

MISTA

Metropolitan Industrial Spatial Strategies & Economic Sprawl

Targeted Analysis

Annex 4
Atlas of Inspirational Cases

Annex 4: Atlas of Inspirational Cases

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

The ESPON EGTC is the Single Beneficiary of the ESPON 2020 Cooperation Programme. The Single Operation within the programme is implemented by the ESPON EGTC and co-financed by the European Regional Development Fund, the EU Member States and the Partner States, Iceland, Liechtenstein, Norway and Switzerland.

This delivery does not necessarily reflect the opinion of the members of the ESPON 2020 Monitoring Committee.

Authors

Valeria Fedeli, Ilaria Mariotti, Dante Di Matteo, Federica Rossi, Rahma Dridi -Politecnico di Milano (Italy), Leadpartner

Matthias Firgo, Fabian Gabelberger, Peter Huber, Anja Kukuvec, Peter Mayerhofer, Maria Riegler - WIFO – Austrian Institute for Economic Research (Austria)

Ivan Tosics, Éva Geróházi, Eszter Somogyi, MRI – Metropolitan Research Institute (Hungary)

Adrian Vickery Hill, LATITUDE – Platform for urban research and design (Belgium)

Advisory Group

Project Support Team: Michael Rosenberger (City of Vienna), Hans Martin Aambø (City of Oslo), Peter Austin (City of Oslo), Haakon Olsvold (City of Oslo), Philipp Perick (City of Berlin), Elke Plate (City of Berlin), Czajkowski Andrzej (City of Warsaw), Małgorzata Kucińska (City of Warsaw), Rudolfs Cimdins (Riga Planning Region), Christoph Hemberger (Verband Region Stuttgart), Thomas Kiwitt (Verband Region Stuttgart), Irene Mortari (Turin Metropolitan City), Claudia Fassero (Turin Metropolitan City)

ESPON EGTC: Gavin Daly and Andreea China, Project Experts and György Alföldy, Financial Expert

Information on ESPON and its projects can be found on www.espon.eu.

The web site provides the possibility to download and examine the most recent documents produced by finalised and ongoing ESPON projects.

© ESPON, 2020

Printing, reproduction or quotation is authorised provided the source is acknowledged and a copy is forwarded to the ESPON EGTC in Luxembourg.

Contact: info@espon.eu

Annex 4: Atlas of Inspirational Cases

MISTA

Metropolitan Industrial Spatial Strategies & Economic Sprawl

Version 23/03/2021

Disclaimer:

This document is a (draft) final report.

The information contained herein is subject to change and does not commit the ESPON EGTC and the countries participating in the ESPON 2020 Cooperation Programme.

Table of Contents

List of Maps	iv
List of Figures	v
List of Tables	vii
Abbreviations	viii
1 Introduction to the Atlas of Inspirational Cases	1
1.1 Outline of the conceptual and methodological framework applied.	1
1.2 Identifying Inspirational cases: protocol for selection	1
1.2.1 Studying inspirational cases: protocol for analysis	3
1.2.2 Working with Inspirational cases: in-depth understanding and reflecting on policy-transfer	3
1.3 Main sources and data used to collect cases	4
1.4 Atlas of inspirational cases – web version	4
2 Macro-scale: visions and strategic frameworks	9
2.1 Berlin Urban Development Plan (UDP) Economy 2030	10
2.2 Brussels circular economy plan - BeCircular	16
2.3 Greater Manchester Local Industrial Strategy	22
2.4 Wirtschaftsförderung Region Stuttgart GmbH (WRS) Stuttgart - Stuttgart Region economic development corporation	28
3 Meso-scale: plans and policies	35
3.1 London Industrial Intensification Study	36
3.2 Planned Manufacturing Districts (Chicago, USA)	41
3.3 Salzburg: data collection	46
3.4 Strijp-S, Eindhoven	52
3.5 The strategic plan of Hovinbyen (Oslo).....	58
3.6 Vienna Business Districts, Austria	65
4 Meso-scale: tools and programs	71
4.1 APEA- Aree Produttive Ecologicamente Attrezzate (Eco-Industrial Parks), Italy	72
4.2 Berlin Initiative for the New Municipal Craft and Trade Centres	77
4.3 Bouwmeestar Maître Architecte, Brussels	82
4.4 Citydev.brussels	87

4.5	Fiscal compensation at metropolitan level, Bologna.....	92
4.6	Małopolska Regional Development Agency, Poland	98
4.7	Strategiedialog Automobilwirtschaft (Strategic Dialogue on the Automotive Industry – SDA), Germany.....	104
4.8	Vienna Adult training and Labour market policy agency - WAFF	109
5	Micro-scale: projects	116
5.1	Brussels' Abattoir	117
5.2	East End Trade Guilds (EETG) & Guardians of the arches.....	122
5.3	Hôtels Industriels.....	127
5.4	Ile de Nantes, France - slow urbanism model.....	131
5.5	I3P business incubator (PoliTo), Turin.....	138
5.6	Lageweg, Antwerp - stimulating joint actions of private actors	143
5.7	LAVAZZA Headquarters, Turin	149
5.8	RDM Rotterdam	154
6	Main take-aways towards policy recommendations.....	160
7	References	163

List of Maps

Map 1: Key Diagram UDP Economy	10
Map 2: Territorial scale of Greater Manchester Combined Authority	22
Map 3: Strategic locations in the Greater Manchester area	25
Map 4: Wirtschaftsförderung Region Stuttgart GmbH (WRS) Stuttgart	28
Map 5: The location of Chicago's industrial corridors which include the Planned Manufacturing Districts	41
Map 6: Planning regions in Salzburg according to the spatial development plan 2007	46
Map 7: Planning regions in Salzburg according to the spatial development plan 2007	48
Map 8: Simplified map of Oslo, highlighting the industrial corridor towards north-east	59
Map 9: Areas covered by Vienna District Management	67
Map 10: APEA	72
Map 11: Zlpa Verde Masterplan- Jesi (AN): an example of APEA master plan	75
Map 12: Union of municipalities in the Metropolitan City of Bologna	95
Map 13: GDP per capita in the districts of Małopolska Region, to the Polish average (2018)	98
Map 14: A map of the East End Trade Guild members	122
Map 15: Ile de Nantes	131
Map 16: The area of Lageweg Hoboken within Antwerp	143
Map 17: Different urban schemes and financial calculations for the area of Lageweg	147

List of Figures

Figure 1: Atlas of inspirational cases website (homepage view).....	5
Figure 2: First level navigation page – inspirations.	6
Figure 3: Clickable cards showcasing the four categories of inspirational cases.	6
Figure 4: Multi-page popup modal with a detailed project's description for each inspirational case.	7
Figure 7: Elaboration & Participation Process of the UDP Economy.....	12
Figure 8: A scheme of the principle metabolic flows calculated within the region of Brussels.16	
Figure 9: A list of the 2019 edition BeCircular funding round projects.	19
Figure 13: View of Stuttgart.....	31
Figure 14: An example of a massing study used to explore densification opportunities.....	36
Figure 15: Urban design guidelines.....	38
Figure 17: A list of activities permitted on different sites.	45
Figure 20: Strijp-S.....	52
Figure 21: Strijps the creative city.	55
Figure 22: Aerial view of Hovinbyen towards the city centre of Oslo.	58
Figure 24: Økern, the main centre of the transformational area of Hovinbyen.	61
Figure 25: Hovinbyen.	62
Figure 26: One of the stakeholder discussions in the course of the development of the Hovinbyen plan.....	63
Figure 27: Vienna business districts.....	65
Figure 31: GSG-Hof Schlesische Straße 26.	77
Figure 32: GSG-Hof Wattstraße.....	79
Figure 33: The role of the BMA, within the scope of a project.	82
Figure 34: Port Sud Beacon along the canal.....	84
Figure 35: NovaCity Sud, a future mixed use project by architects Bogdan & Van Broeck, DDS+ et Eole with 7.600 m2 of economic space.	87
Figure 36: RVB tap manufacturer owns a 40-year lease for their 3000sqm factory on a Citydev site.	89
Figure 37: Covers of the strategic plan of Città Metropolitana di Bologna.....	92
Figure 41: Poster of Małopolska Innovation Festival, October 2020.....	101
Figure 42: The steering committee.....	104
Figure 43: The organisational structure of the strategy.....	106
Figure 44: WAFF homepage.	109
Figure 45: Text advertising support for jo changers.....	112
Figure 46: An aerial rendering of the plan of the Abattoir site in 1910.	117
Figure 47: An aerial view of the new masterplan of the site which includes a mix of production and student housing.	119
Figure 49: A Manifesto for Economic Resilience.....	125
Figure 50: Hôtel Industriel by Dominique Perrault.....	127

Figure 51: Industriel by Paul Chemetov.	129
Figure 53: The most famous product of the Machines of the Island of Nantes project.	133
Figure 54: Karting, a business hotel for the creative and cultural industries.	134
Figure 55: Solilab, businesses that work in social and solidarity fields.	134
Figure 56: L'Agronaute, an urban farm located in the former Nantes MIN.	135
Figure 57: I3P building inside the university campus.	138
Figure 58: Start-us' training session.	140
Figure 60: The discussion with stakeholders at the scale model of Lageweg.	145
Figure 61: The safari with stakeholders to the area of Lageweg.	146
Figure 62: Different design and use options for the area of Lageweg.	146
Figure 64: Lavazza headquarters designed by Cino Zucchi Architetti.	149
Figure 65: Nuvola Lavazza Headquarters' overview.	151
Figure 66: The Hogeschool Rotterdam's Centre of Excellence education where students are given challenges to not only build vehicles from scratch but also look for co-financing to improve their projects.	154
Figure 67: The RDM campus, showing the mix of education (left) and R&D and business (right).	157
Figure 68: The RDM Centre of Excellence's four key themes.	158

List of Tables

Table 1: Protocol for selecting inspirational cases: foundational principles	1
Table 2: Principles to be addressed by the inspirational cases	2
Table 3: Protocol for analysing inspirational cases: foundational elements.....	3
Table 4: Additional sources for inspirational cases	4

Abbreviations

AA	Agglomeration Areas
AMS	Arbeitsmarktservice (Austrian Public Employment Service)
APEA	Aree Produttive Ecologicamente Attrezzate (Eco-industrial Parks)
ARDECO	Annual Regional Database of the European Commission
CMT0	Città Metropolitana di Torino (Turin Metropolitan City)
COVID-19	Coronavirus disease 2019
CZA	Cino Zucchi Architetti
DG REGIO	Directorate General for Regional and Urban Policy
EC	European Commission
ELFS	European Labour Force Survey
ESPON EGTC	European Territorial Observatory Network
EU	ESPON European Grouping of Territorial Cooperation
GMCA	European Union
GSG	Greater Manchester Combined Authority
ICs	Gewerbehofsiedlungsgesellschaft
ICT	Inspirational Cases
IT	Information Communication Technology
I3P	Information Technology
MARR	Incubatore Imprese Innovative Politecnico (Business Incubator)
	Małopolska Agencja Rozwoju Regionalnego S.A (Małopolska Regional
NGO	Development Agency Co.)
OECD	Non-Governmental Organisation
PoliTo	Organization for Economic Co-operation and Development
PTM	Politecnico di Torino (University)
SDA	Piano Territoriale Metropolitan (Territorial Metropolitan Plan)
	Strategiedialog Automobilwirtschaft (Strategy Dialog on the Automotive
SME	Industry)
UDP	Small and medium enterprises
waff	Urban Development Plan
	Wiener ArbeitnehmerInnenförderungsfonds (Vienna employee support fund)

1 Introduction to the Atlas of Inspirational Cases

1.1 Outline of the conceptual and methodological framework applied.

The last and fourth task of the MISTA research project was aimed at enhancing the capacity for stakeholders and places to develop forward-looking strategies, innovative policies, effective tools and governance frameworks to deal with the changing nature of the industrial sector and its role in the city. An atlas of inspirational cases has been developed to support decision-makers, planners and policymakers. The Atlas is conceived as a selection of "inspirational stories" able to stimulate knowledge transfer in supporting stakeholder cities in the development of potential strategies, effective tools and innovative policies. These are by no means ready-to-use solutions that can be applied anywhere, but they help identify pre-conditions necessary to implement a certain kind of action. For this reason, the atlas has resulted in a simple and intuitive repository of 26 cases, organised according to the following macro-categories:

- Macro-level: visions and strategic frameworks
- Meso-level: plans and policies
- Meso-level: tools and programs
- Micro-level: projects

1.2 Identifying Inspirational cases: protocol for selection

Each case selected has successfully dealt with the kind of challenges identified through earlier stages of the project and supported through qualitative and quantitative research. The cases were sourced through a range of sources including scientific literature and policy documents, the results of the case studies (Task 3, see Final Report chapter 3), through the interaction with the project stakeholders and through previous experiences within the project team. The final selection of cases was based on the following criteria:

Table 1: Protocol for selecting inspirational cases: foundational principles

Usable knowledge	They appear relevant and transferable in relation to the specific features and conditions of the seven stakeholders. Projects selected will clearly indicate the conditions that are necessary for success and transferability and what should be done if conditions of policy transfer are limited.
Situated and differentiated knowledge	They can provide support in relation to the different typologies of situations represented by the seven stakeholders, taking into account the different characteristics of the stakeholder cities-metropolitan cities in terms of urban size, economic specialization, governance and institutional framework. Policy changes and knowledge exchange are more possible if solutions are identified in relation to the specific characteristics of the context. In particular, cases will be selected based on application to cities of various sizes and governance frameworks.

Integrated policy approach	They are able to support an integrated and sustainable development approach: visions about the future of the industry shall 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. In this respect, a special role will be assigned at the spatial nature and impact of solutions, where space is conceived as a crucial integrator of policy dimension. Space-sensitive innovation is necessary to generate integration beyond sectoral policies. Policy change and knowledge exchange cannot be neutral; the selection of “inspirational cases” has been done on the base of clearly oriented filters, enabling to select solutions as complex as the problems they are going to tackle.
-----------------------------------	--

Place-based approach	Policy solutions are selected based on the capacity of places and society to activate a wider policy cycle, according to their available resources. The project will select cases involving active and dynamic involvement of stakeholders and society at large. Policy mobility and knowledge exchange cannot take place top-down; a place-based approach is one that counts on the knowledge embedded and available, or further to be built in places.
-----------------------------	--

Source: ESPON MISTA 2020.

Applying the above-mentioned principles, Inspirational Cases (ICs) have been selected by all the partners, under the coordination of Politecnico di Milano (PoliMi). All the partners selected five to eight best practices each, based on the case studies result as well as from literature reviews and their previous experience. After discussing this pre-selection of cases (July to October 2020), 26 inspirational stories have been selected to be studied in depth according to a common protocol of analysis through which to produce detailed knowledge of the “solutions”. Cases have been shared with Stakeholders during the Future Workshops activities (October to November 2020). Moving particularly at the intersection between economic change, industrial transformations and spatial policies/planning, the research team has explored *ad hoc* cases considered to be more beneficial than others, as they show:

Table 2: Principles to be addressed by the inspirational cases

Strategic vision of the development of the metropolitan area in general and the manufacturing sectors in particular;
Planning and/or financial tools (such as coordinated business and real estate taxation, green-field protection instruments, brownfield reactivation incentives)
Forms of cooperation between different actors of the value chain to optimise land use in face of environmental impact
Compensation mechanisms between losers and winners of industrial resettlement
Capacity of Relying on the local resources and creating local networks (employees, agriculture) to produce local or global products
Developing complementary activities instead of competing ones
Agreeing on the main focus points of industrial development on metropolitan level
Involving business representatives to spatial planning processes, in particular within those related to a metropolitan scale
Creating an organisational framework for coordinating economic activities on larger metropolitan scale

Source: ESPON MISTA 2020.

1.2.1 Studying inspirational cases: protocol for analysis

The protocol for analysis has been developed in depth by PoliMi as lead partner, with the support of all the partners, reflecting the above-mentioned selection principles. Therefore, building on a shared protocol of analysis inspirational cases have been studied and presented according to the following main aspects:

Table 3: Protocol for analysing inspirational cases: foundational elements

Problem - why	What is the problem addressed?	What definition of the problem was given locally and why is it interesting?
Solution - how	What is the solution proposed?	Which kind of solution in general terms and in particular was adopted and why is it interesting?
Actors - who?	What actors are involved and what role they play?	Public, private, local, regional, national, etc
Context - where and when	Place based character- what is specific and what is interesting about this case?	How did the context play a specific role in shaping the solution? (attention to capacity building, governance issues and role of local society)
Condition for success and replicability	What are the conditions for replicability?	What "resources" are needed to go in a similar direction? (e.g. economic/social/ political conditions)
Expected impact	What kind of impact is expected from the solution? What capacity of conciliation among different rationalities and expectations?	What effects on sometimes conflicting perspectives? (i.e. supporting local economy. promoting integrated sustainable development creating the condition for territorial cohesion, reduction of inequalities).

Source: ESPON MISTA 2020.

Gathering the results of this investigation, a repository of 26 cases - both offline and online – has been produced. In this document, a synopsis of each inspirational case has been made, including links to a selection of related material collected for further readings has been presented. The same collection has been also made available in the form of a website.

1.2.2 Working with Inspirational cases: in-depth understanding and reflecting on policy-transfer

To facilitate knowledge-transfer, the selected Inspirational cases have been presented to stakeholders and explored during the Futures Workshops and the Inspirational Cases workshops (November 2020). The latter have been exploited as a fundamental opportunity to discuss and learn about Inspirational Cases, enabling an activity of *policy design*, trying to identify how the identified solutions could be applied to the stakeholders' metropolitan contexts.

1.3 Main sources and data used to collect cases

Inspirational Cases have been collected from different sources such as from the seven stakeholders' metropolitan cities, the project partners' experiences and from literature review. The review took into consideration the knowledge platforms supported by EU Cohesion policy, introducing next to these also non-EU case studies (Table 4).

Table 4: Additional sources for inspirational cases

EU policy related sources	URBACT// https://urbact.eu/good-practices/home INTERREG// www.Keep.eu platform and in particular https://www.interregeurope.eu/urbanm/
EU Research related sources	JRC// https://urban.jrc.ec.europa.eu/strat-board/#/where H2020 REPAIR (circular economy peri-urban areas, www.h2020repair.eu) or Makers (www.makers-rise.org) JPI// Cities of Making (http://citiesofmaking.com/cities-report/ ,- Brussels, London & Rotterdam) COST Actions COST Action CA18214 "The geography of new working spaces and the impact on the periphery" " https://www.cost.eu/actions/CA18214/#tabs Name:overview? " ESPON "Possible European Territorial Futures"; "CIRCTER - Circular Economy and Territorial Consequences, exploring among others the topic of Circular economy"
Development Agencies	EURADA
Scientific networks	RGCS network https://collaborativespacesstudy.wordpress.com/a-propos/ , EUKN; urbanit.it
Network of cities	EUROCITIES, METREX
Real-estate driven projects	Examples explored include, but not limited to: Brooklyn Navy Yard (US), Tech-shop, M4H (Rotterdam), Sheffield Advanced Manufacturing Park (UK), Hundred Hopper (US)
Bottom-up initiatives	i.e. Urban Manufacturing Alliance from the USA, the P2P foundation (ERC financed www.cosmolocalism.eu), movements such London's East End Guilds or the globally connected Fab City movement (www.fab.city.com)

Source: ESPON MISTA 2020.

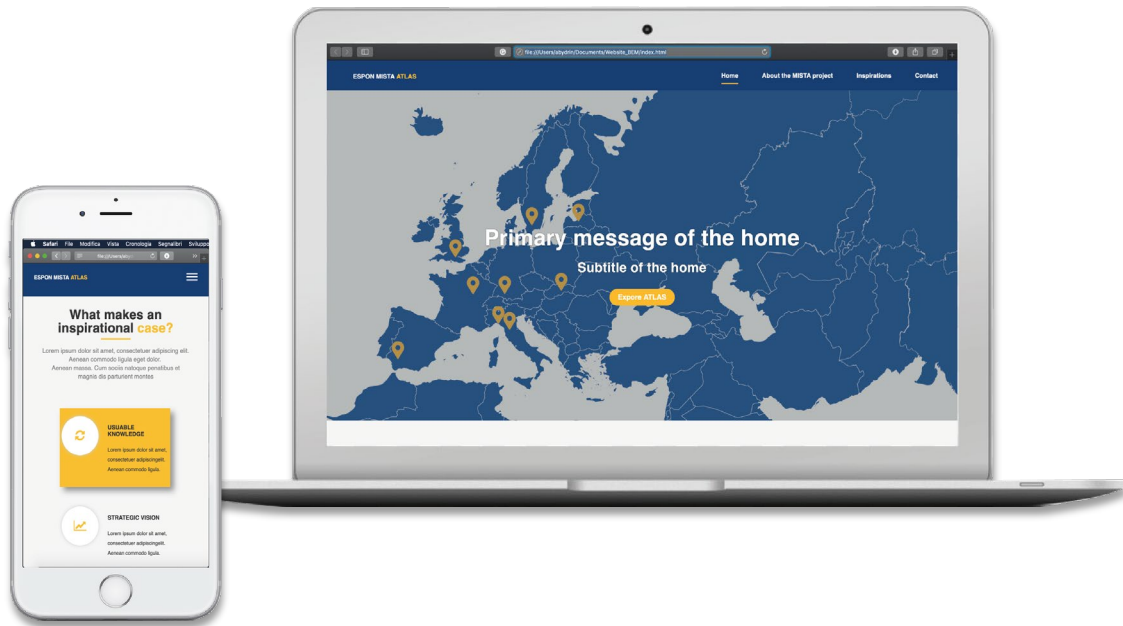
1.4 Atlas of inspirational cases – web version

For a better dissemination of the results of Task 4, a web version of the Atlas of Inspirational Cases has been created. The website is conceived as a simple and intuitive digital repository containing all the 26 cases analysed by the MISTA research team. The cases are categorised according to the following four groups:

- Visions & Strategic frameworks
- Plans & policies
- Tools and Programs
- Projects

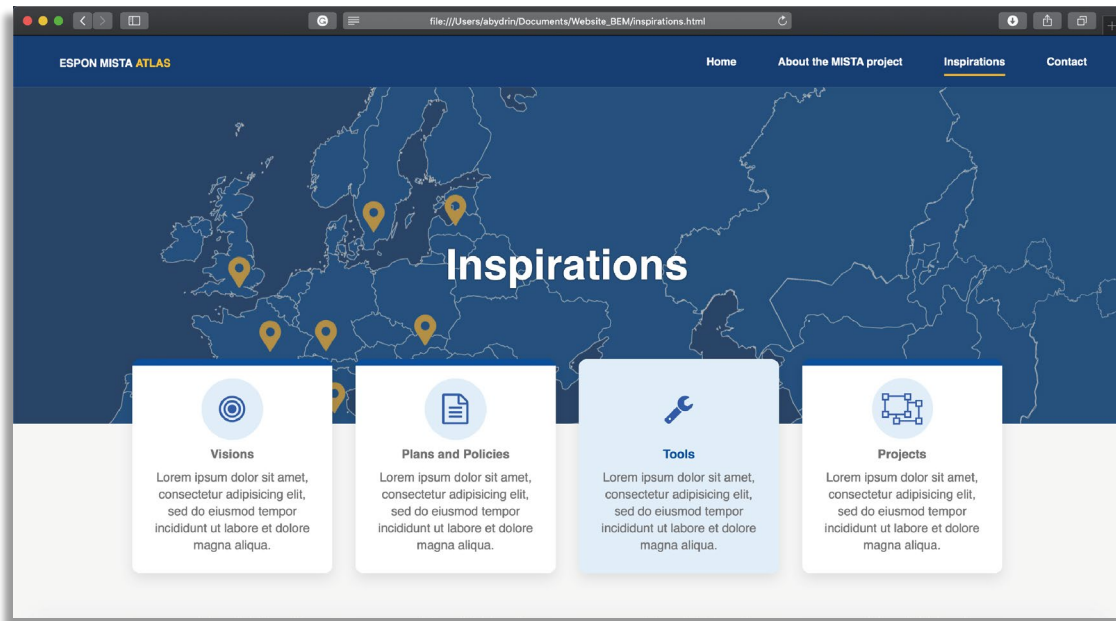
They will be easily accessible through card (see image 3). The landing page (see image 2) access a series of second-level pages by clicking on the cards which are displayed for the four categories. Onclick each card opens a popup modal where it is possible to explore the selected project in detail (see image 4). Here information is mainly structured in the form of a multi-page modal (see image 5).

Figure 1: Atlas of inspirational cases website (homepage view)



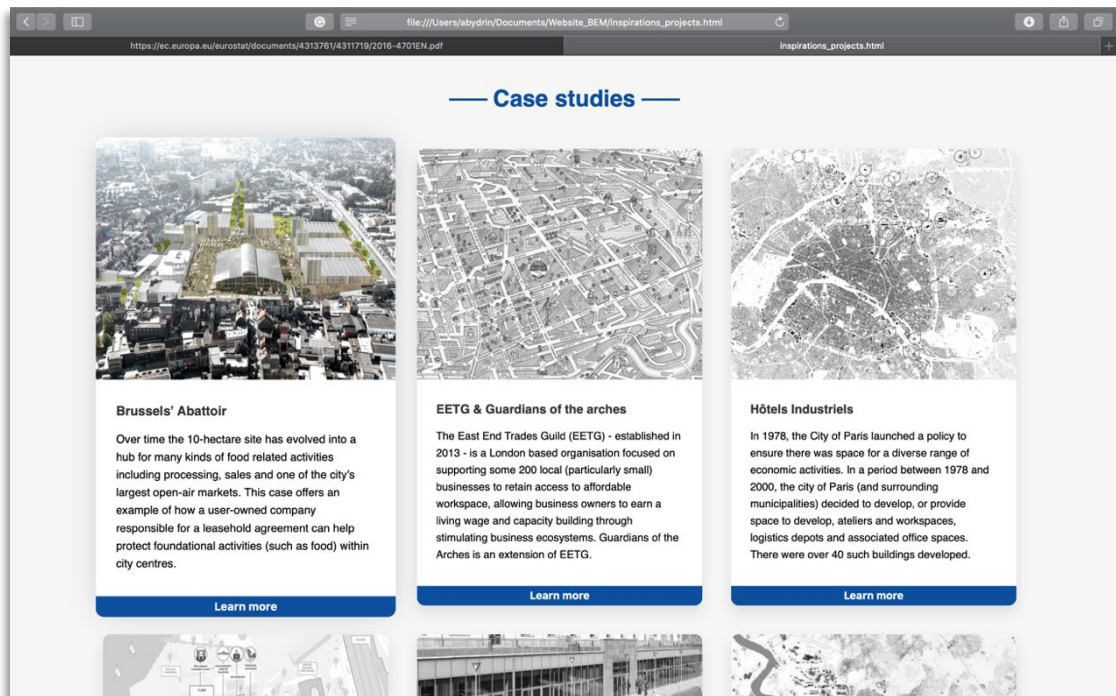
Source: ESPON MISTA 2020.

Figure 2: First level navigation page – inspirations.



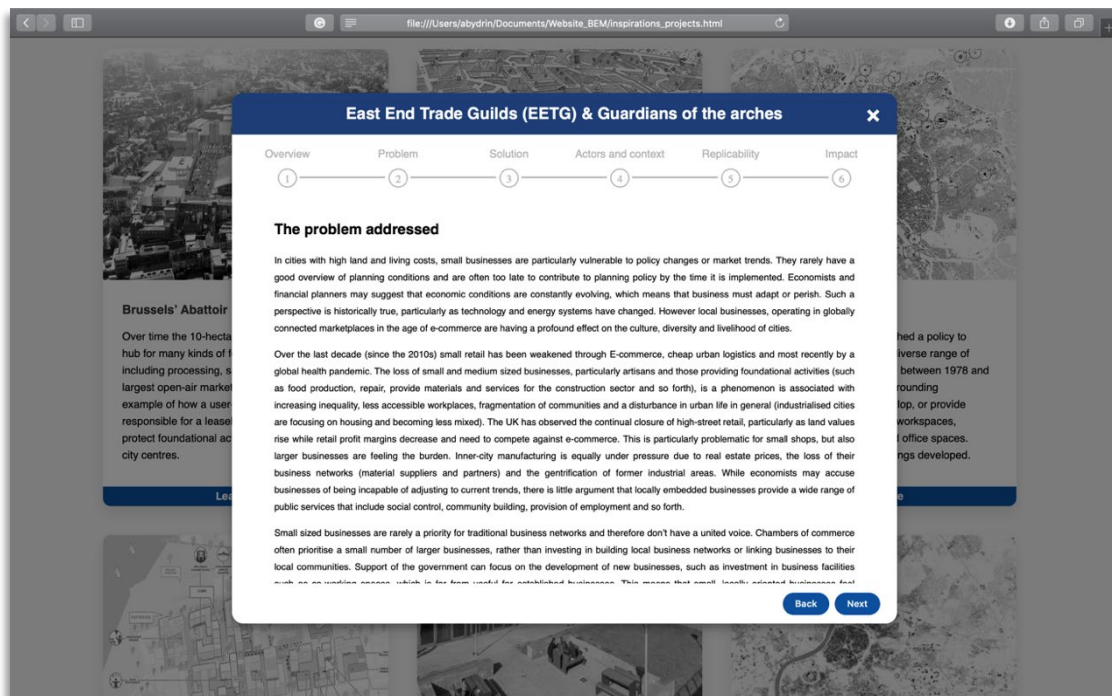
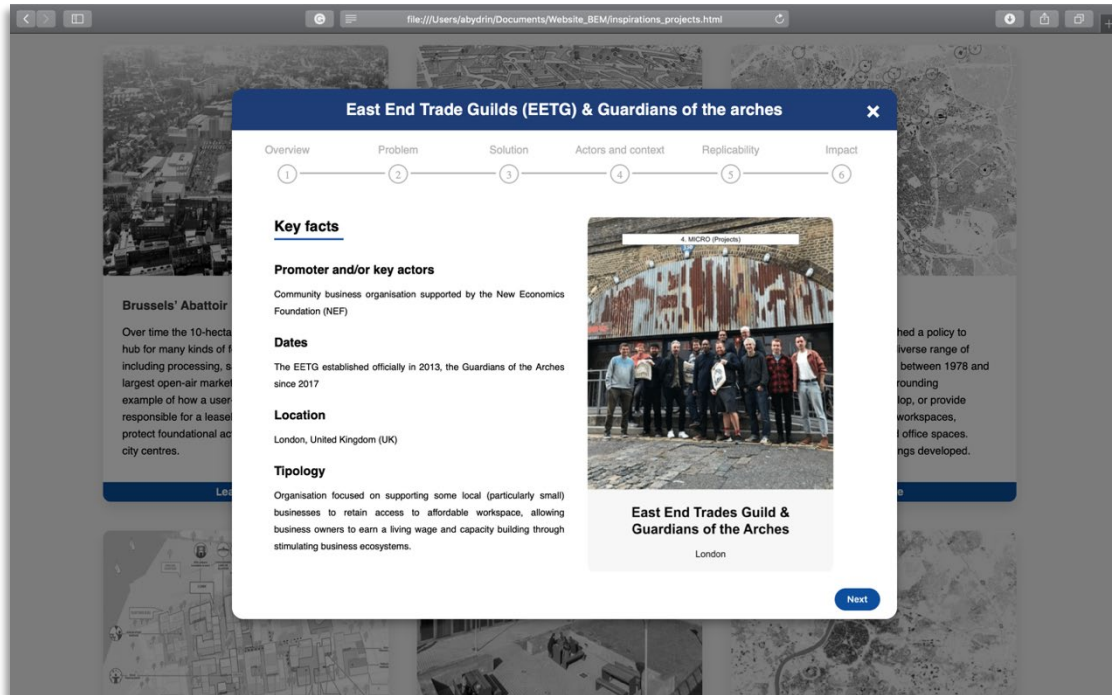
Source: ESPON MISTA 2020.

Figure 3: Clickable cards showcasing the four categories of inspirational cases.



Source: ESPON MISTA 2020.

Figure 4: Multi-page popup modal with a detailed project's description for each inspirational case.



Source: ESPON MISTA (2020).

Visions and strategic frameworks

2 Macro-scale: visions and strategic frameworks

This section collects vision and strategic frameworks promoted or developed by cities and metropolitan areas. Visions have the power to provide both a definition of the problem and a perspective. They can be unilateral, but often they are the temporary, intermediate, or final outcome of a joint effort to exchange and share different points of view, to speak a common language, to select shared objectives. In this respect they bring in leadership and momentum; they often are necessary in a time of crisis or to guide change. They activate the future, trying to address the present. Sometimes they fail to conceive of the future, but they are important in so far as they allow dialogue and public discussion.

The process of producing visions is as important as the vision it may produce, in particular when it activates multi-agency and multi-scalar perspective, able to go beyond traditional identification of the role of actors and traditional boundaries and hierarchies. This is particularly important when a city realises how difficult it is to deal with adapting to global economic change, without the capacity to open multi scalar alliances and produce new supralocal deals.

Sometimes visions converge in strategic frameworks or forms of strategic planning. Which means they try to feed a process of change, producing a framework for the coordination of actors and selection among modes of actions and projects that can make the vision possible. When referring to strategic frameworks, processes of strategic planning have been selected with reference to their capacity to activate visions and projects, by way of defining an agenda for change, supported by leadership and planning. In this respect, we looked for strategic frameworks that aimed at dealing with both structural decisions about spaces and future-oriented agenda. Strategic frameworks are often activated by metropolitan contexts, either in the presence of a strong institutional governance framework, either in the presence of a weaker institutional context and role. In most cases they complement territorial and spatial plans, and often have the capacity to produce integrated policies and visions, to activate a new dialogue between economic development policies, social policies, spatial policies. They aim at supporting a new capacity of action in the public sector, sometimes being based on its direct intervention, sometimes based on a more incremental and tactical approach, trying to build new coalitions and alliances.

2.1 Berlin Urban Development Plan (UDP) Economy 2030¹

Key facts

Promoter and/or key actors

Berlin Senate Department for Urban Development and Housing (lead) in cooperation with Senate Department for Economy, Energy and Enterprises.

Dates

2016-2019

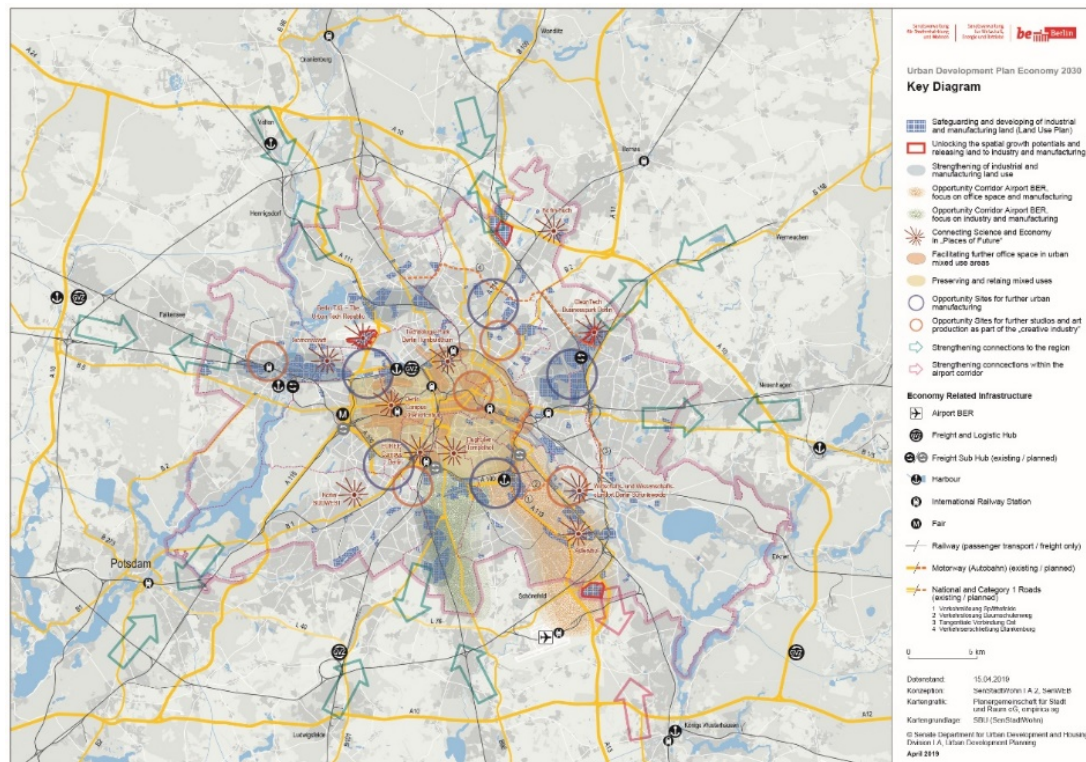
Location

Berlin

Typology

A macro scale, town-wide spatial planning framework on industrial land and economic development.

Map 1: Key Diagram UDP Economy.



Source: Courtesy of Senatsverwaltung für Stadtentwicklung und Wohnen, Berlin.

¹ This case builds on the interviews conducted with Axel Grünberg and Philipp Perick (Senate Department for Urban Development and Housing).

The project in a nutshell

Since the Urban Development Plan (UDP) Industry and Commerce of Berlin was published in 2011, the framework conditions have changed: Economic development has gained considerable momentum, the demand for space for business has increased and the potential land resources for business developments have decreased. But urban development needs space for the economy. Therefore, the new UDP Economy 2030 establishes the planning prerequisites on a town-wide level, especially for a strategic provision of land, a rapid activation of sites, a more efficient use of land. It thus offers the growing economy in the capital sustainable development prospects.

The problem addressed

Elaborating spatial development strategies for production that are integrated into a general spatial development strategy is a challenge for many European cities, in the face of an increasing scarcity of land. For Berlin, this challenge is arguably larger than for most cities because the city has rapidly moved from being a place with ample free space and demographic decline to a demographically growing city with an increasing shortage of land. Thus, the spatial development plan for production that has been drafted in 2010 ran under the motto “the dress is wide” to indicate the ample land reserves available in the city. This changed dramatically when rapid population growth set in in 2010 and land became increasingly scarce and contested by different uses.

As a consequence of the strong economic and demographic development as well as the rapid change in land availability the existing spatial development objectives of the city were becoming increasingly outdated and contested by many actors. In particular it was felt by many that the existing planning framework provided only inadequate strategies to deal with increasing land use competition in the city and it also took too little account of recent economic and technological challenges.

