?

The MISTA project explored the topic and found many like-minded people around Europe and beyond. The idea of productive cities even became prominent in the New Leipzig Charter 2020. We must and can do something to keep our metros diverse places of work. This book shares insights and inspirations.”

**Michael Rosenberger**

— City of Vienna, Department for Urban  
and Regional Planning

# Which policies to support the productive city as in the Leipzig Charter?



“Cities act as catalysts for creativity, innovation and prosperity in Europe and generate up to 85 % of its GDP. Diverse policy areas support the productive city dimension of the New Leipzig Charter. Land use and urban planning, local businesses, labour and skills, but also urban regeneration and housing. The productive city above all needs integrated policies and interconnection of the dimensions of the New Leipzig Charter.

A functional urban area approach, which enhances urban-rural linkages and cooperation between local actors, a strengthened role of smaller cities providing access to a range of public and private services, and a polycentric territorial development, are also key for unlocking the potential of cities and their hinterlands. The productive city therefore calls for place-based policies and strong partnerships between various levels of government, citizens, civil society, industry, businesses and other local actors. The EU objectives for green and digital transition will create new opportunities but also new challenges. Cohesion policy has a role in supporting investments in these areas, in supporting actors have the capacity to sustain such investments, and in promoting innovation.

In 2021-2027 Cohesion policy, each EU country will dedicate at least 8% of the European Regional Development Fund to sustainable, integrated urban development and investments will also contribute to diversifying cities’ local economies and strengthening their resilience. The European Urban Initiative will finance actions to experiment and develop transferable and scalable innovative solutions, improve cities’ capacities, and promote knowledge sharing. All this benefits the productive city that has a need for policies that enable knowledge sharing, upscaling and transferring successful practices.”

**Marek Teplansky**

— Head Of Unit Inclusive Growth, Urban and Territorial Development, Directorate General For Regional and Urban Policy; European Commission







# The present and future of the manufacturing sector in cities and metro-regions

01



Production is important for the economic development of European metropolitan regions, because of its role as a driver of innovation, productivity, and wage growth as well as its “carrier” function for trade in services. According to a comprehensive data analysis, de-industrialisation has slowed down in most European metropolitan regions and given way to re-industrialisation in some. This provides for a cautiously optimistic view of the sector’s future in metropolitan regions. There are, however, substantial differences between individual metropolitan regions in a sectoral and spatial dimension. These appear to be even wider once networks of technologically related industries are considered.

Supporting the production sector in urban contexts therefore requires place specific approaches.





# 1.1

## Introduction

Since the end of the 1970s, the production of physical goods has lost considerably in terms of its shares in total output and employment in developed countries. This de-industrialisation was particularly pronounced in urban areas. For instance, in the 100 largest metropolitan regions of the US, the decline in employment shares of manufacturing exceeded the national average by 10 percentage points between 1980 and 2011 (*Helper et al.*, 2012a). Similarly, in the 58 largest metropolitan regions of the EU, the employment share of the production sector decreased by 41%, relative to 28% in the average EU between 1995 to 2017.

Until the early 2000s, this massive change was considered a natural side effect of a fundamental shift towards a post-industrial, service-oriented, and knowledge-based economy. Therefore it was also an issue of little concern to policymakers. More recently, however, the European discourse on this topic changed dramatically on account of the higher resilience of industrial regions to the global crisis of 2009 and the vulnerability of global supply-chains uncovered by the COVID-19 crisis. Consequently, industrial policy in metropolitan areas is once more a heavily debated issue. Already in 2010, the *EU-Commission* in its document “*An integrated industrial policy for the globalisation era. Putting competitiveness and sustainability at centre stage*”, stated that “a vibrant and highly competitive EU manufacturing sector can provide the resources and many of the solutions for the societal challenges facing the EU, such as climate change, health and the ageing population, and the development of a healthy, safe

and secure society and thriving social market economy” (*European Commission*, 2010, p. 4). This view was consequently reaffirmed in the recently published industrial strategy of the EU Commission (*European Commission*, 2020) and is also reflected in regional policy documents such as the Leipzig Charta<sup>1</sup>. This document states that “small-scale businesses, low-emission-manufacturing and urban agriculture can be stimulated to re-integrate production into cities and urban areas, enabling and promoting new forms of mixed-use neighbourhoods”. It makes the productive city one of its central objectives in this transformation” (The New Leipzig Charta, p 5).

This renewed policy interest in the production sector for urban development is based on the conviction that its characteristics render it particularly important on the path for growth, enabling the socio-economic transformation which Europe has embarked upon. This assumption is also supported by recent economic theories stressing that - next to capital accumulation - technology and knowledge as well as demand and supply linkages between related industries are of primary importance for economic growth and add an element of path dependence to economic development processes. Therefore, it has become a widespread conviction that regional growth policies require place-based strategies founded on a solid understanding of the specific industrial development in cities. This first chapter of the book, analyses the development of the production sector in European metropolitan regions. It asks what features of the production sector make it important for regional development, how the

<sup>1</sup> See: [https://www.nationale-stadtentwicklungspolitik.de/NSPWeb/DE/Initiative/Leipzig-Charta/leipzig-charta\\_node.html](https://www.nationale-stadtentwicklungspolitik.de/NSPWeb/DE/Initiative/Leipzig-Charta/leipzig-charta_node.html)

production sector fared in urban region in the last three decades, which parts of production may be returning to cities and how the changing structure of urban production is reflected in its employment patterns. It also presents

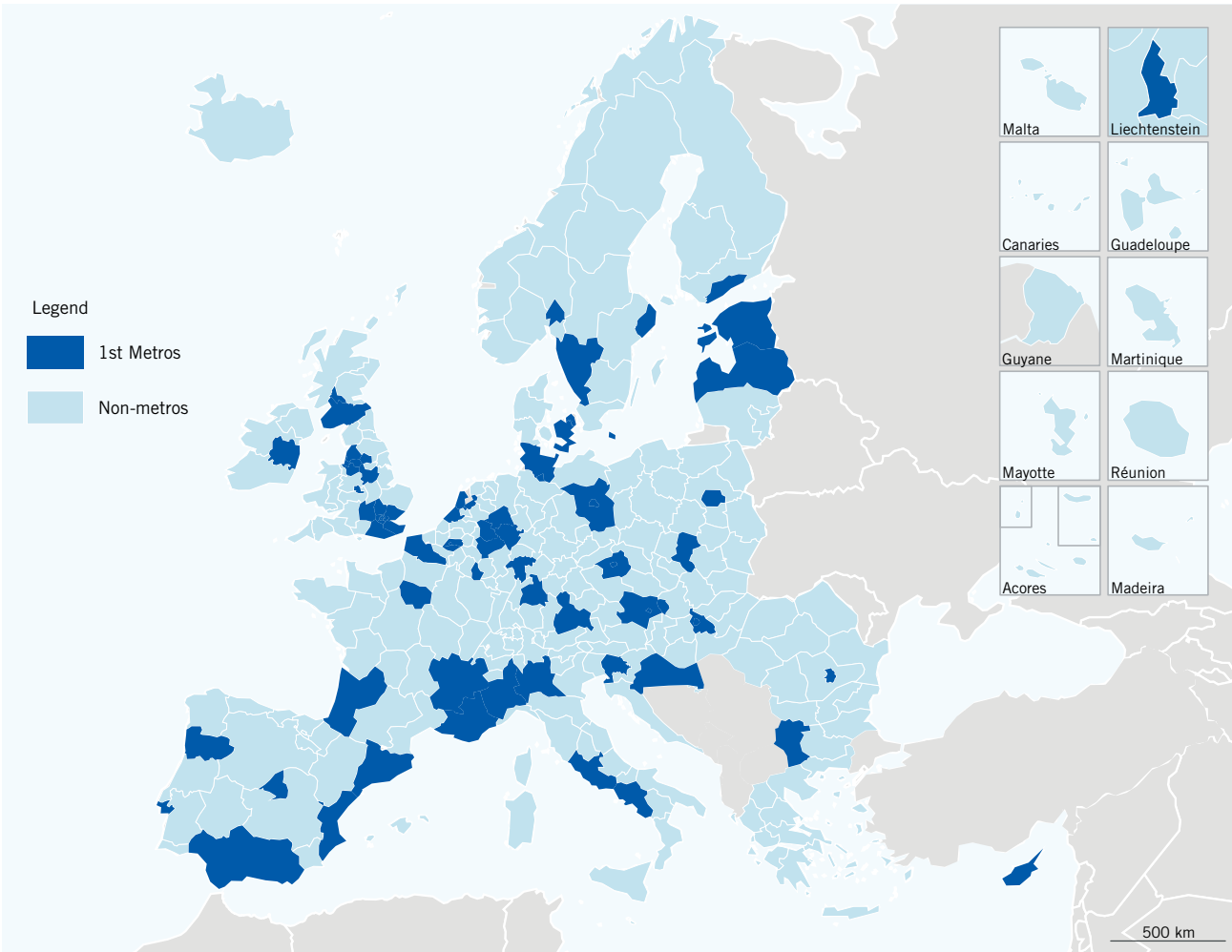
an empirical SWOT analysis of the production sector in seven metropolitan regions covered as case studies in the recent ESPON MISTA 2020 project.

#### **DATA AND DEFINITIONS**

This chapter uses a variety of data sources according to the topics analysed. For the EU level analysis of employment and values added, we use harmonised data on (NACE 1 digit) employment, and gross value added (GVA) at the NUTS 3 level from European Commission's Annual Regional Database (ARDECO), maintained by the Joint Research Centre. This is augmented by data from the European Labour Force Survey (ELFS) and the European Structural Business Statistics (SBS) to analyse employment developments at a NACE 2-digit sectoral level and more recent occupational employment trends in the production sector of metropolitan regions. To explore the case study cities, we use national data sources that provide information on the employment of NACE 3-digit branches at a regional level below NUTS3. Further, the "production sector" is approximated by the NACE 1-digit groups transport and logistics (NACE H), wholesale and storage (NACE 46 + 45), Manufacturing (NACE C) and construction (NACE F) in the 289 "Metropolitan Regions" of the European Union and Norway as defined by Eurostat (2019) and shown in figure 1. These are differentiated by size, income, function (as described by Dijkstra – Poelman, 2011) and specialisation groups. Among these differentiations, the most noticeable is related to the 58 largest metropolitan regions, which we refer to as major metros subsequently and are at the centre of the analysis below.



FIGURE 1: METROPOLITAN REGIONS AND AGGLOMERATION AREAS IN THE EU AND NORWAY



## 1.2

# Production in cities: why care?

The idea that the production sector requires specific policy support has a long-standing tradition in economics. This dates back at least to Kaldor's (1966, 1978) seminal analysis of international growth differences in mid-1960's. In this, Kaldor identified three main characteristics relating to industrial development and economic growth. His analysis, which was confirmed in numerous studies at the national as well as the regional level<sup>2</sup>, shows that higher growth in manufacturing is (all else equal) linked to higher growth in the total economy ("Kaldor's law"). Manufacturing labour productivity growth is positively correlated with manufacturing output ("Kaldor-Verdoorn Law"), and productivity growth in the total economy is positively linked to increase in manufacturing output and negatively to employment in other sectors (see: *Kaldor, 1975; Thirlwall, 1980*). These characteristics have also been shown to be even more relevant for agglomeration areas and justify policies directed at the production sector to this day.

Thus, according to the European R&D survey, manufacturing (NACE C) alone accounted for more than 60% of total business R&D expenditure in the European Union (plus Norway) in 2018. This is 4 times its share in value added. This great importance of manufacturing

**Productivity growth in the total economy is positively linked to growth in manufacturing output and negatively to employment in other sectors**

in European innovation is highly relevant for metropolitan areas as the leaders of knowledge-based production in the EU. The high R&D share has also been largely stable over the last decade. It declined by about 5% between 2009 and 2018. This, however, exclusively benefitted the "other sectors" grouping, where the main drivers have been the electricity, gas, steam and air conditioning supply and water supply, sewerage, waste management and remediation activities, which are all part of production in a broader sense.

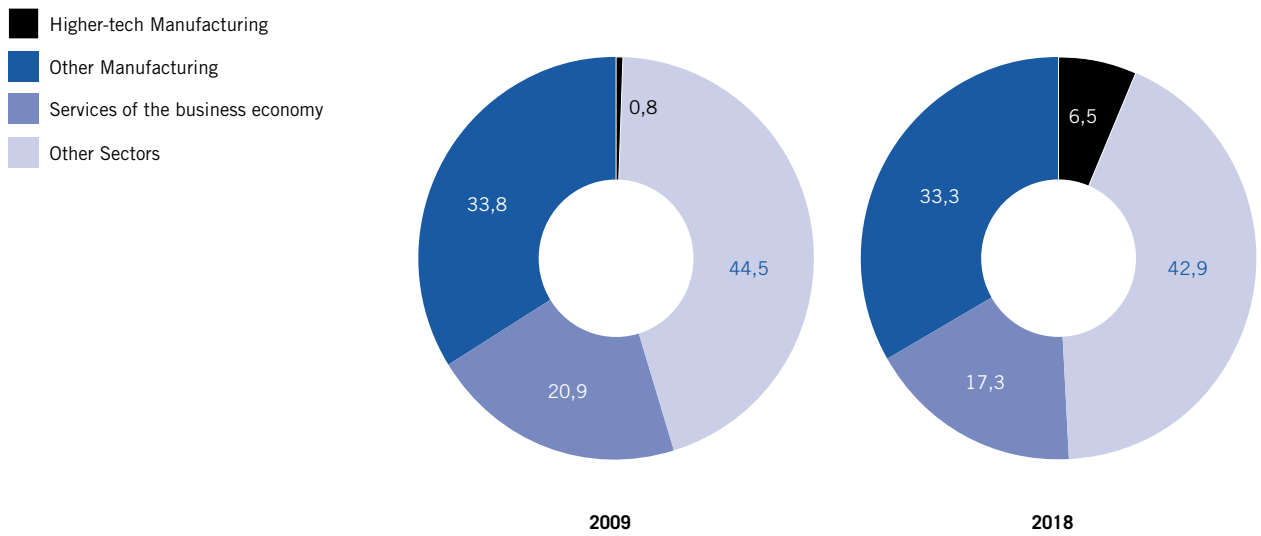
Similarly, according to data from the ARDECO database, from the mid-1990s, in all EU regions labour productivity levels<sup>3</sup> and their growth were higher for the production sector than the total European economy. In addition, larger cities are more productive and their productivity growth in the production sector exceeds that of other regions as a result of (productivity-enhancing) agglomeration and selection effects in metro regions. While productivity growth in the total economy ranged from 24% in the major metro regions to 29% in all EU regions, productivity gains in the production sector amounted from 60% in all EU regions to 70% in metro regions, between 1995 and 2017.

This higher productivity is also reflected in higher sectoral wage levels and dynamics (see Figure 3). According to ARDECO data, employees' compensation in the production sector was € 29,6 per working hour in 2017 in the EU15 countries, some 31% higher than the total economy average. In the EU13, this sectoral wage edge was lower (around 11%). In addition, production shows substantially

<sup>2</sup> E.g. *Necmi, 1999; McCausland – Theodossiou, 2012; Marconi et al., 2016; Gabrisch, 2019 Bernat, 1996; Hansen – Zhang, 1996; Fingleton – McCombie, 1998.*

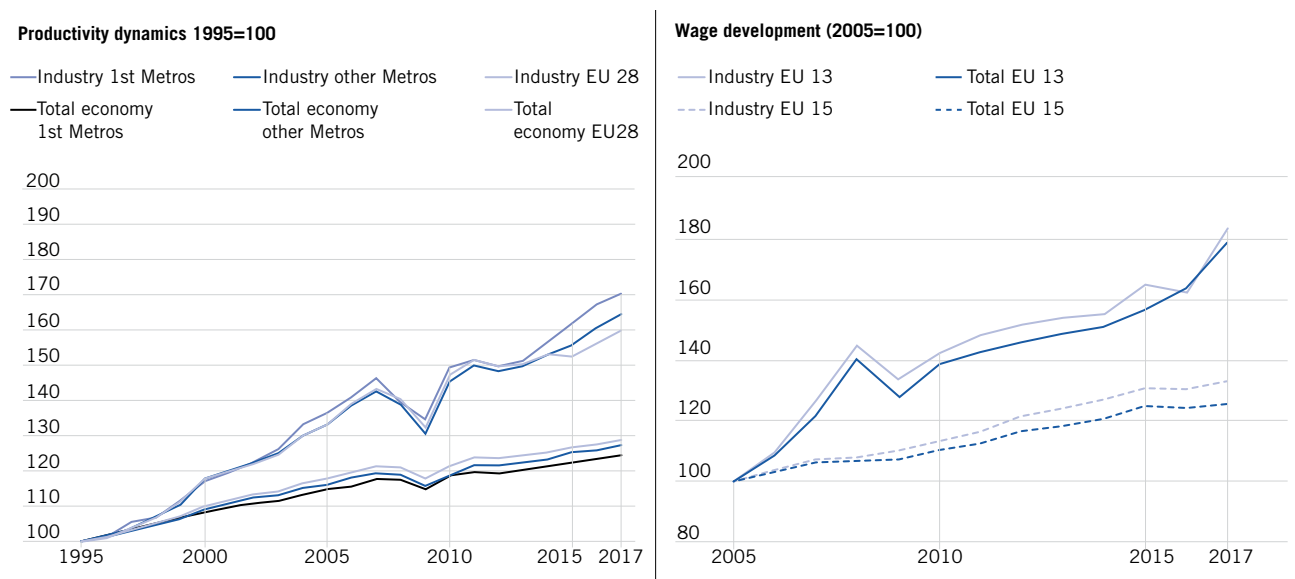
<sup>3</sup> Measured by real GVA per employed in 2017

FIGURE 2: BUSINESS EXPENDITURE ON R&D IN EU MANUFACTURING AND THE EUROPEAN ECONOMY TOTAL 2009 and 2018



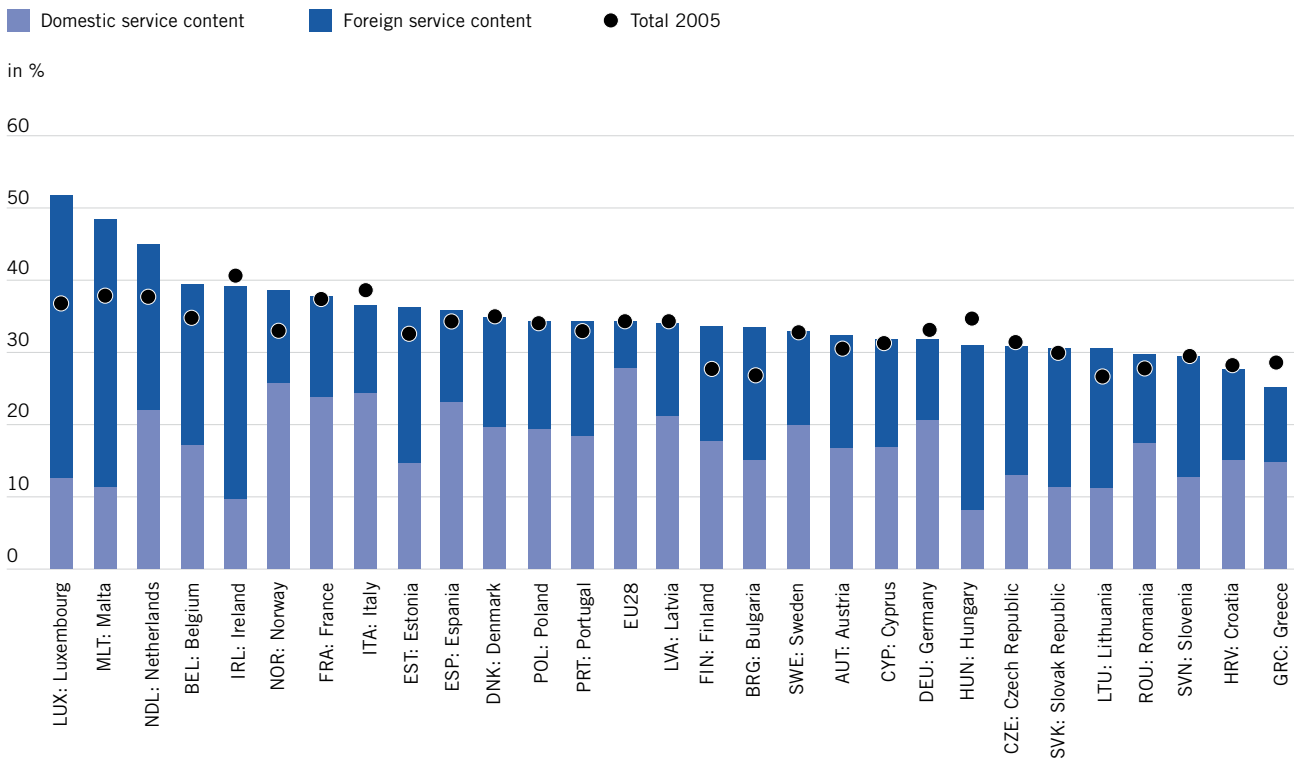
Source: Eurostat, WIFO calculations. – Note: Without Greece, Luxembourg, and Sweden.

FIGURE 3: PRODUCTIVITY AND WAGE DYNAMICS IN EU PRODUCTION AND THE EUROPEAN ECONOMY TOTAL GVA per employed person, constant prices



Source: ARDECO database (JRC/EC); WIFO calculations. Wages exclude Poland

FIGURE 4: SERVICES VALUE-ADDED EMBODIED IN MANUFACTURING EXPORTS  
EU countries, 2016



Source: OECD, 2018a (TiVA Indicators), WIFO calculations.

above-average wage growth rates over the period 2005 to 2017, as wage levels for 2017 exceeded the ones of 2005 by almost 80, while the corresponding growth rates for economy as a whole were below 20%. Therefore, it can be argued that production is something like a “productivity machine” for the EU member states that also supports overall wage growth.

value-added generated from manufacturing exports originates from the service sector. Consequently, the production sector’s exports also have a substantial “carrier function” for services (*Nordas – Kim, 2013*) that are otherwise difficult to export due to their intangible nature.

The production sector also has a vital role in securing the export base for urban economies and facilitating (international) trade in services. While services currently account for more than half of world GDP and around three-quarters of GDP of the developed economies, the worldwide trade volume of 18,9 trillion US\$ in goods still exceeds the 6 trillion US\$ in services for 2019<sup>4</sup>. This means that an export-based manufacturing sector is also likely to be of considerable importance for developing metro regions, that are usually orientated towards a strong service sector. This applies even more strongly when accounting for the critical role of the service sector in the supply chains of the production sector. According to data from the OECD TiVA database, 30% to 40% of the

<sup>4</sup> Even if the estimated supply of services through commercial presence (i.e. trade by foreign affiliates; GATS mode 3) is added, trade in services does not match that in goods at present.

## 1.3

# Production in EU Metropolitan regions: Returning to the city?

Evidence also indicates that, in the last one and a half decades, the de-industrialisation of urban centres has slowed-down substantially (or even stopped in some cities). Looking back, between 1995 and 2017, there was a clear tendency for de-industrialisation: the employment decline in the major metropolitan regions was paralleled by a similar, although slightly less pronounced, decline in all European metropolitan regions and the EU in total (Figure 5). By contrast, on account of higher productivity growth in urban production, gross value added (GVA) increased significantly in volume and decreased more modestly in shares (to 81.5% of its 1995 level).

The decline in employment and GVA shares of the production sector has, however, levelled off substantially in both metropolitan and other regions in recent years. In the period since 2009, employment levels in the production sector stagnated while gross value-added increased in the major metropolitan regions. This more favourable recent development of the production sector in cities is — according to several recent contributions — also be expected to continue in the future.

**Recent evidence suggests a more modest speed of de-industrialisation (or even a re-industrialisation in some cities) in the last one and a half decades.**

### 1.3.1 PRODUCTION HAS DEVELOPED MORE FAVOURABLY IN SMALLER, LOWER TIER, MORE INDUSTRIAL CITIES

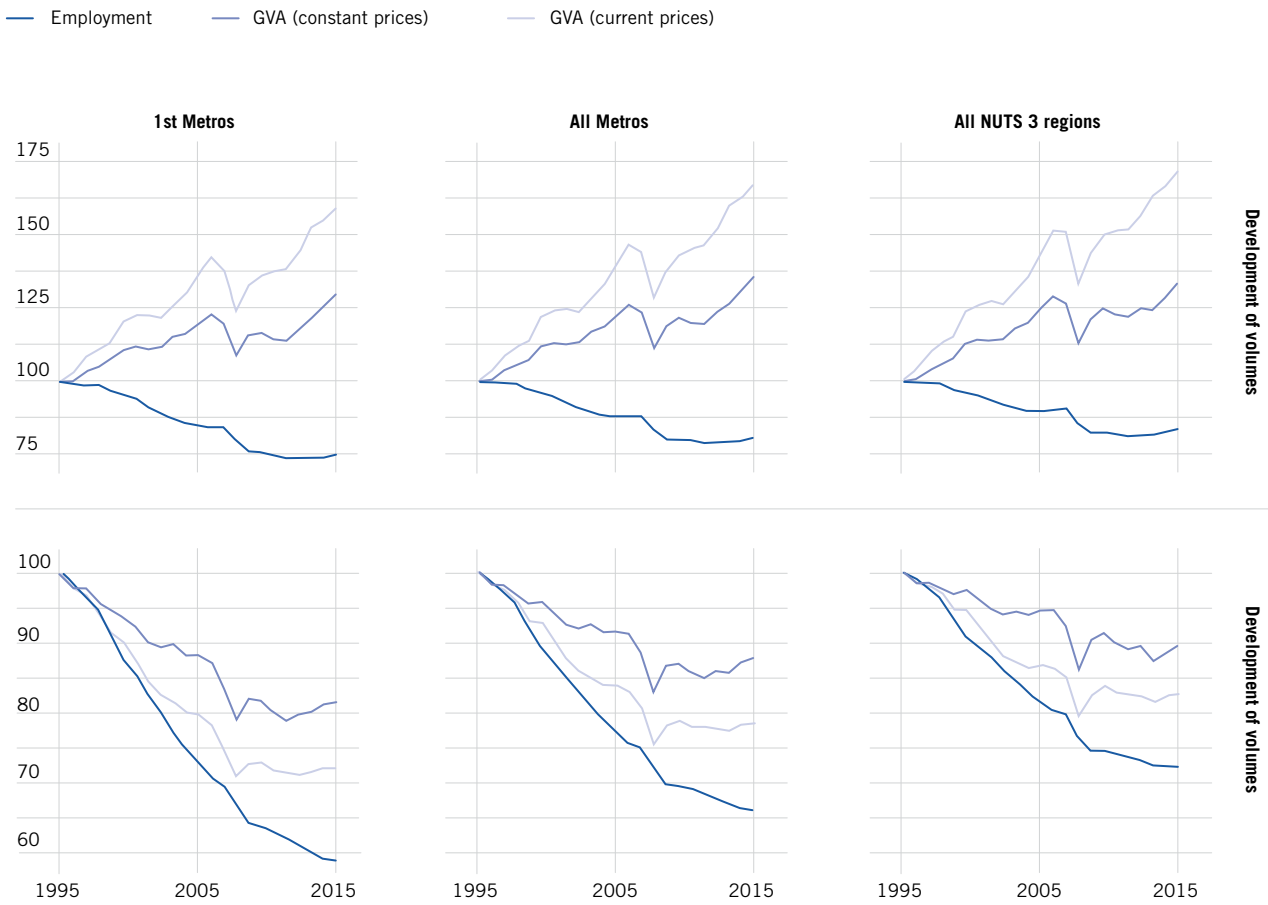
This said de-industrialisation was stronger in larger metros (11.6% in large vs 17.1% in small metro regions), in high-income metros (10.9% in high vs 16.0% in low-income metro regions), and metros with a high service orientation (7.6% in service-based vs 22.9% in industry-based metro regions) than in smaller, low-income or manufacturing based metros (see Table 1). Measured by the production sectors' GVA share (see right panel of Table 1), similar albeit less pronounced differences appear. Most notably, in some metro groups (e.g. lower-tier, low-income and EU13 metro regions), the production sectors' share has remained almost stable. In others (e.g., small and industry-based metro regions), it increased from 1995 to 2017.

