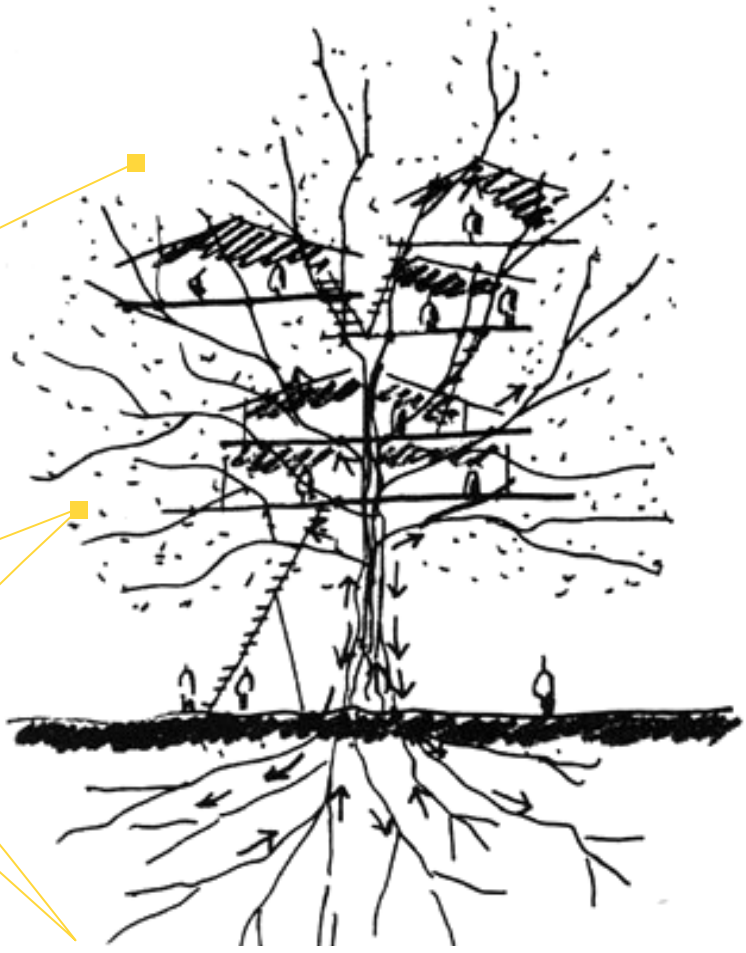
USEAct

Urban Sustainable Environmental Actions



USEAct Thematic Booklet

Edited by USEAct Lead Expert Vittorio Torbianelli

European Union
European Regional Development Fund

Connecting cities
Building successes

URB ACT

Lead Partner
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This Thematic Booklet is edited by **Vittorio Torbianelli**, USEAct Lead Expert.
It refers to the network activities and to thematic contributions from the partners , further thematic expert and URBACT experts.

Maria Luna Nobile, Anna Arena, and Vincenzo Fusco, (Lead Partner team) contributed to editing the paper.

Cover picture:
“Vivere e partecipare nella città”,
“Living and participation in the city”
Drawing by Giancarlo De Carlo,
in the article written by Sergio Signorini
n. 13-14 Città in controluce, September 2006

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FOREWORD

Vittorio A. Torbianelli
USEAct Lead Expert

The USEAct Thematic Booklet

The “USEAct Thematic Booklet” gathers thematic contents of the USEAct projects.

The structure of the booklet mirrors the USEAct thematic framework, proposed in the Baseline Study, centred on three main thematic areas (Table A), as recalled below.

Table A: The three main thematic areas of the booklet

Theme I	Subtheme	
Planning tools and planning governance for Urban Growth Management and reusing urban areas	1.1 Implementing UGM at different administrative levels and scales	**SECTION I**
	1.2 Planning tools to manage land property fragmentation for integrated “reuse” interventions	
	1.3 Taxes and financial tools for promoting and funding	
	1.4 Improving social awareness towards positive effects of UGM, renewal and densification and involvement of communities	
	1.5 Transportation and planning for Urban Growth	
Theme II	**Subtheme**	
Interventions to “reuse” urban areas: management, partnerships, funding, functions	2.1 Designing, managing and funding successful Public Private Partnership and proactive community participation	**SECTION II**
	2.2 Improving public administration ability on controlling and managing “high quality” and “sustainable” reuse interventions	
	2.3 Inducing “local added value” in reuse interventions	
Theme III	**Subtheme**	
Refitting and regenerating inhabited buildings and areas	3.1 Integrated, "regeneration-oriented" public strategies through refitting and maintenance of existing buildings in the urban fabric: residential blocks in central areas and historic	**SECTION III**
	3.2 Involve flat-owners to join refitting integrated strategies trough energy efficiency improvements	

This booklet, in fact, combines contents of three separate “thematic papers” previously published during the project phase on each of three main thematic area of the project.

The Thematic Booklet does not contain, of course, all thematic material exchanged during the development phase. It reperesent a structured selection of cases studies and know-hows, arranged with the aim to provide, mainly to “external” users, an “integrated picture” of the project contents.

The more structured contributions (both by experts experts and partners) was selected, in particular those that were most consistent with the thematic focus.

It is clear that only the entire (and veritably pretty extensive set of materials formed by presentations, case-studies, meeting reports, etc., would be capable to comply with detailed information requirement.

The booklet should however be considered as a “first level” door and a incentive – for people interested in focusing on more specific details or sources - to enter further project outputs or to contact partners and expert to go in depth on specific case-studies.

Main contents

Section I – Chapters 1, 2, 3

Chapters 1-3 are dedicted to the first thematic area of the USEAct project: “Planning tools and planning governance for Urban Growth Management and reusing urban areas”.

Particular attention has been paid to two “strategic” planning issues, which are at the heart of avoidig landtake policies, but do not always emerge in a marked manner as topics to focus on by the partners – namely the ability to organise a suitable metropolitan “governance” (extended beyond the administrative space of the city) and to activate, in an integrated manner, a land-use management policy.

In addition to these, other contributions have also been used (case studies, etc.) from partners, in aspects that adhere highly to the thematic focus.

Section II – Chapters 4, 5, 6

Chapters 4-6 are focused on to the “Theme 2” of the USEAct project. Theme 2 refers to “intervention to reuse urban areas”: management, partnership, funding and functions.

The main theme is divided into three further subthemes, that are related in short, to partnership and participation (Chapter 4) role of public administration in addressing quality for the intervention (Chapter 5) and creating “value” through reuse (Chapter 5, 6).

Sections on interventions to reuse urban areas are structured in a way able to display the specific sub-topics focused on by USEAct partners, maintaining a clear – but not rigid - link with the original thematic structure. As a consequence, chapters do not replicate the general thematic structure, although strong ties are evident.

Chapter 4 is dedicated mainly to the partnership issue, which partners have considered one of the most challenging drivers for implementing urban reuse. Chapters 5, 6 mainly face the “quality” issue, faced from a couple of very specific points of view. First focus is on the capability to let accept to communities and public administrations (politics) the principle that a high quality but denser urban environment can improve and not reduce life quality. Second focus is on the need to select specific “functions” (and in particular productive activities but also affordable housing) in reusing urban areas, avoiding any “generalist” approach to development. Third focus is on smart data and visualization tools. Adopting such kind of tools appears to be one of the most powerful way to facilitate positive relationships between public administration and communities, and in particular to recognize reciprocal needs, to deliver information on values and targets, but also to improve, in general, the decisional process relate to land use and land development.

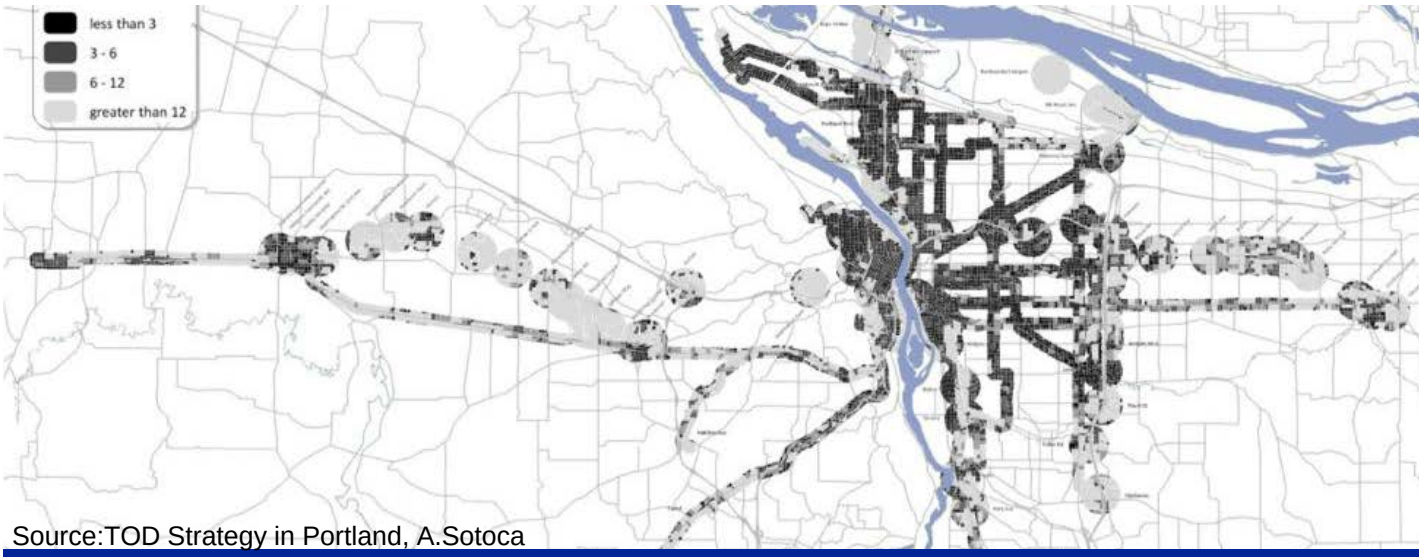
Section III – Chapters 7, 8

Chapters 7, 8 are dedicated to the “Theme 3” of the USEAct project. Theme 3 refers to “Refitting and regenerating inhabited buildings and areas”.

The main theme is divided into two further subthemes, relating to “regeneration-oriented" public strategies through refitting and maintenance of existing buildings in the urban fabric: residential blocks in central areas and historic centres and involving flat-owners to join refitting integrated strategies through energy efficiency improvements

The actual USEAct project development has allowed focusing on further specific sub-issues, linked to the above mentioned topics, which appeared to be of high interest for USEAct partners.

SECTION I



Source:TOD Strategy in Portland, A.Sotoca

1 IMPLEMENTING URBAN GROWTH MANAGEMENT (UGM) AT DIFFERENT ADMINISTRATIVE LEVELS AND SCALES

1.1. STARTING FROM THE BIGGEST CHALLENGE: THE PLANNING MISMATCH

As pointed out in the Lead Expert Kick-Off meeting presentation[1], the USEAct project aims to focus on the issue of integrated urban growth management policy, to minimize (not necessarily avoid!) land take and soil sealing. In general to reach this target is important to create a framework for an effective design and implementation of integrated policy.

Cities and local administrations should therefore: identify the general targets of this integrated policy, at local level; identify which are the "management tools" needed and potentially available to implement this policy and to "manage" the implementation process; recognizing the constraints that, at local level or at a superior level, represent a problem for designing and/or implementing the framework.

As it will be pointed out in the next paragraphs, great attention should firstly be paid to the "planning mismatch", between different authorities. This is probably the first challenge for any "land-take reduction" policy and also for the USEAct partners and in this first thematic report, the specific aspect of planning mismatch is strongly stressed.

Partners should clearly identify, in their respective cases, the "effects" on the land use induced by the mismatch between Administrative Urban Areas, Functional Urban Areas and Morphologic Urban Areas.

All the different components of the integrated policy have therefore to be identified and shown within a coherent enlarged "spatial vision" at supra-municipal level.

The recently published results of the "Plurel Project ", 2007-2011[2], one of the most relevant projects about "anti-sprawl" strategies for European context, has showed very clearly that reducing land take is mainly a "regional –scale" matter.

[1] Vittorio Torbianelli, Presentation at the USEAct Kick-off Meeting, Viladecan, 27th-28th May 2013

[2] http://www.plurel.net/

So far, the governace aspect should be clearly identified (and stressed) by the partners which have situations with more “risks” (now or in the future) of further land take due to the interaction of forces which are not under direct control of the “local” administrative body.

Effective wide area governance frameworks are a possible solution.

Good practices of cooperation among city-administration exist also in case of “small” cities: inter-municipal developments are just an example, and they can be interesting for the USEAct partners as well. Rheintal, Austria, is an agglomeration of several small cities and highly affected by urban sprawl. 29 municipalities have committed themselves to an integrated approach for the whole region, with special focus on the reduction of land take and soil sealing. Inter-municipal business settlements. TMG is a public agency in charge of facilitating new business settlements in Upper Austria. The development of new business locations is an important tool for municipalities to attract new business settlements and new income. However, many Austrian municipalities have already failed and have in fact created new brownfields. As a reaction, TMG has developed the concept of “intermunicipal business location” (INKOBA16). Municipalities co-operate in developing and advertising one common location and share the costs and revenues. By concentrating the efforts of several municipalities the overall land take is lower compared to several smaller projects and the chance that developed locations are efficiently used is higher.

1.2. THE METROPOLITAN ISSUE IN EUROPE

Every year in the EU more than 1000 km2 of undeveloped land is appropriated for housing, roads, industry and recreation. EEA has estimated that there are as many as 3 million brownfields sites across Europe. Past suburbanisation/planned urban sprawl bring spatial and social segregation. No common legislation at European level for the sustainable use of soil resources has been adopted until now. Given these facts, the presentation of Mr Ivan Tosics[3], URBACT Thematic Pole Expert, during the First USEAct Thematic Meeting held in Viladecan, can be considered an ideal “starting point” for discussing the “Urban Growth Management” issue within the framework of the “USEAct” Project.

The lapidary sentence “Europe has a 21st century economy, 20th century governments, and 19th century territorial systems” can be easily referred, among others, also to the “territorial government mismatch” problem, that explains why “Urban Growth Management” is in general rather weak in reaching effectively land take reduction, not only in Europe but in other contexts as well.

This problem clearly emerged, for example, in the U.S.A. context: “*America’s metropolitan areas can no longer afford the crazy quilt of tiny, fragmented governments that they have inherited from the 19th century. The result is a fundamental mismatch between the real metro-scaled economy of innovative firms, risk-taking entrepreneurs and talented workers and the inefficient administrative geography of government*” (Katz, 2010).

Providing some backgrounds on the relationship between functional areas and EU policies can be therefore useful to start to discuss the issue.

Tables 1.1 and 1.2 show, as an example, the territorial pattern around Budapest and other European cities, showing in particular the „wheight” of Morphological Urban Area (MUA/city) and Functional Urban Area (FUA/city) in comparison with the population of the „administrative” city.

[3] Main source: Iván Tosics, Presentation for the USE-Act Kick off meeting – Implementation Phase, 28 May 2013, Viladecans (Spain).

Table 1.1 – Territorial pattern around Budapest

	Popula-tion (million)	Administrative status	Functional importance
Budapest municipality	1.7	local government	
Agglomeration of Budapest	2.5	none (statistical unit)	job market, housing market, infrastructure
Region of Budapest	2.9	NUTS II planning level	none
Economic area of Budapest	4.0	none	economic area (investors)

Source: Ivan Tosics, op.cit.

Table 1.2 – Population in different “areas” around the city core (ratios)

CITIES (million)	Admin city	MUA/city	FUA/city
London	7,43	1,1	1,8
Berlin	3,44	1,1	1,2
Madrid	3,26	1,5	1,6
Paris	2,18	4,4	5,1
Budapest	1,70	1,2	1,5
Vienna	1,60	1,0	1,6
Lisbon	0,53	4,4	4,9
Manchester	0,44	5,0	5,8
Liverpool	0,44	2,7	5,1
Katowice	0,32	7,1	9,5
Lille	0,23	4,1	11,3
…			
AVERAGE (40 cities)	42.63 mill	1,7	2,3

Source: Ivan Tosics, op.cit.

The above mentioned situation – Ivan Tosics affirms – is a precondition of a „democracy deficit” in planning and governance in many cities.

Planning is dominated by private interests and by authoritative decisions of local municipalities. In many CEE cities opportunity led local development dominates and in many Western European cities tax-income maximising policies are behind the efforts to make inner city areas attractive again.

The consequence is increase in socio-spatial segregation (growth of gated communities of the rich vs growing ghettoization of the poor and migrants), leading to dissatisfaction of people.

In such a context, the importance of „functional urban area cooperation” should be stressed to avoid the negative effects of competition (investments, services, taxes) between local authorities, To integrate policies – economic, environmental and social challenges can best be addressed at once on broader urban level and to reach the economy of scale – size matters in economic terms and in services. However, functional urban areas are undefined and usually weak in administrative-political sense

Potential ways to define and „delimit” metropolitan areas, city regions

As Ivan Tosics clearly pointed out, there is no universal agreement, neither on the terms (metropolitan area, functional urban zone, city-region) nor on its contents. Different definitions are recognized, as:

- Labour-market definitions (predominantly focused on TTW-travel-to-work area);
- Economic activity-based definitions (besides access to labour markets other factors might also be important: e.g. the supply chain, proximity of international airport);
- Housing-market definitions (the city-region might be defined as the area in which households search for residential locations);
- Service-district definitions (for example retail catchments, access to hospitals, theatres, etc.).

The OECD identification of FUAs is the following one: population grid from the global dataset "Landscan" (2000). Polycentric cores and the hinterlands of FUAs identified on the basis of commuting data, including all settlements from where at least 15% of the workers commute to any of the core settlement(s). OECD distinguishes four "categories" of „functional urban areas":

– small urban areas, with a population of 50 – 200 thousand;

– medium-sized urban areas (200 – 500 thousand),

– metropolitan areas (500 thousand – 1,5 million);

– large metropolitan areas (above 1,5 million population).

Data contained in the public data base[4], show that in 29 OECD countries, 1.175 functional urban areas are reckoned. In European OECD countries 659 functional urban areas are counted (29 large metropolitan areas and 88 metropolitan areas). More specific data are provided in Table 1.3.

[4] www.oecd.org/gov/regional/measuringurban

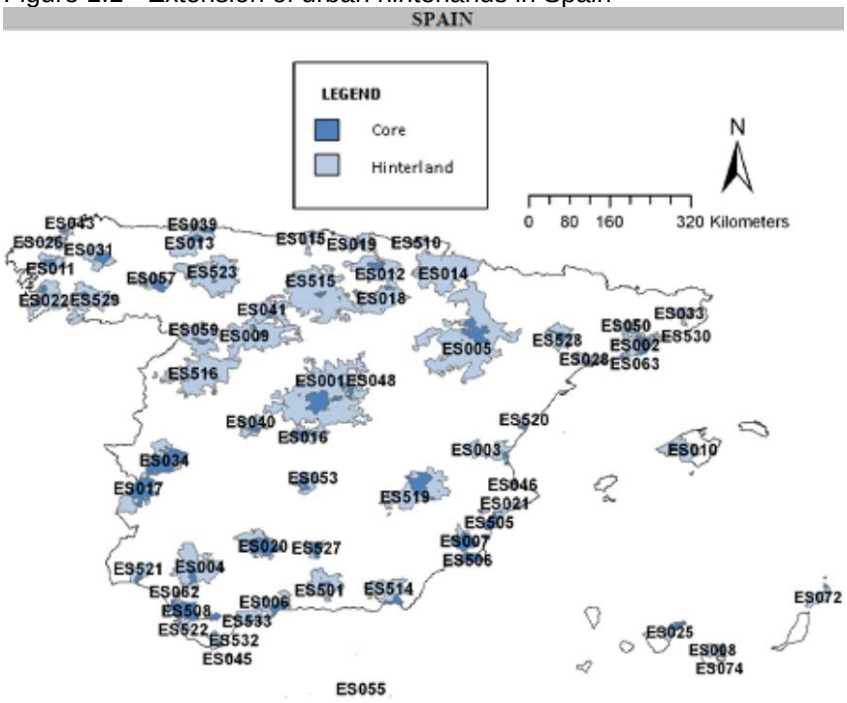
Table 1.3 - Metropolitan areas in OECD countries

European OECD Countries	**Large metro-politan area (1,5 mill -)**	**Metropolitan area (0,5 mill-1,5 m)**	**Medium sized urban area (200 th–500)**	**Small urban area (50 th– 200 th)**	**SUM M**	**Share of pop in FUAs (%)**
Austria	1	2	3	-	6	56,5
Belgium	1	3	4	3	11	58,9
Czech Rep	1	2	2	11	16	45,6
Denmark	1	3	-	-	4	53,8
Estonia	-	1	-	2	3	55,3
Finland	-	1	2	4	7	49,7
France	3	12	29	39	83	**62,8**
Germany	6	18	49	36	109	**64,3**
Greece	1	1	1	6	9	49,8
Hungary	1	-	7	2	10	49,7
Ireland	-	1	1	3	5	50,3
Italy	4	7	21	42	74	50,8
Luxembourg	-	-	1	-	1	**80,2**
Netherlands	1	4	11	19	35	**72,1**
Norway	-	1	3	2	6	44,5
Poland	2	6	16	34	58	55,2
Portugal	1	1	3	8	13	53,9
Slovak Rep	-	1	1	6	8	36,9
Slovenia	-	1	1	-	2	39,1
Spain	2	6	22	46	76	**62,7**
Sweden	1	2	1	8	12	52,7
Switzerland	-	3	3	4	10	55,6
UK	3	12	44	42	101	**73,0**
SUMM	**29**	**88**	**225**	**317**	**659**	

Source: Ivan Tosics, op.cit.

Figure 1.1 clearly shows, as an example, the extension of “urban hinterlands” in Spain.

Figure 1.1 - Extension of urban hinterlands in Spain



Source: Ivan Tosics, op.cit.

Territorial mismatch and governance models

With reference to the “territorial mismatch” issue, analysing the difference governance models is a fundamental step.

The recent “Eurocities Metropolitan Areas Survey”, developed within the “Eurocities” Association framework [5], reached some preliminary results. The cities that have been scrutinized are the following ones. In North-western Europe: Birmingham, Brussels, Ghent, Helsinki, Lille, Linköping, Malmö, Manchester, Oslo, Rennes, Stockholm, Stuttgart, Vienna, Zurich. In Southern Europe: Terrassa, Torino. In East-central Europe: Bratislava, Brno, Budapest, Katowice, Warsaw.

As reported by Ivan Tosics, different types of metropolitan governance emerge from the survey. In particular

1. Structured, pre-defined, fixed boundary metropolitan area organisation (e.g.:STUTTGART)
2. Flexible and/or bottom-up models of territorial governance (e.g. BIRMINGHAM)
3. Strategic planning lead metropolitan areas (e.g. MALMÖ-LUND)

Table 1.4 shows some different governance models with different legal frameworks, functions and roles played by each administrative level.

[5] See: http://www.eurocities.eu/eurocities/home

Table 1.4 - Stuttgart, Birmingham, Malmö, Vienna hinterlands: governance models, functions, legal framework

City, size	Areas around the city	Functions of the different areas	Legal background	Note
Stutt-gart (0,6 mill)	1. Stuttgart Region (2,7 mill) 178 municipalities 2. Stuttgart Metropolitan Region (5,3 mill)	1. Land use planning, the organisation of public transport and the promotion of the economy 2. Voluntarily tasks in the field of transport, economic development, climate change	1. Stuttgart Region (Parliament with 91 delegates) and the Stuttgart Region Association and agencies 2. Committee with 36 nominated delegates.	In Germany, the Federal Ministry of Transport supports model projects of spatial planning called „Modellvorhaben der Raumordnung“, or “MORO”. In these model projects, new ideas and instruments of spatial planning are tested and scientifically monitored.
City, size	Areas around the city	Functions of the different areas	Legal background	Note
Birming-ham (1,04 mill)	1. Greater Birmingham and Solihull Local Economic Partnership (1,9 million) Birmingham, Solihull + 7 settlements 2. Birmingham agglomeration (2,3 mill): physically built area + 10 km green belt 3. West Midland Metropolitan County (2,55 mil): two main parts, Birmingham – Black Country 4. Birmingham Metropolitan Area (3,6 million): County + towns with 30-60 th. inhabitants including rural areas 5. West Midlands Region (5,3 mil)	1. Not clearly decided yet: may contain strategic planning, economic development, transport, culture and the creative industries, tourism and inward investment, business support, skills, the green economy and housing. Finance comes from business oriented public measures. 2. No functions 3. County: Integrated Transport authority (crosses several LEPs, containing only some part of the Birmingham LEP) under geographical reorganisation. 4. Non 5. Non	1. LEP system introduced in 2010 (local governments had the right which LEP to choose). Voluntary partnership. It has boards and working groups, members are mixture of political leaders and business leaders. 2. No organisation 3. The County was established by national law in 1974, and originally had a council. The council was abolished in 1986 and replaced by the current governance by the political leaders of the 7 districts. 4. There has never been any governance arrangements at the Birmingham Metropolitan Area level 5. The Region was just abolished in 2010.	The new British Government that was elected early in 2010 announced that it was abolishing the English regions. The Government announced that the regions would be replaced by "Local Enterprise Partnerships" (LEPs). These would be at the sub-regional level and were expected to reflect functional economic areas - metropolitan areas but also some non-metropolitan areas. The regions have now been abolished, and 99% of England is now covered by LEPs.

City, size	Areas around the city	Functions of the different areas	Legal background	Note
Malmö (0,3 mill)	1. Malmö – Lund (0,63 mill): 11 municipalities 2. Malmö – Copenhagen (appr. 3 mill) 3. Öresund Region (3,7 mill)	1. Malmö-Lund cooperation: planning, business, education-employment, tourism, transport. Common vision and strategy is under development 2. Common vision, huge joint projects (metro) 3. Cooperation (based on Interreg)	1.Voluntary cooperation, informal meetings 2.Meetings of the city councils 3. Öresund Committee since 1993 (state representatives and delegated elected local members)	
City, size	Areas around the city	Functions of the different areas	Legal background	Note
Vienna (1,7 mill)	1: Suburban region (SUM), local definition, close to MUA (2 mill), 70 municipalities 2: Vienna Metropolitan Area (SRO): local definition, close to FUA (2,6 mill), 268 municipalities 3: Planungs-gemeinschaft Ost (PGO): An association of the three eastern federal states Vienna, Lower Austria and Burgenland, larger than FUA, (3,7 mill), 745 municipalities 4: “Vienna Region” Vienna, Lower Austria and Burgenland (larger than FUA) – same area as the PGO 5: Vienna-Bratislava 6: Centrope (6,5 mill): AU, CZ, SK, HU	1. Primary areas of SUM involvement are spatial and landscape planning as well as traffic issues 2. Strategic planning 3. The task of the PGO is to „prepare and coordinate activities of spatial character“. It mainly focuses traffic, open space and spatial planning issues in the form of studies, research and conceptual work. 4. Marketing and business promotion agency 5. -- 6. Planning in the framework of Interreg projects	1. The SUM is organised as a society under civil law, members are the provinces Vienna and Lower Austria. Strategies are adopted by a steering committee of 23 members 2. The area is not officially defined and has no formal organisation. Currently a project by the PGO 3. College of Governors of the participating federal provinces which convenes once per year 4. VIENNA REGION Marketing GmbH 5. Run by business and industry organisations 6. Centrope Agency with regional offices in the 4 countries	

Source: Ivan Tosics, op.cit.

Difference between the agglomeration and the metropolitan area

As Ivan Tosics points out, it is possible, in general, to differentiate the agglomeration area (day-to-day cooperation) and the metropolitan area (broader economic cooperation area), according to functional differences.

The „agglomeration area” refers to integration for transport, housing, sewage, garbage; the metropolitan area to business relations, cultural links, leisure-tourism. There are relevant variations, whether real cooperation exists in formalized way or at least informally on agglomerational and on metropolitan level.

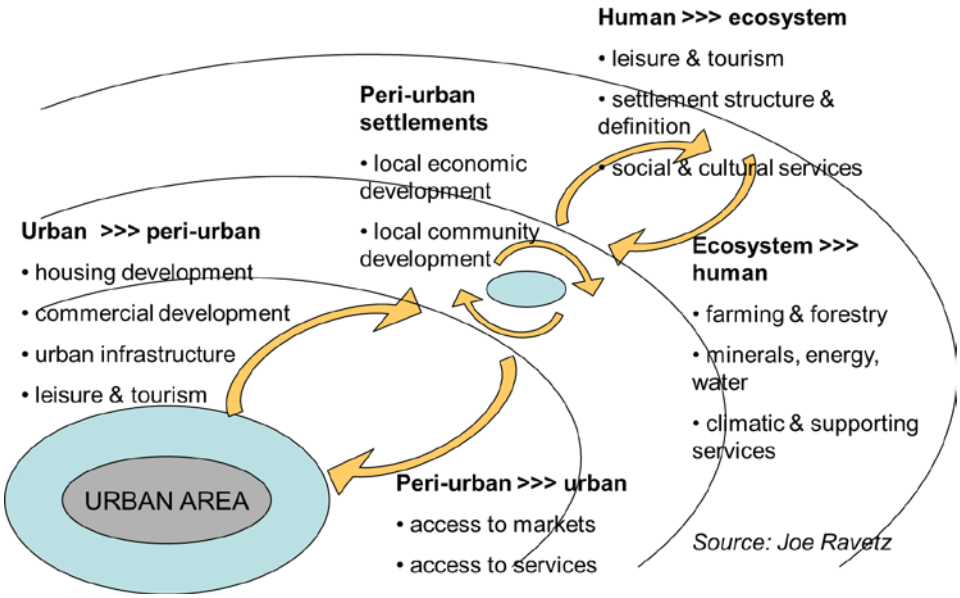
Peri-urban relationships: the PLUREL project

As showed in Figure 1.2, different functions are placed within different "radiuses" ideally centred in the core urban area.

The FP6 PLUREL Project (Peri-urban Land Use Relationships - Strategies and Sustainability Assessment Tools for Urban-Rural Linkages) [6] stresses the importance of coordinating several financial and sectorial policies ("systems") for different zones. Different "systems" and "sectorial policies" to be coordinated can be recognized, as showed in table 1.5.