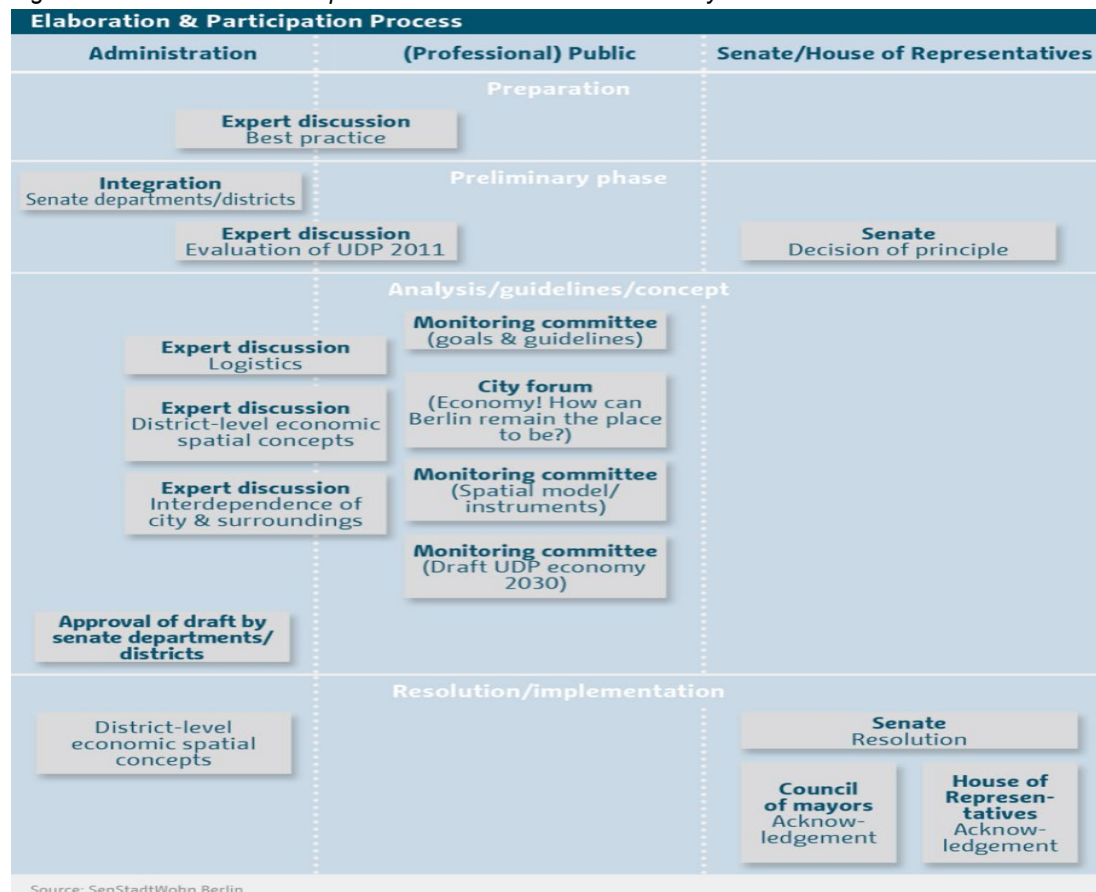
The solution proposed

In 2016 the Senate of Berlin therefore decided to adapt its spatial development strategy on industrial and commercial land to the new circumstances. In the conception of this new plan, it was considered vital to develop a framework that was widely accepted among actors and that also accorded with other urban development plans for Berlin (such as the UDP Housing that was developed simultaneously with the UDP Economy) as well as with other specific urban development plans. Thus, it was decided that next to developing a new economic development plan also a residential development plan and a mobility and transport plan that correspond and

accord with the economic development plan should be developed. The elaboration of the plan was therefore embedded in an almost complete overhaul of the strategic spatial planning tools of the city.

Furthermore prior to the principle, decision to elaborate this new plan a study was commissioned to external consultants. This on the one hand aimed to collect empirical evidence on the spatial development in the city and to build scenarios on possible future developments. On the other hand, the study involved conducting a number of expert interviews as well as interviews and workshops in selected districts of the city, to survey different views of urban development as well as collecting information on similar planning processes in other cities. The results of this study were instrumental to defining the scope and process according to which the plan was developed, even prior to the principle decision to redesign the plan.

Figure 5: Elaboration & Participation Process of the UDP Economy.



Source: SenStadtWohn Berlin.

As a result, Berlin's Urban Development Plans (UDP) are now five spatial development concepts, each dedicated to a single spatial subject: housing, economy (industry and commerce), town centres, mobility and transport, climate adaptation and mitigation.

Each UDP covers the entire administrative area of Berlin and, with regard to its specific spatial subject, refers to future land use and the built environment. The five plans are coordinated and in consonance with each other, so rivalries among different land use claims are avoided at an early stage. In doing so, the UDPs contribute to the development of Berlin in a balanced,

integrated and public welfare-oriented way. This is important to deal with Berlin's growth in a way that existing infrastructure is used as efficiently as possible, nature is being protected and today's and future land use demands, for example for residential and industrial land, can be met.

As strategic plans the UDPs function as a hinge between the town-wide level of the Land Use Plan (Zoning Plan) and the local level of the Local Building Plans. Through mutual feedback they indicate further legal planning requirements, especially necessary alterations to the Land Use Plan or necessary elaborations/alterations of Local Building Plans. Typically, a UDP includes an in-depth analysis, sets objectives and guidelines for future planning and defines spatial and temporal priorities as well as necessary measures to be taken. Regarding their legal status the plans are considered informal as no form and no procedure is determined by formal German federal law. Nevertheless, the fact that they are informal does not mean that the plans are non-binding: they are agreed on by the Senate of Berlin and acknowledged by the House of Representatives and therefore the UDPs determinations have to be considered by all spatial planning authorities in Berlin.

The actors involved and their role

One important aspect of the planning process was the involvement of a wide range of stakeholders with the aim to achieve a strong and lasting commitment for the planning objectives and their implementation. This included the various departments of the municipal administration, the districts of the federal state of Berlin as well as NGOs and social-partner organisations (such as trade unions and organisation the chamber of commerce and industry and trade and the chamber of crafts) and the general public. The policy stakeholders were involved in an accompanying committee that held regular meetings at critical stages of the project in which results so far were discussed and expert views were exchanged. The involvement of the general public was guaranteed through a public information event ("Stadtforum Berlin") that gave citizens the opportunity to express their views and comment on the plan.

Next to this strong involvement of economic policy stakeholders the planning process also involved a very intense co-operation of the two Senate Departments for Economy and the Department for Urban Development (lead), as the most other spatial plans are in charge of single Departments.

Place-based character of the project

While most cities have equivalent encompassing planning processes in place, the Berlin UDP Economy is specific because:

1. Of its high integration with overall urban development goals, as well as with other spatial planning documents. This is reflected in its direct link to the overarching "Berlin

strategy” and its integration with major traffic and residential land use strategies of the city as well as the strong collaboration of the economic and urban development department in its elaboration.

2. The strong alignment of different strategic planning processes in which the elaboration of the economic plan was embedded, which opened the possibility to more closely integrate the plans.
3. Its strong commitment to securing an adequate supply of production in designated manufacturing zones that inter alia involves a commitment to avoiding other competing uses in these zones.
4. Its highly place-based nature provides for a highly differentiated anticipated use profile for the major urban development zones. This is amongst others reflected in the reference and elaboration of the so called “places of the future” (Zukunftsorte) originally developed by the department of economy, which defines a set of places for the future development of the economy, with each of these places having clearly defined locational advantages.

Conditions for replicability and knowledge transfer

The key factors facilitating the elaboration of the UDP Economy have been:

- The legal possibility of the city of Berlin (as well as all other municipalities in Germany) to provide informal spatial plans at regular intervals. This ensures that such planning processes can be conducted at regular intervals and that adequate financial and personnel resources are being provided for such planning.
- The competence and previous experience of the involved partners in the city administration, as this has allowed the relevant departments to react flexibly to the necessary adaptations of the pre-existing plans.
- The generally tight knit actor networks in the city, as this ensures that the relevant actors are well acquainted with each other, have already worked together on a number of similar projects previously and that identification of relevant actors is not an issue in the region.
- The consensus amongst the governing parties and amongst the different units and levels of the public administration that a thriving economy depends on the availability of land and that consequently the extent of industrial land should remain stable and that land potentials must be unlocked. Despite their occasional different interests and logics, this consensus on the economy was a solid prerequisite for achieving a commitment between the Senate departments (horizontal commitment) and between the Senate and the 12 Berlin boroughs (vertical commitment) on the goals of the UDP and their implementation.

Impact and effectiveness

Issues related to urban planning and land use remain to be a controversial issue in the city of Berlin and different actors continue to hold divergent views on a number of issues related to these topics. Nonetheless the UDP Economy 2030 has provided a common point of reference against which all discussions on such issues are based in the city. It has also succeeded in providing a generally accepted “problem definition” among actors.

On account of its clear statement of the importance of production for the city and the very clear definition of the areas for development, it has also contributed to increase planning security for

actors in the economy. It is now clear that maintaining and developing production is a key priority for the city and it is also clear how and where the city intends to implement this priority.

Finally, the continued and repeated strategic process has also led to a continued debate on and consideration of strategic issues in urban development. This inter alia has led to plans within the city administration to update the existing strategy to take better account of the potential long run implications of the COVID-19 crisis.

2.2 Brussels circular economy plan - BeCircular

Key facts

Promoter and/or key actors

Brussels-Capital Region

Dates

2016-2020

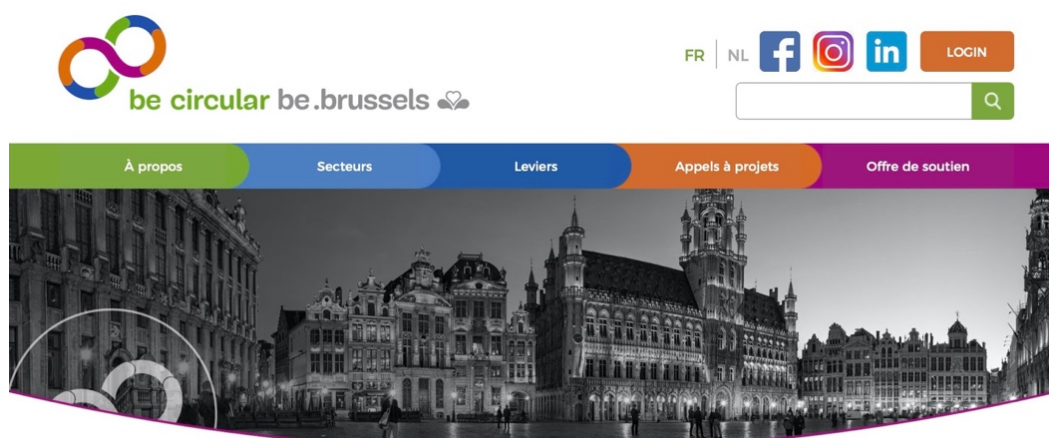
Location

Brussels-Capital Region

Typology

Strategic framework aiming at introducing a new vision of development, based on the principle of Circular Economy.

Figure 6: A scheme of the principle metabolic flows calculated within the region of Brussels.



Offre de soutien à l'économie circulaire

JE SOUHAITE

				
M'INFORMER	M'INSPIRER	ÊTRE ACCOMPAGNÉ	UN FINANCEMENT	UNE LOCALISATION
sur le concept d'économie circulaire	des initiatives circulaires portées par des entreprises bruxelloises	pour définir et/ou mettre en oeuvre une démarche d'économie circulaire	Découvrir les financements pour soutenir ma démarche d'économie circulaire	Découvrir les offres d'hébergement existantes pour soutenir ma démarche d'économie circulaire



Source: ICEDD, ECORES, BATir (2014).

The project in a nutshell

The Brussels Regional Program for a Circular Economy (referred to officially as Be Circular but known locally as the PREC) is a framework developed by the Brussels-Capital Region in order to "encourage the transformation of a linear economy (extract - produce - consumer - dispose) into a circular economy (reclaim - produce - consumer - reuse) within the Brussels-Capital Region" (see Prec, 2016-2020). It is a plan providing a framework for public institutional collaboration allowing for differences in political culture and priorities while taking steps towards circular economy ambitions.

The problem addressed

The topic of circular economy has been the confluence of a number of issues, challenges and opportunities rooted in Brussels and therefore the specific genesis of the plan is hard to source.

Over the last two decades, Brussels' institutions have been increasing their ambition in supporting green building and sustainable development. Public buildings and social housing are required to follow high energy standards. In addition, green technology and innovation has been stimulated through both the regional institution responsible for research (Innoviris) and the institution for business development (Hub). This has resulted in a number of buildings aimed at becoming engines for local waste management or circularity (such as RecyK and Greenbizz) which was funded through European Regional Development Funds (2007-2013).

Brussels is a city-region, that means there is a political motivation for the city to retain some level of self-sufficiency. Space for waste management needs to be located within the city's 162 km² region which means that recycling and waste processing is not only best done close to the source but also is stipulated through European regulation.

While the city has one of the highest GDPs per capita for a European city, it also has a very high unemployment level: the years following the 2008 financial crisis resulted in unemployment rates of over 20% in the city with some neighbourhoods exceeding 40%. The city remains a highly dynamic place for construction, yet a large portion of the construction workers come from outside of the city. Construction, linked to improving existing building energy efficiency, appeared to be an attractive marriage, with training initiatives launched by local institutions and non-profit organisations (referred to in French as *l'Alliance Emploi-Environnement*).

Finally, Brussels' political and public institutional landscape is highly complex and can be difficult to align.

The solution proposed

In 2016, the European Commission began to formally discuss the place of the circular economy within policy and planning. This was stimulated through successful lobbying by, amongst others, the Ellen MacArthur Foundation, which was shifting focus from targeting companies to addressing cities. It was not until 2016 that the first policy was adopted.

In Brussels in 2015 the topic appeared to align with a number of regional challenges and opportunities, which could be brought under the larger umbrella of a circular economy. This was written into the 2025 Strategy, an overarching economic plan. The challenge (or opportunity) was to find a decentralised solution that allowed a range of different actors to address the problem based on their own ambitions and priorities.

This resulted in the Regional Circular Economy Plan, launched in 2016. The plan was based on three general objectives:

1. Transform environmental objectives into economic opportunities
2. Optimise the use of the region (162 km²) as efficiently as possible in terms of local production, reduce movement, use goods and services more efficiently and create value added benefitting the region.
3. Contribute to creating local employment.

The plan became a kind of hybrid: partly a vision, partly a strategic document, partly an operational tool and partly an economic instrument. The document comprises of:

- Four strategic areas: transversal measures, sectorial measures, territorial measures and governance measures.
- Funding is split into two areas. Firstly, 7 types of transversal measures: legislation (LEG), adaptation of the economic structure to facilitate the circular economy (AEE & AEI), innovation (INNOV), facilitative business to become circular (MAPU), education and training (FOR) & employment training (EMPLOI). Secondly, 7 types of sectorial measures: construction (CD), waste and resource management (RD), logistics (LOG), shops & retail (COM), agri-food (ALIM), territorial approach for metropolitan neighbourhoods (TER) and governance (GOUV). Each of these were given a distinct budget.
- It led to a total of 111 measures, which essentially involved a laundry list of investment opportunities. Some of these were given a clear budget and scope, others were developed internally by the responsible institution.
- 8 regional institutions were funded, in 2016 to the tune of €12, 839, 500, each with a different sum according to role and responsibility.

With the list of actions, a regional governance system was given the mandate to oversee the implementation of the measures by the responsible institution allowing for decentralisation of action while allowing some flexibility and space for feedback.

Out of the list of measures, the BeCircular is one important measure for driving innovation and helping young businesses or new ideas to take risks and get off the ground. Every year a call was launched allowing small, medium and large projects to seek co-financing (the applicant

needed to invest around 30% of the budget). The result has given the business community to contribute ideas which could be selected by the institutional program partners.

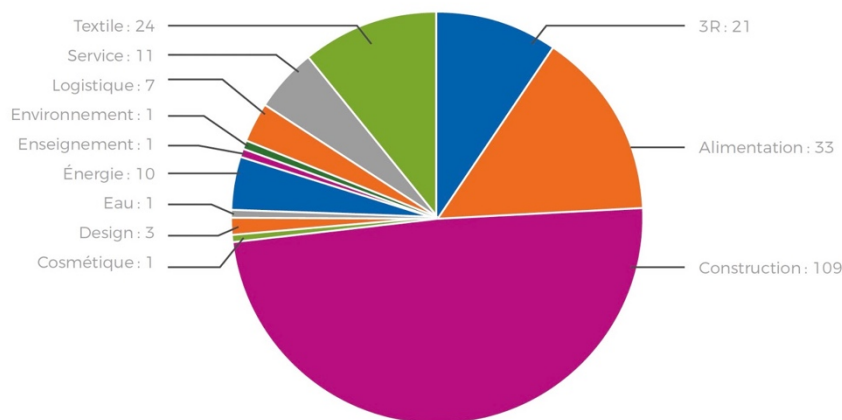
The plan was evaluated first after 18 months, which did not offer enough time to review impact but has provided an opportunity to see some of the results (refer to the Impact and effectiveness section below).

Figure 7: A list of the 2019 edition BeCircular funding round projects.

Lauréats
Appel à projets BeCircular – Entreprises // Edition 2019

3R: Réduire, Réutiliser, Recycler	Alimentation Durable	
Trait Deco - L'environnement sur votre bureau Service de valorisation et d'upcycling de mobilier de seconde main pour les professionnels (B2B)	Newtree - Chocolatree Café circulaire proposant des aliments biologiques et locaux, limitant au maximum les déchets, et cultivant des produits sur place en jardin suspendu	Inclusio - Piérides 71 Reconversion fonctionnelle d'un bâtiment de bureaux en logements à prix abordables
Les Petits Riens - Made by des Petits Riens Atelier de valorisation de textiles et de formation sociale	Glacier Gaston - Glacier Gaston Goes Green Sorbetes et glaces fabriqués grâce à la valorisation de fruits invendus	RINOO - Projet Ferdinand Rénovation d'un triplex avec maintien et revalorisation du bâti existant et utilisation de matériaux de réemploi
Recyclo - Compost in City by Recyclo Valorisation circulaire de bio déchets issus de gros producteurs	Fruitopia - Conserverie Circulaire Confection de confitures, compotes et chutneys au moyen de fruits invendus bio bruxellois	Nouveaux modèles économiques de l'économie circulaire
Rotor DC - E.R.M.E.S Service d'accompagnement et mise à disposition d'une infrastructure pour permettre aux entrepreneurs en construction de devenir fournisseurs de matériaux de réemploi	EnVie - La Conserverie de Bruxelles Partage d'une ligne de production industrielle de conservation alimentaire écologique	Entrakt - Circle Park Création d'un écosystème innovant et expérimental à travers l'occupation transitoire d'une friche industrielle
Revolta Réemploi de batteries de voitures électriques et optimisation de leurs capacités.	Chantiers Circulaires	Dcarbon - Ecothermis Facilitation de l'accès aux PME et secteur tertiaire aux équipements de chauffage, climatisation ou eau chaude sanitaire de type bas carbone
Enprobel - Olliris Service de collecte des huiles de friture auprès des particuliers et revalorisation	BESIX - Projet ZIN Rénovation circulaire des tours WTC 1 et 2 en un espace multifonctionnel	Lili Bulk - GROW Passage à l'échelle supérieure pour la marque de produits bio et zéro-déchets (bocaux consignés)
Bel Albatros - Recyclage de plastique Recyclage de déchets plastiques issus d'entreprises pour une transformation en matière première (sous la forme de pellets)	Casablanca - RECLEEM Réutilisation et valorisation de terres excavées sur des chantiers bruxellois (urban mining) et formation sociale	OS.Family - OpenStructures 3.0 Système de construction modulaire ouvert qui promeut les flux de matériaux circulaires et facilite la réutilisation et la réparation
Circular Brussels Collecte et traitement écologique d'équipements informatiques en fin de vie et développement d'emploi social	CCAutrement - Tiny House 1900 Projet de rénovation avec matériaux de réemploi entrants et enduit éco-sourcé	SENSE - REMADE IN BRUSSELS - THE MARKET PLACE Plateforme en ligne donnant accès à toute une série de produits et services circulaires disponibles à Bruxelles
KISS - Konilgo Location de structures réutilisables en matière recyclée pour l'événementiel	BC Materials Entrepôt de production circulaire, modulaire et urbain pour les matériaux de construction	Heisenberg Corporation - MAD LAB, Belgian organic biscuits Biscuiterie bio artisanale belge
	Inclusio - Pavillon 7 Reconversion fonctionnelle d'un bâtiment de bureaux en logements à prix abordables	

222 ENTREPRISES ACCOMPAGNÉES



Source: www.becircular.brussels

The actors involved and their role

Be Circular is a collaboration between three regional ministers (Minister of the Economy, employment and professional training, who comes from the French speaking liberal party; Minister of housing, quality of life, environment and energy, from the French speaking Christian

democrats; and the secretary of the state, from the French speaking socialist party, who was charged with waste management and scientific research). This constellation of political actors provides an indication of how and why the Be Circular took its form.

In order to operationalise the plan, the €12million annual budget was distributed amongst eight regional agencies: Bruxelles Environnement / Leefmilieu Brussel (responsible for the environment and green waste), Impulse (innovation), Innoviris (research), Bruxelles Propreté / Net Brussel (waste management), Finance.brussels (financial support for businesses), Citydev.brussels (the public developer), BEE (employment) and Atrium (management of retail and commercial space).

Furthermore, several a number of other public and private actors were involved through the likes of training, research or innovation and so forth. A vast range of other actors were involved in the plan once concrete projects were financed which involved the 19 municipalities, the local universities, and businesses.

Place-based character of the project

The structure of the Be Circular is founded heavily in diplomacy. Yet despite the bureaucratic hurdles, this approach has been seen as innovative in itself. The format allows progress without getting stuck on political nuances that may impact more traditional spatial planning while also allowing specific steps to be resolved along the way. The decentralised approach, which included 111 distinct actions, has allowed for a vast range of different actors to get onboard. In this sense, the concept of the Be Circular offers a model that could be easily transferable to other contexts, particularly where governance is less fragmented than in Brussels.

Conditions for replicability and knowledge transfer

- The general concept of the Be Circular is quite replicable in terms of structure and funding.
- At ~€10million budget per year, the investment is accessible for a middle to large sized city.
- A large part of the process involved institutional learning, which simply takes time.

Impact and effectiveness

Be Circular has increased awareness and communicated the general ambitions of the circular economy. It has been considered by academics as one of the most complete plans in Europe and North America. It has been commended for its transversal approach (in terms of topics covered) and cooperative nature (embedding numerous regional institutions but also drawing in a number of other agencies, businesses and organisations). An evaluation after the first two years had shown Be Circular had given smaller and ambitious businesses the opportunity to

take risks (222 businesses had been supported, with 139 projects and some €8 million in subsidies). It has created a space for inter-institutional collaboration and particularly for institutional learning. Almost 1500 people have been trained in some aspect of circular economy. 49 of the 111 measures have been realised and most have been launched. It put Brussels on the map as one of the forerunners of circular economy policy. While not necessarily stipulated, it has created a 'mission driven' policy approach that has cascaded into other areas such as agri-foods (the Good Food plan) and mobility (the Good Move plan).

The plan also has numerous shortcomings. Change has been slow and there has not been a radical shift in the day-to-day life of the city's inhabitants. The impact remains niche and will require many more years to ensure it will be mainstreamed. The vision remains regional and lacks impact on the neighbourhood scale. Furthermore, there are challenges to spatialise the plan and link circularity with infrastructure. There is a challenge to integrate circularity into public tendering, which if realised could have a radical impact on local business. A fundamental shortcoming is the lack of long-term vision for the plan which concerns some observers regarding sustained long-term ambitions. Brussels' political landscape is a serious deterrent in this respect as long-term vision requires political commitment and strategic long-term investment, particularly in infrastructure. To add to this criticism, there is a lack of tertiary education related to the circular economy which would equip a new generation with expertise to be applied locally and even exported. Finally, there is a lack of technical systems to analyse performance which means that it is very hard to know what the impact of the plan is having from year to year.

2.3 Greater Manchester Local Industrial Strategy

Key facts

Promoter and/or key actors

Greater Manchester Combined Authority

Dates

1974 - ongoing

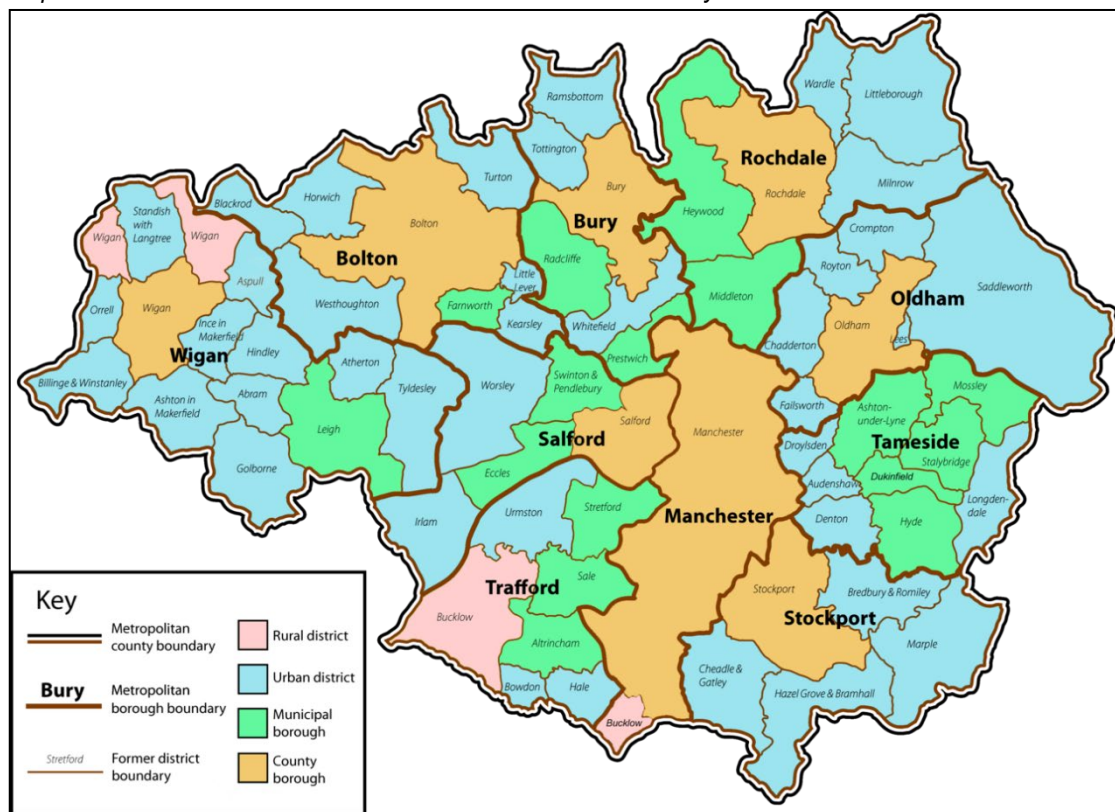
Location

Greater Manchester, United Kingdom

Typology

Example of a macro scale planning and policy rooted in the strong metropolitan governance structure of the Greater Manchester Combined Authority that has strong implications in creating and implementing strategic visions on productive economies.

Map 2: Territorial scale of Greater Manchester Combined Authority.



Source: Wikipedia

The project in a nutshell

Greater Manchester is the UK's second city-region, home to more than 2.8 million people. The Greater Manchester Combined Authority (GMCA) - being responsible for providing coordinated services in the fields of transportation, health, waste management, police, partially housing and social care and having strong competencies in spatial planning - is made up of nine neighbouring districts and the city of Manchester. The Greater Manchester County Council was set up already in 1974 but was terminated between 1986 and 2011, still the participating districts maintained their strong cooperation and were able to create a new governance framework by 2011.

GMCA – set up in 2011 – worked out its Local Industrial Strategy in 2019. By this it was able to define its focus areas both in sectoral terms (health industry, advanced materials and technologies, digital, creative and media sectors) and geographically. The implementation of the Strategy is supported by local action plans, partnerships, concentration of local and national resources and investment in education, skills and health.

The problem addressed

The Greater Manchester County Council was established in 1974 as a result of a national level reorganisation of local governments (containing 10 districts that were created from the original 68 municipalities). It had rich competencies in service provision like public transportation, waste management, emergency services and strategic planning, but was criticized by some members to be too Manchester-centric. The roots of Greater Manchester are even stronger, as this territory has historical inner linkages and the organisation for coordinating and operating public transportation in the area was set up in 1969.

The area of the County Council of Greater Manchester was somewhat smaller than the commuter zone (on the basis of at least 15% of the labour force commuting to the centre), which would be bigger towards the south.

In a decade following 1974, Greater Manchester (and some other metropolitan organisations around major cities) became a strong local political power. It might have been one of the reasons why the County Council was abolished in 1986 – not to create a left-wing opposition to the right-wing government.

The years of 1980 were characterised by the decline of the industry that significantly affected the Greater Manchester area. In addition, it was the period when the local revenues were centralised thus the local governments became heavily dependent on state resources (that is why the budget cuts in crisis periods had serious consequences). This was also the time when

part of the public services was marketized, letting private companies provide public services (like housing, public transportation, higher education, child-care).

The solution proposed

The evolution of the Greater Manchester metropolitan area after 1986 can be split into two periods: 1) from 1986 to 2011 voluntary cooperation was implemented, 2) while in 2011 the Greater Manchester Combined Authority was set up.

In the first period (1986-2011) the legislation that abolished the metropolitan areas provided for the creation of separate, statutory, indirectly elected joint bodies (the Association of Greater Manchester Authorities - AGMA) in the fields of passenger transport, policing, fire services, and waste disposal, as the government conceded the need for continuity in metropolitan service delivery. There were services where not the 10 districts, only some of them were participants, mainly in the field of economic cooperation (e.g. Manchester Investment and Development Agency Service). The Manchester Enterprises, the city-regional umbrella body created in 1999 for delivering business development, training, and economic development programs, for example, became the sub-regional delivery partner for the Greater Manchester elements of the Northwest Development Agency's strategy.

As the abolition also the creation of the Greater Manchester Combined authority in 2011 was the result of state considerations: as strengthening the position of the regions was rejected in public referendum the role of urban/rural relationships and city regions became more important. In 2009 the Local Democracy, Economic Development and Construction Act came into force, which enabled the formation of Combined Authorities in England. 'Combined Authority' is an empty pot that may be poured with different contents. The powers and resources have to be agreed on through individual, bi-lateral intergovernmental deals. It was also laid down in the Act that the mayor of the combined authority must be directly elected.

The Authority's constitution is set out in an Operating Agreement, which has been approved by all 10 constituent councils: Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan. The Greater Manchester Combined Authority is operating with strong competencies: large scale functional bodies exist within the organisation, like Transport for Greater Manchester, Greater Manchester Fire and Rescue Service, Waste Disposal Authority. There is a common Police Service as well, and the ten districts jointly own the Manchester Airport Group. The Authority has 10 councillors (head of districts being responsible for dedicated policy areas) and from 2017 has a directly elected mayor.

The functioning of the Authority heavily depends on the 'city deals' signed with the nation state: six agreements were signed between Greater Manchester and government between 2014 and 2017, mainly related to transport, economic development, the labour market, and the built environment. The Authority has direct revenues (part of local taxes), also service fees and dedicated funds from the state (part of which were coming from the EU before Brexit). The

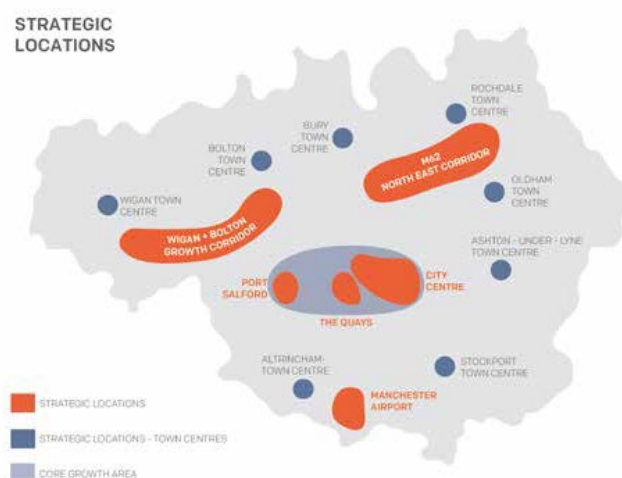
Authority has the commissioning power over certain national funds, e.g. in the field of education, health and social care.

In 2019 Greater Manchester Combined Authority elaborated on its Industrial Strategy. The strategy is based on a careful investigation of the local situation in all 10 districts (Prosperity Review). The data analysis concluded: 'Greater Manchester continues to have a strong manufacturing base, employing over 110,000 people and generating £8 billion of economic output each year. Made up predominantly of small and medium-sized enterprises (SMEs), the city-region has specialisms in advanced materials, textiles (which has a strong concentration in north east Greater Manchester), chemicals, food and drink (with a strong cluster in Wigan), and is developing capabilities in industrial digitalisation.' (Greater Manchester Combined Authority, 2019, p. 43). The review also concludes that the share of low-paid jobs in the foundational economy is growing, so are the internal inequalities of economic potentials among the 10 districts of Greater Manchester. In order to reverse the processes, the main goal of the Industrial Strategy is to increase the innovation potential in different fields and stimulate territorially balanced growth. The main focus points are: health innovation, advanced materials and technologies (e.g. graphene and 2D materials), digitalisation and supporting the creative and media sector. All these efforts are embedded in a strong decarbonisation process to reach carbon neutrality by 2038.

The main tools to reach these goals are:

- Creating the proper ecosystem that needs tailor made solutions in each district (action plans are created for this purpose).
- Creating partnerships, alliances to elaborate on strategies and implementing the action plans.
- Developing the needed infrastructure based on the Spatial Framework of Greater Manchester, concentrating the funds coming from national and EU resources. Also defining areas for growth, where public investments are accumulated (e.g. Advanced Materials City, Enterprise Zone, brownfield regeneration areas).

Map 3: Strategic locations in the Greater Manchester area.



Source: Greater Manchester Local Industrial Strategy, 2019

- Support businesses with one-stop-shop advice, venture capital, and through the Greater Manchester Good Employment Charter: education and skills improvement.

The Strategy states: ‘...each industry sector will need a different mix of policy interventions to realise their full potential, which could include investment in infrastructure, skills, business support, design and marketing, or specialist incubator spaces and premises’. (Greater Manchester Local Industrial Strategy, 2019, p.89)

The actors involved and their role

The operation of the Greater Manchester Combined Authority is realised with the cooperation of many different actors:

- Elected mayor of the Combined Authority since 2017. The Mayor is also supported by a Deputy Mayor for Policing and Crime, and a Deputy Mayor for Economic Growth and Business. The mayor is the single point of accountability, representing the integrity of Greater Manchester. He is responsible for service delivery in some fields (police, fire protection and rescue service) and having its own right for levying tax.
- Councillors, who are the heads of the 10 districts being responsible for different policy fields.
- Strong back office and working organisation behind the Authority with hundreds of employees in addition to the staff of the different public service organisations.
- Wide range of partnerships and alliances where public and private actors in addition to the representatives of the state are present.

Conditions for replicability and knowledge transfer

The inspirational case of Greater Manchester has several issues from the governance of a metropolitan area to the creation and implementation of an industrial strategy. Some parts of the case may be easier to replicate while others are much more complicated to transfer.

- As regards the organisational structure and competencies of Greater Manchester Combined Authority it is challenging to replicate as it requires traditionally strong ties between the municipalities (Greater Manchester was considered a territorial unit in the mind map of the inhabitants for a long time) and also good relationship to the nation state – despite the different political orientations. The organisation of a strong metropolitan governance system as a success story was also the consequence of a long-lasting stability in political leadership in Manchester (governed by the Labour Party) and the devotedness of the Manchester city council chief executive.
- The creation of the Greater Manchester Combined Authority (such as the County Council in 1974) was the result of national decisions and also based on the limited competencies of local authorities. It would not have happened only in a bottom-up way however, the devotedness of the local actors was crucial.
- While it is not easy to replicate the governance pattern of Greater Manchester, there is a lot to learn from its Industrial Strategy. Even if it is easier to create and implement a

metropolitan industrial strategy under strong metropolitan governance, it is not impossible to do so based on voluntary cooperation. The crucial factors that are needed: strong research base to create evidence-based statements, wide partnership between the different actors to contribute to the planning and implementation of the strategy, strong lobbying power towards the national government.

Impact and effectiveness

The Greater Manchester Combined Authority is gaining more and more competencies step by step entering recently into the field of social protection and housing. Even if the strategic thinking and coordinate service operation is prevalent for decades in the area there are still significant disparities inside the metropolitan territory. This is partly due to the fact that the metropolitan area includes both more urbanised and more rural landscapes.

The service provision of the Combined Authority is organised on metropolitan level with regard to those services that are more efficient to implement on metropolitan level (e.g. transportation, utilities, police, fire protection, part of education).

The metropolitan authority has unique competencies over the metropolitan area which is far bigger than most of the metropolitan regions of Europe. However, the implementation of metropolitan political decisions is still based on bargaining to some extent (e.g. the Spatial Framework is a good tool to define points of growth, and efficient in restricting growth where it is not needed, but it is less efficient when growth should be accelerated).

The future success of Greater Manchester heavily depends on whether it will be able to follow an organic way of development, or – due to cost saving reasons – tasks will be delegated to it from national level without the means to implement them.

The impact and effectiveness of the Industrial Strategy of Greater Manchester is too early to judge. It was elaborated in 2019, with the need to create local action plans and partnerships for implementation.

2.4 Wirtschaftsförderung Region Stuttgart GmbH (WRS) Stuttgart - Stuttgart Region economic development corporation ²

Key facts

Examples of publicly owned regional scale development agencies that can help drive economic planning and are involved in area development, innovation, matchmaking opportunities, investment, and community engagement.

Promoter and/or key actors

Stuttgart Region economic development corporation (VRS, Verband Region Stuttgart).