In addition, there are also vast differences between individual metro-regions within relatively homogenous groups. For example, within the major metros (which comprise only capitals and large agglomerations and therefore have reasonably homogeneous traits), the production share in employment varies from more than 25% of the regional workforce in Katowice and Stuttgart to less than 5% in Oslo and London<sup>5</sup>, with the individual metro's position in 2017 highly correlated to the initial conditions in the mid-1990s. This wide range of results (even within a relatively similar group of major metro regions) suggests that path dependence as well as specific influences on production development in individual metro regions (be it the respective economic

<sup>5</sup> Even greater differences can be found in the industrial share of value added (Stuttgart 38.8%; London 5.4%) and its development (Bratislava 172.7% of the 1995 share; London 47.2%).



FIGURE 5: DEVELOPMENT OF PRODUCTION IN EUROPEAN (METRO) REGIONS DUE TO DIFFERENT PERFORMANCE INDICATORS 1995-2017; Index 1995 = 100



Source: ARDECO (JRC/EC); WIFO calculations. Notes: Figure reports indices such that 1995 = 100 throughout. Top panel presents levels, bottom panel shares in the respective aggregate

policy stance, topography, geographical location of the metro region in relation to major trading partners, and/or its centrality in inter-regional value chains), are of great importance for the industrial development of metropolitan regions.

### 1.3.2 THE SURROUNDINGS OF MAJOR URBAN REGIONS HAVE FARED BETTER THAN THEIR METROPOLITAN CORES

Previous literature (reviewed in *Firgo et al. 2020*) suggests a substantial differentiation of production developments between core metro regions and their surroundings. This is confirmed by ARDECO data, for the 52 major European metros for which a differentiation between the core-city and its surrounding NUTS 3-regions is possible

with this data. It, however, also suggests a more modest decline even for metro cores in recent years (see Figure 6). Employment in the production sector declined significantly in the metro cores, (with a cumulative loss of about -22.5%) from 1995 to 2009, giving way to more stable employment environments thereafter. For value-added, the trend for both the core-metros and their

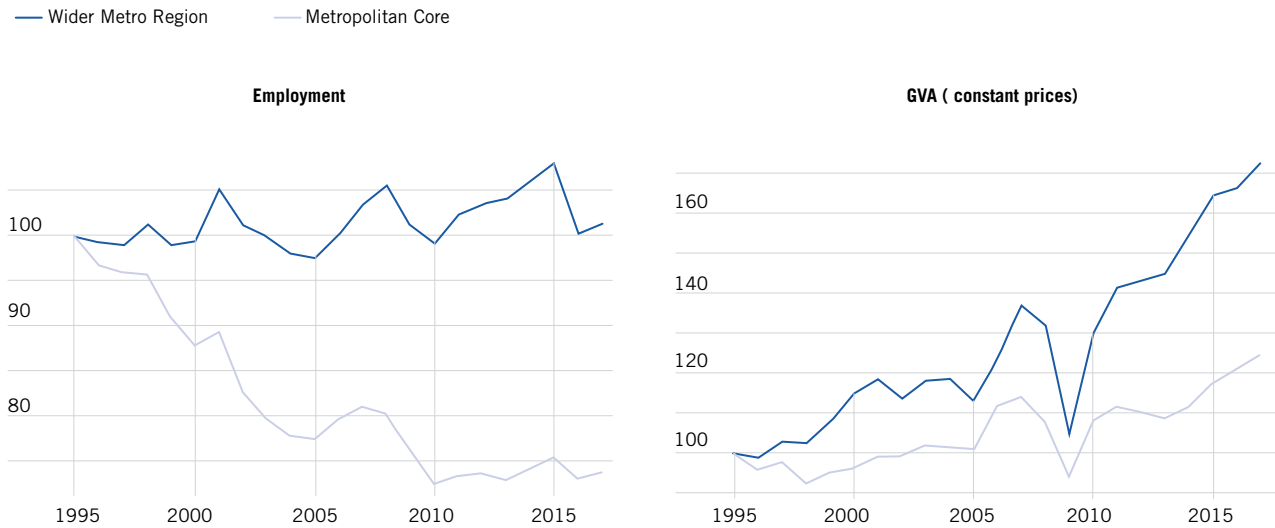
**This provides for a moderately optimistic view of the recent development of production in urban agglomerations that - according to several recent contributions – are expected to continue in future.**

TABLE 1: PRODUCTION IN EUROPEAN MAJOR METRO REGIONS: PRODUCTION SHARE BY TYPE

	Production Employment Share		Production GVA Share	
	<i>In %</i>	<i>1995=100</i>	<i>In %</i>	<i>1995=100</i>
Major Metros	10.4	58.9	14.2	81.5
All Metro Regions	13.0	66.1	17.2	87.6
All EU Regions	15.3	72.3	19.0	89.7
Major Metros	8.0	56.4	10.5	78.0
2nd tier Metro Regions	14.8	65.5	19.5	88.2
Lower Tier Metros	15.4	72.6	21.9	96.0
Large Metro Regions	11.6	62.2	15.5	84.7
Medium-sized Metros	15.1	71.8	18.8	88.0
Small Metro Regions	17.1	76.4	25.2	102.1
High-Income Metros	10.9	64.3	15.8	85.3
Medium-Income Metros	13.4	64.7	19.1	88.2
Low-Income Metros	16.0	70.8	19.0	98.9
Service-based Metros	7.6	56.8	11.3	78.0
Mixed-based Metros	13.5	64.1	19.8	86.8
Industry-based Metros	22.9	79.6	30.6	105.9
EU15 Metro Regions	11.9	64.8	16.8	86.6
EU13 Metro Regions	19.1	72.7	23.2	97.7

Source: ARDECO (JRC/EC); WIFO calculations

**FIGURE 6: DEVELOPMENT OF PRODUCTION IN CORE AND WIDER METRO REGION**  
(52) European metro regions with at least 3 NUTS-3-Regions; 1995=100



Source: ARDECO (JRC/EC); WIFO calculations

surroundings are substantially more favourable. Here, a slight increase in output in the core regions is accompanied by significantly higher growth in the wider metro regions. This growth advantage increases even further in the years after the “Great Recession” (i.e. 2009).

### 1.3.3 UTILITIES, SECTORS RELATED TO THE CIRCULAR ECONOMY, LOGISTICS, CONSTRUCTION AND MANUFACTURING OF DIFFERENTIATED CONSUMER GOODS ARE ALL EXPANDING SECTORS IN METROPOLITAN REGIONS

The vast heterogeneity of the production sector in terms of the products produced, geographic extent of markets, and the size of enterprises and technologies used, are also creating relatively differentiated locational advantages of metropolitan regions in carrying out specific activities. For instance, concerning individual sub-sectors, data from the SBS, suggests that the major metropolitan regions of Europe have experienced a much better development in waste management and utilities, construction, and logistics than in the manufacturing sector.

Waste management and utilities grew by 1.7% annually in the major European metropolitan regions in the period 2010 to 2016 (relative to 1.6% in other EU regions), a

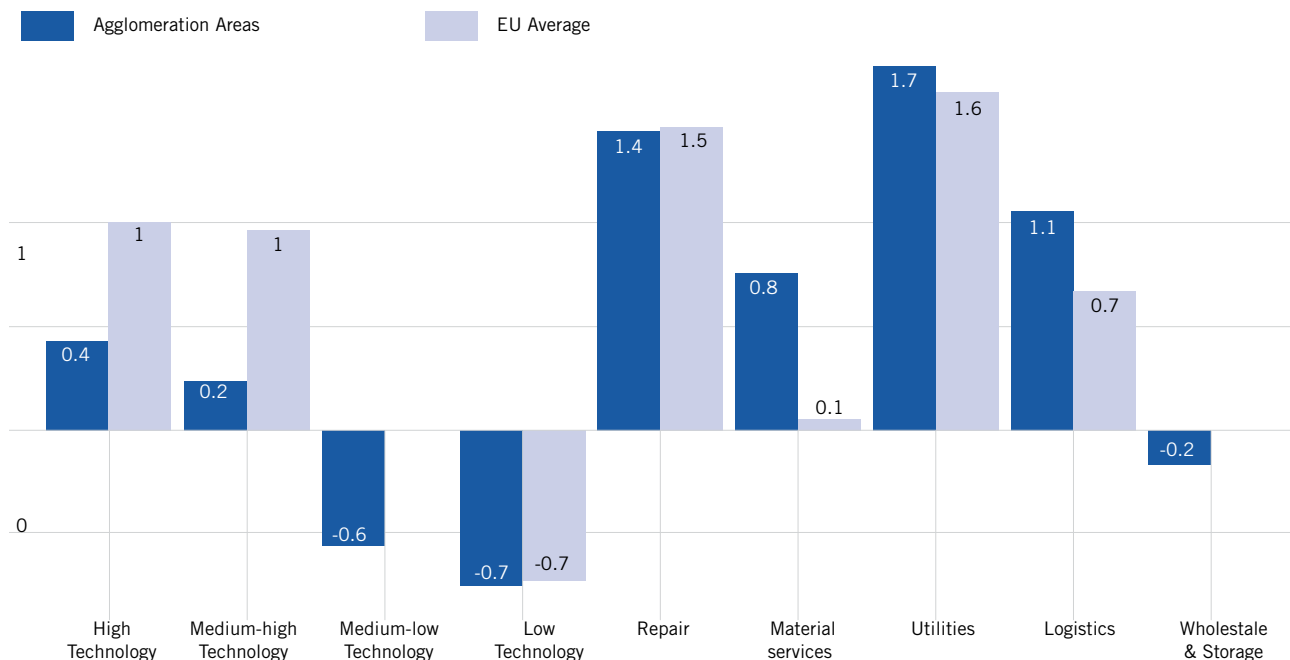
situation reflected for almost all its divisions (remediation activities and waste management services, waste collection, treatment and disposal activities, sewerage, electricity, gas, and air conditioning supply).

Employment in logistics grew by 1.1% per year in the major European metropolitan regions (relative to 0.7% in other regions). Particularly, postal and courier services as well as air transport grew substantially above the EU average in the period 2010 to 2016.

The construction sector expanded its employment by 0.8% annually in the major European metropolitan regions (relative to 0,1% in other regions). Here, in particular, the construction of buildings has shown an above-average employment growth.

On the one hand, employment growth in these sectors is closely related to the sustained population growth in metro-regions, inducing an ever-increasing demand for public and transportation services and housing space. On the other hand, it also reflects major societal and technological developments: increasing environmental concerns, in particular, in densely populated areas; increased mobility; changes in lifestyles; declining household sizes; the fragmentation of the value chain and the

FIGURE 7: AVERAGE ANNUAL GROWTH 2010-2016 OF TYPES OF PRODUCTION ACTIVITIES IN THE AAS



Source: Eurostat, Structural Business Statistics and WIFO regional structure data base.

development of internet trade services have led to an increased demand for logistics services and housing, as well as for more elaborate systems of waste management, in the last decades.

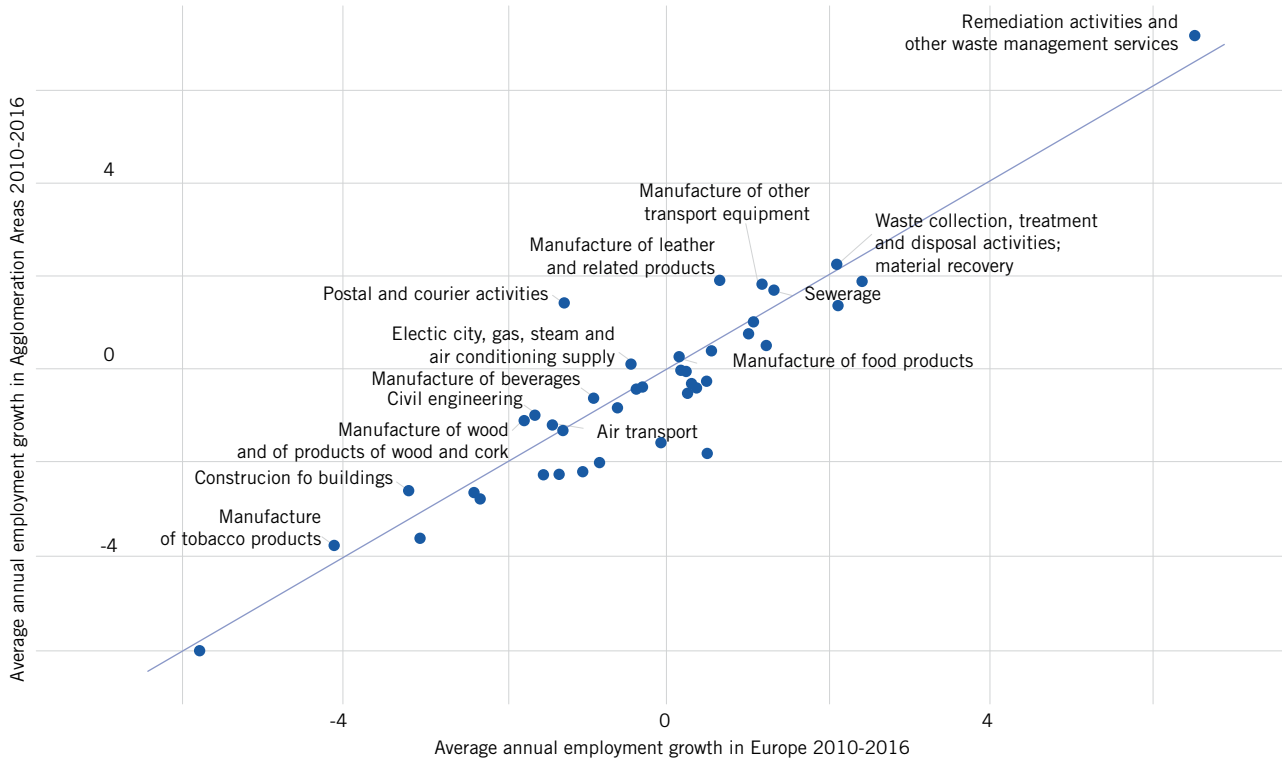
By contrast, for manufacturing and wholesale trade and storage, the major metros have experienced below-average employment growth in the period 2010 - 2016. This applies to all branch divisions in wholesale trade and storage and is due to gains of smaller centres relative to the large urban agglomerations. By contrast, some (NACE 3-digit) manufacturing branches have been growing more rapidly in urban regions than in the European average: This applies specifically to industries with a high relevance of large multinational enterprises and activities with a significant consulting content as well as a high share of high skilled (e.g. manufacture of transport equipment, manufacture of tobacco products, civil engineering). This also applies to various consumption goods-producing industries, profiting from high local demand (such as manufacture of leather and related products, food products, beverages and wood products). These include a substantial share of small-scale producers from the crafts that have inter alia benefited from an increased consumption of locally produced goods, a growing trend in recent years.

#### 1.3.4 PRODUCTION IN METROPOLITAN REGIONS PROVIDES JOBS TO BOTH HIGH AND LOW SKILLED WORKERS

Finally, reflecting the changing nature of urban production, recent decades have also seen substantial changes in employment structure within the production sector. In particular, improved communication and transport infrastructure allowed enterprises to increasingly outsource certain value chain functions (e.g. mass production and assembly) to different locations while retaining or expanding so-called dispositive functions (e.g. headquarters, R&D centres, or product design) in cities. This has also changed the employment structure in urban productions toward service occupations and more high-skilled jobs.

Consequently, relative to other EU regions, a substantially higher share of high-skilled workers (with a completed tertiary education) but also a slightly higher share of low skilled workers works in the production sector of major European metropolitan regions (see Table 2). By contrast, the share of medium-skilled workers in the production sector is noticeably smaller in the major European metropolitan regions than in other EU regions. In 2018, 24.2% of the employed in the production sector of European metropolitan regions had completed a tertiary education, while,

FIGURE 8: RELATIVE GROWTH PERFORMANCE OF EUROPEAN AGGLOMERATION AREAS.



Source: Eurostat, Structural Business Statistics and WIFO regional structure database. Notes: The figure shows average annual employment growth rates in the period 2010 and 2016. The horizontal axis measures the EU wide growth rate. The vertical axis measures the average growth rate in the European AAs. Thus, divisions located above the 45-degree line grow faster in metropolitan regions than in the EU average.

outside these regions, the respective share was 17.9%. By contrast, 65.3% of manufacturing employees in the non-metro regions of the EU completed a medium (upper secondary) educational. In the major metros, this applied to only 57.0% of the employed in the production sector.

Similar observations apply to the occupation structure of the production sector. In metropolitan areas, the percentage of highly qualified employees is significantly higher than in other regions, as is the percentage of employees in medium-skilled service jobs. In 2018 according to ELFS' data, a third (32.8%) of the employed in the production sector in major metropolitan regions worked in high-skilled white-collar occupations and another 14.5% in medium-skilled service occupations. These percentages were 25.5% and 11.9% in other European regions, respectively. This implies a much higher tertiarization of the occupational structure even within the production sector in metropolitan regions than in other regions. A substantial share of the jobs in the production in European metropolitan regions are therefore office jobs associated with demands for office space.

More importantly, the tertiarization of medium-skilled employment has also increased more rapidly in the major metros than in the European average. In the average major metropolitan region, the high-skilled employment share in production increased by 4.6 percentage points in the years from 2011 to 2018, while the share of medium-skilled service occupations increased by 0.6%. In other regions, the respective increases were 3.6% (for the allocation of employed with tertiary education) and 0.4% (for medium-skilled service occupations). By contrast, the share of employed working in highly skilled white-collar jobs increased by 1.2% and thus almost in parallel with other European regions. Based on these recent trends the increasing tertiarisation of the employment structure of production in metropolitan regions is therefore likely to continue in the future, as is the shift towards more highly skilled employment.

TABLE 2: EMPLOYMENT SHARES OF THE PRODUCTION SECTOR BY EDUCATIONAL ATTAINMENT AND OCCUPATIONAL GROUP IN METROPOLITAN AND OTHER REGIONS

	Production		All Sectors	
	Major Metros	Other regions	Major Metros	Other regions
	<i>Levels</i>			
Lower secondary or less	18.8	16.2	14.5	14.9
Upper secondary (incl.post-secondary)	57.0	65.9	49.0	57.3
Tertiary	24.2	17.9	36.5	27.8
High skilled	32.8	25.5	47.0	37.3
Medium skilled services	14.5	11.9	25.8	25.0
Medium skilled production	45.8	55.2	18.9	28.9
Less skilled	7.0	7.4	8.3	8.9
	<i>PP Change</i>			
Lower secondary or less	-3.7	-3.1	-3.2	-3.8
Upper secondary (incl.post-secondary)	-1.0	-0.5	-2.4	-0.5
Tertiary	4.7	3.6	5.6	4.3
High skilled	1.2	1.5	2.2	2.5
Medium skilled services	0.6	0.4	-0.6	-0.3
Medium skilled production	-1.4	-1.3	-1.3	-1.6
Less skilled	-0.4	-0.6	-0.2	-0.6

Source: ELFS, MISTA-project

## 1.4

# Berlin, Oslo, Riga, Stuttgart, Torino, Warszawa and Wien: What are the differences?

<sup>6</sup> These were: Berlin, Oslo, Riga, Stuttgart, Torino, Warszawa, and Wien

<sup>7</sup> See Baudry and Schiffauerova (2009) and Boschma (2017) for surveys of the numerous relevant studies

<sup>8</sup> We use 265 NACE 3-digit level branch groups and the matrix of labour flows between branches at the NACE 3-digit level in Germany developed in a project of the Institute for Employment Research (Neffke et al., 2017A, 2017B) for this analysis. The matrix considers more than 70,000 target-source relationships. We are grateful to Anne Otto of IAB Nuremberg for providing the data. Focusing on labour-flows between branches in Germany to analyse regions of other countries assumes that production technologies are the same. This seems innocuous as all considered regions are highly developed and share a high capital intensity. Also the strong international competition in the production sector implies a rapid diffusion of production technologies. The further data processing steps and the definitions of the respective metropolitan regions based on a NUTS 4 or lower delineation necessary for the approach are provided in the MISTA reports on the case study cities.

<sup>9</sup> For Riga the analysis had to be conducted at the national level due to data constraints.

The vast differences between individual metros clearly indicate that supporting the development of production activities for a particular metropolitan region, implies addressing the region-specific traits of the sector. Consequently, the ESPON MISTA project conducted a detailed regional network analysis of this sector in seven case study metropolitan areas<sup>6</sup>. This analysis was motivated by the increasing empirical evidence<sup>7</sup> that the development potential of a particular industry in a region is determined not only by its size (i.e., its localisation in the region) but also by the extent to which it can rely on a fertilising environment of complementary, technologically or cognitively “related” branches in the same region. It used methods developed by Neffke and Henning (2013) and recently used by Otto et al. (2014) and Neffke et al. (2017A, 2017B) to measure the relatedness of branches. These build on the insight that (in particular tacit) knowledge is embodied in people and therefore also travels/leaves with them as they change jobs. It therefore measures the relatedness of branches through the network of job changes between branches at a very disaggregated sectoral level<sup>8</sup>.

### THE NETWORKS OF INDUSTRIAL BRANCHES DIFFER VASTLY ACROSS INDIVIDUAL METROPOLITAN REGIONS...

Figure 9 displays the network of industrial branches identified for the six out of seven case studies, for which sufficiently detailed information was available on a regional level to conduct such an analysis (Berlin, Oslo, Stuttgart, Torino, Wien, and Warszawa)<sup>9</sup>. In this figure, the size of the nodes (coloured circles) shows

the size of the individual branch as measured through the coefficient of localisation (i.e., the share of production in total employment in the respective metropolitan region relative to the percentage of the same NACE 3-digit branch in nation-wide employment). The colour of the circles signals the sector of the respective NACE 3-digit branch, and the thickness of the lines between the nodes measures the proximity of the branches to each other, with a thicker line implying a greater proximity (i.e., more labour flows). Finally, the nodes are arranged so that more central branches (i.e. branches with many strong links) are located in the centre of the network. In contrast, more peripheral ones are located on the periphery of the network diagram.

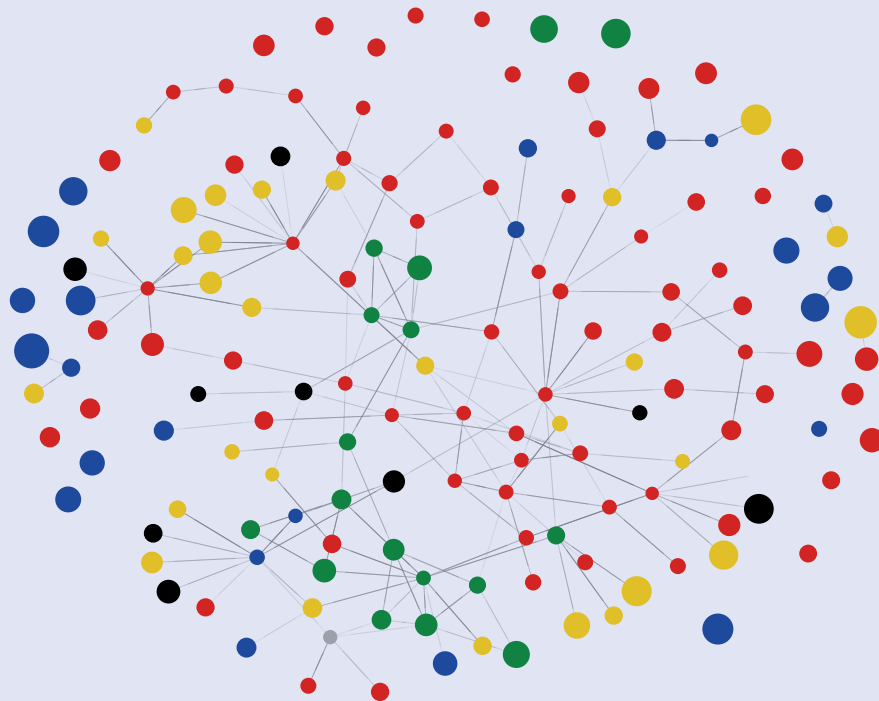
The most eye-catching stylised fact emerging from this diagram is the vast heterogeneity of the production sector networks in the individual case study city regions. This applies both to the size and density of the networks and the location and size of individual branches. In part, these differences reflect differences in the function, structure and size of the metropolitan area considered as well as the extent of de-industrialisation occurring in the cities.