[6] http://www.plurel.net/Project-4.aspx

Figure 1.2 - Functions and urban/peri-urban areas



Source: Ivan Tosics, op.cit. (from Plurel Project)

Table 1.5 - Systems and sectorial policies relevant from the UGM point of view

a)	**The local government financing system**
-	from where and according to which parameters the local governments receive their revenues – externalities
b)	**The taxation system**
•	the existence of different types of local taxes and the spatially relevant consequences of these taxes – tax competition
c)	**Sectoral policies**
•	infrastructure, economic development, transport, housing – regulations and subsidy systems
d)	**Transport in urban – periurban areas**
Anti-sprawl policies:	
•	The share of public transport use in the urban, peri urban and rural areas is high
•	There are financial contribution and other special public subsidies given to encourage the use of public transport
•	There any no transport-linked public subsidies which strengthen urban sprawl (such as tax deduction of travel-to-work costs by car)
•	The RUR area is covered by public transport associations
•	There are efforts to ensure the internalization of external costs of transport
•	Mobility management tools are considered in the most dense urban areas in order to reduce congestions and improve the environmental conditions of transport
e)	**Housing development**
Anti-sprawl policies:	
•	There are supra-local (regional, national) regulations, prescriptions existing, e.g. minimal share of social housing, which influence local housing policy

•	There are no housing-linked public subsidies with the effect to strengthen urban sprawl
•	There is cooperation between the municipalities of the RUR area (or smaller subsets of it) regarding housing policy
f)	**Regulatory "against sprawl" tools and policies at local level**
Public land ownership	
•	land-banking
g)	**Growth management**
•	e.g. balance between jobs and homes, transport services, physical and social infrastructure requirements
h)	**Financial regulations**
•	possibilities for the public sector to recapture some part of land value increase; taxes on green field investments, subsidies for brown field redevelopment

Source: Ivan Tosics, op.cit. (from Plurel Project)

EU level interventions required for integrated urban development

For the success of EU2020 integrated planning (green and social economy strategies) is needed on the level of functional regions.

This new approach needs policy guidance and financial support from the EU, initiating cross-sectoral and cross-territorial planning on the functional region level. Integrated solutions are needed: green economy (retrofitting), social economy (including the low skilled)

New elements in European policy making for the 2014-2020 period

As showed in the presentation of Mr. Tosics, for the success of EU2020 integrated planning (green and social economy strategies) is needed on the level of functional regions. This new approach needs policy guidance and financial support from the EU, initiating cross-sectoral and cross-territorial planning on the functional region level. Integrated solutions are needed: green economy (retrofitting), social economy (including the low skilled).

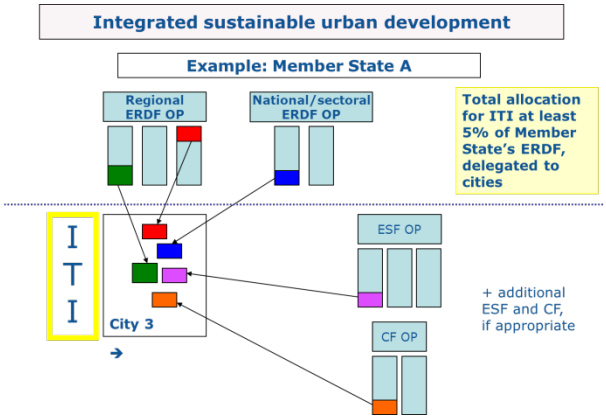
To face the evident "territorial mismatch problem" at the European level, European Union is therefore introducing some new approaches with the aim of improving the ability to "overcome" the often weak integration among urban and peri-urban policies.

Three concepts are, in particular, rather promising:

- ITI (Integrated Territorial Investment): a place-based integrated approach, potentially on metropolitan level (larger cities);
- CLLD (Community Led Local Development): people-based integrated interventions on local (smaller municipalities) and neighbourhood level;
- Horizon2020: spatially blind innovative economic actions.

Figure 1.3 shows how the ITI approach will work

Figure 1.3 - ITI and integrated sustainable urban development



Source: Ivan Tosics, op.cit.

With regards to ITI, funding comes from different programmes, and finances an integrated approach. It is not as easy as it sounds, but the idea is promising.
Decision on how it will work depends on the national level. An innovative aspect is that it is not a territorial approach. It will be important to build the results of USEAct into the ITIs.
In smaller neighbourhoods integrated approaches should be applied„. Results which are useful must be based on decisions made with other actors" (strategic thinking).
The metropolitan agenda and the new EU planning period (2014-2020) is an another field for innovation. The development of tools of different policies is speeding up: Cohesion Policy €320-350bn, within ERDF the ITIs, within EAFRD the CLLDs , innovative urban actions around €0,3 bn, Innovation Policy: Horizon 2020 approximately €80bn.
Potential links between "metropolitan ideas" and European policies are also under evaluation.
Narrow metropolitan areas (zero-sum game model)

could allow to develop the following approach: ITIs, led by cities, in conjunction to CLLDs, led by public-private-thirdsector partnerships in smaller areas. The need for defined boundaries and (at least delegated) fixed institutional structure is a possible solution anyway.

For broader metropolitan areas (win-win type cooperation model): link to regional innovation strategies, led by administrative regions and, to Horizon2020,innovation partnerships can and should be kept on a flexible spatial level.

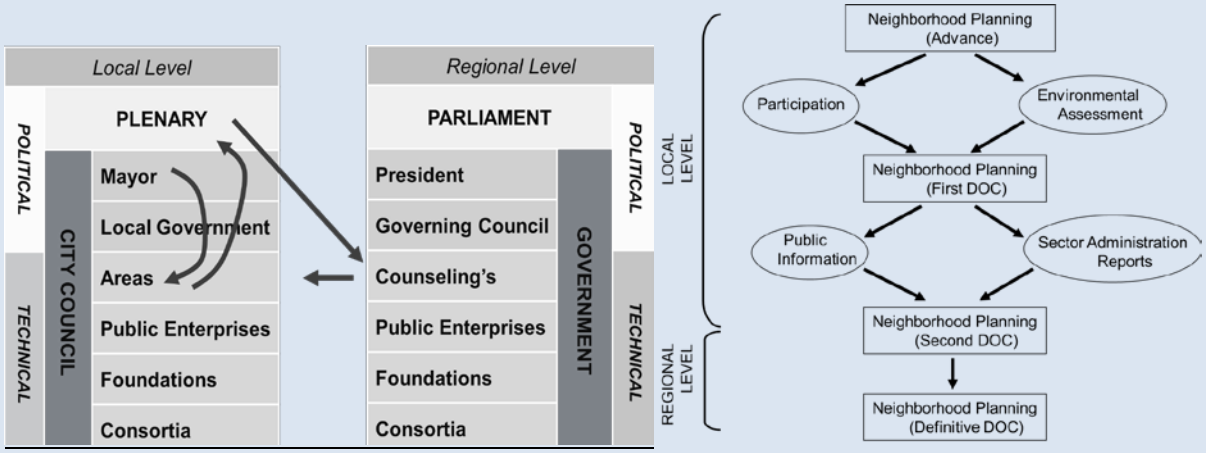
Metroplitan Governance and Urban Planning in the USEAct partnership

VILADECANS

The governance framework (local level and regional level) is a fundamental feature of the decision making process also for USEAct partners cities.

Figure 1.4 shows the decision- making process and the different planning tools in Viladecan context.

Figure 1.4 - Viladecans: decision-making process and planning tools



Regional Planning:
- Territorial Plan for the whole region of Barcelona, 2010 (164 municipalities)
- Director Plans (Coastal, Airport, …)
- Metropolitan Plan (Master Plan), 1976 (27 municipalities)

Local Level:
- Neighborhood Plans
- Municipal Action Plan
- Urban Land, Building Land and Non-Building Land Director Plans
- Housing Local Plan
- Local Agenda 21
- Strategic Plan
- Mobility Plan
- Municipal Laws

Source: Eric Serra: Presentation of the City of Viladecans, USEAct Kick-off Meeting, 28th May 2013

An example of “coordination” among different planning levels, relevant for Viladecan context, is the so called “Districts Act” This Act is a regional government initiative to promote the transformation of slum areas in the cities of Catalonia through the definition of integral projects to be financed. The level of co-financing is set at 50%. The first neighbourhood that was chosen to implement this initiative was the Ponent neighbourhood in 2007. It is a social housing environment configured with isolated dwelling buildings. The whole project is based on actions included in 8 compulsory action fields: Improvement of public space and the facilities, rehabilitation and furnishing of the common elements of buildings, Increasing the facilities for collective use, Incorporating information technologies in buildings, promoting the sustainability of urban development Gender equity in the use of public space and the facilities, social urban and economic improvement programmes, accessibility and removal of architectural barriers. Most programmes have been developed. Currently, urban planning needed to complete the renovation of the district is being developed.

NAPLES

The essential role played by the “super-urban” planning framework emerges also from the Naples case study . The “**Provincial level Regional Masterplan”** (PTR – “Piano Territoriale Regionale) aims at protecting landscape (natural and built), preserving the territory from land consumption and sprawling development and enhancing the multifunctional character of rural areas in peri-urban fringes. Moreover, a “Legge Regionale 1/2011 (So called “Piano Casa” law), promotes the interventions on existing built heritage.

The Management Plan for the Protection of land and water resources (promoted by the Northwestern Campania Basin Authority) is aimed at preserving open spaces and reducing land consumption. Thanks to a new law recently entered in force, Naples will become an administrative “Metropolitan Area”: this fact can be considered as a positive one, since it will allow greater control of land-use around the city . Also the transport plan is an essential planning level, **since** urban reuse potential is linked to the urban transport structure: important parts of the urban fabric are interested by the optimization plan of the infrastructure network, which operates both on an urban and regional scale, and is based on the creation of new underground lines to connect the suburbs to the city centre, and a “regional metro”.

The Naples integrated transport network plans, which are based on railway/metro infrastructures (see the so called “Hundred Stations Project”), fit the requirements of the regional government planning schemes. These plans include the 1997 Council transport Project, the “Primary Infrastructure Network Plan” and the “General Masterplan” which was developed during the period 1004-2004. The renovation and extension of the underground network and its station is of particular importance. Before the Hundred Stations Project, the Naples underground network numbered a total of 57 stations, while the network development project foresees 114 stations, of which a large number will be finished by 2015.

NITRA

*In Slovack Republic, national authorities are r*esponsible for the budget. Definition of the basic strategies of the state development which should be adopted at the regional, local, city level by implementation in to the lower level strategic documents /vertical structure/ in the field of urban development, nature conservation, environmental issue. *County/regional authorities have a c*ontrol function, evaluation of construction, environmental and conceptual matters merit at the local/regional level, review of the general plans ad conception document proposals and adjustment.

*Municipality / city council have e*xecutive and legislative function, and local budget affirmation. Moreover they are in charge of urban development proposals, implementation of the legal framework through the local level regulation, dealing with the city property, social issues.

OSTFOLD

In Norway, the political/ administrative and decision-making process is as follows. At national level, the Planning Authority is the Ministry for the environment, that provides guidelines for planning at the regional and local level. The Ministry for local and regional issues is in charge of housing policy, local and regional development, local government and administrating elections. Priority is given to the outlying districts. At regional Level there is a further planning authority: the county council that prepares plans for the county, provides guidelines for planning in the municipalities and sectors. The regional authority stops local plans which are not considering regional or national restrictions. At local level there is the Municipal Council, as Planning Authority: it prepares municipal master plans and legally binding zoning plans.

1.3 TERRITORIAL PLANS TO REDUCE LAND TAKE: CASES STUDIES FROM SPAIN

As pointed out in the presentation of professor Adolf Sotoca (University of Barcelona), coherent planning frameworks at territorial level are seriously important to reach land take reduction targets at local level. Recently, in Spain, several planning instrument at regional level have been introduced. This paragraph is dedicated to present this articulated instrument framework[7].

To better understand the current Spanish urban planning environment, is useful to begin from the real estate boom phenomenon occurred some years ago.

Currently, there are 3,5 milion empty housing units (increased up to 10,8% in the last 10 years) and the amount of land financed by the bank sector would potentially allow the construction of 3,5 milion more housing units. The amount of potential land for urbanization covers the housing demand for the next 45 years. The existence of a decentralized planning system in Spain has also to be recalled. **C**entral government controls basic regulations on land value and financial valuations ("national land act"). Regional governments are fully in charge of urban legislation and strategic planning. Municipalities, finally, are responsible for planning tools approval ("masterplan").

Finally, the role played by some national laws has to be stressed. In 1998 the so called "Land Act" was putted into effect. It was a market orientated law, that recognizes market values of land once the real estate product is offered. In 2008, another national law is introduced. This is a "balanced" orientated law, that takes in consideration the existing status of land value, independent of future potentialities.

The land Act characterised land as: 'not for building', as 'potential urbanisation' (growth containment) or as 'urban land for integrated urban regeneration'.

Figure 1.5 shows the framework of Policies, Instruments and Actions that characterizes the current Planning system in Spain, as premises for effective UGM. Most actions are at regional level. Only recently have there been discussions to introduce instruments, at national level, to promote rehabilitation, regeneration and renewal.

In the images of figure 1.6, through several examples, an overview on "how" these different instruments work is presented.

Within this framework, policy instruments are under three main headings:

a) Rural land custody (Landscape plans and Rural land custody);

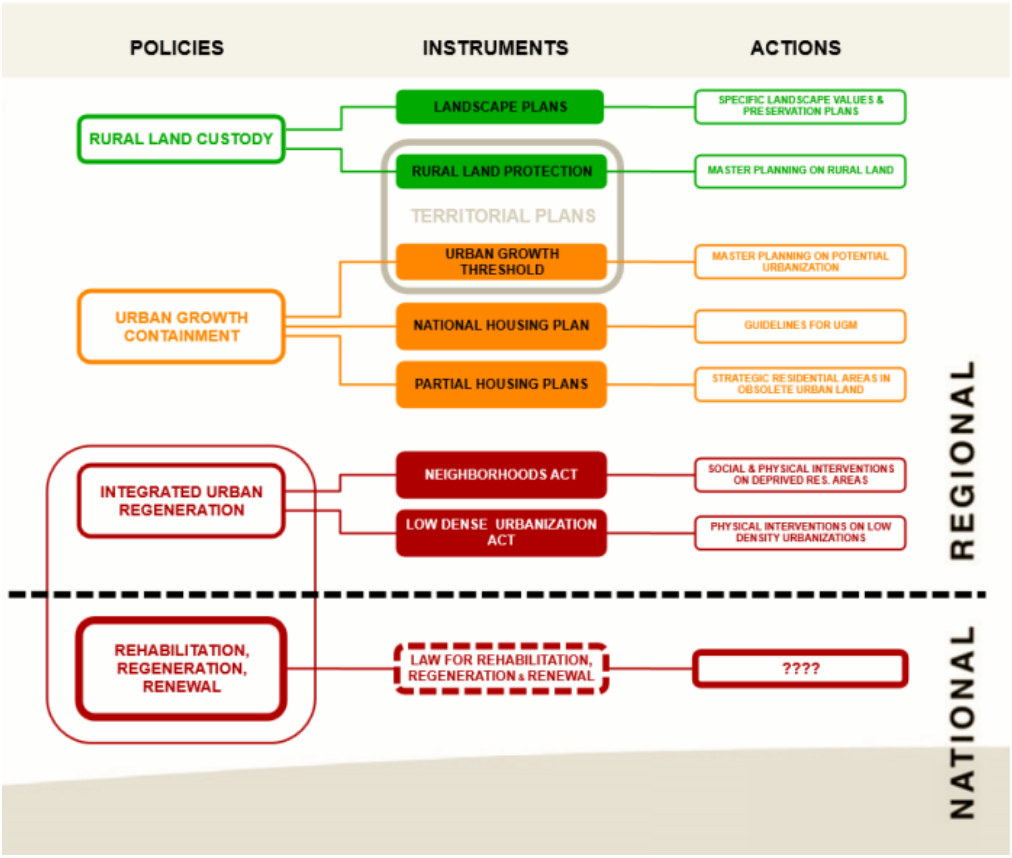
b) Urban growth containment(Urban growth threshold, the National housing plan and Partial housing plans) and:

c) Providing land for regeneration, rehabilitation and renewal (Neighbourhoods act, Low density urbanisation).

In 2004 17 landscape plans were drawn up in Catalonia, with classification and guidelines. Of these, however, only two were implemented, and two more only partially implemented.

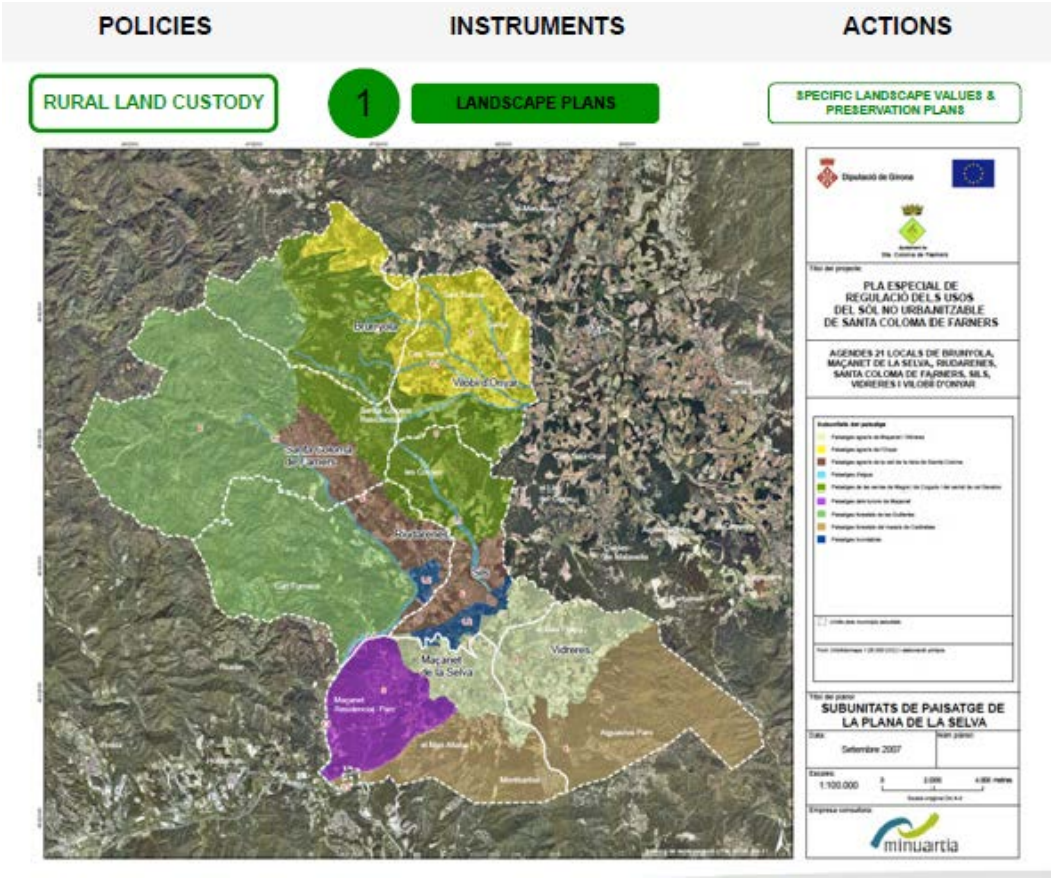
[7] Main Source: Adolf Sotoca, Planning Tools in the Spanish Context, Presentation at the USEAct Kick-off Meeting. Viladecans, 28th May 2013

Figure 1.5 - Planning Policies, Instruments and Actions for Urban Planning in Spain



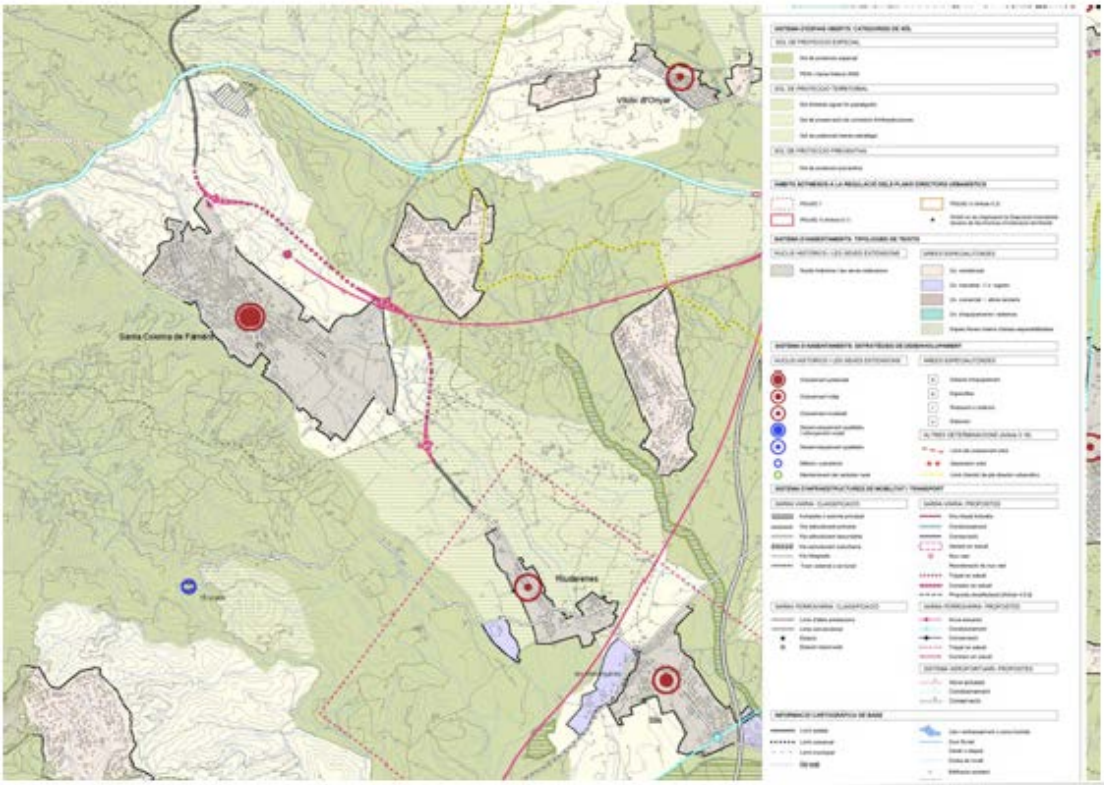
Source: Adolfo Sotoca, op.cit.

Figure 1.6 *(1-11)* – Planning policies, instruments and actions for UGM in Spain



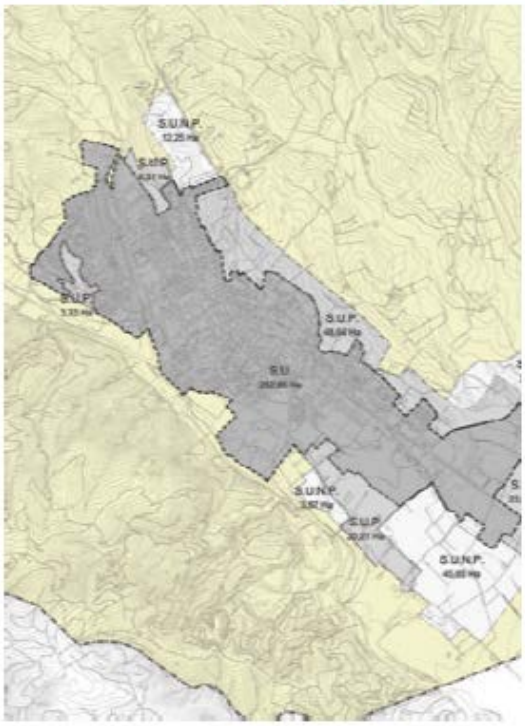
POLICIES | INSTRUMENTS | ACTIONS

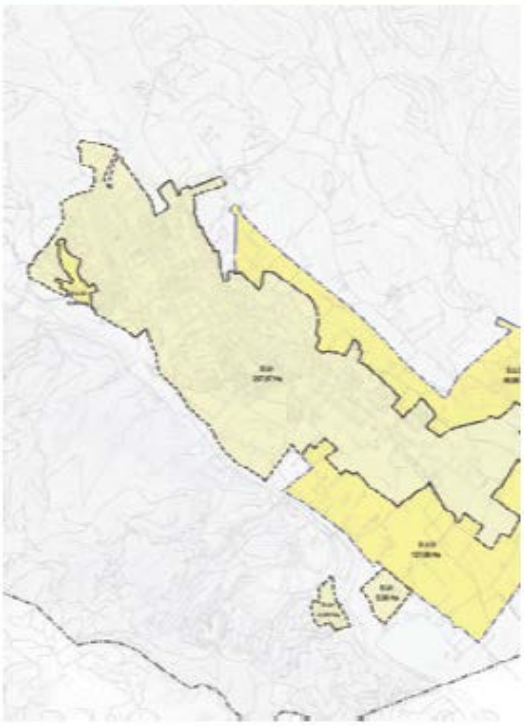
RURAL LAND CUSTODY | 2 | RURAL LAND PROTECTION | MASTER PLANNING ON RURAL LAND



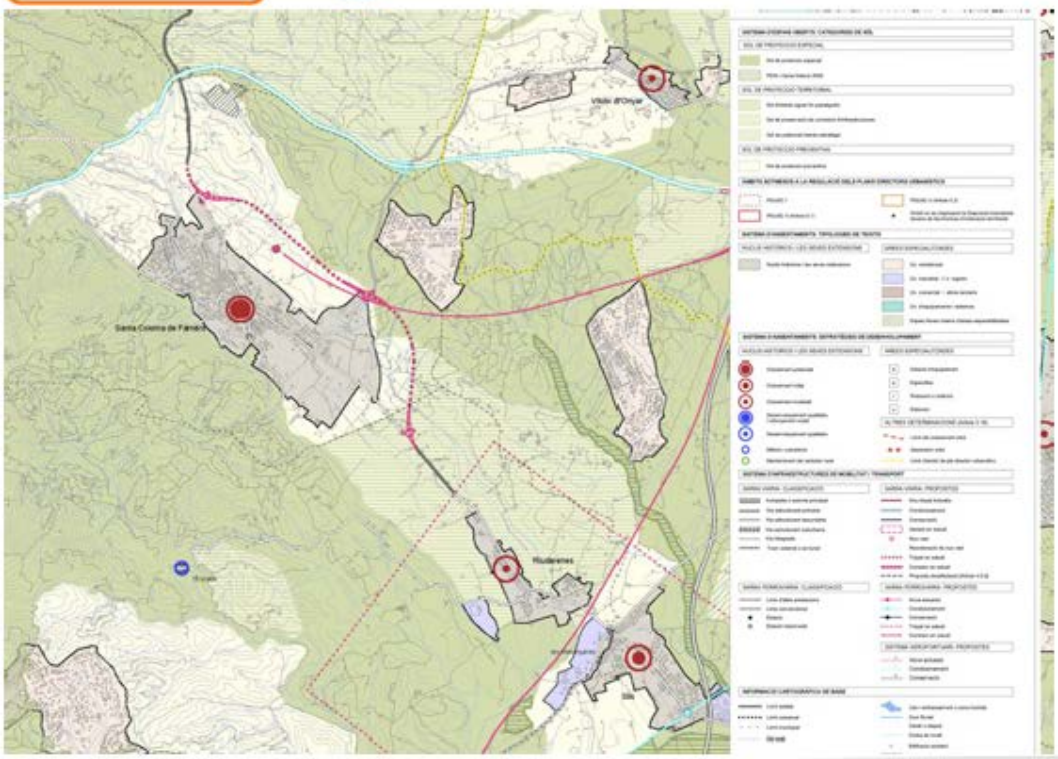
POLICIES | INSTRUMENTS | ACTIONS

RURAL LAND CUSTODY | 2 | RURAL LAND PROTECTION | MASTER PLANNING ON RURAL LAND

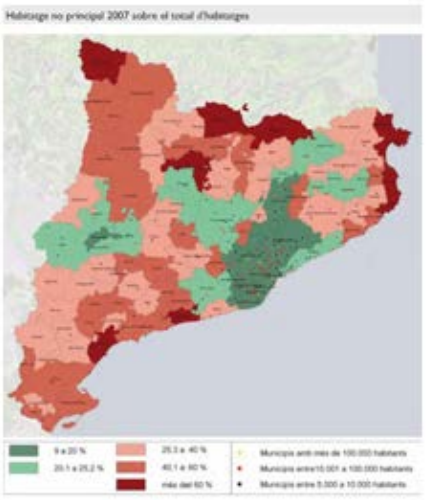


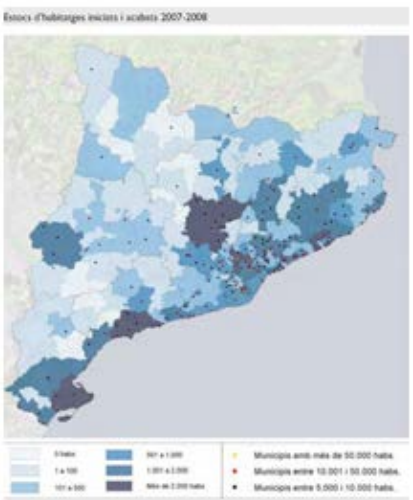


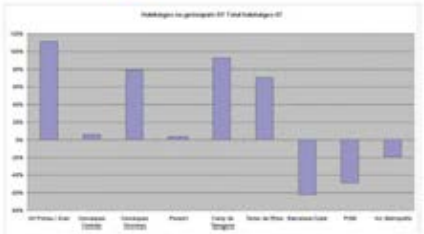
POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	3 URBAN GROWTH THRESHOLD	MASTER PLANNING ON POTENTIAL URBANIZATION