Dates

1995- ongoing

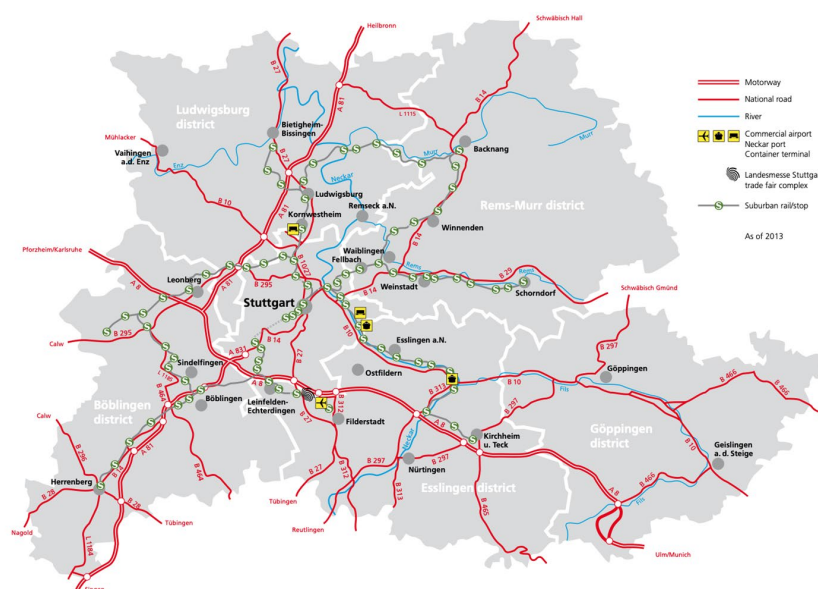
Location

Stuttgart, Germany

Typology

It is an example of a publicly owned regional scale development agency that can help drive economic planning and is involved in area development, innovation, matchmaking opportunities, investment, and community engagement. It concerns a comprehensive approach directed at the maintenance and the enhancement of the structural economic strengths of the territory, specifically business promotion.

Map 4: Wirtschaftsförderung Region Stuttgart GmbH (WRS) Stuttgart.



Source: www.region-stuttgart.de

² For a review see Frank A., Morgan K. (2012), Re-inventing the City: The Art of Metro-Governance in the Stuttgart Region, PAPER IN PLANNING RESEARCH 186, Cardiff School of City and Regional Planning.

See also Wirtschaftsförderung Region Stuttgart GmbH (WRS), n.d. [online] Wrs.region-stuttgart.de. Available at: https://wrs.region-stuttgart.de/uploads/media/publikationen_Stuttgart_Region_EDC-Presentation.pdf (accessed 22 November 2021).

The project in a nutshell

The “Wirtschaftsförderung Region Stuttgart GmbH” (WRS) is the Stuttgart Region economic development corporation. The WRS builds on a comprehensive approach aiming to maintain as well as enhance the structural economic strengths of the territory. Among these is the support and stimulation of the region's industrial and entrepreneurial activities by providing a platform for the cooperation facilitating the dialogue and linkages between the industry clusters, regional networks, and the academic and research municipalities. Moreover, there is the strategic approach to developing land through research and monitoring, which constitutes a crucial input from the regional planning process.

The problem addressed

The Stuttgart Region is located in south-west Germany and acts as the seat of the Baden-Württemberg State Government. It has a population of 2.6 million and covers an area of 3 654 square kilometres. With a population density of 722 inhabitants/skm (German average is 230), the Stuttgart Region is one of Germany's most densely populated agglomerations.

The Stuttgart Region is one of Europe's most important locations for technology. It comprises the City of Stuttgart (the state capital) and the five surrounding districts. The most important industries include automotive and mechanical engineering as well as IT and the creative sector. The combination of global players, innovative SMEs, and renowned research institutes is unique to the Stuttgart Region.

From 1991 to 2000, the City of Stuttgart's economic growth rate was lower than its surrounding region, while the average growth rate in Baden-Württemberg was more substantial than that in the Stuttgart region. One of the reasons is that jobs have been relocated and inhabitants have moved to the neighbouring areas of the Stuttgart Region as a result of spill-over effects. Another reason is that some regions of Baden-Württemberg used to be in an economically weak position have experienced high growth rates in recent years. This is true, for example, for the regions situated on the French border. Moreover, compared with other German metropolitan regions and with the federal state of Baden-Württemberg, the average unemployment rate is relatively low in the Stuttgart Region.

In 1994 the former regional association was replaced by the Verband Region Stuttgart (VRS). This change was driven mainly by an economic recession which impacted significantly on the automotive/manufacturing-based region. Pressures exerted by the population, especially from major businesses in the region, led to a paradigm shift in the mayors and councils' attitudes and councils who agreed to transfer powers and resources to the new institution to strengthen cooperation and promote a more coordinated form of economic development in the region. The VRS collaborates with the WRS (the Stuttgart Region economic development corporation) and

its partners in regional, national and European networks. Together with VRS, WRS has its own representative office at the centre of European politics, the Stuttgart Region European Office in Brussels.

The solution proposed

In 1995, WRS (Stuttgart Region Economic Development Corporation - Wirtschafts-förderung Region Stuttgart GmbH) was founded as an independent company with limited liability.

Compared to regional development agencies in other European regions, the WRS is a small and lean agency, with a full-time staff of 45 employees and a budget of just 8 million Euros, 5 million of which comes from its VRS parent (data refer to the year 2012). The latter is also the majority shareholder in WRS, controlling 51% of the shares. Another major shareholder is the Association of Municipalities, which controls 24% of the shares.

The main responsibilities of WRS are to i) look after and advise firms established in the region ii) look after and advise the municipalities and counties iii) manage the region's industrial space iv) stimulate innovation and promote and support cooperation initiatives v) attract new businesses to the region vi) promote the region via advertising channels and promote regional tourism. Specifically, the WRS supports the structural change in the automotive industry toward alternative drive technologies and new mobility concepts. Moreover, it supports the technical and strategic exchange of experiences within this leading industry in the region. The focus areas are key technologies relating to the future of production, such as industry 4.0, automation or resource efficiency, and the development of competitive services. WRS uses projects and initiatives to contribute to the region becoming one of the most energy-efficient locations by 2030. Environmental technology products, construction technologies, and services are becoming the most important economic pillar in the Stuttgart Region alongside mechanical engineering, information technologies, and the automotive industry.

The regional competence and innovation centres have become established as a practice-based tool for promoting networking and innovation. WRS offers support in matters relating to recruiting, retaining, and providing personnel development for skilled staff. WRS runs the Stuttgart Welcome Centre together with the City of Stuttgart.

Through networking, marketing the region and training, WRS works to improve the location's conditions for the key industry in the creative sector and develop the Stuttgart Region as a creative location and market it at both a national and international level.

To support start-ups from universities and companies, WRS provides various offerings from initial advice to attracting capital. WRS works closely with the local authorities and districts' economic development departments to help companies find locations. Alongside the regional real estate market reports, the Stuttgart Region real estate online portal ensures better market transparency.

WRS informs about the Stuttgart Region's strengths in business, science, and technology and raises awareness of its high standard of living and extensive leisure options. The primary target groups include companies, investors, scientists and skilled specialists along with their families.

Figure 8: View of Stuttgart.



Source: <https://wrs.region-stuttgart.de/>

The actors involved and their role

The VRS, which replaced in 1994 the former regional association, was given more extraordinary powers and responsibilities, which are legitimized by virtue of a directly elected regional assembly. This quite radical change makes the Stuttgart region unique in comparison with others. The move was driven mainly by an economic recession which impacted greatly on the automotive/manufacturing-based region. Pressures exerted by the population, especially from major businesses in the region, led to a paradigm shift in the mayors and councils' attitudes and councils who agreed to transfer powers and resources to the new institution to strengthen cooperation and promote a more coordinated form of economic development in the region.

The VRS is responsible for a range of region-wide tasks such as: (i) Regional planning, (ii) Landscape framework planning; (iii) Regional transport planning and public transit; (iv) Parts of waste management; (v) Regional economic development; (vi) Regional tourism marketing. About regional economic development the VRS works with its partner the Wirtschaftsförderung Region Stuttgart (WRS) to support economic development.

Stuttgart Regional Organisation has a majority stake (51 %) in WRS, with the other 49 % of the voting rights shared between the other corporate members. The region's municipalities and counties are represented in the form of a registered association, the Kommunale Pool Region Stuttgart. The major stakeholders of WRS are the Stuttgart Regional Organisation (51%) and the Kommunale Pool Region Stuttgart (24.6%).

As part of its work, WRS constantly collaborates with its partners in regional, national and European networks. Together with VRS, it has its own representative office at the centre of European politics, the Stuttgart Region European Office in Brussels.

Place-based character of the project

Creating a regional economic development agency (WRS) for one of the richest regions in the EU might appear misguided, but this is not how it is perceived by state officials or the business community in the Stuttgart region. Indeed, securing the economic future of the region was the single most important motive for the creation of the VRS in 1994. Indeed, a crisis mentality had gripped the local elite in response to two threats: (i) the deep recession of the early 1990s, which exposed the region's manufacturing sector to the "lean production" challenge from Japan and (ii) the fear of a corporate flight, especially to Berlin, where the federal government had decided to relocate following German unification.

Although WRS offers four different business support types – namely business services, investor services, start-up services, and services for municipalities – half its total budget is devoted to innovation support. In contrast to the grant-based support systems common in other regions, the WRS support system emphasises knowledge brokerage activity because this is what resonates most for local firms. Two prominent examples of such knowledge brokerage activity are the network support program and the competence and innovation centre program.

In the case of the network program, the WRS helps to broker a total of 10 networks covering the following sectors: biotechnology, creative industries, energy and environmental technology, health, ICT, mobility and the automotive industry, university start-ups, the film sector, open-source technology, and the music business. Although largely sector-based, these networks help start-up companies meet established firms, fostering an infusion of new ideas that keep mature firms on an innovative footing. This is especially the case in the automotive sector, where firms like Daimler and Bosch are at the forefront of new technologies like fuel cell technology and new conceptions of sustainable mobility.

Conditions for replicability and knowledge transfer

- The Stuttgart one may be considered a model best suited to the situation of German metropolitan regions and more future-fit. The regional parliament provides the regional association with sufficient leeway vis-à-vis the restrictive local interests, at the same time offering the necessary capacity to resolve regional conflicts via party organisation and majority decision rule.
- The competence and innovation centre programme promoted by the WRS has the aim to accelerate the commercialisation of research results by fostering inter-organisational collaboration and knowledge transfer.

- The VRS is part of a very sophisticated regional innovation system, where the needs of small firms are especially well catered for through such institutional networks as the Steinbeis Transfer Centres and the Fraunhofer Gesellschaft.

Impact and effectiveness

As already stated, the VRS is responsible for a range of region-wide tasks such as: (i) Regional planning, (ii) Landscape framework planning; (iii) Regional transport planning and public transit; (iv) Parts of waste management; (v) Regional economic development; (vi) Regional tourism marketing. Regarding regional economic development, the VRS works with its partner the WRS to support economic development.

VRS constitutes one of the most successful examples of regional cooperation. Inter-communal political cooperation is reinforced at the professional level by a high degree of formal cooperation in the planning community, where planners freely admit that informal know-how trading and a common educational background have helped fashion a high degree of trust inter-communal negotiations.

What has been achieved in the Stuttgart Region is increasingly acknowledged by experts on spatial planning and public administration, one of whom goes so far as to say:

“Probably the Stuttgart model is best suited to the situation of German metropolitan regions and more future-fit. The regional parliament provides the regional association with sufficient leeway vis-à-vis the restrictive local interests, at the same time offering the necessary capacity to resolve regional conflicts via party organisation and majority decision rule. The Region Stuttgart corresponds well to the requirements...for building the organising capacity of metropolitan regions: an administrative organisation, the capacity for strategic networking (given by the association and its director), leadership (embodied in the director), vision and strategy to enable regional collective actions, and the capacity to mobilise political and societal support” (Fürst, 2005:162³).

Notwithstanding these achievements, the VRS faces several challenges in the future, especially concerning economic development, connectivity, and climate change, each of which merits some attention. Although the Stuttgart Region had enjoyed considerable economic success since 1994, when the VRS was founded, this achievement cannot be attributed to regional governance alone. The VRS is only one variable in the regional economic equation and, because it is impossible to isolate the causal effect of a single variable, it is, therefore, impossible to attribute local economic outcomes to particular forms of sub-national governance.

³ Fürst, D. (2005) Metropolitan governance in Germany, in H. Heinhelt and D. Kübler (eds) Metropolitan Governance. Abingdon: Routledge, pp. 151-168

Plans and policies

3 Meso-scale: plans and policies

A wide range spatial plans and policies have been selected in to order to highlight how they can provide an important role for productive spaces in the city.

Spatial planning has often reserved space for productive activities: zoning and land use regulation has been able to protect space from other competing functions. Nevertheless, the market forces are difficult to be managed. Public actors are often trying to introduce incentives, financial or fiscal ones in order to favour the relocation of productive activities.

Moreover, the public sector tries to reduce the gap between policy makers and business. On the one hand promoting studies and research, as well as promoting opportunities for dialogue at local scales with local entrepreneurs. On the other, promoting experimental and temporary uses, in order to establish innovation cycles responds to the need to bring in the future into an uncertain present. This can also mean the possibility to promote new building typologies and design guidelines. But also, to generate integrated policies to support those areas which are uncompetitive.

3.1 London Industrial Intensification Study

Key facts

Promoter and/or key actors

Greater London Authority

Dates

2018

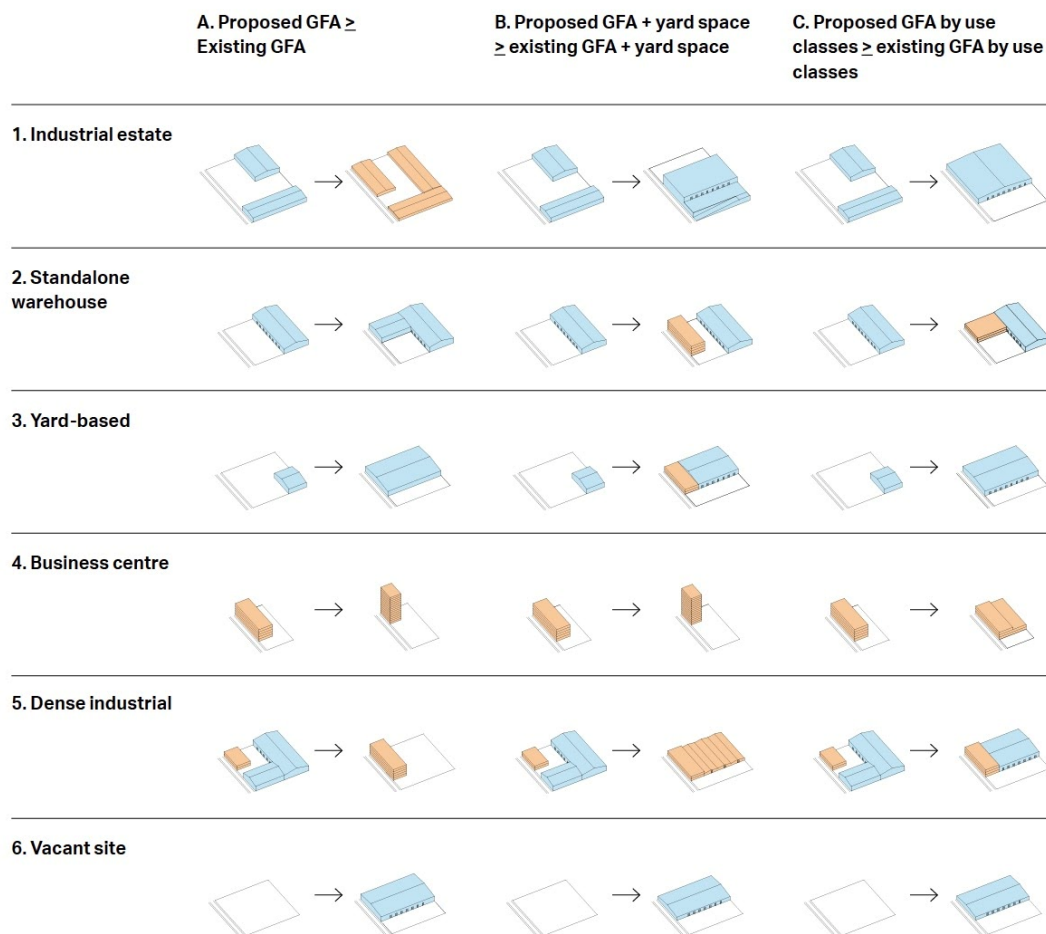
Location

London, United Kingdom (UK)

Typology

Design guidelines to help landowners and public authorities to implement industrial intensification (which can refer to multi-storey industrial buildings) and co-location (the mix of industrial and other activities such as housing).

Figure 9: An example of a massing study used to explore densification opportunities.



Source: *We Made That, Savills & Feasibility. 2018 Industrial Intensification and Co-Location Study: Design And Delivery Testing. Greater London Authority, London: 6*

The project in a nutshell

Cities faced with land shortages or high land costs often look to industrial land to provide space for development. Some public authorities are looking to intensify industrial sites, but few have experience in doing so. Design guidelines can help landowners and public authorities to implement industrial intensification (which can refer to multi-storey industrial buildings) and co-location (the mix of industrial and other activities such as housing).

The problem addressed

London has long been an industrial centre, even if over the last half century, its economy has shifted radically towards the services sector. With less than 3% of London's employment working in industrial activities, it 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. London's real estate has been used as a form of investment, which has pushed up land prices and is squeezing a large percentage of London's inhabitants out of the housing market or out of the city. This has led academics claiming that 'London is eating itself'.

Public officials are now struggling to balance demand for (particularly affordable) housing, while also providing space for population growth. Public authorities have also only begun taking industrial land-loss seriously after decades of industrial land being rezoned regardless of clear policy against it. Furthermore, industrial activities are providing important employment opportunities for low-skilled workers while it is becoming increasingly clear that a certain amount of industrial land is simply necessary to feed or build the city.

The Mayor of London has committed to 'no net loss' of industrial land to manage future losses. In doing so, the measurement system has also shifted from measuring industrial land (hectares) to measuring industrial floorspace (sqm). This has provided an interesting but poorly understood development opportunity.

A few simple rules are available to make the available land 'work harder'. Developers can replace industrial land with other land uses if they can shift the floorspace (sqm) to another site. In other cases, developers can intensify industrial activities (such as stacking activities vertically) which provides a number of benefits of integrating other land uses on the same site (such as housing). The net result could be both intensification of industrial activities, more effective use of land and additional space for other land uses (such as housing).

In principle these ideas are logical, but they can have absurd unintended consequences if the projects are not suitably developed or if the developer pressures the local planning authority to against enforcing the industrial zoning regulation.

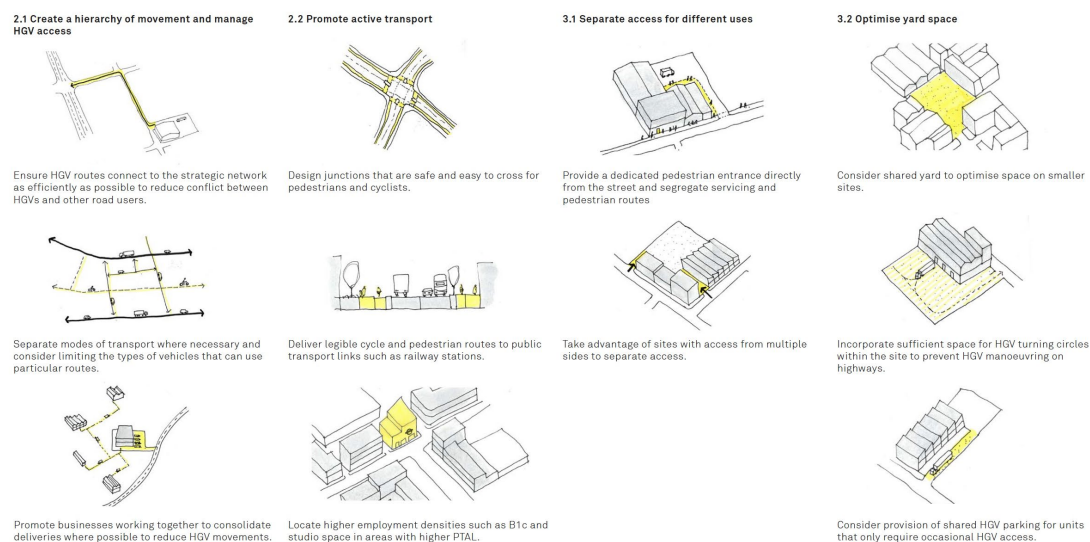
The solution proposed

The 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 study consisted of five key aspects:

1. *Defining and measuring industrial intensification.* This helps to inform the implementation of planning policies and the assessment of planning decisions. It gives a clearer indication of the results of land intensification (the consequences of changes to land use plans). It provides a clear indication of how land can be suitably / effectively developed according to existing and new regulation encouraging intensification of development activities.
2. *Specifications for development and indicative construction costs.* This helps to ensure industrial intensification and colocation with residential, results in genuinely “industrial” space. It provides examples of how space for production and logistics could be mixed. It also helps ensure that public authorities can have an honest and balanced conversation with developers, particularly developers that have little experience with industrial projects or mixed-use programs.
3. *Urban scale guidance.* To provide guidance on the development of industrial intensification and associated co-location with residential, beyond the individual site boundary.
4. *Testing proposals.* Through a ‘research by design’ approach, four sites were tested to show industrial intensification could occur in practice in London. This involved testing potential projects involving production space, storage, office space and accessibility.
5. *Synopsis on viability.* This provides general feedback on feasibility issues and potential barriers. It also considers opportunities for investors and developers while considering how public sector intervention may be required.

Figure 10: Urban design guidelines



Source: *We Made That, Savills & Feasibility. 2018 Industrial Intensification and Co-Location Study: Design And Delivery Testing. Greater London Authority, London: 20*

The actors involved and their role

The plan benefits from two public entities: the Mayor of London and the Greater London Authority (GLA). The Mayor of London is the executive body of the GLA, setting policy which is enacted by the GLA. The Mayor, under leadership of Sadiq Khan, has shifted policy to address affordable housing, accessible workplaces and industrial activities. The GLA is responsible for a number of large redevelopment projects such as the Old Oak Park Royal Development Corporation, which is currently charged with redevelopment of one of Europe's largest urban industrial estates.

The plan was developed by a multidisciplinary team of consultants with a very strong portfolio of working on industrial land (We Made That, Savills & Feasibility). These consultants had an established knowledge of how industrial land works and the results of the plan show how the collaboration offers simple but usable results. One of the biggest challenges with this plan is that many of the scenarios are theoretical or have few precedents. Nuances can be lost on design and planning consultants that have little experience with this subject matter particularly when land uses such as industrial and housing intersect.

Place-based character of the project

The planning conditions in London may not be directly replicable, but the general principle is. The Study simply offers sensible advice for intensifying industrial land and many of the concepts presented in the plan offer precious insights for planners looking for advice on economic development.

Many cities are in a similar situation to London, where land is precious and expensive, yet where industrial land is poorly organised or the 'least-worst' place for increasing density. This is particularly the case for cities that have large remaining industrial surface areas but have weak influence over spatial planning at a metropolitan level or there is no metropolitan scale governance. Other cities include Brussels, Berlin, Vienna, Oslo, New York and Amsterdam.

Conditions for replicability and knowledge transfer

There are three elements that can influence how applicable this project is:

- Firstly, land use planning should allow for multi-storey development on industrial land or even mixed-use development.
- Secondly, land use planning conditions should be strongly controlled, particularly if there are two (or more) levels of government that have direct jurisdiction over industrial land and particularly where one level can undermine or block the other.

- Finally, real estate values should be able to justify the expense of multi-storey development for industrial activities or balance the costs based on increasing land values through housing.

Impact and effectiveness

The Industrial Intensification Study offers guidelines, inspiration and possible solutions for development on industrial land. This offers an instructive insight into interpreting regulation and planning ambitions which makes it clearer to develop good quality industrial intensification projects but also for public authorities to be able to have a constructive conversation with developers or other levels of government interested in industrial intensification.

The plan is not a compulsory instrument and is an interpretation of policy guidelines, therefore the exact impact and effectiveness is difficult to measure. Regardless, such a plan is an essential tool for interpreting abstract regulation.

3.2 Planned Manufacturing Districts (Chicago, USA)

Key facts

Promoter

The City of Chicago

Dates

Since 1988

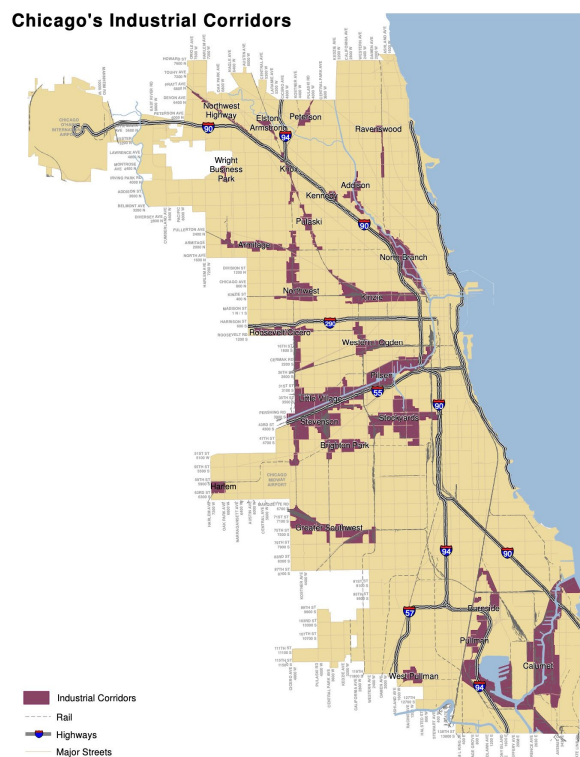
Location

Chicago, (USA)

Typology

Flexible zoning system that locks in space for economic activities related to production (or material and immaterial products), logistics and storage.

Map 5: The location of Chicago's industrial corridors which include the Planned Manufacturing Districts.



Source: Chicago City Council.

The project in a nutshell

Chicago's Planned Manufacturing Districts (PMD) is a flexible zoning system that locks in space for economic activities related to production (or material and immaterial products), logistics and storage. The PMD regulation has created conditions for business networks to develop and explore the economic identity of a particular area. Ultimately this kind of zoning creates space for cities to deal with macro-economic transitions.

The problem addressed

In the middle of the 20th century, Chicago was the second largest manufacturing centre in the USA. By the late 1970's and the 1980's, the global and local economy was changing and resulting in an economic planning oriented to economic growth, driven by a strong services sector. Growth was most concentrated within the central business district but led to a gentrification of the city's traditional economic engine, manufacturing. With the growth of jobs, particularly favouring the educated and wealthier residents, social tensions emerged which linked work and place.

Pioneering empirical research in the early 1980's showed manufacturing job loss in working class neighbourhoods due to rezoning. This research found that manufacturing was then far more beneficial than retail or other land uses associated with employment, taxation and multiplier effects. Manufacturing was also considered of regional benefit (for jobs and goods), which meant that the district level was unable to properly justify the value. Furthermore, as friction emerged between new housing and established manufacturing businesses, a community led movement began to fight for clearer industrial zoning to ensure that businesses and jobs were protected while having a clearer role within regional planning.

The solution proposed

In 1988, the Planned Manufacturing Districts (PMD) were launched by the Chicago City Council as a form of zoning system that locks out residential activities while defining conditions for a wide range of production and distribution of material and immaterial goods. It is a designation that does not provide any additional supporting measures, such as business incentives or tax breaks. The result provides a number of clear benefits:

1. It is a defensive mechanism for development, providing clear guidelines for potentially conflicting land uses in a strongly market driven local economy.
2. It limits real estate speculation, and particularly blight in industrial areas resulting from speculation.
3. The commitment to PMDs helps to structure infrastructure such as multi-modal transport.
4. The zoning provides space for activities that the city may depend upon, but where the value cannot be easily quantified in financial value.

The PMD legislation was not intended as a one-size-fits-all policy, rather it was designed to provide some flexibility and was intended to be adapted over time. While residential uses are strictly not permitted, some specific forms or retail are available on some sites while others permit film studios or event offices. 15 PMD sites were zoned incrementally particularly between 1988 and 2005 in connection to Chicago's 24 industrial corridors.

The original architects thought through the impacts of friction and transitions between different land uses, particularly with housing. Therefore, in some PMDs there are zoned transition areas, or various zones to minimise possible tensions between land uses while also allowing a range of different forms of manufacturing to be located within the city centre (associated with the first PMD, the Clybourn Corridor).

Zoning and rezoning PMDs is not easy as due to the required approval from Chicago City Council (rather than district level approval which is considered easier). This renders the PMD a robust instrument, particularly in terms of the bureaucratic safeguards against piecemeal industrial land loss. However, since they were launched, two sites have lost between 50-70% of their surface area to rezoning.

There are some clear distinguishing factors attributed to the successful and more vibrant sites. One particular aspect is the business community support and facilitation that helps to bring businesses together, federating their interests and helping stimulate new business. Those sites with effective organisational support were found to have generated jobs and connected with the local neighbourhoods. In cases where such an actor did not exist, and it was noted that relationships between businesses and particularly the links with the surrounding were much poorer. These organisations will be mentioned below.

The actors involved and their role

Public planning in Chicago on a parcel-by-parcel basis is managed at the district level. The particular characteristic of the PMDs, and one of the reasons why they have remained as a robust economic planning tool is that the Chicago City Council is responsible for approving any proposed changes.

Secondly each PMD has different governance structures and a coalition of actors, referred to as Industrial Development Organizations (IDO) and Community Development Corporations (CDCs). Typical for American culture, third sector actors have a strong role in community organising, which means that there are a range of different actors with similar competencies. These are said to fall into three categories: industrial business incubators, advocacy organisations and place-based coalitions. There are also NGOs active also across Chicago's 24 industrial corridors. For example, one of the older organisations, called North Branch Works (originally called the LEED Council – Local Economic and Employment Development), was critical in setting up the PMD policy and is a delegate agency of the City of Chicago Department of Planning & Development. North Branch Works is active in three industrial corridors.

Place-based character of the project

Chicago has a long and well-established relationship with industrial areas and manufacturing, considering that it was one of the main American industrial centres (only after New York) in the mid-20th century. This means that the nature in how the PMDs were established is endemic to particular conditions in the city at a time of extreme tension between services driven inner-city development and tensions with the degradation of working-class employment areas.

The decision for strict zoning was based on research in the early 1980's by the LEED Council related to manufacturing job losses due to redevelopment pressure and the high value of manufacturing (through improved multiplier effect, greater local taxation rates and significantly better jobs than retail). This drove a grass-roots effort to enact the PMD policy which was supported by the incumbent mayor which was pushing for greater levels of community led economic development which is still very active in the city.

The PMD is simply a zoning plan and does little more than stipulate what cannot occur on certain sites. What is particular about Chicago, and particular to the USA, is the role of the 3rd sector to contribute to social wellbeing. The capacity for areas to 'self-organise'. Chicago's PMD contains fifteen sites and 26 industrial corridors, each with distinct characters, activities, histories and communities.

Conditions for replicability and knowledge transfer

- Many cities have industrial land and support industrial activities, but it is common that the land contains activities that blur the definition of 'industrial' (such as including retail, recreation, office space, religious or community activities). This can be problematic when industrial activities are firmly restricted from creating noise, odours or having space for heavy vehicles to freely move. Chicago's PMD have allowed these conditions to occur.
- The PMD provides only the 'hardware', the strict zoning regulation that restricts the range of activities that may take place on the site. Associated with each site is a variety of community-based business organisations, which could be referred to as the 'software', which are critical for supporting and stimulating the businesses while also helping to adapt the focus of each PMD. This relationship between generic regulation and site-specific action is inspirational for other cities, particularly outside of the USA.
- The zoning is simple, provides clear boundaries and allows for flexibility regarding the character of each site. The fact that rezoning requires approval by the Chicago City Council, according to requests by the districts, makes them more resilient to change rather than plot by plot (piecemeal) control that can be enacted at a district level.

Figure 11: A list of activities permitted on different sites.

Table 2.1. Allowable Uses by Planned Manufacturing District		
Clybourn Corridor (Core)	Goose Island	Kinzie Corridor
<i>Prohibited</i>		
Dwelling units	Dwelling units	Dwelling units
<i>Permitted</i>		
Production*	Production*	Production*
Auto laundries	Cartage/express facilities	Auto laundries
Auto service stations	Contractor offices	Auto service stations
Building material sales	Earth station antennas	Blue-printing
Contractor offices	Fuel & ice sales	Building material sales
Fuel & ice sales	Garage & parking lots	Community centers
Garage & parking lots	Occupational health clinics	Contractor offices
Greenhouses	Offices (business & professional)	Earth station antenna
Public utility/public service uses	Public utility/public service uses	Fuel & ice sales
Restaurants	Recycling facilities	Garages/parking lots
Storage/warehousing	Retail sales rooms for goods that are manufactured onsite	Greenhouses
Wholesale establishments	Storage/warehousing	Industrial services establishments
Accessory uses	Wholesale establishments	Linen/towel supply services
Railroad & water freight terminals	Storage of flammable liquids	Machinery sales

Source: Ordinances establishing Clybourn Corridor, Goose Island, and Kinzie Corridor PMDs, City of Chicago.

Impact and effectiveness

The effectiveness of the PMDs depends heavily on one's perspective and mindset. For the local and regional economy, PMDs provide flexible space for a wide range of economic functions that cities need for resilience (in terms of jobs and supply of resources) and innovation (in terms of adaptability). In many PMDs, offices and non-material production (like film sets or IT companies) are permitted which have allowed sites suited for services jobs to allow them to occur without subdividing the land. For the growth driven, pro-development, that favours land uses generating the highest real estate value (price), the PMDs are an outdated and inflexible form of planning that should be abolished. The tension between these two perspectives have long raged within Chicago and are unlikely to find a clear compromise.

Each PMD has adjusted and changed over time. The American market driven approach has shown that the relevance and resilience of each PMD has depended on the competency of 3rd sector actors to mobilise and federate local businesses. Political pressure by developers and private interest groups towards rezoning PMDs remain caught between the strength and continuing growth of the services sector (and the sector's associated needs of housing and urban conditions) in contrast to a renewed interest in urban manufacturing that is stimulated through growing international trade tensions. While some of the PMDs may not represent an image of current 21st century urban areas that appeals to all, removing this type of zoning will impact the capacity for a metropolis like Chicago to adapt in the future, particularly for an economy that depended on local manufacturing for much of the 20th century.

3.3 Salzburg: data collection⁴

Key facts

Promoter and/or key actors

STADT: SALZBURG, Department of urban planning and traffic of the city of Salzburg and the Salzburg based firm responsible for conducting the survey (ICRA Schwap e.U.).

Dates

2004/2019

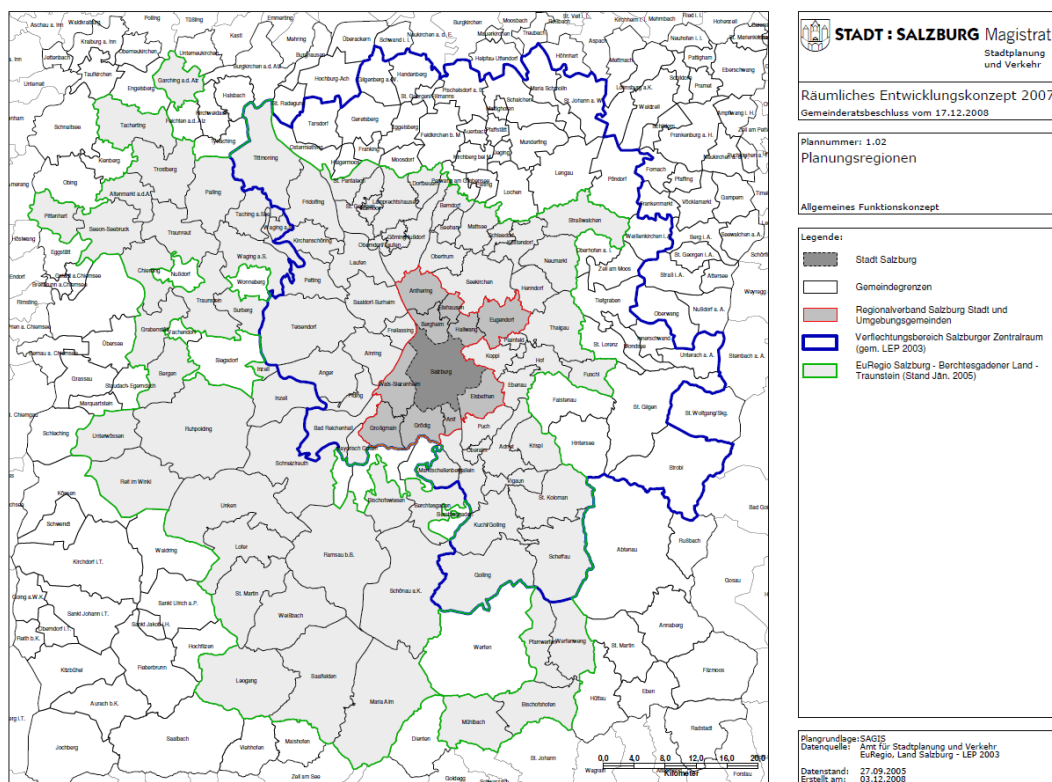
Location

Salzburg, Austria

Typology

Tools for providing a factual basis for spatial planning, throughout onsite observation of productive uses.

Map 6: Planning regions in Salzburg according to the spatial development plan 2007.



Source: <https://www.stadt-salzburg.at/rek/rek-2007-text-und-planteile/>

*Translated legend:

(dark grey) City of Salzburg

(white) municipality borders

⁴ This case builds on the interview conducted with Laura Mayr (town planner at Stadt: Salzburg).

*(Grey with red border) Regional association Salzburg and Salzburg environs
(Blue) larger Salzburg area (according to LEP 2003)
(Green) EuRegio Salzburg- Berchtesgadener Land – Traunstein (Jan 2008)*

The project in a nutshell

Faced with a need to provide a spatial development plan the city of Salzburg decided to develop and finance a long-term land use monitoring tool that allows for an analysis of the changing land use patterns within the city. The process involved analysing actual activity through onsite observation. This approach ensures that policy makers know what how land is used and how land use patterns change.

The problem addressed

The city of Salzburg is arguably one of the cities that is most strongly affected by a limited availability of land. On the one hand this is due to a difficult topological situation. On the other hand, this is due to a high attractiveness of the city as a residential and production location as well as a location for second homeowners. This situation has led to soaring land prices such that Salzburg is one of the regions with the highest prices in Austria.

Salzburg is also one of the most tertiarised cities in Austria with a manufacturing share of employment that ranges at around 10%. In this environment spatial planning and the zoning of land is always an issue of high priority in the city. The city administration therefore historically has always had a highly expert, motivated and well-staffed spatial planning department. This high level of expertise was also supported by the existence of a highly reputed department for geoinformatics at the University of Salzburg. This has resulted in the existence of a number of specialised firms in the field, which are organised in a cluster (<http://www.giscluster.at/>). It has also resulted in strong personal links between the University, the GIScluster and the department of urban planning and traffic of the city.