**This approach builds on increasing empirical evidence that the development and innovation are primarily driven by exchanging (localized) knowledge between cognitively proximate producers.**

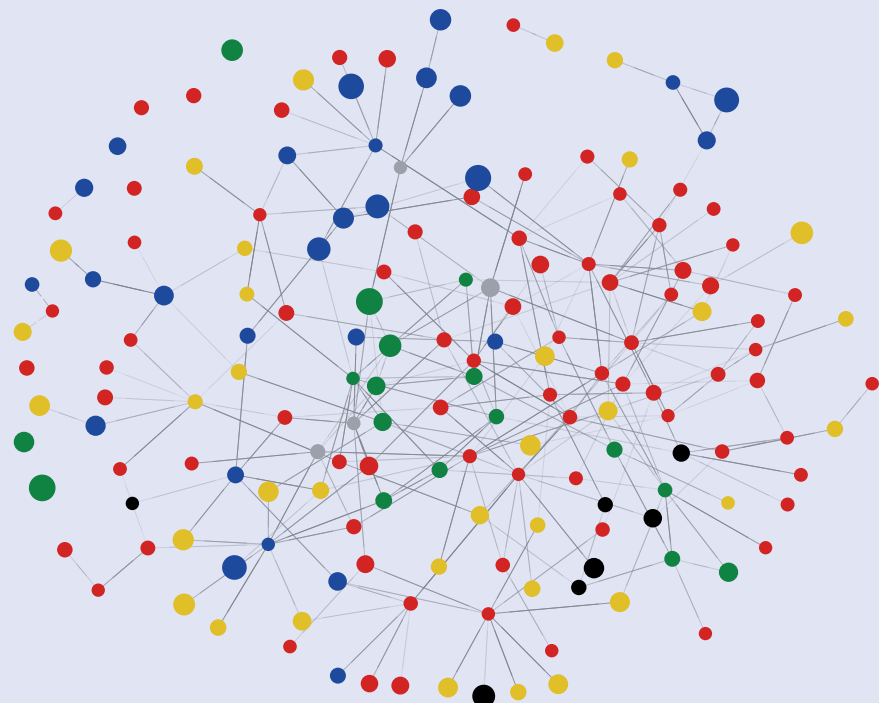


FIGURE 9: NETWORK OF BRANCHES IN BERLIN, OSLO STUTTGART, TORINO, WARSZAWA AND WIEN

**BERLIN**

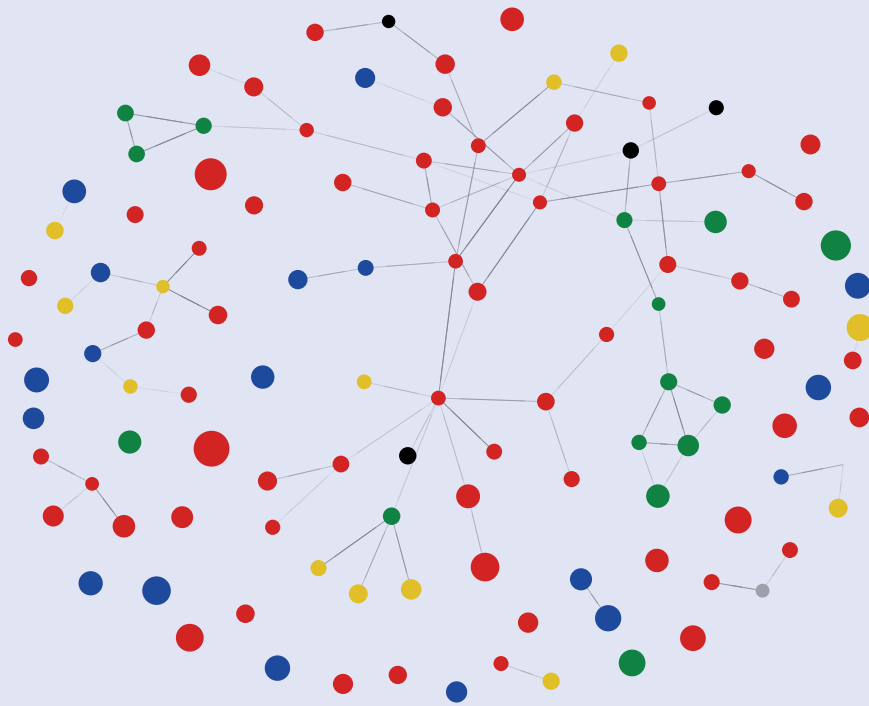


**OSLO**

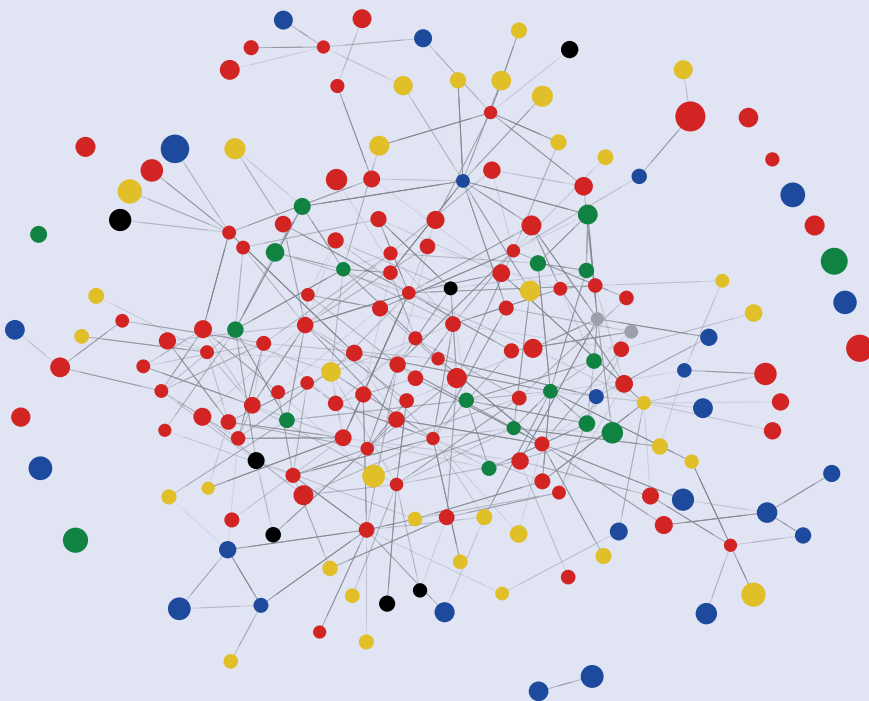


Source: Statistics Austria, Istat, Federal Employment Agency, BA Statistics Norway, network structure based on Neffke et al. (2017B), MISTA team calculations; For illustrative purposes, only NACE 3-digit branch groups marking production activities (in bold) and non-production activities with strong links to production activities with at least 100 employees are displayed.

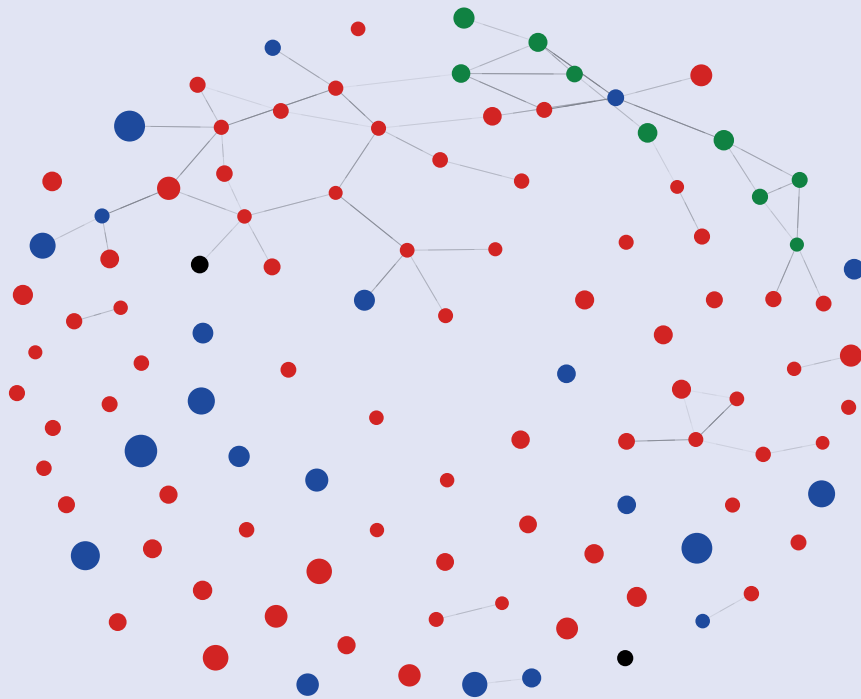
### STUTTGART



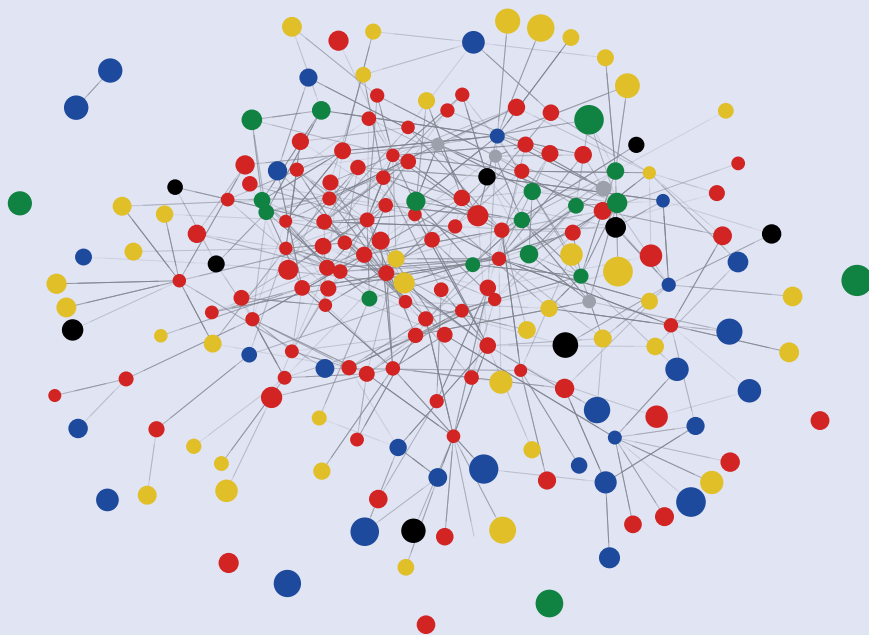
### TORINO



WARSZAWA



WIEN



On the one hand, there are differences between the capital city regions of Berlin, Oslo, Warszawa and Wien and the major industrial cities of Torino and Stuttgart. Due to their function as a capital city, the former have a much larger employment share in public services. This, as a rule, leads to a smaller and less tightly knit production network in these cities. In these networks branches belonging to utilities and construction (shown in light green) or the trade and logistics (blue) sector take a central position. By contrast, in Torino and Stuttgart as central locations of the European automotive industry, branches belonging to the manufacturing sector (red) are more localised (i.e., have larger nodes) and have more central positions in the production networks.

On the other hand city size plays an important role. This is illustrated by the differences between larger metropolitan regions such as Wien, Berlin, and Warszawa, with almost 2 million or more inhabitants and smaller metropolitan regions such as Stuttgart, Torino, and Oslo with populations below one million inhabitants. The larger labour markets in the former lead to a more diversified industrial structure because there are a larger number of nodes in these regions than in the smaller ones. This also (almost by definition) leads to more connections between these nodes and thus to denser but more diverse networks.

But even within these groups, there are noticeable differences. For instance, comparing Torino and Stuttgart as two relatively similar industrial cities suggests a different network structure in both regions. In Torino, the industrial production network is characterised by

a rather dense network with relatively small production branches in the network centre. In Stuttgart, by contrast, the network is less dense but more strongly dominated by a few large manufacturing branches, reflecting the large multinational firms in the region.

Similarly, among the capital cities, Oslo's production network (as one of the cities with the lowest employment shares in the production sector among the European cities) and Warszawa's one (as a city of the EU13, which were less strongly affected by de-industrialisation in the last decades), differ markedly. Both cities have relatively low-density production networks. Yet, Warszawa has several highly localised NACE 3 digit branches and comparatively low diversity of the production sector. By contrast, Oslo has more diversified but less localised production networks. Equally, comparing Berlin and Wien, two metropolitan regions with relatively close employment shares in industrial production, the number of heavily localised branches (i.e., larger nodes) is slightly higher in the Berlin metropolitan region. However, in Berlin, these localised branches are more often located at the periphery of the production networks, and networks are somewhat denser in Wien.

Finally, in Riga the central positions in the network are taken by many smaller manufacturing branches. By contrast, branches in trade, construction and utilities sector, that are very central in other cities are less so in Riga. This may, however, reflect that fact that for this city, account of data restrictions, the whole country had to be considered to approximate the metropolitan region.

TABLE 3: CATEGORIES OF THE EMPIRICAL SWOT ANALYSIS

Development potentials according to degree of specialisation and embeddedness

		REGIONAL EMBEDDEDNESS OF BRANCH I	
		high $LQ_{ir}^{rel} > 1,1$	low $LQ_{ir}^{rel} < 0,9$
Regional degree of specialisation in branch <i>i</i>	high $LQ_{ir}^{rel} > 1,1$	Strength	Threat
	low $LQ_{ir}^{rel} < 0,9$	Opportunity	Weakness

Source: Otto et al. (2014), MISTA team original illustration.

### ... AS DO THE EMPIRICALLY MEASURABLE SWOT PROFILES

These networks reflect the configuration of cognitively and technologically related branches in a region. Their structure, therefore, has implications for the development perspectives of individual production branches. Otto et al. (2014) argue that considering localisation as well as embeddedness of a branch in a region four constellations may arise (see table 3):

1. A branch may be heavily localised (i.e., has a large node in Figure 9) and also well connected to other branches. In that case, it should be considered a strength of the respective region because it is large and has good learning opportunities and thus development perspectives within the region.
2. A branch with a low degree of specialisation (i.e. a small node) and embeddedness (i.e. few connections) will, in all likelihood, only have low development potential. Therefore, it should be regarded as a regional “weakness” and will hardly be the focus of structural policy initiatives to build up sustainable fields of technological strength. However, such branches may have high importance for other reasons than their technological development potential.<sup>10</sup>
3. Branches with a low localisation may have favourable development perspectives if they face a favourable regional environment of technologically or cognitively “close” branches in the region. These branches could thus be seen as an opportunity.

4. Branches with high localisation but low embeddedness are considered threatened since large employers face a regional environment that is likely to be less conducive for development. However, such branches could very well also be a focus of regional policies that aim to improve the integration of these branches into inter-regional or international networks.

Based on the knowledge of the regional production networks, the MISTA project applied this typology to the 7 case study cities considered<sup>11</sup>. For both specialisation and embeddedness, an upper cut off point of 1.1 was taken to imply that the indicator’s value was high and a cut off of 0.9 to suggest that the indicator is low.

Figure 10 summarises the results of this analysis by plotting the indicator of localisation (on the vertical axis) against the indicator of embeddedness on the horizontal axis for each of the case study cities. Branches in the top right quadrant of this diagram (with their location coefficient above 1.1 and a location coefficient of related branches above 1.1) are strengths and branches in the bottom right (with an own location coefficient below 0.9 and a location coefficient of related branches above 1.1) opportunities. Branches on the top left (with an own location coefficient above 1.1 and a location coefficient of related branches below 0,9) are weakly embedded but localised, and those on the bottom left (with an own location coefficient below 0.9 as well as a location coefficient of related branches below 0.9) are weaknesses. Furthermore, Table 4 lists

<sup>10</sup> A primary example are health care or educational services. These are of high relevance for a region irrespective of their localisation and technological embeddedness as they provide vital services to the population.

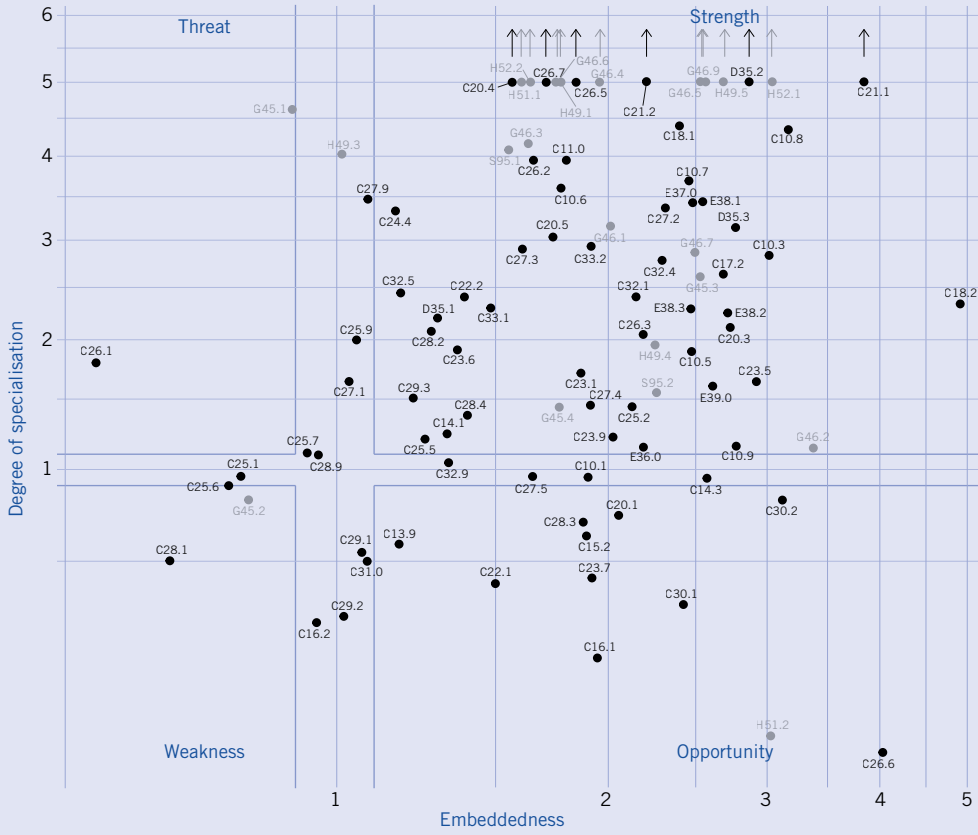
<sup>11</sup> In doing so, a branch’s embeddedness was measured by the “skill-relatedness” indicator also suggested by Otto et al. (2014) and Neffke et al. (2017A, 2017B). This is defined as the weighted localisation of related branches in the region, relative to the weighted share of related branches in the country, where the weights are defined through the observed job changes between branches relative to the expected job changes between two branches, in the absence of knowledge spillovers.



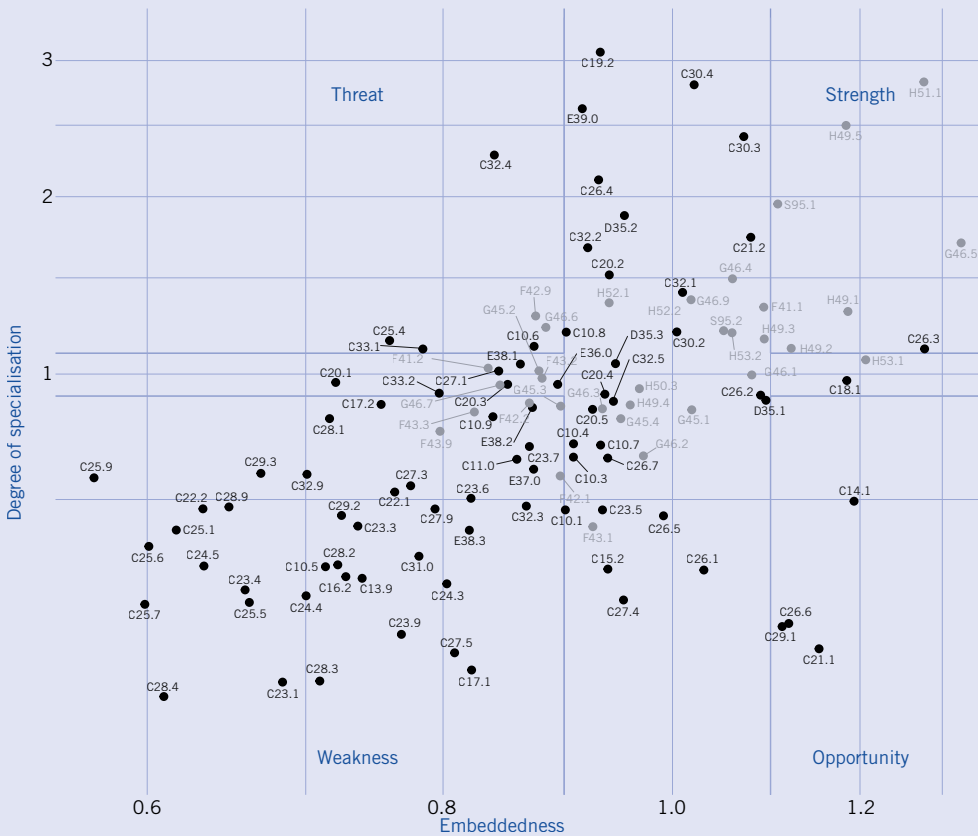




### WARSZAWA



### WIEN



the five most prominent (in terms of employment) branches classified as strength, opportunity, and threats in the region.

Once more, the results point to highly place-specific SWOT profiles for each of the case study cities, with the most considerable differences applying to the differences between the capital cities and the two automobile producing industrial cities. In our sample's capital cities, the heavily localised and well embedded NACE 3 – digit branches mainly belong to the wholesale trade, construction, and transport sectors. In all capital cities, branches of the logistics and transport sector (such as rail and air passenger and freight transport) belong to this category. In Wien, Oslo, and Warszawa, this also applies to some wholesale sector branches (e.g., wholesale information and communication equipment). By contrast, only a few branches in manufacturing are identified as strengths in the capital cities. The exception to this is Warszawa, where due to the lower degree of de-industrialisation, two of the identified localised and highly embedded NACE 3-digit branches belong to the pharmaceutical industry and thus the manufacturing sector. In Oslo, this applies to the manufacture of pharmaceuticals, while in Berlin and Wien, none of the identified strengths belong to the manufacturing sector.

Rather than as a strength the manufacturing branches in capital cities are more often classified as lowly localised yet well-embedded (i.e., opportunities). This applies in particular to either high tech and/or consumer goods industries. Among the latter, the

manufacture of jewellery and related articles (in Oslo) of wearing apparel (Oslo and Wien) and of footwear (Warszawa) list among the five largest branches classified as opportunities. The list is somewhat longer (including branches such as the manufacture of irradiation and electrotherapeutic equipment) in Wien and in Oslo (with the manufacture of electronic components and boards) concerning high technology or knowledge-intensive industries. Even if these branches often only employ a few hundred people and are thus still small, this once more reconfirms the finding of potentials of consumer goods and high-tech production in metropolitan regions. However, it also highlights that the specific industries these opportunities apply to differ substantially between metropolitan regions.

For Riga, by contrast, reflecting the consideration of the whole country as a metropolitan region, there is a very strong differentiation between the core of Riga and its surroundings. The surroundings are characterized by a strong industrialisation and a high share of employment in manufacturing, logistics and the construction sector. The core city, by contrast, is specialized on knowledge intensive service industries such as “financial and insurance activities”, information and communication” and “professional, scientific and technical activities”. This indicates that Riga city, serves as a major modern service centre to a still strongly industrialized hinterland.

In Stuttgart and Torino, reflecting their different function but also their different

TABLE 4: SWOT PROFILE FOR THE BERLIN, OSLO STUTT GART, TORINO; WARSZAWA AND WIEN METROPOLITAN REGIONS

<h2>Berlin</h2> <p><b>STRENGTHS (5 LARGEST)</b></p> <ul style="list-style-type: none"> <li>• Inland passenger water transport</li> <li>• Freight rail transport</li> <li>• Development of building projects</li> </ul>	<h2>Oslo</h2> <p><b>STRENGTHS (5 LARGEST)</b></p> <ul style="list-style-type: none"> <li>• Wholesale of information &amp; com. equipment</li> <li>• Passenger air transport</li> <li>• Wholesale on a fee or contract basis</li> <li>• Man. of pharmaceutical preparations</li> <li>• Wholesale of household goods</li> </ul>
<p><b>OPPORTUNITIES (5 LARGEST)</b></p> <ul style="list-style-type: none"> <li>• Passenger air transport</li> <li>• Wholesale of information and com. equipment</li> </ul> <p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Waste treatment and disposal</li> <li>• Construction of utility projects</li> <li>• Steam and air conditioning supply</li> <li>• Repair of personal and household goods</li> <li>• Warehousing and storage</li> </ul>	<p><b>OPPORTUNITIES (5 LARGEST)</b></p> <ul style="list-style-type: none"> <li>• Man. of communication equipment</li> <li>• Manufacture of jewellery, and related articles</li> <li>• Manufacture of wearing apparel</li> <li>• Manufacture of electronic components and boards</li> <li>• Electric power generation, transmission</li> </ul> <p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Support activities for transportation</li> <li>• Other specialised wholesale</li> <li>• Construction of roads and railways</li> </ul>
<h2>Stuttgart</h2> <p><b>STRENGTHS (5 LARGEST)</b></p> <ul style="list-style-type: none"> <li>• Manufacture of motor vehicles</li> <li>• Manufacture of parts &amp; accessories for motor vehicles</li> <li>• Man. of metal forming machinery &amp; machine tools</li> <li>• Man. of communication equipment</li> <li>• Man. of instruments and appl. for measuring etc</li> </ul>	<h2>Torino</h2> <p><b>STRENGTHS (5 LARGEST)</b></p> <ul style="list-style-type: none"> <li>• Man. of motor vehicles</li> <li>• Man. of parts and accessories for motor vehicles</li> <li>• Man. of air and spacecraft and related machinery</li> <li>• Forging, pressing, stamping and roll-forming of metal</li> <li>• Manufacture of computers and peripheral equipment</li> </ul>
<p><b>OPPORTUNITIES (5 LARGEST)</b></p> <ul style="list-style-type: none"> <li>• Sale, maintenance &amp; repair of motorcycles</li> <li>• Warehousing and storage</li> <li>• Manufacture of wiring and wiring devices</li> <li>• Manufacture of electric motors, etc</li> <li>• Man of air and spacecraft and related machinery</li> <li>• Electric power generation, transmission</li> </ul> <p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Waste treatment and disposal</li> <li>• Construction of utility projects</li> <li>• Steam and air conditioning supply</li> <li>• Repair of personal and household goods</li> <li>• Warehousing and storage</li> </ul>	<p><b>OPPORTUNITIES (5 LARGEST)</b></p> <ul style="list-style-type: none"> <li>• Man. of general-purpose machinery</li> <li>• Manufacture of electric motors, generators etc.</li> <li>• Sale, maintenance &amp; repair of motorcycles</li> <li>• Manufacture of refined petroleum products</li> </ul> <p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Manufacturing n.e.c.</li> <li>• Sewerage</li> <li>• Other postal and courier activities</li> <li>• Manufacture of medical &amp; dental instruments</li> </ul>

## Warszawa

### STRENGTHS (5 LARGEST)

- Manufacture of basic pharmaceutical products
- Passenger air transport
- Transport via pipeline
- Manufacture of pharmaceutical preparations
- Wholesale of information & com. equipment

## Wien

### STRENGTHS (5 LARGEST)

- Passenger air transport
- Transport via pipeline
- Wholesale of information and com. equipment
- Repair of computers and com. equipment
- Passenger rail transport, interurban

### OPPORTUNITIES (5 LARGEST)

- Man. of railway locomotives and rolling stock
- Man. of basic chemicals
- Man. of agricultural and forestry machinery
- Manufacture of footwear
- Manufacture of rubber products
- Manufacture of other textiles

### THREATS

- Sale of motor vehicles
- Manufacture of electronic components and boards

### OPPORTUNITIES (5 LARGEST)

- Man. of wearing apparel
- Man. of irradiation & electrotherapeutic equipment
- Man. of motor vehicles
- Man. of basic pharmaceutical products

### THREATS

- Manufacture of games and toys
- Construction of other civil engineering projects
- Wholesale of machinery,
- Manufacture of grain mill products etc.
- Repair of fabricated metal products

specialisation, manufacturing and in particular branches in or strongly related to automobile production continue to dominate both the list of localised and embedded branches (i.e. strengths) as well as the list of less localised but highly embedded branches (i.e. opportunities). In both cities, the manufacture of motor vehicles and parts and accessories for motor vehicles are the two largest well embedded branches. In addition, many of the other large branches in this category (manufacture of metal forming machinery and machine tools in Stuttgart; forging, pressing, stamping, and roll-forming of metal in Torino) are closely related to the automobile industry.