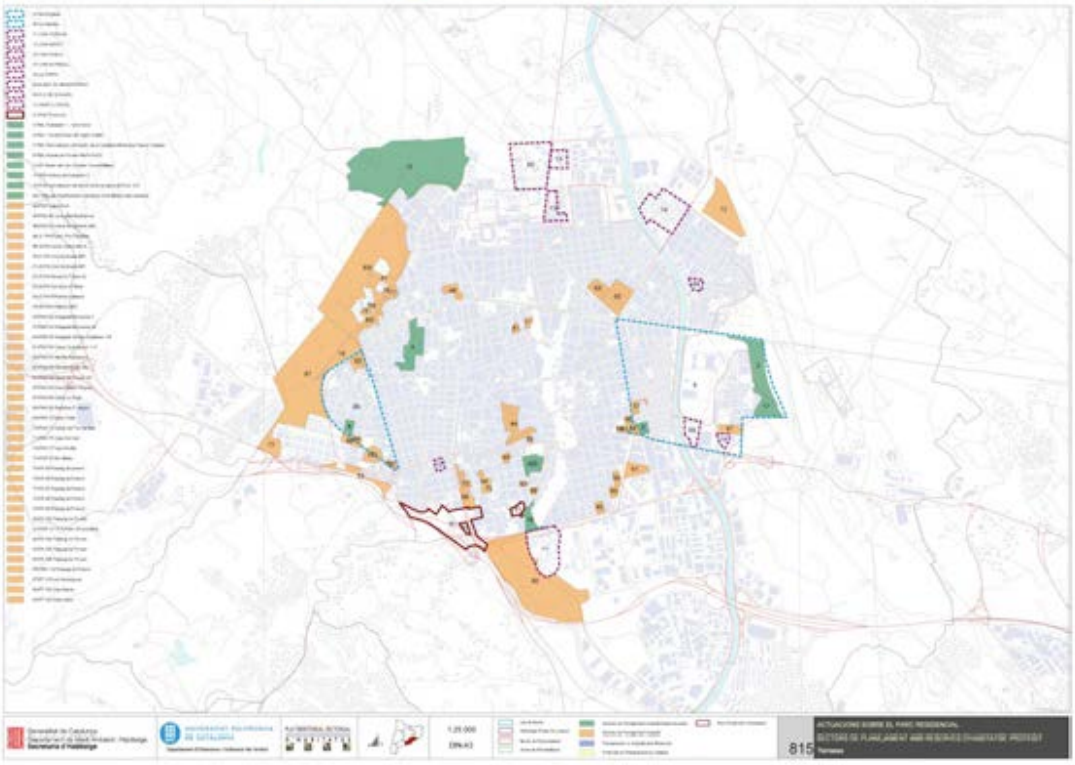
POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	4 NATIONAL HOUSING PLAN	GUIDELINES FOR UGM





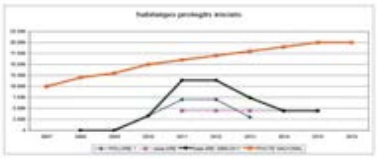


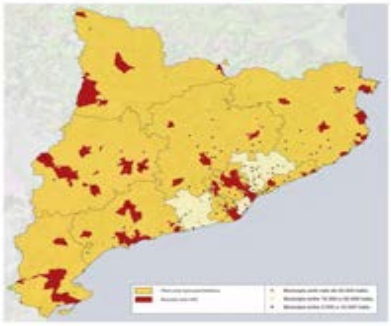
POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	4 NATIONAL HOUSING PLAN	GUIDELINES FOR UGM



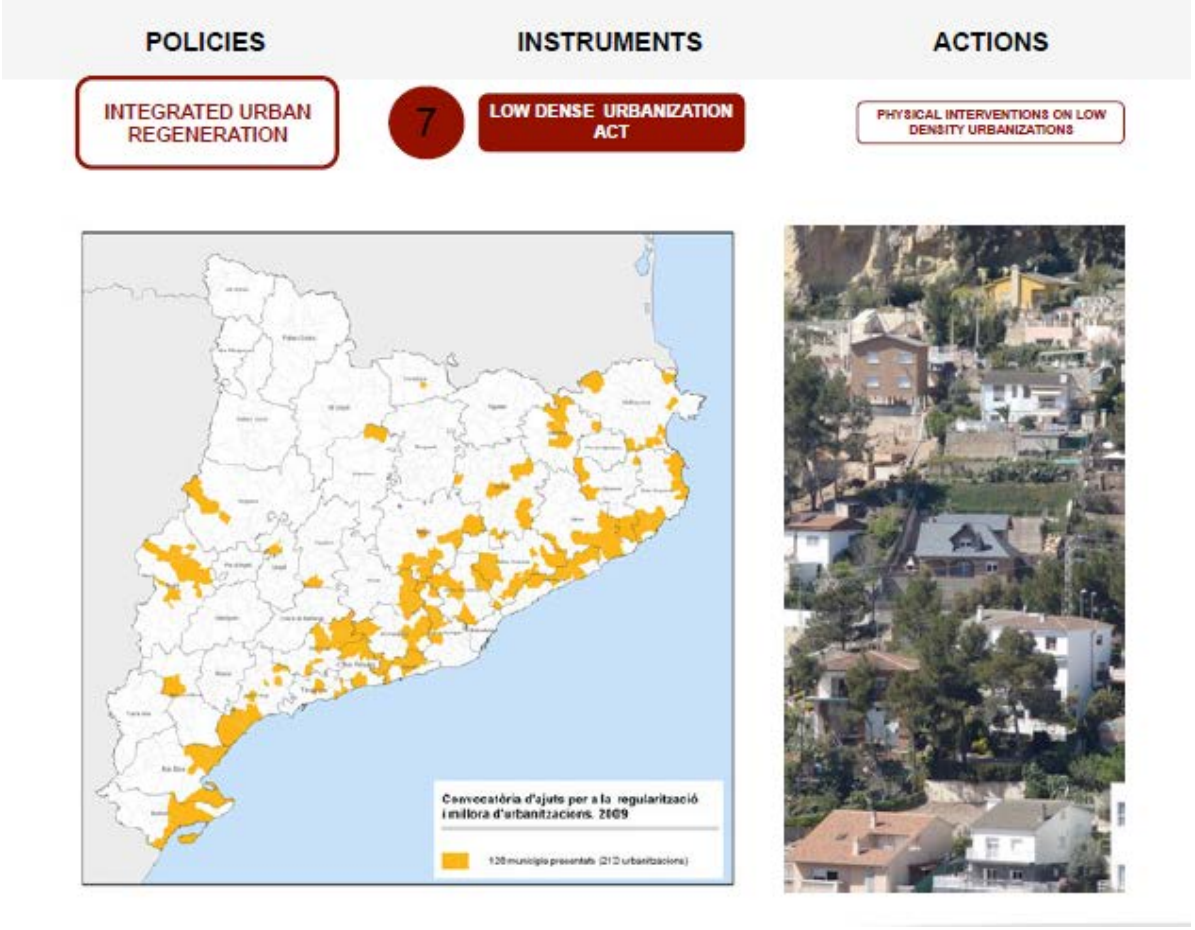
POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	4 NATIONAL HOUSING PLAN	GUIDELINES FOR UGM

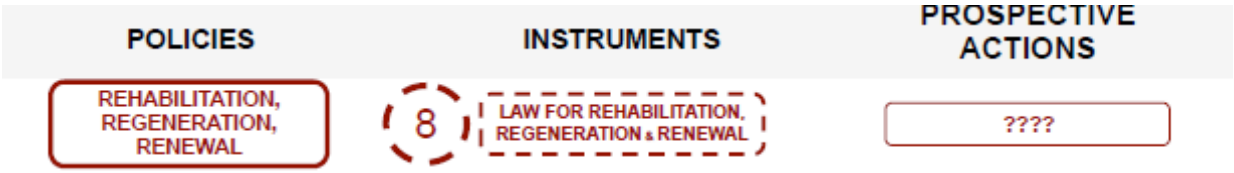
POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	5 REGIONAL HOUSING PLANS	STRATEGIC RESIDENTIAL AREAS IN OBSOLETE URBAN LAND





POLICIES	INSTRUMENTS	ACTIONS
INTEGRATED URBAN REGENERATION	6 NEIGHBORHOODS ACT	SOCIAL & PHYSICAL INTERVENTIONS ON DEPRIVED RES. AREAS





Source: Adolfo Sotoca, op.cit.

Seven territorial plans were drawn up in Catalonia, with planning at a regional scale, to promote rational use of existing resources, with a more coherent approach. This entailed potential categorisation as well as two on protected urban land. These were very strictly applied, though less so now, following political changes.

Master plans are drawn up by municipalities, subject to final approval by regional government. Now most plans are de-classifying land, at regional level. Now they won't compensate on further losses. This process avoids conflict at local level, because the plan has to be approved by the master plan.

The 2008National housing plan (guidelines for UGM) was not approved. Some houses are used only a few days per year, so either pre-emption was proposed (not approved) which would give local authorities the right to buy the stock (in Catalonia there are one million empty housing units) or to impose mandatory housing rental. This is also a not approved plan. However, this is happening in Andalucia, where banks owning housing are being taken over by the government to make them available for rent.

The regional housing plan (strategic residential areas in obsolete urban land) is in force in seven areas in Catalonia. As a response to the lack of social housing, it has been decided to take advantage of the housing need to develop "strategic housing" (30.000 dwells for social housing). However, this would imply the need of continuing to extend cities. Therefore, the majority have stopped this due to the crisis: the initial objective (9.000 housing units) was not reached. Some of these deregulated areas are placed in the so called "urban renewal land", and not only in central areas.

The Neighbourhoods Act is oriented to improve mainly Urban Land. The Catalan programme, aimed at improving different typologies of developments (mass housing estates, informal

settlements, old city centres), can be mainly comes from industrial developments plans for renewal of urban areas. The Act supported 92 neighbourhoods, through 1500 M€. The current aim is to integrate physical interventions with social ones. Participation is important. The regional government funded 50% and the municipalities 50%.

The 'Low density urbanisation act' has its root in the fact that, in the 60s and 70s, many individual houses were built in several areas around Spain and people are now moving to live there. Densifications are allowed, with public support (regional government 50%, local residents 50%.) and the need to provide services for community. This measure is only partially implemented, due to the crisis.

It is useful, , among others, to focus on the more recent instrument, the "Law for rehabilitation, regeneration and renewal" (See Figure 1.6 Number 8).

Table 1.6 provides some basic data about the law, which is still under discussion.

This new law for regeneration, rehabiliation and renewal at national level deals, first of all, with the land values issue, being inspired by an "urban renewal" oriented approach rather than an urban growth oriented one. Originally conceived as a support at the single building scale (rehabilitation) and local scale (regeneration), the framework is paying more attention to urban renewal (with relevant changes in the currently in force "Land Act"), to stimulate the seriously damaged building industry (73% less activity than in 2007). Moreover, further targets have been progressively recognized, and in particular: updating the housing stock through energy efficiency improvements; promoting the rental market (today it only means 7% of total), adapting the legal framework towards an urban renewal oriented planning; reducing the public land take; supporting planning agreements and improving flexibility in the basic urban parameters for renewal interventions; introducing fiscal bonus for renewal interventions (depending on conditions); promoting the development of urban renewal consortiums (blurring of public/private domains); clarifying the distinction between owners and promoters.

Some programmes (rental market promotion, public housing stock, rehabilitation fostering) can be considered as "related" to this general framework.

Further programmes are also focused on urban regeneration and reducing land taking by public administration, while other are targeted to improve the "size" of interventions and to promote integrated interventions (with more actors involved), to reach critical mass.

Table 1.6 - The Spanish "Law for regeneration, rehabiliation and renewal": essentials and linked programs

Originally conceived at the building scale (rehabilitation) and local scale (regeneration)
Later consideration of urban renewal (relevant changes in the current land act)
Motivation:
Stimulation of the seriously damaged building industry (73% less activity than in 2007)
Updating of the housing stock through energy efficiency actions.
Promotion of rental market (today it only means 7% of total)
Daptation of the legal framework towards an urban renewal orientated planning
Taking of public land
Planning agreements: flexibility in changing the basic urban parameters for renewal interventions
Fiscal bonus for renewal interventions (depending on conditions)
Size of potentially renewal sectors
Set up of urban renewal consortiums (bluring of public/private domains)
Distinction between owners and promoters (= to previous urban extension processes)
Programs:
Even programs (rental market promotion, public housing stock, rehabilitation fostering)
Ne program focused in urban regeneration
Land taking by public administration diminishing
Size of interventions
Market integrated interventions (critical mass

Source: Adolfo Sotoca, op.cit.

To conclude, Urban Growth Management implies potential growth of every municipality. This means that renewal can only be undertaken within existing land, leading to a lot of conflict with planning bodies. Land cannot really be de-classified if it has already been prepared. As soon as streets are built, it becomes considered as urban land, which has tax implications.

The legislation on urban regeneration has to be considered, as a whole, still rather weak in Spain.

Reaching development and land take reduction targets: a failure of the national planning framework in UK?

As explained in the presentation on the Governance System of the Wycombe area (Buckingamshire), in March 2012 the UK government produced the National Planning Policy Framework (NPPF), to consolidate the majority of the national planning guidance and statements into a single document.

The NPPF includes a shift in emphasis particularly in:

a) Presumption in favour of sustainable development. Local authorities are required to add into new plans as they are produced and essentially means that the Council should grant planning permission where the development plan is absent, silent or relevant policies are out-of-date, unless any adverse impacts of doing so would outweigh the benefit, focus on the Economy. The planning system should focus on building a strong, competitive economy, with significant weight placed on the need to support economic growth.

b) Previously Developed Land (PDL) in the Green Belt: although great importance is still attached to the protection of the Green Belt, the NPPF identifies that limited infilling or the partial or complete redevelopment PDL is not inappropriate development in the green belt

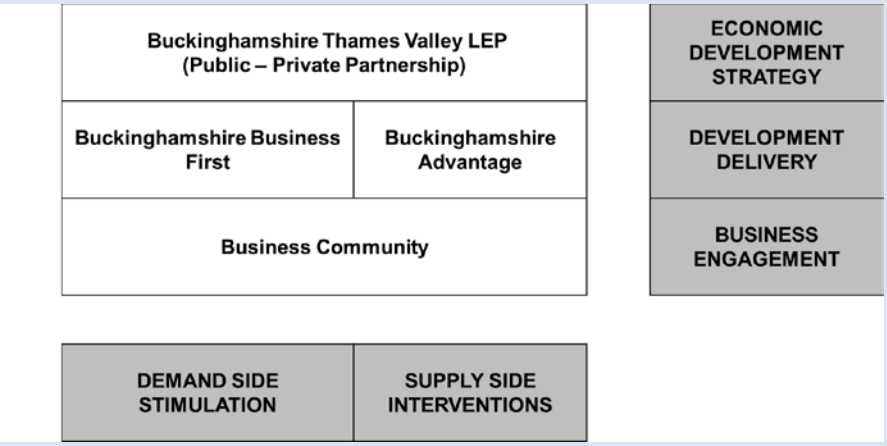
c) Local Green Spaces: the NPPF enables local communities through local and neighbourhood plans to identify for special protection green areas of particular importance to them.

The NPPF is a key material consideration when the Council considers planning applications. When assessing proposals for development the Council will still use the adopted plans as set out below, but will also need to consider how consistent existing policies are with the NPPF on a case by case basis.

But the system isn't working, since it does not allow the development of industrial sector. Situation is difficult at present: the gross value added per hour worked is decreasing; worklessness is increasing; poor supply of technical skills for an effective industrial mix is recognized; industrial sector shows one of the lowest investment rates in commercial property in the UK; there is a lack of core, basic infrastructure; low firm inward investment, accelerated outward investment and an increasing extreme dormitory status; suitable employment land is lacking, with developers that are always keen to convert what development land is available to housing.

What are the reasons? Planning seems to be too focussed on adhering to a regulatory process, rather than managing development sensitively. There is a shortage of good "old fashioned" town planning skills in the system. The governance of the planning process is too squarely rooted in the political system. Local politicians face clear and present lobbying from current residents with fears while future generations and employees have no voice. There is inconsistency in process across different organisations.

Figure 1.7 – Buckingamshire: PPP Governance solution



Source: City of Wycombe

A PPP governance solution – as is the case described in figure 1.7 - based on a "effective functional integration" between subjects can be considered a solution.

There is increasing need for some local authorities to trade to balance finances is encouraging some to favour schemes which only happen on their land.

However the Nimby communities view development from the 'neighbourhood' perspective, rather than from a 'global competitiveness perspective' appears to be potentially harmful to the society as a whole. \ Green Belt Policy continues to hold back growth.

Source: USEAct Presentation of the "City of High Wycombe", UsaAct Kick-off Meeting Viladecan, 27th-28th May 2013

1.4 GOING BEYOND "THE PLAN": INTEGRATED STRATEGIES TOWARDS LAND USE MANAGEMENT

In occasion of the USEAct Kick Off Metting, in Viladecans, Mr Didier Vancutsem, Thematic Expert of the USEAct Project, and previous Thematic Expert of the LUMASEC project, showed as "integrated land use management" is a methodology that, whereas adequately applied, can play a major role not only in reaching urban land take reduction targets but also to overcome more traditional, rigid planning approaches (plans, etc.) that could be not still able to provide answers to the requirements of the contemporary European Cities.

In this paragraph, starting – among others - from the conclusions of the LUMASEC project, the concept of integrated land use management strategy is presented and some good practices, taken from European Cities cases studies, are described[8].

An essential conclusion of the URBACT LUMASEC Project is that Strategic Land Use Management approaches are required. These approaches should be able to coordinate spatial, sector-oriented and temporal aspects of urban policies.

Strategic Land Use Management should include the debate about norms and visions driving the policy-making and sector-based planning in both the strategic and operative time spans, as well as the spatial integration of sectorial issues, decision-making, budgeting, participation, implementation of plans and decisions and the monitoring of results and evaluation impacts.

By developing their strategic land use management, cities and regions would achieve the following targets:

- A sustainable prevention and/or adaptation to climate change
- An important step towards building resilient areas
- An interlinking of different layers of intervention to integrative approach against political fragmentation
- The building of sustainable financial policy for municipality
- A better environmental protection and development
- The building sustainable transport infrastructure
- *Capacity building*

The elements of building an integrated land use management strategy can be identified on several levels, especially on the spatial pattern level, on the governance level and on the capacity building level.

[8] Main Sources: Didier Vancutsem, Integrated strategies towards land management - Best Practices, Presentation at the USEAct Kick-off Meeting, Viladecans, 27th-28th May 2013;

Furthermore, a strategic land use management on the regional level should, on one side, identify in a comprehensive way the inner development potentials, develop mobilizing strategies and evaluate in a realistic way the implementation time steps.

On the other side, it is necessary to take precautions measures to avoid –sometimes inevitably- outskirts urban developments, in respect to unsure prognosis.

A balanced strategic land use management should manage the land use and building land (re) production in the sense of a regional system management, and optimize for the territory:

- according to economical, social, ecological and urban-planning criteria,
- related to quantity, quality, situation and priority levels,
- in a participative, cooperative regional process.

A strategic land use management means also planning, active implementation and experimental projects instead passive "supply planning".

It should have its main focus in mobilizing surfaces for inner development, in the support of land saving building and in land recycling.

Moreover, it has to prepare in time and foresightedly the necessary building plots development ("outside development") and in particular, early clarifying the settlement areas with clear linkage to the regional system, in which central challenges have to be addressed (climate fair city, social integration, new mobility and energy-efficient building).

Biodiversity offsetting: a debated matter

The UK government has outlined its proposals on compensating for the loss of biodiversity through development.

The idea of "biodiversity offsetting" is controversial, with campaigners dubbing it a "licence to trash".

It means developers planning to build houses in environmentally sensitive areas would be allowed to go ahead if they could offset damage by paying for conservation activities elsewhere.

In England, six pilot areas were selected in 2012 for two year trails of a voluntary approach to offsetting through the planning system Reinforcing and integrating biodiversity offsetting into developments can help manage the environmental impacts of development

Current methodologies, tools and evidence are sufficient to begin encouraging increased use of biodiversity offsetting.

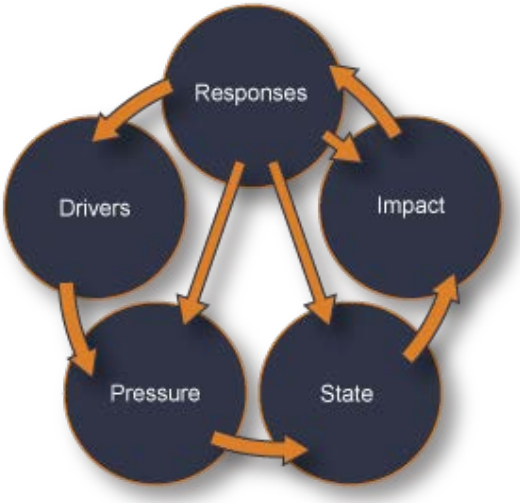
Some key-points should be considered in evaluating the "offset" approach:

- Evaluate the scientific principles underpinning your proposed biodiversity offset carefully.
- In designing biodiversity offsetting schemes, try and involve third party agencies and interest groups (NGOs, local authorities etc.)
- Interest groups, the public and decision-makers need to be engaged carefully when implementing Biodiversity Offsetting..
- Manage risks and avoid unintended consequences.
- Base your proposals on good quality biodiversity information.
- Consider offsetting for ecosystem services in addition to biodiversity.

Source: Jim Sims, USEAct Case Study "Biodiversity offsetting", Nitra Thematic Meeting, October 1st – 2nd 2013

As already pointed out, focussing on peri-urbanisation is essential. By using e.g. the circular DPSIR model (Drivers/Pressure/State,Impact, Responses) is possible to try to understand what is happening in the peri-urban area.
Figure 1.8 illustrates the main components of the DPSIR Model - *Drivers / Pressures / State / Impact / Response*

Figure 1.8 - Main components of the DPSIR Model



Source: Didier Vancutsem, op,cit

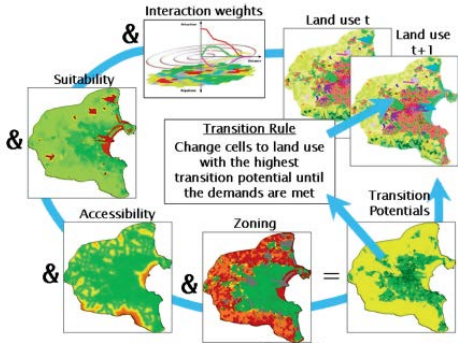
Using modelling approaches is useful to test the anticipated land use changes arising from land use development scenarios.

Different models are potentially available for that purpose.

- Regional Urban Growth model (RUG)
- MOLAND (Monitoring land use cover dynamics)
- Testing residents responses to environmental change affecting their quality of life (QOLSim)

Figure 1.9 shows how a modelling approach can generate, through integrated GIS tools, land use and impact scenarios.

Figure 1.9 - Modelling approach for MOLAND (RIKS)



Source: Didier Vancutsem, op,cit

An integrated land use management strategy impacts on different drivers/elements is showed in Table 1.7.

Table 1.7 - Impacts of Land Use Management on different urban drivers

On Spatial patterns
*Getting an **overview regarding land, land use, land value**, including brownfields, sprawl, etc. by developing a GIS mapping tool for the territory, respecting the INSPIRE regulations*
*Development of a **strategic integrated vision** / strategic plan for the territory, including territory outside the borders, controlling growth without sprawl and compliant with environmental and other EU procedures, taking into account the actual trends in demography, climate change, economy, social changes and energy*
*Combination of the strategic plan with **strong rules including fiscal instruments like land taxes, land banking** as well as consideration of the added value of development for public interest*
On Governance
*Building up a **culture of cross-sectoral working between the different levels of administration** and developing structures for the integration of multilevel partnerships in land use processes: public, private and citizenship*
Developing leadership in territorial land use policies to achieve vertical and horizontal integration of *stakeholders*
*Combining **long- and short term interests in the processes**: developing financial engineering techniques for long-term land use strategies to establish integrated urban strategies*
On Capacity Building
*Active communication of land use tasks to stakeholders and citizens by **sensitizing to the land as resource and not as tool***
*Building up **co-operations with existing participatory networks** like e.g. the Local Agenda 21 to establish two-way learning processes*
*Considering public administration and other stakeholders as target groups in addition to the involvement of citizens. **Education and training of institutions and people** in order to develop skills regarding tools and the processes.*

Source: Didier Vancutsem, op,cit

Different Best Practices in urban growth management

It can be useful to categorize Land Use Management best practices putting in light the "drivers/focus" of each approach. Specifically, three cases studies are presented, with three different "drivers".

a) ICT related – case study: Region Stuttgart

b) Process related – case study: City Munich

c) Governance related – case study: Amsterdam

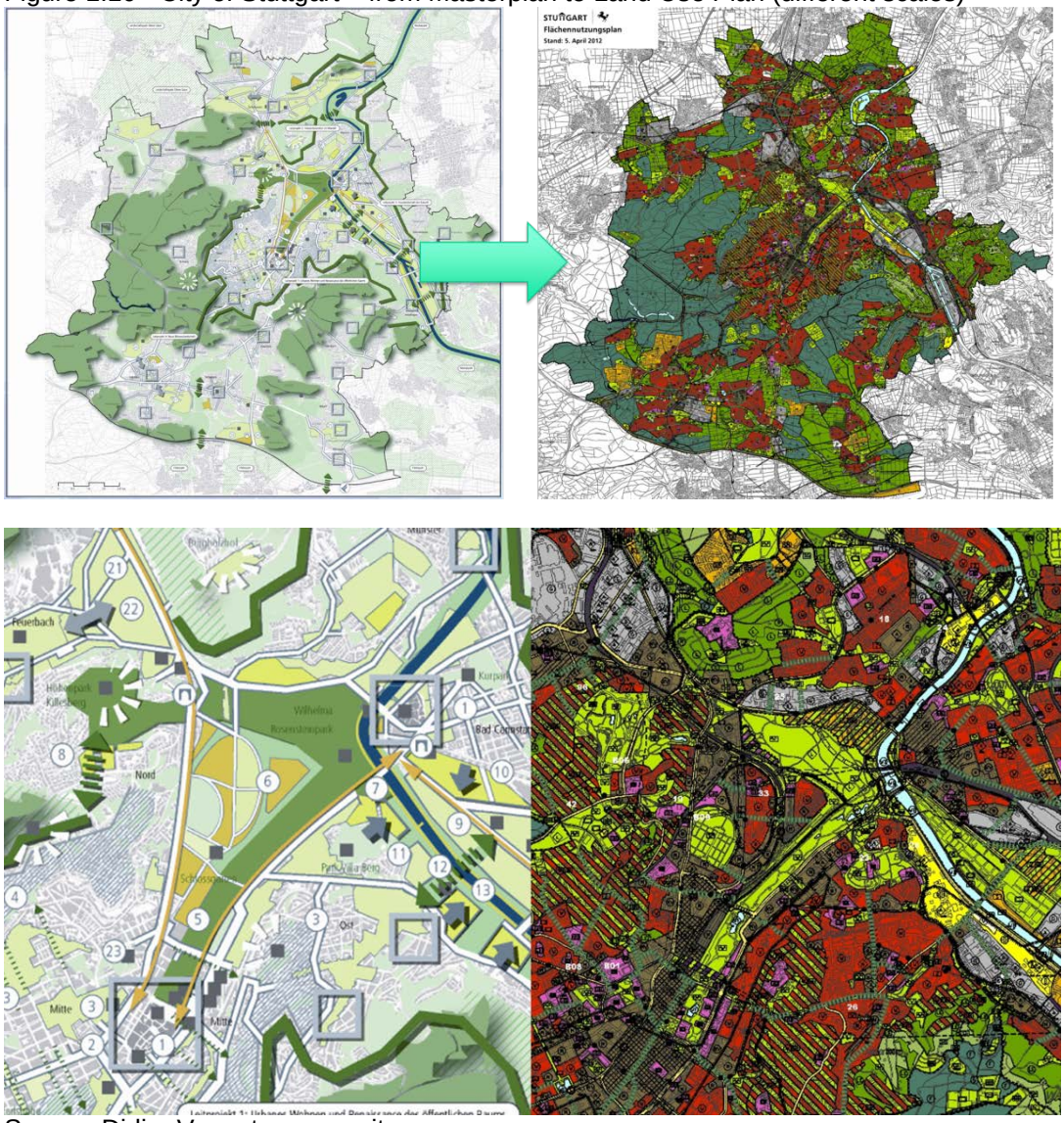
a) A "GIS related" case study: City of Stuttgart

The Stuttgart, the Land Use Management strategy has been founded on several pillars, which are integrated through a wide use of GIS based technology and data bases. In particular, the Stuttgart approach is bases on:

- Existence of different plans integrated each other (Masterplan – Land Use Plan – Building plans)
- Integrated strategies – from the regional level to the local level
- Very strong instrumentation of planning
- High level quality of urban documents
- Database "NBS – Nachhaltiges Bauflächenmanagement" (Sustainable building areas management).

Figure 1.10 shows the integration between the "MasterPlan" and the "Land Use Plan" layers, facilitated by GIS technology.

Figure 1.10 - City of Stuttgart – from Masterplan to Land Use Plan (different scales)



Source: Didier Vancutsem, op.cit.

Moreover, the general framework of the Land Use Management strategy encompasses, in Stuttgart, a specific tool, designed to identify, categorize and optimize the use of the "existing building areas", with the purpose to reduce the need of further expansion. This tool, called "NBS – Sustainable building area management"; it represents an excellent example of integration between a technology (GIS) and a strong strategic managerial approach, by the public administration, for urban reuse.

In short, Stuttgart Region moves from a master plan to a land use plan to a building plan, and, in order to attract investors created a detailed online database, indicating all available plots for development: housing, industry etc. It indicates clusters of strategic importance, as well as plan density. The database is updated every week by an agency inside the administration connected to a property agency. This operates both inside and outside the city centre. Also a lighting plan, and a well-developed marketing plan are integrated too. This information is communicated to citizens, linked to the building plan consultation, where the value of land is visible.

b) A "process related" case study: City of Munich

City of Munich is a case of a city with no master plan. The planning process is a continuum: durable effort is needed from the administration which is always producing updated documents.

Essentials of the so called "Perspective Munich" are the following ones.

- Process of urban development since 1998;
- Integrated long-term strategy for Munich attractiveness and competitiveness;
- No plans, but a framework of action with parameters;
- Together with an intensive dialogue between actors interested in Munich's urban development;
- 16 guidelines and principles (previously 12);
- Implementation: 5 action programmes and 50 pilot projects.

Furthermore, since 2010, a long-term development discussion called "LaSie–Langfristige Siedlungsentwicklung/long-term urban development" is ongoing.

Principles of the "Perspective Munich" are described in Tab. 1.8. In general, following the "principles", the city had to build on brownfields (for example, an old railway has been re-planned and integrated into the urban structure).