One ingredient to ensure high quality and sustainable urban planning processes are reliable databases that augment and add to the existing readily available administrative data sources. Given the dynamics of the production sector in which the variety of uses is much more heterogenous than for residential uses and where consequently new enterprises appear (and old ones disappear) at a much faster rate, this applies in particular to data on production uses.

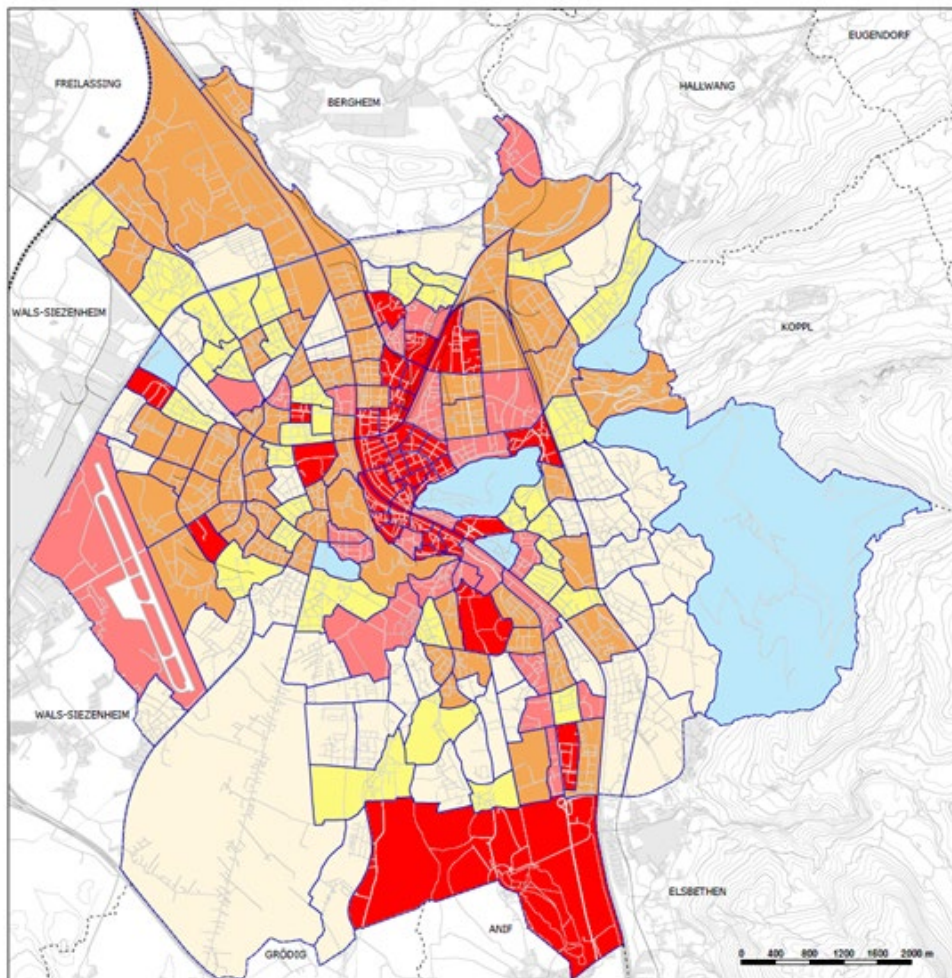
The solution proposed

Faced with these increasing needs for objective data the department of urban planning and traffic in Salzburg in 2004 therefore decided to invest into augmenting its pre-existing administrative data sets by a systematic data collection of land use patterns and their

development over time. In particular the aim was to construct a new high quality data set on land use, based on methodologically sound survey methods This decision was facilitated by a decision of the federal state that required all communities of the state of Salzburg to provide a spatial development strategy (Raumentwicklungskonzept) that had to be provided according to the planning law and required a detailed structural analysis.

The aim of this data collection process was to provide better information on actual land use patterns and their changes in the city, that could be linked to the exiting administrative data sets. It was hoped that through this on the one hand the factual basis for spatial planning processes and regional development strategies could be improved. On the other hand, it was also hoped that this data collection could inform discussions over land use patterns by providing a common knowledge base to all actors involved.

Map 7: Planning regions in Salzburg according to the spatial development plan 2007.



Source: <https://www.stadt-salzburg.at/rek/rek-2007-text-und-planteile/>

*The Map is taken from the spatial development plan 2007 it shows the employment density per hectare (light pink) = up to 10 employees

Yellow = 10 to 25 employees

Orange = 25 to 50 employees

Pink = 50 to 100 employees

Red = over 100 employees

Blue = N.A.

Consequently, in 2004 the city of Salzburg commissioned a local firm of the GIS cluster (ICRA) in the city to conduct a complete survey of the use of all buildings on the territory of the city. This survey was to be conducted by field researchers that visited the buildings and noted the use of the respective floor space by categories relevant to the spatial planning process. It was informed by the existing administrative data sets of the city that included as a cadastre recording all buildings in the city, and (since 2011) records of any changes to buildings that had to be registered according to building law. It was also designed with the intention of repeating such surveys at regular intervals, that were closely linked to the elaboration of new spatial development plans. As a result of this in 2004 for the elaboration of its spatial development plan the city could resort to a data set that allowed linking the actual use of buildings to the dedicated uses according to the spatial development plan.

Subsequently, the survey was repeated in the years 2011 and 2014 as well as in 2019. These updates primarily focused on structures, where changes had to be notified according to new construction law (i.e. where new buildings were built, or existing buildings were modified or where changes in use categories occurred). These updates resulted in a database that allowed for tracing the evolution of actual use of areas in the city over a one-and-a-half-decade period and to link these changes to zoning regulations and their changes in principle at the building level (although for practical reasons such analyses are conducted on a 100x100 m² grid).

The analyses conducted with these data allowed for a number of important insights into the effects of zoning laws on the actual use of buildings over time. This applied in particular to the use of land for production, as the data allowed to document that on the one hand a substantial part of the production activities that are not associated with noise or pollution (e.g. offices) can easily locate outside designated industrial zones and that on the other hand also the areas designated for production purposes undergo substantial structural change over time.

The actors involved and their role

The principal partners involved in this project were the department of urban planning and traffic of the city of Salzburg and the Salzburg based firm responsible for conducting the survey (ICRA Schwap e.U.). Among these partners ICRA Schwap e.U. (see <https://www.icra.at/>) is an engineering office for applied geography, geoinformatics and surveying that is specialised both in data collection as well as sophisticated GIS analysis. Its central role in the project is to organize the sampling plan of the survey, the data collection through field researchers and to enter this data into the city's GIS database. The department of urban planning and traffic, by contrast, is the central authority responsible for spatial planning in the city of Salzburg that is also responsible for elaborating the spatial development plan. Its roles in the project are to provide the data sources necessary for administering the survey and to commission the study.

Next to these core partners also the authorities responsible for collecting the administrative data that feed the sampling plan of the survey are involved in the project. These are the land surveying office, which provides the building cadastre and the building authority, which provides the records of the relevant changes in buildings.

Place-based character of the project

The data collection process thus provides a primary example of a measure in which a city administration addresses specific regional needs by providing for common knowledge base among decision makers. Next to this also the close link to a pre-existing regional specialisation (in the form of the Salzburg GIScluster) provides a clear link to the specific situation of Salzburg. In principle, however, this data collection process primarily involved a long-term commissioning of a data collection project to a commercial firm and should thus be easily transferable to other regions.

Conditions for replicability and knowledge transfer

Nonetheless a number of important factors have been important in securing the long-term commitment and also the financial resources necessary for the data collection process. These include:

- the adequately staffed and highly expert spatial planning department in the city, that has led to a high absorptive capacity on the side of the city administration and has also allowed the city to define and prioritize data needs.
- the existence of a regional GIScluster that provided for an “easy to access” knowledge pool in designing the project and a potential provider of data collection services in the locality. This has definitely facilitated communication and information transfer between the data provider and the department of urban planning in the city.
- The existence of various administrative data sets that could be used to construct a high-quality sampling plan for the data collection process.
- The limited availability of land in the city, which undoubtedly increased the awareness for the necessity of well-informed spatial planning decisions.

Impact and effectiveness

In the view of the department for urban planning and traffic of the city of Salzburg embarking on the data collection process has led to a substantially improved information on the land use patterns and their change in the city. It has also helped to improve spatial planning processes, in particular in conjunction with the additional data collected by the department of urban planning and traffic of the city. The data collection has also been an important source for elaboration of the spatial development plans. Furthermore, availability of the data has

contributed to the creation of generally accepted base of “common knowledge” among the actors, that is repeatedly used for strategic planning.

3.4 Strijp-S, Eindhoven ⁵

Key facts

Promoter and/or key actors

City of Eindhoven

Dates

2004- ongoing

Location

Eindhoven, the Netherlands

Typology

Urban regeneration project based on the development on new Creative and cultural activities in a large former industrial area of the city.

Figure 12: Strijp-S.



Source: www.strijps.nl/home.php

⁵ For a review see: <http://www.strijp-s.com/Introduction>; <http://www.strijp-s.nl/nl/home>; Fernandez Maldonado A.M., Romein A. (2009), The reinvention of Eindhoven: from industrial town in decline to capital city of a technology and design region, mimeo, City Futures in a Globalising World Conference, Madrid.

The project in a nutshell

The city of Eindhoven, with 210.000 inhabitants, constitutes a remarkable case of knowledge-based development. Masterplan Strijp-S 2002 is the strategy to redevelop the former industrial areas Strijp-S as a creative and cultural area of Eindhoven and to promote its (inter)national reputation, and rediscovery as industrial heritage. The Masterplan was later updated (Vision Art & Technology 2014) to cover the entire spectrum of art and technology ranging from research and development to cultural production and display.

The area has been transformed into a vibrant cultural district drawing on a «culture-led regeneration approach». The regeneration scheme builds on the close synergy and cooperation among various institutional actors: regional and local, and a strong collaboration between the public and private sector. The area hosts a mix of uses - cultural and innovative industries, offices, residential and commercial spaces, public amenities, etc.

The problem addressed

The origin of Eindhoven's industrial development dates back to the late 19th century. In the beginning of the 20th century, the city went through a period of explosive industrial growth. This was mainly driven by Philips Electronics – today one of the largest Dutch multinational firms – and still nowadays, Eindhoven is known in the Netherlands as Philips company town. After the war, Eindhoven gradually developed into the most important industrial centre of the Netherlands and the leading city of South-East Brabant. Besides electronics Eindhoven had other large firms such as DAF (automotive) and Campina (food processing).

In the late 20th century however, de-industrialization caused a great jobs loss in the city and its region. In the early 1990s, both Philips and DAF went through a difficult period and had to massively reorganize, reducing the number of workers. Thanks to a series of policies – by both the public and private sector – the Eindhoven region gradually overcame its employment problems during the late 1990s, becoming the main node of the Dutch knowledge-based manufacturing industry.

The aim of the Strijp-S project is to transform a declining post-industrial area owned by Philips into a vibrant innovative district. The city, in connection with its surrounding region, has successfully reinvented itself as the major technology node of the Netherlands. Its successful economic development is not only based on technology but has been carefully supplemented and merged with activities linked to creative design, considered indispensable for economic competitiveness.

The purpose of urban design is to merge past and future that are 'mutually constitutive', thus preserving industrial heritage while also looking at the evolving future. This has been achieved

through the close synergy and collaboration among different governance levels (regional and local).

The solution proposed

With Strijp-S, Eindhoven transformed an industrial area into a creative and cultural area. It is in many ways an exemplary (re)development scheme where strategic infrastructures have been developed. In 2008 “Cultuurfonds Strijp-S” was launched, as a private/public fund to stimulate creative initiatives, events and programmes in the Strijp-S area so as to contribute to the national and international reputation of Strijp-S. It supports cultural and creative projects. Since 2010, Klokgebouw, the main building of Strijp-S, has hosted 100 creative companies. Apparatenfabriek, the old Philips Device Factory, offers 20,000 square feet of commercial and working space for CCIs. Additionally, other Philips buildings have been transformed into lofts, leisure facilities (skate park, festival event spaces), restaurants and retail shops. In 2013 the famous Natlab building (former Philips Research Laboratories building) reopened as a cultural centre for film, theatre and two media labs.

Strijp-S has become the largest urban redevelopment area in the NL and has gained international recognition as part of the Brainport region, internationally recognised as a leading “smart region”. Specifically, the area has been revitalized through a mixed-use urban project (cultural and innovative industries, offices, residential and commercial spaces, public amenities, etc.), which has increased the socio-economic attractiveness of the district stimulating investments. Eindhoven’s successful economic development is indeed not only based on technology, but it has been carefully supplemented and merged with creative design activities and institutions. The purpose of urban design is to merge past and future that are ‘mutually constitutive’, thus preserving industrial heritage while also looking at the evolving future.

The redevelopment scheme builds on flexibility and adaptability, which allowed the masterplan 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.

Promotion of a territorial approach enhancing a mixture of culture, leisure and retail in the city centre. This approach is combined with the ambition to develop Eindhoven’s typical features: an innovative, design oriented high-tech city.

Figure 13: Strijps the creative city.



Source: www.holland.com

The actors involved and their role

The project has fostered a close synergy and collaboration among different governance levels (regional and local). The strong interaction between local and regional partners constitutes an advantage for knowledge-based development.

The involved actors are the city of Eindhoven, Park Strijp Beheer, WolkerWessels (development company), the university, two housing companies. The city of Eindhoven created a project team, consisting of a general manager, financial, real estate and legal experts, a project manager for cultural development and a communication manager.

The strong interaction between regional partners with complementary qualities of the regional space have constituted a great advantage for the knowledge-based development of the city region Eindhoven. The region's organizational quality, embodied in Triple Helix interaction between the local university, the private industry and the government, has been a main driving force of the reinvention of Eindhoven as a knowledge-based industrial region, and recently also as a creative design destination. Reverting its traditional industry into high and medium technology industrial sectors, in combination with the design sector, has been the fruit of a comprehensive policy that has properly identified the local strengths and limitations and has sought for a proper balance between business and people climate, through the implementation of concrete programmes and projects.

Place-based character of the project

In 2004, the Eindhoven region was appointed national 'Brainport' by the Dutch government. The Brainport Programme focuses on further development and completion of the value chains of spearhead sectors of technology valorisation: life-tech (life sciences, medical technology), high-tech systems (ICT, micro-electronics, nanotechnology, automotive and mechatronics) and creative industries. Its mission is to create an environment for economic and social development towards a high quality of life and, through this, to achieve a sustainable and globally competitive region (Stichting Brainport, 2007).⁶

The policies and initiatives function at several spatial scales: from the Municipality of Eindhoven up to cross-border networks. These have a common objective to enhance knowledge, technology, creativity and innovation in the region of South-East Brabant and Eindhoven city.

Within this context, the Strijp-S project can be considered the fruit of a comprehensive policy that has properly identified the local strengths and limitations and has sought for a proper balance between business and people climate, through the implementation of concrete programmes and projects. Eindhoven's regional policy and corresponding actions are based on a vision for the future of the city and its region that is shared by most stakeholders and as such constitutes a great asset towards the type of endogenous development that it aims for.

Conditions for replicability and knowledge transfer

- Strijp-S is a project that cannot be replicated as such. What should be considered in similar situations would be the strategy (Masterplan) and the involvement of actors from different fields, including young local creative talents.
- Cooperation with the local creative sector and engineers (university, CCIs, Natlab).
- A post-industrial area became a source for inspiration for a creative environment: seeing a problem as an opportunity.
- Creativity and flexibility in decision-making processes and in problem-solving situations.
- The strong interaction between local and regional partners constitutes an advantage for knowledge-based development.
- Synergy between technology and design, which has become crucial in the international competitiveness of knowledge regions.
- Eindhoven's strategic and decisive behaviour has been useful to implement a forward-looking approach which shows flexibility and adaptability, while it promotes regional synergy.

⁶ Stichting Brainport (2005), Brainport Navigator 2013. Lissabon voorbij! Eindhoven: Stichting Brainport.

Impact and effectiveness

Eindhoven, which was once considered more of an industrial place than a real city (a collection of very small villages) became visible as an international smart hub for creative activities. The former industrial area has transformed into a creative centre increasing the visibility of the city as well as attracting creative people to invest their talent and work in Eindhoven. Today, Klokgebouw hosts over 100 entrepreneurs from creative industries and the Apparatenfabriek business complex offers over 100 workspaces of different sizes and rental rates. Developing Strijp-S had a huge, broader effect on the city. It sparked new energy and hope.

Nevertheless, Eindhoven still suffers from some problems: (i) its quality of place, which constitute a liability to precisely attract those groups that are considered strategic in the knowledge economy - creative people, young people and high-skilled foreigners – is modest: (ii) lack of buzz and of a lively and attractive urban scene is combined with difficulties to provide access to the type of housing these groups demand. Eindhoven's main stakeholders are aware of these problems and are taking steps to improve this situation. The city shows considerable energy and dedication to execute urban projects in central districts with the purpose to improve their attractiveness by mixing residential, work and cultural functions.

3.5 The strategic plan of Hovinbyen (Oslo)

Key facts

Promoter and/or key actors

Municipality of Oslo: Planning Agency, Real-estate Agency. Industrial and other sectors: Pådriv, active interest organization, operating on cross-sectoral basis.

Dates

2014 – ongoing

Location

Oslo, Norway

Typology

Guiding, non-binding planning for transformation of large, dominantly privately-owned area in the fringes.

Figure 14: Aerial view of Hovinbyen towards the city centre of Oslo.



Source: <http://nws.eurocities.eu/MediaShell/media/WD02EoCTfinalreport.pdf>

The project in a nutshell

The strategy for the transformation of the fringe in Hovinbyen (Oslo) represents a special planning tool developed by the Oslo Municipal Agency for Planning and Building Services, to see sub-areas in context and deal with the overall challenges in the area. This plan provides

non-binding policy guidelines for public space as a framework for public investment in infrastructure, green/ blue space and other technical facilities; and for negotiating with private developers on proportionate cost-sharing of upgraded public space towards formalised agreements which are linked to planning approvals.

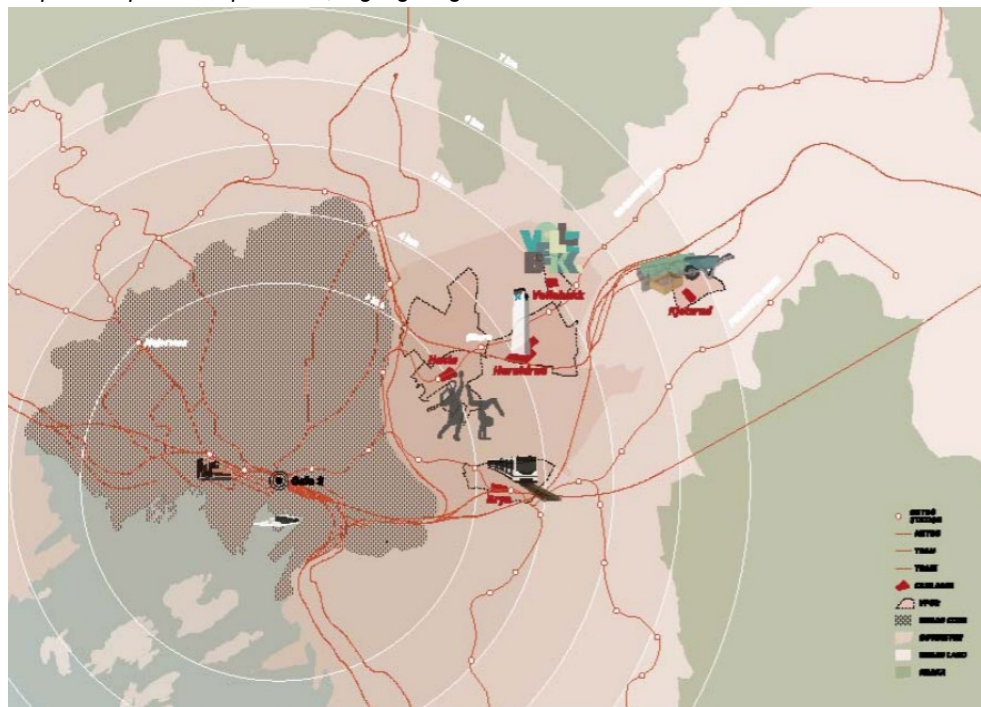
The municipal planning agency takes the role as a driving force of the transformation process, using more resources in collaboration both with private stakeholders and between the municipal agencies, and sees its own municipal interest and investments as an opportunity to facilitate and create innovative pilot projects that can provide role models for private developers.

The problem addressed

Oslo is one of the fastest growing cities in Europe. 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 in Norway (Groruddalen), is proposed as a key development area for Oslo's growth.

Hovinbyen is a complex 11 km² area with a patchwork of various islands of mostly privately-owned warehousing, housing, industry, commerce and fragments of green space, divided and separated by heavy infrastructure, mainly roads. There are already several tens of thousands of homes and jobs in Hovinbyen, to which 80,000 residents and 100,000 new jobs should be added, without displacing all the existing workplaces.

Map 8: Simplified map of Oslo, highlighting the industrial corridor towards north-east.



Simplified map of Oslo, highlighting the case areas Bryn, Hasle, Haraldrud, Vollebakk and Kjelsrud (ill. Haakon Haanes)

Source: https://issuu.com/suburban.reinventingthefringe/docs/oslo_gebundeld

The solution proposed

Oslo does not have a planning system which covers the whole city with a zoning plan⁷, but has for several decades planned with a strategic land-use plan and legal guidance and requirements. The city makes zoning plans for prioritised areas where it is important (e.g. where the strategic land-use plan indicates new uses and densification, creating the need for new detailed zoning), or prepares guiding plans.

The 2015 municipal masterplan sets out several areas that are “development areas” where new zoning plans should be made – either by using the tool called area zoning plan, or by creating guiding plans for public space and then allowing more detailed zoning plans for smaller sub-areas of the larger area.

Most of these area plans are made by the planning agency, which has in that way quite a lot of control over this process. Even so, the agency cannot (or at least is reluctant) to force the landowners to redevelop their land. The agency merely sets out how it should be developed if they want to redevelop it. Thus, there is a balance between what serves the public good and each landowners’ property rights. This is one of the reasons for finding subtler tools like guiding plans and strategic plans and to try to use the planning process to communicate and get everybody (including the state) involved and in agreement of the common goals for an area.

The 2015 municipal plan of Oslo has set the target of building 100 thousand additional housing units by 2050. Hovinbyen has been considered as a prioritised area for transformation and urban development, aiming at intensifying the use, developing the area incrementally from being an underutilized mono-functional barrier between the city and the suburbs, to becoming a denser, multi-functional part of the urban fabric. However, the city recognized that if residential use will become possible, sooner or later the industry will be pushed out. Therefore, a strategic plan was prepared in 2016 for Hovinbyen, to secure functions which would not otherwise be built under a purely market-led transformation.

In the course of developing the plan in 2015 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 of the area’s potential and the central elements of the plan.

⁷ To be more precise, zoning plans for most of the city exist, but some of these are old. If ideas emerge to develop an area, new zoning plans are needed. This can be done through both private and public initiatives, but the planning agency is responsible for handling each proposal and preparing it for public review and later review and approval by the city council.

Figure 15: Økern, the main centre of the transformational area of Hovinbyen.



Source: Municipality of Oslo

The strategy for the transformation of the fringe of Hovinbyen, which was finally approved by the city council in 2018, provides the framework for producing non-binding policy guidelines for public space across the areas to be transformed. These policy guidelines are providing a framework on the one hand for public investments in infrastructure, green/blue space and other technical facilities – communicating with relevant authorities about the development of this very large area, which needs considerations, how to change/redevelop large scale infrastructure (without which only smaller “islands” would be created, without a real territorial cohesion). On the other hand, the policy guidelines are providing a framework for negotiating with private developers on proportionate cost-sharing of upgraded public space within a framework of formalised agreements which are linked to / part of planning approvals.

With the Strategy for the transformation of the fringe of Hovinbyen Oslo has in fact four layers of different plans/planning tools: the top being the municipal masterplan, second the strategic plan, third area zoning plans or guiding plans for public space, and fourth detailed zoning plans.

If developers raise ideas against the intentions of the strategic plan (e.g. to introduce housing into an industrial area), and planners refuse the idea with reference to the strategic plan, the issue is referred to the political level for clarification. Politicians usually listen to the position of the professional planning agency.

One of the key points in the plan for Hovinbyen is that the municipal administration needs to take a more active and collaborative role and utilize a broader range of instruments than today. To achieve this, the municipal agencies need to take the role as a driving force of the transformation process, use more resources in collaboration both with private stakeholders and between the municipal agencies, and see municipal interest and investments as an opportunity to facilitate and create innovative pilot projects that can provide role models for private developers. To work towards more social inclusion and a more democratic city, it is also important to make sure that the development takes place on several fronts, and that the public is involved and participates in the development. As a primer for permanent transformation, temporary projects can contribute to promoting urban development and inspire involvement from the public.

Figure 16: Hovinbyen.



Hovinbyen today (photo: Jonas Aarre Sommerset)

Source: https://issuu.com/suburban.reinventingthefringe/docs/oslo_gebundeld

The actors involved and their role

Municipality of Oslo: the Planning Agency is working on the guidance plan, and the Real-estate Agency contributes with calculations and in detailed negotiations. For climate goals there is a special climate budget available.

Pådriv: an active interest group of industrial and other sectors involved, operating on a cross-sectoral basis, bringing together all actors to think about the future of the development of the area. The establishment of Pådriv has been one interesting effect from the early planning phase of the Hovinbyen strategic plan, when the collaboration mechanisms were discussed and launched.

Figure 17: One of the stakeholder discussions in the course of the development of the Hovinbyen plan



Start-up workshop for « Vollebekk factories », where local stakeholders are invited to temporarily reinvent the existing factory hall at Vollebekk (photo: Haakon Haanes).

Source: https://issuu.com/suburban.reinventingthefringe/docs/oslo_gebundeld

Place-based character of the project

The place-based character of the project is strong, as it concentrates on a well-defined geographical area, between the inner city and the periphery, where substantial changes are foreseen for the next decades. The importance of this area is further strengthened by the complexity of the task, to ensure sufficient land for the large number of new housing units that are needed, without completely eradicating the established industrial and logistical activities which have served the city and region for many decades.

Conditions for replicability and knowledge transfer

Most of the dynamically growing European cities are facing similar problems to those described in the Oslo case. The replicability of the approach depends largely on the flexibility of the municipal actors and on the openness of the local political leadership, to experiment with new planning tools and communication methods towards the existing stakeholders in the area. The interest in knowledge transfer is already substantial, and the Oslo case has been included in the URBACT project suburban and in the EUROCITIES project Edge of centre transformation. A new EUROCITIES project, with a focus on transforming urban highways into urban streets, has also been started in collaboration with METREX. More information can be acquired on the following websites:

- https://issuu.com/suburban.reinventingthefringe/docs/oslo_gebundeld
- <http://nws.eurocities.eu/MediaShell/media/WD02EoCTfinalreport.pdf>

Impact and effectiveness

The plan for Hovinbyen represents a comprehensive urban planning approach for further development, as well as strategies and measures to transform the different parts of the area. The task of reshaping the urban area is extensive, where national government agencies, the municipality and private landowners are all responsible for transforming the area in the future, in line with the intentions of the plan.

The work on the plan started in 2014, not only in the municipality but also establishing the collaboration channels with stakeholders in the area. The plan of Hovinbyen was officially approved by the city council in 2018 and since then the municipality agencies are following up the plan – together with the Pådriv interest organization, which was established in the course of this process. The political backing, together with the institutional structures, and the cooperation efforts from the side of municipal agencies and the purpose-built interest organization ensure the effective functioning of the new planning tool.

3.6 Vienna Business Districts, Austria⁸

Key facts

Promoter and/or key actors

Wirtschaftskammer Wien (Chamber of Commerce Vienna), Wirtschaftsagentur Wien (Vienna business agency), Stadt Wien-Stadtteilplanung und Flächenwidmung (City of Vienna - department for spatial planning)

Dates

2019 - 2024

Location

Wien

Typology

Promotion of a central hub for strengthening cooperation, information and consulting services and innovation development, based on city districts.

Figure 18: Vienna business districts.



Source: Foto der Pressekonferenz Juni 2019.

The project in a nutshell

The Vienna Business District Management acts as a central hub for strengthening cooperation, information and consulting services and innovation development. Firstly, the business district

⁸ This case builds on the interview conducted with Andres Pena (Head of Unit at Vienna Business Districts).

managers act as an intermediary to find suitable space or a location. Secondly, they act as a central communications hub among the enterprises in a region and between these enterprises and political decision makers. Thirdly, they help businesses looking for grants or financing. This could be from a range of sources such as the City, Chamber of commerce and beyond. Finally, the managers host events and ensure that businesses are supported with the latest standards, trends and legislation.

The problem addressed

Keeping local policy makers well informed about the day-to-day problems of urban producers, informing and networking enterprises in enterprise development zones is a major challenge in large urban agglomerations where the level of anonymity is substantially higher than in smaller cities and the identification of key actors thus often difficult. While in a smaller urban context, local politicians and entrepreneurs almost automatically meet informally at various social events, and can use this to exchange information, the same cannot be expected in large cities. Nonetheless networking among decision makers and ensuring a high degree of information on planned policy initiatives for them, have often proven to be instrumental to the successful design and implementation of various policies.

In Vienna in particular there has also been an increasing concern in the last decade that local decision makers lack information on the day-to-day challenges of in particular small and medium sized enterprises. At the same time policy makers often regretted the poor connection and embeddedness of enterprises to their locality and the lacking networking among local enterprises.

Similarly mobilising existing land plots for development for productive uses has proven to be a major challenge in most cities, as owners often hope to increase land value by waiting for a rededication of their land to other, financially more lucrative, uses.

The solution proposed

In the face of this situation, the city of Vienna- (district planning and land use-MA21), the Viennese Chamber of Commerce (Wirtschaftskammer Wien) and the Vienna Business Development Agency have established a system of district managements that is known under the umbrella brand name "Vienna Business Districts". These district managements support companies operating in the enterprise zones defined by the Vienna spatial development plan in establishing themselves locally. In addition, they offer a platform for networking between companies and are also tasked with networking the companies with one another and with the political decision makers at the district level and/or with the city administration.

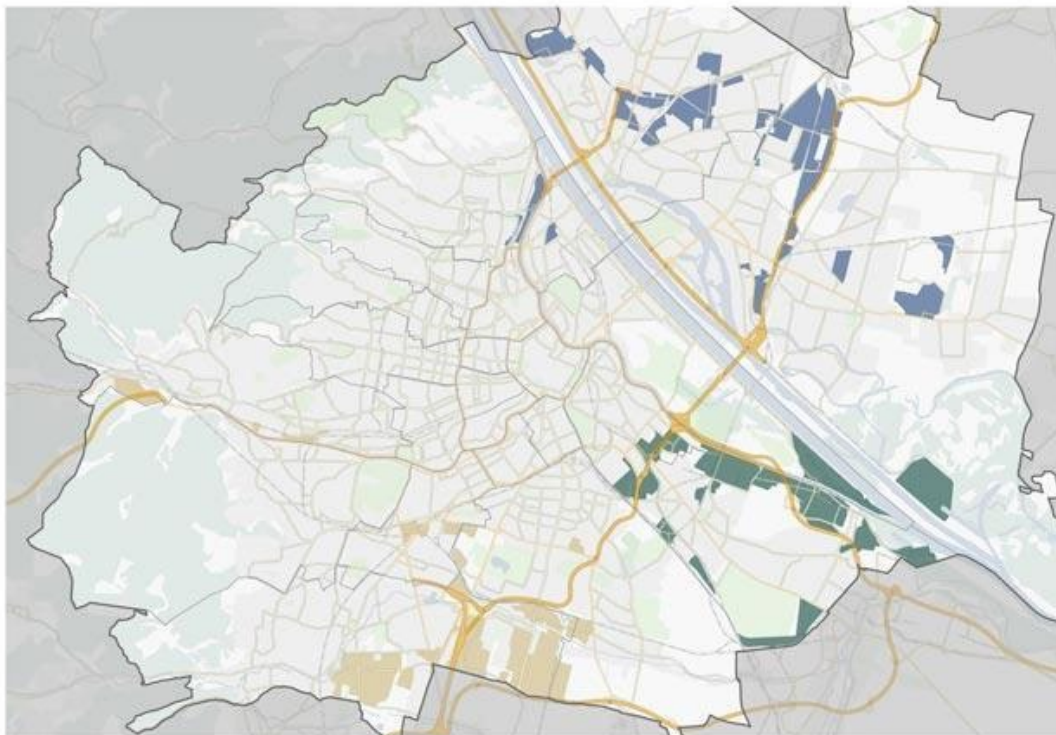
These tasks are taken on by district managers, who act as contact persons on site, and are in continuous contact with all active stakeholders. District managers are expected to facilitate and

accelerate the settlement process of newly founded enterprises, to help enterprises moving to Vienna in their search for suitable locations and to provide existing enterprises with information on funding opportunities. They are also expected to provide local information on the day-to-day problems of existing enterprises to local decision makers.

In this capacity, district managers:

- organize events (e.g. on issues related to mobility management, the future of work, resource management) for the enterprises located in their region.
- conduct studies aiming to identify particular strengths and weaknesses of their respective area as a business location.
- publicize success stories among the enterprises located in their region with the aim of making enterprises better known to the public.
- provide an internet-based search possibility for enterprise locations.
- continuously inform local businesses about funding opportunities.

Map 9: Areas covered by Vienna District Management.



Source: Courtesy of Vienna Business Districts

**Legend*

Blue=Vienna business district north

Green= Vienna business districts east

Orange=Vienna business districts south

Moreover, district managers also have a central role in identifying suitable areas that could be used for further development for production and to motivate owners and developers to develop these areas.

The actors involved and their role

The district management started as a pilot project initiated by the City of Vienna, the Viennese chamber of commerce and the Vienna business agency in the district of Liesing in 2012. In 2015, based on the success in Liesing, a second organisation in Floridsdorf followed. Currently the district managements are rolled out to eleven districts and organized for the areas Vienna South (Districts 10, 12, 14, and 23), Vienna North (Districts 19, 20, 21, and 22), and Vienna.

The district managers are co-funded by the City of Vienna, the Viennese Chamber of Commerce and the Vienna Business agency. From an administrative point of view, they are a part of the Viennese Chamber of Commerce.

Next to these central stakeholders the district managements are in continuous contact with the enterprises located in their respective business zones as well as local politicians and the district and city administration. The main actors in this continuous process are the enterprises and Vienna district administrations. Contacts, however, also extend as far as to local infrastructure providers, who play an important role when it comes to e.g. intended improvements in the provision of public transport to business zones or to securing a better provision of broadband internet access for enterprises.

Place-based character of the project

The specific feature of the district managers is that they are organised locally servicing specific enterprise development zones by building local networks. This contributes to building local know-how as well as ensuring a place-based approach, directed at individual locations of the city where production takes place. The initiative is also highly demand driven as it was initiated by the Chamber of Commerce on the request of its members.

Also, the individual measures and activities of the district managements speak to the strongly local nature of the initiative. Thus, major initiatives with a high local impact have included lobbying for improvements to public transport systems and broadband access. Similarly, the business managers have also been instrumental in propagating plans for joint resource use in enterprise zones.

In addition, the Vienna Business Districts plays a key role in implementing and propagating more overarching strategies to the local level. Thus, some of the most important successes of these organisations have been registered in consulting local enterprises on the possibilities to increase resource efficiency and in informing on sources for financial support for the implementation of such investments.

Conditions for replicability and knowledge transfer

In general, a key challenge for the implementation of networking activities among enterprises is that the enterprises need to see a value added from the activities and that district managers must be close enough to the day-to-day problems of enterprises to provide such value added. In Vienna this is achieved, inter alia, by the support of the Chamber of Commerce as a well-informed actor on these issues.

Next to this the work of the business districts is facilitated by the existence of clear and binding strategies at the city level and a clear commitment of politicians to production in the city. This applies, in particular, to the productive city concept, which contains both a clear commitment to maintaining a productive sector in the city and the major strategies for the further development of production in the region.

Through this clear commitment to production, on the one hand, planning security on the side of enterprises is enhanced, which in turn also motivates enterprises to invest more strongly in relationships to local actors such as the business districts. On the other hand, the clear strategic guidelines on the city level provide orientation as to which topics are of relevance for enterprises at a more local level and should thus be propagated by the organisation. A case in point is Vienna's strategy for increased resource efficiency, in the implementation of which the business districts have attained an important role recently.

Impact and effectiveness

Overall, the Vienna Business Districts have been seen as an important addition to the institutional framework of business support to the city. This is also evidenced by the fact that after an initial pilot phase in the districts of Liesing and Floridsdorf, they were mainstreamed in 2019, within the framework of the productive city plan.

On a more concrete level, the Vienna Business Districts have also contributed to mobilizing land areas for production uses (e.g. recently in securing the mobilisation of a 40.000 square metre plot owned by the Austrian Railways in Liesing for such uses) and have been instrumental in implementing Vienna's strategy for increasing resource efficiency through their consultation and information activities.

Tools and programs

4 Meso-scale: tools and programs

This family of cases collects a wide set of heterogeneous tools, policies and programs which are essential to the implementation of strategies. During the last decades, some cities have invested in the creation of agencies, in the form of operative tools able to support a strategic and collaborative dialogue between businesses and the city. Agencies can be public owned or guided, helping to steer development. In others they are private led and connect companies with places, and resources, or reduce the obstacles to development related to the interactions with norms and plans.

What is evident is the necessity to move beyond scales, for cities and metropolitan areas to develop deals and alliances with national and international actors. At the same time, this group of cases shows the limits of public policies based on simple spatial planning. There is clear evidence of the need to display a full range of policies to support a new productive future of cities, based for example on people training and professional qualification.

Facing the challenge of economic change, means dealing with job creation at every level. Specific financial and management tools have to facilitate businesses to settle and create those infrastructures which can guarantee sustainable productive cycles even out of core city areas. They are required to support the production of knowledge and the management of processes which exceed the competences of small and medium size cities and entrepreneurs. Finally, fiscal tools can play an essential role in promoting territorial cohesion policies, redistributing resources and opportunities among more favoured and less favoured places.