Similarly, the less strongly localised but embedded branches (i.e. opportunities) in these metropolitan regions are often either technologically close to (e.g., manufacture of air and spacecraft and related machinery) or have close supply chain linkages to car manufacturing (e.g., manufacture of electric motors, generators etc.). Therefore, this analysis confirms the high importance of strategies directed to the automobile clusters for industrial policy in these regions.

Finally, the list of less embedded but highly localised branches, that may also be of interest for policymakers, differs even more markedly between the metropolitan regions but often includes branches (such as waste treatment and disposal, various repair services, warehousing and storage, sewerage) that are localised in cities on account of the heightened need to serve local demand or (such as printing and service activities related to printing in Stuttgart; manufacture of games and toys in both Wien and Stuttgart or the Manufacture of medical and dental instruments in Torino) reflect secondary specialisations. In the latter cases, which often include creative and/or knowledge-intensive industries, metropolitan strategies often focus on measures to guarantee a sufficient inflow of knowledge into the region<sup>12</sup>.

<sup>12</sup> E.g. both Stuttgart and Wien have such measures (such as visitor programs and exchange programs for designers and technicians in the creative industry clusters) to support the integration of their creative industries into larger scale international networks.

# 1.4

## Summary

In sum, the results of the European data analysis conducted in this chapter suggest that the production sector remains an important sector for the economic development metropolitan regions, on account of its essential role as a driver of innovation, productivity, and wage growth as well as its “carrier” function for trade in services. Further, de-industrialisation has slowed down in most European metropolitan regions and even gave way to re-industrialisation in some. This thus provides for a cautiously optimistic view of the sector’s future in metropolitan regions.

**The production sector remains an important sector for the economic development metropolitan regions, on account of its essential role as a driver of innovation, productivity, and wage growth as well as its “carrier” function for trade in services.**

This said, however, there are substantial differences between individual metropolitan regions in a sectoral and spatial dimension. Concerning the sectoral dimension, recent developments suggest that in future the following subsectors of the production sector are likely to show an above-average development in metropolitan regions:

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

In addition, increased functional specialisation within production activities can be expected even within manufacturing sectors that do not fall into these categories. This should lead to an increasing number of service and high skilled jobs in the production sector of urban regions.

From a spatial perspective, production has developed more favourably in the broader metro environs than in the metropolitan cores. Therefore, over time, mirroring the advantages of the metro centres for knowledge-intensive services and the broader environs for production, intra-metropolitan specialisation has also increased. Core metro regions, however, remain to be central locations for a modern production sector. 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 market success of production located in the wider metro region heavily depends on the complementary production-related services found in the metropolitan cores. On the other hand, the changing tastes and lifestyles of consumers (such as increased environmental concerns and increased preferences for customisation and individualisation through consumption) and the 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 must be satisfied by nearby producers in city centres.

The vast differences between individual metros as well as parts of the production sector imply that, for policy to support production activities in specific metropolitan regions, information on region-specific developments in the production sector is required. The results of the network analysis of industrial branches for the case study cities of the MISTA project, indicate a startling heterogeneity in the production networks of the cities covered and the role played by different industries in this network, as well as the more and more entrenched nature of manufacturing and service activities. This highlights the importance of place-based approaches in formulating regional policies directed at the production sector.

While the methods applied in this chapter are instrumental in informing the policy debate, there are some limitations. The first one is

that the quantitative analysis on a very detailed sectoral and regional level always runs the risk of overinterpreting developments in small aggregates that could be caused by statistical outliers or measurement errors. To develop its full potential, such an analysis needs to be augmented by additional qualitative information on the results’ significance. A second one is the emphasis on technological development implied by the approaches. This means that it is likely to successfully identify specific policy needs for economic growth. It, however, also means that branches that are of relevance for reasons other than their economic potential are not adequately considered. A complete urban development strategy must take account of the importance of such sectors. Finally, a third limitation is that the methods used here do not consider the institutional differences between regions, which have been shown to substantially impact the design and effectiveness of policy instruments. Therefore, these topics need to be addressed in a more discursive manner, and the next chapters will show how such a discourse was triggered within the ESPON MISTA project.

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# Exploring the metropolitan dimension

02





The metropolitan scale can play a crucial role in dealing with the current societal challenges, among which with the locational dilemmas of production and workforce. The reality of metropolitan cooperation is very different across the stakeholder areas. The chapter has shown some innovative examples on cooperation between the core city and the municipalities within the larger metropolitan area. Most cities agreed that besides joint metropolitan planning and experimental interventions also a well-positioned, strong metropolitan agency is needed, which could actively step up solving concrete problems. 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 also help to keep and modernise industry in the metropolitan area.



## 2.1

# Beyond the administrative boundaries of cities: the metropolitan dimension

There is a growing spatial mismatch between the administrative boundaries and the “real” extension of the urban areas, corresponding to the realities/motivations of the economic actors and the population. Present administrative boundaries of cities are inherited from the previous centuries and are increasingly different from the realities. There are considerable efforts undertaken to produce new and updated interpretations of functional urban areas, e.g. by the OECD, Eurostat, and the European Commission, trying to move beyond administrative boundaries to grasp the complex organisation of the relationship between space and society. Even though we are still missing a univocal and consolidated methodology, it is necessary to adopt a new metropolitan perspective to integrate the urban within a broader regional dimension.

Administrative boundaries reproduce spatial imaginaries and contribute to problem setting and problem-solving in policy design. Boundaries are crucial for policymakers in that they deal with competencies, territoriality, legitimisation. Nevertheless, socio-economic processes tend to escape consolidated geographies, new translocal actors emerge, with new forms of agency and power.

EU regional policy and cohesion policy have tried to be less “spatially blind” since the beginning of this century. Still, even in this perspective, they kept focussing upon

**it is necessary to adopt a new metropolitan perspective to integrate the urban within a broader regional dimension.**

enhancing skills and labour mobility with little consideration of the implications for specific places (Hildreth and Bailey, 2013). The main aim of policies was to move people to places where there are opportunities, not to declining areas. This approach has tended to exacerbate regional imbalances, in contrast to which place-based policy approaches, supported by the last round of Cohesion policy, seek to deliberately build upon a place’s existing industrial and technological strengths skills profiles (Barca et al., 2012).

Thus cities are back on the scene in contemporary Europe. After the traditional, modern state crisis, and due to the new attention devoted to them by both EU and international institutions, cities have apparently become the new protagonists of a new cycle of policy and strategies. However, even from a perspective that highly values the municipal model (based upon the relationship between leadership, proximity, legitimation and efficacy-autonomy of action), cities cannot be thriving if they do not take part in those complex networks and unexpected assemblages which go across scales and imply multiple sets of actors and forms of agency. Consider the Strategic Planning effort produced by the city of Torino in the last 15 years or the tradition of Stuttgart, both investing consistently on a metropolitan dimension). In the new phase of attention to metropolitan governance (attached to institutional reforms both in some of the Member states and/or some parts of national /European policies), cities promote their strategic role and understand the need for new approaches to coordination problems.

At the end of the 20<sup>th</sup> century, in some countries, national administrative reforms have introduced metropolitan governments to react to contemporary governance's growing complexity, uncertainty, and fragmentation (Brenner 2009). However, metropolitan forms of governance/governments are still few, some relatively weak and in many cases contested. Scholars are still split. Following the thesis of Ostrom et al. (1961) about the potentialities of a polycentric political system rather than a metropolitan holistic solution, some experts suggest going beyond simplifying institutional solutions. Others continue to argue that only a national political effort can adopt a metropolitan spatial imaginary (Salet et al., 2015).

More recently, in the debate towards the New Urban Agenda, the idea has emerged that the metropolitan scale can play a crucial role in dealing with the current societal challenges. To deal with the expansion of metropolitan areas, "strong metropolitan governance is a key component of new urban governance" (UN General Assembly 2016, p. 2) together with "strategic spatial planning that observes functional rather than administrative boundaries".

## 2.2

# Present realities of metropolitan cooperation in the stakeholder cities

Metropolitan cooperation dynamics and strengths/efficiency are very different across the stakeholder areas. Stuttgart has a strong, directly elected metropolitan level government, but even in this case, individual municipalities can't be pressed for growth beyond their will. Despite its legal solid metropolitan structure, the metropolitan area of Torino does not function optimally in delivering projects due to its territorial differentiation and its limited competencies and resources for implementation. Oslo previously had well-functioning cooperation between the city and its metropolitan area, which has changed due to the reorganisation of the region. Berlin and Brandenburg have a joint planning authority (with limited competencies) while the regional administrations are separated. Warszawa has only lately started the metropolitan cooperation within the EU Cohesion Policy funding framework, using the Integrated Territorial Investment (ITI) instrument. In Wien, cooperation across borders remains limited to individual practical projects. In contrast, the institutional framework for cooperation remains complicated and vague and overarching development strategies for the metropolitan region are missing. Riga and its surrounding area constitute one official planning region without proper spatial scale and competencies, but with a hope that this will change in favour of a more efficient metropolitan cooperation, as part of the ongoing governance restructuring programme.

In case of weak or non-existent governance mechanisms for cooperation between the core city and the surrounding area, neither

spatial planning nor economic development strategies are jointly elaborated. Even in those cases where the metropolitan area has more significant competencies (e.g. Stuttgart), implementing coordinated actions remains a difficult task. Actions get even more delayed, even if regional zoning plans allow industrial development, as there is usually a strong neighborhood resistance from the residents. But even in this situation, cities can use a different array of tools to support the different preferences in directing the economic development. But most often, good examples of cooperation between municipalities in the metropolitan areas, mainly concern transport systems and public services and less economic development.

**In case of weak or non-existent governance mechanisms for cooperation between the core city and the surrounding area, neither spatial planning nor economic development strategies are jointly elaborated.**

## 2.3

# Other tools to influence spatial development processes of manufacturing

In most European cities, the main actors in industrial development processes are (mostly private) landowners and private entrepreneurs and developers. Municipalities usually do not interfere directly in the negotiations between these actors. However, there are some tools available for the public sector allowing them to steer the direction for urban development.

Direct public ownership of large plots of land is not common nowadays. For instance, Wien still has some land reserves (but mainly for residential development), while Berlin and Oslo had already sold most of these on the private market. Recently the strategy of these cities has reversed, and they started to purchase back land. In Berlin, land has been purchased for foundational activities, start-ups, and innovative hubs. The city offers to the entrepreneurs the possibility to lease plots of land on a long-term basis, often below market rates. The Senate of Berlin recently introduced a rent cap not only for the housing sector but also for industrial land. This is seen as a revolutionary tool, being highly contested.

Planning and zoning procedures linked to financial and taxation systems are more indirect tools to regulate the real estate market dynamics. All the analyzed cities have well-developed planning systems, including strategic and binding/detailed planning regulations. Most commonly, zoning regulations indicate what are the possible functions allowed in given areas, yet these operate more as restrictions rather than actively encouraging structural change. In some cities, there

are several legal possibilities for exemptions (as in Warszawa, where national legislation enables developers to ignore the local zoning plan to accelerate investments). In others, landowners simply do not sell land or do not start investments until the land has been rezoned to a more profitable category. National regulations could reduce cities' interest in rezoning land, when limiting the taxation over land value increase or make this impossible at a local level (as in the case of Oslo).

Interesting experiments that allow more flexible land use categories can be found in many cities: such as mixed-use zoning (Oslo and Berlin) or conditional zoning (Wien). Developing local spatial frameworks (e.g. masterplans) within dynamic areas provides an opportunity to bringing a more participatory approach to planning and focusing on the desired functions by involving potential stakeholders. Such or similar practices (e.g. planning guidance for public space) are experienced in Oslo, Wien and in Warszawa (in a bottom-up form).

Even if being established mostly at national level, the taxation systems are efficient tools and influence the motivations behind local

**Even if being determined mostly on national level, the taxation systems offer tools and influence the motivations of local municipalities to intervene in the processes between private actors.**



municipalities decisions to intervene in the processes between private actors. There are considerable variations in the regulations of the primary taxation forms (such as personal income tax, real estate tax, business tax) and the opportunities they create for local municipalities. For example, cities cannot levy any local business-related taxes in Latvia. Thus, municipalities' prevailing interest relates to residents personal income tax. In Poland, municipalities can lower the local business tax to attract enterprises into their area. In Stuttgart, local revenues are based on jobs and company taxes, while in Oslo, national taxation is dominating, making any forms of local tax revenues insignificant. Depending on these taxation forms, there are different attempts to sign development agreements with developers to get contributions directly from them in each city.

In the cities analyzed, there are some initiatives to form bottom-up networks of local enterprises that could represent their interests more efficiently. For example, the Motzener Strasse initiative in Berlin consists mainly of traditional trades and repair businesses that joined their forces to resist crowding out effects more efficiently. Paadriv is a more recent initiative in Oslo, a social hub with enterprises and individuals networking for sustainable development. Such innovative tools can provide a more flexible framework to enhance desired industrial activities. Still, experiences vary to what extent the cities can achieve the result in reality.

## 2.4

# New efforts for cooperation in manufacturing in the stakeholder urban areas

It does not seem realistic that metropolitan areas' (generally fragmented) governance systems should change shortly. Even so, some examples show that common interests and innovative incentives may lead to better cooperation between the core municipality and the municipalities within the larger metropolitan area. A few strategies include:

- A good example is the aerospace district in Torino metro area, an innovation hub, which developed from a committee to an institutionalised cooperation. The regional policy supported the I3P incubator investing in an innovative industrial supply chain in the Torino region. Here, municipalities in the metropolitan area jointly developed future visions of specific industries, planning activities, and implementing concrete actions.
- An excellent example of cooperation is represented by the development of the new *Berlin Brandenburg Airport* in Schönefeld. This was a joint development program carried out by Berlin, Brandenburg, and the Republic of Germany to establish an intercommunal enterprise zone. The city of Berlin bought 120 ha of land for industrial development to realise the program.
- In the Stuttgart region, a strategic dialogue has been launched on the future of the automobile industry as a new form of institutionalised collaboration. Furthermore, the regional government has its own Stuttgart Region Economic Development Corporation, which supports SMEs' networks to facilitate developing clusters in the region.
- Wien has established an organisation with a small group of managers

(Stadt-Umland-Management) responsible for enhancing cooperation among its districts and surrounding communes through regular informal meetings and personal negotiations. These were also involved in establishing a joint enterprise zone of 8 municipalities in Lower Austria.

- Across municipalities in some metropolitan areas in Poland there are examples of establishing joint development agencies. Such agencies, e.g. in Krakow and Wroclaw, do the marketing campaigns to attract new investments, which might be located in other surrounding communes. At the same time, the core city plays a crucial role in providing highly qualified professionals. Warszawa does not have such an agency but had positive experiences as a result of implementing the Integrated Territorial Investment cooperation, which provided the framework for joint EU funded transport and infrastructure developments.

In the interviewing process and the future workshops, it became clear that in all of the cities analysed, more metropolitan cooperation is needed in order to handle different problems related to the protection and development of manufacturing industries. Most cities also agree that besides joint metropolitan planning, a well-positioned, strong metropolitan agency is needed to solve concrete problems actively. This could link economic development to the related infrastructure needs and promote economic development in privately owned areas. Some cities are more advanced, where Stuttgart already has a solid metropolitan organisation, while in others like Oslo, Berlin, Torino and Warszawa, discussions about establishing such agencies are just happening.

## 2.5

# Concluding remarks

The analysed cities (being major metropolitan areas of Europe) are all undergoing similar restructuring processes of their economies, that resulted in the decreasing share of manufacturing in employment. However, under increasing growth pressure, this restructuring process has different spatial and structural consequences, linked to the competition for industrial land. In those cities where the growth pressure is lower, and brownfields are available and privately owned (e.g. Torino and Riga), the major challenge is linked to making the local industry more competitive and handling the problems that derive from ownership as these are expensive to develop (capitalise). On the other hand, in cities with no land reserves and intense growth pressure, manufacturing may leave the urban core, negatively impacting foundational activities and jobs available for the lower-skilled (e.g. Oslo, Berlin).

The manufacturing profiles of the core cities and their agglomerations are usually different. There is the potential to strengthen the links between the productive activities between the core city and its surrounding, creating economic activities in the metropolitan area. There are different strategies to do that, either to strengthen the core activities of the metropolitan areas (as in Stuttgart or Torino) or create a more dispersed economic structure based on small scale manufacturing sectors with high growth potentials (as in Oslo or Wien).

Seen from the outside, metropolitan areas are the most viable / appealing territories for productive industries. The optimal distribution of activities, supported by proper land use, labour force capacity and infrastructure patterns, is crucial from a local perspective. In reaching this local optimisation, even the

metropolitan areas with official administrative structures and/or elected bodies tend to have problems due to ineffective governance systems. The different interests of individual municipalities in the metropolitan space make the coordination on the metropolitan level rather complicated – but extremely necessary in order to boost innovation and keep essential industrial functions in metropolitan areas. For a more robust metropolitan governance system it is critical to strengthen cooperation on two levels: 1) bottom-up cooperation of local stakeholders 2) creating solid linkages to the nation-state to gain support for developing the major infrastructure and locate crucial economic branches.

Several good initiatives were revealed in the cities analysed, also at the metropolitan level, that ensure a more balanced development of different functions and the industrial upgrading. Using financial incentives, planning and taxation tools in a more imaginative way, and approaching planning and economic development from the participatory side on both local and metro level, might lead to more favourable results in retaining and upgrading industry.







# Striking the balance between competing land uses, dealing with structural change and maintaining a high quality of life

“As one of the demographically fastest growing cities in Europe, Wien has not only faced increased competition for land use but also massive structural changes in the last decades. These processes continue to challenge Viennese urban planning in its goal to strike the balance between competing land uses, while at the same time maintaining a healthy and diverse local economy and a high quality of life. Developing solutions to these challenges requires “thinking out of the box” and building on the experience of other cities and academics to answer question such as: Which manufacturing branches are necessary for a modern city and compatible with overall development goals? And: where can we find the best space for their development? In this endeavor, the MISTA findings provide valuable orientation for the advancement of spatial and economic development in Wien.”

**Michael Rosenberger**

— City of Vienna, Department for Urban and Regional Planning



Panorama of Warszawa Metropolis, courtesy of City of Warszawa, 2021

# Developing mechanisms of metropolitan cooperation enabling coordinated answers to the process of deindustrialization and changing of the urban economic base of Warszawa, Poland

“The relevance of the problem in the context of the management of the Warszawa metropolitan area depends on the adopted time perspective.

Within the short-term perspective, bilateral cooperation between Warszawa and individual communes of the Warszawa metropolis is carried out in order to solve current issues.

In the longer term, it is necessary to establish appropriate mechanisms of metropolitan cooperation that will enable the coordination of policies responding to the process of deindustrialization and changing of the urban economic base.

The activities of the City of Warszawa are currently aimed at developing such mechanisms based on the experience of implementation of the ITI instrument as well as on the basis of domestic and foreign experiences.

The Warszawa metropolitan area management system will be developed and implemented in close cooperation with key stakeholders, particularly municipalities from the Warszawa metropolitan area.”

**Andrzej Czajkowski**

— City of Warszawa, Chief, Office for European Funds and Development Policy (FE), Department of Integrated Territorial Investments





Development process of "Orkla" food company in Adazi municipality located in Riga functional area.  
Courtesy of Riga Planning Region, Head of Spatial Planning Unit

# Identifying criteria for defining industrial and new development territories in metropolitan areas, the experience of Riga, Latvia

“During the past three decades, due to the expansion of urban territories, significant spatial changes have taken place in Riga and its surrounding areas forming Riga’s functional region.

Following these changes, productive sector spatial localization and specialization adapted to a broader territorial perspective. There is visible development of vital manufacturing sectors in Riga urban area outside of the core city – food production, chemical and pharmaceutical industries are the most visible examples. An important factor here is the need for a well-organized metropolitan scale collaboration process to react to market demand and help make the right location decisions for companies. Considering metropolitan scale spatial transformation processes, it’s crucial to identify existing and potential territories for industry and other space-consuming sectors. Riga region focuses on identifying criteria for defining industrial and new development territories in metropolitan areas considering recent development trends, IT development, global tendencies and local habits, significant future projects (e.g. RailBaltica), and changing spatial structure.

This book shows valuable findings regarding the changing role of industry on a spatial scale: it explains the main trends in productive activities of city regions. So far, it is essential to think about spatial consequences of urban sprawl, distribution of economic activities, as well as the readiness of metropolitan areas for potential future jobs.”

**Rudolfs Cimdins**

— Riga Planning Region, Head of Spatial Planning Unit





# Reintegrating the productive activities in the city development of Oslo, Norway

“Oslo has seen increasing pressure on real estate in recent years. In the fringe areas of the urban centre, this has led to land-use changes, pushing industrial and production activities further out, beyond the fringe.

Land transformation for housing, and increased rent levels on sites that are increasingly perceived as being centrally located, make it hard for firms to find affordable space with access to the city centre.

What kind of production industries do we need in Oslo, and what can we expect in the future? What are the needs for these types of production and services? Where should they be located to serve the city and to succeed? How can we address this in our own policymaking, and what planning instruments do we have to facilitate future production in the city?

Our involvement in the ESPON MISTA-project was driven by a need to understand these processes and questions better and to integrate them in achieving the city's development goals.”

**Peter Austin**

— City of Oslo, Planning advisor,  
Urban Development Department

MAKING GROUND



The renovated Officine grandi riparazioni - OGR, Torino.  
Courtesy of Città metropolitana di Torino

# Building the enabling factors for specialization and differentiation in a the highly diversified and articulated metropolitan area of Torino, Italy

“In a context characterized by the micro-industry spread over the plains and mountains and by the presence of a considerable heritage of abandoned production areas, the Metropolitan City of Torino is now committed to building the enabling factors for the increase and dissemination of the ability to create value in its key and various economic sectors, including those more peripheral.

The Metropolitan City aims to transform abandoned places into economic and social development opportunities, attract national and international investments, and encourage the establishment of innovative production activities in processes and products.

It supports territorial aggregations functional to cooperation in business networks, for the construction of supply chains centred on local production vocations and, last but not least, to counteract the consumption of free land and optimize the use and management of available resources.”

## **Irene Mortari**

— Head of Project Unit Metropolitan General Territorial Plan Department Territory, building and traffic, Metropolitan City of Torino





Automotive factory in Sindelfingen  
Courtesy of VRS  
Copyright Regina Voigtman



# Driving into the future. Sites for a changing automotive industry in Stuttgart Region, Germany

“Stuttgart Region is often dubbed the cradle of the automobile. In fact, the contribution of car manufacturing to the region’s jobs, GDP, and prosperity is outstanding. For that reason, the apparent transformation from combustion engines to electric powertrains will cause far-reaching changes in terms of production and logistics but also in the local economy and labor market.

In spatial terms, these changes cause – at least temporarily – an additional demand for industrial sites: Locations for emerging technologies and respective supply chains are hard to find in a densely populated area. Moreover, warehouses and cargo handling are among the least attractive options: ample space, heavy traffic and emissions – but a limited number of jobs and little contribution to local tax revenues. However, these facilities are essential for the industrial base.

The Verband Region Stuttgart works with the 179 municipalities that oversee local land use planning and zoning to provide the necessary sites.”

**Thomas Kiwitt**

— Managing Director, Verband Region Stuttgart





Manufacturing area Söding Neukölln © Sen SBW Berlin / Dirk Laubner (2021)



# Planning for a new productive city, Berlin, Germany

“For years Berlin has witnessed a steady growth of both the population and the economy. However, the other side of the coin reveals a loss, especially related to those manufacturing areas vital for the economy’s functioning. Areas that are home to crafts businesses, local production of small scale, and construction companies. Due to the increasing shortage of land and rising land prices, many of these essential but low-yield branches are being priced out of inner-city locations into the urban hinterland by residential, office and retail.

Among other activities, the Berlin Senate countersteers with its Urban Development Plan (UDP) Economy 2030 and an initiative for new municipal craft and trade centers. Nevertheless, to evaluate and further develop strategies and instruments, policymakers need a broader knowledge basis of the processes behind and potential solutions.

The view from the outside by independent scientists on Berlin and from Berlin to other European cities can set new impulses for Berlin – these have been a great motivation to engage in the ESPON MISTA project and support the production of this handbook, presenting the main results of the project.”

**Elke Plate, Philipp Perick**

— Senate Department for Urban Development,  
Building and Housing, Berlin



# Re-assembling the productive city: scenarios

03



Policy and planning can play a critical role in urban production, manufacturing activities and industrial land. Public administrations and policy makers are thus key. There is no clear script or pathway, which makes it challenging for the public sector to know what role to play due to highly context specific factors.

Regardless, two dimensions can offer clues. Firstly, is the public sector actively engaged in shaping the local economy or is it more inclined to support market dynamics?

Secondly, is the scale of focus at the level of the city or Functional Urban Area? Based on these clues, it is possible to narrow the range of actions that would be most relevant for the public sector. This chapter considers four scenarios, illustrated with case study examples.





## 3.1

# Re-assembling the productive city: scenarios

Since the 1970's numerous factors resulted in a rapid transition within many cities from an industrial to a services based economy. Chapter 1 described how this shift in the local economy of many cities was driven largely by market-based innovations in technology and production process that has allowed larger volumes of goods to be produced with less labour and at more affordable prices. Many forms of production have left cities and metropolitan areas, while others have stayed or are returning. General trends observed across European cities may be associated with the decline in production are attributed to innovation in production, the costs of logistics or the cost of production. Yet other trends are very context dependent relating to local economic conditions, planning and governance.

Until recently, the role of the public sector in urban production systems has been largely ignored or under-appreciated. Business was considered the driver while the public sector was seen to provide a facilitation role or be responsible to develop common infrastructure. Events and trends during the last decade have shown a greater need for the public sector to be actively involved in the economy. Adapting to climate change, managing resources, dealing with income inequality and the need to stimulate the local economy have shown that the public

**The role of the public sector in urban production systems has been largely ignored or under-appreciated.**

sector must provide stronger leadership to deal with complex problems.

Traditionally the public sector has supported production through zoning land, building infrastructure, imposing permits and policing standards, leveraging taxes, and subsidising education programs. But more recently, notably since the COVID19 pandemic, the public sector has taken on a more active role in shaping the economy with local economic visions, networking local actors and investing in fundamental research and development. The local public sector, acting at a city or metropolitan scale, has become increasingly important in addressing complex challenges as they often have a close link to local actors and have a keen awareness of local socio-economic dynamics. For example, some activities may have very poor profit margins but provide a very important service for the city, as explained in Chapter 1 (i.e. waste management or food production). Protecting and supporting local production is likewise a responsibility increasingly embraced by the local public sector.

The role of the local public sector in supporting production activities is very context dependent which makes it difficult to provide clear policy guidance and standard recommendations. Any form of economic development should be sensitively linked to the culture, geography, resources and character of the local economy. However, without a roadmap, public authorities may find it daunting to prioritise investment. Chapter 1 presented trends on types of production

that are active in cities and indicated how certain activities are in a phase of growth or decline. Chapter 2 discussed in particular the problem, with reference to the role of metropolitan areas and cities.