Table 1.8 - Principles of the "Perspective Munich"

1.	To safeguard and promote economic prosperity
2.	To improve cooperation in the region - enhance the competitiveness of the economic area
3.	To safeguard social peace through socially-minded local government policies
4.	To strengthen individual districts through local developments
5.	To create future-oriented settlement structures through qualified internal development - "compact-urban-green"
6.	To preserve the form and appearance of the city of Munich and promote new architecture
7.	To maintain and improve mobility for all road and transport system users and manage traffic and transportation to the benefit of the city
8.	To safeguard internal harmony through local security, social, educational and cultural policies
9.	To seize the opportunities offered by new media and promote improved basic services, public access, media competence and the media industry
10.	To develop ecological standards and safeguard natural resources
11.	To safeguard Munich's leisure value by offering varied facilities for different target groups

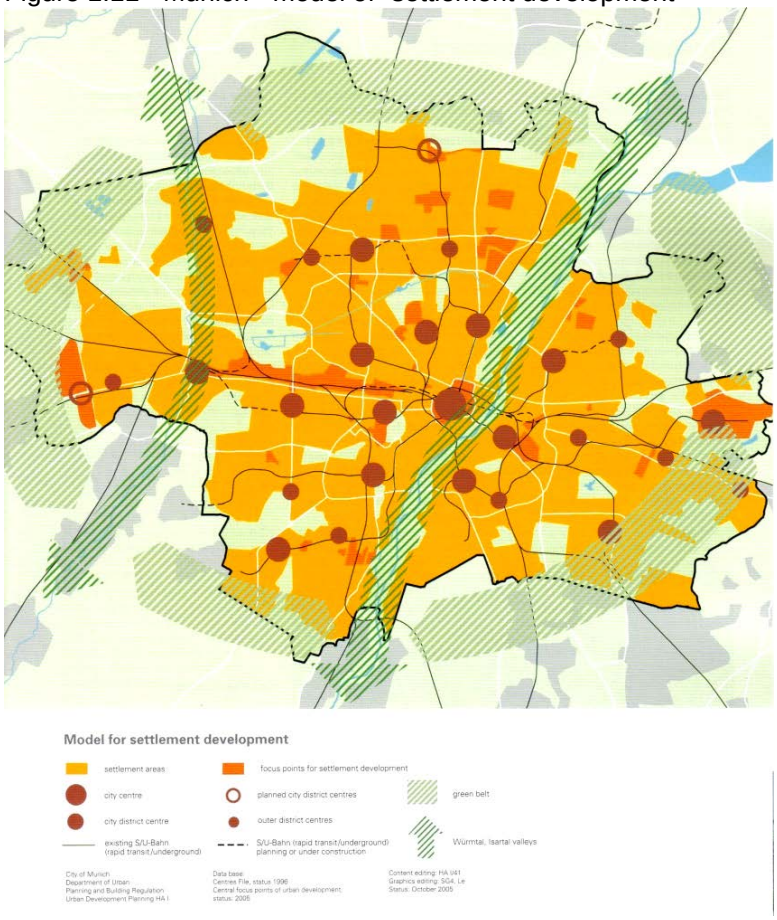
Source: Didier Vancutsem, op.cit.

The land use plan is integrated with the 'process'. Furthermore, a new 'land use tax' was decided for the realisation of green spaces: part (20%) of the plot development must be a green space: this can also include green space on the roof. Each square meter built in Germany, has to be compensated with 1 square metre of green space. The city is working with the Regional Planning Agency and the regional board (a meeting of mayors on a monthly basis). All housing developments are located around public transport, so there is concentration along public transport routes.

Next steps will be restructuring mixed areas, densifying single family housing, and urban border developments. An integrated approach can be developed to link developments on one plot. Very important principles adopted by Munich Municipality are referred to the so called "Inner city development" approach.

Figure 1.11 shows the “model of settlement development” within the urban area, aimed at creating future-oriented residential area structures through qualified inner-city development and „compact, urban, green“.

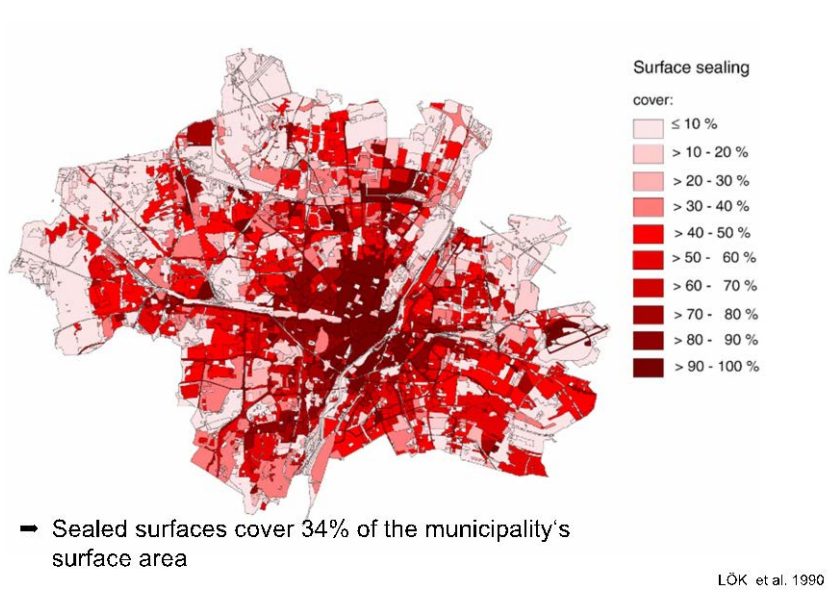
Figure 1.11 - Münich - model of “settlement development”



Source: Didier Vancutsem, op.cit.

Each “model” can be assessed also in terms of effects on the sealed surfaces, which are recorded through the GIS managed by the municipality, as showed in Figure 1.12.

Figure 1.12 - Munich – Sealed surfaces map



Source: Didier Vancutsem, op.cit.

As already noted, "long-term urban development" approach is a keyword of the urban strategy of Munich municipality. The land use management strategy is therefore strongly integrated with housing development scenarios.

Table 1.9 presents the "numbers" of the expected housing demand in Munich and the potential effects on land-use (surfaces needed).

Table 1.9 - Munich - expected housing and surface demand (2030)

Expected Growth Inhabitants 2009 – 2030:
+151.000 Inhabitants
Housing demand related to demo Growth:
+76.000 Housing Units
Growth Liveable Housing surface:
+10.000 Housing Units
Replacement Demand:
+30.000 Housing Units
Housing Demand until 2030:
+116.000 HU
Building construction:
- 59.000 HU
(brownfields, empty spaces)
Necessary Building Authorisation for:
59.000 HU
Surface demand for Building:
1.220 ha

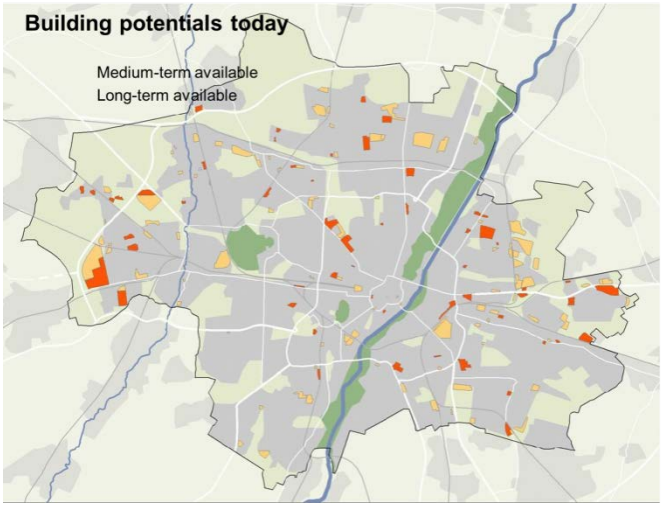
Source: Didier Vancutsem,op.cit.

In general, the urban growth strategy is based on three different "axis": re-structuring urban core, densifying mixed areas, developing single family housing only for the development of the urban border.

A coherent urban land use management cannot avoid to take in account the development at regional level as well. In general, demographic development at the region level is lower than in Munich, but the liveable housing surface growth is higher than in Munich. Necessary building authorisation are similar to the Munich case, while building densities are lower than in Munich. Therefore Building Surface demand is higher than in Munich, whith consequences that have to be managed also at regional level.

The land use management strategy adopted in Munich (similarly to the above mentioned Stuttgart case) allows to get a very precise quantitative and qualitative assessment of the building potentials – with information on temporal availability - in the inner-city areas, as showed in Figure 1.13.

Figure 1.13 - Munich – building potentials and temporal availability



Source: Didier Vancutsem, op.cit.

c) A "Governance related" case study: City of Amsterdam

The case study described below, related to City of Amsterdam, is not strictly referred to the "reducing land take" issue, but it is very remarkable from the "integration", "flexibility" and "inclusivity" of urban strategies point of view.

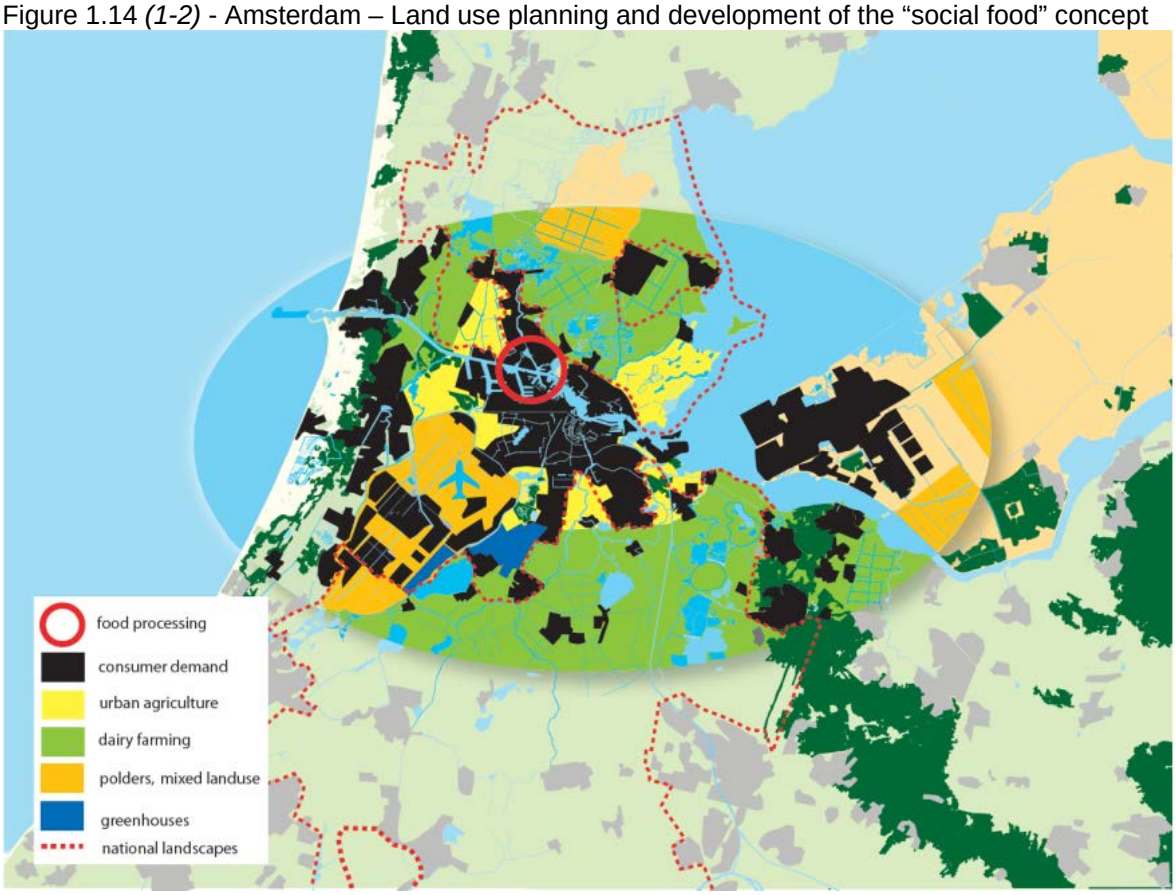
The process has stimulated participation in the food industry, including food production land use by involving people (tools: urban farm, cultural activities) The aim is providing around 17 sq m/habitat public space within a 5' walk from some "central cultural clusters". The process allowed, among others, to highlight heritage or outstand landscape features, to re-populate low density areas and to develop a "no cars" vision for the city in central areas.

The approach adopted is able to stimulate a participation methods useful for updating the general land use plan, improving local and social food production, developing cultural clusters useful to reinforce the identification process of the citizen.

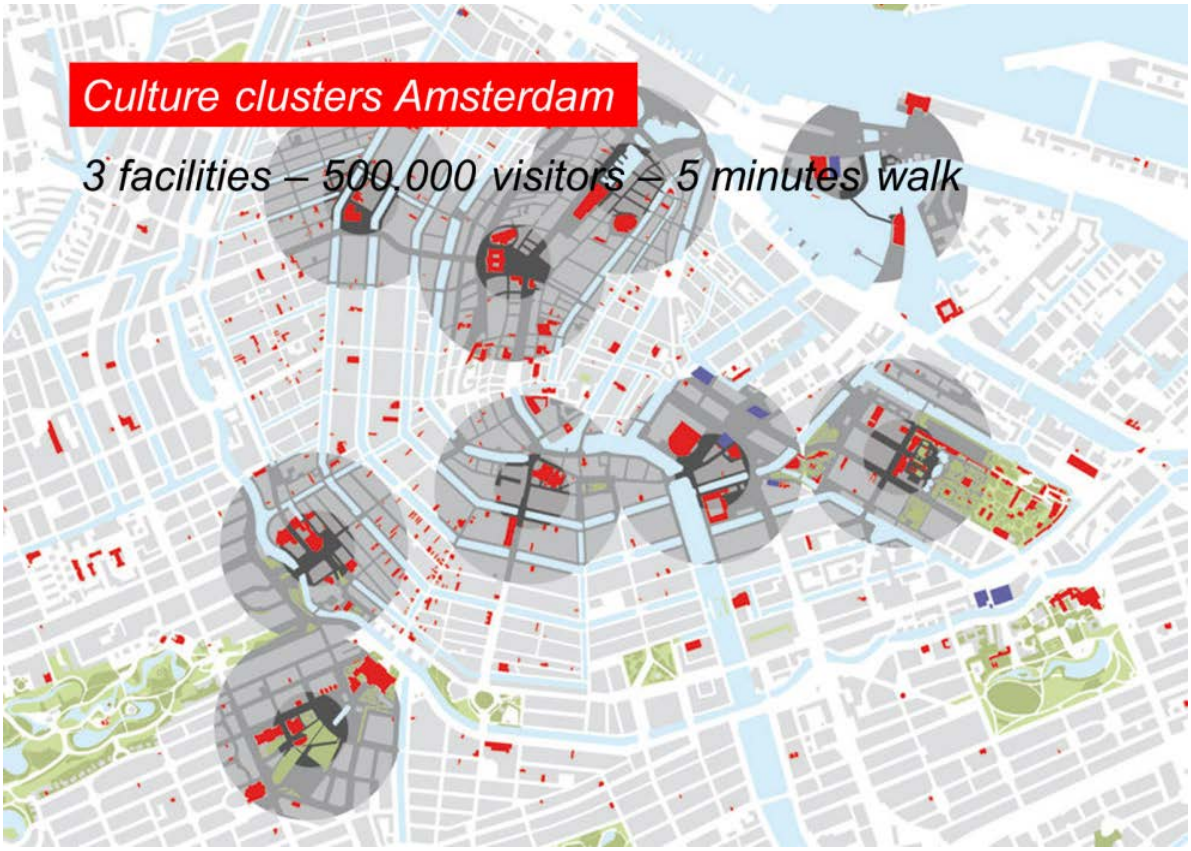
Figure 1.14 shows some "visions" elaborated within the process.

The values of this process, which has been strongly founded on participation, can be considered as useful guidelines for every land use management. Key words are: "start small, do not exclude others, leave your weapons, focus on the content, share stories, avoiding power points, curb your passions, be curious, old on"

Figure 1.14 *(1-2)* - Amsterdam – Land use planning and development of the “social food” concept



Source: Didier Vancutsem, op. cit



Source: Didier Vancutsem, op.cit.

Focusing governance - UK “Local partnerships” as promoters of sustainable “Land Use Management” approaches

UK Local Nature Partnerships (LNPs) are partnerships of a broad range of local organisations, businesses and people who aim to help bring about improvements in their local natural environment. Setting up LNPs was one of the commitments the UK Government made in the Natural Environment White Paper 2011. There are 48 LNPs across England. LNPs work strategically to help their local area manage the natural environment. They aim to make sure that its value, and the value of the services it provides to the economy and the people who live there, is taken into account in local decisions, for example about planning and development. LNPs are also being encouraged to work at a large scale, which we call ‘landscape-scale’, and to identify Nature Improvement Areas using these criteria.

Buckinghamshire and Milton Keynes Natural Environment Partnership has been established as an influential and authoritative advocate of the natural environment to engage positively with business and community interests. Membership of the Partnership will be open to organisations in the public, private and voluntary sectors with an interest in, and ability to influence, a high quality natural environment.

Strategic leadership of the Partnership will be provided by a Board whose members will represent local government and the voluntary, business, health and education sectors. The Board is advised and supported by a Co-ordinator and by Delivery and Task Groups. At present the Delivery Group focuses on biodiversity and green infrastructure, and the Environment Task Group covers sustainability issues. The Board collaborates with other strategic bodies, with a key objective to work with Local Enterprise Partnerships, and Health and Wellbeing Boards to promote their common interests. The NEP defines the natural environment as covering ecosystems, wildlife, landscapes, accessible green spaces, natural resources and cultural heritage. The proposed key priority work areas are as follows:

A. Developing a framework to support landscape-scale projects
B. Influencing spatial planning
C. Low Carbon Buckinghamshire
D. Highlighting the health and wellbeing benefits of the natural environment
E. Sustainable growth - Promoting the natural environment as an economic asset and driver
F. Monitoring and reporting on progress in the Natural Environment

By establishing a partnership comprising these various governance bodies, we hope that we kind find appropriate ways of managing development whilst also maintaining the natural environment

Source: City of Wycombe

The Land Use Management issue: the “Lumasec” and “CircUse” projects

The LUMASEC URBACT II Project experience

Sustainable Land Use Management is an integrated process of managing use and development of land, in which spatial, sector-oriented and temporary aspects of urban policy are coordinated.

In the past, “steering urban land use” was a simple matter of permissions and land exchange. Today the framework conditions are changing: land issues are more interlinked and globalized in urbanisation context and Local Authorities are responsible for delivering sustainable development for today and future generations. Cities have a huge impact on natural resource management, consumption of land and global warming, combined with brownfield land within cities and urban sprawl.

The “Lumasec” project, dedicated to the Sustainable Land Use Management issue, involved different partners within different planning cultures: 5 city partners, i.e. Baia Mare (Romania), Bristol (United Kingdom), Bytom (Poland), Kavala (Greece) and EPURES Saint-Etienne (France); the 3 “knowledge” partners were CERTU (the Centre for Development of Urban Development and Transport, France), the University of Ljubljana (Slovenia), the University of Karlsruhe (Germany) as Lead Partner, Lead Expert Didier Vancutsem (Germany/Belgium), within the URBACT family.

The Main Focus of the project was on strategic land use management for sustainable development of cities, considering issues of urban sprawl and brownfields on the strategic level (strategic planning methods, process of cooperation between public and private bodies, fiscal measures and observation tools) and the operational level (actions plans related to case studies) of land use management. The aim of the Project is the elaboration of strategies, methods, tools and practical recommendations.

The project started with a discussion with partners and politicians, with the public and private sectors. The “trialogue” between public actors, private sector and politics aims to integrate the diverging perceptions of a problem and by this means to overcome the gap between planning and implementation and between long-term and short-term objectives.

The first discussion was on Spatial planning and land use management, focusing on the real world, with targets and understanding, and an analysis of instruments. Creating an image of the reality by different professions; mapping by indicators and competences; getting (and sharing) an understanding of the use of land; Identifying and analysing instruments, tools as well as involved stakeholders; defining or executing policy aims in land use; setting up a management approach of land use (process) by intervention on different layers were the focal points of the discussion.

A discussion on Spatial pattern took place **in** Bytom (19-21 November 2008) – “Information and data for land use management” covered the occurrence of urban sprawl, GIS tools for mapping and steering land use, and government by building permits.

The discussion on Governance took place in Bristol (4-6 November 2009) – “Governance of land use management”, with Stakeholders involved in land use management and examined Structures, processes and tools of governance.

The discussion on “Capacity” took place in Kavala (5-7 May 2009) – “Involving people!” with participation of inhabitants and other (not professional) stakeholders, on awareness and political backup for land use and its management, and competences to deal with complex problems and tools.

An Example of a Lumasec LAP is the Local Action Plan of LUMASEC Partner EPURES/Saint-Etienne, aimed at developing a Land Use Strategy as a Governance tool. This strategy aimed at delivering both an operational tool to limit urban sprawl and promote urban renewal, preserve natural spaces and promote social housing and a strategic tool to establish a governance capacity without new institution. Actions were proposed to promote a smart green and incentive city: introducing public “Land Banks” in peripheries (organizing urban development and preventing uncontrolled development) and existing urban areas (urban renewal, public investment with incentive role); identifying strategic places for social housing development, transport, etc. ; developing mixed-uses programs, organization of land exchanges with investors, etc.

The Karlsruhe Knowledge Support Group developed a “learning kit” on sustainable land use management, with the aim of creating awareness and impact knowledge on land use management. The learning kit consists of teaching material for high school onwards – environmental education, containing commonly understandable information, ready to use teaching units, interactive media like video or online tools as well as games on land use management. The learning kit was developed in co-operation with the Local Agenda 21 in Karlsruhe.

In general, some typical problems emerged from the Local Action Plans**:** weak data management and data use; lack of citizens involvement and participation; lack of inter-municipal cooperation / governance; Brownfield and Urban Sprawl challenges in cities combined with a lack of instruments to contain sprawling process; problem of short-term projects vs. long-term spatial strategy; limited capacity of authorities to develop effective land use management due to administrative and institutional fragmentation; inefficient dialogue within existing horizontal structures / lack of vertical integration at city and city-regional level.

Regarding the Local Support Group Concerning the very relevant issue of “data management”, there is now more data available than at the time of the project. In one city data was made available to the public. In Greece there is no data available, in France it is being organised.

“Lumasec” Project provided several conclusions and recommendations included policy implications for European cities: multi-level approach coordinating land use policies on horizontal and vertical levels of governance; knowledge before action (e.g. local land market); elaboration of land use policies between strategic planning and opportunities (public regulation, direct land acquisition, private involvement by initial public investment, local taxes, etc.).

The tools proposed are mainly the following ones:

- good governance tools; actions by local authorities (internal management structures, networking city-region, information system, capacity building, tax systems,…);
- new generation of financial tools oriented to future governance structures (EIB Programmes, innovative PPP structures);
- Land Banking and Land Accounting Systems.

“Lumasec” also developed a communication network: 1st “post-project” Newsletter; Addressing Networks such as: ISOCARP, IFHP, ECTP, DIFU, ADEF, CERTU, etc:; European Environment Agency; European Investment Bank; ESPON; DG Regio, DG Agriculture, DG Environment; Committee of the Regions: municipalities, regional agencies. The results of the LUMSEC project can be found on the URBACT website.

Main Sources: a) Didier Vancutsem, LUMASEC Project - Land use management for sustainable European cities, Project Conclusions, Presentation at the USEAct Kick-off Meeting, Viladecans, 27th-28th May 2013. b) http://urbact.eu/en/projects/metropolitan-governance/lumasec/homepage/

The CircUse Project Experience

CircUse gatheres academics and cities dealing with brownfields, land use and regeneration, and concerns a methodology for circular land use management, representing cities in Poland, Germany, Austria, Slovakia, the Czech Republic and Italy. The Spectra Centre of Excellence works with the universities of Newscatle upon Tyne as well as German universities. The project concentrates on instruments for land management and land consumption.

In general, land use management in all (CircUse) project partner countries is much more focused on the controlling of changing land uses at the strategic and local level than on the practical interventions. Regulation is used to ensure a sustainable and growing development. The local level is the land-use management level while the central government is giving supervision on setting central objectives.

The analysis shows that on the one hand land re-use and structural rehabilitation measures and instruments are included as parts of the overall legal framework of planning and on the other hand own specific legislations or regulations are in place addressing exclusively issues of land-re-use and rehabilitation.

Legal framework can be characterized by the importance of sectorial laws dealing with the particular aspects of land-re-use, e.g. historical preservation, public housing, environmental protections, soil protection, transportation, technical and environmental infrastructure, housing improvement strategies offering financial incentives to owners and small businesses.

The institutional arrangement plays an important role in land-re-use and is the conventional framework for urban rehabilitation. The role of the regions and municipalities as well as the involvement of public sector in planning and decision making differs considerably among the different partner countries. Increasingly, municipalities are seen as focal points of land-re-use management as well as of public participation and involvement of the private sector.

Most of participating countries suffer a lack of expertise and financial instruments, as the decentralization of responsibilities and decision making power was not accompanied by decentralization of funding and resources.

Typical for all analysed countries is the claim for more public-private cooperation and partnerships as for example quasi-commercial enterprises. On the other hand, for example in Italy, contracting became a very common instrument addressing complex situations of land-re-use and urban rehabilitation. An efficient comprehensive system of instruments to guarantee efficient limitation of land consumption is missing:

In general, the following negative drivers emerge:

- Fragmentation of the legal instruments dealing with land consumption into many laws (-)
- No quantitative goals on land consumption (-)
- No implementation of controlling urban sprawl (-)
- Region and municipalities in central Europe are weak in steering allocation of sustainable land use (-)
- Contrast of the important position and weak capacities of local responsible bodies (-)
- Financial resources of municipalities (-)

Positive aspects are, on the other hand, the following ones:

- Environmental compensation measure pools by nature conservation law or building codes in several countries e.g. in Germany, Slovakia, Czech Republic (+)
- PPP (+)
- Specific organisations e.g. land development agencies (+)
- Regional schemes (+)
- Italian and German experience with informal planning instruments (+)
- Integrated spatial development measures (+)
- Key element to combine space, institutions and action and civil society involvement (+)
- Optimising direct funding programs (more oriented to circular land use management (+)
- Cost-benefit surveys as a tool for estimation of long-term profitability of settlement development (also in terms of infrastructure costs) (+)
- Property tax (+)
- Tradable land-use obligations (+)

CircUse project tried also to identify potential, chances and preconditions for efficient land use management towards land consumption reduction, that can be summarized in the nine theses presented in the table 1.10.

Thesis number 8 is of high relevance, since it represents a “concept” (the Circular Flow Land Use Management) that can be considered as a specific outcome of the CircUse project (see Figure 1.15)

Further focal issues pointed out by the CircUse Project are the need to develop Land Use Management Database, and in particular GIS based transnational database, and to improve the European and national systems of the land re-use instruments.

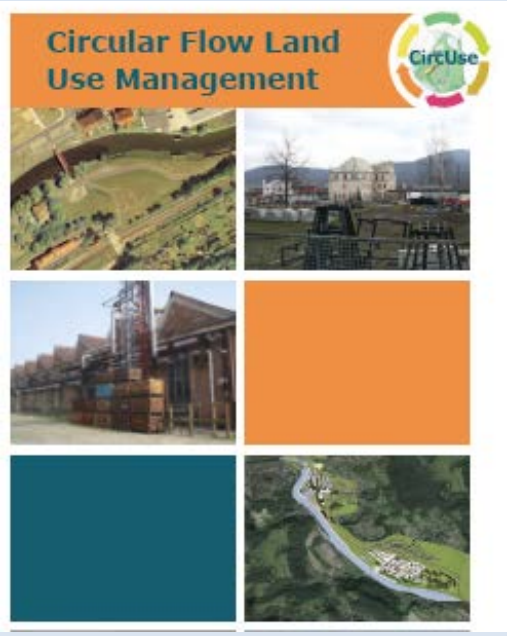
CircUse also supported the development of CircUse – Training courses (for municipal and regional stakeholders) on reducing land consumption. This aspect is of highest importance, since There is often a lack of expertise (in particular where municipalities are of so many different sizes) on that field and it is very important to support local decision-making processes. Education of investors is also important: investors are not aware of the potential relevance of empty city centre areas, because they don’t have a vision of the benefits of city centre re use, which already have infrastructures etc.

Table 1.10 - The nine thesis of the CircUse Project

Thesis 1: common problems and diversity of national and regional frameworks could be tackled by a common strategy on land consumption reduction and circular flow land use management
Thesis 2: the setting of quantified and qualified targets is a necessary requirement for successful implementation of a management strategy according to sustainable land use management.
Thesis 3: sustainable land use management focused on land consumption reduction needs a comprehensive definition of land types (incl. greenfield and brownfield areas)
Thesis 4: the development and application of information instruments and data management for registration and monitoring of space oriented potentials is one of the key activities towards land consumption reduction and land circular flow land use management.
Thesis 5: circular land use management in urban regions cannot be driven by the actions of a single primary stakeholder but can only be achieved through the coordinated efforts of the various public and private stakeholders who, as planners, property owners and land developers, influence or govern how land is used (shift from government).
Thesis 6: the implementation of sustainable land use management needs an integrated course of action which encompasses the wider spectrum of policies and activities providing a package of instruments (policy mix). In this instance current and potential new instruments should be pooled according to regional differences in framework conditions.
Thesis 7: the implementation of action plans need the selection of an applicable policy mix, stakeholder institutions, financing sources that meet the regional demands.
Thesis 8: in general new forms of organization need to be implemented by the stakeholders of a circular flow land use management. There are wide opportunities for institutional solutions in the EU.
Thesis 9: permanent knowledge acquisition and awareness of sustainable land use management are crucial preconditions for a successful implementation of a strategy for reducing land take and strengthening inner development.

Source: Maros Finka, op.cit

Figure 1.15 - The CircUse “Circular Flow Land Use Management Concept”



Source: Maros Finka, op.cit

More in general, a comprehensive system of instruments is missing and CircUse Project tried to provide a framework to support the different stakeholders to change their strategies, stressing, among others, that regional cooperation is very important in land use reduction.