4.1 APEA- Aree Produttive Ecologicamente Attrezzate (Eco-Industrial Parks), Italy

Key facts

Promoter and/or key actors

National, regional, local authorities

Dates

1998- today

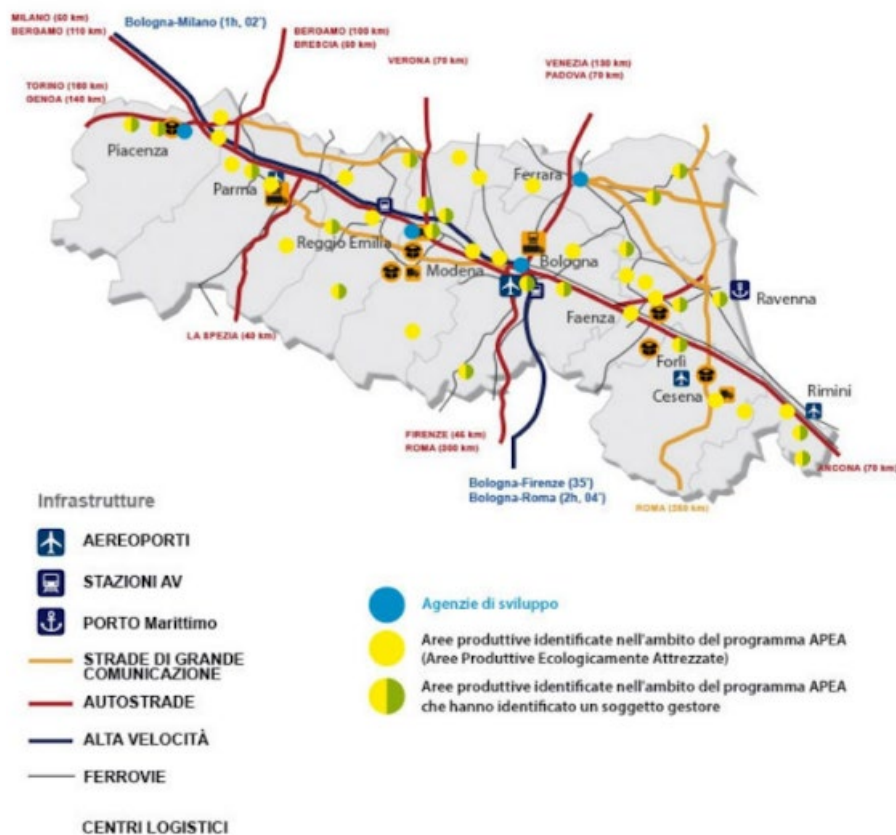
Location

Italy

Typology

Planning tool, aimed at fostering new sustainable productive sites or the sustainable regeneration of former ones, based on the principles of industrial ecology, supporting small and medium size cities, as well as small and medium size businesses.

Map 10: APEA.



Source: Regione Emilia-Romagna (2012).

The project in a nutshell

Instituted by national law, in 1998, the Ecologically Equipped Production Areas (APEA) have been implemented in different regions in Italy. Being based on the principles of industrial ecology, they aim at “closing the cycles” of matter, water and energy, as well as at sharing main environmental services (water, energy, waste) among the industrial activities located inside the area and optimizing the organization of activities that generate impacts on the environment. 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 can count on forms of unitary management and from the simplification in the acquisition of the authorizations to run their activities and use those services.

The problem addressed

APEA have been instituted in order to feed a new generation of manufacturing sites, as well as to support the rehabilitation of existing and out-dated industrial sites, with a specific attention to supra-municipal sites and initiatives and the reduction of land consumption within an integrated spatial vision. The aim of the institutive law was to build a new sustainable model of industrial sites and facilitate processes of sustainable industrial development reducing the complexity and costs of the settlement procedures for new businesses and activities. Special funds for the production of infrastructures and services were to reduce the settlement costs for companies, while the introduction of a unique management body, often in the form of a Consortium (public or private, local or supralocal) was to introduce coordination among private and public actors, especially trying to support small and medium size companies, as well as small and medium size municipalities in the production of innovative and sustainable facilities, equipment and infrastructure provision.

The solution proposed

The APEA “Aree Produttive ecologicamente attrezzate” have been instituted by national law in 1998 by the Decreto Bassanini (D.Lgs. n. 112, 31 March 1998), this latter asking the regional authorities to provide local implementation by a regional law. The different regional solutions adopted all over the country (among which Abruzzo, Calabria, Emilia Romagna, Liguria, Marche, Piemonte, Puglia, Toscana, Sardegna and Campania and Lazio) are essentially based on the idea of fostering closed productive cycles, in order to optimise the relationship between the industrial functions and the environment. The Italian law was largely inspired by international experience of the Eco-Industrial Parks.

In fact, the solution is essentially based on two main aspects: on the one hand the industrial sites shall be provided by collective ecological infrastructures serving the whole industrial site (i.e. energy production sites, wastewater treatment plant), on the other the companies settling in these industrial sites shall be supported by a management body due to provide collective management of these infrastructures. This management body is also asked to develop a sustainable development plan for the site.

Regional laws, following different paths of experimentation, have developed guidelines, pilot projects and funds to support the institution of APEA: funds in particular have been dedicated to support the production of infrastructures and facilities (which are high and difficult to be supported by companies on their own - a medium amount of 1 million euro each site has been distributed), in some cases to the organisation of the management body (which requires expertise and organisational resources, not necessary available to companies and also to municipalities).

A central role in the implementation of APEA is in most cases played by the spatial Planning Departments, together with Environmental and Economic Development Departments in the municipalities. At the same time, the definition of the APEA is normally introduced at regional level, which identifies the most strategic new industrial areas and introduces major requirements to their development. In particular Regions, when introducing APEA by law, try to privilege the re-use or completion of existing industrial sites; to re-localise industrial activities when environmental or social issues are emerging; to favour areas served by infrastructures, in particular by public rail infrastructures; to favour a positive and qualitative relationship between industrial sites and the liveability of places.

After being identified at Regional level, APEA are implemented by their identification within spatial plans, at provincial level or at municipal level, by both structural and then operational plans, in all cases supported by territorial agreements between different public institutions. The design phase is often managed by an urban master plan, which identifies the infrastructural works and services, together with the building programme. A final step is related to the settlement of companies, which make the APEA executive and open to the phase of management of the coordination body. In some cases, APEA have a supralocal dimension, which requires the introduction of master plans based on guidelines to be adopted by different municipalities.

- In some of the regional laws, APEA are supported by territorial equalization funds, in order to favour territorial integration mechanisms.
- In some cases, APEA are required to also introduce facilities and services for citizens, trying to contribute to their integration in the urban fabric.
- In some cases, APEA are an opportunity to achieve the Emas certification and are part of a wider sustainable strategy: in other cases, APEA is a non-binding opportunity supported by local authorities.

Map 11: Zipa Verde Masterplan- Jesi (AN): an example of APEA master plan.



Figura 44 - carta dell'uso del suolo di ZIPA verde (Masterplan)

Source: https://ambiente.regione.emilia-romagna.it/it/sviluppo-sostenibile/temi-1/sviluppo-sostenibile/gestione-e-sostenibilita-aree-industriali/materiale-per-approfondire-1/rapporto%20APEA_2010.pdf

The actors involved and their role

The introduction of APEA relies in most of the cases on a regional law and planning act, which identifies them, gives them a status and a recognition, besides the possibility to get access to special funds.

The coordination body who is instituted to support the implementation of the APEA and the management of shared infrastructures is in most of the cases a public body, although there are also examples of private-public actors: the public nature of such bodies seems to better allow a role of coordination between different actors.

Nevertheless, for their full implementation, a large involvement of the companies located on the APEA site is needed, since, together with the Management Body, they are the most important actors of the model.

Place-based character of the project

The initiative has been promoted at national level and then introduced locally by regional laws. In this respect it has been implemented in different ways all over the country, which made it

possible to introduce specificities related to the different socio-economic context and territorial/environment situation. At the same time, the success of the initiative is also based on the capacity of actors and their interest to cooperate in order to achieve a more sustainable economic development. So far, the initiative proved to work better where a strong dialogue between local public actors and local business activities was available.

Conditions for replicability and knowledge transfer

- A strong investment at regional /national level to promote a tool to support the implementation of new sustainable productive sites, contrasting sprawl, land consumption and promoting a new model of industrial settlements
- A diffuse environmental attention in the economic actors and attitude to work together to achieve the coordination expected
- Availability of public funds in order to support the realisation of major infrastructures to serve the site
- Collaborative and cooperative attitude by the municipalities, willing to share intermunicipal initiatives

Impact and effectiveness

After more than 20 years after the introduction of APEA, they are quite diffuse all over Italy, even if with a different normative status. Several analyses have been conducted at national level, in order to measure to what extent, the APEA have been able to reach their objectives. Despite lacking a process of monitoring them, their introduction has been a step forward in the promotion of innovative pilot experiences in the coordinated management of the production of new sustainable models of industrial sites. At the same time, in order to keep their role after the experimental phase funded by the public actors, the management body has to reach financial autonomy: this was not often a condition achieved.

4.2 Berlin Initiative for the New Municipal Craft and Trade Centres ⁹

Key facts

Promoter and/or key actors

Berlin Senate Department for Economy, Energy and Enterprises (lead) in cooperation with Berlin Chamber of Crafts (Handwerkskammer) **and** WISTA

Dates

Currently planned

Location

Berlin

Typology

Tools for protecting industrial land and facilities that are necessary for the city and providing affordable rental spaces for small enterprises

Figure 19: GSG-Hof Schlesische Straße 26.



Source: https://www.gsg.de/de/gewerbehof-gewerbepark/berlin/?gclid=EAlaIqobChMlgJm7xoK-7QIVR_gYCh2UuAK2EAAAYASABEgKARvD_BwE#2

The project in a nutshell

Faced with rapidly increasing rents and land prices many craft and trade enterprises located in Berlin's inner city find it impossible to find affordable space for new locations or expanding their

⁹ This case builds on the interview conducted with Carsten Grashoff (Senate Department for Economy).

business. In consequence, many of them relocated to the outskirts of Berlin in recent years. As now a subsequent shortage of services provided to the population by such enterprises in the inner city occurs, the city of Berlin in cooperation with the Berlin Chamber of Crafts and WISTA (a municipal site developer) started an initiative to build new municipal crafts and trade centres (“Gewerbehöfe”) to provide affordable rental space for in particular craft enterprises.

The problem addressed

In recent years, the city of Berlin has witnessed the relocation of many craft enterprises to the outskirts, in particular small and medium scale ones. This has resulted in a situation where the supply of certain repair and crafts services in inner city locations is considered challenging. Providing affordable spaces for production of small and medium sized craft enterprises in inner city areas and in this way guaranteeing the continued supply of such services throughout the city, is therefore a priority issue for the city.

This is even more so as Berlin has a long tradition of mixed-use neighbourhoods (the so called “Berliner Mischung”), where crafts enterprises and residential housing co-locate. This tradition has, however, become increasingly challenged in recent years due to high property and rent prices for crafts enterprises as well as an increasing resistance of residential neighbours fearing noise nuisance.

The solution proposed

In order to develop viable mixed-use zones in an urban context and to secure an adequate supply to the population in inner city locations with services from crafts (e.g. plumbers and other repair services) the city of Berlin is started the so called “Gewerbehofinitiative”. This is a concept that has a long tradition in Berlin.

Already in 1965, the Berlin Senate, the Berlin Chamber of Commerce and Industry and the Berlin Chamber of Crafts founded the Gewerbesiedlungs-Gesellschaft (GSG Berlin). Its task was to promote small and medium-sized companies in particular and to provide them with affordable commercial space in a city, where commercial space was hard to find after construction of the Berlin Wall. The first commercial yard in Berlin-Kreuzberg was acquired in 1966 and subsequently others followed and for most of the time period until the German reunification the measure was considered as very successful.

Due to Berlin’s debt crisis in 2001 the city sold most of its shares in the GSG to a state-owned bank that was later privatized. The formerly state-owned Gewerbehöfe, however, still exist but under private management. Currently the GSG owns approximately 50 objects with a total floor space of over one million square meters that are let to over 2000 tenants.

Today, with the renewed population and economic growth of Berlin, crafts and trade enterprises are again facing difficulties in finding affordable production spaces and the currently privately

operated *Gewerbehöfe* operated by the GSG with market-oriented principles do not fully satisfy the demand, *inter alia* because only few of the tenants in these premises belong to the crafts. As a consequence, the city of Berlin and the Berlin Chamber of Crafts assisted by the WISTA Gm.b.H. (a municipal site developer) have started this initiative to build new municipal craft and trade centres. Currently concrete plans are scrutinized for three city owned locations are being scrutinized. The first location is in Lichtenberg, a historic production site that has, however, experienced substantial decline in the 1990s. The second location is in Spandau, while the third location is in Berlin Mitte.

Figure 20: GSG-Hof Wattstraße.



Source: https://www.gsg.de/de/gewerbehof-gewerbepark/berlin/?gclid=EAlaIqobChMlgJm7xoK-7QIVR_gYCh2UuAK2EAAYASABEgKARvD_BwE#5

As with the existing *Gewerbehöfe*, the aim is to provide space for crafts enterprises at an affordable rate at these premises, with the city currently assessing different possibilities to finance the initiative. In contrast to the original ones the new municipal craft and trade centres are meant to provide for a greater mixture of uses, including a higher share services and to be more strongly differentiated according to the concrete advantages of their respective location within the city's territory.

The actors involved and their role

The project of the new centres is mainly developed by the city of Berlin and WISTA, with the city of Berlin as the main planning authority responsible for the strategic concept of the locations as well as their financing. WISTA, by contrast, will be responsible for the construction and day-to-day operation. Next to these partners, the Chamber of Crafts is a main stakeholder to the project as it supports the initiative with its know-how and ensures that the initiative addresses the specific problems and needs of their clientele, as the primary intended beneficiary of the measure. Finally, the Berlin boroughs as the local authorities responsible for issuing the local

building plans (Bebauungspläne) are main actors, as they will provide the legal basis for the use of the premises as production sites.

Place-based character of the project

The still existing GSG-Gewerbehöfe as well as the newly planned state-owned Gewerbehöfe represent an example of a policy, in which a city resorts to a previously used measure to improve the availability of space for production. The initiative therefore builds on a locally existing and successful historic example and adapts it to the current circumstances.

It is also a place-based approach as it involves planning and initiating economic development in concrete localities of the city. In particular the nature of the measure allows for a differentiation of the profiles of the different localities according to their needs and comparative advantages. For example, the location in Lichtenberg has a high potential for small scale manufacturing and crafts, while in the Spandau area the vicinity to existing larger enterprises implies a high potential for more knowledge intensive production, whilst and the site in Berlin Mitte could also be used to address some social and labour market challenges of the area (e.g. by also providing a Kindergarten)

In addition, the structure of the partnership developing the initiative, through the expertise of the Chamber of Crafts, ensures that newly planned Gewerbehöfe 2.0 will cater for the needs of the intended beneficiaries.

Conditions for replicability and knowledge transfer

The intended implementation of the initiative is undoubtedly facilitated by the high level of public conviction that the existing Gewerbehöfe have shown favourable results. This, on the one hand, makes the historic example a blue-print and public acceptance for the initiative is high. On the other hand, the fact that the intended new Gewerbehöfe are all located on land owned by the city or other public actors is encouraging, as it reduces financing constraints.

Nonetheless the current plans to increase the number of Gewerbehöfe and to renew state support to this initiative have also met a number of challenges. These are mainly related to financing. First, the provision low or reduced rents to crafts enterprises have to be implemented in compliance with EU regulations prohibiting distortionary subsidies. Second, national and regional support programs for enterprises, which could serve as a further source of finance for the project, are mainly tailored to the support of major technological innovations and usually do not cover crafts and trade, where product innovations and incremental product improvements are the more common forms of innovation.

Impact and effectiveness

The existing Gewerbehöfe have a high public acceptance in Berlin and for most of the post-war period, in which these have been supported by government funds, they were also seen as an effective measure to support crafts enterprises in the city. In addition, the Gewerbehöfe are also a success from an urban planning perspective, as many of them have an historic value (mostly Wilhelminian style): buildings that could probably not have been preserved in a time when demolition was customary if a building had not what was seen as an appropriate use.

Furthermore, the fact that the GSG today still operates a number of the Gewerbehöfe and thereby provides substantial space to enterprises in the city is evidence of their economic viability. Nonetheless, for the initiative it is still too early to report concrete results as it is still in the initial phase.

4.3 Bouwmeester Maître Architecte, Brussels

Key facts

Promoter and/or key actors

The Region of Brussels

Dates

Since 2010

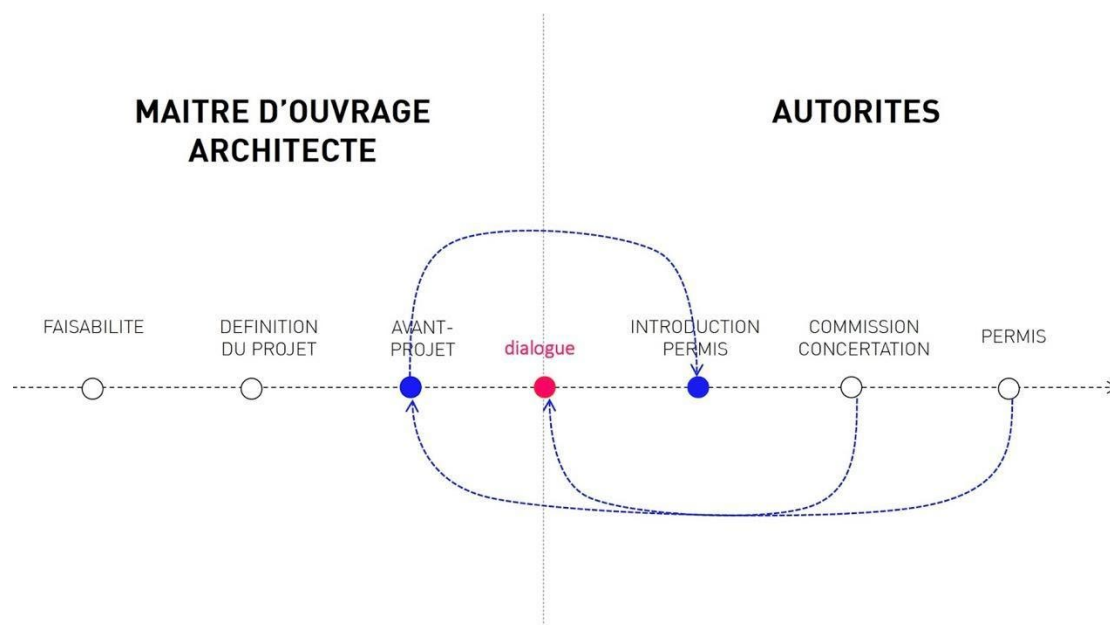
Location

The Region of Brussels

Typology

Introducing a mediator and facilitator in development processes for projects that have a considerable urban impact on the city, in order to promote qualitative design and a better integration in the city of productive areas.

Figure 21: The role of the BMA, within the scope of a project.



Source: www.bma.brussels

The project in a nutshell

The Bouwmeester Maître Architecte (BMA), the Brussels' Chief Architect, is a mediator and facilitator in development processes for projects that have a considerable urban impact on the city. The BMA 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 been contributing to translating political ambitions

and legal conditions for new mixed-use buildings, industrial intensification projects and economic development sites.

The problem addressed

Cities with market-oriented economies do not necessarily deliver projects that benefit the local economy, and which fit into the urban context. This is not necessarily a question of the developers, both public and private, not wanting to contribute to the economy. It is a matter of decision-making and development often being decentralised and not having suitable guidance or support in the development process, from concept to implementation.

Many cities have implemented solutions, such as design review bodies, which help to protect scenic quality or help moderate urban design principles. Some cities have chief architects that are responsible for designing and developing significant projects or infrastructure. In Flanders, for example, the chief architect (the Bouwmeester) which has been in existence since the 1990's plays predominantly an agenda-setting role but also facilitates competitions.

The solution proposed

In Brussels, the mission of the BMA (the chief architect and the support team) is to advance Brussels' urban development ambitions. This relates to the quality of urban space (particularly urban form and the public realm), both architecturally and in terms of urban planning in the Brussels-Capital Region.

The chief architect has a five-year term and is selected in a similar fashion to a festival curator with a vision the role should play for the upcoming term. The chief architect is financed publicly but retains independence from the mandate of public institutions and the opinion of elected officials. 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).

The role involves three main tasks:

1. Competitions. A technical support to run architecture and urbanism competitions and to increase the design quality of projects through competitions aimed at being open and transparent. The BMA helps in a number of ways. Firstly, the BMA can help define the ambition of the project, particularly from the perspective of spatial ambition. Secondly, there are standard templates regarding public and private procurement (public projects above €8500 need to follow public tendering procedures which can be exhausting for local public authorities). Finally, the BMA can support through the competition process, in terms of communicating the competition through their newsletter, through phasing, defining selection criteria and reporting. Neither public nor private actors are obliged to involve the BMA in their competitions yet doing so can build stronger credibility to the project, before large investment has been made.

2. Research by design. A service to explore feasibility and test the capacity of a site before a project is defined. This is particularly important to avoid developers, both public and private, from investing too much time and effort into a project if it will be contested during the design review process. Furthermore, the BMA helps explore design solutions that are best suited to their contexts. This is particularly relevant for projects on industrial sites that adjoin residential areas or are highly exposed to the general public. More recently, the BMA has been involved with mediating design processes to support (particularly private) developers with exploring the most suitable solutions for mixed use or industrial intensification development particularly within the context of a regional project called the Canal Plan.
3. Design review. An independent review of projects that have an impact at the scale of the city (particularly public projects and large public or private buildings).

Figure 22: Port Sud Beacon along the canal.



fig. C-E



Source: https://bma.brussels/wp-content/uploads/2017/03/bMa_EN_24.09.2014_Preview.pdf

The actors involved and their role

The BMA holds an ‘independent’ facilitation role within the public institutional landscape within the region of Brussels and the relationship that both public and private organisations have with the BMA is largely voluntary.

The BMA does not fall under the direct mandate of any of the region’s ministries yet provides advice up to request to many of the ministers that are involved in spatial development such as environment, mobility, waste, the port, education, urbanism and heritage. Likewise, both public and private organisations are not obliged to engage the BMA, however doing so evidently improves the legitimacy of the urban planning process. This gives the BMA ‘soft power’ within the urban development landscape in Brussels.

There are four main stakeholder groups. Firstly, the regional institutional actors, who are often responsible for larger urbanism projects. Secondly, the local authorities (in Brussels there are 19 municipalities), which are responsible for some public infrastructure (like schools and public space) and must approve any development projects occurring within their territory.

Place-based character of the project

There are many examples of chief architects available world-wide, but the BMA provides a particular role as an intermediary within a highly complex socio-political landscape. This complexity forces the BMA to use soft power and act as a facilitator or moderator to translate policy and development ambitions into a project that fits into its local and regional context. Cities with less fragmented planning or top-down development approaches may not see the role of the BMA as necessary.

Conditions for replicability and knowledge transfer

Cities that require practical solutions for improving urbanism, support with the development process or legitimacy in creating design competitions will find the BMA to be very useful. Much of the BMA can be easily replicated:

- The BMA’s tools, essentially the competitive tendering documents, are freely available and can be easily adapted to other contexts (particularly where legal conditions for tendering are different).
- The team structure and competencies can be easily translated to other contexts.

Impact and effectiveness

The BMA’s role in Brussels has radically changed the culture of commissioning architecture and urbanism, encouraging younger risk-taking organisations to compete fairly with large and

established organisations. The capacity of the BMA to constructively explore design conditions, through their research by design service, is especially useful for negotiating with developers on sites where planning conditions can be widely interpreted – particularly the case for mixed use projects.

What constitutes the BMA's strength and weakness is in its use of soft power, whereby the role helps facilitate or mediate development, but is not involved in developing projects from scratch.

4.4 Citydev.brussels

Key facts

Promoter and/or key actors

The Region of Brussels

Dates

Established in 1974

Location

The Region of Brussels

Typology

Publicly owned development agency, at the scale of the Brussels Capital Region, helping in driving economic planning.

Figure 23: NovaCity Sud, a future mixed use project by architects Bogdan & Van Broeck, DDS+ et Eole with 7.600 m2 of economic space.



Source: www.citydev.brussels

The project in a nutshell

Citydev.brussels (here referred to simply as Citydev) is a publicly owned development agency that operates at the scale of the Brussels Capital Region (referred to here as Brussels). It helps to drive economic planning and is involved in area development, innovation, matchmaking opportunities, investment and to some extent community engagement.

The problem addressed

Private developers can be slow to adapt to new planning conditions or misinterpret planning ambitions. This is particularly challenging for planning regulation that aims to increase density in industrial areas or mix uses.

Developers, particularly those experienced in housing or commercial space, are often those interested in and most able to finance mixed use development projects. However, these developers generally have little experience with mixed use projects that involve activities with high potential for conflict. These developers are also most inclined to prioritise the most profitable project rather than find the most suitable solution for the site which can mean they would rather avoid industrial activities (either through challenging land use planning or simply pricing industrial activities out of the market. Powerful and convincing developers will furthermore use political channels to abandon industrial or mixed-use activities, in favour of housing or commercial activities, with convincing arguments regarding increased job density, affordable housing and higher paying work. Essentially this creates tension between planning and development.

Cities that are interested in developing functional mixed-use activities need champions to showcase how mixed-use and new industrial intensification projects can be successfully developed in order to not only challenge market trends but also to show leadership. A public-interest company provides the vehicle for leadership and risk-taking.

The solution proposed

Citydev is a publicly owned company that is involved in three kinds of development and active across the Brussels Capital Region. Firstly, it aims to provide space, particularly for key workers by developing affordable (subsidised) housing aimed at keeping key middle-income families within the region. Secondly, it aims to attract and retain industrial, semi-industrial, craft and service companies with high added value in the region by offering real estate infrastructure (land or buildings) at attractive conditions and prices. More recently, the company has begun developing mixed use projects based on new regulation allowing for mixed use in a number of key areas across the region.

As a publicly owned company, Citydev helps to enact government policy and best practice. It provides a pioneering role in developing new building typologies and implementing new construction standards (for energy, water, waste...). This is really important for policy makers that see a long lag time between developing and passing policy and the moment where the policy is enacted and where it has been applied.

For example, a new mixed-use development policy was enacted by the government in 2013 with first projects being conceived since 2018 and will be likely delivered by 2023 but will take

until at least 2026 before the true impact of this policy can be properly assessed. With Brussels' experience through Citydev, hands-on experience developing complex inner-city projects can be fed back to policy makers and planners in dealing with private developers that are now exploring mixed-use projects for the first time.

Citydev also is mandated with delivering public policy. Affordable workspace for foundational activities (such as food production) help to ensure some manufacturing can remain local. Brussels mandated Citydev to develop and explore Fab Labs, implementing three projects. More recently, Citydev will be hosting urban agriculture projects on a number of their sites to enact policy on local food production (following the Good Food plan).

Figure 24: RVB tap manufacturer owns a 40-year lease for their 3000sqm factory on a Citydev site.



Source: Adrian Vickery Hill.

The actors involved and their role

Citydev is owned by the Region of Brussels, but functions under a private structure with a public mandate. This is referred to as a QuaNGO – a quasi-non-governmental organisation.

The board of 24 administrators is presided by representatives of a number of public and private organisations including: six members designated from the region of Brussels, six members designated by the Brussels' 'conference of mayors' and the remaining 12 designated by organisations representing employees (such as unions) and employers (such as chambers of commerce). Furthermore, the general assembly is represented by:

- 22 appointed by the Brussels-Capital Region.

- 26 appointed by the Conference of Mayors of the Brussels-Capital Region, with at least one member per municipality.
- 24 appointed by the representative organisations of the employees represented in the National Labour Council.
- 24 appointed by the representative organisations of employers represented in the National Labour Council, including 11 members appointed by the middle-class organisations represented in the Economic and Social Council of the Brussels-Capital Region.

Place-based character of the project

Citydev was founded in 1974 as the Development Society for the Brussels Capital Region which has allowed it the opportunity to establish a healthy real estate portfolio. The company has been fortunate in being established in a city that has undergone a significant amount of redevelopment over the last five decades, from one of Europe's most industrial cities to now one of Europe's least industrial large urban centres. Furthermore, the Belgian state has some land acquisition rights that give an organisation like Citydev advantage over the market. This has meant that Citydev has been created in favourable conditions, however these are not inherently defining factors in its success and should not limit other cities from seeking inspiration in the organisation.

Conditions for replicability and knowledge transfer

The Citydev model is highly replicable:

- In 2019, the organisation had €91mil active funds and ~€500million passive assets, which had been accumulated over 45 years. This may appear to be a hurdle unless a healthy starting capital is found.
- The governance model is highly replicable, particularly in terms of the membership of representatives of both public and private organisations.
- There are many other examples of public development agencies, but there are few examples of public development agencies that are involved with the development of industrial assets.
- Cities looking to replicate Citydev as a publicly owned company, should have the means to invest in or own such a company. This could be a limiting factor; regions are limited or forbidden in doing so. A public institution is rarely a suitable structure as it can result in conflict of interest emerging, it can be harder to hire suitable staff (in competition with the private sector) or fire unsuitable employees, while it should be foreseeable that the company is exposed to financial risk which should not bankrupt a public institution.

Impact and effectiveness

Citydev is a relatively medium sized developer by market standards but is large enough to be able to commission and finance projects that have a significant impact on not only the neighbourhood level but also on the regional housing market. Due to their governance structure

and the high level of local accountability (refer to the list of administrators noted above), Citydev's projects often showcase strong urbanism principles, new technology and good public space interventions. These projects can be used by public authorities to encourage (or force) private developers to improve standards.

Mixed use and industrial development are certainly two of the areas where Citydev has shown its capacity to provide leadership. A new mixed-use regulation was launched in 2015 which allowed mixed use development on a number of strategic former industrial sites. The zoning regulation was highly contentious and without reliable local precedents (local developers have little experience with mixing housing and industrial) and therefore Citydev helped to test some of the first development projects.

4.5 Fiscal compensation at metropolitan level, Bologna

Key facts

Promoter and/or key actors

Città Metropolitana di Bologna (Bologna Metropolitan City)

Dates

2020

Location

Bologna, Italy

Typology

Fiscal tool to support territorial cohesion, within the Territorial Metropolitan Plan and Strategic Metropolitan Plan Bologna 2.0

Figure 25: Covers of the strategic plan of Città Metropolitana di Bologna.



Source: <https://www.ptmbologna.it/>

The project in a nutshell

For the first time ever in Italy, the new territorial plan of the Città Metropolitana di Bologna (currently in the phase of formal approval, November 2020), foresees the possibility to share at metropolitan level the fiscal revenues generated by urban transformation projects at municipal scale. The compensation fund will be managed by the Città Metropolitana and used to promote

urban regeneration projects, infrastructural programs and policies in less competitive territories. Metropolitan cities are important recently instituted institutional bodies, but not supported by a fiscal levy. The fund, with an estimated value of 10 million euros a year, will include shares of the revenues equal to 50% of the secondary urbanization charges and will consistently support the capacity of action of the metropolitan government towards territorial cohesion.

The problem addressed

Metropolitan cities in Italy, introduced in the early 90'es have become operative, after a long debate and legislative process, thanks to an uneven convergence between the 2014 Delrio Law and the National Operational Programme PON METRO concentrating the ISUD resources on metropolitan cities. In fact, they are supposed to become a relevant vehicle to territorial cohesion (MIT, 2012). Nevertheless, a recent research work produced by OECD, in 2019¹⁰ has highlighted how metropolitan cities in Italy are far from displaying their potentials, both in terms of competences and powers, agency and resources due to a number of factors, among which the institutional fragmentation provided by a high number of municipalities, competition and lack of cooperation with the regions and the biggest cities, the lack of resources (they are contributing to less than 1% to the public expenditures). Therefore, despite big expectations towards a new governance capacity able to address the problems of large urban areas in Italy, their capacity of action is quite reduced. Indeed, many of the metropolitan areas and urban regions they should support are experiencing relevant processes of economic change and restructuring, which are producing accelerated growth and competitiveness, but also growing disparities.

The solution proposed

Città Metropolitana di Bologna, in the process of developing its new territorial plan, has introduced the so called "Fiscal compensation Fund". This consists in the possibility to share at metropolitan level the fiscal revenues generated by urban transformation projects at municipal scale. It is based on the Territorial Equalization planning principle and aims at building equity and effectiveness in the territorial policies with wider territorial contexts, through an equitable distribution of the costs and benefits connected to the design of territorial policies and project, trying to reduce the negative effects of a blind competition between municipalities.

The compensation fund is to be 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.

¹⁰ OECD, 2019, Studi economici dell'OCSE, Italia, Aprile 2019

The compensation fund will be managed by the Città Metropolitana and used to promote urban regeneration projects, infrastructural programs and policies in less competitive territories. Metropolitan cities are important recently instituted institutional bodies, but not supported by a fiscal levy.

The fund, with an estimated value of 10 million euros a year, will include shares of the revenues equal to 50% of the secondary urbanization charges and is meant to consistently support the capacity of action of the metropolitan government towards territorial cohesion.

In particular the aim of the fund is to support new productive settlements and to strengthen inter-municipal cooperation. It aims at developing territorial cohesion and reducing the weakness of small inner municipalities and territories in economic competitiveness. It also aims at supporting unions of municipalities to develop strategies and visions towards the future.

So far it is proposed at metropolitan scale, but it is part of a wider discussion on the possibility to extent it on a regional scale, supporting the development of the most competitive areas (along a highly infrastructure corridor) and the less accessible and rich (in the inner areas of the Apennine Mountains, southern to the corridor, in the Plain agricultural areas in the northern).

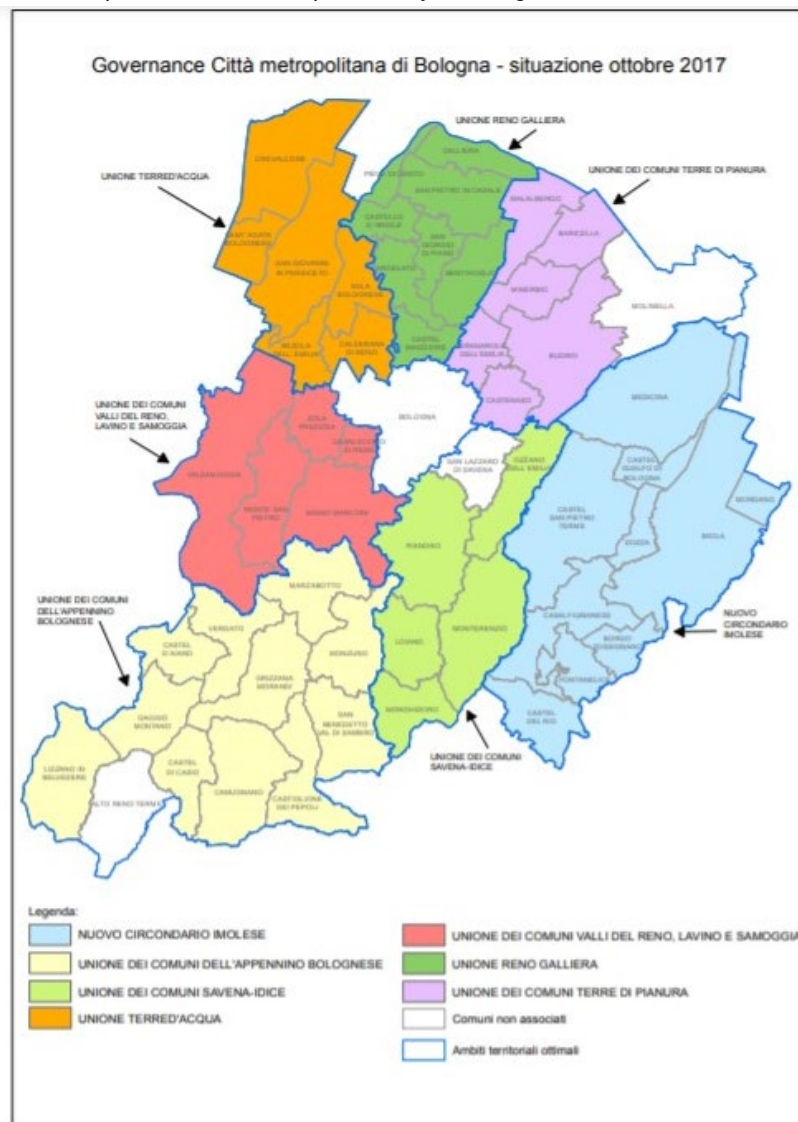
Its introduction is based on the reference to comma 3 art. 15 Law n. 20 del 2000, according to which in the occasion of the implementation of "territorial agreements" (Accordo Territoriale), it is possible to introduce forms of fiscal territorial compensation (in Italian "forme di perequazione territoriale"). This was first experimented by some voluntary forms of intermunicipal cooperation in the early 2000, and in particular, in cases related to the management of new productive areas. Now the Plan goes further in this direction and introduces the idea that the Accordo Territoriale is the tool under which the most relevant decisions under the metropolitan and supra-local perspective should be defined, which means that those decisions have to be subscribed by the municipalities involved as well as by the unions of municipalities they are part of (all municipalities in the Emilia Romagna region are part of a union of municipalities). This tool is especially meant to promote strategic projects for the metropolitan cities and in particular for the management of new productive sites (APEA, see IC 4.1) and to favour the settlement of new industrial activities in strategic areas.

According to the new Territorial Metropolitan Plan (PTM, Art. 5.3) the fund will be dedicated to support those unions of municipalities or municipalities which are assigned limited further urbanisation capacity, in order to compensate the limitation on fiscal revenues produced by the norm of the Plan which favours urbanisation in more accessible, infrastructure urban areas (metropolitan poles). The funds collected from the latter, will be made available to the first, every year, in order to be used for initiatives of urban regeneration, also in relation to former industrial areas. The Metropolitan Plan introduces the implementation of the fund to be accompanied by a preliminary feasibility study of its functioning.

The actors involved and their role

The major actor involved in the design of this policy tool is the Metropolitan city of Bologna, which has decided to introduce it within its Metropolitan Strategic Plan and Territorial Metropolitan Plan. At the same time the tool, being a device to support Territorial Agreements (Accordi Territoriali) directly involves Municipal administrations and the Union of Municipalities they are part of. Regione Emilia-Romagna over the last decades has invested steadily on the construction of forms of intermunicipal cooperation and in particular the Metropolitan city of Bologna is now subdivided in 7 Unions of Municipalities, which are the main interlocutors to the metropolitan city.

Map 12: Union of municipalities in the Metropolitan City of Bologna.



Source: https://www.cittametropolitana.bo.it/portale/Associazioni_di_Comuni_1

*Legend blue= new Imolese district; the areas highlighted in yellow, light green, orange, pink, dark green and violet are all union of municipalities corresponding to different zones; white=non-associated municipalities; blue border=optimal territorial areas.