This third chapter is conceived as a guide for the public sector to engage with production processes, industrial land and manufacturing activities. Firstly, different aspects of the production chain will be presented, identifying where the public sector

could actively contribute to the production process. It then looks at the role of the public sector in supporting production in cities, viewed through the lens of four scenarios, illustrated by case studies presented in more detail throughout the fourth Chapter.

This chapter concludes with a reflection of how the public sector could act, in light of the multitude of actors connected to production. Together with the fourth Chapter it speaks to policymakers, trying to provide arguments and ideas for action.

## 3.2

# Where to act: the production chain

*“Manufacturing has changed, but our understanding of it has not... It has become difficult to differentiate between goods and services and the attempt to apply such a distinction distorts understanding of complex production processes.” Bryson (2009, 6) <sup>1</sup>*

How can the public sector contribute or support local production? Since the 1970's, the production process has become increasingly more complex and specialised. Some production chains, for technology like aeroplanes or mobile phones, can involve a global network of contractors and suppliers. Other goods can be very local. Rarely do businesses internalise the entire production chain (what is referred to as vertical integration), but there are often steps that need to be physically near each other. Therefore, looking at different steps in the production cycle can help illustrate inter-dependencies and possible clusters that public authorities can support or develop. The production chain can be broken down into seven distinct segments.

**Research and development** (R&D) is generally associated with knowledge of new materials or components. Most businesses internalise some form of applied R&D, but fundamental R&D can be expensive and often linked to universities or specialised research organisations. The public sector has traditionally played a strong role in supporting fundamental research and helping researchers spin-off their ideas into commercial products or to connect established businesses and researchers.

**Design** relates to the design of the product,

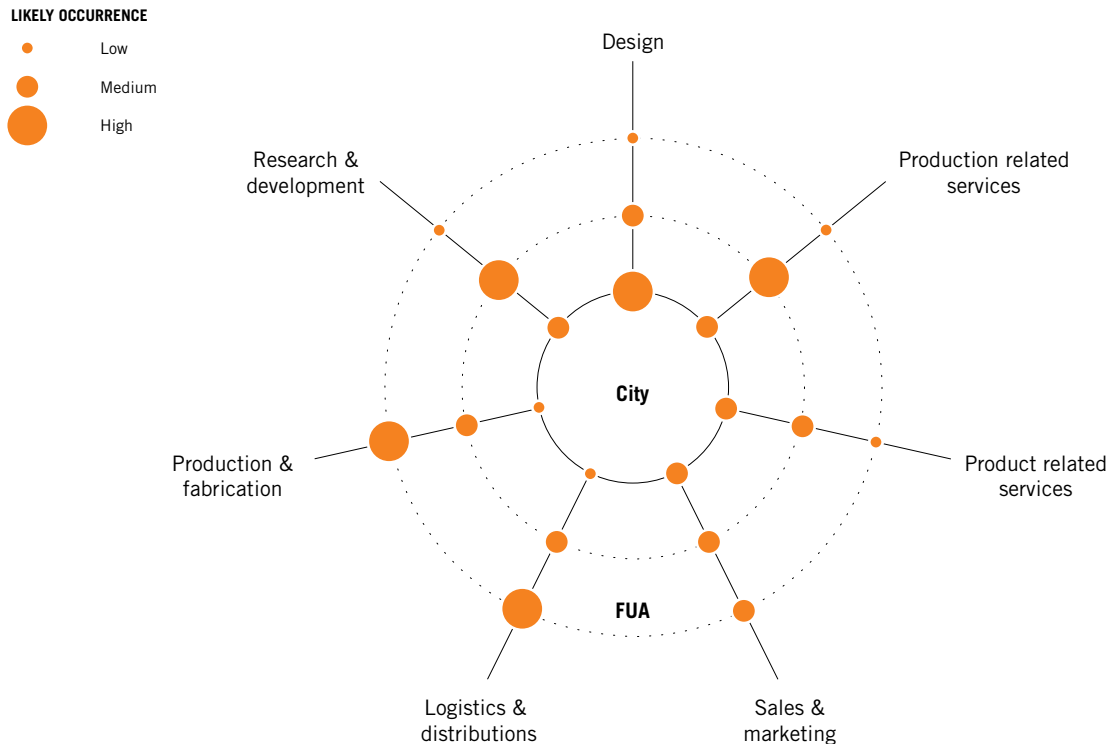
translating R&D into a good that can be manufactured. The designers could be very local (often the case for R&D or furniture) but could be located far from the place of production (typical for clothing or consumer electronics). The public sector can stimulate design particularly through training, competition and showcasing innovation. The public sector can help communicate quality in terms of the global impact of the product (from resource extraction to longevity of use).

**Production related services** are based on a design, preparing it for the production process and often is located near the place of production. With greater levels of automation and connected devices, product related services can be located far away from the production location. The public sector can support businesses, particularly small and medium sized enterprises, with expert knowledge to improve production processes or management.

**Product related services** help to facilitate the use, interaction or life of a product. This is an increasingly important aspect of hybrid products where the good is heavily dependent on an associated service. For example a car generally needs a mechanic to ensure that it is suitably maintained. Product related services have become increasingly important in urban areas and are seen as critical for the circular economy and resource management for goods such as communications devices, lighting, clothing and specialist equipment. The public sector can help stimulate product related services that avoid waste and extend the life-cycle of products or create local jobs linked to locally produced technology.

<sup>1</sup> Bryson, J. R. (2009) Hybrid Manufacturing Systems & Hybrid Products. Volume 3: Studies for Innovation in a Modern Working Environment – International Monitoring. Institute for Management Cybernetics e.V. IMA/ZLW & IfU – RWTH Aachen University

FIGURE 11: SEVEN STEPS WITHIN A PRODUCTION PROCESS, INDICATING THEIR OCCURRENCE WITHIN A FUNCTIONAL URBAN AREA.



Source: Based on Bryson 2009, interpretation ESPON MISTA (2020).

**Sales and marketing** is the link between the producer and consumer, which may be a wholesale consumer (such as a business) or a retail consumer. This step is often as important as the actual product for businesses. Local businesses can struggle to connect their products to local markets and compete with sales and marketing budgets from large businesses. The public sector can support local businesses in a range of ways such as creating links between local supply and demand, labelling local products (such as “Made in...”), grouping producers in trade fairs and running local communications campaigns.

**Logistics and distribution** involves the source materials that are fed into the production process and the distribution of produced goods. This is a challenging activity for local producers. Firstly, as it is difficult to distinguish between materials or parts used for local producers and those manufactured goods that are manufactured elsewhere and simply sold locally. Secondly, producers often depend on local material or parts suppliers. If

a supplier closes, it can impact a larger network of producers. The public sector can help support local producers through understanding their interrelations between suppliers and producers and where necessary protecting or supporting suppliers.

**Production and fabrication** is the final step where a good or product is manufactured. This is the stage which is under great real estate pressure in growing cities. The public sector can help protect and support production relevant to the local economy. There are vast range of ways that this could manifest, as described in the last Chapter

Some of these steps are more strongly linked to the core city (the local authority that is linked to the main central business district and a large portion of the population). Other steps are more suited to the larger metropolitan area where land is cheaper, development regulation is more flexible, where environmental norms are less stringent due to lower population densities and where conditions for logistics and transport are better.

## 3.3

# The Role of the Public Sector

### TWO QUESTIONS

The scope and scale of action of the local public sector can be determined by two simple questions which can help to narrow priorities and policy.

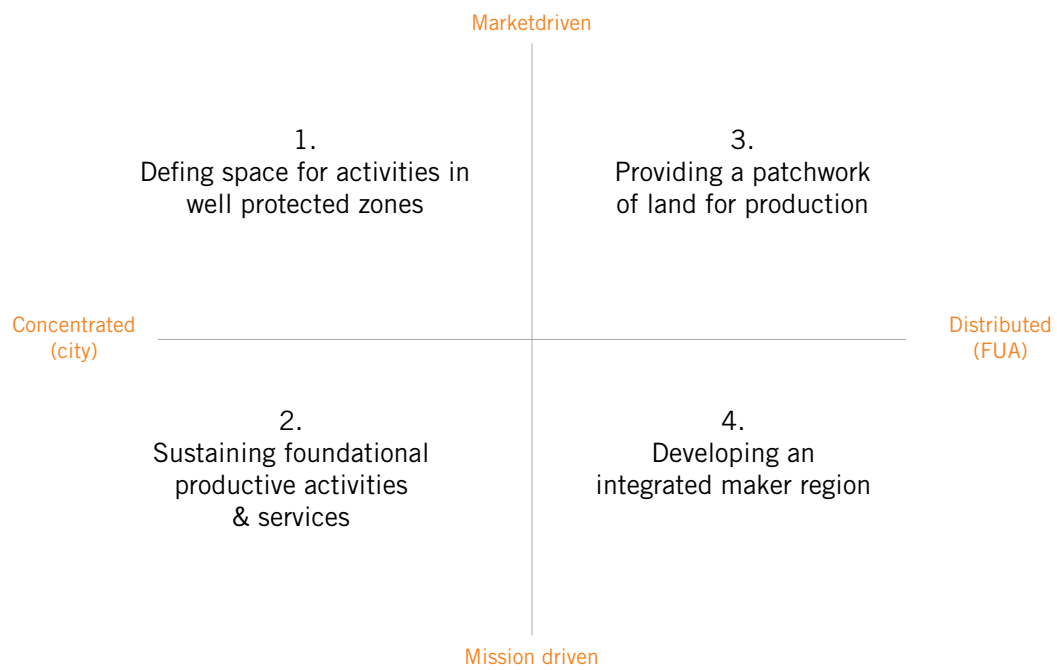
#### WHAT IS THE SCALE OF ACTION?

Local public authorities may operate just at the scale of the core city or cover the larger institutional scale of a metropolitan area. As noted above, certain aspects of the production chain are more likely to be attracted to different parts of a metropolitan area. Some core cities cover considerable territories yet may not be able to align policy at a larger scale and come into conflict with smaller surrounding municipalities. This means that economic development planning is limited to the core city and may require finding innovative solutions for certain activities (particularly logistics or larger manufacturing spaces). Alternatively, cities with working relationships at a metropolitan scale through formal governance structures (such as a metropolitan government) or informal partnerships will take a different approach to investment and development.

#### WHAT IS THE ROLE OF THE PUBLIC SECTOR IN THE LOCAL ECONOMY?

The role of the public sector can vary significantly in terms of its position for supporting or developing the local economy. Some cities are more inclined to support development trends driven by the private sector. In other cities, the public sector plays a proactive role in agenda setting, mediating, facilitating and supporting the economy. These are qualitative distinctions but will result in different approaches to policy, public investment and development.

FIGURE 12: THE TWO AXES THAT DEFINE THE POLICY SCENARIOS.



Source: Adapted from ESPON MISTA (2020).



## 3.4

### Four scenarios

By intersecting the two dimensions noted above - the scale of action and the role of the public sector - four scenarios emerge. All four scenarios assume that local public authorities are actively involved in developing their local economy but it assumes that there are different forms of governance subject to the role of the public sector within the local economy and the scale of action.

The scenarios in themselves are neither good or bad, better or worse and there is no one-size-fits-all solution. They will suit local and metropolitan public authorities in different ways. The scenarios are descriptive and not prescriptive, and public authorities may like to combine elements of each to develop a strategy that fits their local conditions. The scenarios also reference case studies that can be found in the last Chapter.

## SCENARIO 1

# Defining space for activities in well protected zones

When action is focused at the city level and the economy is market driven, the public sector may prioritise the availability of space to ensure that the market reveals the most suitable activity. The kinds of activities that occur will be driven by forces outside of the public sector. This is the most accessible scenario for cities where there is political ambition to ensure that production remains local yet there are limited budgets for productive activities.

Letting the market decide how industrial land is occupied, could give an impression of poor governance or a high probability for chaos. However, in simply protecting zoning and stipulating general criteria for the kinds of activities that are permitted within certain zones, public planning can provide space for other actors to emerge that help to facilitate local business communities. There may be

space for independent entrepreneurial area managers to help federate the needs of local businesses.

This scenario comes with evident risks. The role of the public authority in this scenario is to ensure that there is adequate supply of land or space to ensure that a wide range of activities will occur. But without having an influence over the kinds of activities found on industrial land, there is a chance that those activities located on industrial land do not satisfy the needs of the city. Consequently, space may be used for non-production based activities such as religious congregations, sports and entertainment, storage or large retail. Likewise, if the local occupants are poorly organised and the planning authority is weak, gentrification of former industrial land/ neighbourhoods is likely to occur over time.

<b>Opportunity</b>	Secure space for businesses based on the strongest demands from the market.
<b>Policy</b>	<ul style="list-style-type: none"> <li>• Protection of industrial land, for industrial activities which does not include regulating the specific kinds of activities present.</li> <li>• Definition of conditions for mixed use and industrial intensification for land that can be densified.</li> <li>• Ensure space is flexible and in suitable supply.</li> </ul>
<b>Public investment</b>	<ul style="list-style-type: none"> <li>• Zoning and planning documents.</li> <li>• Policing of space to ensure that it fits within the scope of certain activities.</li> </ul>
<b>Challenge</b>	<ul style="list-style-type: none"> <li>• Seek the most out of available industrial land based on minimum effort.</li> <li>• Ensure that space used for production is used efficiently.</li> <li>• Where space is not used efficiently, provide incentives or regulation that improves the capacity of available space.</li> <li>• Ensure that any form of densification of industrial land does not create conflicts.</li> <li>• Ensure mixed use zones work as intended and that industrial spaces are not consumed by other activities (cultural and religious activities, retail, office space...).</li> </ul>

## OPPORTUNITIES FOR PUBLIC AUTHORITIES

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### PROTECTING LAND THROUGH STRONG POLICY.

A simple yet highly effective approach is to use strong land use planning policy to regulate the kinds of activities that may occur on a site. The Planned Manufacturing Districts in Chicago have defined the kinds of criteria of activities that can occur on a site (see for additional details, Chapter 4). This strategy depends on strong policing and active regulation.

### SHOWCASING TO STIMULATE THE LOCAL MARKET.

Private developers are often very reluctant to try alternative development models so the public sector may use two solutions to stimulate new ideas. Firstly, the public sector could subsidise lighthouse projects that showcase development such as those developed by Citydev, brussels or the Initiative for the New Municipal Craft and Trade Centres launched by the city of Berlin. A second alternative is for a public actor to accompany developers along their design process to provide reassurance and alternative ideas (see for example the initiative launched by the region of Brussels with the Bouwmeester Maître Architecte, an independent public organisation that offers support to developers).

### CREATING SPACE FOR BUSINESSES TO DEFINE THE PROGRAM.

The public sector may not be the most suitable actor to define the program but can create the conditions for a business community to emerge. Brussels' municipality of Anderlecht is the owner of the Abattoir site, an inner-city site that contains an abattoir and food markets. The municipality awarded a concession to operate the site to a cooperative consisting largely of local businesses related to the abattoir site. In this way the local public authority does not manage the site, however it creates the conditions where local businesses have a direct interest in the future of the site. In London, the East End Trade Guilds (EETG) and Guardians of the Arches are grass-roots organisations that help strengthen local businesses and have support from the local public authorities.

### STRATEGIC DEVELOPMENT OF FORMER INDUSTRIAL LAND.

Some former large industrial zones are unfit for contemporary forms of production and also are under great pressure to be gentrified. The temptation to simply develop such sites into the highest "value" development project, could result in a lost opportunity. Strijp-S, Eindhoven is a project where the industry has been embraced through a mixture of technology focused innovation, research and culture developed through a transitional process with extensive testing and experimentation. The Ile de Nantes, France - slow urbanism model presents an alternative to the typical masterplan approach. It builds upon a grassroots approach that has allowed new activities to emerge, through testing and temporary use, providing space to incubate new ideas and businesses.

### FACILITATING MULTI-ACTOR DIALOGUE DURING THE DEVELOPMENT PROCESS.

Even if public authorities do not own land and have a weak position in a development project, it does not mean that they cannot manage the development process. Important decisions and ambitions evolve through a dialogue process which a public authority could host. The strategic plan of Hovinbyen in Oslo or the Lageweg site in Antwerp are two projects where the local government hosted workshops and a co-design trajectory.



3.3.1 Top-left: Living apart together in NovaCity (view from the train station). Public lighthouse projects showcasing new types of projects can help stimulate the private sector. Citydev is a publicly owned developer. (© Design by BOGDAN & VAN BROECK | DDS+ | Eole, developed by Citydev.brussels | Kairos | BAM, image by Pixelab).

3.3.2 Top-right: The public sector can help to guide development projects to prioritise the local economy, such as the public-private development partnership for Eindhoven's for Philips site, Strijp-S (Perspective view of the Strijp-S Masterplan 2004, © West 8)

3.3.3 Bottom-left: Publicly owned land can be managed or developed by local interest groups, particularly under the form of leasehold title (such as a 99-year lease). Brussels' abattoir site is managed by a company owned in part by local companies that occupy the site. (© ORG PERMOD – [www.abattoir.be](http://www.abattoir.be).)

3.3.4 Bottom-right: The public sector can help facilitate the transition of sites by acting as a mediator of privately owned land (© Veva Roesems & Dieter Leyssen)

## SCENARIO 2

# Sustaining foundational productive activities & services

This scenario is suited to cities with a strong political mandate to stimulate local production-based activities. This scenario assumes that cities that are adopting progressive economic policies are doing so due to strong real estate pressure requiring strategic planning to make bold decisions in order to protect space for a wide range of services that the city depends on. Activities and services that are most under threat from real estate development include food, waste management and construction. It could also include activities related to specialised knowledge

clusters that are hard to detach from the city, particularly those linked to research facilities or universities.

This scenario is most relevant to core cities that have strong policy ambitions particularly for environmental and social challenges, but where political vision is not aligned at a metropolitan scale and therefore the core city must focus on its own territory to address policy ambitions. As a result, the core city authority is forced to develop their land as effectively as possible.

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<b>Opportunity</b>	Boost a city's resilience and economic diversity by ensuring a balance of economic activities.
<b>Policy</b>	<ul style="list-style-type: none"> <li>• Build on other policies associated with climate, circular resource management, accessible work, relevant applied research, skills development and so on.</li> <li>• Define the kinds of activities that are "city-oriented" and stimulate them.</li> <li>• Invest in public ownership or control of land to enable missions and set ambitions.</li> </ul>
<b>Public investment</b>	<ul style="list-style-type: none"> <li>• Public investment in securing a limited amount of space to protect foundational functions.</li> <li>• Support &amp; stimulation programs.</li> </ul>
<b>Challenge</b>	<ul style="list-style-type: none"> <li>• To ensure that there is not sufficient critical mass of manufacturing for it to be viable.</li> <li>• Spaces need to be fiercely protected and businesses need to be screened to benefit the most suitable actors.</li> <li>• Find the most suitable activities linked to the local needs.</li> <li>• Avoid possible conflict with state-aid.</li> </ul>

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## OPPORTUNITIES FOR PUBLIC AUTHORITIES

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### CLEAR GUIDANCE REGARDING CLUSTERS.

Cities with a political mandate to focus on specific aspects of their local economy will benefit from conditions for collaboration and informal competition to help drive efficiencies, competitive advantage and innovation. Clustering may occur at different scales according to the kinds of activities. The Berlin Urban Development Plan Economy 2030 designates areas for production based branches within industrial zones to safeguard land for manufacturing and foundational economic services. The Brussels Circular Economy Plan treats the region of Brussels as a metabolic system to manage material resources.

### INTENSIFYING LAND USE.

When real estate value is at a premium and there is limited affordable land, cities will need to find creative ways to balance the needs of various land uses such as housing, public space, social services in addition to production. As industrial land is generally much cheaper than housing and commercial real estate, it becomes the target for rezoning. Cities that want to provide both public facilities and retaining space for production often will look vertically for answers. There are two models to densify land. Firstly, “industrial co-location” means mixing very different activities, such as production, logistics, sports and even housing. In this case, often the more valuable land uses (housing of commercial space) subsidise the lower value activities. This can be problematic if the most vulnerable activity (such as housing) is disturbed by other activities (such as noise, odours or heavy vehicles). A second model is “industrial intensification” whereby activities are compacted onto a site or where production is layered. The London Industrial Intensification Study explored the feasibility based on four scenarios. Both models have been realised in Paris with their *Hôtels Industriels* and in Brussels with various projects by Citydev.brussels through a mix of public investment or defining development conditions on private developers.

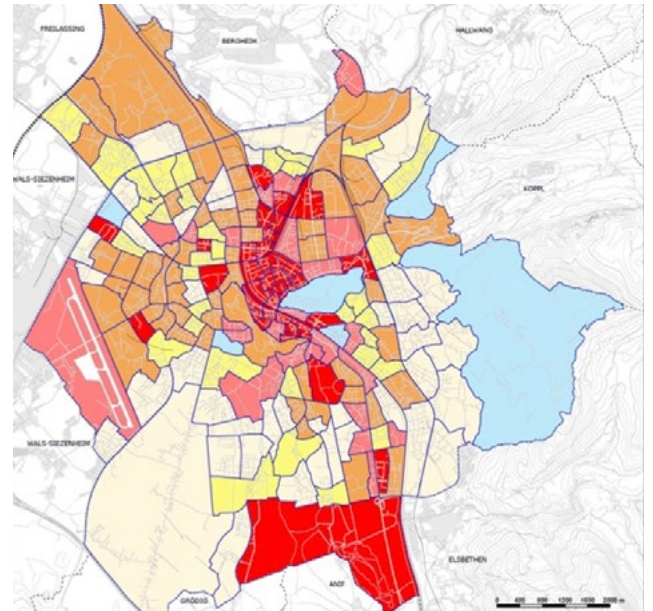
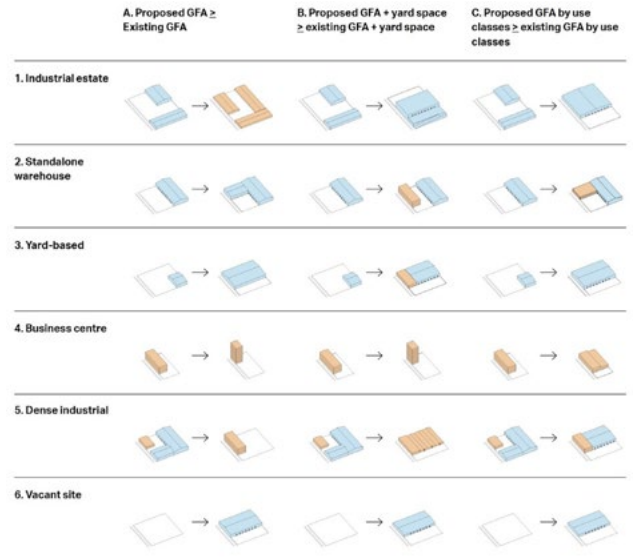
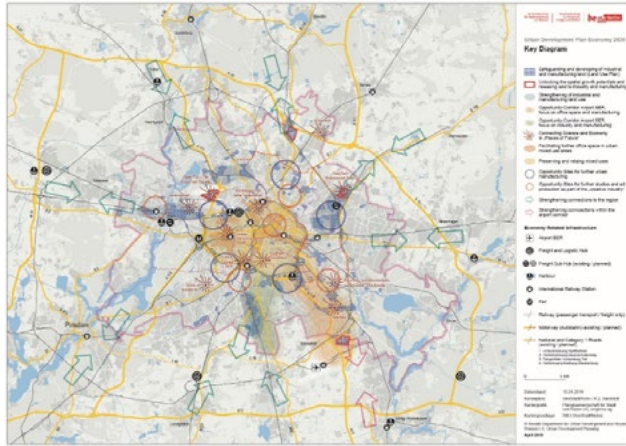
### DEVELOPING A PORTRAIT OF EXISTING LAND USES.

There is a large gap between generic statistical data (such as the European NACE codes or Labour Force Survey) and what happens on the ground. Businesses may be unrealistically categorised or there may be activities that do not show up in statistics because they’re legal address is not the same as the production site. Qualitative issues and evolving land uses are also essential for policy makers to understand and rarely will appear through statistics. On the ground observation is therefore invaluable. Cities like Salzburg have very limited land and therefore have started collecting data to observe changes.

### SUPPORTING BUSINESSES THROUGH FACILITATION AND TRAINING.

A city with a public mandate to stimulate its local economy could actively support local businesses through capacity building, networking and skills training. Wien hosts two inspirational examples. Firstly, the Wien Business Districts is a publicly funded, independent organisation that supports businesses in various stages of their development from finding locations, dealing with financing and funding, looking for partners, building networks and so forth. Secondly, the Wien Adult training and Labour market policy agency - WAFF is an example of professional training that encourages life-long-learning and adaptations of staffing to the exigencies of the job.





3.4.1 (Top-left): Cities with a strong agenda to stimulate production can help strengthen areas by defining their predominant economic character, such as Berlin's Urban Development Plan (UDP Economy 2030, courtesy of Senatsverwaltung für Stadtentwicklung und Wohnen, Berlin)

3.4.2 (Top-right): Intensification is one way to increase available surface areas, however it is necessary to explore local legal and financial implications, such as in the London Intensification Strategy (Greater London Authority - Good Growth by Design Programme, image by We Made That)

3.4.3 (Bottom-left): Paris developed between the 1980's and 2000's a series of buildings that mixed production, logistics and other activities referred to as "Hôtels Industriels" (Hôtel industriel Berlier © Michel Denancé/ Dominique Perrault Architecte/ADAGP)

3.4.4 (Bottom-right): Cities can carefully monitor activities to understand trends and identify where unintended activities are occurring, such as Salzburg's data collection focused on economic land ([www.stadt-salzburg.at](http://www.stadt-salzburg.at))

## SCENARIO 3

# Providing a patchwork of land for production

Larger cities are increasingly expanding competencies at the metropolitan scale through formalising partnerships amongst local authorities or through national scale policy that enable a metropolitan scale government. The local economy can be much more effectively developed at a metropolitan scale, than at a city scale. This means that businesses and land uses can find the most effective location according to their needs. However, metropolitan scale governments or governance does not necessarily result in increasing power.

This scenario is dedicated to metropolitan scale governance that is inclined to allow the

market to drive the economy. This may be due to limited power at a metropolitan scale (typical for most metropolitan scale governance) or it may be a strategic decision by the public sector due to a well organised business community.

As in Scenario 1, this scenario comes with evident risks if there is no coordinated strategy to ensure that activities that the larger metropolitan area depend on (think of waste management) have a suitable place and that the benefits and costs are shared across the larger metropolitan area.

<b>Opportunity</b>	A market driven and flexible approach to economic development.
<b>Policy</b>	<ul style="list-style-type: none"> <li>• Ensure land is available (through zoning).</li> <li>• Ensure that land is being used for the anticipated zoned uses.</li> <li>• Support businesses to find a site, particularly one that is most attractive to the business' activity.</li> </ul>
<b>Public investment</b>	<ul style="list-style-type: none"> <li>• Clear zoning plans.</li> <li>• Possible investment in sites for development.</li> <li>• Facilitation services to link businesses to a site.</li> </ul>
<b>Challenge</b>	<ul style="list-style-type: none"> <li>• Lack of vision that may be unattractive for large companies seeking a specific economic identity.</li> <li>• Poor coordination and piecemeal action that can lead to a lack of a network.</li> <li>• Poor influence of metropolitan scale competitiveness.</li> </ul>



## OPPORTUNITIES FOR PUBLIC AUTHORITIES

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### DEVELOPMENT OF METROPOLITAN PLANNING STRUCTURE.