Sources: Maros Finka; Existing and New Instruments Supporting the Circular Flow Land Use Management and Land-Consumption Reduction - CircUse Project´s opinion, Presentation at the USEAct Nitra Thematic Meeting, Nitra, October 2013; www.CircUse.eu

1.5 FROM TRACING BOUNDARIES TO COMPLEX LAND USE MANAGEMENT IN U.S.A.. THE METRO PORTLAND CASE STUDY

As showed by Adolf Sotoca, Urban sprawl occurred in the US 40 years before Europe. The focus then was mostly on physical planning, and a lot of reports were produced, such as “Drosscape”, and “The end of the suburbs”. US planning policy is mostly decentralized. In Oregon there were real policies: the metropolitan area is considered as a whole. In the 70s the Metropolitan area covered two states, and seven counties. However the two states work independently.

A “green” boundary was defined in the 70s, allowing no action outside the boundary, by preserving farmlands outside the boundaries. But the area inside the boundary needed to develop, with limited extension of the boundary. 1M people live within the boundary, over approx 1000 square kilometres. The urban boundary is revised every five years, and must foresee the extension of the city over the following 20 years. In the late 90s it was decided to address the question of inner growth.

Complex organization: Competences are at state level (the constitution does not enforce the union with urbanism competences). However there are some legal constraints, bills and specific laws and programmes that affect urban planning (environmental laws). States organize differently. In general, they are extremely decentralized. Most of states enforce municipalities to manage their own urban planning. The character of land (buildable or not) defined at municipal level by a Master Plan. Zoning defines uses but in a generic way (by zoning ordinances or amendments). Oregon (together with Hawaii and Vermont) has its own authorities or agencies in charge of planning: the “land conservation commission”, origins in 1973.

Oregon is the state where urbanism is most regulated, with licences, on-site reviews, conditional permits, public audiences and information, for variations, conditional permits, and greenways cession.

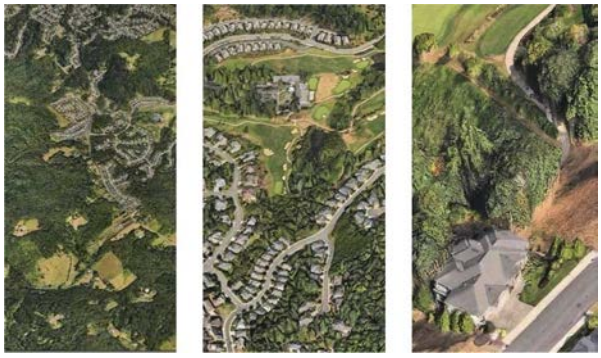
Portland Case-Study: Urban Boundary

The urban boundary controls urban expansion onto farm and forest lands. Land inside the urban growth boundary supports urban services such as roads, water and sewer systems, parks, schools and fire and police protection that create thriving places to live, work and play. The urban growth boundary is one of the tools used to protect farms and forests from urban sprawl and to promote the efficient use of land, public facilities and services inside the boundary.

The Oregon Metropolitan Authority is responsible for managing the Portland Metropolitan area's urban growth boundary and is required by state law to have a 20-year supply of land for future residential development inside the boundary. Every five years, the Metro Council is required to conduct a review of the land supply and, if necessary, expand the boundary to meet that requirement. This is called the urban growth management process. When undertaking this review, Metro also considers needs for future jobs in the region during this same 20-year period. The current urban growth boundary encompasses approximately 400 square miles. As of 2012, about 1.5 million people lived within the urban growth boundary.

The history of the urban boundary: The Columbia region association of governments, the Metro's predecessor, engaged in a complete planning process and proposed an urban growth boundary for the region in 1977. When Metro was created by voters in 1979, it inherited the boundary planning effort. A year later, the land conservation and Development Commission approved the boundary as consistent with state-wide planning goals.

Figure 1.16 – Settlments in the Portland area



Source: A. Sotoca (presentation at USEAct Istanbul meeting)

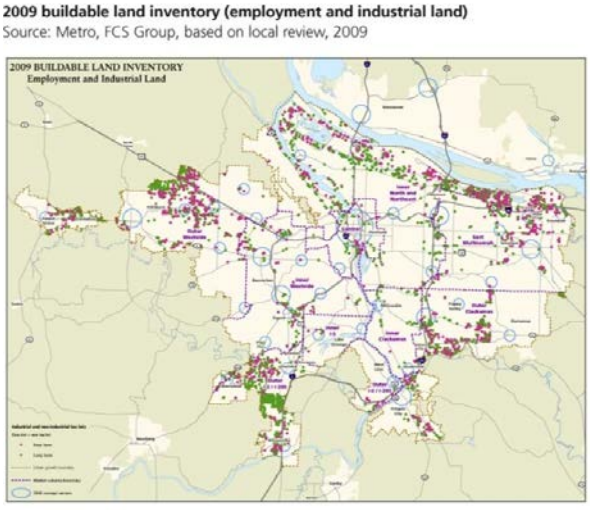
The location of the Metro urban growth boundary involved more than simply drawing a line on a map. The plans and growth projections of Washington, Multnomah and Clackamas counties, along with 25 cities and more than 60 special service districts, had to be accommodated. The initial urban growth boundary was based on a projection of the need for urban land as well as the land development plans of individual property owners.

The urban growth boundary was not intended to be static. Since the late 1970s, the boundary has been moved about three dozen times. Most of those moves were small – 20 acres or less. There have been other times when the Metro Council approved larger, legislative additions: in 1998, about 3500 acres were added to make room for approximately 23000 housing units and 14000 jobs. Acreage included areas around the Dammasch state hospital site near Wilsonville, the Pleasant Valley area in east Multnomah, the Sunnyside Road area in Clackamas County, and a parcel of land south of Tualatin.

In 1999, another 380 acres were added based on the concept of "subregional need." An example of "subregional need" would occur when a community needed land to balance the number of homes with the number of jobs available in that area. In 2002, 18867 acres were added to the urban growth boundary to provide 38657 housing units and 2671 acres for additional jobs. This action also created regional policies to support neighbourhoods, protect industrial areas and enhance regional and town centers. These expansions represented an increase of only about 9 percent, even though the population has increased by about 17% since 1990. In 2004, 1956 acres were added to the boundary to address the need for industrial lands identified as part of the 2002 planning process. In 2005, the Metro Council added 345 acres of land for industrial purposes which will complete the 2002 planning process. In 2011, the Metro Council added 1985 acres to the boundary to help address the anticipated 20-year need for new housing and jobs.

The revision of 2009: first strategies involved industrial refill (redeveloping plots, providing big plots for big companies), residential refill, diversification and phasing, and others (industry cluster, community based development, employment policies). The first action involved the optimization of existing urbanized land, the mapping tax lot, short and long term, the awareness of ineffective use of urbanized land. Two different strategies were planned: the urban refill of existing already built plots and the optimization of empty large plots and putting them onto the real estate market. On small plots different floor ratios within three different zones are defined: central, corridor etc… For big plots smaller plots are put together to prepare for bigger plots. Land is 100% private. Infill is to increase ratio, and replace buildings.

Figure 1.17 – Portlland Metropolitan Plan



Source: A. Sotoca (presentation at USEAct Istanbul meeting)

Expected effective refill: the first type of capacity is zoned capacity inside the current Urban Growth Boundary that is market feasible (by the year 2030) with no change in policy or investment trends. Finally, half of the capacity in new urban areas (land brought into the urban growth boundary since 1997) is deemed to be market feasible by the year 2030 and will be counted towards meeting the region's 20-year employment demand. This capacity is the capacity that can be legally counted towards meeting the region's identified 20-year residential demand.

Potential refill: the second type of capacity is zoned capacity inside the urban growth boundary that is likely to require changes to policies and investments to make it market feasible by the year 2030. Policy and investment actions can increase FAR System (Federal Acquisition Regulation System), increase the refill rate and increase the market feasibility of developing vacant land. An example of these types of actions is targeted infrastructure investments. The potential result of these actions is taken at the local or regional level. This capacity requires documentable local or regional action to count towards meeting the region's identified 20-year residential demand by the end of 2010. The complete range of capacity over the next twenty years includes key assumptions that influence the low and high ends of the supply range.

Despite the fact that FAR increase is not required according to the demand prognosis for 2030, the Far is increased for the 2040 scenario and in order to provide additional growth that will avoid an eventual lobby on land management. Supply-side FAR assumptions in most instances exceed today's market-based (demand-side) FAR assumptions. Zoning regulations have been found to be ahead of the market and thus provide plenty of regulatory "headroom" to allow additional density and growth to be accommodated in the near term as well as long-run time frame (2040). These FARs describe an average of maximum zoning densities permitted by local zoning codes:

- MUR: Mixed Use Commercial and Residential: FAR varies by location.
- CC: Central Commercial: allows a full range of commercial typically associated with CBD's and downtowns. More restrictive than general commercial in the case of large lot and highway-oriented uses, this encourages higher FAR uses including multi-story development.
- CG: General Commercial: larger scale commercial districts, often with a more regional orientation for providing goods and services. Businesses offering a wider variety of goods and services (including large format retailers) are permitted in this district and include mid-rise office buildings and highway and strip commercial zones.
- CN: Neighbourhood Commercial: small-scale commercial districts permitting retail
- and service activities such as grocery stores and neighbourhood service establishments that support the local residential community. Floor space and/or lot sizes are usually limited to between 5 000 to 10000 square feet.
- CO: Office Commercial: districts accommodating a range of low-rise offices; supports various community business establishments, professional and medical offices; typically as a buffer between residential areas and more intensive commercial districts.
- MUE: Multiple use employment: an employment district that accommodates a broad range of users including offices, retail stores, warehouse distribution, and light industrial including manufacturing, fabrication, and assembly.
- IL: Light Industrial districts permit warehousing and distribution facilities, light manufacturing, processing, fabrication or assembly. May allow limited commercial activities such as retail and service functions that support the businesses and workers in the district.
- IH/RSIA: Heavy Industrial districts permit light industrial and intensive industrial activity such as bottling, chemical processing, heavy manufacturing and similar uses with noxious externalities.

The process of definition: supply side FARs. The FAR assumptions are derived from local zoning ordinances and represent the maximum regulatory capacity. These FARs were utilized in the preliminary UGR to estimate both the industrial and commercial building square foot capacity from vacant buildable land. Applying these FAR values to the buildable land inventory (vetted by consultants and reviewed in part by local governments) resulted in a set of building supply estimates for industrial and commercial building space capacity. Using the regulatory or supply-side FAR values allowed for an estimate of the regulatory capacity of the buildable land to

accommodate a variety of industrial and commercial building formats and types. Conversion from acres of supply to building density capacity estimates allowed policymakers to compare how regulations and not just vacant land can be utilized to accommodate realized and potential capacity demand in the future.

However, a shortcoming of using supply-side or regulatory FAR values is that many zoning ordinances are well ahead of building densities that the market can feasibly build in the next 5 to 20 years. In some instances, the FAR values were unrealistic given prevailing and expected market conditions. As a result, this revised employment analysis employs expected market-based FAR projections. This approach provides less potential capacity than the regulatory FARs but is more reflective of market conditions. These demand-side or market-based FAR values have been vetted with local governments and a variety of trade and business organizations as well as by the Hovee consultant team. The demand-side FARs are also consistent with Metro Scope scenario results reflecting current policies and trends.

The Revision of 2009: Industrial refill. plot grouping. vacant buildable large lot map: it is likely that many future large parcel needs will need to be accommodated on vacant buildable land rather than refill. Refill would appear to be a more likely source of capacity for smaller lot needs. The buildable land inventory for employment uses was amended by metro's regional partners to incorporate local knowledge of available land.

There are three lots in the large lot inventory that have questionable buildable acreage values reported by the jurisdictions that amended the vacant lands inventory. Two lots in the 25 to 50 acre range reportedly have more buildable acres than total acres. The total acreage for each of these lots is in the 25 to 50 acre range, so they are assumed to be 100% developable and are included here. One lot over 100 acres appears to have been previously developed but the full tax lot area is reported as buildable acres. This lot might more properly be identified as a redevelopment opportunity than a large vacant lot; however it is still included here.

It is common practice to assemble multiple tax lots. A number of the large lots (over 25 acres) are adjacent to one another. In addition there might also be opportunities to assemble smaller lots that are already under common ownership into parcels of at least 25 acres. The comparison of supply and demand begins with the large lot supply as it currently stands before addressing the possibilities of tax lot assembly to meet projected large lot demands. It is likely that many future large parcel needs will need to be accommodated on vacant buildable land rather than refill. Refill would appear to be a more likely source of capacity for smaller lot needs. The buildable land inventory for employment uses was amended by Metro's regional partners to incorporate local knowledge of available land.

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Revision of 2009. Residential refill. Refill rate. The "refill rate" is the percentage of new dwelling units that are built on land that is already considered to be developed, instead of on vacant land. It is important to note here that we are comparing the number of refill units to the total of all new units built over a particular time period. So the refill rate is a proportion of new development, not a proportion of some land base. Multifamily developments accounted for about 39% of new dwelling units built from 2001 to 2006 while single family dwellings made up 61% of new residential units. The refill rate for multifamily dwelling units was much higher than single family, at 46% compared to 25%. Accordingly, the overall residential refill rate is sensitive to the proportional distribution of multi family developments and single family development. If the long term share of multifamily dwelling units compared to single family dwellings were higher in the future than that observed over the study period, we could expect a higher overall residential refill rate. If the multifamily share were lower, we would expect a lower overall residential refill rate over the long term.

The strategy is to promote multifamily housing so that future urban policies (not only refill) will have a wider impact in a smaller territory. All new developments where the Metro is participating are multifamily. Multifamily dwelling (MFD) refill rates are generally expected to increase across the

region, potentially reaching an overall MFD refill rate of nearly 70% for the region given current policies. The reasons for this are the lack of infrastructure on newly urbanized land within the projected time (intentional shortage of public investment in those areas) and increasing demand for dwelling units closer to the city center and other concentrations of jobs, retail and services.

Figure 1.18 – Refilling strategies

Source: A. Sotoca (presentation at USEAct Istanbul meeting)

Accordingly, new dwelling units in these areas must be created through refill development, and multifamily dwellings are particularly well suited for this purpose. Oregon City – Milwaukie is the only subarea where the future MFD refill rate is expected to fall in comparison to the historical data. However, since so little MFD development occurred for the subarea from 2001 to 2006 the estimated historical MFD refill rate of 87.8% should be interpreted with caution. The MFD refill rate is expected to increase dramatically in the Lake Oswego – West Linn area, from 21.9% to 79.9% since the model is anticipating no new vacant land for MFD development in this area by 2030.

Revision of 2009. Diversification and intentional fragmentation of urban extensions: In January 2008, Clark County added approximately 19 square miles of urban growth areas. A portion of the 19 square mile expansion was overturned and was appealed at the Washington State Superior Court. Scenario assumptions for Clark County urban growth boundary expansions are based on the Superior Court decision.

Portland case-study: urban boundary revision of 2009 phasing and timeline: sequences of prospective UGB expansions are assumed for this scenario, including the aforementioned areas that have been added to the UGB since 1998. New enlargement of the urban boundary is only considered when previous extensions are already developed.

Urban growth concept 2040: from 1992 to 1994, Metro used urban development analysis tools and forecasting technologies to study different growth management strategies. A wide range of possible approaches were identified and analyzed for impacts to the region's neighbourhoods, transportation system, natural resources and key urban services. This intensive study, originally called Region 2040, allowed Metro to focus on a number of options to prepare for local jurisdictions and the public to review. Metro ultimately tested four scenarios for how the region could grow. Each option was analysed for its effects on: land consumption, travel times and distances, open spaces and air quality, and various urban landscapes. The four options, called "growth concepts," presented different philosophies about how the region should actively manage growth. In September 1994, a new idea emerged. Drawing from the best features of the different approaches –the 2040 Growth Concept won the unanimous support of local government partners on the Metro Policy Advisory Committee. The Metro Council adopted the 2040 Growth Concept in 1995.

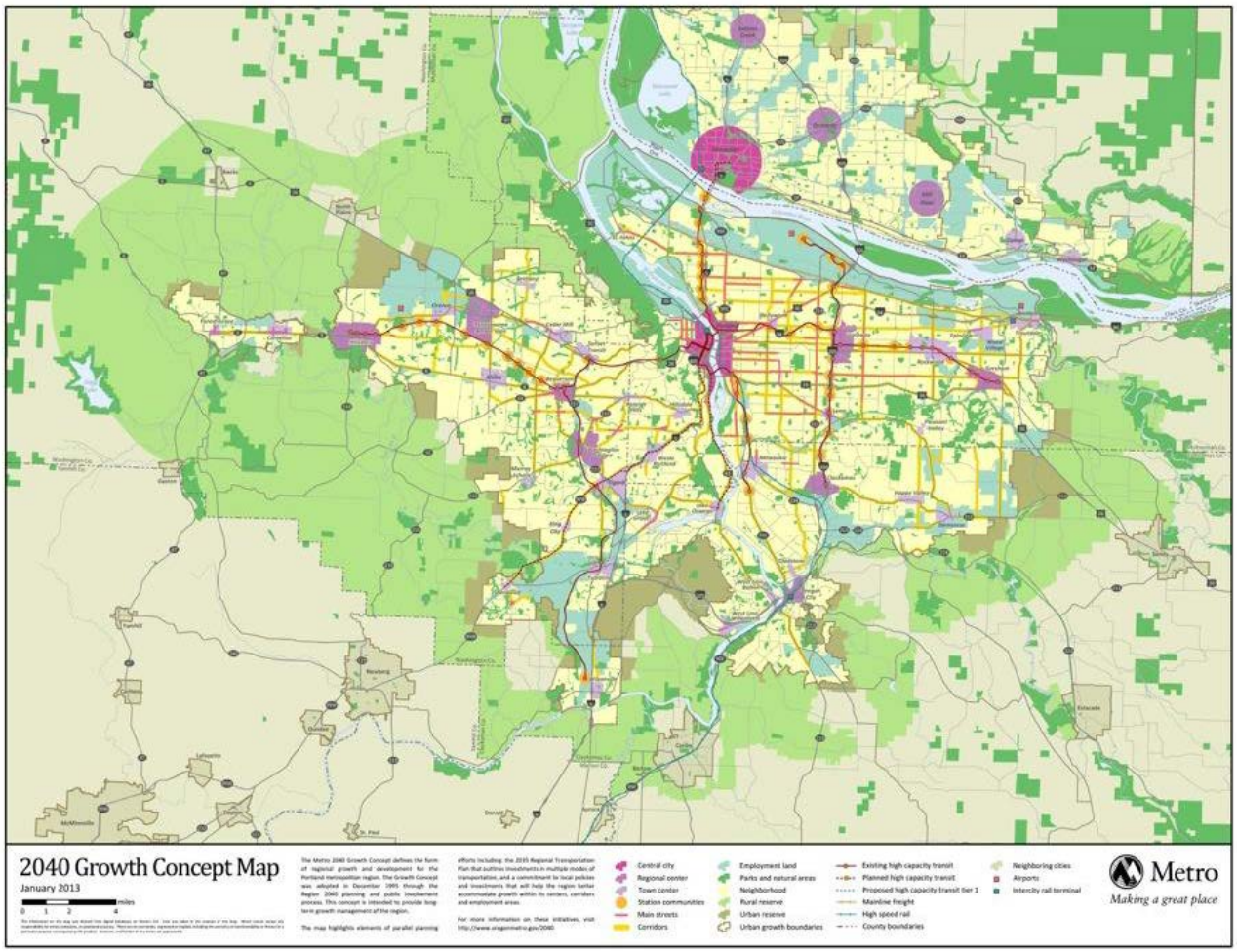
Land-use decisions are aimed to: encourage more efficient use of the land in cities, business centers on "main streets" and on major transit routes, protect natural areas, parks, streams and farmland both inside and outside the urban growth boundary, mobility diversification, by promoting a transportation system that includes all types of travel, such as bicycling, walking and using mass transit, as well as cars and freight, metropolitan scope work with neighbouring cities just outside the region, such as Sandy, Canby and Newberg, to keep the separation between communities, and promoting diverse housing options for all residents of the region.

Spatial hierarchization is based on multimodal structure involving central city, regional centers and town centers; an axial structure: main streets (retail commercial), transit corridors (transportation axis) and station communities (TOD), and areas of homogeneous identities: neighbourhoods (existing, preservation; new, more density), neighbouring cities (green belts instead of urban continuum) and rural reserves (preserved areas).

Strategies: redevelopment Transit Oriented Development (TOD). In considering walkability,

the street pattern in the surrounding area determines not only whether residents and workers can access rail and bus transit, but also whether they can access the shopping, jobs, and services that might be located in their immediate neighbourhood (if these uses are even present). Non-work trips continue to grow as a share of Americans' travel patterns, making local walkability a critically important component of building vibrant communities. Block sizes are a good proxy for the walkability of a neighbourhood, and small block sizes have a demonstrated correlation with reducing vehicle miles travelled. While central Portland has the smaller block sizes associated with increased pedestrian connectivity, there are notable walkable areas throughout the region. However, block sizes are less consistent, and often not directly connected to light rail or bus transit in communities outside of central Portland, making it more challenging for nearby households to reduce their auto use.

Figure 1.19 – Portland "2040 Growth Concept Map"



Source: A. Sotoca (presentation at USEAct Istanbul meeting)

Impact on the real state land value: new development is a fundamental way to improve the vibrancy of station areas and corridors, but the potential to attract private investment is clearly predicated on both neighbourhood market conditions and regional market demand for more compact housing types. The land value and historic real estate market transactions are both indicators used to understand local market strength, in the absence of the ability to do a detailed market analysis for every transit community in the region. Additionally, with the current real estate downturn, it is important to gauge the long range potential demand for compact development, including multifamily ownership and rental housing, town homes, and smaller single-family detached units.

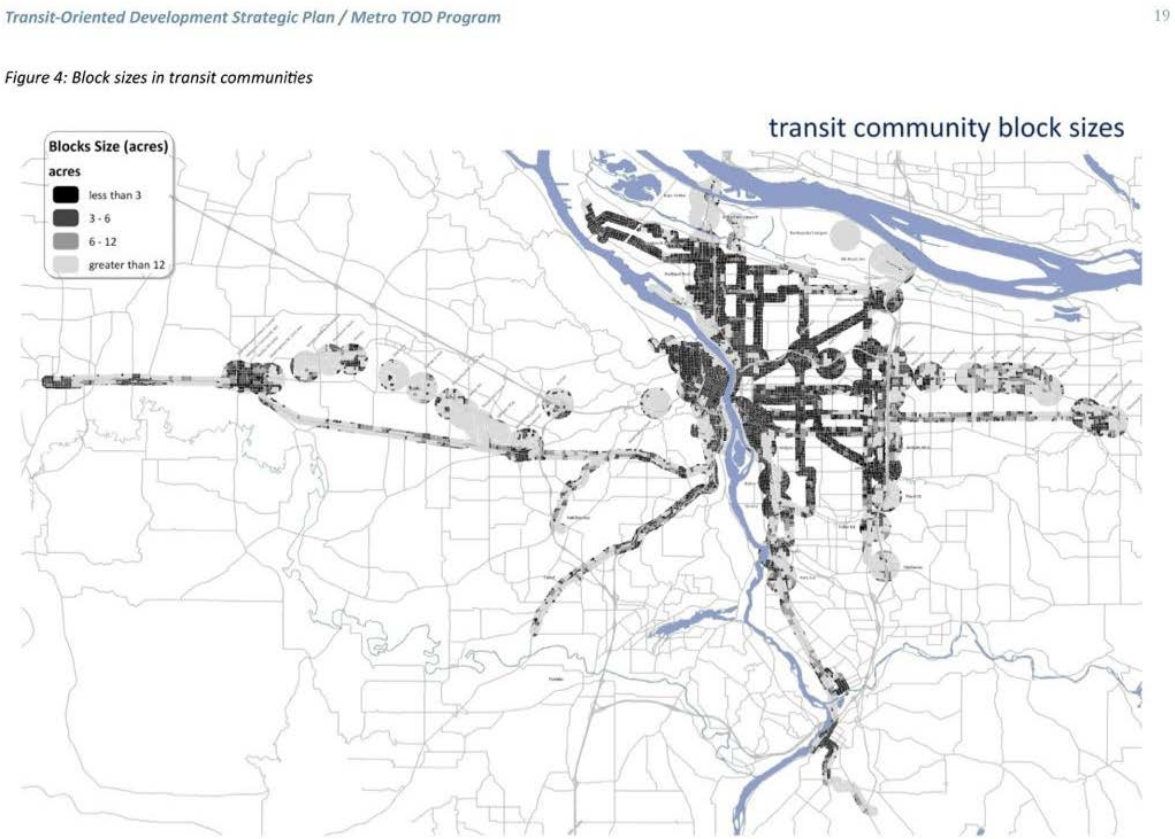
During the last housing market boom, downtown and other neighbourhoods at the region's core, such as the Pearl District, absorbed a significant share of new regional growth, much of it in

compact housing types including apartments and condominiums. Frequent bus corridors in Portland's inner east side also saw significant infill housing development, including three to five-story apartment and condominium buildings, many with limited or no on-site parking. Outlying suburban station areas and frequent bus corridors have thus far been less successful at attracting compact apartment and condominium development. Future market potential for new high-end multifamily housing will clearly be impacted by the current surplus of condominiums in the core of the region, but to what extent did the most recent strong market cycle absorb longer term demand for all multifamily development?

260 000 sq feet have been developed for mixed-use development, 580 000 transit trips/year, 2324 affordable housing (652 for 60% median income, 704 for 80% median income).

Metro's resources in the TOD program are quite limited, and investments should work with the market and leverage private investment with targeted public investments. We see two major roles for the programme: the first of these would be what can be referred to as "proof of concept" investments, supporting projects that test and hopefully demonstrate market support and achievable pricing for a targeted development form. Examples of this type of intervention would be the crossings at Gresham station and north main village in Milwaukie, both of which demonstrated that a significant premium could be achieved for untested urban development forms in these markets. The second type of investment would be related to increasing the attractiveness of a center, thereby generating a marketable premium that would be reflected in higher achievable pricing. This could include infrastructure investments (quite expensive), common area improvements (parks, plazas, streetscape), and active support for targeted "urban infrastructure" that have a demonstrated positive impact on achievable pricing (specialty grocers, theatres, etc.). An example of an investment type that this analysis would support would be providing funding to assist in the renovation and possible expansion of a theatre, a restaurant, café, or bookstore within a centre.

Figure 1.20 – TOD Strategy in Portland



Source: A. Sotoca (presentation at USEAct Istanbul meeting)

Revitalization of downtowns: Downtown and the Pearl District include significant amounts of employment and businesses and an expanding housing stock. The area is the primary tourist destination in the region, boasting multiple theatres, museums, restaurants and high-end retailers. The area has a population of 16 316 residents and a total of 79 750 employees, highlighting its primary function as the regional employment centre. The area includes a substantial amount of housing stock in the form of urban-style condos and apartments, allowing for many to live and work within the district.

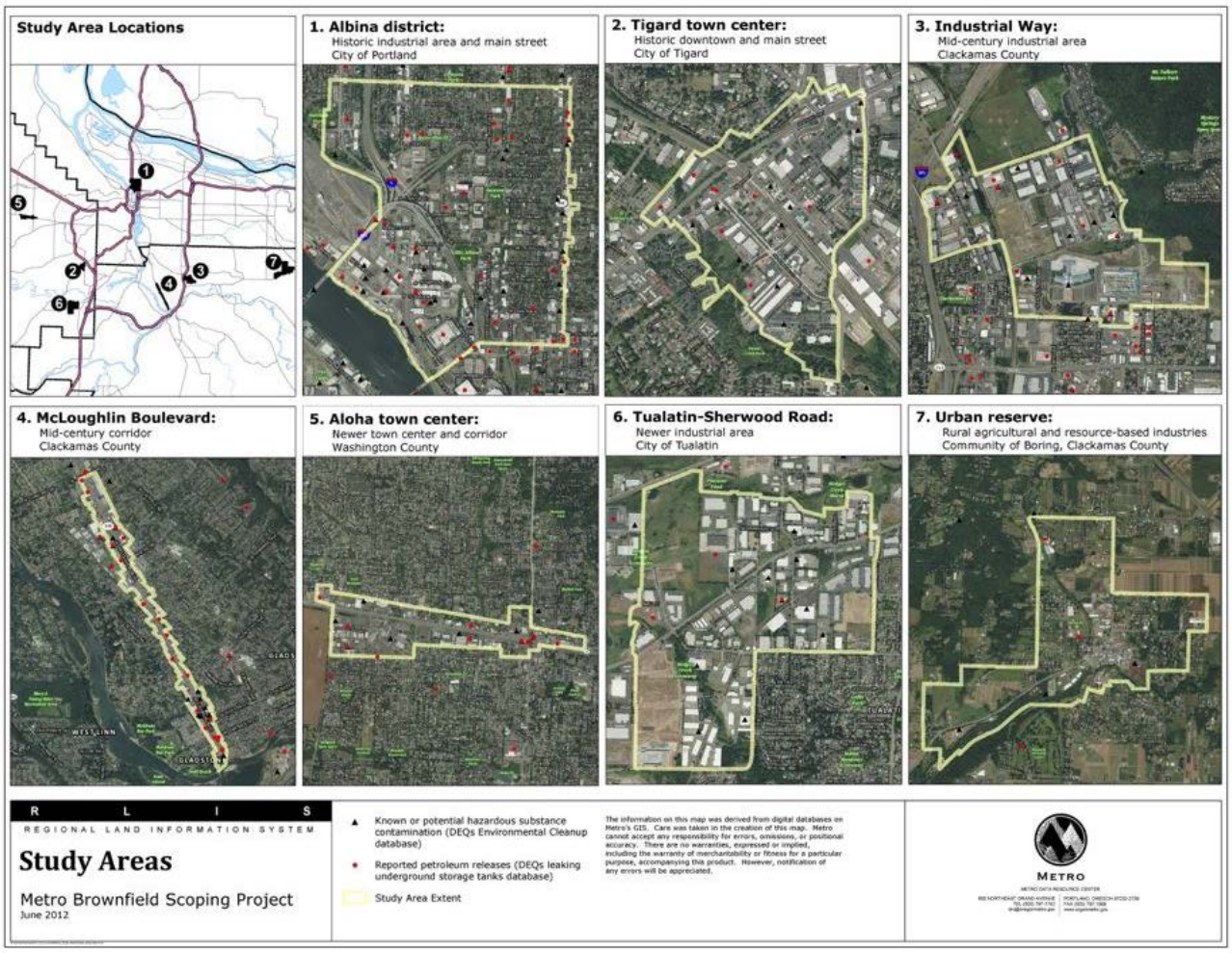
Downtown and the Pearl is considered a 24-hour activity center, with daytime uses that include office jobs, high-end and speciality retailers, grocery stores, farmers markets, museums and many limited-service restaurants. Nighttime's activity includes fine dining restaurants, coffee shops, theatres, bars and nightclubs. Within the area there is a wide range of businesses, especially restaurants, coffee shops and specialty clothing stores, with additional businesses that include: bakeries, dry cleaners, fitness gyms, and childcare and book stores.