Place-based character of the project

The Città metropolitana di Bologna can count on a history of institutional and political investment on the metropolitan dimension. The concept of Bologna as a Metropolitan city was already formulated in the early sixties, leading to the first attempts of intermunicipal planning (Piano Intercomunale di Bologna, 1967) and the institution of an administrative union called “Comprensorio”. The territorial regional plan “Piano Territoriale Regionale” (PTR), approved in 1990, preferred to invest on the regional polycentric territorial structure, rather than on the metropolitan institution, but in 1994 when an agreement between Municipalities belonging to the Province of Bologna was signed and led to the voluntary creation of a metropolitan conference of Mayors. Since then, the status of "metropolitan city" was assigned to Bologna by the PTR approved by the Emilia-Romagna Region in 2010 (and then finally confirmed by the national law in 2014). Today the Metropolitan City of Bologna is made of 55 Municipalities grouped in 7 “unions”. The overall image and perspective of the new metropolitan city is currently driven by the “Piano Strategico Metropolitan di Bologna 2.0” (Bologna Metropolitan Strategic Plan 2.0¹¹) which has further invested in a strong tradition of intermunicipal cooperation and metropolitan vision, also based on a high involvement of local stakeholders and political alignment between different levels of local administrations.

Conditions for replicability and knowledge transfer

- Strong political leadership at metropolitan level, interested in promoting an integrated regional strategy
- Strong investment on intermunicipal collaboration by the metropolitan city as an institution able to enhance cooperation and deal with the threats to territorial cohesion needs to build on the capacity to share a vision and build a clear alliance among municipalities
- Strong public administration expertise and capacity to invest in innovation: the proposal is generated in a context in which the public officers and civil servants are important vectors of collaboration and innovation
- Collaborative and cooperative attitude by the municipalities, willing to share the metropolitan vision promoted by the Metropolitan institution, but also actively experiencing on their own the pros and cons of forms of intermunicipal cooperation.

Impact and effectiveness

The expected impact and effectiveness of this tool is to be seen in the next ten years: in fact, it has been recently introduced in the new metropolitan territorial plan under approval and a public discussion is ongoing at the moment. Most of the municipalities so far have demonstrated a

¹¹ https://psm.bologna.it/Engine/RAServeFile.php/f/documenti/Relazione_PSM_2.0.pdf

strong interest in it and the Mayor of the city of Bologna, that is also the President of the Città Metropolitana di Bologna is supportive of this tool. The first experimentations in some municipalities of the Regione Emilia Romagna during the last decade had generated interesting results but needed wider legal support and its introduction at metropolitan level is expected to reinforce its role.

4.6 Małopolska Regional Development Agency, Poland

Key facts

Promoter and/or key actors

Małopolska Regional Development Agency

Dates

Since 1993

Location

Małopolska Region, Poland

Typology

A regional development agency with the mission to attract and support investments and increase the competitiveness of the local business sector.

Map 13: GDP per capita in the districts of Małopolska Region, to the Polish average (2018).



Source: *Urząd Marszałkowski Województwa Małopolskiego Departament Nadzoru Właścicielskiego i Gospodark (2020).*

The project in a nutshell

Małopolska Regional Development Agency has been active for more than 25 years, being established to increase the competitiveness of entrepreneurs from the Małopolska Region

(area surrounding Krakow).¹² The agency provides both the hardware (space) and software for business development (skills, funding and support).

It aims at supporting 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.

The problem addressed

Małopolska Region is one of the main economic centers in Poland with a population of 3.36 million people. The region's capital is Krakow, the second largest city in Poland and home to 779,000 people. The region has good international transport connections, it is a well-known educational and research center, whereas more traditional industries also significantly contribute to its economy.

The Krakow Regional Development Agency, as the predecessor of Małopolska Regional Development Agency (MARR), was established in 1993 by the Krakow Voivodeship and the Polish Investment and Trade Agency (a central government agency) in order to support the privatisation and restructuring process of large former socialist enterprises. Because of the administration reform of 1999, the regional system was changed, and the former 49 smaller regions were merged to 16 larger regions in Poland. The reform was carried out as part of the decentralisation process of the administrative power but also the EU accession process fuelled the regionalisation in Poland in order to create a meso-level governance system that is able to efficiently absorb the EU funds. As a result, Małopolska Region was created, constituted by the former Krakow region and six other regions. The territorial competence of the development agency was also enlarged to the whole area of the Małopolska region. (Büttner, 2005)

After 1989, the newly formed democracies of Central and Eastern Europe had to face a deep economic crisis largely stemming from the inefficient socialist industries. Krakow Region, as one of the main heavy industry centres in Poland, was especially affected by the problem of bankrupted large industrial companies, e.g. steel works, car factory, food industries, and was in need for deep restructuring of its economy: bankrupted companies needed to be liquidated, post-industrial areas to be revitalised, and new investors, particularly foreign ones had to be attracted also as a part of privatisation of former state-owned economy.

¹² If not indicated otherwise the main source of information for this description is the website of the Małopolska Regional Development Agency. www.marr.pl

The solution proposed

The main task of MARR is to contribute to the implementation of the Development Strategy of the region, namely, to promote the business development of the region through different activities. To that end, the agency has developed its own strategy. It plays a vital role in assisting the regional business sector to absorb the available EU funds. The MARR defines the main interventions through which they can contribute to the implementation of the regional economic strategy. The agency owns three business parks in Krakow with office, commercial, logistic and warehouse facilities, which were acquired during the 1990's. MARR also has shares or stocks in 30 companies, most of the shares were acquired by investments funded from EU funds. A significant part of MARR's revenue comes from the rental income related to letting or leasing of its own real estate. (Małopolska Agencja Rozwoju Regionalnego S.A. p. 8-13.)

Key areas of activities:

1. A main task of MARR is to promote the region and attract investors to the region both on national and international scale. MARR owns an extensive database about the developable lands in the region, which serves as a base to provide tailor-made offers for potential investors. Offers also involve links to potential local business partners including the R&D sector, financial solutions, available EU funds, labour market intermediation and consultancy services in matters related to setting up a business locally. The agency is the leader of the "Business in Małopolska" project that has set up an export-import services system in order to assist the market growth of local businesses.
2. MARR's business consulting activities cover a comprehensive range of services for new and existing enterprises with a special focus on micro, small and medium enterprises. MARR helps to set up new businesses, develop business plans and marketing strategies, introduce new products, and get access to marketing and distribution channels. It provides legal, financial and IT consultancy and relevant training for both those who want to set up their new business or for new economic activities of existing enterprises.
3. MARR has also been active in the field of financial services since 2001. It has created the Małopolska Loan Fund with competitive products on the market and keeps on diversifying its products according to the newly emerging needs of its clientele. It also provides preferential loans using national and EU funds to finance, among others, innovative projects and energy efficiency related investments. Its clientele covers SMEs but also NGOs and housing communities. MARR has started to expand its activities including financing to the social economy in order to help establish more social enterprises. The agency runs a seed capital fund (called Capital Investments) as well through which it invests in starts-ups with innovative ventures. (Małopolska Agencja Rozwoju Regionalnego S.A. p. 31-32.)
4. MARR is also active in linking the R & D sector and industry as it has a wide cooperation network with local universities and research institutes. Its recent initiative aims at an early intervention into R & D development with the involvement of the business sector in order to commercialize innovative ventures.

5. Employment support related activities include mediating between job seekers and companies searching for new staff by offering tailor-made solutions to both sides. Training, professional internships, carrier consulting is provided for job seekers.

Figure 26: Poster of Małopolska Innovation Festival, October 2020.



Source: *Business in Małopolska*, September, 2020. NR. 16.

The actors involved and their role

The Małopolska Regional government is one of the founders of the agency and it holds 88.8% of the company's stocks. Through its regional development strategy, it defines the directions of MARR activities, but it also directly participates in some of the agency's projects. The above referred "Business in Małopolska" project is a joint initiative of the agency (who leads the project), the regional government and the Polish Investment and Trade Agency and Krakow Technology Park¹³.

The Polish Investment and Trade Agency works together with the MARR (just like with other regional development agencies) in attracting foreign investors and assisting businesses to

¹³ The Krakow Technology Park is a special economic zone, it was established by the Municipality of Krakow, the State Treasury, several universities and a steel works in. Since then, the Technology Park opened several other premises in the region. <https://www.kpt.krakow.pl/en/>

expand their export activities abroad. MARR also cooperates with the region's local governments to develop their local economy and use EU funds for local development activities.

Universities and research institutes are increasingly gaining importance in the agency's partnership network as the regional development strategy is putting more focus on innovation and high-tech related investments.

Place-based character of the project

The region, especially its capital, Krakow and its surroundings, being a cultural, educational and research centre and at the same time having substantial economic and industrial capacity has had a high potential to attract foreign investments. The favourable geographical position of the region and good international transport facilities also contributed to its attractiveness.

The developed and diverse educational system could provide the necessary human capacity both in terms of skilled workers and highly educated professionals.

The strong cooperation among local governments, especially among Krakow and its surrounding communes, could serve as a solid base for the joint regional marketing strategy. The MARR's own assets generated in the economic restructuring process in the 1990's could ensure a long-term economic stability for the agency.

Conditions for replicability and knowledge transfer

- Long term political commitment of regional authorities to play an active role in economic development seems to be important, but it is also necessary that the administrative system in the country ensures sufficient competence on regional level in forming economic development policy.
- Cooperation among local governments is important in order to develop a joint economic development strategy and to support the agency in its implementation.
- Flexible conditions for the operation of the agency seems to be a key factor in its success in order to enable it to use a wide range of tools to attract and support business activities such as financial tools, marketing, training, compiling databases, economic analysis. The agency can combine various resources (own revenues, EU and national funds) to provide comprehensive services. MARR having its own assets can generate substantial own revenues that ensures the agency's independence and stability in the long run.
- The agency should have a sufficiently large human capacity with a multidisciplinary professional background in order to deliver the tailor-made diverse services to businesses and absorb the available development resources.

Impact and effectiveness

Since its establishment, the MARR has become the regional leading actor in business development. By the beginning of the 2000's substantial foreign direct investments already

went to the region contributing to the transformation and diversification of the region's economy: service sector particularly financial services, and light industries (e.g. plastics, cosmetics, life sciences) gradually became more important than heavy industries. The region could also modernize the remaining heavy industry and successfully start to shift toward the knowledge intensive industries and innovation related activities. In this process not only the foreign investments but the developing local SME sector have played a crucial role as well. The ICT sector development is a good example for the transformation, 79 thousand people working in the IT sector in Krakow by 2019.

Despite the continuous modernization of the region's economy, there is still a huge gap between the urban centres and the rural areas inside the region, which also appears as a main challenge in the regional development strategy.

The MARR as a member of a broader network of regional stakeholders (regional authorities, local governments, universities and research centres, business, industrial and innovation parks, clusters, SMEs) has had a substantial role in forming the new economic landscape of the region and the related development policies.

4.7 Strategiedialog Automobilwirtschaft (Strategic Dialogue on the Automotive Industry – SDA), Germany

Key facts

Promoter and/or key actors

Baden-Württemberg state government, Germany

Dates

2017- ongoing

Location

Baden-Württemberg, Germany

Typology

Government state initiative promoting cooperation among public and private actors to support industrial activities.

Figure 27: The steering committee.



Source: Staatsministerium Baden-Württemberg, www.stm.baden-wuerttemberg.de

The project in a nutshell

The Strategiedialog Automobilwirtschaft "Strategy Dialog on the Automotive Industry" (SDA) in Baden-Württemberg (Germany) is a government state initiative promoting interregional cooperation through cross-collaboration between public, industry, research institutions, and civil society. It aims to support industrial activities and stimulate innovation in the automotive sector through both working practices and formal planning agreements.

The problem addressed

Baden-Württemberg's automotive industry is a pillar of the state's economy, both in terms of growth and wealth, employing more than 440,000 people. More than any other industry, it is a driver of innovation, but it is also searching for identification. Indeed, the industry is facing some crucial challenges: electrification, digitization, autonomous driving, and flexible user concepts offer new opportunities, but, at the same time, they are potential threats.

Moreover, our society is facing the challenges imposed by climate change. A reliable and environmental-friendly energy supply based on renewable energies is the prerequisite for climate-compatible mobility. Since the traffic and transport sector still depends on more than 94% of fossil fuels, the automobile industry is developing to achieve a green transition.

Given the centrality of the automobile industry in Baden-Württemberg's economy in terms of technological leadership, economic power, and employment, there is a need to involve all the regional stakeholders in discussing future perspectives.

The solution proposed

The SDA initiative involves all the relevant stakeholders in the region in an institutionalized collaboration to discuss state of the art and the future trends of the automotive industry in the next years and develop projects, policies, and concepts to support and shape the transformation process successfully. The goal is to address the need for climate-friendly mobility, use a comprehensive approach, and encourage potential innovations across industries. The strategic dialogue across the stakeholders is structured according to six main topics covering the entire value-chain of the automotive industry: (i) research and development, production and suppliers; (ii) sales and aftersales; (iii) energy; (iv) digitization; (v) traffic solutions; (vi) research and innovation environment.

Two working groups were created to discuss the first pillar. The "technology, innovation and value creation" working group defines measures that ensure the long-term preservation of system competencies and innovative strengths in the automotive industry. It also identifies priorities for industrial development and needs for political and regulatory framework conditions. The "skilled workers and qualification" working group defines, among other things, public and internal measures to prepare current and future employees for the expected changes in the labour market.

For the second subject area (sales and aftersales), the working group "retail and workshops" identifies future changes in sales, services, and aftersales by analysing the effects of new drive technologies on the sales channels and the processes resulting from digitization.

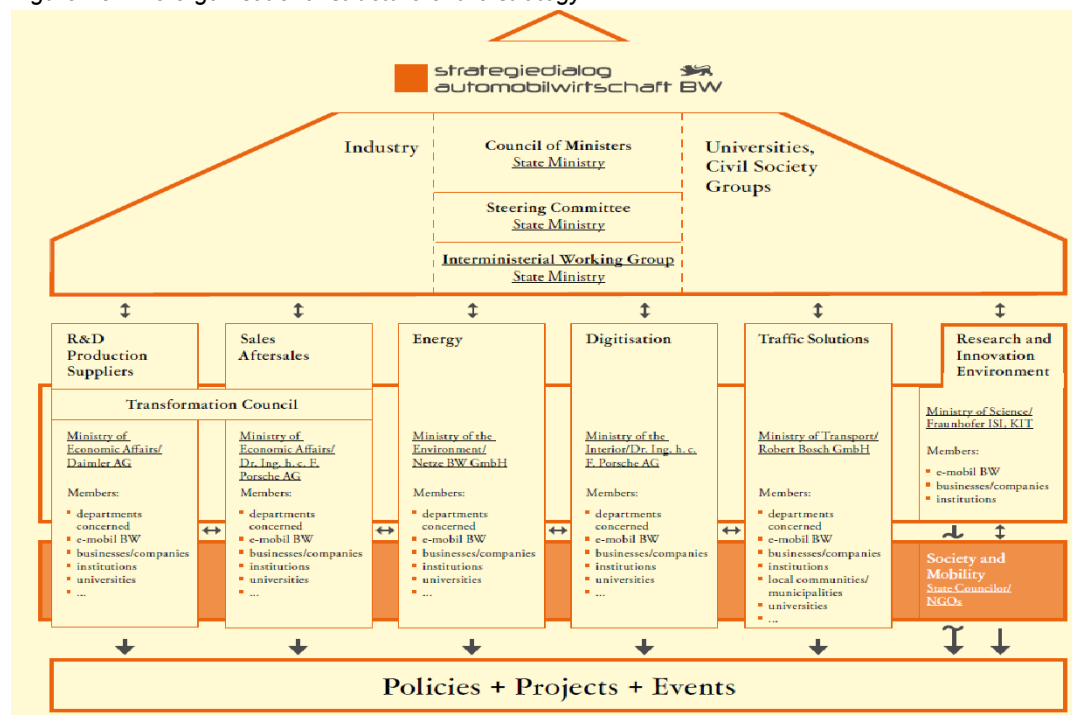
The working group "new mobility: business models and value creation" combines the first and the second subject areas by analysing the value creation and job potential of new business models against the background of crucial developments in mobility such as inter- and multi-modality, car-sharing, ride-sharing, and big data. This working group combines electrification, digitization, automation, and networking to create systemic mobility services for customers.

The third thematic pillar (energy) discussion focuses on future mobility, which will require the supply of new energy resources for the transport sector, different from today's petrol-centred model. The aim is to investigate how energy can be made available for future mobility solutions, to what extent, and in which places.

The fourth subject area (digitization) crosses all the other pillars. The discussion on the fifth topic (traffic solutions) is structured into three working groups, where the participants examine the climate protection instruments in vehicle technology, various mobility scenarios, and pilot projects, which can significantly advance decarbonization in the transport sector.

Finally, the aim of the last subject (research and innovation environment) is to collect and make synergies among research groups and strengthen the innovation capacity. Therefore, the SDA initiative sets areas of activity, defines strategies, and prioritizes actions to stimulate innovation and provide space for experimentation.

Figure 28: The organisational structure of the strategy.



Source: Staatsministerium Baden-Württemberg, www.stm.baden-wuerttemberg.de

The actors involved and their role

The actors involved in the SDA initiative are the Baden-Württemberg State Ministry, the Ministry of Economic Affairs, the Ministry for the Environment, the Ministry of the Interior, the Ministry of Science, the Ministry of Transport, the municipalities of the region, the automotive industry (Daimler AG, Robert Bosch, Porsche AG, Fraunhofer ISI, KIT), universities and research institutions, the third sector organizations, and the NGOs.

The Baden-Württemberg Ministry of Economic Affairs is responsible for the first subject area (research and development, production, and suppliers) and the second one (sales and aftersales). The Ministry for the Environment oversees the third thematic pillar (energy). The Ministry of the Interior is responsible for the topic of digitization. The Ministry of Transport oversees the fifth pillar (transport solutions and electromobility). Finally, the "research and innovation environment" topic responsibilities lie with the Ministry of Science.

Place-based character of the project

240,000 people in Baden-Württemberg are directly employed in the automotive industry. Also, considering the related industries, which directly depend on the automotive or are working in the supply chain, the cluster provides jobs for more than 440,000 people. The automotive industry has crucial importance in the economy of Baden-Württemberg under various perspectives. First, it is one of the main contributors to the total employment, income, and GDP of the state: automotive manufacturing employs about 6% of the active population in Baden-Württemberg, but its contribution to the wage bill is more than 13%. Moreover, it is hugely export-oriented: automotive vehicles and parts represent the most significant product group in the export statistics of Baden-Württemberg. In 2017 cars and vehicle parts exported amounted to 45.7 billion euros, accounting for one-fifth of total exports. Finally, the automotive industry is one of the biggest innovators in the state. The R&D share of automotive manufacturing amounts to 8.9% of sales, and therefore it is an essential contributor to the international leadership of Baden-Württemberg in R&D.

Conditions for replicability and knowledge transfer

- Institutionalized collaboration helps the automotive industry catch up on what is happening worldwide and develop ad hoc strategies looking at the emerging trends (e.g., the rise of e-mobility).
- Enabling cross-innovation through collaboration between public and private to formulate strategies and policies addressed to a specific industry boosts innovation and encourages knowledge transfer.

- The initiative covers the car industry's entire value-chain to disentangle the transformative process affecting the automotive cluster properly.
- Strong synergy and close cooperation between all the stakeholders of the region, coordinated by the public actors.

Impact and effectiveness

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. For example, this includes 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. Another initiative is the ideas competition for "mobility concepts for an emission-free campus." It aims to develop environmental-friendly mobility solutions on the steadily growing campus areas of Baden-Württemberg universities so that the air can be healthier, the noiseless, and the quality of life better.

Since 2019, the SAFE project has provided a nationwide charging infrastructure for electric vehicles in Baden-Württemberg: every 10 kilometres, there is an electric charging station, and every 20 kilometres a fast-charging station. Besides, the state fleet will gradually be equipped with environmentally friendly vehicles, and the procurement will be centralized.

The project "reFuels - rethinking fuels " focuses on regeneratively produced synthetic fuels that, like e-mobility, represent an alternative to fossil fuels.

Finally, together with the federal government, the state of Baden-Württemberg has also planned two major research projects on battery cells. As part of the "DigiBattPro4.0" project, a competitive production technology suitable for the masses is being developed based on Industry 4.0 principles. The federal government funds the project with 30 million euros, and the state portion is up to 8 million euros. Besides, a "European test and competence centre for batteries and energy storage systems" is planned to be set up in Freiburg. The Baden-Württemberg state wants to support this project with up to 12 million euros. The final coordination with the federal government is currently underway.

4.8 Vienna Adult training and Labour market policy agency - WAFF¹⁴

Key facts

Promoter and/or key actors

City of Vienna

Dates

Founded in 1995

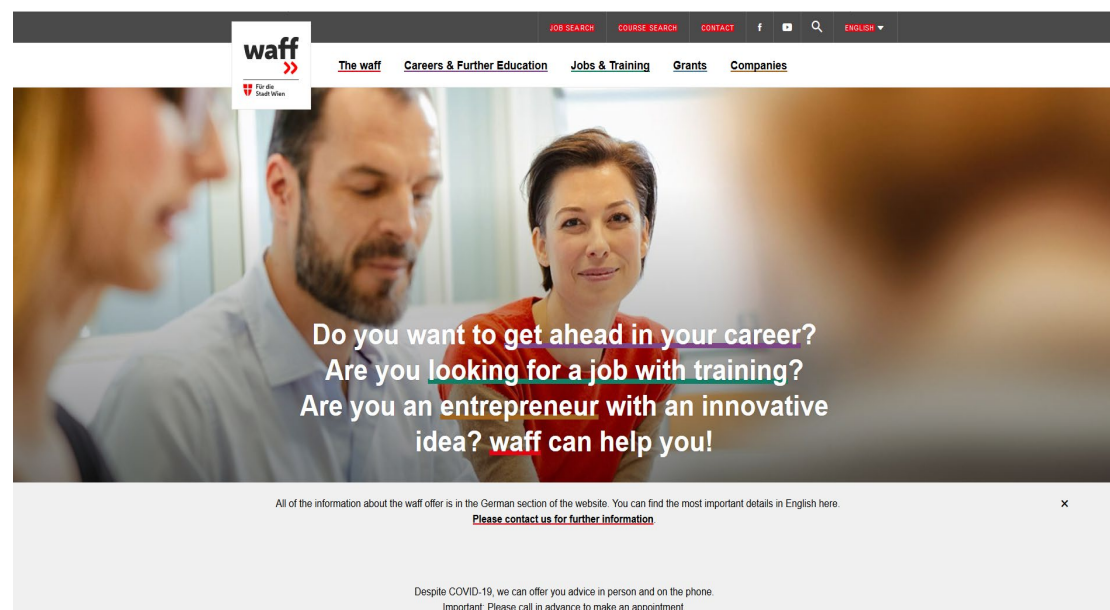
Location

Vienna, Austria

Typology

Public agency dedicated to the administration, development and organisation of city funded active labour market and adult training policies.

Figure 29: WAFF homepage.



Source: <https://www.waff.at/en/>

The project in a nutshell

Dealing with the impact of structural change on urban labour markets is a central policy concern for policy makers in Europe. 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

¹⁴ This case builds on the interviews conducted with Rudolf Hochholzer and Ursula Adam (respectively referent and Vice Director at Wiener ArbeitnehmerInnenförderungsfonds).

address these issues the city of Vienna joined forces with the local social partners to fund an agency dedicated to the administration, development and organisation of city funded active labour market and adult training policies.

The problem addressed

Dealing with the impact of structural change on the labour market has been a major policy challenge for most European cities. Vienna is arguably one of the locations most strongly affected by the shift of labour demand from low skilled to high skilled jobs. On the one hand, in recent decades, due to a combination of technological change and increased competition from lower wage locations in the neighbouring Central and Eastern European countries, labour demand increasingly shifted to high skilled jobs. At the same time immigration both from abroad and within the country also implied that – next to highly qualified labour - a large number of less skilled workers moved to Vienna. As a consequence, in 2019 almost half (46.9%) of the unemployed in the city had only completed compulsory education and the unemployment rate among low skilled worker (with at most compulsory education) was above 10% in the city over the last decade, while at the same time the unemployment rate among those with a completed university education was below 5% throughout.

The low intensity of adult training and severe deficits in life-long learning in particular of low skilled workers in Austria, has been seen as a major impediment to increasing the flexibility of the workforce in reacting to these major shifts in labour demand by numerous studies. Analysts have attributed these deficits in the implementation of life-long learning goals to a rather complicated adult education system, which has led to a further training market that is difficult to understand, in particular for less skilled workers. Also, numerous studies stress that employed workers are a specific target group for the implementation of preventive labour market policy and life-long learning strategies as active labour market policies are mainly focused on the unemployed.

In addition, up until the mid-1990s the federal states of Austria were reluctant to fund regional labour market policies, targeted at their specific needs, as active labour market policy is a responsibility of the central government. This resulted in a situation where regional (provincial administrations) often had little information on and awareness for the specific labour market policy needs of their specific region. This lack of place-based approaches in labour policies and of competent and well-informed institutions to implement such policies was seen as a major deficit in the active labour market policy framework in Austria.

The Waff (Vienna Employment Promotion Fund – Wiener ArbeitnehmerInnenförderungsfonds) represents an example of an institution that administers, designs and organizes tailor-made active labour market and adult education policies in an urban context.

The solution proposed

Faced with increasing labour market challenges the city of Vienna joined hands with one of the local social partner organisations (the Austrian employee federation – Arbeiterkammer) to fund a central agency to administer, develop and organize all active labour market and adult training measures funded by the city. The mission of the agency is “to promote the professional development of employees in Vienna, who are seeking to enhance their skills.” The objective of the Waff are (1) to improve the career prospects of people who work in Vienna, (2) eliminate existing discrimination in the job market, (3) prevent the threat of exclusion from the employment system, (4) provide young people with good vocational training and a successful start to working life, (5) improve the attractiveness of Vienna as a business location, (5) promote equal opportunities for women and men on the job market and to (6) improve the labour market opportunities for inhabitants of Vienna with a migration background. Specifically, the Waff is the only organisation servicing both the employed as well as the unemployed in Vienna.

To achieve these objectives the agency, focuses on specific target groups these are employed and unemployed persons working in Vienna, young people undertaking initial vocational training or leaving school (as part of the Vienna Training Guarantee), Vienna-based companies seeking to employ well-trained staff or wanting to provide better training for their employees and Vienna-based companies that need to reduce staffing levels and want to do so in a socially responsible way. In particular this agency is one of the few public sector actors in Austria that considers employed workers as its main target group. The majority of the training activities founded by waff have a short-term bridging function. In contrast to the Austrian Public Employment Service (PES), that mainly focuses on the job placement of unemployed and (with few exceptions) provides few courses to complete formal educational degrees, the waff also funds programs allowing participants to complete formal education programs (such as the completion of compulsory training for dropouts or completing vocational education exit exams).

The Waff commands an approximate annual budget of € 63 million annually (including the budget for courses and consultancy) from the city excluding additional funding from various EU funded programs (such as the ESF). These funds are used for the implementation of a large number of adult education and active labour market policies in the city of Vienna. These activities inter alia include, the administration of long term training program for employees in firms reducing their staffing levels, the administration of major adult training initiatives of the city of Vienna and/or the local social partner organisations (e.g. the recent so called digi-winner initiative according to which employed citizen of Vienna can receive a € 5000,-- subsidy for vocational trainings in digitalisation), subsidies for enterprise start-ups, subsidies for completing vocational training exit exams and many others.

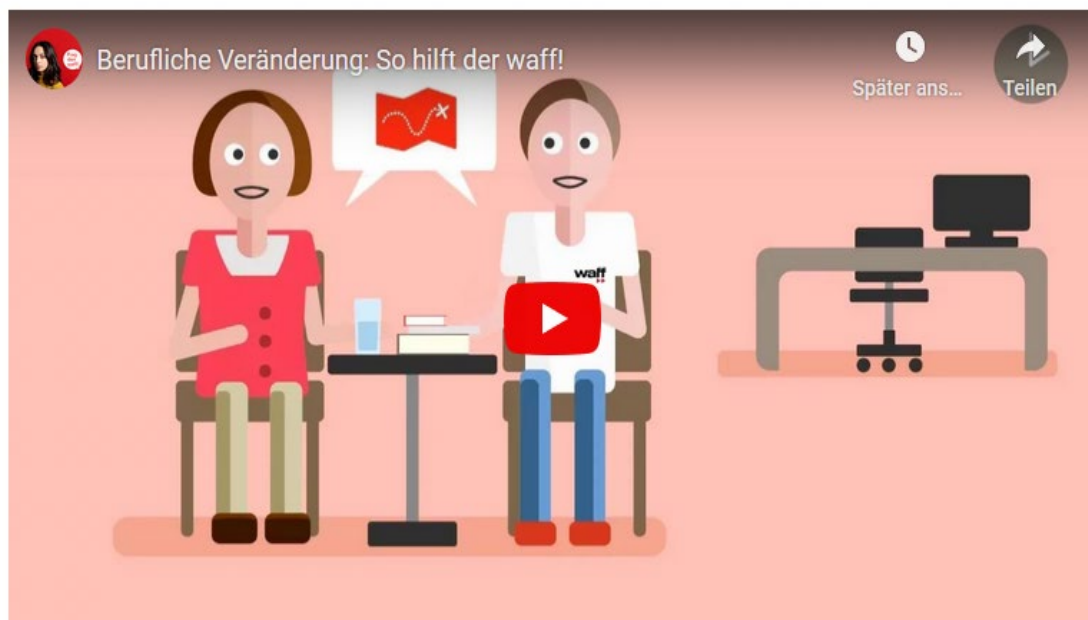
The Waff is also responsible for implementing the Vienna education cheque, under which the city subsidizes further training with maximum support of €3.000 per person. Further notable

measures include focused support for women planning to return to work after their maternity leave and services for enterprises (including the selection and specific training of prospective personnel).

According to the most recent annual report in 2019 the Waff supported 844 enterprises and over 37.000 residents with training and other measures and had contacts and consultation with over 150.000 customers.

Next to these funding activities the Waff also analyses recent trends on the Vienna labour market, repeatedly commissions studies focusing on recent labour market trends and/or specific target groups among the employed or unemployed as well as conducting evaluations of its individual initiatives.

Figure 30: Text advertising support for job changers



Find out more about the further education services offered by waff.

Source: <https://www.waff.at/en/careers-further-education/>

The actors involved and their role

The waff is supported by a fund of the municipality of Vienna based on the Vienna State Foundation and Fund Act. According to its statute, its governance structure consists of a board of trustees, a board of directors and an office. Among these, the board of directors is the most important decision-making body. It consists of representatives of the municipality of Vienna, the Austrian Trade Unions, the Vienna Chamber of Labour, the Vienna Chamber of Commerce, the Vienna Industrial Association, and the regional office of the Austrian Public Employment Service (PES) in Vienna (AMS Wien).

As one of the major active labour market policy actors, the waff also works in close co-operation with the local partner organisations and the Austrian Public Employment Service. To this end it

is involved in regular consultations with these authorities, staff major coordination bodies for conducting economic and labour market policy in the city of Vienna. It is also the organisation representing the city of Vienna in the board of directors of the Viennese PES.

Finally, also the Viennese enterprises are central partners as the waff provides a number of training measures and programs on their behalf. One example for this is a collaboration with the Umbrella organization of the Viennese social institutions to monitor the training needs of their employees.

Place-based character of the project

At the city level the waff's policies are highly place based as they are often initiated as a reaction to specific problems perceived by the local social partner organisations or the city of Vienna, who, next to being central policy actors in the city are also members of the governing bodies of the Waff. Policies are also embedded in a continuous analysis of the specifics of the Vienna labour market situation, that is based either on the waff's own analyses or the analysis of its partner organisations. Further together with its partners the Waff develops specific training and qualification strategies.

At a more local level the waff has also repeatedly been involved in initiating local employment initiatives aiming to motivate local actors and enterprises to contribute to increasing the flexibility and employability in the city and closely co-operates with the Vienna district administrations.

Conditions for replicability and knowledge transfer

The following factors are often named as facilitators for the operation of the waff:

- The long tradition of intensive involvement of social partner organisations in policy making in Austria and Vienna. This – already prior to the founding of the WAFF – has led to a high level of trust between these organisations, that has undoubtedly made it easier to motivate these actors to contribute to the initiative on a long-term basis.
- An increasing awareness of the specific regional labour market problems of the city caused inter alia by the massive structural changes of the 1990s and the high priority given to social and labour market policy issues by the city of Vienna.
- The city's commitment to supporting the employed in Vienna.
- A general move to increasing involvement of regional actors in labour market policies in the 1990s. as this time period was marked by a reorganisation and regionalisation of the Austrian Public Employment Service as well as an increasing emphasis on the regional dimensions of unemployment at the European level.

Impact and effectiveness

In general, the waff is seen as a notable innovation to the labour market governance system due to its strong social partner foundation and because it has resulted in securing sustainable

provincial funds for active labour market policies addressing the specific needs of the Viennese work force as well as contributing to improve the further education possibilities in particular of less skilled employed workers. In addition, the Waff has also been instrumental in increasing the knowledge base on regional labour market challenges in Vienna and has contributed to building important actor networks at a more local level.

One important limitation of the Waff is, however, that its programs are only available to residents of Vienna, such that commuters, who work but do not live in Vienna are not eligible for any of its services. On occasion this has led to situations in which employees of the same firm have rather different access to state funded training support depending on their state of residence.

Projects

5 Micro-scale: projects

The projects collected include examples of new relationship between the city and spaces for production. In general, they reflect the changed conditions under which the city is now able and interested to host productive activities. It is not just a matter of preservation of land. The challenge is related to the promotion of new functional mixes. Productive spaces can live together with creative and cultural activities, as well as residential activities and leisure activities.

This in part can be built on alliances between residents and makers, entrepreneurs and citizens. But it also must ensure avoiding impact with other land uses. To address this, cities can elaborate and experiment new building typologies, design guidelines, design competitions, and launching a design task force of experts (also referred to as a 'quality chamber) serving the city in the dialogue with business and economic actors.

Special attention shall also be given to the capacity of former industrial spaces to adapt to new uses. Their historical identities can play an important role in the regeneration of entire neighbourhoods as well as large infrastructure, like harbours, railway yards and power plants, and food markets and structures. These large establishments can provide spaces for that foundational economy which is considered as a strategic resource for the metabolism of contemporary cities. At the same time, less qualified spaces leftover can host important logistic activities.

In some cases, businesses can also be interested in directly launching urban regeneration activities, but in most cases, brownfields are not conditions for redevelopment. High costs of environmental regeneration, low interest in fringe areas, once central in metropolitan hierarchy and monocultural industrial context, fail to become attractive. In these cases, the role of the public sector is still crucial.

5.1 Brussels' Abattoir

Key facts

Promoter and/or key actors

The Abattoir NV

Dates

Established in 1842 but under current management structure since 1983

Location

The Region of Brussels

Typology

A case for the protection of foundational activities in the city centre.

Figure 31: An aerial rendering of the plan of the Abattoir site in 1910.



Source: Attributed to Eckert & Pflug (Leipzig).

The project in a nutshell

The Brussels' Abattoir is one of the only remaining active urban abattoirs in a European city. The 10-hectare site has evolved into a hub for many kinds of food related activities including processing, sales and one of the city's largest open-air markets. The site is managed through a company established in 1983, invested in by many of the market holders on the site with 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 foundational activities (such as food) within city centres.

The problem addressed

Many cities accept the importance of protecting foundational activities, to ensure that they remain healthy and affordable places to live. 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 can be problematic for employers that depend on low-cost manual labour and problematic for low paid employees that live far away from the accessible jobs provided in sectors such as food or waste management. Furthermore, while the activity may not leave the city, it may become unnecessarily expensive due to logistics or material costs.

Few cities have found ways to counter market forces without providing uncompetitive protectionist measures. However, without some form of protection, certain activities will struggle to stay close to their customers.

The solution proposed

The Brussels Abattoir is possibly one of the only remaining urban slaughterhouses in Europe. The 10-hectare site is located some 4km from Brussel's medieval Grand Place, it is truly embedded into the city. Through certain historical fluke, the site has become an interesting example of how foundational activities can retain a place within the city centre.

The site was developed during the end of the 19th century, when the land was still a swampy tributary of the Senne River. The site was developed as an industrial production system, connected by railway. This allowed it to process high volumes. In the 1950's, the local mayor tried to push industry out of this neighbourhood, inclusive of the abattoir to be replaced by social housing. However due to the success of the abattoir in the 1960's, the site was spared.

By the late 1970's the municipality was losing money due to the cost of modernising the production lines and due to its inner-city location, congested roads rendering it increasingly uncompetitive. The municipality wanted to reduce their losses and in 1983 launched a public tender for managing the site. Some 150 individuals that owned businesses or had a personal interest invested and launched a company, tendering for the project and eventually winning the concession. This resulted in a user-owned business called Abattoir s.a/NV that had a stake in the development of the slaughterhouse. Because of the ownership by numerous local businesses their primary interest was in food, and more specifically meat processing, which has meant that despite the odds, the site has retained its primary activity despite market trends

towards activities like housing or more lucrative forms of retail. Furthermore, the abattoir reflects the local immigrant roots of the local workers and sends halal meat as far as France.

The site still contains a slaughterhouse but also is home to a number of other activities involving food generally. This includes a very affordable food market, open 3 days a week. It contains an innovative mushroom and microgreens business located in the cellar space (Champignon de Bruxelles). It contains one of the largest urban greenhouses in Europe, that is based on cradle-to-cradle principles (BIGH) and sells locally 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 while helping activate the open space while the market is not operating.

Figure 32: An aerial view of the new masterplan of the site which includes a mix of production and student housing.



Source: ORG (<http://orgpermod.com>).

The actors involved and their role

There are three key stakeholder group which have been central in the project:

- Abattoir NV shareholders
- Anderlecht
- Market holders and businesses.

Place-based character of the project

There is much about this site which renders it highly place-based and difficult to replicate. It is a 10-hectare site in the city centre. Unlike many other cities, Brussels' complex bureaucracy may have saved a site of this size and led to the local business owned company by sheer mistake. The solution may be difficult to replicate in other locations.

Conditions for replicability and knowledge transfer

The user-shareholder model is relatively simple and highly relevant to a range of other conditions where public management is not suitable and where a simple association also does not have sufficient power and an independent company may focus on profitability rather than community interest.

While there are many aspects of the Abattoir's development which came about due to a matter of chance, the ownership structure and focus of the Abattoir s.a/NV model could be useful for defining the structure of Public Private Partnerships that are used to stimulate manufacturing and industrial activities. This can be stipulated within public tendering documents or terms of agreement between a public landholder and the management agency.