It is easy to underestimate the importance of a metropolitan scale organisation to simply facilitate exchanges between stakeholders and that is respected by local public authorities, businesses and other relevant actors. The Greater Manchester Authority is such an example of an organisation that, despite politics, has managed to facilitate constructive and pragmatic dialogue between various levels of government and to federate certain public services at a metropolitan scale. While the Berlin metropolitan area extends well beyond the city of Berlin, Berlin's UDP Economy aims to safe-guard and activate industrial land through defining areas, priorities and clear guidance for planning decisions.

### PROTECTION OF LAND.

Simply enforcing that industrial land is dedicated to industrial and production based activities can offer a clear enough signal to the market that production is a relevant part of the local economy. By defining and policing the use of industrial land at a metropolitan level it is possible to avoid harmful conflicts between local governments that are trying to attract or expel certain types of land uses. Chicago's Planned Manufacturing Districts have used land use planning to protect zones for manufacturing and associated activities. In retrospect, the zoning alone in Chicago was not sufficient to "protect" land as local public authorities have been able to rezone land into other uses (such as housing), however legal constraints have slowed the gentrification process.

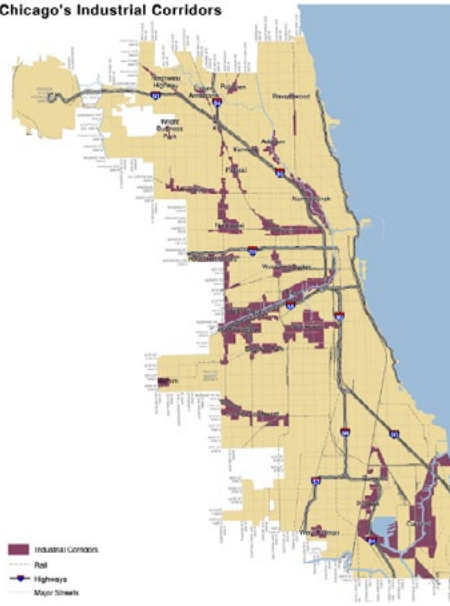
### SUPPORTING INDEPENDENT BUSINESS NETWORKS.

A market driven metropolitan area may not have the mandate or feel comfortable in intervening in public policy, yet without some form of guidance, the local economy can suffer loss of competitive advantage or lack sufficient density of certain expertise. Local chambers of commerce may also not have sufficient capacity to focus on a particular theme or area. Industry organisations or local business networks can provide a critical service. The East End Trade Guilds (EETG) and Guardians of the arches are two location bound organisations that provide grass-roots support for local businesses impacted by rising real estate prices or the impact of land use change.

STRATEGIC LOCATIONS



Chicago's Industrial Corridors



3.5.1 (Top-left): It is important at a metropolitan scale to define land and infrastructure to help support the local economy, yet it may need to remain indicative to avoid conflict between local and metropolitan scales of government (© Greater Manchester Local Industrial Strategy, permission granted under the UK Open Government Licence v3.0)

3.5.2 (Top-right): Simply firmly protecting certain land for production is an important step to avoid speculation, such as Chicago's Planned Manufacturing Districts (Chicago City Council Planning and Development, 2013, "Chicago Sustainable Industries")

3.5.3 (Bottom): Public authorities may not be the best organisations to federate a local business community. The East End Trades Guild help local businesses with communication and alignment (© East End Trades Guild)

## SCENARIO 4

# Developing an integrated maker region

In some circumstances a metropolitan scale organisation exists that has sufficient political power and respect from local stakeholders to be able to drive the local economy. Driving the economy means clearly defining priority areas or missions which are then developed through a partnership of actors such as public institutions and services, policy makers, businesses, civil society actors and so forth. The investment in organising and stimulating the local economy is high, but the benefit is that local business conditions will encourage private investment from local businesses and can improve the attraction for non-local businesses to relocate.

This narrative certainly fits internationally focused, high-tech activities. But it can also offer an important foundation for foundational activities, particularly through training facilities and attraction for talent. Public authorities do need to be careful to stimulate types of production that offer a wide range of different jobs and skill types and to ensure that land remains available and flexible to avoid overwhelming real-estate values.

In this scenario, the larger metropolitan area is seen as a whole and therefore infrastructure and production sites are seen as a system linked to other strategic infrastructure such as university and training facilities, distribution zones, mobility hubs and so forth.

<b>Opportunity</b>	Define and facilitate missions supported by public and private actors based on the strengths and competencies of each actor. Align local authorities.
<b>Policy</b>	Clear open opportunities for collaboration. Using financial stimulus, marketing and communication and land ownership to orient markets.
<b>Public investment</b>	Investment in real estate. Subsidies, (R&D) funding and finance. Communications. Tightly linked education and research actors.
<b>Challenge</b>	Costly and time-consuming before results are evident. If there is a lack of trust of buy-in, it may not have huge (directly visible) pay-offs compared to some classic market-oriented development.

## OPPORTUNITIES FOR PUBLIC AUTHORITIES

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### MISSION-DRIVEN PLANS AND POLICY.

Metropolitan areas can guide economic policy that helps to stimulate and guide the local economy. The Strategiedialog Automobilwirtschaft (or Strategic Dialogue on the Automotive Industry) in Stuttgart is a forum that brings public, private and knowledge actors together, in order to ensure the region's world-class vehicle manufacturing sector remains competitive. In addition, the Wirtschaftsförderung Region Stuttgart GmbH (WRS) is a publicly owned development agency that helps to ensure that land is suited to economic function and helps to moderate impacts and opportunities for local municipalities. A final example is the Brussels circular economy plan / BeCircular, which is an action-based plan to create a circular economy dynamic within business, education and public services.

### SUPPORTING BUSINESS NETWORKS.

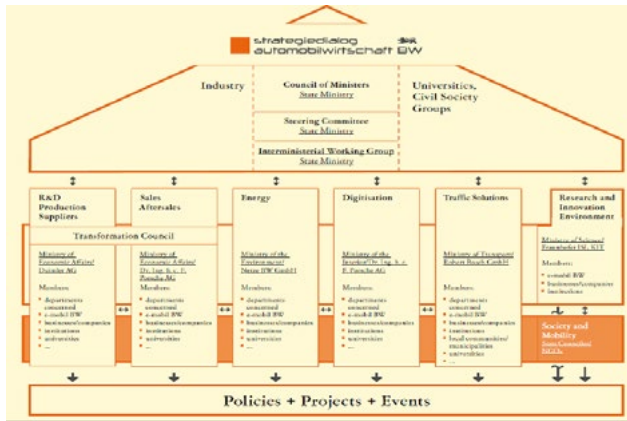
A public authority operating at a metropolitan scale has both the capacity and the interest to ensure that businesses are competitively managed, well-resourced and, most importantly, located on the most suitable site according to their role in the economy. Małopolska Regional Development Agency in Poland is responsible for a wide range of issues concerning businesses including networking, capacity building, identifying real estate, creating space for start-ups, promoting businesses and so on. The Wien Business Districts is an independent public agency that helps connect businesses with suitable locations while providing one on one assistance with seeking subsidies, building networks and improving their facilities. Metropolitan areas may also invest in common infrastructure, such as the APEA, Area Produttive Ecologicamente Attrezzate (Eco-Industrial Parks) in Italy to support sustainable resource management.

### SKILLS & INNOVATION.

As production and skilled labour is becoming a less common career choice for students and due to the speed of technical change, positions are becoming harder to fill. Part of the challenge is about inspiring students towards applied STEAM (science, technology, engineering, art and maths) careers or high-skilled trades-based jobs. The RDM Campus in Rotterdam is an example of technical education mixed with entrepreneurship and innovation. The Wien Adult training and Labour market policy agency - WAFF creates adapted training based on "life-long-learning" to ensure that workers can adapt to changing employment needs. Many actors are supporting the entrepreneurial process, with examples such as the I3P business incubator in Torino.

### DEALING WITH IMBALANCES.

Public and private investment can result in some areas winning due to economic activity, while others being overlooked. NIMBYism (not in my backyard) can also be challenging. Inhabitants need waste treatment facilities, vehicle maintenance workshops, cement plants or food production facilities, yet residents can fight aggressively to avoid living next to these activities. It can be challenging to ensure productive activities remain in or near urban areas. Considering this dilemma, Bologna's Fiscal compensation at metropolitan level offers an exciting alternative whereby an investment fund is developed to ensure investment is systematically available to improve less developed parts of the metropolitan area.



3.6.1 (Top-left): Metropolitan areas can help to stimulate a specific sector or cluster by federating actors around shared challenges. The Strategiedialog Automobilwirtschaft in Stuttgart helps to bring together businesses that may be competitors but can benefit from partnerships (© e-mobil BW GmbH)

3.6.2 (Top-right): Stimulating a new generation of workers can depend on stimulating environments, linked to young research and development projects. The RDM campus is helps to bring together learning, exploration and industry actors (© Adrian Vickery Hill)

3.6.3 (Bottom-left): Production is increasingly services based and depends on new businesses to kick-start new projects. I3P is an incubator in Torino that provides business guidance for new businesses. (© www.i3p.it)

3.6.4 (Bottom-right): Businesses within the production sector are increasingly isolated and struggle with a range of issues such as staffing, moving sites, networking, sourcing subsidies, dealing with neighbours and so forth. The Vienna Business Districts provides an important facilitation service to ensure that production businesses stay in the city (© VBD/Christan Husar www.viennabusinessdistricts.at)



## 3.5

### How to act

#### ALIGNMENT OF VIEWS FROM WITHIN THE PUBLIC SECTOR

The cases present in this book may offer promising solutions for public authorities in search of concrete ways to stimulate production or development of industrial land. Stimulating the local economy requires long and consistent investment and support. Economic development for productive activities can involve a broad range of actors within public administrations, businesses and business sector representatives, researchers and community or worker representatives (such as environmental organisations and unions). Ensuring at the very least that the public sector is aligned therefore is critical.

#### ALIGNING VIEWS

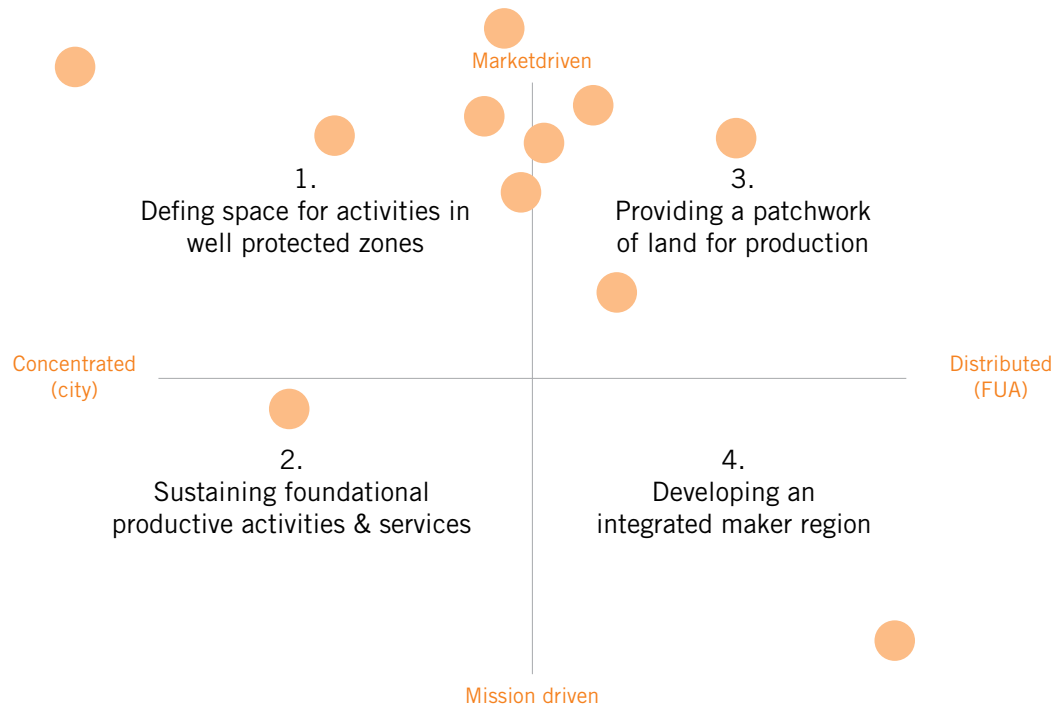
Within any public administration production can involve at least 4-5 departments or agencies. Urbanism and planning deal with zoning, development permits, territorial analysis and even development strategies. Finance and public investment deal with budgets and can set conditions for returns on investment. Local economic development can be responsible for providing business support. Waste management can be responsible for both the collection and processing of resources, which is increasingly important for policy ambitions such as the circular economy. Environmental agencies can be responsible for permits and policing environmental standards. Many cities also have urban development agencies and employment services. Rarely do these organisations have aligned ambitions and priorities. To illustrate this point, Figure 13 (right)

shows how the views of actors from various departments were positioned very differently according to the scenario noted earlier in this chapter. How can public administrations commit to a long-term and aligned vision of their local economy? More challenging still, how can non-public actors collaborate?

In the past, the public sector typically used two particular management approaches. Firstly, negotiation is an approach whereby a position is taken before being discussed with concerned parties. Negotiation looks for feasible compromises, or win-win solutions, whereby power and coalition forming are key in getting as close as possible to the position. But negotiation can also lead to poor outcomes for all stakeholders, such as combining housing and production. The second is the scientific or empirical approach which involves commissioning expert knowledge and identifying a plan for the best rational outcome. In the past many experts have pointed empirically to the decline in manufacturing jobs and the value for the GDP of production activities.

As experienced during the recent COVID19 pandemic, both “top-down” approaches have very limited value when there are no clear answers and can easily result in negative consequences and criticism. This is because negotiation and empirical approaches often are not inclusive and provide little room for actor’s positions to evolve to complex and dynamic conditions. Three other approaches are much more engaging, adaptive and reflective, particularly when collaborating with non-public actors. These approaches are referred to as motivating, learning and dialogue.

FIGURE 13: HOW PUBLIC SECTOR ACTORS FROM VARIOUS DEPARTMENTS POSITIONED PUBLIC AMBITIONS DURING A FUTURES WORKSHOP.



Source: Adapted from ESPON MISTA (2020).

### MOTIVATING

In situations where the public sector has limited financial or regulatory tools, it can provide a supporting role through motivating established dynamics or encouraging new ones. This is also a useful approach where there is insufficient political ambition or where there is little alignment across public agencies. Public investment therefore could focus on encouraging businesses to shift to the circular economy by using examples of best practice and awards to showcase excellence. Motivating would be a suitable approach for the two market-oriented scenarios (1 and 2). The Greater Manchester Local Industrial Strategy and the Brussels circular economy plan / BeCircular are designed in part to motivate.

### LEARNING

For cities and metropolitan areas that are directly confronting complex problems with no clear outcome, a learning approach is useful. In this case the public sector is likely

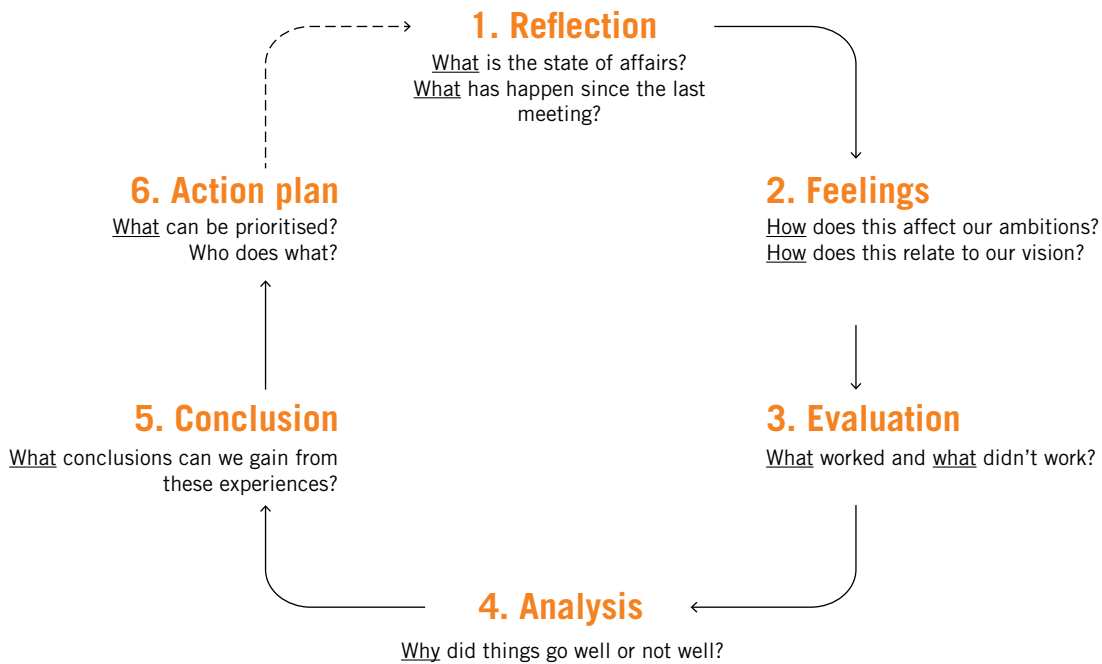
to network local actors, define common projects or goals and leverage incentives through a collection of tools such as research grants, loans, development of common infrastructure and implementing ambitious legislation that is agreed upon by a wide range of local stakeholders. Examples could be focused on a specific sector (such as bio-medical research and development) or could be more transversal (such as zero-emissions mobility). Importantly, learning is a very collaborative process but should be action oriented and based on clear goals shared by all stakeholders. Learning methodologies can help participants to understand how to participate. For example, Figure 14 (next page), shows a simple experiential learning methodology that helps to connect both emotive and rational thinking.

### DIALOGUE

In contexts where there is already a strong and competitive production dynamic (consider an automotive production cluster), or where large businesses are traditionally



FIGURE 14: STEPS OF THE EXPERIENTIAL LEARNING METHODOLOGY.



Source: MISTA adaptation, based on Graham Gibbs 1988

closed, dialogue can be a useful approach to define common interests and opportunities for collaboration. This is important because local public authorities may not have the technical expertise, businesses competencies or financial capacity to motivate the business community but can support in other ways such as exploring development scenarios, logistics infrastructure, creating links with research institutions and so forth. Public authorities may also be concerned about sudden changes in the private sector which could impact employment and the local economy. The Stuttgart Region economic development corporation and the Strategic Dialogue on the Automotive Industry – SDA are examples of this.

#### SELECTING MANAGEMENT APPROACHES

Planning may combine a mix of negotiation, empiricism, motivation, learning & dialogue. However, at any one time, one of these approaches will take precedence over the others. A negotiation approach can appear as an ultimatum but is applicable to contexts where local actors refuse to collaborate and there is inaction. An empirical approach can be useful when there is little knowledge of

a topic and when public opinion has not committed to a position on how to address the said issue. Negotiation and empirical approaches may be the correct or most effective approach but are not necessarily inclusive. A motivating approach is useful where the public sector has limited tools to shape the local economy yet would like to show leadership. A learning approach is useful particularly where a range of actors willingly collaborate around a similar challenge. A dialogue approach is useful for innovation clusters where the public sector can help align local competitors by increasing a region's global competitiveness.

## 3.6

# Summary

Spaces for production, manufacturing businesses and industrial land are under a vast amount of pressure in urban areas. Local public authorities that are interested in supporting the productive activities should consider the broader production chain to identify where that city or metropolitan area excels and where it needs support. Policy can be guided by two dimensions: firstly, the role local public sector plays within the economy, be it in reactively supporting the market or by proactively agenda setting; secondly, the scale of action can define the scope, whether it is at a city scale or metropolitan scale. Finally, as production touches a vast range of actors, any approach for policy and planning must be inclusive which may mean public authorities need to embrace an adaptive and flexible approach. The following chapter will propose policy recommendations both at core cities and metropolitan level that can help policy makers consider the breadth of possible actions.



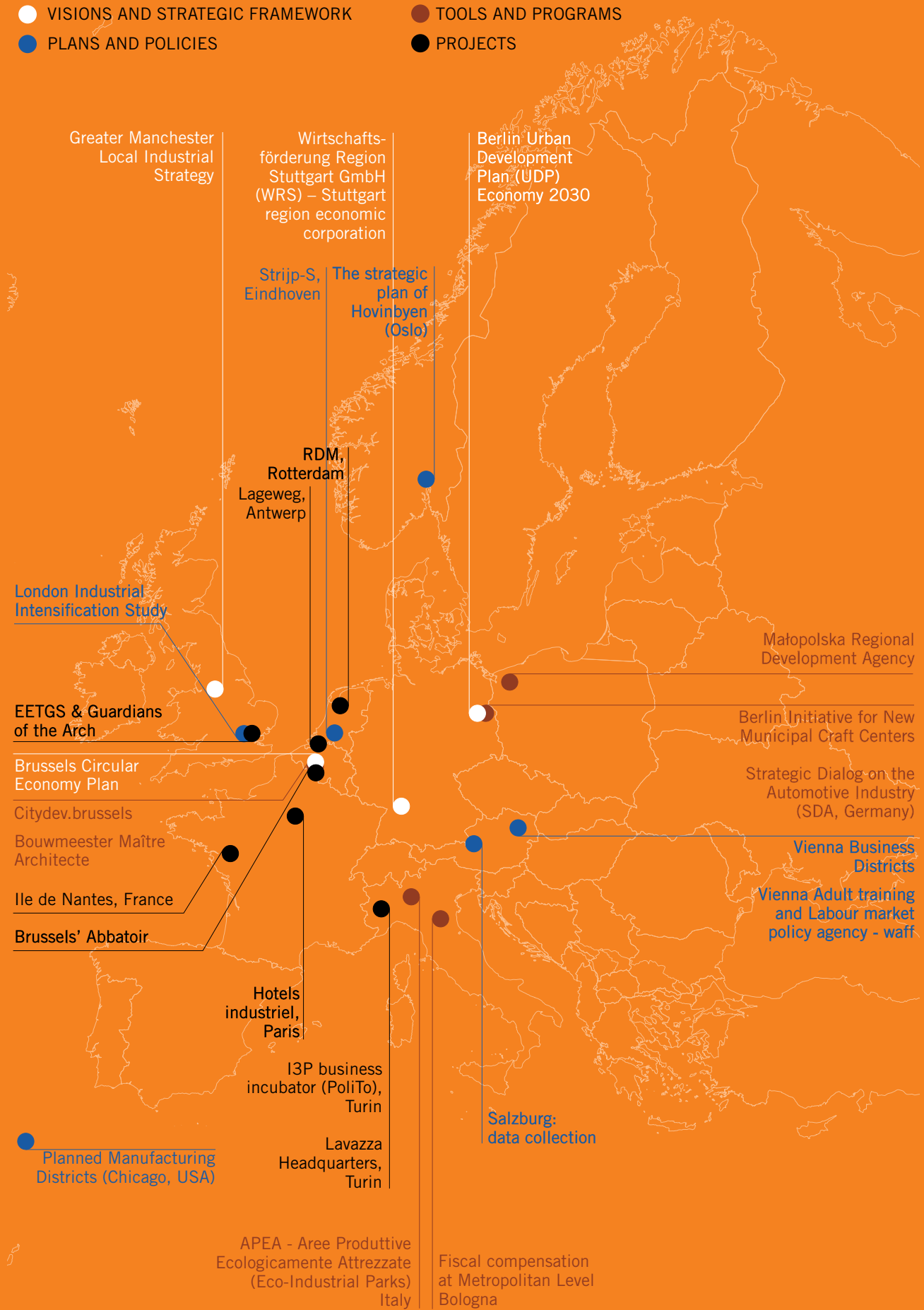




# Reassembling the productive city: crucial steps for policy makers to take action

04

- VISIONS AND STRATEGIC FRAMEWORK
- TOOLS AND PROGRAMS
- PLANS AND POLICIES
- PROJECTS





# What can policymakers do in order to support cities and metropolitan areas and regions creating the conditions for a new productive city? Which initiatives already promoted at different levels can help policymakers design place-based innovative solutions?

This chapter aims to answer these questions and to propose a set of policy advice that can inspire policymakers: each of them is illustrated by short portraits of inspirational stories in which promising or successful solutions have been set in place. Recommendations are formulated and stories have been selected in order to engage and provide food for thought, as well as a sort of roadmap to rethink the new productive city.

**Policy advice** is formulated at two scales, the city scale, and the metropolitan scale, having in mind the different institutional conditions under which cities and metropolitan areas can work and take action. At the same time, policy advice addresses the need for strong integration between the scales, across consolidated spatial imaginaries.

**Inspirational stories**, in this respect, are crucial to making evident and visible that a very challenging transition is already happening, and that cities and metropolitan areas are already fully engaged in elaborating their own strategies to govern the economic transition and find spaces for defining a new relationship between the city and the manufacturing sector. This is achieved by developing forward-looking strategies, innovative policies, effective tools, as well as new governance frameworks.

Inspirational stories are not necessarily best practices but opportunities to reflect upon the need for established and differentiated knowledge-production, as well as to develop an integrated, sustainable, and place-based approach. A first crucial step is to develop innovative approaches for different kinds of contexts and cities. Second, visions about the future of the industry and policies should be based on the capacity not only to generate economic development but more and more to produce new opportunities for tackling social and environmental issues. Where space is conceived as a crucial integrator of policy dimension and space-aware innovation is necessary to generate integration beyond sectoral policies. Third, policy solutions should be based on the capacity of places and society to activate a wider policy cycle, using their available resources, including the active and dynamic involvement of stakeholders and society at large. Entrusting local elites with the responsibility of decision-making, raising awareness of the trans-local and multilevel dynamics of economic development trajectories and governance are important steps to go through. All in all, policy mobility and knowledge exchange cannot take place top-down; a place-based approach is the one that counts on the available embedded knowledge, or the one to be further built in places.

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Inspirational stories:  
what are cities/metropolitan areas doing?

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**SUPPORT TO KNOWLEDGE  
PRODUCTION: NEW  
METHODOLOGIES,  
OBSERVATORIES, AND  
MONITORING TOOLS**

There is a growing and shared awareness of the need to develop new analytical approaches. Additionally, there is a growing mismatch between the changing nature of the manufacturing system and the official portrait produced by national and local statistics. Several cities have started to invest in initiatives, projects, observatories that investigate the nature of the contemporary productive city, understanding the nature of the crisis that is affecting them, but also the nature of new productive initiatives that are emerging, both in core city and metropolitan areas.

**VISIONS, PROBLEM SETTING  
AND METROPOLITAN  
GOVERNANCE: GENERATING  
NEW AWARENESS AND  
CAPACITY TO REACT BY  
NEW POLICY APPROACHES**

Efforts to develop metropolitan/regional perspectives can consistently contribute to the formulation of new visions. The first step has often to do with problem setting: conceptualising the problems needs momentum, leadership, collaboration, dialogue. The second with the act of visioning and promoting spatial strategic foresight. Moving from a more structured governance framework, able to support integrated strategies and visions, to more voluntary, progressive forms of mobilization based on more incremental and tactical approaches, can enhance the public sector pivotal role in promoting those new spatial imaginaries. These are supported by transcalar alliances that are crucial in dealing with the global and local nature of the contemporary productive city. For a vision to be enacted and able to inspire official policies, plans and concrete projects. an enlarged dialogue with stakeholders is essential.