Residents, workers and visitors can easily access the area through a variety of transportation options. The area is served by multiple light rail and bus lines, a streetcar system, multiple bike routes, and pedestrian-friendly streetscapes based on an urban-style small grid network and narrow streets. Additionally, this center serves as the central hub for all bus lines in the region, meaning most major bus routes stop in this district at some point. Auto access is prevalent with access to several major highways and thoroughfares that further support the area's accessibility to others from outside the region. Land values in this center allow for the strategic placement of structured parking throughout. Large, mixed-use parking structures and underground parking are prevalent. In addition, surface parking lots can be found in key locations along the edge of the district. Various forms of public transit and walkable streetscapes help make the car a secondary choice for transportation into and out of the district. Parks are found in abundance throughout the district, and are utilized by workers, residents, and tourists alike.

The Clackamas Regional Center is located directly adjacent to Interstate 205 and serves as the retail hub of northern Clackamas County and much of East Portland. Located in unicorporated Clackamas County, the center is home to a large regional mall and many destination shops and services. It is the final southbound stop on the newly opened MAX Green Line. This MAX station is also home to a 750-space park-and-ride facility, which allows for extended transit service to 10 bus lines. The regional center is part of an active urban renewal district and contains abundant surface parking. The center has 5 227 residents, 12059 employees and 2680 dwelling units.

The Lake Oswego Town Center covers the majority of downtown and land along the Willamette River waterfront. The town center is serviced by three separate bus lines that connect to Portland and eastern Washington County. Highway 43, an ODOT facility, serves the center. The center has 2194 residents, 2054 employees and 1429 dwelling units.

Figure 1.21 – Porland - Industrial area/brownfield redevelopment studies



Source: A. Sotoca (presentation at USEAct Istanbul meeting)

Restructuring brownfields: brownfield properties are typically located in older neighborhoods with a longer history of industrial and commercial uses. It is interesting to note that the reported sites in the DEQ (Oregon Department of Environmental Quality) database tend to be concentrated in the older parts of the metropolitan area, near the Willamette River and Columbia Slough. Many of the candidate sites that are suspected brownfields are located in the more recently developed areas of the metropolitan region, typically along transportation corridors and in industrial and agricultural hubs. Approximately 50 percent of the DEQ sites are in, or within 1000 feet of, sensitive environmental areas, such as wetlands and streams, as designated by Title 3 and Title 13 of the region's Urban Growth Management Functional Plan. Over 200 brownfields are within a quarter mile of a community garden, and 50 are within 200 meters

Brownfield typologies:

- type 1: small commercial sites. Common historical uses were gas stations, repair shops, and dry cleaners, characterized by small parcel size and located along highways and arterials, and in commercial centers, including main streets and small downtowns. These properties are commonly redeveloped for commercial, office, multifamily, and mixed uses. The small size of these sites can be a challenge to redevelopment, because they often cannot generate enough value to balance remediation costs. this typology represents approximately 80 percent of the number of brownfield properties in the metro region, but only 20 percent of the acreage. These types of sites are typically located in centers and corridors, and scattered in employment areas.

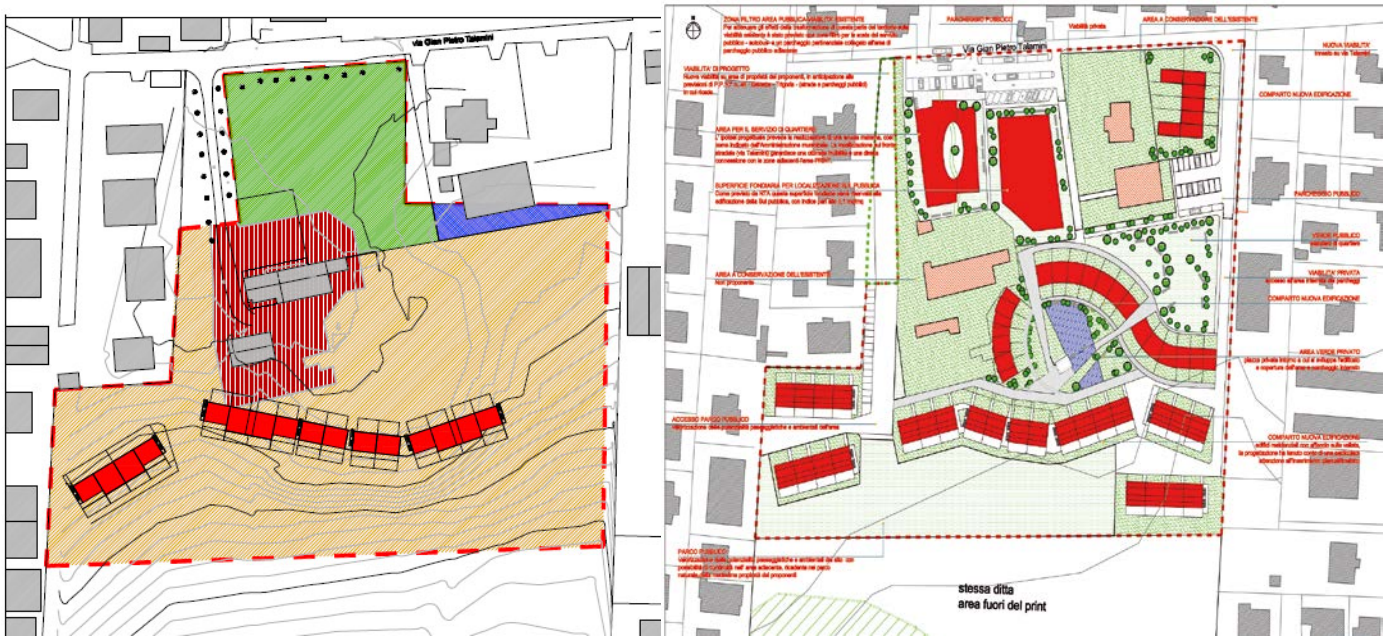
- type 2 industrial conversion sites: these properties range in size and are historically found in areas that have transitioned from industrial to office, retail, and mixed-use centers. Change of zoning and location often drives redevelopment of these properties. Sites in highly attractive, high-density areas, such as the pearl district, often are redeveloped by the private sector.
- type 3 ongoing industrial: these properties are located in areas with an industrial past that continues today, particularly through regulatory controls such as metro's title 4 requirements and local employment sanctuary overlays. The types of historical uses vary, but they share constraints on land value and future use that can be a challenge to redevelopment opportunities. These properties are typically large; while they represent only approximately 14 percent of the number of brownfield parcels, they encompass nearly 60 percent of the acreage. Difficult intervention due to the sensitive issue of job numbers.
- type 4 rural industry sites. These properties are associated with rural natural resource extraction industries and agriculture. They are typically large and located on the edge of the UGB, especially within urban and rural reserves. Structural economic changes can make these properties difficult to redevelop. There are relatively few of these types of brownfields in the Metro region and its urban reserves, but they individually can occupy large areas and can have significant regional impacts. Environmental issues at regional scale

Restructuring brownfields a prioritization in public investment. Brownfields are also highly likely to be located in a community designated by Metro's Equity Composite (conducted originally for the Regional Flexible Funding Allocation) as underserved, an analysis that highlights areas that simultaneously have a high underserved population (nonwhites, elderly, low-income, non-English speaking, youth), a low density of essential services (food, essential retail, health, civic, financial/legal), and low proximity to non-auto transportation. 19% of all DEQ sites are in underserved communities, but these properties represent a much smaller proportion of all land in the region. When normalizing by acreage, every brownfield in a non-underserved area represents 1.7 brownfields in an underserved community. Sixty percent of the brownfields in underserved communities are also located in the region's designated centers and corridors.

Restructuring brownfields: policies and tools include creating tax incentives (all mean statutory change and legislative action: long term)

tax credit for remediation; tax abatement (extend duration of tax abatement in infill and remediation areas); control tax assessment valuation rules in time (discourage mothballing); tax increment financing in brownfields; building capacity (all legislative, mid-long run); public land bank; public clean up tax; integrated planning; community based complementary actions, guidebooks (non effective); regulatory framework (short term, municipality, effectiveness); deregulation; interagency funding coordinated by municipality to promote brownfield restructuring; transfer rights and duties (not innovative, dangerous); GIS, database (non effective); guide books (non – effective.

There are still some differences regard the European context: preservation of natural land by specific regulation, limiting urban growth and lack of attention to individual urban structures. Engaging people is a key element.



2 PLANNING TOOLS FOR INTEGRATED "REUSE" INTERVENTIONS

2.1 INCENTIVES TO "JOIN" OWNERS AND PROPERTIES IN THE RECENT NEW GENERAL TOWN PLAN OF ROME

City of Rome recently adopted (2008) a new General Town Plan scheme (GTP) which substituted the previous one, in force since 1962. The former plan, based on a "traditional" zoning approach, suffered several variations over the years. One of the most important target of the new GTP is limiting land take, through promoting a better use of already urbanized areas, following a "mixed use" approach.

The new GTP encompasses some specific incentives aimed at boosting developments run by several land-owners jointly. Before focusing on these specific tools, it is of use to provide a general overview on the general scheme[9].

One clearly declared challenge of the new GTP is to boost "redevelopment schemes" on areas that are already urbanized, avoiding, as much as possible, new land take. To boost redevelopment, two main «area based» planning tools working within the existing city are available.

A) URBAN PROJECTS («Progetto Urbano»), which are public Initiative interventions (with public funds) on established areas. These projects mainly focus on infrastructures, connections and public spaces and require a strong participatory approach. They are used mainly for "historic city/dense" urban zones.

[9] Main Source: Vittorio Torbianelli, Planning tools and incentives for urban regeneration and densification: the Rome case-study, presentation at the USEAct Nitra Thematic Meeting, Nitra, October 2013

B) INTEGRATED PROGRAMS (PRINT). Aimed at urban renewal/densification of urban non core areas, PRINTs can be defined as (re)development densification schemes (new volumes are allowed) with the purpose of urban and environmental requalification, in areas designated by the GTP, that are totally or partially built.

PRINTs do not require any specific variation of the GTP (PRINT spatial boundaries are clearly identified) and should therefore be quickly viable. In PRINTs areas, threshold planning parameters are the general ones, but within these limits there is freedom.

PRINTs in general allow several urban uses (no mono-functional approach) and integrate – also from funds and resources point of view - different typologies of intervention (public utilities included).

More detailed clarifications on PRINTs are necessary. Public or private entities can develop PRINT development schemes. In the Rome case, the role of public promoter is played by the so called «Municipio» ("borough"). Formally, in the Public Initiative PRINTs there is room for integrating (one or more) private owners into the scheme (through a "contractual" approach). However, if private owner does not comply with the scheme, compulsory purchase occurs. At present, public administration has weak interest and no resources for promoting such schemes and public Initiative PRINTs in fact does not work actually.

PRINT development schemes can also be developed on private initiative. Private owners have two solutions since they a) can develop the properties individually, following the normal rule (without any specific incentive); b) officially apply for a PRINT scheme jointly (if they associate at least 75% of the whole PRINT land). For PRINTs that comply with the "prevailing residential" character, the volumetric incentives provided are showed in Table 2.1-

Table 2.1 - Incentives for private "individual" and "joined" development

	Building Rights (m2Built/m2Land) Usablr Surface/Total Surface* For individual developments denominator (total Surface) is the extension of the owned parcel within the PRINT area; for joint-ventures, it is the entire PRINT area			
FORMER GTP zones (1962)	Individual Private Development = ordinary building rights Ordinary Planning Fees: Primary public works (network utilities)	(PRINT) Joint-venture (75% of properties) For private owners (joined) = extraordinary share of building rights Extraordinary Planning Fees: Secondary public services (e.g. school)	Available for the municipality (compensatio ns?) See later!	Total
Zones (former GTP 1962)				
Land for high density housing developments	0,30	0,60	0,00	0,60
Land for low density housing developments	0,10	0,20	0,10	0,30
Land for public building (M1, M3)	0,00	0,20	0,10	0,30
Not developable land (roads, etc)	0,00	0,12	0,18	0,30
Green and public services areas	0,04	0,08	0,50	0,56

Source: Vittorio Torbianelli (op.cit)

Private owners (joined) together with the public body («Municipio") discuss and arrange the scheme (and the private contributions), up to definitive approval. In general, PRINT schemes developed jointly allow a better utilisation of the areas.

Owners that are not involved in the (original) private proposal, have right to join the group if interested, even if that represents a risk of "complications" within the original "group" (for example due to a low financial solidness of the additional partner).

The above mentioned incentives (as supplementary «building rights») would induce considerable benefits for the land owners. So far, the larger rights are balanced by a purpose-built "planning fees"

system, linked to the PRINT scheme, agreed both by public and private investors. The fee scheme is as follows.

A) For the “standard” share of the building rights (first column of Table 2.1), planning fees are the ordinary ones (note that generally the fees are contractually “converted” into physical public works - network public utilities – roads, etc.- to be built by the private developer)

B) For the “supplementary” share of building rights (second column of Table 2.1), “extraordinary” planning fees (higher than the ordinary ones) are required, to finance further public services (schools, social housing, etc.). These fees are contractually convertible into public works too.

The “value” received by the public sector as extraordinary planning fees (actually as physical works) must be exploited only for public works/services within the PRINT area and not generically in the entire borough area.

As above mentioned, the conversion of the supplementary planning fees into material works is “agreed” within the PP development scheme. In principle, this solution could benefit the (efficient) private developers, by reducing their final cost in comparison with the monetary payment alternative. However, private developers often assert that the lack of prior information on what/where public services should be built (cost uncertainness) is a strongest deterrent to apply.

Therefore, public bodies should previously provide a clear outline of public targets/public works/services for the PRINT areas

A similar incentive framework to promote joint-ventures among land-owners is available for PRINTs areas which are dedicated to host “economic activity” In case of individual development, the building ratio allowed is 0,30 m2/m2 and on public green areas, development is allowed only if parcels are smaller than 1.500 m2 and. Moreover, urban uses allowed for individual developments are rather severe: residential buildings can be («only one dwelling for each productive unit, not exceeding 10% of the Usable Surface), while further allowed uses are retail, services (allowed functions with low parking/transport impact only) hospitality (hotels, etc.), production, agricultural activities and parking spaces.

For larger private-owned areas (more than 10.000 m2), a joint application for a scheme (75% of the parcels) is always compulsory. More in general, urban functions allowed and incentives for “joint-venture” development schemes in PRINT areas dedicated to economic activity are more favourable than the individual development case. The building ration is 0,35 m2/m2 and residential units are permitted up to 20% of the whole allowed development. Further uses are production activities (not less than 30% of the allowed development), retail, services, tourism/hospitality (uses with medium and high parking/transport impact allowed too).

Changes of urban uses are also allowed, through payment of extraordinary planning fee.

In reality, many factors tend to dissuade private developers to apply for development schemes in reality.

1) The extent of the PRINT areas is often too large to allow “75% of the area” agreements (Implementation of partial development sub-schemes should be allowed).

2) The “right to be involved” of further (extra75%) land-owners is considered a potentially relevant “risk” and a source of uncertainty for the “first” applicants (Agreed “admission procedure” of further applicants should be allowed).

3) The lack of a prior general vision (developed by the public authority) on what are the public requirements/public services for each PRINT area: this brings not minor uncertainty for the business plan of the applicants (a clear pre-existing plan for public facilities should be available).

4) Boroughs are often not technically capable to manage the “agreement procedures” and the multi-step design and assessment process of the development scheme (need to identify the appropriate level of competence for managing the procedure).

These negative factors represent, in general, a typical risk for incentive-based planning schemes aimed to “joint” fragmented properties and should carefully considered as the legal planning framework is developed.

Identifying and levy urban vacant land in Dublin – A way to incentivate urban reuse?

Identifying and levy urban vacant land in Dublin – A way to incentivate urban reuse?

Now that the era of tax incentives is over, Dublin City is pursuing alternative means of turning our brownfield legacy into opportunities. The policies and objectives of the Development Plan "promote intensification and consolidation of Dublin city. This will be achieved by way of in-fill and brownfield development; regeneration and renewal of the inner city; redevelopment of strategic regeneration areas; and the use of higher densities especially in public transport catchments" (DCC Development Plan 2011-2017 Chapter: 3.2.1)

Recently the Lord Mayor's Task Force on Vacant Land proposed a "vacant land levy" for the Inner City of Dublin to the Department of Finance. In addition students from University College Dublin are currently preparing a report on the range of incentives/sanctions/policies/best practice which could be used to expedite the regeneration of such lands.

The Vacant Lands Levy initiative involves 2 key pieces of work to date;

a) A research paper on a proposed vacant land levy for the Inner City, produced by the Lord Mayor's Task Force, and which has been submitted to the Department of Finance for its consideration.

b) A vacant lands survey for all vacant sites in the Inner City has begun.

In addition the City Council has set up a Local Support Group comprising City Council Experts, Strategic Policy Committee Elected Members and including one University Representative.

The survey is initially confined to the Inner City. Need a base map (1:1000) with most recent vacant sites survey. May need to be divided into grids blocks (e.g. 500x500m) to assist survey work. Baseline map could have vacant sites from Housing Land Availability and City Council owned sites layered onto it.

The project is still undergoing implementation therefore steadfast or concrete conclusions have not become apparent yet, particularly in regard to the logistics of implementing a vacant land levy on a derelict site against the will of the land owner. Moreover, the nature of a number of the chosen sites and their subsequent categorization on the vacant lands database may lead to legal discourse in the future, particularly if such a levy was to be introduced.

2.2 CONTAINMENT OF LAND USE AS A STIMULUS FOR THE REGENERATION OF EXISTING AREAS AND REUSE OF ABANDONED AREAS FOR A MORE LIVEABLE AND ENERGETICALLY EFFICIENT CITY: THE NEW GENERAL TOWN PLAN OF TRIESTE

The Municipality of Trieste is developing the new General Town Plan. Focussing on reuse and regeneration as an opportunity to regenerate the city of Trieste and make it more sustainable presupposes much work reading the specificity of the various urban fabrics and elements that make it up, like the starting of a process of recognition of many urban cityscapes and built elements of value.

This is to identify levels of transformability of individual buildings and parts of the city, up to the possibility of more significant operations of demolition and replacement of these elements that are no longer able to guarantee a suitable level of

habitability and energy efficiency. This is a request that was put forward not only during the economics and professional participation-meetings, but also that takes on an important role in improving the environmental quality of our city that is central to the administration programme.

The General Town Plan in process identifies:

-areas of real urban renovation, where it will be possible to replace whole parts of the fabric for better energy efficiency standards, but also for a better use of green spaces and public use; the

creation of regeneration opportunities of periphery parts of the city that today are in an evident state of neglect can also be linked to this;

- areas of the city where the energy efficiency of individual buildings is “rewarded” through the acquisition of volumetric “credits” in other parts of the city (identified in the Plan, see map) where a densification process is possible (essentially this deals with a reinterpretation of the “equalising” mechanisms that our Plan modifies to the Trieste context where there are no large public properties, or large areas of expansion where further building capacity can be set down.

- areas of the city in which the energy efficiency of individual buildings is “rewarded” through the acquisition of volumetric “credits” in other parts of the city (identified in the Plan, see map) where a densification process is possible (this is essentially a reinterpretation of equalising mechanisms, which our Plan adjusts to the conditions of the Trieste context where there are neither large public properties, nor large expansion areas in which “to land” additional building capacity, but the volumetric awarding should be necessarily conceived in the most widespread manner on the existing fabric);

- rewarding mechanisms which incentivise the recovery of disused buildings.

Ecological reconversion and incentives for energy upgrading

Ecological reconversion pursues the general aim of improving the quality of life in the city, via measures which are both diverse and vary in the binding legislation.

The themes concern the safeguarding and improvement of the quality of air, water and soil, energy efficiency, production and biodiversity.

In line with this objective, the Plan outlines:

1. measures designed to improve the quality of air, such as the use of green for regulating the microclimate, the introduction of a tree and shrub density index, the encouragement of the use of roof gardens;

2. measures designed to obtain conditions of hydraulic invariance, such as the provision of systems to ensure the full return of rainwater to groundwater;

3. measures designed to save energy, such as the creation of roof gardens and solar greenhouses, energy upgrading of existing buildings with a level change, the improvement of the environmental compatability of the buildings and the energy efficiency of the building systems and/or envelopes;

4. measures designed to ensure biodiversity, such as the protection and enhancement of environmental safeguards and ecological corridors, the recovery of enclosures in karst stone, the creation of roof gardens, the introduction of a tree and shrub density index.

Incentives for energy upgrading

The Plan provides for the energy upgrading of existing buildings (in particular those built in the sixties-seventies in the last century), through the development of a type of “pilot project” geared towards promoting energy reconversion:

- of buildings in the urban Centre of environmental value (B0);

- of buildings in the City of objects (zone Bo1 and zone Bo2);

- of disused buildings.

The selection of places in which to incentivise energy upgrading is motivated by the fact that these areas are difficult to transform for the following reasons:

- presence of buildings where some elements of value and alignments along the road have to be safeguarded;

- presence of buildings of high density and and high coverage ratios, of large containers with a high number of housing;

- presence of different owner conditions;

- building heritage (in particular in zones Bo1 and Bo2) sometimes of poor quality both architecturally and in energy-environmental terms.

The energy upgrading is incentivised via the creation of building “credits”, not more than 10% of the volume of the redeveloped building.

These credits can be used:

- in areas specifically identified within zone Bo4 City of objects, in zone Bg1 City of gardens and in zone Bg2 City of gardens from Karst to Opicina (see composition PO1.2). In the areas of “landing” the credits in zones Bo4 and Bg1, a maximum expansion of 250 cubic metres is forecast per housing unit, up to a maximum of 45% of the existant volume; in the area of “landing” the credits in zone Bg2, a maximum expansion of 250 cubic metres is forecast per housing unit, up to a maximum of 2 units and no more than 45% of the existing volume in the lot;

- in some C zones – New city of gardens, where an increase of territorial index 0.5 cubic metres/square metres is permissable, which leads to a maximum1.5 cubic metres/square metres, as provided for by PURG.

The selection of “landing” areas of credits is motivated by the fact they are low density building areas or expansion areas. However, among these types of areas, environments and zones deemed particularly sensitive from the following perspectives have been excluded:

- environmental: zone Bg1 City of gardens and specifically the areas corresponding to Barcola, but also zone Bg3 City of coastal gardens, zone Bg4 City of vegetable gardens;

- of settlement principles: zone Bg2 City of the gardens of Karst (except Opicina);

- of historical and documentary architectural value: buildings under protection.

Other excluded areas include those falling under Areas of urban renewal and restructuring because they are aready covered by volumetric awards.

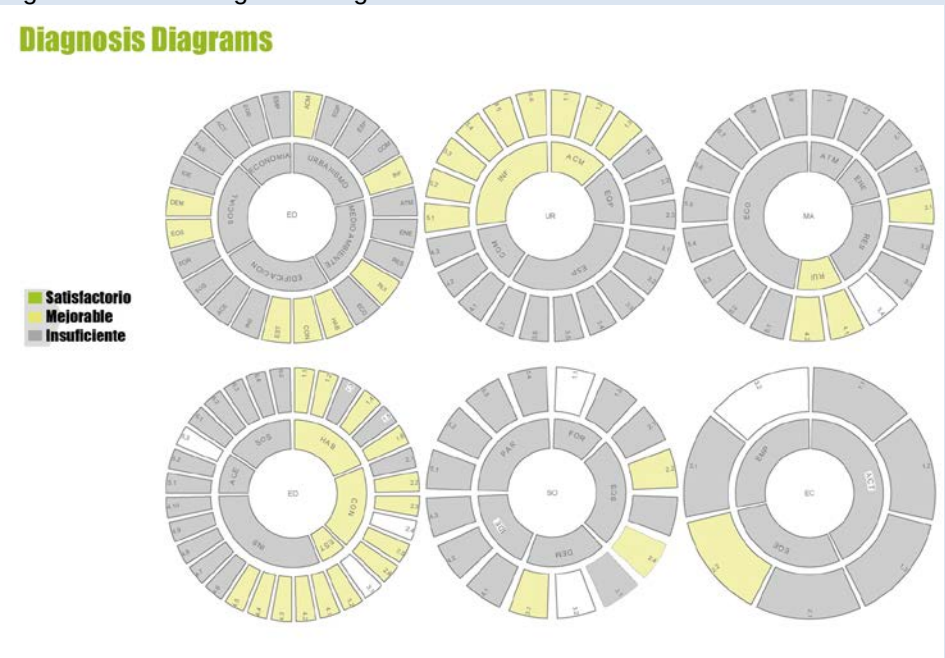
Specific Regulation will define in detail the process of the operation and landing of credits. This process shall also see the establishment of a special Register of building credits, aimed at controlling building loans that can be activated throughout the whole territory. In this initial phase, the loans amount to 350,000 cubic metres and can be used within 10 years of the Registry set up.

What are the priorities? Measuring urban vulnerability to improve urban planning

"Land Use Management" approaches aimed at reducing land take and reusing urban areas, require continuous evaluation and monitoring activities. The Municipality of Barakaldo has developed a research aimed at establishing criteria to assign priorities in renovation programs. This research, called "Diagnóstico de las necesidades de intervención en la renovación del parque edificado de la CAPV" (Diagnosis of the necessities in built environment renewal interventions of the Basque Country) has been developed by TECNALIA- Madrid Polytechnic University (UPM) and Basque Country University (UPV/EHU). This diagnosis establishes six parameters of vulnerability for urban analysis on two scales of comparison (Basque Country average town and Barakaldo municipality). The parameters were (see figure 2.1):

- Social and economic vulnerability.
- Building habitability and comfort measures.
- Urban and building accessibility.
- Construction and structural viability.
- Energy efficiency.
- Building and population density.

Figure 2.1 - The diagnosis diagram



Source: City of Barakaldo

This second methodology establishes five categories of vulnerability on neighbourhood scale, considering before-after inputs of compared analysis to determine the benefits of the possible proposals. The categories were:

- Urbanism.
- Environment.
- Building.
- Social
- Economic.

Once the proposal of urban intervention was defined, the second methodology was carried out again, in order to check the improvements of each category (colour code difference for the improvements, along with the circular shape, enhance the comprehension of the analysis).

Analyzing the pre-existing urban spaces and areas with the idea of promoting urban interventions, requires the definition and implementation of an integral methodology for urban analysis, considering all the specific and key factors of the area (specific indicators and sub indicators).

- The proposed interventions are and must be analysed from the urbanistic, environmental, building, social and economic points of view, so as to have a real overall view.
- The proposed methodology and indicators have to be easily understood (for public participation and dissemination) and must allow reflecting and evaluating the benefits of the urban proposals (before-after comparison).

At the same time, Barakaldo City officers concluded that:

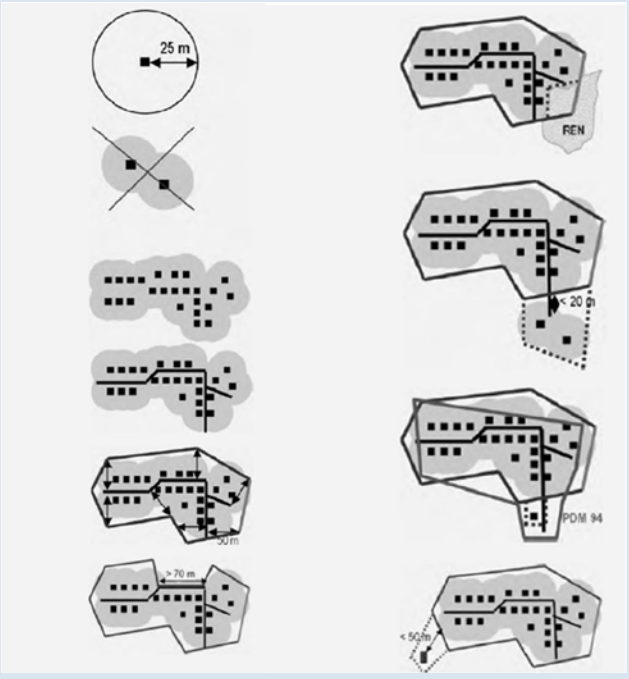
- The presented methodology and indicators of analysis were valid.
- They will try to use this methodology in the revision of the future Barakaldo Urban General Plan, so as to study urban pre-existing and degraded areas.

(Source: Alvaro Cerezo, Analysis and Diagnostic on vulnerable urban areas, the neighbourhood of Llano in Barakaldo - Methodology and Indicators for Urban Analysis, case study presented at the USEAct Nitra meeting, Nitra, 27TH-28TH October 2014

What is the urban "built area"? Methodologies to identify the "urban fringe"

Urban planning schemes aimed at reducing land take often require to "delimit" the areas that have to be considered as urban area. This is the so called "Morphological delimitation of urban fringe" issue, as defined by N.U.R.E.C. 1994 (Network on Urban, Research in the European Community).