Public authorities could use this model for buildings, land or infrastructure to ensure the site runs efficiently, but within the public's interest. The leasehold title is a useful way to avoid public authorities from losing a stake and ultimate control.

A community interest company, a mix between an NGO and a classical business, may have been a more suitable structure.

Impact and effectiveness

The Abattoir site plays an important role in Brussels's food production system and a particularly important role in a number of immigrant communities. The Abattoir itself provides good reliable employment and employment pathways for low-skilled employment, which is particularly important for one of Belgium's poorest neighbourhoods with over 20% unemployment. The open-air market offers not only very affordable produce, but also very accessible workplaces and is an important source of exotic food that attracts an extremely multicultural crowd. The result is an ecosystem of specialist shops and businesses that spill out of the Abattoir site and into the surrounding neighbourhood.

In more recent times, the site has also attracted innovative businesses that are developing cutting edge technology in urban agriculture, producing for the local market. This includes one of Europe's largest greenhouses that is based on cradle-to-cradle approaches and a company based on acclimatised growing environments that produce mushrooms and microgreens. Due

to the production costs and the type of products, these businesses have little interaction with the general public attracted to the open-air food market.

Finally, due to the nature of the site, with a large open area that is used only three days a week, a community organisation, Cultureghem, has been set up to use the space for youth and community services. This is especially relevant for an extremely underprivileged community and especially helpful for the identity of the site. Cultureghem also collects food waste and distributes it to the needy.

5.2 East End Trade Guilds (EETG) & Guardians of the arches

Key facts

Promoter and/or key actors

Community business organisation supported by the New Economics Foundation (NEF)

Dates

The EETG established officially in 2013, the Guardians of the Arches since 2017

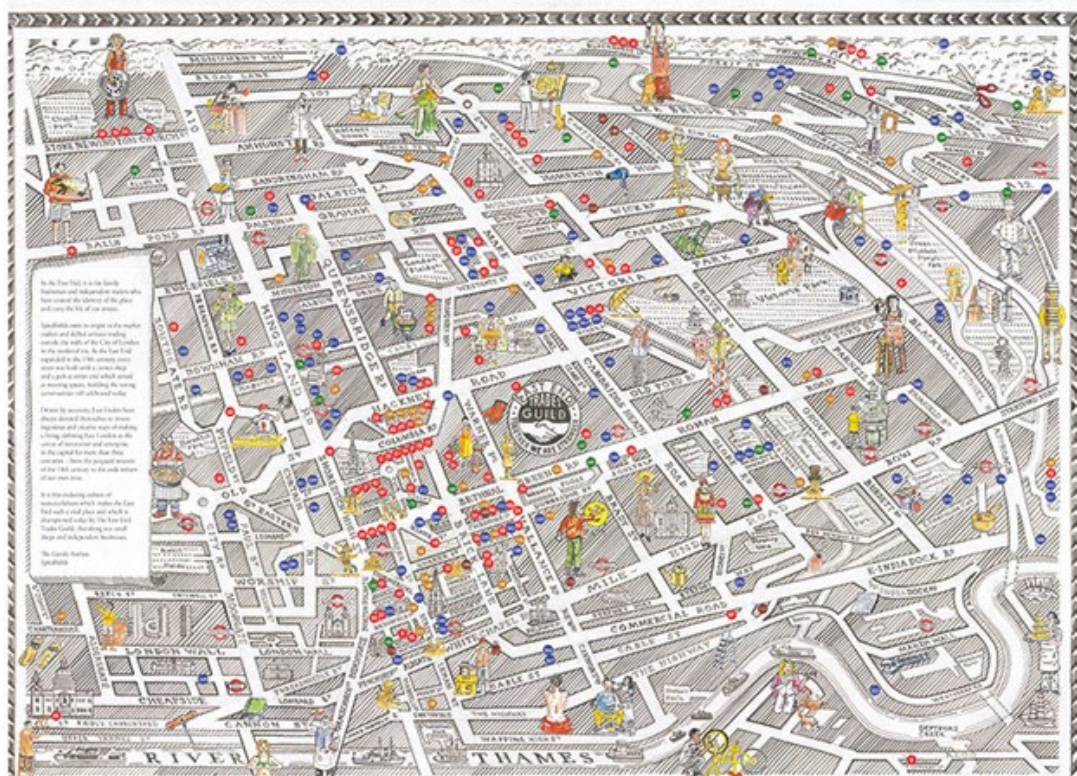
Location

London, United Kingdom (UK)

Typology

Organisation focused on supporting some local (particularly small) businesses to retain access to affordable workspace, allowing business owners to earn a living wage and capacity building through stimulating business ecosystems.

Map 14: A map of the East End Trade Guild members.



Source: www.eastendtradesguild.org.uk

The project in a nutshell

Large international cities like London are facing increasing living costs and growing wage gaps. This is particularly problematic for locally oriented small businesses that tend not to be well represented within the larger business community and are often vulnerable to top-down policy change and real-estate costs. The East End Trades Guild (EETG) is a London based organisation focused on supporting some 200 local (particularly small) businesses to retain access to affordable workspace, allowing business owners to earn a living wage and capacity building through stimulating business ecosystems. Guardians of the Arches is an extension of EETG, focusing on workspaces located under the elevated railway lines.

The problem addressed

In cities with high land and living costs, small businesses are particularly vulnerable to policy changes or market trends. They rarely have a good overview of planning conditions and are often too late to contribute to planning policy by the time it is implemented. Economists and financial planners may suggest that economic conditions are constantly evolving, which means that business must adapt or perish. Such a perspective is historically true, particularly as technology and energy systems have changed. However local businesses, operating in globally connected marketplaces in the age of e-commerce are having a profound effect on the culture, diversity and livelihood of cities.

Over the last decade (since the 2010s) small retail has been weakened through E-commerce, cheap urban logistics and most recently by a global health pandemic. The loss of small and medium sized businesses, particularly artisans and those providing foundational activities (such as food production, repair, provide materials and services for the construction sector and so forth), is a phenomenon associated with increasing inequality, less accessible workplaces, fragmentation of communities and a disturbance in urban life in general (industrialised cities are focusing on housing and becoming less mixed). The UK has observed the continual closure of high-street retail, particularly as land values rise while retail profit margins decrease and need to compete against e-commerce. This is particularly problematic for small shops, but also larger businesses are feeling the burden. Inner-city manufacturing is equally under pressure due to real estate prices, the loss of their business networks (material suppliers and partners) and the gentrification of former industrial areas. While economists may accuse businesses of being incapable of adjusting to current trends, there is little argument that locally embedded businesses provide a wide range of public services that include social control, community building, provision of employment and so forth.

Small sized businesses are rarely a priority for traditional business networks and therefore do not have a united voice. Chambers of commerce often prioritise a small number of larger

businesses, rather than investing in building local business networks or linking businesses to their local communities. Support of the government can focus on the development of new businesses, such as investment in business facilities such as co-working spaces, which is far from useful for established businesses. This means that small, locally oriented businesses feel neglected while lacking a voice that represents their interests and lacking the capacity to challenge public policy.

The solution proposed

Established in 2010, London's East Ends Trade Guild is a community-based initiative that emerged from the tension between established businesses and the 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 are located in. EETG is particularly active in areas that contain small traders that are heavily embedded in the neighbourhood. This 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 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.

In 2017, Network Rail, the owner of hundreds of small spaces in the archways under the elevated railway lines, were raising rents and eventually were considering selling off the archway spaces. These spaces had been an affordable space for hundreds of small businesses that included vehicle repair, food producers, furniture manufacturers, construction material traders, storage space and so forth. Many spaces were attracting to higher end retail and restaurants and therefore Network Rail found the sale of the arches could cover other needed investment. The plight of many businesses was foreseen and so a group, supported by the EETG mobilised the businesses to federate their interests to halt the sale or set conditions on any future ownership. This resulted in the Guardians of the Arches (GOTA), which represents a EETG spin-off which addresses activities associated more with production than EETG showing that the principles of the place-based, community scale, small-business federation is transferable.

Both the EETG and GOTA show how small, community-oriented businesses can be very sensitive to changes in real-estate conditions but are often overlooked. It shows that an

independent federation that understands their challenges is an essential intermediary actor in providing resilience.

Figure 33: A Manifesto for Economic Resilience.



Source: www.eastendtradesguild.org.uk

The actors involved and their role

The East End Trades was the initiative of a local resident, Krissie Nicolson, a local resident that was completing a masters of community management who observed rental increases affecting local businesses. Local businesses in and around London's East End are the core of the organisation. The New Economics Foundation, a London based foundation, provided support. More recently, local borough councils (such as Hackney and Tower Hamlets) have supported the initiative.

The Guardians of the Arches involved a collaboration between local businesses, concerned activists and academics, eventually the EETG and NEF, amongst many other actors that helped raise awareness and communicate the situation.

Place-based character of the project

The conditions in London are particular, in the sense of there being a strong local culture of entrepreneurship. It is also a city suffering from particular real estate pressures, common for larger or more prosperous urban centres. Therefore, London's wage gap and living costs are therefore more extreme than other cities, yet the same pressures are evident elsewhere.

London does have a history of the economic struggle of the working class and therefore organisations like the New Economics Foundation exist to help find alternatives to market trends. This may be endemic to London, but it is by no means unique to the city or the English culture.

Conditions for replicability and knowledge transfer

- The EETG's spin-off in the GOTA shows that the general organisation structure and community support can be applied to other sites or challenges.
- The business model is relatively simple and accessible, ensuring that the organisation does not need to depend on other public or private sources of finance.
- The EETG's values and principles are simple and easily replicable. Their manifesto on 'working rent' is also very accessible.
- Both the EETG and GOTA depend on a champion, a community focused facilitator that has exception integrity, the local trust of the members and long-term ambition to support the business community.

Impact and effectiveness

The EETG and the GOTA represent a small portion of businesses in the areas they are associated with, but through membership they provide a critical mass to communicate trends and challenges that are affecting businesses across the city. This voice is capable of organising and reaching policy makers.

Local borough mayors are onside and committed to the project, seeing the struggles that their local constituents are faced with.

The nature of both EETG and GOTA will remain a long-term struggle in the hustle between market trends, public policy and the conditions for local businesses.

5.3 Hôtels Industriels

Key facts

Promoter and/or key actors

The city of Paris

Dates

Almost between 1978 and the late 1990's with recent renovations

Location

Paris, France

Typology

Mixed use projects and industrial intensification (particularly involving a development organisation).

Figure 34: Hôtel Industriel by Dominique Perrault.



Source: <http://www.galinsky.com/buildings/industriel/index.htm>

The project in a nutshell

Starting from 1978, Paris's city launched a program to retain existing production enterprises within the city and encourage new ones. This public policy aims to foster creating (or provide space to develop) ateliers, workspaces, logistics depots, and associated office spaces. By 1983 five had been developed; in 2000, over 40 such buildings were designed and distributed across the city.

The problem addressed

Historically, Paris has a strong tradition of production and manufacturing, particularly for fine craft and design, accommodated in various city neighbourhoods. These neighbourhoods traditionally contain a rich mix of commercial and residential functions and production activities, such as printing, textile, clothing production, furniture fabrication, metalworking, electronic assembly, and craft-oriented activities like antique and art restoration.

As in many other European cities, the decline of production and manufacturing in the city centre began in the 1960s, bringing about the gentrification of former industrial land. It also launched the beginning of production move outside of the city into the larger *Ile de France (la 2me couronne)*.

The city has a history of planned mixed-use and intense industrial land uses, which dates back to the Haussmann's interventions in the 19th century but were further intensified through market-driven trends with modern building techniques and electrified lifts allowing for vertical production.

The solution proposed

Instead of accepting the manufacturing decline as a natural phenomenon of the post-industrial city, in 1978, Parisian authorities decided to slow down this process by launching a program to retain existing production enterprises within the city and encourage new ones. The *Hôtels Industriels* were designed to host ateliers, workspaces, logistics depots, and office spaces within the city centre. They allow the creation of space for production and logistics in dense residential areas. They are financially viable; indeed, they are privately financed, but with time-lease mechanisms to ensure that the land remains in public hands in the long-term. The buildings have remained oriented towards mixed-use, production, and logistics through strong planning controls. Moreover, *Hôtels Industriels* present a high-quality design, which means the facilities are functional and beautiful.

Figure 35: Industriel by Paul Chemetov.



Source: <https://www.paulchemetov.com/projets/centre-dactivites>

The actors involved and their role

The *Bureau Municipal des Activités Economiques* was mostly responsible for developing the program and acted as organizer-facilitator, bringing together investors, developers, and small producers. In many of the projects, the city provided parcels of land that it owned for development. In these cases, the developer had the land lease for free for seventy years, after which the land would revert to the city. In other cases, land taxes were structured to make development attractive to investors. The agency smoothed the way through permitting processes and other municipal regulations to facilitate development, and it took an active role in helping developers secure tenants. While developers selected their architects in early projects, later projects have often been awarded to joint-venture teams through architectural competitions. This process has resulted in high-quality architecture and urban design; some projects have been designed by internationally known architects like Renzo Piano, Paul Chemetov, and Dominique Perrault.

Place-based character of the project

Paris is one of the most dense and crowded cities in the world, with more than 21000 inhabitants per square/km. It is also the second city in the world for the number of international tourists. This makes competition for land very high and since several decades, what was once a city where the productive city played an important role, is now a city where only the 3% of the inhabitants are employed in the productive sector. In the final phase of the industrial decline, started in the 1980es generated a new awareness and several initiatives to contrast this process. In particular, after the creation of the initiative of the “Hotel industriels”, since the 2000s the city has launched a policy dedicated to support and valorisation of the manufacture in the

city. The program “Fabrique à Paris, the call for project ParisFabrik, the implementation of several fablab, has provided new spur to the conservation of manufacturing activities in Paris, mainly related to artisans, makers, highly qualified crafts, integrated in the historical city.

At the same time, a series of initiatives have tried to focus also on more peripheral areas, where the dismissal of large industrial sites and the substitution with tertiary functions has generated social frictions and conflicts. The city of Paris is part of a large conurbation, the metropole de Paris, which is also part of the wider Ile de France urban region. Both are focusing on relaunching the industry in the area: this latter has recently focussed its attention and effort on 26 sites, partially brownfields, partially greenfield, where innovative and qualified activities are invited to locate, based on the offer of qualified and accessible conditions for development. The first has published a working paper “Strategie pour une metropole productive”.

Finally, also the national government Territoires d’industries shows a general new attention to the industrial future of the most important urban areas in France, even if according to some observers, the awareness of the challenges to be addresses is still limited¹⁵.

Conditions for replicability and knowledge transfer

The strategy adopted in this project could be interesting for cities that:

- Want to retain manufacturing activities within their city center.
- Have high competition between functions (residential, commercial, manufacturing activities, etc.) inside their urban context.
- Need to accommodate important logistic activities within the urban fabric, in order to provide them access to a large conurbation and marketplace, but have few, if not limited spaces to host these functions.

Impact and effectiveness

The neighbourhood's entrepreneurial climate, acting as a catalyst for several productive and non-productive activities. Moreover, they facilitate the integration of the enterprises within the local economic context.

As described above, they can contribute to regenerate abandoned buildings through high-quality architectural and design projects and, consequently, reassess the entire area's real estate values.

¹⁵ See <https://www.gpmetropole-infos.fr/lile-de-france-mise-sur-lindustrie-pour-la-reliance/> (accessed 18 December 2020)

<https://www.usinenouvelle.com/editorial/municipales-quelle-place-pour-les-usines-au-coeur-du-grand-paris.N938180> (accessed 18 December 2020)

<https://www.apur.org/fr/nos-travaux/fabriquer-paris> (accessed 18 December 2020)

5.4 Ile de Nantes, France - slow urbanism model

Key facts

Promoters and/or key actors

Nantes municipality, SAMOA publicly owned development agency

Dates

1989 – ongoing

Location

Nantes, France

Typology

Urban area redevelopment process through temporary use and creative industries.

Map 15: Ile de Nantes.



Source: www.urbact.eu

The project in a nutshell

Ile de Nantes, centrally located within the city of Nantes, has a long history of industrial use. Problems started – as in many European cities – in the 1980s with the closure of the shipyard and the port areas. By the end of the 1980s the island became inaccessible for people while private developers came up with a growing number of project ideas, such as to build new hotels,

big international congress centre, luxurious waterfront housing. However, in 1989 the newly elected mayor – Jean-Marc Ayrault, who stayed as mayor till 2012 – stopped all project planning and started a process to rethink the island as the centre of the whole Nantes metropole.

Since then, Ile de Nantes has become a well-known European example of slow urbanism. Development is carefully steered by the public sector through an agency established for this purpose. The agency, using the legal tool of eminent domain and the innovative experiment of temporary use, develops the island step-by-step towards becoming part of the city centre of Nantes.

The problem addressed

The story of Ile de Nantes is very well known in many European cities: after intensive industrial and port activities for decades, the use of the area changed quickly, as a consequence of the decline in shipyard and port productivity in the 1980s. The industrial part of the island soon turned into a vast wasteland.

In the model of capitalist urban development, the problems of post-industrial areas have to be solved by market actors. This usually brings first a waiting period when the area remains neglected and further deteriorates – until private actors 'discover' the area and develop it with investments which prove to be the most profitable according to actual demand conditions.

The case of Nantes shows that even under market circumstances there are other ways possible for urban development: the public sector can actively influence the redevelopment of post-industrial areas. A further peculiarity of the case is that in uncertain times the decision-making process about the future can be slowed down until the best use of the area can better be seen and determined.

The solution proposed

The island covers 330ha, of which 115 used to be occupied by industries. To be able to steer further development, the city authority decided to apply the right of first refusal (eminent domain) for the public sector over the whole area.

One of the city's first steps was to build a new courthouse here, in a time when no one wanted to build on the island. The courthouse development started the expansion of the city centre towards the island, and it contributed to bringing back the area to the mental map of the people of Nantes.

The political leaders of the city developed step-by-step the idea that industrial heritage has to be kept but used with 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 is exercising the right of first refusal,

buying land, rezoning and reselling it with fixed project ideas and predetermined conditions. The model can be understood as a public sector led real estate development strategy accompanied with value-increasing taxation – where the main goal is to upgrade the island along public interests through giving new functions to the industrial heritage.

In order to enhance the interest towards the island, to promote the city's image and intend to build an identity for it as a creative metropolis of dream and of fantasy and also to make use of the industrial traditions, 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 covered buildings of the former shipyards in Nantes that were at one time used for ship construction and later used as business sites. The success of this idea can be illustrated by the fact that les Machines de l'île received around 700.000 visitors in 2019.

Figure 36: The most famous product of the Machines of the Island of Nantes project.



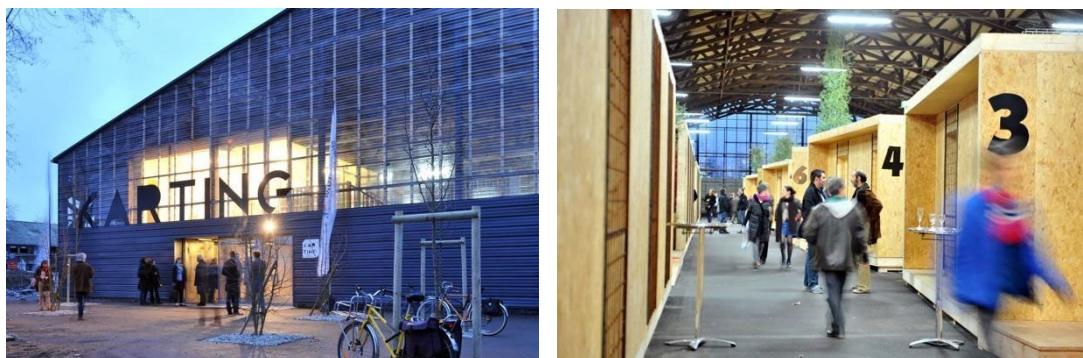
Source: Iván Tosics, 2017.

Besides this flagship project an essential piece of the model is temporary use. In a normal market process centrally located and waterfront areas would be quickly redeveloped. Not on this island: here, existing buildings are turned temporarily into rental places for innovative creative and cultural companies, places for the social and solidarity companies, or for media companies. This is part of the slow urban planning: it needs time to find out what should be the next use. SAMOA provides temporary use office spaces and artists workshops to 220 organisations.

One of the temporary use models is incubating start-up companies, offering below market price rental prices. An example for this approach is the Karting, an old warehouse, which was previously used as a go-kart racing circuit, surrounded by a vast brownfield. The SAMOA bought the plot from its private owner and decided to use the warehouse instead of leaving it empty or tearing it down for new development. If the plot had been sold on the market, this would certainly have been the result, as there is high demand for waterfront areas, to be used for housing or hotels. Nantes chose a different route: rather than redevelop the area immediately, the SAMOA has chosen to keep it as it is for now. It will be the last area to be rebuilt.

Scattered on the island are three large halls, all of which have been refurbished to allow small businesses to rent spaces from 12 to 96 m². Le Karting is one of them and is now used by innovative, creative and cultural businesses; another, the Solilab has become home to businesses that work in social and solidarity fields; and a third, the Centrale houses media companies. In total, the buildings house 180 companies. The project is so successful that a waiting list had to be opened. The project was launched in 2012 and is meant to run for ten years, after which the city will decide upon a more permanent purpose for the area. The timeframe is deliberate; careful and gradual urban planning takes time.

Figure 37: Karting, a business hotel for the creative and cultural industries.



Source: © Jean-Dominique Billaud / Samoa.

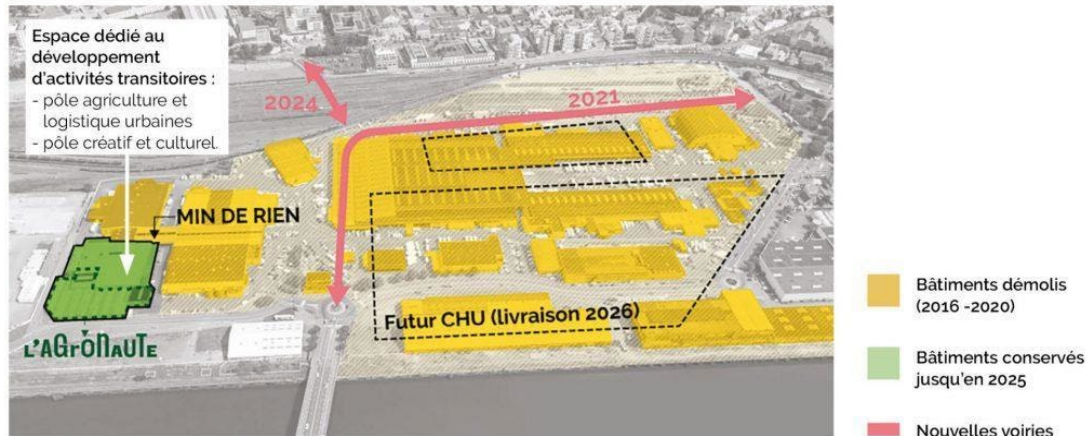
Figure 38: Solilab, businesses that work in social and solidarity fields



Source: Iván Tosics, 2017.

The most recent temporary use project is connected to the national wholesale market, previously located on the island (*Marché d'Intérêt National: MIN*) and dismantled in 2018. As much as 12000 sqm of the buildings has been preserved, 6000 sqm of which are now occupied by an urban farming project and 9 other organisations around local food distribution, circular economy and cultural and creative industries. This project is called *MIN de rien* and might enlarge in the near future. This project is in close proximity to Karting and Solilab and is part of the same slow urban development strategy.

Figure 39: L'Agronaute, an urban farm located in the former Nantes MIN.



Source: © Franck Badaire / Samoa

In the course of slow urbanism projects plenty of time has to be allowed to grow naturally and take their course. This does not mean, however, that changes along the way are impossible or even unwanted. At the onset of the Ile de Nantes project, the goal was to change the image of

the island. Later on, efforts concentrated on the development and connection of certain areas. More recently, the project's ambition has turned to answering the challenges of innovative economy and urban growth. Accordingly, the current direction of the project is to turn it into an innovative district with larger parks along the riverbanks.

Temporary use agreements play a crucial role in the Nantes approach for urban development. They offer the city a way of keeping empty buildings in public ownership while also giving incentives to creative ventures. The SAMOA's task of buying and developing deserted plots is successfully combined with its role of offering empty spaces to innovative companies.

The example of Nantes shows how important it is to strive for long-term thinking, with the necessary flexibility, to achieve in the long run strategic goals in the interest of the public.

The actors involved and their role

Political leadership - strong mayor and long-lasting power, enabling to follow the same strategy
Municipality, collaboration of relevant departments especially in economic and social issues
Publicly owned agency with sufficient legal mandate, funding and flexibility, under the strategic control of the municipality.

Place-based character of the project

Post-industrial areas are usually spatially concentrated along major infrastructure services (railway, water, etc.). It is a crucial issue how the ownership of such areas is regulated when the industrial use terminates. The essential step which made the Nantes model possible was the expansion of public control over the whole of the island through the tool of eminent domain. In the lack of such a regulation the usual consequence is plot-by-plot privatization after which it becomes much harder for the public sector to control the regeneration of the area.

Conditions for replicability and knowledge transfer

The Nantes approach is based on stable political leadership which considers the interest of the public as most important. Also, strong institutional background is needed, created for the purpose. Both are needed to secure enough time for understanding the 'feeling' of the post-industrial areas, and for developing strategic ideas, avoiding 'tabula rasa' developments according to the demand of the given moment.

Not all cities have such unique places as Ile de Nantes and even less are able to create such stable political leadership and institutional background for strategic development over decades. Even so, the example of Nantes shows how important it is to strive for long-term thinking, with the necessary flexibility, to achieve strategic goals in the interest of the public.

Impact and effectiveness

In 2019 the 30th anniversary of transitional town planning on the island of Nantes has been celebrated. The Scopitone festival was reminiscent of the Les Allumées festival, which was organized 29 years earlier in the former ice factory, Quai Wilson, as the first event showing how the industrial and port heritage became a springboard for cultural and creative initiatives.

The effectiveness of the model can be illustrated by recent developments on the island, which show how the combination of redevelopment and temporary use shape together the future of the area. Samoa is working on the demolition of the former Nantes MIN, on the place of which the future République district will take shape with the new hospital in 2026 as the first building. One part of the site of the former MIN, however, will be demolished only after 2025 – and this is turned into the transitional activity zone called “MIN de rien”. The combination of new functions with activities in temporary use buildings related to agriculture, the artistic sector and cultural production is a key element to shape the future of Ile de Nantes.

5.5 I3P business incubator (PoliTo), Turin¹⁶

Key facts

Promoters and/or key actors

Politecnico di Torino (PoliTo), the former Province of Turin (today Turin Metropolitan City), Piedmont Region through its financial institution FinPiemonte and the chamber of commerce.

Dates

1999 – ongoing

Location

Turin, Italy

Typology

Incubator project for business development and stimulation supporting entrepreneurship in innovative industrial supply chains.

Figure 40: I3P building inside the university campus.



Source: www.i3p.it

The project in a nutshell

I3P 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

¹⁶ This case builds on the interviews conducted with Paola Mogliotti (CFO) and Prof. Giuseppe Scellato chairman of the incubator.

advanced start-ups. The services offered by I3P consist in incubation and pre-incubation programs – which are provided for free - designed to strengthen start-ups innovation capacity, minimize uncertainty and maximize companies' growth. Recognized as a relevant centre 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.

The problem addressed

Despite the technological revolution and disruption occurred in early '90, when establishing I3P - back in 1999 - there was little knowledge about the role and the organizational form of an incubator, the world surrounding innovative entrepreneurship as well as the potential of the digital market. Although innovation capacity became determinant as a key driver to ensure territorial competitiveness of the local economy, two major challenges were observable: high uncertainty and little capacity to assess and support technology start-ups that build around advanced technologies. Indeed, the most relevant constraints weighing on the adoption of AdTech are not exclusively factors related to limited resources and skills, but rather concern the capacity to estimate technology and evaluate ideas' technical and economic feasibility, the prospects for investment, scalability, profitability and return on investment.

To put it differently, the inability to access knowledge and *ad hoc* expertise constitutes the major competitive disadvantage bounding several entrepreneurs' innovation capacity. In order to fill this gap and draw on overseas experiences and entrepreneurial success stories from the U.S., in the late '90 Dr. Vincenzo Pozzolo (full professor of electronic engineering at PoliTo) promoted the creation of I3P incubator. Indeed, the value-generating of such a tool/platform in fostering economic development prompted four joint partners to pioneer this newer model in Turin (and thus establishing the first incubator of its kind in Italy).

The solution proposed

Given the rapid technological transformation, the fundamental premise guiding the establishment of the incubator was the need to support technology-driven companies operating in innovative industry sectors. The central role of the university as a hub of innovation highly contributed to defining I3P mission statements outlining its overriding objectives. In particular, the core concept around which the incubator builds which is the creation of a platform to facilitate knowledge transfer along with the assessment and uptake of AdTech is deeply grounded in the close synergy and cooperation with research institutions. In this case, the “mutually constitutive” relationship between research and the industry well exemplifies the role of the university as a strategic resource. In fact, at the very local scale, I3P is conceived as an enabling tool for university's departments to exploit intellectual assets by translating ideas into testable products/services to bring to 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. To do so, I3P offers two sets of services in the form of pre-incubation and incubation programs designed to boost and strengthen start-ups innovation capacity, minimize uncertainty and maximize start-ups' growth. In particular, the services provided - which are free of charge - are directed at assessing the viability and feasibility of start-up ideas at the outset and guiding the early-stage start-ups in the business development process throughout the actual incubation program afterwards. Recognized as a relevant centre 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 areas of interest mainly regard industry 4.0, artificial intelligence, machine learning, smart-mobility, automotive industry, block-chain, cybersecurity and recently it has expanded its portfolio to new business opportunities dealing with clean-tech and med-tech.

Once a year I3P opens a call for ideas inviting researchers, professors, students and both experienced and inexperienced entrepreneurs, from outside the academic setting, to submit potential start-up ideas. Out of the thousands of applications submitted every year a preliminary selection is made, narrowing the choice to 150 ideas that undertake the pre-incubation program consisting of a series of targeted activities (e.g. consultancy, mentorship, networking events, etc.) that help start-ups refining their ideas and finalizing a business plan. At this stage, ideas' growth potential and sustainability are evaluated resulting in the selection of 20 start-ups which are introduced to the actual incubation program leading towards the incorporation of the start-up. In terms of legal structure, I3P is a public non-profit joint-stock company which derives about 40% of its annual activity budget from regional funds on a competitive basis. Next to this, a small percentage of revenues comes from the rent of workspaces within the incubator itself which disposes of 3000 sqm of office spaces available for businesses. It is estimated that tenants' rental fees cover up to 40% of the incubator operational costs. Usually incorporated start-ups - that by the end of the incubation program have reached a certain stability - choose to locate within the incubator as they benefit greatly from a whole host of supporting factors and networking opportunities.

Figure 41: Start-us' training session.



Source: www.i3p.it

The actors involved and their role

Established in 1999 as a non-profit company, I3P incubator was founded by four joint partners: Politecnico di Torino (PoliTo), Turin Metropolitan City (CMTTo), Piedmont Region through its financial institution FinPiemonte and the chamber of commerce. Over the past two decades, the company structure changed. In 2004 the addition of two partners – one public institution, the City of Turin and one private foundation, Torino Wireless – triggered the transformation of the incubator legal structure into a new entity. More precisely, the inclusion of two more shareholders entailed the passage of I3P from a limited liability company into a joint-stock company. This *status* allowed for a significant increase in the share capital, which has risen to around 1.3 million euros. As a result of the evolution of the legislative framework, the shareholders' structure changed again in 2018. In fact, the City of Turin based on regulatory divergences and incompatibility reasons put its shares up for public sale. These were purchased in 2019 by Links - a local private foundation.

Each of the above-mentioned actors plays a specific and important role in the operation of the incubator. A paramount role is played by the university which is a strategic resource for the optimal functioning of the incubator. The proximity relations with academic-based activities not only facilitate the access to technical expertise, scientific knowledge and qualified human resources but it constitutes a privileged access to intellectual assets which arise numerous business opportunities towards the commercialization of the ideas elaborated by researchers and professors into viable market products/services. Next to this, affiliated public institutions and private foundations play a key role in supporting I3P services (e.g. financial support, sponsorships, accounting, etc.), disseminating initiatives, strengthening the entrepreneurial network and boosting local economic development.

Place-based character of the project

The Turin ecosystem has been essential for the implementation of the incubator in many ways. First of all, even though at the early stage the usefulness and potential impact of such a project were not fully unfolded, the presence of a series of public entities capable of converging on a long-term shared vision was crucial for the creation of I3P. Next to this, the project builds on a long-standing vocation for innovation, which has always characterized the local entrepreneurial ecosystem. Finally, the area's industrial strengths (i.e. culture and know-how) constitute a fertile ground for the exploitation of new business opportunities and job creation in emerging sectors.

Conditions for replicability and knowledge transfer

- Strong synergy and close cooperation between the typical triple-helix actors (public institutions, industry and research/universities).
- Enabling cross-innovation through collaboration between public/private actors and research institutions. In particular, the creation of a platform of interconnected public and private actors provides the optimal conditions to boost the innovation capacity of the local economy, promote business development and create new job opportunities.
- Capacity-building through linkages to university-based activities and intellectual assets intended as strategic resources to access extremely qualified human capital (i.e. academic experts) and facilitate knowledge transfer. Specifically, the proximity relationship to the university ecosystem constitutes the foundational element of I3P success ensuring its competitive advantage.
- “Learning by doing” culture whereby the incubator supporting services aim to help start-ups in finding the best product/market fit through experimentation, iterative development process towards the implementation of innovative solutions and commercialization of viable product/services.

Impact and effectiveness

Founded over two decades ago, I3P is one of the longevous Italian incubators and has managed to establish itself as one of the most relevant public incubators at the national and international level. Indeed in 2019, it has been recognized by UBI “World Rankings of Business Incubators and Accelerators” as the world-leading public incubator (see www.i3p.it). Conceived as a public investment project for the promotion of territorial development as well as the stimulation of innovative and competitive enterprises, I3P has had a very consistent and highly recognised multiplicative effect over time, especially in recent years if compared to other public policies. Since its establishment, about 260 companies have been incorporated with a very high survival rate of around 75%. Its companies have raised over 13 million euros in seed funding with a total combined post-money valuation of about 90 million euros (see www.i3p.it for more info). In terms of economic impact, in 2018, the start-ups (which have not undergone an acquisition process since their incorporation) generated about 2000 new jobs locally and a turnover of about €180 million.

5.6 Lageweg, Antwerp - stimulating joint actions of private actors

Key facts

Promoters and/or key actors

The City of Antwerp, the Flemish Waste Agency (OVAM), Ruimte Vlaanderen, Team Vlaams Bouwmeester, het Vlaams Agentschap voor Innoveren en Ondernemen, en het Agentschap voor Binnenlands Bestuur, Stedenbeleid, Inburgering en Integratie

Dates

2015 – 2018

Location

Antwerp, Belgium

Typology

Lighthouse project to launch private investment and public/private development opportunities.

Map 16: The area of Lageweg Hoboken within Antwerp.



Source: https://urbact.eu/sites/default/files/media/lageweg_presentatie.pdf

The project in a nutshell

Lageweg is a 30-ha mixed area outside the historic city centre of Antwerp, having ten different private owners and almost no public property. Antwerp launched an experimental process in this area to encourage cooperation between the private owners. Instead of designing a top-down masterplan, the approach is to build up a coalition between the landowners in a bottom-

up way. The aim is to dynamize the Lageweg area towards a new urban fabric in which housing and services can coexist with manufacturing (production).

The stakeholders of the project are very different: a project developer, a school, families who inherited a piece of land, entrepreneurs of industries that are moving away as well as entrepreneurs who are staying and enlarging their businesses. By launching a cross-allotment approach and coalition-building between the different owners, the city is proactively stimulating the transformation process. The coalition process is also a process of collective learning based on different design tables and a financial model that is owned by the stakeholders.

The lessons that Antwerp learns from this pilot project is incorporated on a larger scale into the transformative vision for the entire 20th-century belt of the city.

The problem addressed

Antwerp is a dynamically growing city which faces increasing problems to find areas which could accommodate the need for new development. To protect the already densely built-in historic centre area of the city, the municipality aims to stimulate the redevelopment and densification of the transitory belt around the central area, The Lab XX project investigates the opportunities to make these neighbourhoods, built in the 20th-century, look more attractive and ready for more dense development. Lab XX is combining research by design with the experiences of the municipality in implementation processes.

The Lageweg project is one of the experimental approaches of the city to dynamize a concrete area over which the city does not have direct control as not having ownership of any properties.

The solution proposed

The Lageweg project site is situated in a semi-industrial part of the Antwerp transitional belt, between the historic inner city and the outer fringe. The area is in decline for years and has become known as a no-go zone. It is characterised by large, empty factories, an inaccessible locked-in green space and rundown illegal houses. Bars are closing in the area, there is an increase in small criminality, there are noise and dust complaints of the industry that is still working and bailiffs collecting back pays are more and more common. The area is locked in its present status quo since long.

The area of the project is very mixed, where different zoning categories (industry and housing) are touching each other. Almost all the land is privately owned. There are no real social links between the inhabitants and the users of the place. The area is in need of transformation to avoid the continuation of deterioration (which cannot be stopped by plot-wise development with no added public value).

The municipality launched the project to develop cohesion and shared ambitions through open dialogue and collaboration. There were five “discussion moments” following each other around a table with the landowners. During these meetings, the city did not avoid conflict and discussion since this puts the different points of view of the stakeholders openly on the table. An important aspect of the method was to change topics from spatial, over juridical and financial models, giving enough time to search for consensus around seemingly different topics.

The main steps of the process were as follows:

- 1. Mind Opening Dialogues & Ambition Levels - A kick-off based on possibilities.**
Attendants: the landowner (one-by-one), an inspirator, a process-manager, project-facilitators. The dialogue is an exploratory discussion gauging the ambitions of the landowner using ambition levels and new lines of thought of the inspirator. The inspirator, an expert outside the project framework, attends in order to open up the dialogue.
- 2. Design Table & Interactive Scale Model - To create trust in the collectivity.**
Attendants: all identified stakeholders, process-managers, project-facilitators.
Activity: discussing, designing and working on an interactive model in order to explore different possibilities.

Figure 42: The discussion with stakeholders at the scale model of Lageweg.



Source: https://urbact.eu/sites/default/files/media/lageweg_presentatie.pdf

- 3. Safari on Site & Brochure with future prospect - Linking imagination to the experience of the group.**
Attendants: all identified stakeholders, process-managers, different experts, project-facilitators. Activity: a guided walk with all the stakeholders on the site, with a brochure showing possible future scenarios in one, five or twenty-years' time. The spontaneous suggestions and ideas coming up during the tour are duly noted down.