**THE ROLE OF SPATIAL  
PLANNING: REINVENTING  
PLANNING TO REINVENT THE  
MANUFACTURING CITY**

The role of spatial planning in the productive city can be different: ranging from a strong regulative approach based on traditional planning functions (like land use regulation and zoning), a design reflecting new spatial patterns to host the industry in the city or the experimentation of urban regeneration strategies and the design of new industrial functions in the fringes of the urban region. Moreover, cities also look for a new dialogue between spatial planners and economic actors, to reduce the communication and knowledge gap and reinforce the co-production of knowledge as the basis for a more efficient planning process.

**INNOVATIVE TOOLS  
AND PROGRAMS TO  
OPERATIONALISE THE NEW  
RELATIONSHIP BETWEEN THE  
CITY AND THE INDUSTRY**

A wide range of tools has been designed and implemented to support the contemporary productive city: from public and private agencies and incubators to fiscal incentives and regulative tools; or models of business parks and productive districts. Many of them are based on experimental collaboration between the public and the private sector. Public investment is often needed to cover essential infrastructure, pioneer new technology and showcase new development approaches. Moreover, programs involve services such as training, education, research, and development to activate spaces, as they provide interpretations of an integrated and sustainable development approach. This is done by paying new attention to both the hardware (space and technology) and the software (capacity building, skills, and management).

**INNOVATIVE URBAN  
AND ARCHITECTURAL  
DESIGN SOLUTIONS**

Cities and metropolitan areas are investing in innovative functional and spatial solutions, facilitating a new dialogue between the existing urban fabric and the manufacturing sector. Pilot projects are experimenting with the coexistence conditions between economic functions and liveability, moving from large-scale infrastructures redevelopment to small and medium-size neighbourhoods located in the city centres or in the urban fringes. Functional mix, quality of built-up and open spaces, participation of local entrepreneurs and citizens seem to be strategic ingredients. Together with the emergence of new actors, universities, foundational economy activities are completely reshaping the scene.

**FIRST FAMILY  
OF POLICY ADVICES****R.1**

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**KNOWLEDGE  
CO-PRODUCTION.  
RECONCEPTUALISING  
THE PRODUCTIVE CITY**

- 
- R.1.1** Cities and metropolitan areas need clear insights on industrial processes and their impacts. They can promote new in-depth data analysis in support of strategic decision making.
- 
- R.1.2** Cities and metropolitan areas should constantly remain engaged with the productive city. They can help facilitate strategic collaboration and dialogue among stakeholders.
- 
- R.1.3** Metropolitan authorities should support territories in finding their role in the value chain. Public authorities can foster cooperation and integrated visions to ensure their economies remain competitive and cohesive.

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Cities and metropolitan areas need clear insights into industrial processes and their impact. 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 the production activities and processes 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 territories and actors to better contribute to the wider value chain, since the metropolitan scale is fundamental for the effectiveness and success of productive systems.



# R.1

## KNOWLEDGE CO-PRODUCTION.

### RECONCEPTUALISING THE PRODUCTIVE CITY

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#### R.1.1

Cities and metropolitan areas need clear insights into industrial processes and their impacts. They can promote new in-depth data analysis in support of strategic decision making.

Available statistical data is focused on jobs, employment density, turnover, and land values. This, on the one hand, offers a limited understanding of how the local economy works; on the other, from a policy perspective, it favours the focus on services-oriented activities over production activities. The links between businesses, value-added and the multiplier effects are very difficult to quantify when services and manufacturing become particularly hybridised: it becomes even more difficult when it comes to analysing the benefits and impacts of issues such as local food production, the circular economy, or social aspects of employment.

**CASE****SALZBURG DATA COLLECTION**

A permanent survey for monitoring spatial dynamics of the production activities

The City of Salzburg, one of the most tertiarised cities in Austria, is facing increasing conflicts over land use due to the limited availability of land. In this light, it has decided to develop and finance a land-use monitoring tool allowing for an analysis of the dynamic changing land-use patterns within the city. Through onsite observation, the survey allowed policymakers to know what is happening on the ground, rather than relying only on the limited statistical data which can easily overlook multiple occupancies on a site or discrepancies (such as for retail on industrial land). Running on a permanent base since 2004 (repeated in 2011 and 2019 when updating the spatial development plans), the survey produced a database that allows tracing the evolution of land use in the last 15 years and reflecting on the effects of zoning and regulation over space.



Salzburg data collection –  
Example of Elaboration  
© Ingenieurbüro ICRA  
(courtesy of Alexander Schwap)

# R.1

## KNOWLEDGE CO-PRODUCTION.

### RECONCEPTUALISING THE PRODUCTIVE CITY

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## R.1.2

Cities and metropolitan areas should constantly remain engaged with the productive city. They can help facilitate strategic collaboration and dialogue among stakeholders.

Manufacturing and production processes are in constant evolution. Cities and metropolitan areas can support development processes by providing a space of exchange and interaction, that foster appropriate conditions for a productive city. A constructive and regular dialogue between stakeholders is needed to ensure that cities are shaped to fit many different aspects of the production process (such as office spaces mixed with production space, leisure spaces mixed with creative uses and activities related to the foundational economy). A metropolitan perspective can help in dealing with these challenges, based on the construction of permanent forums for stakeholder collaboration and dialogue.

**CASE****THE BRUSSELS CIRCULAR ECONOMY PLAN**

A space for inter-institutional cooperation for understanding and promoting the transition

BeCircular, the Brussel Circular Economy Plan, is a framework developed by the Brussels-Capital Region to encourage the transformation of a linear economy (extract - produce - consume - dispose) into a circular economy (reclaim - produce - consume - reuse). Lacking a strong metropolitan government structure, as well as aiming at providing a new vision among stakeholders, BeCircular adopted a decentralised approach in order to get onboard a vast range of different actors. In so doing, it increased awareness and communicated the general ambitions of the circular economy, giving smaller and ambitious businesses the opportunity to take risks. It created a space for inter-institutional collaboration and put Brussels on the map as one of the forerunners in circular economy policy. The “mission driven” policy approach has cascaded into other areas such as agri-foods and mobility.



The cement industry of Brussels, moving towards a more resilient approach.  
© Hananel Cédric, Belin Hughes.  
“L'économie circulaire en Région de Bruxelles-Capitale”, 2019. Ed. The Word Company.

# R.1

## KNOWLEDGE CO-PRODUCTION.

### RECONCEPTUALISING THE PRODUCTIVE CITY

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#### R.1.3

Metropolitan authorities should support territories in finding their role in the value chain. Public authorities can foster cooperation and integrated visions to ensure their economies remain competitive and cohesive.

Economic processes are rarely overlaying institutional boundaries. The public sector can provide consistent terms and services to business and local authorities to avoid internal competition among territories, while offering knowledge resources and capacity building between different sectors and specialisation. On the one hand, metropolitan areas should be conceived as a network of clusters that integrate a range of related products and services. This is even more crucial to address promote mission-oriented challenges such as the circular economy. On the other hand, governance fragmentation, unequal taxation and non-coordinated land use planning in metropolitan areas can create contradictions and obstacles, competition, and failures, as well as unnecessary socio-environmental and economic costs.



**CASE****THE GREATER MANCHESTER LOCAL INDUSTRIAL STRATEGY**

A vision and a strategic plan to tackle the economic transition

In 2019 the Greater Manchester Combined Authority elaborated its Industrial Strategy. The strategy is based on a careful investigation of the local situation in all 10 districts (Prosperity Review), which concluded that, despite a consistent process of restructuring of the economy, the Greater Manchester has still a strong manufacturing base, but the share of low-paid jobs in the foundational economy is growing, so does the internal inequalities of economic potentials among the 10 districts that compose the Greater Manchester. In order to reverse this process, the Industrial Strategy aims at increasing the innovation potential in different fields and stimulating territorially balanced growth. A consistent effort to create evidence-based statements, a wide partnership between the different actors to contribute to the planning and implementation of the strategy, strong lobbying power towards the national government are crucial elements for such an initiative, which is not easy to replicate but can be adapted to less structured governance frameworks.



© Greater Manchester Authority

SECOND FAMILY  
OF POLICY ADVICES

# R.2

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# SPATIAL FORESIGHT. FOSTERING NEW SPATIAL CONDITIONS FOR THE DIALOGUE BETWEEN THE INDUSTRY AND THE CITY.

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R.2.1 — 2.7

CORE CITY LEVEL

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R.2.8 — 2.11

SPECIFIC METROPOLITAN LEVEL

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Industrial location factors and urban agglomeration are still partly dependent on the 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.

Core cities should:

- Take a strategic position on the most effective use of its industrial land to embed manufacturing and productive activities within its local economy.
- Be able to enhance a joint dialogue with other municipalities and develop partnerships to facilitate innovation processes in industrial relocation.
- Develop tools to select and attract production activities that could be beneficial for the city, preserving industry space and land in the city for production.
- Use their capacity for dialogue and negotiation to activate or steer the market.
- Relief pressure on rezoning industrial land through intensification, mixed-use buildings, and strong zoning controls.
- Develop tools to guarantee better quality productive spaces.
- Redevelop brownfield industrial land to modernise links to the city's industrial heritage local economy while also providing space for compatible demands.

Metropolitan areas should:

- Develop metropolitan governance to play a crucial role in generating an integrated vision, strategy, and services to attract businesses.
- Explore new tools to support economic development for industrial land, manufacturing, and productive activities.
- Support small municipalities by providing the knowledge, competencies and resources needed to interpret and implement metropolitan plans.
- Develop compensation or equalisation mechanisms to reinforce territorial cohesion.
- Actively support brownfield regeneration, in order to reduce sprawl and urban blight.

## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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### R.2.1

#### CORE CITY LEVEL

Core cities should take a strategic position on the most effective use of its industrial land to embed manufacturing and productive activities within its local economy.

The flow of different production activities within and out of metropolitan areas is often driven by market forces. The public sector cannot clearly anticipate trends of the industry but can define the kinds of activities it deems most relevant while being reactive to market changes. Core cities are exploring opportunities for clustering and integrating manufacturing in urban areas through promoting industrial intensification and mixed-use zones. Innovative regulations based on new zoning principles are needed, in addition to other ways of reducing possible conflicts between industrial uses, avoiding environmental impacts and tension with residential areas.

**CASE****BERLIN URBAN DEVELOPMENT PLAN (UDP) ECONOMY 2030**

a spatial planning framework to ensure the strategic provision of land for production functions

During the last decades, the city of Berlin has experienced a strong economic and demographic development, impacting land availability: the existing spatial development objectives on industrial and manufacturing land formulated in 2011 were becoming increasingly outdated and contested by many actors. In particular, the existing planning framework was considered incomplete to provide adequate strategies to deal with increasing land competition in the city, while taking too little account of recent economic and technological challenges. The new Urban Development Plan (UDP) Economy 2030 establishes the planning prerequisites on a city-wide level, especially for a strategic safe guarding of land and rapid activation of sites and more efficient use of land. The plan states that maintaining and developing production sites is a key priority for the city and clearly indicates how and where the city intends to implement this priority. It provides a definition of the areas for development, thus also contributing to increased planning security for economic actors.



Inner-city research and production site EUREF-Campus Berlin.  
© SenSBW Berlin, Till Budde



## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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### R.2.2

#### CORE CITY LEVEL

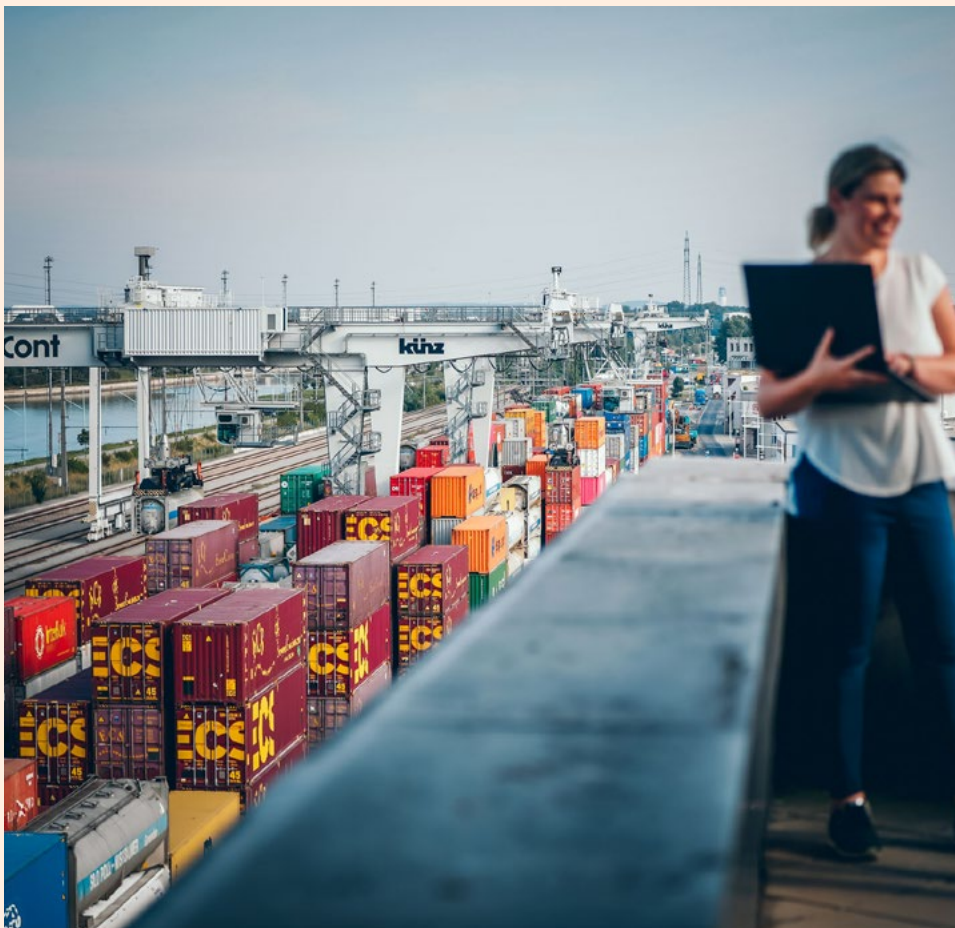
Core cities should be able to enhance a joint dialogue with other municipalities and develop partnerships to facilitate innovation processes in industrial relocation.

Businesses could be looking for the opportunity to move from the central city and relocate within the metropolitan area, where planning decisions may be less complicated and costs reduced, whereas easier and wider spaces can be available. This can be problematic if the business is an asset for the city or a key part of a larger business network and if it happens without a general cooperation strategy because it deeply affects the central city's employment or functioning. At the same time, better harmonization of administrative procedures across the local public authorities is needed to avoid uncoordinated action, of both economic actors and municipalities within a metropolitan area.

**CASE****WIEN BUSINESS DISTRICTS**

A management system that supports strategic relocation of production activities

The Viennese Chamber of Commerce (Wirtschaftskammer Wien) and the Wien Business Development Agency have established a system for district management that is known as “Wien Business Districts”. District managers, based on continuous contact with all active stakeholders, are expected to facilitate and accelerate the settlement process of newly founded enterprises, to help enterprises moving to Wien in their search for suitable locations and to provide existing enterprises with information on funding opportunities. They support companies, operating in the enterprise zones defined by the Wien spatial development plan, in establishing themselves locally. At the same time, they help policymakers remain well informed about the day-to-day problems of urban producers. They also ensure a high degree of information on planned policy initiatives dedicated to small and medium-sized economic actors. In addition, they offer a platform for networking between companies and political decision-makers at the district level and/or with the city administration.



© VBD courtesy of Christian Husar

## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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### R.2.3

#### CORE CITY LEVEL

Local public authorities could find out new ways to preserve land for industrial uses, despite having limited tools to select and attract productive activities that could be beneficial to the city.

Traditional spatial planning can aim to preserve land for industrial uses. But zoning is often not enough to deal with market forces present in cities undergoing urban growth. To ensure space is retained, public investment may be necessary or an active supervision and policing to ensure space is being used according to zoning. At the same time, innovative spatial planning approaches could be needed, allowing for more flexible uses, in terms of space and time, especially under conditions of economic restructuring and transition.

**CASE****THE ILE DE NANTES**

## Giving a new future to the industrial heritage

The Ile de Nantes has been a very intensive industrial and port area for decades. Due to decline of shipyard and port productivity in the 1980s, the industrial part of the island soon turned into a vast wasteland, destined to be redeveloped by the market actors after decades of abandonment. Step-by-step, the political leaders of the city developed the idea that industrial heritage had to be kept but under new functions. In 2003 the public company SAMOA (Société d'Aménagement de la Métropole Ouest Atlantique) was established for the purpose of bringing new life to the area according to this principle. SAMOA works as a public sector-led real estate development strategy accompanied with value-increasing taxation – where the main goal is to upgrade the island with a with public interest perspective by bringing new functions to the industrial heritage. In 2007 the Machines of the Island of Nantes (Les Machines de l'île) project has been launched, as an artistic, touristic, and cultural programme, in the old buildings of the former shipyards. The success of this idea can be illustrated by the fact that les Machines de l'île attracted around 700.000 visitors in 2019.



Les Machines de L'île  
© Ivan Tosics

## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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### R.2.4

#### CORE CITY LEVEL

## Core cities should find new tools to activate or steer the market.

With most of the areas of the city in private ownership, the public sector must use its role as a facilitator and negotiator to look for practical solutions for issues that affect the city. Public authorities that do not own land, should not feel incapable of facilitating and activating private landholders to contribute to a common vision. Zoning regulations, taxation tools and financing can be used in the negotiation process. To attract new investors, development agreements can be applied that allow for industrial intensification or co-location. The establishment of independent facilitators can be crucial when including a spatial development perspective where the public authority wants to be treated as an equal partner to achieve a common good.



**CASE****THE STRATEGIC PLAN OF HOVINBYEN (OSLO)****The municipality as a driving force for innovative pilot projects**

Oslo is one of the fastest-growing cities in Europe, but the city has limited expansion opportunities, due to its topography and the protected forests around the city. For these reasons Hovinbyen, the urban fringe between the inner city and the largest post-war urban enlargement is a key development area. In the 2015 municipal plan, this area, basically an underutilized mono-functional barrier between the city and the suburbs, has been considered as a prioritised urban redevelopment area, destined to become a denser, multi-functional part of the urban fabric. However, the city recognized that if residential use will become possible, sooner or later the existing industry will be pushed out. Therefore, a strategic plan was prepared in 2016, to secure functions that would not otherwise be built under a purely market-led transformation. An architectural and idea competition and an international conference were organized, followed by a comprehensive information and participation scheme to strengthen the knowledge, and understanding the area's potential and the key elements of the proposal. The plan approved in 2018 shows how the municipality can become a driving force of the transformation process and create innovative pilot projects.



Ulven - newly built area for housing on former industrial land.  
© Hans Martin Aambø

## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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### R.2.5

#### CORE CITY LEVEL

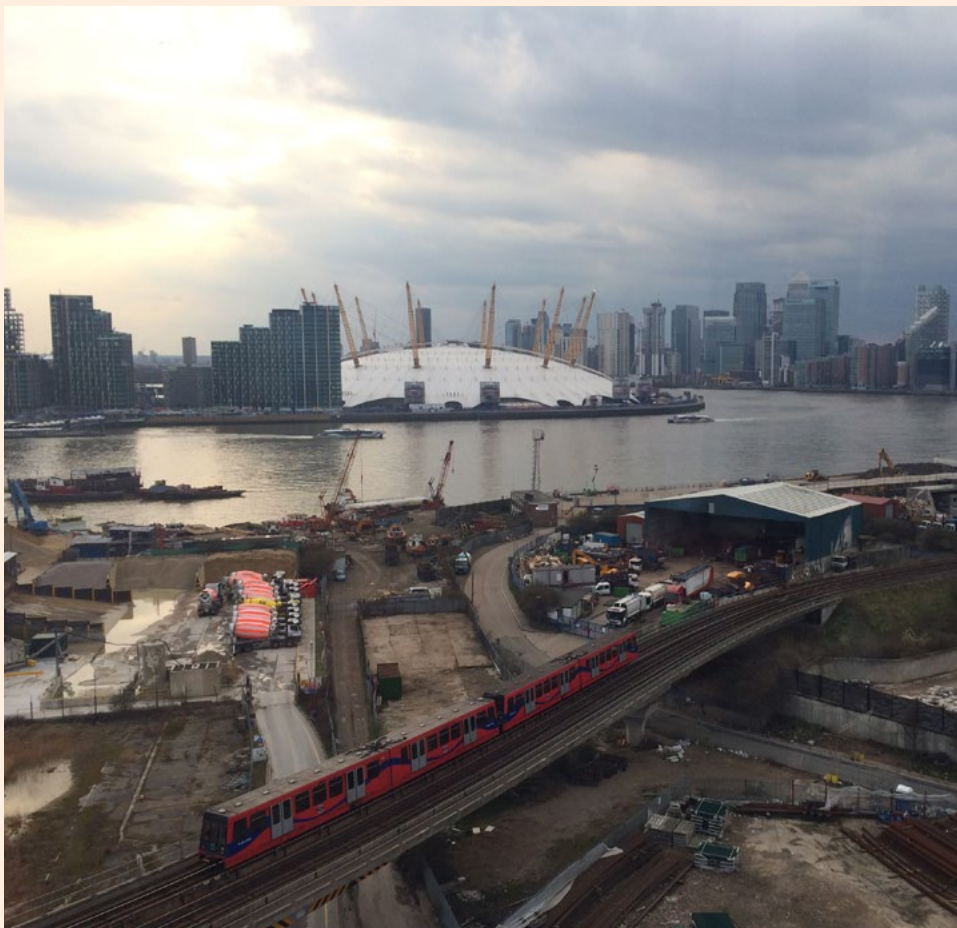
Pressure on rezoning industrial land should be relieved through intensification, mixed-use buildings and strong zoning controls.

In cities where there is competition for real estate, there is a growing need to reflect on the use of space, going beyond consolidated solutions. Cities across Europe are reconceptualising spaces for production and going beyond the logic of 20th-century zoning. The intersection of production activities and other sectors presents new opportunities for mixing them, such as office spaces for creative industries, cultural activities, and even residential and leisure spaces. Some forms of production and manufacturing work more effectively than others in intensified or co-located industrial zones. Activities that can be easily mixed with other land uses, will gain through increased exposure to the public and help communicate what is being produced in the city.

**CASE****THE LONDON INDUSTRIAL INTENSIFICATION STUDY**

Exploring the feasibility and acceptability of new urban models

With less than 3% of London's employment working in industrial activities, the city of London still contains the largest number of industry-related jobs for a UK city. Over the last 50 years, industrial land has been rezoned or appropriated in an often-piecemeal fashion. More recently, public authorities have begun taking industrial land loss seriously. The Mayor of London has committed to "no net loss of industrial land to manage future losses". The London Industrial Intensification Study was commissioned to provide guidance on the acceptability of industrial intensification and co-location with residential activities and to test the viability of various proposals. The innovative idea is that developers can intensify industrial activities (such as stacking activities vertically) which opens the possibility also to provide several benefits of integrating other land uses on the same site (such as housing). The net result could lead to both intensification of industrial activities, more effective use of land and create additional space for other land uses (such as housing).



London, view over the Thames from the Victoria Dock, 2019  
© Teresa Domenech Aparisi  
University College London

## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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### R.2.6

#### CORE CITY LEVEL

Cities can develop tools to  
guarantee better quality  
productive spaces.

To enable suitable industrial intensification and co-location the design process should be suitably facilitated through expertise in design and mixed-use areas. Industrial intensification and mixed-used areas may seem like a good idea on paper, but if poorly designed they can cause serious tension between future users and usages. Good architecture and urban planning can design out possible problems such as noise or possible conflicts between pedestrians and vehicles. A co-creation-based design process can help explore possible scenarios to identify ways of achieving a good result that addresses both opportunities and possible conflicts.

**CASE****BOUWMEESTAR MAÎTRE ARCHITECTE (BMA), THE BRUSSELS' CHIEF ARCHITECT**

Providing guidance or support for developing urban quality for the productive city

Cities with more market-oriented economies often deliver projects that benefit the local economy, but not necessarily the quality of the urban space. Many cities have implemented solutions, such as design review bodies. Some cities have appointed chief architects, with a specific role in mediating development processes for projects that have a considerable urban impact on the city. It is the case of the Bouwmeester Maître Architecte (BMA), the Brussels' Chief Architect: it provides a service, upon request, to both public and private developers in exploring design feasibility, defining briefs, providing competitive tendering, and advocating for good policy related to design. The BMA has a five-year term and is financed by the public sector; it retains independence and acts as a festival curator with a vision of the role that it should play for the upcoming term. The role is supported by a team: in 2020 there were 16 staff predominantly consisting of architects and urban planners, who are employed through the regional planning agency ([perspective.brussels](http://perspective.brussels)).



Bouwmeester Maître Architecte  
(BMA)  
© Séverin Malaud  
Courtesy of SECRETARIAAT - Team  
Bouwmeester Maître Architecte



## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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### R.2.7

#### CORE CITY LEVEL

Brownfield Redevelopment can be used to modernise links to a city's industrial heritage local economy while also providing space for compatible demands for space.

Production processes have changed dramatically over the last century, while the distinction between production and services has increasingly blurred. The redevelopment of former industrial land can be used to strengthen this evolution while retaining a link to a site's heritage. Brownfield land can be developed progressively, concentrating on activities with high value-added and their supplementary services. Decontamination of land can be a major hurdle for future real estate projects, especially for the case where industrial land is reused for residential or office spaces. Redeveloping industrial activities may only require partial decontamination, which may lower costs and ensure that sites retain an industrial character. Entrepreneurs in the manufacturing sector can also be attracted by the opportunity to invest in urban regeneration, based on new ideas and models of business.

**CASE****MASTERPLAN STRIJP-S 2002**

A strategy to redevelop a former industrial area in a new production hub

The city of Eindhoven constitutes a remarkable case for rethinking its industrial past. The Masterplan Strijp-S 2002 proposes a strategy to redevelop the former industrial areas owned by Philips as a creative and cultural area and to promote its (inter)national reputation, by rediscovering the industrial heritage. It is based on a close synergy and cooperation among various institutional actors, public and private. The area hosts a mix of uses - cultural and innovative industries, offices, residential and commercial spaces, public amenities, etc - and it preserves industrial heritage while also looking at the evolving future. The redevelopment scheme builds on flexibility and adaptability, which allows the master plan to be incrementally adjusted over time through an experimental approach in the planning process. Moreover, knowledge and technology, quality of place, and organizational capacity play a key role. Strijp-S has become the largest urban redevelopment area in the Netherlands and has gained international recognition as part of the Brainport region, internationally recognised as a leading “smart region”.