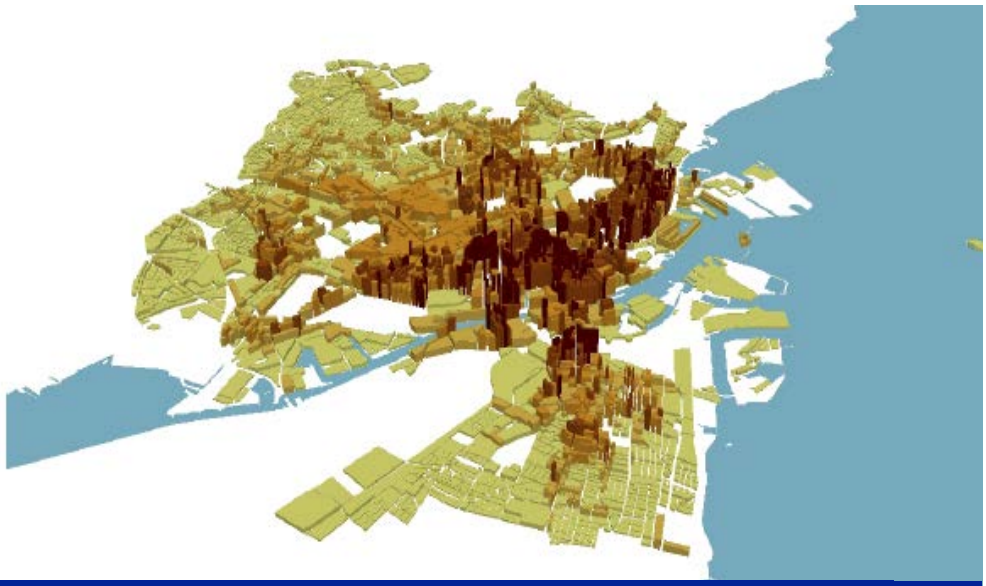
Figure 2.2 - Different approaches to delimit "urban fringes"



Morphological delimitation takes into consideration the United Nations' concept for contiguous built-up area, where the distance between buildings must be less than 200 m. That is, by generating a buffer of 100m around buildings it is possible to delimit built-up continua. This sort of criteria, well suited to cities with very uniform expansion, is insufficient when these processes are a complex blend of suburbanization, sprawl and the incorporation of existing settlements, when the dominating typologies are the detached single family housing, both in the close vicinity of urban settlements or on the outskirts of the city, and the isolated single family house, aimed for the weekend- or summer-house market. In these cases, is very important to adopt a rational approach to "delimitate" the urban fringe ("built area"), within the official planning document. A very sensitive aspect is related to the areas which are placed near the infrastructures (roads).

The lack of an adequate supply of building plots within urban perimeters or the difficulty in acquiring them from landowners unwilling to either build on them or sell them to those who will, may have contributed to the strong building pressure outside urban settlements. The slim supply of housing in the city and the slow or stalled rate of conclusion of some large-scale urban plotting and urban plans situated inside the city's boundaries were also identified as probable causes for this sprawl.

Source: José Antunes Ferreira⁎, Beatriz Condessa, Joana Castro e Almeida, Pedro Pintos (2010), Urban settlements delimitation in low-density areas—An application to the municipality of Tomar (Portugal), Landscape and Urban Planning 97 (2010) 156–167



Source: City Model and Urban density

3 INTEGRATING PLANNING AND MANAGEMENT WITH TOOLS FOR URBAN LANDSCAPE VISUALIZATION

3.1 THE ROLE OF URBAN VISUALIZATION TOOLS FOR COMMUNICATION OF FUTURES LANDSCAPE AND URBAN ALTERNATIVES

Urban "visualization tools", in particular when supported by EDP, are gaining importance in the urban planning arena. As it is explained in Section II, they can be used to show to local communities targets and visions (or impact scenarios) related to the land use, to discuss them, playing a potentially important role in stressing the opportunities both of avoiding land take and, in other cases, of developing land through "suitable" schemes. In this chapter a first overview on this tool is provided, with a specific focus on the role played in "planning" ad "land use management".

It is clear that the choice to use these tools should consider the difficulties that citizens can face in "reading" and interpreting the contents, but also the opportunities to integrate these tools with widespread online web-based geographic visualisation tools.

An Australian survey[10] dedicated to the potential role of using "Google Earth" to develop scenarios of land use/environmental impacts shows clearly that perceptions of the current users (planners, city managers, etc.) and futures users (young people – university students) are in general rather positive, whereas different categories react in different ways. A Denmark national project[11]

[10]Source : Christopher J. Pettit a, Christopher M. Raymond, Brett A. Bryan, Hayden Lewisa (2011), Identifying strengths and weaknesses of landscape visualisation for effective communication of future alternatives (2011), Landscape and Urban Planning 100 (2011) 231–241

11 3D City Model and Urban density, Danish examples, Center of Urban Planning Bruno Tournay, 2010, Milan.

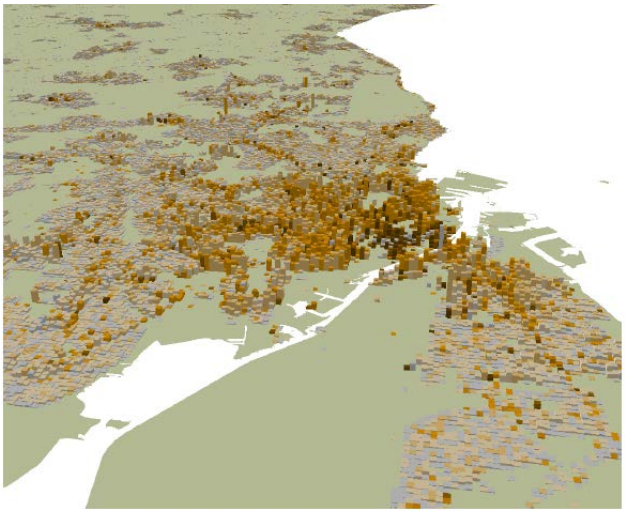
supported cities through providing guidelines useful to identify and «communicate» the «values» of urban density to the citizens within a common basic framework. The project was published in 2009 (Ministry of Environment).

The visualisation framework entails three frames (different scales) for urban 3D EDP, and visualization: 100x100 m cells. The three frames refer respectively to building typologies (30x30m), Settlement (1200 x 1200 m), and wider areas (7000 x 7000 m), a distance within which it is comfortable to move by bike (3-5 km).

As showed in Figure 3.1, a 3D visualization of the number of people living in each 100x100m cell, can be represented by the height of the column, and the number of working places witch is represented by the colour of the cell. The higher and darker is the column, the more dense and integrated are residential and working places.

At a large scale level, online tools can be used also as cost-assessment tools. "Urban Interactive Studio, in conjunction with PlaceWays and RKG Associates, developed an online tool under the auspices of the New Hampshire Office of Energy and Planning[12]. This tool, called "Cost of Sprawl", was specifically designed to incorporate existing land use information, infrastructure, and financial attributes with sprawl-related conditions in order to assess the future impact of development in any of New Hampshire's 239 municipalities".

Figure 3.1 - Outcomes of 3D City and Urban density Model (Denemark, 2009)



Source: City Model and Urban density

http://www.blst.dk/NR/rdonlyres/1A4B568E-F851-4718-8527-61843FD08A4D/90547/taethed_bog_til_nettethw.pdf

12 (Source: Geneva Faulkner, "Engaging City", 2012). See http://www.costofsprawl.org/.

More in general, online tools can be uses also to engage citizens.

The City Form Lab at MIT has released a new data visualization that allows users to analyse urban street networks with by utilizing five graph analysis measures of street networks (reach, gravity, Betweenness, closeness, and straightness)[13].

Denver city (USA) also developed an online "visualization/participation" tool to involve citizens into planning issues and stimulate a participatory approach[14].

3.2 INTEGRATING GIS AND VISUALIZATION TOOLS: LESSONS FROM U.S.A.

Integrating GIS town management systems with visualization tools can be a way, for city administration, to reach effective outcomes, both for "internal" and "communication/participatory" use. A USA case study is significant[15].

Langley is 45 minutes east of Vancouver. In 2010 the municipality issued nearly 1,000 building permits: for a community that is used to a landscape of farmland and single-family housing, new proposed pockets of urban growth that include higher-density apartments and condominiums can be perceived as a problematic solution. Since 1995, the municipality has used "Esri" technology to manage land information across its enterprise and enable geographic applications in various departments, including planning, finance, engineering, and protective services". "It also maintains a web-based GIS interactive mapping system that provides staff and the public with access to maps, land data, and aerial photography of the township.

13 http://engagingcities.com/article/data-modeling-tools-help-planners-visualize-different-futures

14 http://www.deliveringdenversfuture.org/

15 Main source: web page ESRI advertising http://www.esri.com/news/arcnews/spring12articles/preparing-for-a-vibrant-future-in-the-township-of-langley.html

To stay at the forefront of GIS technology, the township upgraded recently to an another system (ArcGIS 10). The ability to create an interactive, shareable 3D model for the township that can be used for current and future needs was a major driver for that decision. The new EDP/GIS tools allows to view and analyze large datasets in three dimensions. This includes remotely sensed 'Lidar' data that provides highly accurate geographic positions of properties and assets whether they be buildings, utility poles, or trees. Lidar - light detection and ranging - is an optical remote-sensing technique that uses laser light to densely sample the surface of the earth, producing highly accurate x,y,z measurements.

This data is being used to create a 3D model that will provide a current baseline against which the township can visualize alternative growth scenarios. GIS allows municipality departments to conduct view-shed and line-of-sight analyses to see how new development—multifamily housing structures and mixed-use buildings, which are taller than single-family houses predominant in the township—might impact the current skyline or special views to landmarks. Taller buildings can also mean more shadow: GIS supports the visualization and estimation of the total amount of shadow that a new building might cast on adjacent properties, which could result in greater heating costs for the impacted property.

Urban planners have traditionally taught and used GIS, while the architects have taught and used modelling/visualization software. The development of integration between GIS and 3D visualization tools is a target that can be reached also through cooperation with universities. The faculty members and students at Florida Atlantic University (FAU), who had no proficiency in CAD or GIS software, came together to create an interactive three-dimensional GIS for a portion of downtown Fort Lauderdale (USA)[16].

Architectural visualization emphasizes the representation and analysis of form, space, and material, while GIS uses layers to subdivide datasets, layering systems in architectural design typically reference material components and a language of line-weights, colours, and textures."

Key questions to select the best approach

As in Section II will be showed with more detail, municipalities or other authorities that are interested in developing or optimizing integrated approaches toward land use management, should carefully focus on the opportunities offered by advanced visualisation tools integrated with GIS.

However, the following basic questions should be answered.

- What is the purpose of the local authority? Just focusing an issue (density? Land uses changes and scenarios; environmental issues?). To assess/support urban development schemes?
- At what scale could the tool be operated? (region/municipality)
- Could the tool be integrated into a more structured urban management approach (GIS managed by the municipality for many functions?)
- Benefits of integrating high quality features of the typical «architecture» 3D visualization tools with GIS database/data processing have been carefully considered?
- How could be the tool integrated into a online interactive communication/participation framework (e.g. "urban games")?

These questions seem to be of primary importance also for USEAct partners interested in developing most advanced tools to face land take and improving the use of existing city.

16Source:Esri
http://www.esri.com/news/arcuser/0207/urban.html
Some demos…
http://www.esri.com/software/arcgis/extensions/3danalyst/key-features/demos
http://www.rndrstudio.it/
https://www.youtube.com/watch?v=pjK_ljgWxCM

SECTION II

4 PUBLIC PRIVATE PARTNERSHIPS FOR URBAN REUSES: POSSIBILITIES AND LIMITS

Ph. © Giorgio Benni MAAM Museo dell'altro e dell'altrove, Roma

4.1 FROM PPP THEORY TO PRACTICE

As stated in the 2004 EU Green Paper on PPP, "PPP describe a form of cooperation between the public authorities and economic operators. The primary aims of this cooperation are to fund, construct, renovate or operate an infrastructure or the provision of a service"[17].

The Green Paper distinguishes two main categories of PPP: a) PPPs of a contractual nature; b) PPP of institutional nature.

In the first case, partnership is based solely on contractual links and may fall within the scope of European Directives on public procurement. In general, contractual formulas can have form of public works contract or services concessions, operating and finance leases, Private Finance Initiative (PFI), services sold to the public sector (e.g. DBFO, Design, Built, Finance and, Operate), free standing projects. Variations are possible, according the different legal systems.

PPPs of an institutional nature, on the other hand, involve cooperation within a distinct entity and may lead to the creation of an ad hoc entity held jointly by the public sector and the private sector or the control of a public entity by a private operator.

Typical forms of institutional PPP are Joint enterprises, Investee companies (public minor participation), - Public Private Associations (APP/BID), Joint Ventures o Public Private Consortiums.

With reference to the urban development and regeneration sector, however, there is some ambiguity in defining PPP, since many (and very different) forms of PPP are possible. Each situation has its own distinctive area of scope, its drives and the expected outputs.

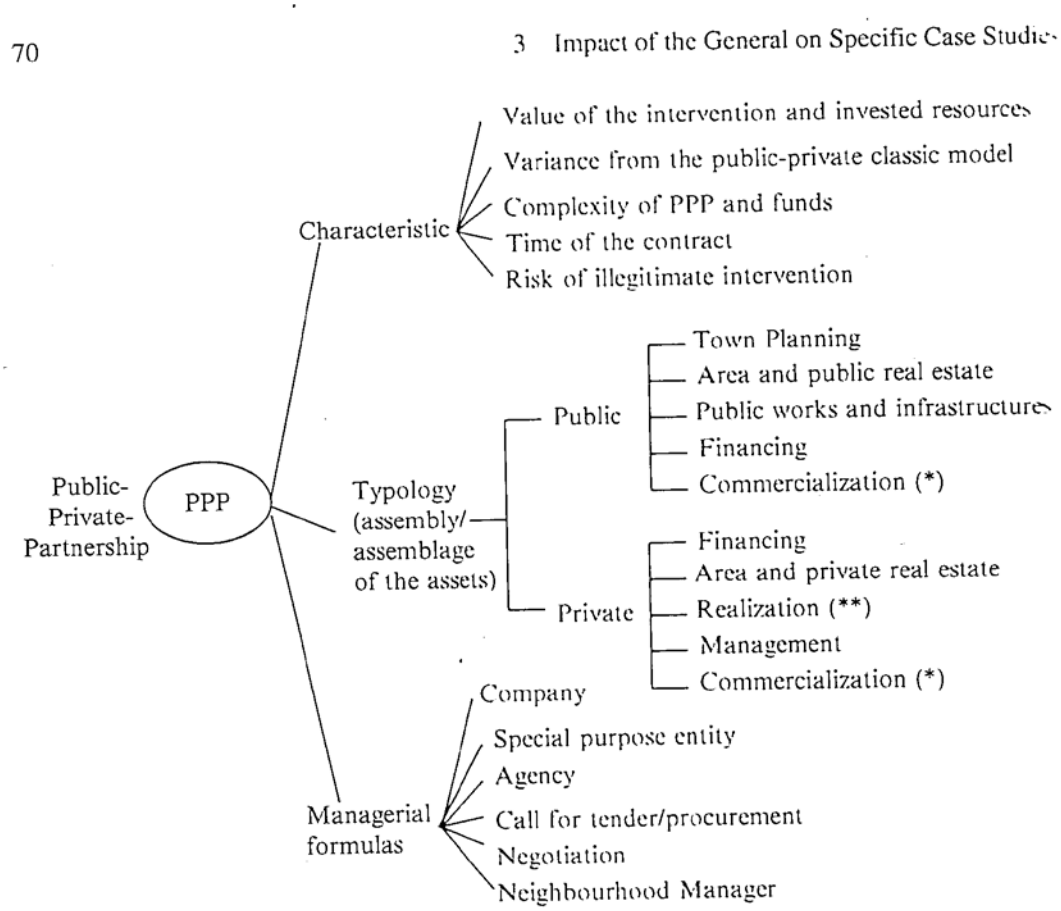
In spite of a widespread rhetoric of the PPP (presented as an innovative tool universally

[17] COM (2004) 327, GREEN PAPER ON PUBLIC-PRIVATE PARTNERSHIPS AND COMMUNITY LAW ON PUBLIC CONTRACTS AND CONCESSIONS

suitable to support PA for reaching targets and reducing the public financial burden), many real urban re-development “PPP experiences” are not so satisfactory from the “outcome” point of view.

Figure 4.1 shows roles PPP can play in urban Interventions.

Figure 4.1: PPP characters and roles in urban interventions



Source: Della Longa, R. (2010), Urban Models and Public-Private-Partnership, Springer

In many real cases, subjects driving the regeneration set up PPP structures, without fitting the EU “basic requirements” for PPPs such as: a) adoption of project financing methods; b) relevant role of the economic operator; c) adequate share of risks between public and private partners.

How should be faced this matter? The first answer is avoiding any “rigidity” or seeking “fixed formulas” and, rather, learning the “art” of PPP through exchanges of experiences.

The second is understanding that the role of public sector is essential in urban regeneration and that many PPP are successful under condition that public sector is able to in depths control all the process.

These are, likely, the most important pillars of any effective PPP approach for local administrations.

4.2 LIMITS OF A TRADITIONAL EU APPROACH TOWARDS PPP: LESSONS AND THOUGHTS FROM SPAIN

During the Istanbul USEAct meeting, Mr. Alvaro Cerezo, from Municipality of Barakaldo, discussed the possibility to engage the private sector into co-financing interventions

of "urban reuse", within classic "PPP" frameworks[18].

Specific focus was the possibility to restore "public owned "agent-entrepreneurs" (such as energy service companies, ESC) to build, within PPP schemes, alternative public financing models, for instance through joint ventures.

Mr Cerezo recalled that, in the urban regeneration field, there is a number of "PPP cchallenges" that appear to be similar for many countries: legal changes that imply specialized legal-technique knowledge, developments that have to occur under "free market" frameworks, focus on private sector models with expected economic viability ("benefits guarantee").

Several constraints limiting urban regeneration interventions have also to be recalled, in particular the general lack of funds and of financial capability and the difficulty to develop public subsidies plans on short or medium term, due to public administration budget stability EU requirements.

However, there are also less manifest difficulties in developing urban regeneration by public administrations, such as a) urban intervention mechanisms and traditional interpretation of their results which tend to reduce the possibility, for urban administration, to heavily invest in this field; b) public conception and management of the PPP models and tied instruments (power and control of the public urban intervention entities).

The case study developed by Barakaldo, which refers the Spanish situation, clearly shows the lack of new examples of "EU PPP models" (see above) in Spain, so demonstrating how it is difficult, for a country, to concretely apply the "hypothetical" PPP schemes.

Since 1956, Spain developed its specific but rather "traditional" way towards PPP: the Public Administration defines the project and the private owners manage, finance and develop, under the supervision and collaboration of the public administration.

This PPP model – which is common to other countries - is based on remunerating the private developer through the assignment of a building potential (roof sqr meters per plot sqr meters), with no cost to the public administration on what budget accounting is concern.

The PPP model above has been used in new urban development interventions, but not so much on urban regeneration and renewal interventions, because precisely in these operations the building potential increased value, compared to the intervention costs, made the operation less interesting.

Starting from such a "status quo", what are – if any - the main challenges (with tied problems) and engagements required to boost effective innovation of PPP schemes?

To do that, it should be beared in mind that, compared to other urban interventions, urban regeneration operations have specific characteristics. Firstly, the interest of the private owners in the area tends to prevail, more than the general or public interest or even the interest of companies involved in the process (construction companies). Moreover – in the Spanish situation at least – the "tax compact" is another key factor for the urban tissue sustainability and maintenance: current urban tax-charges do not cover the cost of the public urban services deployed, so this gap is covered with some other taxes and incomes.

There is a lack of awareness of the citizens on relation to the urban public services deployed and their costs and it is very relevant for costs that are typically tied to urban renewal.

On the other hand, the research carried on new PPP models enlightens the existence of examples and instruments of PPP on international scale, usable for urban regeneration interventions anyway.

Among the most promising ones, American and UK Business Improvement Districts (BIDs), town Center Manager (UK), commercial and economic revitalization local agencies, USA Empowerment Zones Program, USA CDC (Small Community Development Corporations) are mentioned in the study.

The main conclusions from the research carried out in Spain and proposed by Mr. Cerezo, can be summarized as follows: in urban regeneration interventions, any PPP model is likely doomed to failure if strong changes in focuses and ways of intervention in the existing urban tissue will not occur.

The "EU sponsored" PPP approaches are often not of use for urban regeneration, given the existing legal, social and cultural basis. Our

[18] Source: Alvaro Cerezo, Project and ULSG Coordinator, Case Study Presentation, USEAct Meeting, Istanbul, 25th February 2014

citizens do not understand or share the idea. Theoretically, the urban regeneration interventions should be mainly a private initiative, but in many contexts, as Spain, heritage and precedents make impossible to get rid of the actual urban intervention model (based on subsidies and direct public intervention).

The only possible urban regeneration intervention is the one that comes bottom-up (with the primary private owner´s involvement in all meanings), where the public administration helps to manage, to take decisions and to ease the management (does not invest any public money or if it does, no more than a 10% of the total expending of the intervention).

Furthermore, a bottom-up cultural and mental change is undoubtedly required: being an owner implies more that paying a mortgage since it implies (or should imply) assuming the duties of maintaining private and public facilities.

The matter discussed above let arise some more questions: a) should urban regeneration interventions be a public administrations economic initiative? Or should they rather be a private owner's initiative? b) Is there a public interest on urban regeneration interventions or is it a private interest, no matter if it deals with the public space too? Who has more interest? Are there any other interest related? As long as compulsory participation defined by law, is there any public duty? According to the new legal regulations, if the urban regeneration interventions are mandatory (through urban planning instruments), how should be considered the "European PPP" instruments? Should not be considered a contradiction defining, on one hand, an urban intervention as "compulsory" and, on the other hand, expecting public funding? What should be the role of citizens in assuming their duties and respond abilities?

These questions are absolutely relevant when the debate on PPP for urban reuse passes from the theoretical limbo to the real problems of European cities arena.

4.3 LEARNING FROM NOT EU EXPERIENCES: THE PORTLAND (USA) POLICY FRAMEWORK FOR EFFECTIVE PPP AIMED AT REUSING URBAN SPACES

Providing positive frameworks for stakeholders

It is well known that in the U.S.A., urban planning culture and frameworks are deeply different from the European ones and that, within the U.S.A., differences among states are also present.

In general, public planning authorities in U.S.A. are less used to establish rigid planning schemes and to be strongly involved into the development process, but, on the other side, they do not fail to provide general frameworks and incentives aimed at preserving public interest, if it is relevant.

Some U.S.A. cases – as the Portland case described by Thematic Expert Mr. Adolf Sotoca during the UsaAct meeting in Istanbul - seem to be very useful to show how public interest targets (in this specific case reducing land take) can be reached adopting pragmatic approaches aimed at co-working -with developers, landowners and, in general, stakeholders, within pro-active policy frameworks based more on incentives and facility provision that on limits and constraints.

The whole urban planning framework for the Porland case will be described elsewhere in the outputs of the USEAct Project.

Here, just the PPP approach adopted is focused on.

The Portland case is a very good example of how a land take reduction policy can be established (for a large area) through a conceptual framework capable to support and control integrated actions – both by public and private subjects – targeted to reuse vacant land on a community based and partnership oriented development perspective.

Figure 4.2 shows a first example of conceptual strategic framework to be specifically applied to brownfield remediation strategy.

As t is clear, the role of Public Administration in the Portland Case, is mainly oriented to provide a "good environment" and a sound vision for private interventions rather than a constraint-based approach. More details about the whole strategy are provided in chapter of the final booklet

Figure 4.2: Conceptual framework for Brownfield Remediation in the Portland "Urban Growth Concept 2040"

TOOL	DESCRIPTION	LEVEL OF GOV.	POLICY ACTION	TERM	PREV. PROPOSED	FURTHER RESEARCH NEEDED
Bundle 1: Create Tax Incentives						
Tax Credit for Remediation	Consider expanding the use of tax incentives, such as income tax credits for dollars spent on site investigation and environmental cleanup.	State	Statutory Change	Long-term	Legislative	Eligibility requirements, magnitude of credit
Property Tax Abatement	Modify tax abatements associated with Enterprise Zones and urban infill programs to extend the duration of tax abatements in any area and make brownfield remediation for industrial development more viable.	State Policy Change; Local Implementation	Statutory Change	Long-term		Eligibility requirements
Reform Contaminated Property Tax Assessment	Modify tax assessment valuation rules to include time restrictions on the value reduction associated with a cleanup liability to discourage mothballing.	State	Constitutional, Statutory, and Administrative Rule Change	Long-term		Legal constraints
Complementary Tools						
TIF Reforms	Modify policy to make TIF a more effective tool for promoting brownfield cleanup and redevelopment. Use policy mechanisms to create better tie-ins between TIF and brownfield projects to incentivize redevelopment.	State Policy Change; Local Implementation	Statutory Revision	Long-term		Examine range of options

TOOL	DESCRIPTION	LEVEL OF GOV.	POLICY ACTION	TERM	PREV. PROPOSED	FURTHER RESEARCH NEEDED
Bundle 2: Build Capacity						
Public Land Bank	Establish a land bank to acquire contaminated properties, manage and finance cleanup and redevelopment, and sell property back into the private market.	State Legislation; implemented at State or Local level	Legislative	Mid-term/long-term		Identify most appropriate agency sponsor

TOOL	DESCRIPTION	LEVEL OF GOV.	POLICY ACTION	TERM	PREV. PROPOSED	FURTHER RESEARCH NEEDED
Dedicated State Cleanup Tax	Establish a dedicated fund for cleanup and redevelopment of brownfields. The revenues or the fund should be generated from a source that has both a nexus with contamination and the potential to generate a substantial revenue stream.	State	Legislative	Mid-term/long-term		Explore revenue source options
Integrated Planning & Site Assessment Grants	Establish a publicly funded Brownfield Integrated Planning Grant to conduct environmental assessments and support site-specific redevelopment strategies.	State or Local	Legislative	Short-term/mid-term		Explore revenue source options
Complementary Tools						
Pooled Bonding	Allow localities to use bond proceeds to purchase a pool of general obligation bonds to fund cleanup projects.	State Legislation: Local Implementation	Statutory Revision	Short-term		Examine fiscal impacts
Historical Insurance Support	Provide technical support to assist work parties in making claims on historical insurance policies.	State or Local	Programmatic Change	Short-term		Compare cost of contracting vs. in-house service
Community Investment Initiative	Building on models being explored in Metro's Community Investment Initiative, create a new entity to combine public and private funds and foster unique joint venture opportunities.	Coordinated State and Local	To be determined	Long-term	Report (2)	Ongoing policy development
Public Equity in Sites	Make it easier for public development organizations to provide gap financing for projects in exchange for securing an equity interest in the property.	State Legislation: Local Implementation	Legislative	Long-term		Research legal issues
Pooled Environmental Insurance	Establish a program that would decrease the transaction costs and reduce the cost of purchasing environmental insurance to cover risk.	State or Local	Programmatic	Long-term	Report (2)	Explore concept with private market
Brownfield Guidebook	Provide more effective resources to educate landowners and prospective buyers about the cleanup and redevelopment process and the resources available to assist these projects.	State or Local	Programmatic Change	Short-term	Report (1)	

TOOL	DESCRIPTION	LEVEL OF GOV.	ACTION	TERM	PREV. PROPOSED	FURTHER RESEARCH NEEDED
Bundle 3: Streamline Regulatory Framework						
Regulatory Flexibility	Local governments could apply a zoning code overlay to contaminated sites or create a brownfield inventory list for priority sites that would allow developers and property owners to develop the site with greater regulatory flexibility.	Local	Policy Change	Short-term	Report (1)	Examine land use implications
One-Stop Shop	Create a system for interagency coordination for permitting and funding brownfield projects.	State and Local	Programmatic	Short-term	Report (1)	
Complementary Tools						
Model Purchase and Sale Agreement	Create a model agreement with indemnification language and distinctions between upland and in-water liabilities along with standard transfer issues such as due diligence period, timing of cleanup, warranties, and inspection period.	State or Local	Programmatic	Short-term	Report (3)	
Model PPA	Review and update model language for legally binding PPAs to streamline the process and encourage their use.	State	Programmatic	Short-term	Report (3)	
Universal Database	Create an open system to share environmental information across projects. This system could include analytical data on groundwater flow and contaminant concentrations, along with beneficial use determinations.	State	Programmatic	Short-term	Report (1)	
Formalize Presumptive Remedies and Standards	Establish guideline documents for simple cleanup sites with common redevelopment uses.	State	Programmatic	Short-term	Report (1)	Convene expert panel to review

Source: A Sotoca, Portland Case Study, USEAct Istanbul Meeting, 25th February 2014

Baia Mare Case – Legal framework for the Metropolitan Industrial Park

Industrial Parks can be a tool to develop PPP framework for reusing land.

In Romania, Law no. 186/2013 regulates the creation and functioning of the industrial parks and presents the steps necessary to be followed in order to obtain the industrial park certificate: a) the interested organizations (public or private) shall establish a company that will be considered the industrial park administrator; the industrial park administrator shall be a legal entity registered for this scope; the administrator shall manage the industrial site and must have among its' founders the owners of the land.

Baia Mare Metropolitan Area tries to develop a strategy to promote Industrial Parks in the region.

Possible facilities and support for investors are the following ones: a) tax incentives for the agricultural land transformed in industrial area only after obtaining the industrial park certificate; b) tax incentives for technological & industrial park development offered by the local councils from the metropolitan area; c) advantages offered to investors by the local administration, by facilitating land procurement or rental; d) other public facilities legally offered by local administration.

The need to work within a sound PPP framework is due to the fact that, in many cases, stakeholders involved are rather numerous. In the so called "South Industrial Area" of the Baia Mare City, (approx. 400 hectares), plurality of stakeholder and fragmentation of the land property between many owners are remarkable issues, since three "Communes", two associations, several private companies, Orthodox Church and Baia Mare City itself are involved.

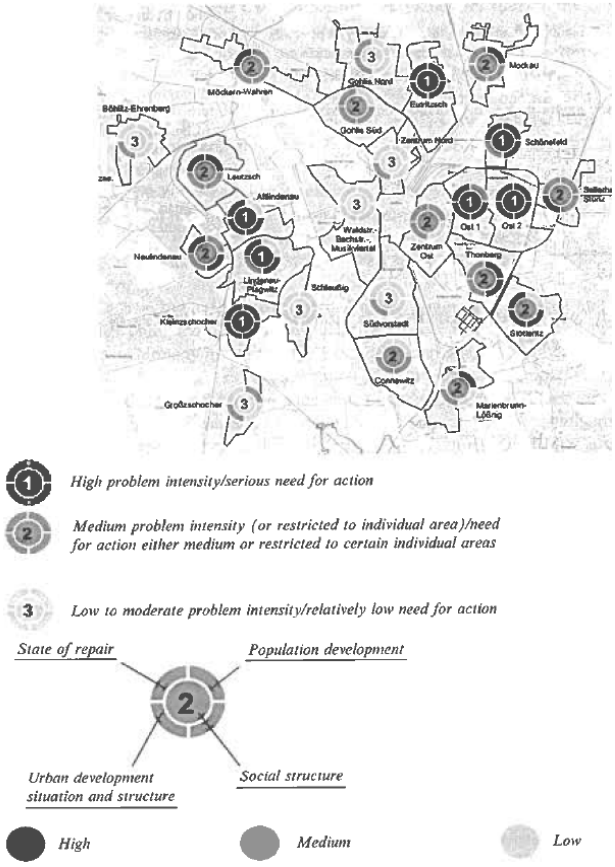
Source: Marius Ecea, Baia Mare Case Study, USEAct Meeting in Ostfold, 27th May 2014

4.4 MANAGING PPP AS A PROCESS: A GERMAN PILOT CASE STUDY

Since the mid-1990s, Leipzig has developed an integrated strategy of "urban restructuring" for all the "needing districts"[19].