Figure 43: The safari with stakeholders to the area of Lageweg.



Source: https://urbact.eu/sites/default/files/media/lageweg_presentatie.pdf

Figure 44: Different design and use options for the area of Lageweg.



Source: https://urbact.eu/sites/default/files/media/lageweg_presentatie.pdf

4. **Spatial & Financial Calculation Model - From a linear to an iterative process.**
 Attendants: 9 of the 10 landowners, process-manager.
 Activity: individual communication about the content of the declaration, in order to customise on demand.
5. **Declaration of Engagement & Personal Assistance - From best content to best possible content. From receptive involvement to active involvement.**
 Attendants: stakeholders, project-facilitators, process-manager, experts. Discussion on the financial feasibility of the coalition for the cross-allotment approach in an iterative process of design and calculation. The outcome was an adaptable spatial and financial

calculation model, which was paid for and therefore owned by the landowners, making it possible to test the feasibility of several options. The model made it clear that selling the property pieces at the moment is not profitable and therefore working together and developing a plan together is financially more rewarding than developing the individual pieces of land separately.

Map 17: Different urban schemes and financial calculations for the area of Lageweg.



Source: https://urbact.eu/sites/default/files/media/lageweg_presentatie.pdf

The actors involved and their role

The project is characterised by a strong political leadership which is open for experimenting and planning by design. In particular the role of the Municipality, was crucial in so far it could count on several experiences in innovative planning tools and ability to create collaboration of relevant departments. The process was able to include different types of experts, involved on contract base, to help to create the dialogue with the landowners from process and from content side. Finally, the project is characterised by the capacity to involve owners of the space, through developing a strong cooperative model of development.

Place-based character of the project

The Lageweg area represents a typical, mixed used neighbourhood in the transitional belt (between the historic inner city and the periphery) of Antwerp. Such areas are usually privately owned, while the types and uses of the plots are very different from each other.

In the dynamization of such areas the proximity of the different plots and their owners is crucial. Through the activation of the owners, in their dialogues and through a joint model-development it can be proved that cooperative actions across the area might bring advantages to everyone, as opposed to individual actions.

Conditions for replicability and knowledge transfer

The Antwerp approach is based on political leadership which – considering the interest of the public as most important – is ready to intervene in areas which are normally out of the realm of public interest. The municipality is well-known about applying innovative, experimental approaches with the aim to activate private stakeholders.

The Lageweg method can easily be replicated in other cities if the political leadership is open, and the municipality is capable of carrying out such open-ended experimental processes. The example of Antwerp shows that even in areas without any public property ownership it is possible to achieve strategic goals in the interest of the public.

Impact and effectiveness

The Lageweg project proved to be effective: 9 out of 10 landowners signed a declaration of engagement to work and invest together in the project. This joint venture allows working across property borders, creating a “bank of land properties” and making an effective plan for the whole area that will allow for phased development.

Compared to a classic linear planning process, where each moment has a specific purpose, where tension between stakeholders is a nuisance and the dialogue with the stakeholders takes place after the creation of a vision, in Lageweg the vision was shaped during the dialogue, the tensions were turned into a productive way of working and each moment had several purposes.

With the Lageweg project the city dynamized the long existing status quo, identified and contacted all the rightful owners and made everybody dream by setting the bar of an ambitious project. Now it is the job to realise the project and hold on to the ambition, which is an equally difficult task.

5.7 LAVAZZA Headquarters, Turin¹⁷

Key facts

Promoters and/or key actors

Lavazza Group in accordance with the City of Turin

Dates

2011 – 2017

Location

Turin, Italy

Typology

Brownfield development project - to create new urban mixed-use zone through private investment and building on public-private cooperation for the area's development.

Figure 45: Lavazza headquarters designed by Cino Zucchi Architetti.



Source: CZA (www.zucchiarchitetti.com), photos realized by Andrea Martiradonna.

The project in a nutshell

The Lavazza Headquarters project is located in Borgo Aurora, a former industrial area of the City of Turin previously connoted as a working-class district. After the deindustrialization, the area has undergone a process of decline for years. The site is characterised by large empty

¹⁷ This case builds on the interviews conducted with Paolo Corradini, project manager Nuvola Lavazza.

factories. Over time many commercial activities shut down, while socio-demographic dynamics such as ageing population and social tensions between residents and migrants were exacerbated. The project - which is located in the former Enel power plant - consists of a massive intervention on the existing block which allowed to make the area accessible by opening the former industrial premises to the surrounding context. The project designed by Cino Zucchi Architetti draws upon a strong urban scheme encompassing architectural elements to create openness, break down barriers and link the public and private realms. As such, the project develops a mixed urban area which integrates the main buildings with several public amenities (e.g. green spaces, parking spaces, public square, pedestrian zones and various facilities).

The problem addressed

Well-known as a coffee-centred manufacturer, the history of Lavazza production has been linked to the Turin 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 (situated in Corso Novara) to the outskirts. Accommodating the structural change of production, indeed, upgrading its capacity to an industrial scale (i.e. mass production), made this movement necessary for the expansion purposes. The new production site - which insists on three different municipalities (the city of Turin, the city of Settimo Torinese and the city of San Mauro) - has facilitated the industrial growth of the Lavazza group until establishing into a successful international manufacturer. The '70s marked a further evolution of the company in this direction. In fact, following the socio-political crisis and economic recession, the conviction that to ensure competitiveness and survive the crisis was vital to invest in innovation through R&D activities gained ground. As such Lavazza profiting from favourable expansion conditions (IE the existence of industrial plans and Detailed Plan) acquired a new plot of land adjacent to the manufacturing plant for the development of its research centre. It started to emerge the progressively hybrid character of the place of production, where product-oriented activities are combined with service-based functions to 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 has established its new headquarters in a quiet central urban area in the city of Turin occupied by the former ENEL power plant. After years of decline following the deindustrialization process that hit Borgo Aurora - previously connoted as a working-class district occupied at large by industries - the private investment has restored urban quality by regenerating the urban fabric and revitalising the area's economy, and social cohesion.

The regeneration project has been a catalyst stimulating further private investments able to enhance the area's attractiveness both in social and economic terms. Next to this, the redevelopment of the brownfield area gave impulse to the creation of new job opportunities.

The solution proposed

Leveraging on the existing resources and building on the convergence of product-service systems, Lavazza group carried out its most recent investment for the development of the brand-new company headquarters (Nuvola) in Turin. The area selected in Borgo Aurora - a former industrial area connoted as a working-class district - is just a few hundred metres away from the company's first manufacturing plant. After the acquisition of the brownfield area from Enel, Lavazza in agreement with the city of Turin opened a call for projects for the transformation of the newly purchased area. The total investment for the project's realization amounts to 140 million euros.

The project – designed by Cino Zucchi Architetti – is based on an articulated regeneration scheme combined with new development. The plan consists of a massive intervention on the existing block which allowed to make the area accessible by opening the former industrial premises to the surrounding context. The reorganization of the urban fabric along with the reconfiguration of the road network ensures urban continuity and a better use of urban spaces. In particular, the project develops around a core element which is “piazza Lavazza” the open public square that serves as an architectural expedient for the connection of the private and public realms. This strategic architectural layout has transformed the area creating openness and breaking down barriers. The purpose of this urban solution is to ensure a certain ‘fluidity of the space’ as well as creating a sense of place. The mixed urban area integrates the main buildings with several public amenities (e.g. green spaces, parking areas, public square, pedestrian zones and various facilities). Half of the spaces are subject to public use in accordance with the city of Turin.

Figure 46: Nuvola Lavazza Headquarters' overview.



Source: www.lavazza.it

The actors involved and their role

During the transformation process that lasted about 7 years from 2010 to 2017, the city of Turin played a fundamental role in defining the 'success' of the project. The strong public-private cooperation has sought to tackle the development scheme in a comprehensive way outlining a forward agenda for the completion of the area's transformation. The municipality administration has directed the intervention coordinating a multi-disciplinary team including various sectors ranging from urban planning, transport planning to real estate and private housing (and many others). On the environmental side (e.g. land remediation) the project called for the interaction with different governance levels and partners at the metropolitan and regional scale (involving the Turin Metropolitan City and Arpa Piemonte that is the agency for environmental protection). Next to this, the national trust has been an integral and active part of the transformation as during the site-works remarkable archeological findings have been brought to light. Next to this public-private collaboration, interesting forms of bottom-up initiatives have emerged which have seen the active involvement of the local community along with third sector associations throughout the whole implementation process. In particular it should be recalled, the "community engagement program" established by Lavazza in collaboration with the city's District 7 and in partnership with the associations ASAI, CleanUp, Tèkhné and Torino Spazio Pubblico. Among the many activities promoted within the Lavazza engagement program is the project "I luoghi del bello" (Places of beauty) which has featured the citizens active engagement in the selection and installation of greenery around the area and community cultural events. This participative approach adopted by the private operator allowed to build trust and acceptance over the project.

Place-based character of the project

The Nuvola Headquarters project, undoubtedly, builds on the historical ties with the local context. The regeneration indeed can be framed as a territorial investment directed at the revaluation of the neighbourhood which has been the background of the company's historical evolution. Next to this, the paradigm of sustainability guiding the entire transformation reflects the company's core value.

Conditions for replicability and knowledge transfer

- Ensuring sustainability within and beyond the development project. In this direction, the strong emphasis put on the social value-creation whereby the company's human capital and community were the focus, is indicative of a valuable sustainable approach aimed at creating an enduring sense of belonging.

- Leveraging on the existing resources, the manufacturing servitization process is crucial to facilitate value-creation and boost innovation. Next to this the creation of a platform of closely interconnected private actors and research institutions enhances the innovation capacity of the company and helps to promote business development and create new job opportunities.
- Rationalisation and simplification of administrative/bureaucratic procedures are essential. In this case, the capacity of the public to accommodate the requests of the business operator not only has speeded up the development process but it has also created the optimal conditions for the Lavazza to consolidate its presence locally.
- The redevelopment project scheme builds on a strong public-private cooperation. The case shows the proactive role of the public administration in the management of the urban transformation. In addition, community engagement and citizens' active involvement allowed to build trust and acceptance over the project.

Impact and effectiveness

The Lavazza project is an emblematic case of manufacturing servitization. The case, in fact, offers insights not just on the cooperation between the private and public sector which allowed for such redevelopment but also on how production can be integrated in an increasingly service-oriented economy. The project by Cino Zucchi Architetti, constitutes a relevant case of technical, administrative, architectural and social innovation capable of redesigning the entire neighbourhood. The former industrial area shows a renovated identity. Today, the headquarters host 600 workers. Arguably, the project restored urban quality while preserving industrial heritage, enhanced the socio-economic attractiveness of the area being catalyst of multiple private investments and nonetheless gave new impetus for social interaction.

5.8 RDM Rotterdam

Key facts

Promoter and/or key facts

Land owned by the City of Rotterdam, activated and developed by Havenbedrijf Rotterdam (Port of Rotterdam) and the Hogeschool Rotterdam.

Dates

2002 – ongoing

Location

Rotterdam

Typology

A large development program which involves the redevelopment of a former wharf area with a focus on mixed-use typologies and innovative and creative industry.

Figure 47: The Hogeschool Rotterdam's Centre of Excellence education where students are given challenges to not only build vehicles from scratch but also look for co-financing to improve their projects.



Source: Adrian Vickery Hill.

The project in a nutshell

RDM 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. The building brings together formal technical training, space for start-ups to carry out research and development and facilities for events and showcasing work, particularly with a maritime focus. This building is part of a larger development program referred to as the Rotterdam Makers District which involves the redevelopment of a former wharf area on the north side of the river with a focus on mixed-use typologies.

The problem addressed

This inspirational case responds to a set of particular circumstances found within Rotterdam. Yet these conditions can be translated to many other places that are home to technology or industrial clusters.

The Port of Rotterdam is essentially a large industrial cluster which competes with other large European ocean ports such as Antwerp and Hamburg. In order to remain competitive and innovative, it must ensure suitably skilled local workers are available to enter the workforce. It also has particular technical challenges which means that it must ensure that entrepreneurial engineers and designers are regularly producing forward thinking solutions that can compete with other major ports across the globe such as in Shanghai or Singapore.

Manufacturing businesses worldwide complain about the shortage of suitable technical skilled workers that are capable of adapting to new technology and working conditions. This is partially about the basic technical training but also starting early with educating students with multi-disciplinary skills that allow them to adapt easily to new technology and working conditions in the future.

Training institutions worldwide often struggle to prepare students for modern workplaces as the training facilities are poorly connected to the challenges of the workforce. This is in part because training facilities provide generic education curricula, and many are located far away from where students will eventually find work.

Young and entrepreneurial engineers and designers that are exploring new technology or technical solutions, often do not have the skills or technology to develop their ideas while also not being able to afford space during early prototype stages. These entrepreneurs often need places where they can develop their ideas, which are close to clients but also accessible for future investors.

The solution proposed

RDM Rotterdam is the ultimate place for innovation in the port; this is where the manufacturing industry of the future takes shape.

Where previously famous ships like the steamship Rotterdam were built, the former shipyard of the Rotterdamsche Droogdok Maatschappij (RDM) now offers space for companies, education and research.

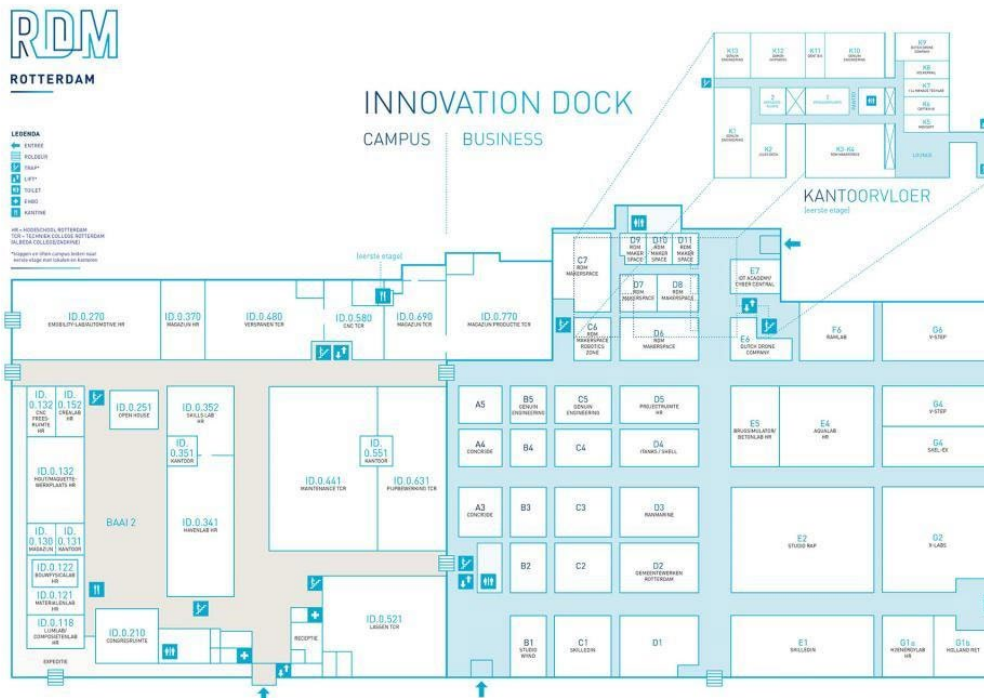
Because companies can use high-tech facilities and find collaboration with education and research, innovations are realised quickly. Both start-ups, SMEs and world players in the maritime and offshore sector can be found at RDM Rotterdam. More than forty innovative companies, including Ampelmann, Franklin Offshore, RanMarine Technology, Energy Floors and Studio RAP, have found their place at RDM.

The RDM Rotterdam project responds to a history of technical innovation related to the port and maritime activities which now focuses on the motto: 'Research, Design and Manufacturing'.

The title RDM has historical significance that does not just refer to the city of Rotterdam. The site was originally home of Rotterdam's Drydock Company (Rotterdamsche Droogdok Maatschappij), the source of the name RDM. The site initially repaired ships, but through technology transfer quickly evolved into building large and complex vessels such as cruise ships and submarines. This 'import replacement' allowed the site to produce directly for the harbour or Rotterdam and become the biggest boat building yards in the Netherlands and one of the biggest in Europe, in the years leading up to World War Two. The two decades after the war were the golden years for the site, employing some 7000 personnel at its peak. The signing of world trade agreements and the cheaper personnel costs in Asia led to decline and bankruptcy of the shipping yard in 1983. But in 1987 the site turned to high-tech production for the military and the energy sector, changing its name to RDM Technology. In 2002 the site was purchased by the City of Rotterdam. At the same time, the company's training school was taken over by a technical college (the Albeda College). In 2009 the Rotterdam university of applied sciences (Hogeschool Rotterdam) and the Port of Rotterdam's development company (Havenbedrijf Rotterdam) became the two main actors that transformed the site into the 'Innovation Dock' and the RDM site as it is known today.

RDM Rotterdam now consists of the three programs. Firstly, the site is a campus for training and education. A special feature of this campus is the existence of technical education and applied sciences from the under one roof, with a particular focus on entrepreneurship. The campus hosts Hogeschool Rotterdam's automotive course. Other technical study programs - such as Industrial Product Design, Mechanical Engineering, Electrical Engineering and Maritime Engineering - come to RDM for practical and project education, making use of the workshops space. The Albeda College, which took over the former RDM Technology training college, also offers technical training on the site. Secondly, over 50% of the site is available for start-ups, SMEs and global players to develop space oriented in the maritime and offshore sector. Businesses and the Campus share some facilities and workshops. The Campus and Business areas occupy 12000m². Thirdly, the Events are hosted at the Submarine Wharf, managed by Ahoy (one of the Netherlands' largest events spaces, located in south Rotterdam) providing space for events of up to 5,000 people.

Figure 48: The RDM campus, showing the mix of education (left) and R&D and business (right).



Source: www.rdmcoe.nl

The actors involved and their role

Today there are two main actors. Firstly, the Havenbedrijf Rotterdam is responsible for developing the site. The Hogeschool Rotterdam provides the training and facilities which it refers to as the RDM Centre of Excellence and offers a range of learning experiences ranging from technical skills to research and development.

There are a number of other actors that have indirect interest in the site such as the City of Rotterdam, the Rotterdam Mainport Institute (offering a bachelor level university degree) located on the north side of the river and Ahoy (one of the Netherlands' largest events spaces, located in Rotterdam) which hosts events on the site.

Place-based character of the project

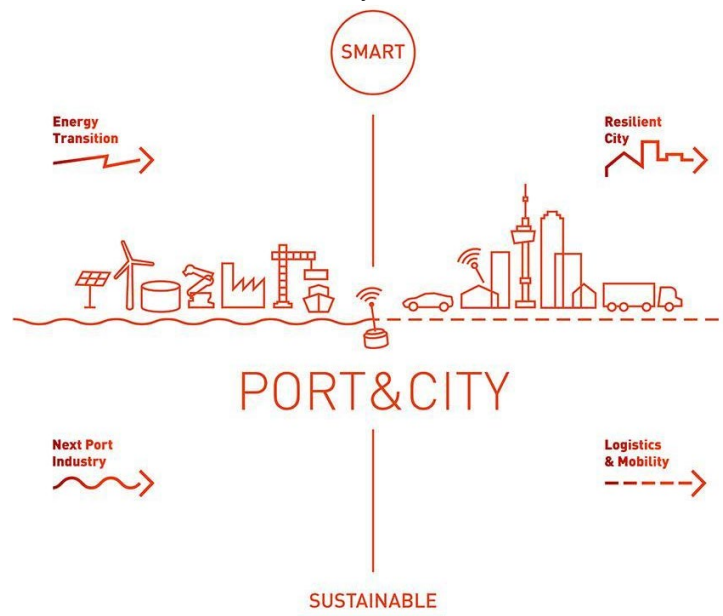
There is much about this project which is highly place-based. The building itself, a former shipyard, is a heritage monument which in itself embodies the spirit of innovation and technical skill. The site is located near the city of Rotterdam and accessible to technical universities and research institutions such as TU Delft, WR Wageningen and the Rotterdam Mainport Institute. The Port and City of Rotterdam have a long history of adapting to and embracing technical

change which offers fertile ground for the RDM campus. However, similar conditions can be found in other cities with a living industrial heritage.

Conditions for replicability and knowledge transfer

- Collaboration model between the city, the Port of Rotterdam and the training college (Hogeschool Rotterdam) may not be easily replicable but is structured in the triple helix model of publicly supported research that can be converted into business.
- The current iteration of the site has emerged quickly yet is built on clear DNA related to port-side manufacturing and innovation. This could not be carbon copied to another site but clearly shows the importance of building on established local skills and knowledge.
- The concept of hub and the intersection of technical education, research and development and communications, within a site that is exciting for the general public, offers a clearly inspirational case that can be replicated in many other locations.

Figure 49: The RDM Centre of Excellence's four key themes.



Source: www.rdmcoe.nl

Impact and effectiveness

The RDM is one of various sites in and around Rotterdam that aim to showcase innovation. But there are very few publicly accessible sites that informally combine education, research and development and allow people of various skills and backgrounds to intersect within (maritime) R&D and manufacturing. The Centre of Excellence's location within the old production halls creates an inspiring environment for developing new innovative projects, particularly within the context of the port. The Hogeschool's Centre of Excellence defines four themes, see Figure 67, which defines some mission driven ambitions. In practice, not all projects active on the site are directly related to the port or maritime activities which means that the skills and knowledge are

not strictly restricted to maritime activities. The site itself has spawned a number of start-ups which are addressing serious real-world challenges, much of this can be attributed to the investment and collaboration between the Port of Rotterdam and the Hogeschool Rotterdam. The future of the larger area with the development of the Rotterdam Makers' District may allow the RDM hub evolve into a larger 'innovation district' where ideas are prototyped on the RDM site and then spun out into the larger Makers' District.

6 Main take-aways towards policy recommendations

The production of usable knowledge in the form of an “**Atlas of 26 Inspirational cases**”, delivered to the stakeholders, has been a useful tool for discussion and interaction for the occasion of the interactive workshops. In particular, in the process of collection and analysis of these cases the workshops were a fertile ground as well as a strategic resource to:

- stimulate knowledge exchange and feed up policy mobility about the relationship between industry and the city,
- experiment and support critical design about future scenarios on the relationship between industry and the city; interact with some of the protagonists of these experiences.

In fact, the stakeholders had the opportunity to read, comment, learn from inspirational cases, but also to interact with some of the protagonists of these experiences, as well as of experimenting policy design drawing from the lessons learnt, during the Inspirational cases workshop.

The inspirational cases, collected and discussed with the stakeholder cities, provided some crucial arguments for reflection in order to develop new policy approaches.

1) The need of new analytical lens and monitoring tools

The first consideration speaks up to a wider public - policymakers and institutions, academics and entrepreneurs - and basically concerns the growing and shared awareness of the need to develop new analytical approaches. There is an evident and urgent need to restructure the way data is collected to grasp the nature of the contemporary manufacturing sector. The discussion with the stakeholder cities and local actors, together with the methodological approach conducted in the MISTA Project, confirm the mismatch between the changing nature of the manufacturing system and the official portrait produced by national and local statistics. Inspirational cases support this hypothesis showing the efforts provided by cities to dig in the nature of the contemporary productive city, the nature of the crisis that is affecting some of the cities examined, but also the nature of new productive initiatives that are emerging citywide, both in central and metropolitan areas.

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

A second consideration moves from the idea that a metropolitan/regional perspective, together with a new understanding of the manufacturing sector, can consistently contribute to a better awareness of the problem and guide the formulation of new visions. Indeed, cities are not all the same and are experiencing different situations, from deep crisis to high competition for economic functions, from strong actors' collaboration to high fragmentation and competition. The act of conceptualising the situation is a crucial one, and it needs momentum and capacities. The inspirational cases analysed represent the potential displayed by a regional/metropolitan governance framework in developing an integrated territorial strategy, as well as the fragility and complexity of developing a shared vision of the problems to be addressed. Despite not

being representative of the whole range of situations, they ideally move from a more structured governance framework, able to support integrated strategies and visions, to more voluntary, incremental forms of mobilization based on a tactical approach. In all cases, the public sector is playing a major role in trying to put forward frameworks based on a future prospect of the city-industry vision. Transcalar alliances are evidently crucial, but at the same time, also at city level, visioning and strategic planning can be elaborated and shared with stakeholders. Translocal deals are crucial anyway in the globalisation of the productive city.

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

A third bundle of considerations is related to the role that spatial planning can play in fostering a new dialogue between the city and the industry in contemporary societies. The Inspirational Cases selected under this perspective, present different interpretations of the role of spatial planning, ranging from a strong regulative approach based on traditional planning functions like land use regulation and zoning, to a design reflection on new spatial patterns to host the industry in the city, passing from the experimentation of urban regeneration strategies and the design of new industrial functions in the fringes of the urban region. Finally, cities also look for a new dialogue between spatial planning and economic actors, in order to reduce the communication and knowledge gap and reinforce the co-production of knowledge as the basis for a more efficient planning process. All in all, the inspirational cases show the effort that spatial planning is doing to reinvent itself in relation to the need to support a new economic base for the city.

4) Innovative tools to operationalising the new relationship between the city and the industry.

A wide range of tools have been designed and implemented Europe-wide to represent a viable solution to address problems: public and private agencies and incubators, as well as fiscal tools and models of business parks are interpreting in different ways the need to develop operative spaces able to implement visions and strategies and to support spatial planning decisions. The public actor in this respect is particularly investing on these types of initiatives, at different scales and with different models of public action. At the same time, new public-private solutions are also under development.

5) Innovative urban and architectural design solutions.

The design of innovative functional and spatial solutions is one of the most interesting challenges for both the public and the private sectors. Single initiatives or pilot projects have been developed during the last decade to contribute to a new dialogue between the existing urban fabric and the manufacturing sector, which is radically changing its nature and scope. Moving from large-scale infrastructures redevelopment to small and medium size neighbourhoods in the city centres or in the urban fringes, pilot projects experiment basically the reuse of abandoned spaces, trying to provide new conditions of coexistence between economic functions and liveability. Functional mix, quality of built up and open spaces,

participation of local entrepreneurs and citizens are ingredients of pivotal experiences that are trying to subtract manufacturing spaces from traditional real-estate dynamics: the role of the public, in this sense, is still determinant, but the emergence of new actors, universities, foundational economy activities together with the new entrepreneurship of local business is producing a mix of initiatives that are managing to put forward innovative solutions.

7 References

APEA – Aree Ecologicamente Attrezzate (Eco-Industrial Parks), Italy

Regione Emilia-Romagna (2012) Le aree produttive ecologicamente attrezzate in Italia stato dell'arte e prospettive, Cartesio, ERvet. Available at: https://ambiente.regione.emilia-romagna.it/it/sviluppo-sostenibile/temi-1/sviluppo-sostenibile/gestione-e-sostenibilita-aree-industriali/materiale-per-approfondire-1/rapporto%20APEA_2010.pdf (accessed 25 November 2020)

Cariani R. (2013) Eco-aree produttive Guida all'eco-innovazione, alle politiche per la sostenibilità e ai progetti operativi nelle Aree Produttive Ecologicamente Attrezzate (APEA), Edizioni Ambiente. Available at: https://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.showFile&rep=file&fil=ETA_BETA_Final_Book_IT.pdf (accessed 25 November 2020)

Berlin Initiative for the New Municipal Craft and Trade Centres

GSG Berlin. Available at: <https://www.gsg.de/de/gewerbehof-gewerbepark/berlin/> (accessed 1 December 2020)

Gewerbesiedlungs-Gesellschaft. Available at: <https://de.wikipedia.org/wiki/Gewerbesiedlungs-Gesellschaft> (accessed 29 November 2020)

GSG Berlin Erwirbt 50. Gewerbehof (2020). Available at: <https://www.e-pr.de/aktuelles/item/249-gsg-berlin-erwirbt-50-gewerbehof> (accessed 29 November 2020)

Berlin Urban Development Plan (UDP) Economy 2030

Stadtentwicklung und Wohnen, Berlin.de. Available at: www.stadtentwicklung.berlin.de (accessed 30 November 2020)

Bouwmeestar Maître Architecte

<https://bma.brussels> (accessed 18 November 2020)

Brussels' Abattoir

<https://abattoir.be> (accessed 18 November 2020)

Brussels circular economy plan

<https://www.circulareconomy.brussels/homepage/?lang=en>

Kampelmann S. & Athanassiadis A. (2019) 'Evaluation du Programme Régionale en Economie Circulaire de la Région de Bruxelles-Capitale : Un regard académique sur le programme initial et les réalisations (2016-2018)', Chair of Circular Metabolism (ULB), www.circularmetabolism.com (accessed 20 November 2020)

Brussels Capital Region (2019) 'Rapport d'activité Intermédiaire (2019)'. www.circulareconomy.brussels (accessed 20 November 2020)

Brussels Capital Region, 2016, 'Programme Régional en Economie Circulaire 2016-2020. Mobiliser les ressources et minimiser les richesses perdues: pour une économie régionale innovante', www.bruxellesenvironnement.brussels (accessed 20 November 2020)

Citydev.brussels

<https://www.citydev.brussels> (accessed 18 November 2020)

East End Guilds (EETG) & Guardians of the arches

<https://eastendtradesguild.org.uk/about/> (accessed 21 November 2020)

<https://www.guardiansofthearches.org.uk> (accessed 21 November 2020)

Ferm J. (2014) Delivering affordable workspace: Perspectives of developers and workspace providers in London, *Progress in Planning* 93 (2014) 1-49

Froy, F and Davis, H. (2017), 'Pragmatic urbanism: London's railway arches and small-scale enterprises', *European Planning Journal*, 25:11, 2076-2096

Francesca F. (2017) Railway Arches: A Refuge for London Businesses in the Context of Rising Property Prices, *MoveableType*, Vol.9, 'Metropolis' (2017) DOI: 10.14324/111.1755-4527.075

Fiscal compensation at a metropolitan level, Bologna

Città metropolitana di Bologna, Piano strategico 2020. Available at: https://psm.bologna.it/Engine/RAServeFile.php/f/documenti/Relazione_PSM_2.0.pdf (accessed 18 November 2020)

Ferri V. (2020) La perequazione territoriale nella Città metropolitana di Bologna. Available at: <https://www.urbanit.it/la-perequazione-territoriale-nella-citta-metropolitana-di-bologna/> (accessed 18 November 2020)

Greater Manchester Metropolitan Governance and Planning

Greater Manchester Local Industrial Strategy (2019). Available at: <https://www.greatermanchester-ca.gov.uk/what-we-do/economy/greater-manchesters-local-industrial-strategy/>

Harding, Alan (2020) Collaborative Regional Governance: Lessons from Greater Manchester, IMFG Papers on Municipal Finance and Governance, 2020 Vol 48.

Metropolitan Research Institute (2018) Addressing the metropolitan challenge in Barcelona: Lessons learnt from analysing five European metropolitan areas. Working document commissioned for Area Metropolitana de Barcelona.

Hôtels Industriels

Institut d'Aménagement et d'Urbanisme (2016) Sites D'activités Économiques. Panorama d'exemples français et internationaux de densification. Report, IAU Ile-de-France, FR, January 2016.

Loomis JA (1995) Hôtels Industriels. *Places* 10(1): 24-26.

Moiroux X (2011) Benchmarking de Formes Urbaines Économiques. Fiches Bâtiments. Fiches Espaces d'activité. Report, Agence d'Urbanisme de l'Agglomération Marseillaise, FR, November 2011.

Ile de Nantes, France – slow urbanism model

<https://www.iledenantes.com/>

Laurent L. (2015) Shaping the image of a city: Nantes (Fr) a case study. International Architecture Forum: the preservation of monumental heritage, Dec 2015, Hangzhou, China. fhal-01508976v2f

<https://hal.archives-ouvertes.fr/hal-01508976v2/document>

I3P business incubator (PoliTo), Turin

I3P business incubator. Available at: <https://www.i3p.it> (accessed 10 November 2020).

Lageweg, Antwerp – stimulating joint actions of private actors

<http://remakingthecity.urbact.eu/lageweg-antwerp-belgium--98.case> (accessed 15 november 2020)

LAVAZZA Headquarters, Turin

Corriere della Sera, ABITARE (2018). Contemporary baroque. Available at: <https://www.abitare.it/en/architecture/projects/2018/11/06/cino-zucchi-new-headquarters-lavazza-turin/> (accessed 21 November 2020).

CZA Lavazza Headquarters. Available at: <http://www.zucchiarchitetti.com/projects/offices/ed036/> (accessed 10 November 2020)

Nuvola Lavazza. Available at: <https://www.lavazza.it/it/chi-siamo/nuvola.html> (accessed 21 November 2020).

London Industrial Intensification Study

London Industrial Intensification Primer, City of London, 2017. Available at: <https://www.london.gov.uk/sites/default/files/industrialintensificationprimer.pdf> (accessed 15 november 2020)

Malopolska Regional Development Agency

Büttner S (2005) The Małopolskie Economic Region. Case study for Eurocap project. Available at: https://www.google.com/search?q=B%C3%BCttner+S+The+Ma%C5%82opolskie+Economic+Region&rlz=1C1PRFI_enHU869HU869&oq=B%C3%BCttner+S++The+Ma%C5%82opolskie+Economic+Region&aqs=chrome..69j57j33i160.3850j0j15&sourceid=chrome&ie=UTF-8# (accessed 27 November 2020)

Małopolska Agencja Rozwoju Regionalnego S.A (Małopolska Regional Development Agency)
www.marr.pl

Małopolska Agencja Rozwoju Regionalnego S.A.: Strategia Rozwoju Na Lata 2018-2030. Available at: <https://www.marr.pl/wp-content/uploads/2019/02/Strategia-Rozwoju-MARR-2018-2030.pdf> (accessed 27 November 2020).

Planned Manufacturing District (Chicago, USA)

Jordahl H. (2016) Zoning for Industry in a Post-Industrial Era: The Legacy and Potential of Chicago's Downtown Planned Manufacturing Districts, Master in City Planning at the Massachusetts Institute Of Technology Master dissertation.

The University of Wisconsin-Milwaukee Center for Economic Development (2005) Curbing Industrial Decline or Thwarting Redevelopment? An Evaluation of Chicago's Clybourn Corridor, Goose Island, and Elston Corridor Planned Manufacturing Districts. Center for Economic Development Publications. 40. https://dc.uwm.edu/ced_pubs/40

Planned Manufacturing Districts: How a Community Initiative Became City Policy (retrieved at <https://ecommons.cornell.edu/handle/1813/40535>)

<https://www.aiachicago.org/events/rethinking-the-future-of-planned-manufacturing-districts/#.X90gkdhKg2w> (accessed 15 november 2020)

RDM Rotterdam

<https://www.rdmrotterdam.nl/en/about-rdm-rotterdam>

Salzburg: data collection

ICRA. Available at: <https://www.icra.at/> (accessed 15 November 2020)

Stadt – Salzburg. Orte, MA 5/03 Office for Urban Planning and Transport. Available at: <https://www.stadt-salzburg.at/orte/ma-5-raumplanung-und-baubehoerde/ma-503-amt-fuer-stadtplanung-und-verkehr/> (accessed 15 November 2020)

Strategiedialog Automobilwirtschaft (SDA), Germany

Staatsministerium Baden-Württemberg. Available at: www.stm.baden-wuerttemberg.de (accessed 23 November 2020).

Strijp-S, Eindhoven

Fernandez Maldonado A.M., Romein A. (2009) The reinvention of Eindhoven: from industrial town in decline to capital city of a technology and design region, mimeo, City Futures in a Globalising World Conference, Madrid.

Stichting Brainport (2005), Brainport Navigator 2013. Lissabon voorbij! Eindhoven: Stichting Brainport.

The strategic plan of Hovinbyen (Oslo)

https://issuu.com/suburban.reinventingthefringe/docs/oslo_gebundeld

Vienna Adult training and Labour market policy agency – WAFF

WAFF, Stadt Wien. Available at: <https://www.waff.at/> (accessed 17 November 2020)

Vienna Business Districts, Austria

Vienna business district. Available at: <https://www.viennabusinessdistricts.at/> (accessed 20 November 2020)

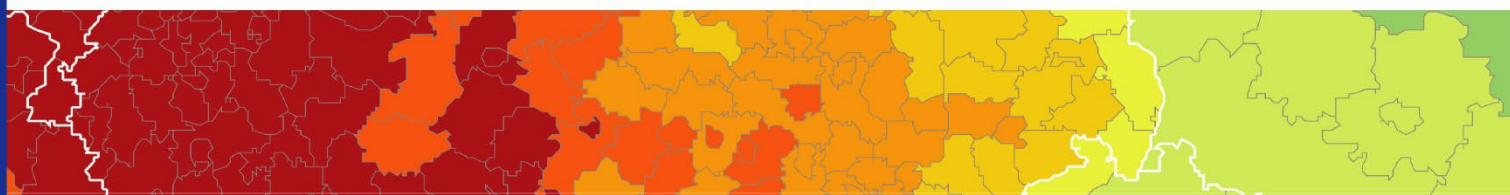
Vienna Business Districts, Positive Entwicklungsdynamik in den Betriebsgebieten der Stadt Wien (2019). Available at: <https://www.wko.at/service/w/verkehr-betriebsstandort/vienna-business-districts.html> (accessed 20 November 2020)

Vienna Business Districts - Gemeinsam Wirtschaft planen. Available at: <https://www.wien.gv.at/stadtentwicklung/strategien/vienna-business-districts.html> (accessed 20 November 2020)

Wirtschaftsförderung Region Stuttgart GmbH (WRS) Stuttgart

Frank A., Morgan K. (2012) Re-inventing the City: The Art of Metro-Governance in the Stuttgart Region, Paper in Planning Research 186, Cardiff School of City and Regional Planning.

Fürst, D. (2005) Metropolitan governance in Germany, in H. Heinhelt and D. Kübler (eds) Metropolitan Governance. Abingdon: Routledge, pp. 151-168.



ESPON 2020 – More information

ESPON EGTC

4 rue Erasme, L-1468 Luxembourg - Grand Duchy of Luxembourg

Phone: +352 20 600 280

Email: info@espon.eu

www.espon.eu, [Twitter](#), [LinkedIn](#), [YouTube](#)

The ESPON EGTC is the Single Beneficiary of the ESPON 2020 Cooperation Programme. The Single Operation within the programme is implemented by the ESPON EGTC and co-financed by the European Regional Development Fund, the EU Member States and the Partner States, Iceland, Liechtenstein, Norway and Switzerland.