Strijp-S, Eindhoven  
© Nanda Sluijsmans from Den  
Haag, Nederland

## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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#### R.2.8 SPECIFIC METROPOLITAN LEVEL RECOMMENDATIONS

Metropolitan areas should explore new tools to support economic development for industrial land, manufacturing, and productive activities.

Municipalities surrounding cities often position themselves against industrial development for several issues, like NIMBYism, lack of financial incentives (such as tax revenues) or a lack of interest in the kind of work that is being offered. For this reason, local and metropolitan institutions find it easier to implement restrictions rather than provide incentives for industrial activities. To contrast this trend and encourage a better planned industrial development, incentives can be important tools to steer industrial development towards sustainable principles and help municipalities in taking advantage of good economic opportunities. This means, for example, providing funds to develop the infrastructure and services which are needed for sustainable economic development. But also means to reduce the burden of bureaucratic and administrative procedures on businesses at the local level.

**CASE****CITYDEV.BRUSSELS**

A publicly owned development agency at metropolitan level

The Citydev.brussels initiative is a publicly owned development agency that operates at the scale of the Brussels Capital Region. It is a QuaNGO – a quasi-non-governmental organisation, owned by the Region of Brussels, but functioning under a private structure with a public mandate. It helps drive economic planning and is involved in area development, innovation, matchmaking opportunities, investments and to some extent, in community engagement. Citydev works in three different directions. Firstly, it aims to provide affordable (subsidised) housing for key middle-income families within the region. Secondly, it aims to attract and retain industrial, semi-industrial, craft and service companies by offering real estate infrastructure (land or buildings) through attractive conditions and prices. More recently, the company has begun developing new regulations allowing for mixed-use in several key areas across the region. Citydev helps to enact government policy and best practices and provides a pioneering role in developing new building typologies and implementing new construction standards. It supports developers that normally are more inclined to prioritise the most profitable and less conflictual projects, or have little experience with dealing with the potential conflicts generated by projects including mixed use activities.



Brussels - A construction materials village on the quayside at the Vergote Dock, TETRA architecten Bouwmaterialendorp © Adrian Hill

## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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#### R.2.9

##### SPECIFIC METROPOLITAN LEVEL RECOMMENDATIONS

Metropolitan areas should support small municipalities providing the knowledge, competencies and resources needed to interpret and implement metropolitan plans.

Small and medium-sized cities often have limited technical resources to manage economic planning and industrial development. Supporting municipalities with specific tools and incentives can help enable them with realising projects that align with a larger metropolitan strategy.



**CASE****ECOLOGICALLY EQUIPPED PRODUCTION AREAS (APEA)**

Supporting small municipalities in developing a new generation of manufacturing sites

Ecologically Equipped Production Areas (APEA) have been instituted by national law in 1998 and implemented in different regions in Italy. They are based on the principles of industrial ecology and aim at “closing the cycles” of matter, water and energy, as well as at sharing main environmental services (water, energy, waste) and optimizing the organization of activities. When settling in these areas, industrial activities can count on the most advanced infrastructures and systems necessary to ensure the protection of health, safety and the environment; at the same time, they have a unitary management and benefit from the simplified acquisition of authorizations to run their activities and use those services. APEA have been instituted to feed a new generation of manufacturing sites with specific attention to delivering supra-municipal sites. The law was designed to support small and medium-sized companies, as well as small and medium-sized municipalities, reducing complexity and promoting the rehabilitation of existing and outdated industrial sites, while reducing land consumption and enhancing a cooperative effort for an integrated spatial vision.



Area Produttiva Ecologicamente  
Attrezzata, Piacenza.  
<https://www.aepepiacenza.it/>

## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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#### R.2.10 SPECIFIC METROPOLITAN LEVEL RECOMMENDATIONS

## Compensation or equalisation mechanisms are needed to reinforce territorial cohesion.

New development can impact areas well beyond their boundaries, producing loss of revenue (through traffic, pollution, noise) or simply through reducing development ambition. Metropolitan level regulations, incentives or fiscal levies are needed to deal with externalities, to share costs and benefits and create a basis for common development. Cities and towns in metropolitan areas might be attractive locations for new productive activities due to the presence of infrastructure, services, education or other businesses.

**CASE****FISCAL COMPENSATION FUND, CITTÀ METROPOLITANA DI BOLOGNA**

Promoting territorial cohesion by sharing fiscal revenues

In the process of developing its new territorial plan, the Città Metropolitana di Bologna has introduced the so-called “Fiscal Compensation Fund”, which consists in the possibility to share at the metropolitan level the fiscal revenues generated by urban transformation projects at the municipal scale. It is based on the Territorial Equalization planning principle and aims at an equitable distribution of the costs and benefits connected to the design of territorial policies and projects. The compensation fund works on reducing the negative effects of blind competition between municipalities: the fund, with an estimated value of 10 million euros a year, is generated by the share of urbanization costs supported by private actors and tax revenues resulting from the implementation of the interventions agreed in the context of Territorial Agreements. It will be managed by the Città Metropolitana and used to promote urban regeneration projects, infrastructural programs, and policies in less competitive territories. It will support new productive settlements and strengthen inter-municipal cooperation.



Città Metropolitana di Bologna, from the hills. Courtesy of Città Metropolitana di Bologna, © Grazietta Demaria

## R.2

### SPATIAL FORESIGHT.

FOSTERING NEW SPATIAL CONDITIONS FOR THE  
DIALOGUE BETWEEN THE INDUSTRY AND THE CITY

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#### R.2.11

#### SPECIFIC METROPOLITAN LEVEL RECOMMENDATIONS

Metropolitan areas should actively support brownfield regeneration, in order to reduce sprawl and urban blight.

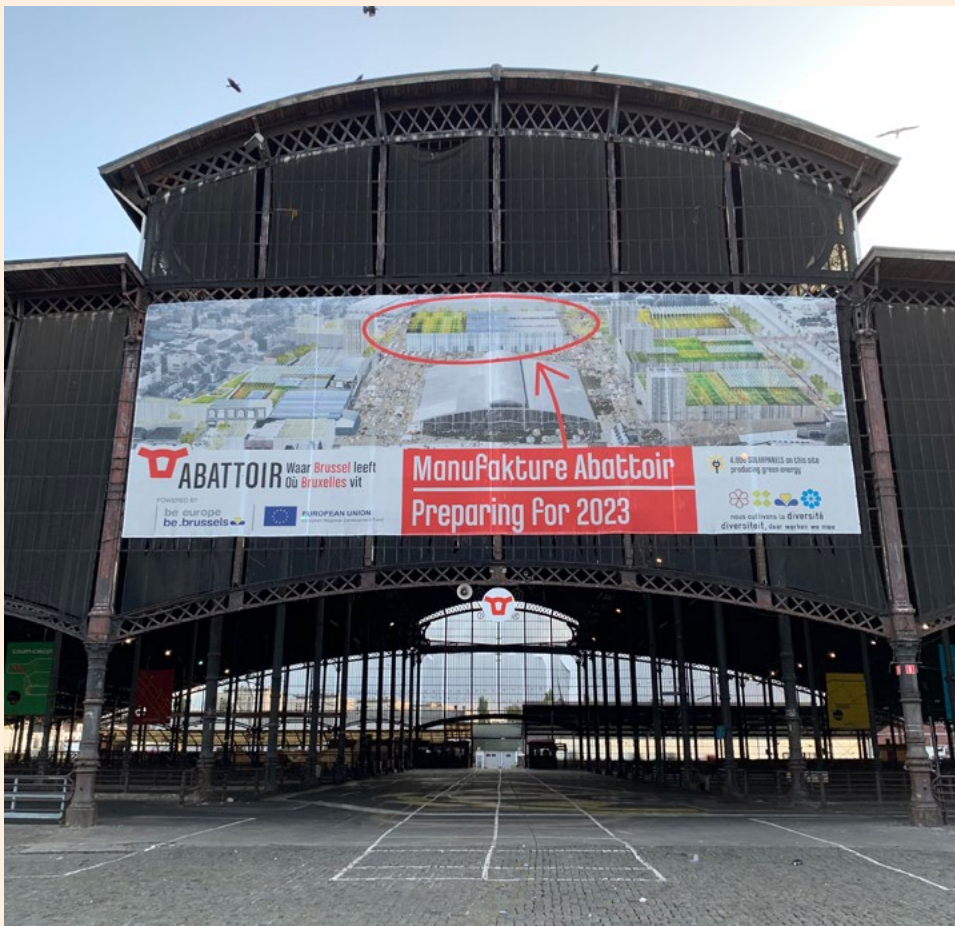
New development in peripheral areas may lead to unnecessary urban sprawl while brownfield regeneration in central areas can be costly. Over-supply of land can affect land values at a metropolitan scale, undersupply can have negative effects on business development. Municipalities are unlikely to manage such complex decisions. They should be able to count on the support of metropolitan authorities and specific funds, in order to reduce both the opportunities of sprawl and the costs of renaturalization of brownfields and of nature-based solutions, especially in those areas where productive functions cannot find anymore the preconditions for settling. Innovative models means also that available land is being used effectively. Municipalities need the support of metropolitan scale organisations and specific funds, to deal with development or conversion costs.



**CASE****BRUSSELS' ABATTOIR**

Old Urban Spaces for the foundational economy.

Brussels' Abattoir is one of the only remaining active urban abattoirs in an European city. The 10-hectare site has evolved into a hub hosting different food-related activities. It is managed through a company established in 1983, invested by many of the on-site market holders, that have a 50-year leasehold from the municipality of Anderlecht. This case offers an example of how a user-owned company responsible for a leasehold agreement can help protect and retain foundational activities within city centres. Foundational activities include food production and processing, construction, repair and maintenance and other essential activities which are hard to detach from the city. In cities with high real estate values, foundational activities often get pushed to the most affordable sites on the edge of the city. This case shows that it is possible to contrast these dynamics: the site still contains a slaughterhouse but also is home to several other activities involving food generally. This includes a very affordable food market, open 3 days a week, and one of the largest urban greenhouses in Europe, based on cradle-to-cradle principles (BIGH) that sells local products (tomatoes, herbs and fish). It also hosts a very dynamic community-building organisation, Cultureghem, which provides youth services to some of the country's poorest residents, activating the usage of the open space while the market is not operating.



Brussels - The Abattoir  
© Adrian Hill



**THIRD FAMILY  
OF POLICY ADVICE****R.3**

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**METROPOLITAN  
LEADERSHIP.**  
A GUIDE TO  
SUPPORTING THE  
TRANSITION OF THEIR  
LOCAL ECONOMY

- 
- R.3.1** Metropolitan governance can play a crucial role in developing an integrated vision, strategy and services to attract businesses.
- 
- R.3.2** Metropolitan areas should be frontrunners of (technology) change and develop strategic visions based on specialisation and new alliances.
- 
- R.3.3** The economic success of urban regions and metropolitan areas will heavily depend on the prosperity of new manufacturing cycles.
- 
- R.3.4** Metropolitan areas should assist citizens in coping with economic change by gaining new skills and knowledge.
- 
- R.3.5** Industrial development requires suitable conditions for innovation.

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Production activities are changing due to global processes (such as digitalisation and the 4th Industrial revolution). Metropolitan areas must guide the process of embracing new technology or supporting the transition of their local economy. Well-functioning metropolitan areas are built on a robust organisational structure based on the commitment of the local public authorities. They should be frontrunners of (technology) change and develop strategic visions based on new transcalar metropolitan alliances, promoting a more diversified and integrated vision of the industrial system, based upon green technology and able to fix the social benefits of production. Metropolitan areas should also assist citizens in coping with economic change by gaining new skills and knowledge. Industrial changes require quick adaptation of the labour force. The public sector can 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 fuelling the workforce (and primary/secondary/tertiary school education and practical professional skills development training). Finally, industrial development requires suitable conditions for innovation: the metropolitan scale should play a facilitating role, supporting research and development, setting ambitions, reducing bureaucratic and administrative barriers, offering space for experimentation.

## R.3

### **METROPOLITAN LEADERSHIP.**

#### A GUIDE TO SUPPORTING THE TRANSITION OF THEIR LOCAL ECONOMY

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### **R.3.1**

Metropolitan governance can play a crucial role in developing an integrated vision, strategy, and services to attract businesses.

Metropolitan governance may be one of the most important yet most challenging issues to enable competitive and efficient productive regions. Governance can come in a range of formats. It may involve spatial and strategic plans, soft governance spaces, funding and development tools. It can be based on voluntary action or public-private cooperation platforms. Most importantly is about sharing a vision on which to base the dialogue upon and align policymakers and public authorities (spatial planning, economic development, sustainability departments). Good metropolitan governance is critical to support integrated territorial visions and multi-level dialogue. There are no standard solutions to this problem as each metropolitan area has different conditions and historical development. The availability of a kind of metropolitan governance is crucial to try to develop a new regional perspective, able to go beyond the traditional counter-position between the central city and the outskirts, but also to promote new alliances between the local, the regional and the national levels.

**CASE****“WIRTSCHAFTSFÖRDERUNG REGION STUTTGART GMBH” (WRS)**

Good metropolitan governance to support integrated territorial visions and multi-level dialogue.

The Verband Region Stuttgart (VRS) constitutes one of the most successful examples of regional cooperation. Among its responsibilities are both regional planning and regional economic development. It adopts a strategic approach to developing land through research and monitoring which constitutes a crucial input from the regional planning process. The political steering lies with the members of the directly elected regional assembly. Inter-communal political cooperation is reinforced at the professional level by a high degree of formal cooperation in the planning community. Informal know-how trading supports the high degree of trust in inter-communal negotiations. The VRS is also the Major Stakeholder of the Wirtschaftsförderung Region Stuttgart (WRS), the Stuttgart Region economic development corporation. Organized as a GmbH – an independent company with limited liability – it builds on a comprehensive approach aiming to maintain as well as enhance the structural economic strengths of the territory. Its aims are to support and stimulate the region’s industrial and entrepreneurial activities. It provides a platform for cooperation facilitating the dialogue and linkages between the industry clusters, regional networks, and the academic and research municipalities. It can also make use of regional funding schemas to support local development activities.



Daimler factory, from the Flugfeld development area in Böblingen  
Courtesy of WRS  
© Regina Voigtman

## R.3

### **METROPOLITAN LEADERSHIP.**

A GUIDE TO SUPPORTING THE TRANSITION  
OF THEIR LOCAL ECONOMY

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#### **R.3.2**

Metropolitan areas should be frontrunners of (technology) change and develop strategic visions based on specialisation and new alliances.

Cities and urban regions are witnessing uneven benefits or impacts of technological change which is rapidly restructuring local and global economies. Urban regions are crucial in supporting sustainable technologic uptake at an appropriate scale of action. Recent innovations provide technology-enhanced solutions to improve urban life, as well as an inclusive and participatory urban governance (referred to as Smart City 3.0). These innovations require active co-creation and steering at a metropolitan level, as well as in relation to the national and international scales – otherwise, the technology and industrial players may provide little or any local community value.



**CASE****STRATEGIEDIALOG AUTOMOBILEWRTSHAFT “STRATEGY  
DIALOGUE ON THE AUTOMOTIVE INDUSTRY” (SDA)**

A process of visioning supported by strategic dialogue among stakeholders

SDA is a government state initiative promoting interregional cooperation through cross-collaboration between the public, industry, research institutions, and civil society. The initiative, established by the state government of Baden-Württemberg, is essentially directed at mobilizing projects and policies capable of projecting the automotive industry into a “new climate-friendly age of mobility”. The rise of e-mobility in fact represents both an opportunity and a threat for the car industry. Working groups have been discussing the state of the art and the future trends of the industry for the next 7 to 10 years in order to implement targeted strategies and projects which are aimed at easing and supporting the disruptive changes affecting the automotive sector. Since the SDA initiative was born, the state of Baden-Württemberg has started twelve pilot projects and has invested a total of 20 million euros in them, including a technology calendar that can give small and medium-sized enterprises (SMEs) orientation based on a schedule on how the automotive industry’s transformation process could take place in the medium term. Thanks to this, SMEs can plan sustainable mobility products and services, accessing the innovation voucher “High-Tech Mobility” with little bureaucracy.



Strategiedialog Automobilewirtschaft  
© e-mobil BW/ Studio KD Busch

## R.3

### **METROPOLITAN LEADERSHIP.**

#### A GUIDE TO SUPPORTING THE TRANSITION OF THEIR LOCAL ECONOMY

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### **R.3.3**

The economic success of urban regions and metropolitan areas will heavily depend on the prosperity of new manufacturing cycles.

Metropolitan areas can benefit from specialisation but should also be careful not to focus on a single market which could expose the local economy to possible shocks. To turn the historically embedded sectors into new resources, there is a strong need to develop the dialogue between the public sectors and the economic actors able to help diversify the economy and encourage industrial knowledge transfer to other sectors. Public sector actors could steer the new dialogue, focusing on the strengths of metropolitan areas, favouring the development of forward-looking relationships among differentiated and specialised economic clusters.

**CASE****THE NEW LAVAZZA HEADQUARTERS, TORINO***Manufacturing investing back on the city*

Well-known as a coffee-centred manufacturer, the history of Lavazza production has been linked to the Torino context for generations. In the late '50s, the need to scale up production contributed to the relocation of the company's first manufacturing plant from the historical inner-city location to the outskirts. The '70s marked a further evolution, as strong investments in innovation through R&D activities were made in order to prepare for the future. As such Lavazza profiting from favourable expansion conditions acquired a new plot of land, adjacent to the manufacturing plant, where it would develop its research centre. The progressively hybrid character of the production place started emerging, where product-oriented activities are combined with service-based functions that facilitate value-creation and boost the manufacturing activity. In contrast with the relocation choice of many companies and in line with a sustainable approach aimed at guaranteeing zero soil consumption and strengthening the ties with the local context, Lavazza group established its new headquarters back in a central urban area in the city of Torino, on a plot that was formerly occupied by a power plant. After years of decline, this area- previously a working-class district occupied at large by industries- is experiencing an urban and economic revitalisation, positively impacting social cohesion.



New Lavazza headquarters,  
Cino Zucchi  
© Andrea Guermani for Nuvola  
Lavazza.

## R.3

### **METROPOLITAN LEADERSHIP.**

#### A GUIDE TO SUPPORTING THE TRANSITION OF THEIR LOCAL ECONOMY

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### **R.3.4**

Metropolitan areas should assist citizens in coping with economic change by gaining new skills and knowledge.

Industrial changes require quick adaptation of the labour force. The public sector can become more reactive to the changing needs of industry, by facilitating innovation through linking production processes with numerous forms of education that could be fuelling the workforce at different stages. Education and training struggle to adapt to industry demands. For this reason, most businesses expect some forms of training while most large industrial players have their own internal training programs. While internal training is often unavoidable, it is important to have public, or publicly accessible, forms of training that ensure workers have a transferable education. Furthermore, businesses (particularly SMEs) avoid training due to costs, which ultimately can reduce the business's competitiveness, meaning that workers are less capable of adapting to new processes or trends. Building on the Quadruple Helix model, the public sector should be able to align its own efforts with industrial and educational institutions.



**CASE****THE WAFF (WIEN ADULT TRAINING AND LABOUR MARKET POLICY AGENCY)**

A city-funded agency to promote active labour market and adult training policies

A central policy concern for policymakers is how to deal with the impact of structural change on urban labour markets. Most cities are experiencing a noticeable shortage of high skilled labour, while at the same time unemployment of mainly low skilled workers is soaring. To address these issues, the city of Wien joined forces with the local social partners to fund an agency dedicated to the administration, development and organisation of the active labour market and adult training policies. The waff (Wien Adult training and Labour market policy agency) represents an example of such an institution. Its mission is to promote professional development of employees who are seeking to enhance their skills. Specifically, the waff is the only organisation servicing both the employed as well as the unemployed in Wien. Next to these funding activities it also analyses recent trends on the Wien labour market, continuously commissions studies focusing on labour market trends and/or specific target groups among the employed or unemployed, as well as conducting evaluations of its individual initiatives.



Waff offices  
Courtesy of waff



## R.3

### **METROPOLITAN LEADERSHIP.**

A GUIDE TO SUPPORTING THE TRANSITION  
OF THEIR LOCAL ECONOMY

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### **R.3.5**

## Industrial development requires suitable conditions for innovation.

Innovation needs both a market and a context for it to be applied. Suitable conditions for innovation are difficult to define but public policy and public services have a clear role in supporting it. Innovation should be facilitated at a metropolitan scale, supporting research and development, setting ambitions, reducing bureaucratic and administrative barriers, and offering space for experimentation and long-term operations. Cities have always been the cradle for innovation, being at the same time the places in which innovation is generated and used. Metropolitan governments can play an important role in reducing barriers and obstacles to innovation, reinventing normative design and policymaking beyond boundaries and sectoriality.

**CASE****RDM CAMPUS, ROTTERDAM**

A multi-actor's effort to promote a hub for education, research and development in a former industrial site

RDM Campus is a hub for education, research and development and prototype, located in a former ship-building wharf on the south side of the Nieuwe Maas River, four kilometres west of the city centre. Former site where famous ships were built, it now offers the space for companies, education and research. The building brings together formal technical training, space for start-ups to carry out R&D activities and facilities for events and showcasing work, particularly with a maritime focus. The building is part of a larger development program referred to as the Rotterdam Makers District which involves the redevelopment of the former wharf area with a focus on mixed-use typologies. Two main actors support RDM: the Havenbedrijf Rotterdam which is responsible for developing the site and the Hogeschool Rotterdam which provides the training and facilities, referred to as the RDM Centre of Excellence and that offers a range of learning experiences ranging from technical skills to R&D. Several other actors have an indirect interest in the site such as the City of Rotterdam, the Rotterdam Mainport Institute (which offers a bachelor level university degree) and Ahoy (one of the Netherland's largest events spaces, located in Rotterdam, which hosts events on the site).



M4H - the location of Rotterdam's  
"Maker's District", 2019  
© Victor Muñoz Sanz

**FOURTH FAMILY  
OF POLICY ADVICE****R.4**

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**COLLABORATION  
IS CRUCIAL**

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**R.4.1** Local stakeholders should be involved in planning and development to build institutional capacity.

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**R.4.2** Mission driven projects and alliances can help achieve common goals or vision.

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**R.4.3** Public-private partnerships and agencies can play a pivotal role in developing competitive market ready projects.

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Financial, technical, and strategic tools are important in the success of local/metropolitan strategies for retaining industrial land and enhance productive activities. Stakeholders should be involved in planning and development in order to create institutional capacity. Mission-driven projects and alliances can help achieve common goals or visions 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. Launch fair and well-balanced public-private partnerships and industry support agencies to ensure results are relevant to the market and help businesses remain competitive.

## R.4

### COLLABORATION IS CRUCIAL

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#### R.4.1

Local stakeholders should be involved in planning and development to build institutional capacity.

Capacity building and momentum can be developed by enabling a wide group of stakeholders. Traditional stakeholder collaborations for industrial development were built around the Triple Helix (public authorities, research organisations and business), which now has been extended to the Penta-Helix (including now the third sector and actors representing capital). More specifically, Chambers of commerce and Universities have become increasingly important activators in innovative metropolitan scale partnerships: fostering technological innovation, building relationships with scientific research, local entrepreneurs, policymakers, and society at large. Incubators are playing an important mission in supporting new productive activities in several EU cities.



**CASE****I3P BUSINESS INCUBATOR, TORINO**

A public incubator to support innovative industrial activities

The I3P business incubator is the public incubator of Politecnico di Torino University and is the result of a regional public policy. Established in 1999, the incubator aims at supporting innovative and technologically advanced start-ups. The services offered by I3P consist of incubation and pre-incubation programs designed to strengthen start-ups' innovation capacity, minimize uncertainty and maximize companies' growth. Internationally recognized as a center of excellence for innovation and business development, the incubator is specialized in hi-tech and deep-tech projects encompassing innovative industrial supply chains according to a B2B model. I3P is conceived as an enabling tool for university departments to exploit intellectual assets by translating ideas into testable products/services to be brought to the market. On a larger scale, instead, the final goal underlying the long-term vision of this project is the support of the local entrepreneurial ecosystem by fostering technological innovation processes able to generate new employment opportunities in the field of innovative entrepreneurship.



I3P Incubator  
Courtesy of I3P S.c.p.a. -  
Incubatore Politecnico di Torino

## R.4

### COLLABORATION IS CRUCIAL

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#### R.4.2

## Mission driven projects and alliances can help achieve common goals or vision.

Concretely activate a broad range of actors to address urban and metropolitan challenges. Momentum is needed to enable change, particularly where societal challenges are concerned. The public sector may not be the initiator of such projects but is often the most effective enabler. Collaboration with concerned stakeholders is crucial to driving long-term visions and cooperation. This is particularly important in order to turn from shared principles into concrete action.

**CASE****LONDON'S EAST ENDS TRADE GUILD**

Promoting community based urban business ecosystems

Established in 2010, London's East Ends Trade Guild is a community-based initiative that emerged from the tension between established businesses and market trends. It is an organisation representing around 300 small independent businesses and self-employed workers concentrated around East London. EETG provides local businesses with a collective voice, federating local interests, providing social spaces, sustaining relationships and networks, and improving the quality and safety of the places they're located in. EETG is particularly active in areas that contain small traders that are heavily embedded in the neighbourhood. This is a quality that has made London's East End attractive for speculation and gentrification which in turn is pushing out these very businesses. In practice, local businesses contribute with a small membership fee (at least £15 per month) to the EETG and are expected to uphold the organisation's values and principles based on inclusivity, reciprocity, collaboration, interdependence, creativity, and pragmatism. The Guild prides itself on offering "customers a human touch and meaningful interaction". This shows a clear distinction with classic chambers of commerce and considers that being small means being flexible and closely attuned to customer demand.



East End Trades Guild.  
© Adrian Hill

## R.4

### COLLABORATION IS CRUCIAL

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#### R.4.3

Public-private partnerships and agencies can play a pivotal role in developing competitive market ready projects.

Public-private partnerships have been viewed with some concern by policymakers due to problematic outcomes particularly related to large development projects. Both at a city metropolitan level, agencies supporting businesses play an important role to build networks, improve skills and develop stronger relationships between industry and the city. Public actors may not be able to find the best way to support the local economy, therefore it can be useful to develop forms of public-private partnerships where aligned visions and strategies can be implemented, based on shared governance.



**CASE****MAŁOPOLSKA REGIONAL DEVELOPMENT**

## Regional support to competitiveness

A stronger example of a Public Agency, with a consistent role of the public sector that is acting at a regional level, is the Małopolska Regional Development Agency. The agency, which has been active for 25 years, was established in order to increase the competitiveness of entrepreneurs from the Małopolska Region (the area surrounding Krakow). The agency provides both the hardware (space) and software for business development (skills, funding, and support). It supports companies at every stage of their development. This includes comprehensive financial know-how, investment, consulting, and training assistance supports start-ups and established businesses to access an international network while promoting the region's economic brand. It is a key institution for regional development. Also, it helps national institutions and regional governments to shape policy for innovative regional development.



Support for regional development in Poviats Gorlicki and Nowosadecki - project implemented by Małopolska Regional Development Agency



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In addition to this publication there is an online version of the whole project report, which allows generating tailor-made reports on policy options and tools or case studies. This online version is available at: <https://www.espon.eu/makingground>

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