The strategy identifies priorities and locations for intervention, as showed in the map of Figure 4.3.

Figure 4.3: Regeneration needs for the different Leipzig districts – general scheme



Source: Weidner & al (2011), p.228, in Della Longa Remo, Urban Mode/s and Pub/icPrivate Partnerships, Springer, Berlin 2011.

[19] Main source: Torbianelli, V. "Appraising and shaping ppp for urban regeneration: a Leipizig case study", USEAct Istanbul Meeting, 26th February 2014

Some "pilot projects" were launched, aimed at re-establishing, at a district level, a dynamic economic structure, improving the attractiveness and the social vitality of the quarter through intervention (refurbishment/rebuilding) in the building stock, attracting "small" businesses and implementing marketing/communication and "community involvement" strategies.

The target "units" were mainly the "building blocks" and their inner courtyards. These spaces were owned both by private owners and by the municipality housing association (LWB). The interventions were aimed at reinforcing the attractiveness of the blocks and courtyards in terms of specialized retail/business potentials (e.g. development of ethnical retail area).

To support the strategy, Municipality of Leipzig focused on the PPP issue from the starting phases.

Potential project partners were identified, both of public sector and private sector. More specifically, potential partners identified were: city of Leipzig, Leipzig Local Authority (ASW), LWB (municipal housing association, wholly owned by the City of Leipzig, but not incorporated into the local administration); "District management", "Quarter Management", Investors, Operators and Users/tenants.

It is important to clarify that, in Germany, the so called "District Managers" and "Quarter Managers" are operational public units aimed at reducing the distance between administration and local players and facilitating the redevelopment process through different initiatives, such as activating local residents, developing the district image, soothing conflicts and supporting local business people.

To embed the PPP strategy into a robust management framework, municipality of Leipzig developed an evaluation tool (called "PPP guidelines") aimed at designing and appraising different "scenarios" of PPP for urban regeneration projects.

For each project, a formalized multi-step appraisal and a suitability test (based on a "polarity profile evaluation") for alternative PPP structures are foreseen.

Once the general economic sustainability of the project is confirmed (required turnover, potential spending power, etc.), different scenarios of project management structures and, consequently, of PPP are proposed and discussed.

A more detailed description of the so called “polarity test”, aimed at verifying potential fo The feasibility study and the evaluation of the scenarios includes a (rough) economic impact study, by the point of view of the different stakeholders (e.g. owner and occupiers).

Rents and costs, with a dynamic income/expenditure occurring at different times, are calculated (for a 20 years horizon) on the basis of “comparable” assets.

The finding from the studies should result in a firm decision being taken to continue or abandon the project. Within PPP tests, scenario-diagrams that support the decisional process describe, respectively: a) roles of possible players (with possible contractual relationships); b) possible “timing” for actions (e.g. if it is better to start with “step by step” refurbishment or to renew an entire housing block)

Possible (alternative) contractual forms, concern, among others: rent levels, financial support tied to specific conditions, sale of the areas or agreement for the transfer (or use) of the courtyards, “management” of the courtyards.

A scheme of a possible partnership structure to restore the block is showed in Figure 4.5.

Further relationships with players are also appraised through the test (e.g. institutionalized “associations” with the owners, etc.).

4.5 FUNDS AND PPS FOR “AFFORDABLE HOUSING”: THE UK LESSON

Developing “affordable” or “social” houses is perceived, in general, as a priority and in many urban context and many local authorities are currently developing programs for affordable housing.

With specific tie to the USEAct project framework, providing affordable or social housing is a major way to “re-use urban spaces”, both vacant land and existing housing.

The feasibility study and the evaluation of the scenarios includes a (rough) economic impact study, by the point of view of different stakeholders (e.g. owner and occupiers).

Rents and costs (income/expenditure at different times, are also estimated (on a 20 years horizon) on the basis of “comparable” assets.

The finding from the studies should result in a firm decision being taken to continue or abandon the project.

Possible incentives structures are evaluated too.

If the project is sufficiently attractive, this commitment can eventually secure the institutionalization of the partnership (e.g. associations of retailers or owners).

Within this managerial process, public sector can provide risk buffers to boost the projects: assumption of risk shares as incentive (e.g. sureties, interest subsidies) is a possibility but also but also reliable “public investment” assurances by the local authority (e.g. preliminary improvement of public amenities to valorize private properties) can play an important role.

In general, a short implementation time is an essential aspect.

All these risks and opportunities are appraised within the “suitability test” of the PPP different scenarios.

Therefore, it is important focusing on innovative tools and approaches to develop affordable and Social Housing and in particular on the role that municipalities and local administrations can play to reach this target through taking advantage not only of national or regional funding schemes but also the services provided on the market by other subjects, within PPP frameworks.

In many countries, national ‘state’ funding schemes and tools are an important driver in stimulating affordable housing. However, more constrained public finances since the onset of the recession have resulted in some member states finding it difficult to stimulate sufficient affordable housing to meet the needs of the local residents.

Given this scenario, member states have to find more innovative approaches to ensuring they develop sufficient affordable homes to meet the needs of local residents.

The UK “Housing Associations” model

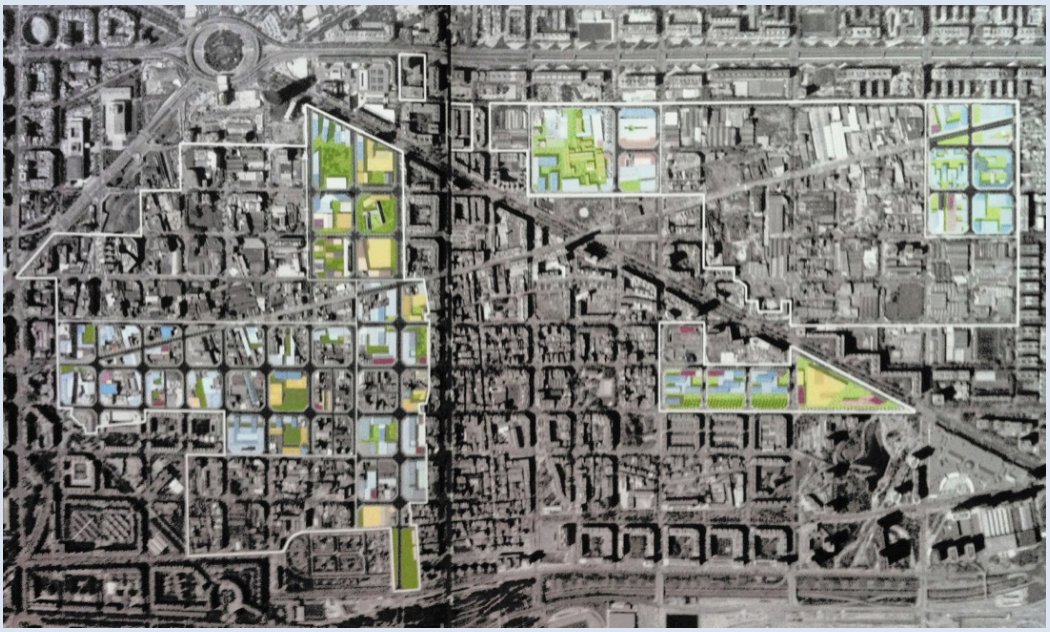
As clearly emerged from the USEAct I Bilateral/Trilateral Meeting, and from the meeting report prepared by Mr. Sims, the UK context is rather interesting as a starting reference for exploring the opportunities to deal with the social housing issue (and with the correlated - often

Public-private partnership in urban regeneration interventions. The 22@ technological district in Barcelona, 2000-10

As Adolf Sotoca, USEAct Thematic Expert, explained during the Istanbul thematic meeting, the “22@” technological district in Barcelona is a former industrial site, which had many owners.

The area is located within the “Barcelona Grid” zone, as showed in fig. 4.6

Fig. 4.6: The zone of “22@” in Barcelona and main target areas for public initiative plans



The role of the public administration has been very important, along with private investment. In 1990 a plan was implemented for the east of the city, with a high speed train corridor, and other infrastructure.

Public sector, for six key target areas, was promoter of public initiative development plans. In other zones, private initiative

schemes was developed.

The aim of “22@” is a balance between what is intended and what is on the ground: main principles are conserving heritage & urban identity, with mixed-use development, including residential and productive activities, with an approach based on “flexibility”. It has been a ten year process, and ten more are still needed to complete it. The success was partly due to the political will of the then mayor of Barcelona, Juan Clos.

Regarding heritage and urban identity, local communities aimed to maintain historical buildings, including 19th century factory buildings. A catalogue of buildings of architectural heritage has been drawn up: though not proposed initially this arose from a strong demand from local residents.

Mixed use is achieved by allocating 30% for public housing. Constant flow of investment is required to avoid empty spaces. All public housing is subjected to an architects' competition. The best quality housing in Barcelona is, in fact, public housing. Public space is also considered as very important and public space designs often has been selected through international competitions too.

Through urban management it has been possible to gain an increase in land use of 22, 5 m2/100 m2 floor increase (of which 15 m2/100 m2 public spaces).

The actual implementation of "22@" is an interesting example of private-public mix of activities.

The planning framework foresees specific areas with specific plans: in particular, six "public initiative" plans, promoted initially by the pubic authority (37% of total land, 47% already completed, 16% approved plans but not yet completed). On the other hand there are also plans of 100% private initiative, but controlled by the city anyway.

Public administration developed its policy on "22@" through a specific offices. The role of the 22@ offices is to achieve land use readjustment to allow, that, at the end of the process, developers obtain benefits. In general, within the regulatory framework, private developers provide 50% of the land and get 50% of the benefits, and are charged 50% of the infrastructure costs.

The main tasks of the public administration are: setting goals, physical plans, assigning benefits, planning and implementing infrastructure, accompanying the process and monitoring. The area is now a functioning part of the city.

The office was created in 2000 with 22 people. Officials in the city council are well skilled and experienced, especially as it is important to have the political will to develop in a continuous way.

In general, key 'orchestration' is needed between the private and public sectors The "22@" used private sector knowledge in public sector management.

Community has been engaged into the development process as well. Social participation was not so successful at the start, but they learnt ways of participation.

The project seems to be able to guarantee sufficient "social return". Initially 50% was for housing, now it is at 30%. All housing is price-controlled ('protected' public sector housing) and subsidized by the public authority.

Owners cannot sell within 20 years: otherwise they have to return the increased value, to avoid speculation.

Developers are willing to develop 'social housing" because there is less risk involved and the quality of the open space ensures no ghettoisation/marginalization

Source: A Sotoca, *PPP in Urban intervention*, USEAct Istanbul meeting, 26th February 2014

challenging -funding issue) through innovative governance and funding tools and models[20].

During last ten 15 years, dramatic changes in funding sources for social housing have occurred in the UK, due to the shortage of public funds.

Figure 4.7 shows recent changes in funding sources for affordable/social housing in the UK.

The UK situation is rather dynamic at present, as their developer community is probably more active/mature than other member states.

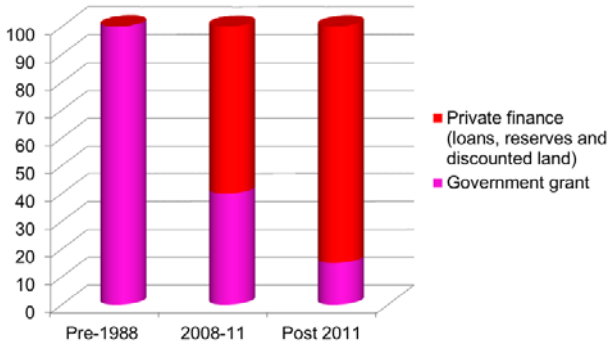
The reason for this is because, in addition to the traditional private sector players, they also have an active Not-for Profit Sector, in the form of 'Housing Associations' or 'Registered Providers'.

These Housing Associations were formed under the previous Conservative government in the late 1980's to try and encourage the transfer of publicly owned housing stock out to market, under the then governments drive to try and make it

[20] See the Report of the USEAct I Bilateral/trilateral meeting

possible for every individual in the country to realize a goal of owning their own home.

Figure 4.7: Funding sources for affordable/social housing in the UK in the recent years



Source: Jim Sims, Funding Social Housing across Europe, USEAct I Bilateral/Trilateral Meeting, London, 3rd April 2014

Since this time, Municipalities have been encouraged to transfer what housing stock they did own out to Housing Associations, in return for a capital receipt and a potential Right to Buy 'kick back' when these residents bought former council homes. In addition to these Housing Associations, commercial house builders are active in the development of large 'New Build to buy' estates, which the UK government now mandates must include a target of 40% of Social Housing which are supported by 'Developer Contributions' (from Section 1061 or Community Infrastructure Levy) from these developments.

More in details, UK Housing Associations - as explained in the "guide" published by THFC - are independent private sector, not-for-profit bodies that provide rented homes at sub-market rents. 85% of HA turnover comes from renting general needs housing at sub-market rents. 70% of rents are paid directly to Landlords from Housing Benefit (although this is increasingly coming under pressure from changes to the Benefit system).

HAs also undertake development for low cost home ownership; principally shared ownership. This helps meet government objectives to extend home ownership and has cross-subsidized development of general needs housing. HAs also cross-subsidies their affordable housing development through open market sales.

The "Homes and Communities Agency" is the grant distributing body to HAs. Grant is subordinated to Housing Associations, with the HCA taking the "1st charge" over the HA assets.

Falling rates of public grant over a period have led to private finance becoming the main source of investment.

Gathering funds

The UK has over the last 20 years or so also broadened the range of funding that is available for the development of Affordable Housing.

In the UK, the Housing Community Agency (HCA) operates a number of grant schemes to encourage the development of Affordable Housing. In addition to the above, The Housing Finance Corporation (THFC) - an independent, specialist, not-for-profit organisation that makes loans to regulated Housing Associations, that provide affordable housing throughout the United Kingdom – provides finance to Housing Associations by issuing bonds to private investors and by borrowing from banks. In delivering this programme of work, THFC works closely with the European Investment Bank.

THFC, through its subsidiary, Affordable Housing Finance is the delivery partner for the Affordable Housing Guarantee Scheme. AHF makes loans to RP borrowers and funds itself through the issue of bonds and by borrowing from the European Investment Bank. AHF's obligations under the terms of its financings and the obligations of its RP borrowers are guaranteed by the Government. The scheme has been designed to allow RPs to access cost effective funding so as to act as a stimulus in the building of affordable housing.

Figure 4.8 shows the Debt Aggregation function played by THFC

Figure 4.8: Debt Aggregation function

Source: THFC

The banks, in general, and especially institutions like THFC have no problem in lending to the sector as they use the rental streams of HAs and 30 year business plans as a model to base their lending criteria. They also use the homes owned by the organisation as security for the debt rose

What is the role of Retail Investors in supporting Affordable Housing?

Whilst many of the above schemes rely on 'State' or 'Institutional' funders, there has been a growing interest in recent months on whether additional opportunities exist to develop affordable housing by securing funding from retail (individual) investors, including businesses.

Not only do Retail Investors provide a potential new source of finance for the Housing Sector, but the returns that retail investors potentially want are less than Institutional Investors.

Focusing on "REITS"

One of the most under-developed tools for securing funding from retail investors, which is attracting interest across Europe are Real Estate Investment Trusts (REITS).

In general, REITs offer an additional financing option, with potential to raise new capital from equity investors.

Real Estate Investment Trusts are quoted companies that own and manage income-producing property, which provide a way for investors to access property assets without having to buy property directly. REITs were created in the United States when President Dwight D. Eisenhower signed into law the REIT Act contained in the Cigar Excise Tax Extension of 1960. REITs were created by Congress in order to give all investors the opportunity to invest in large-scale, diversified portfolios of income-producing real estate in the same way they typically invest in other asset classes – through the purchase and sale of liquid securities.

Since then, more than 20 countries around the world have established REIT regimes, with more countries in the works. The spread of the REIT approach to real estate investment around the world has also increased awareness and acceptance of investing in global real estate securities. A comprehensive index for the REIT and global listed property market is the FTSE EPRA/NAREIT Global Real Estate Index Series, which was created jointly in October 2001 by the index provider FTSE Group, the National Association of Real Estate Investment Trusts (NAREIT) and the European Public Real Estate Association (EPRA). As of mid-2012, the global index included 414 public real estate companies from 37 countries representing an equity market capitalization of about $1 trillion (with approximately 68% of that total from REITs).

REIT is not a trust despite the name. It is an ordinary company which is UK resident and listed on a recognized stock exchange. It is Property investment company, and not a development company. REIT status exempts from UK corporation tax the profits derived from property rental business. It must pay out 90% of rental profits as a dividend which is then taxed on shareholders as rental income.

Focusing on the "REIT" formula, the following key points emerge for UK.

There are many practical and sensitive issues to be considered when REITs are taken in consideration from the point of view of Registered Social Housing Providers (Housing Associations).

REITs are related with transfer of "regulated" assets and availability of grant. Listing requirements are needed (complying with listing rules, preparing prospectus, etc.). There is on-going relationship between the REIT and the Registered Providers, but the existence of multiple (and often small) RPs can generate complexity. Moreover, a conflict between social purpose and commercial purpose always potentially exists. Asset sales and shared ownerships are other potential problems which is difficult to be overcome. Moreover, there are distribution requirement (more than 90% of the income) and complex rules around sale and leaseback transactions (maturity transformations). Finally, the Stamp Duty Land Tax (it is a tax on documents which applies to stock transfer forms transferring shares) reduces return, and can be tricky where returns are already tight.

Other tools for funding social housing

Other tools which might potentially be of interest to making the sector attractive to Retail investors are:

a) Retail Charity Bonds - Retail Charity Bonds is an issuing platform to raise medium term debt finance for charities through bonds issued to retail and wholesale investors and listed on the Stock Exchange. The platform opens up a new dimension of borrowing and an alternative to bank debt for established charities with strong credit worth. It also gives charities the opportunity to significantly raise their profile and engage with a new audience of investors.

b) Social Investment Tax Relief - Social investment tax relief gives individuals who invest in qualifying social organizations a reduction in their income tax bill for that year. In the UK, this reduction currently sits at 30%. The 30% rate is the same rate as the Enterprise Investment Scheme and Venture Capital Trust investments, and is designed to attract the same capital gains tax reliefs, creating a level playing field for investment.

The Naples SIRENA experience in rehabilitation of private buildings through PPP

For Naples Municipality, one of the most important targets is to develop tools able to support rehabilitation of private buildings within the (protected by “UNESCO”) historic centre, and to avoid gentrification as well.

In the Naples historic centre (which is included in the “World Heritage List” of UNESCO since 1995), 80% of the buildings are private properties. Buildings are often split in several apartments which are mostly rented. The majority of the properties are “regulated“ by rental agreements (very old contracts). Therefore the apartment owners earn low rents that are not sufficient to invest on rehabilitation of the buildings. The inhabitants (rent occupiers) of this area also construct its cultural identity that must be preserved.

Some questions arose, from the L.P. presentation, and in particular how new finances (beside private ordinary real estate investments) could be found to support rehabilitation and whether/how ERDF Funds and/or REITs could be of use for this aim.

Mr. Mollura also recalled the Naples “Sirena Project” experience, still in development, which is a potential field of application for REITs and EU funds opportunities.

“SI.RE.NA. Città Storica” Company, a no–profit public/private subject under public control, developed a program to restore the buildings ‘common parts in the old town areas of Naples and outskirts (12.000 ha).

Municipality assigned to public sector the task to define rules and quality control procedures. SI.RE.NA promoted protocols of Understanding with sector experts, banks, insurances in order to offer to the involved subjects some measures to ease the interventions. Since 2003 until 2012, 1200 private buildings has been involved into the “Sirena Project” and the owners of 800 buildings obtained free grants and made restoration works, mostly in the Historic Centre - UNESCO Heritage.

The contribution (without return), granted by Campania Region and Naples City Council, amounts up to 37% of comprehensive intervention amount. A further contribution up to 3% is granted to those who applied the so called “Building Maintenance Booklet”. The grant cannot exceed in all the threshold of €130.000,00/160.000,00 for each building. Moreover this contribution is cumulative with further incentives and/or easing granted from the Public Authorities. The citizens ask the grants sending to the Municipality an application form as provided for by specific announcement. Subsequently the Municipality, through SIRENA Company, judges the compliance with the announcement and makes the list.

Source: Gaetano Mollura, LP Presentation, I Bilateral/Trilateral Meeting, London, 24th April 2014

4.6 THE MUNICIPALITY-OWNED REAL ESTATE DEVELOPMENT COMPANY AS KEY "PPP CONTROL PLATFORM": THREE CASES FROM GERMANY

Germany is a country without long tradition in PPP for urban reuse and urban regeneration.

The German approach to urban reuse and urban regeneration is normally based on a strong direct role of the public administration.

Although, in recent times, opportunities for new form of cooperation between public and private subject have remarkably improved, the German way to urban regeneration prefers to maintain strong control in the hands of public administration.

Ways adopted in Germany to involve private subjects into the urban reuse/regeneration process can vary from case to case with different "levels" of involvement.

Three classic examples of the German way to engaging private subjects have been illustrated by the USEAct Lead Expert during the meeting in Istanbul, dedicated to the PPP issue[21].

a) "Im Reiser" area in Stuttgart

A first example refers to the purchase by Municipality of Stuttgart of a former military area ("Im Reiser" area) from the German State, aimed at realizing "affordable" settlements for young families

First step of the process was launching "Calls for ideas" for urban designers and architects, aimed at providing a general preliminary scheme for the site and proposals for the "family friendly buildings" to be located in different zones of the site.

Working together with the Municipality offices, several "winners" shape housing project proposals (for the different zones of the area), the last ones differentiated in terms of design although harmonized to common criteria (e.g. maximum cost for each housing unit was established).

In this first phase, the process managed by the municipality included: a) vision and macro-definition of the "contents" to be developed in the area (with target "criteria"); b) Demolitions, rehabilitation of the ground/soils; c) Definition of the lots; d) Sale of the area.

The site-development was contracted out, without any tender, to a private subject (WHS), while the Project Management function was allocated to a single person of the Municipality (department for urban renewal), in charge of internal and external communication and of coordination of the several departments of the municipality.

The second phase, more "privately managed", followed, with four building companies selected (2001), (WHS was one of these) through tendering.

Within a contractual framework agreed with the municipality, these four developers/builders were required of: a) gathering resources to purchase the "four sectors" of the area; b) providing e a detailed design of the houses, agreed with the architects previously designated (the "winners") by the municipality and building the housing units; c) marketing/selling the houses, embracing the "rules" defined (for instance about the "purchasers' profile) by the public administration.

The amount earned by the public administration through "selling" the areas to the builders was used to support families interested in buying the housing units at market price (as a direct "social housing" incentive, about 45% of the total price). 30% of the houses sold resulted in fact "subsidized".

Although the role of private subjects was not negligible, the role of the private sector remained, in fact, a "distinct" role (service provider on contractual basis or independent "buyer/seller"), without any risk sharing or ambiguous roles.

[2121] Main source of the case studies a) and b): *Della Longa, R. (2010), Urban Models and Public-Private-Partnership, Springer*

b) Requalifications of vacant factory buildings in Hamburg

A second case-study on PPP model in Germany refers to a requalification process of vacant factory buildings in Hamburg.

Old vacant factory buildings - many of them are located in Hamburg's inner city quarters (listed monuments - have been renovated and managed through a consortium of public and private partners, after a rehabilitation process managed by a public-owned company.

These "industrial/commercial courtyards" can provide new spaces for small and medium companies, as a part of a wider "middle class business" support policy.

To understand the redevelopment process and the "partnership" approach adopted, a premise is needed about a public owned company (HaGG) controlled by Hamburg Municipality.

In 1976/7, the municipality of Hamburg founded the HaGG, a "specialized" organization aimed at supporting brownfields redevelopment and facilitation of the reuse of vacant properties in well fitted locations for business uses compatible with adjacent neighborhoods.

HaGG is today a consortium of public shareholders as well as members from the business and trade communities (60% municipality-owned - through a municipal "Holding", HGV -; 40% owned by the chambers of commerce/craft). In the Hamburg courtyard case, HaGG played the role of buyer/re-developer/renter of the spaces, and gains rental incomes from the activity, being this way economically independent.

HAGG, in this case, attracted private investors to join the project development company and to buy shares of the commercial courtyards (consortium).

Another public limited company (Sprinkerhof AG, 100 people employed), owned by the city, has been involved into the operation. This company is the main real estate company of the City of Hamburg and has a general lease for the commercial property, but it is not specialized in "industrial" real estate. So far, in this case, it transferred its real estate (industry courtyards) to HaGG.

The redevelopment of the commercial courtyards has been integrated with a strong and dedicated "quarter management" strategy, specific for business. Consulting experts were "offered" locally to provide, among others, services on location, give advice to start-up business on business enlargement or relocation, to select the most apt spaces for the business, to speed authorization procedures and networking the companies in order to share knowledge about financing and funding opportunities.

The role played in the Hamburg case by these public municipality-owned companies coupled with a very effective "support" to the final private investors, clearly exemplifies how efficient public owned companies can "substitute" other kinds of private players to fund and "market" redevelopment processes.

c) Hamburg "HafenCity"[22].

A "similar" final example of process strongly controlled by a municipality-owned special purpose vehicle is the recent re-development (in Hamburg too), of the so-called Hamburg "HafenCity" (around EUR 2.4 billion, of which approx. 4.5 billion revenue from the sale of land; around EUR 8 billion of private investments), a former port area to be transformed in a multi-activity urban area

Hamburg GmbH is a 100 percent subsidiary of the City of Hamburg" and develops HafenCity at Hamburg's behest.

The supervisory board of HafenCity Hamburg GmbH – chaired by the first mayor – consists of members of the city senate.

The Municipality strongly controls the redevelopment process and the relationships with private subjects are mainly of a "contractual" nature (e.g. selling the areas).

However, in this framework, although based on contractual relationships, a strong "cooperation-oriented PPP approach exists anyway, since private sector is fundamental for capitalizing and realizing the scheme with adequate quality standards.

To guarantee quality standards and sureness about the outcomes, it is in fact necessary: to attract investors and developers willing to cooperate in setting high quality standards and to respect the timetable of the project.

[22] Main source: Hafencity Hamburg website, http://www.hafencity.com/

To support private partners to comply with these strategic requirements, wwhatever the type of land use, the necessary ratification by the Land Commission is followed by an "exclusive option period" with an obligation to plan.

During this "option period", the investor/user (previously selected by the municipality following "reliability" criteria) has to proceed, in conjunction with the City of Hamburg, with an architectural competition, and may commission site surveys (it gets an "access right to the site), and has to prepare for building approval.

Throughout this process, HafenCity Hamburg GmbH, the authorities and the buyer remain in constant dialog before the private buyer decides to formally apply for building approval.

The "option period" solution benefits private subjects since: a) financing of the "purchase price" is postponed until after the building permit is granted; b) the private investor has adequate time to enhance the quality of its product, secure finance and perhaps acquire additional users; c) the city retains its ability to ensure the building's quality by intervening during the development process which lasts for one and a half years after award of the option, thus ensuring that the originally submitted use concepts and time schedules will be adhered to, since the purchase cannot go through until the building permit is received.

Some lessons learned

The three German cases studies put in light the role that a long long-lasting "in-house" approach (municipality-owned real estate company) can potentially play in urban reuse. But further conditions are needed: a) a sound and market-oriented asset-play capability (selling/renting, etc.) also to reinvest the earned money into the project; b) contractual PPP frameworks able to guarantee the desired "quality – also through specific tools (as the "exclusive option period"); c) effective "local" support, e.g. within a "quarter management" framework., in particular in case of numerous private (small) players to be engaged.

In conclusion, PPPs can be arranged by public administration through different tools also where strong direct control of the intervention is maintained, as is the case of real estate investment fully developed by companies owned by public administration.

A public-private Company for delivering appropriate development in Buckingamshire[23]

Buckingamshire faces several challenges to be overcome to get optimal outcomes in land use management. Among others, a complex regulatory environment, lots of actors in the system (private sector, land use planning authority, transport authority etc.), potential disconnect between Leaders, Officers, Private Sector and Residents, pressure from central government for more growth, difficult land supply issues

Establishing a 'Chinese wall' between planning function and development function in the public sector when promoting development, assembling land, is therefore needed.

City of High Wycombe, Buckinghamshire, decided to promote a strategy to address the matter.

The strategy is based on establishing a joint venture ('Urban Development Company' – Buckinghamshire Advantage) to enhance governance and decisional process.

Rules to address decisional process are a pillar of the strategy. Five Local Authorities and Buckinghamshire Business First are the members of the company. Each of the Member organisations detailed above can appoint one Director and there is a minimum of six or a maximum of twelve Directors. The Members acting jointly would appoint a further five private sector Directors and the Managing Director of the Company.

Each Member can also appoint a representative "observer" to attend Board meetings in a nonvoting capacity. Board resolutions are decided by a majority vote. The Board Chair does not have a second or casting vote - matter with no overall majority will be referred to the Members for their approval.

It is proposed that the Leader represents the local authority at the Member Organisation level and that the Chief Executive will be the Director appointed to the company.

Main lessons learned and utility can be summarized as follows. a) the company secures appropriate development, particularly in tight

[23] Main source: Jim Sims, City of Buckinghamshire/High Wycombe, USEAct Case, USEAct Meeting, Istanbul, 27th February 2014

financial conditions (it requires public – private sector collaboration on delivery); b) since delivering effective development outcomes can sometimes require, the company complies with the need for mechanisms which bring together different layers of the public sector to come together; c) It is a deadlock company, that protects the members interests and it works as an “asset lock”, since retains any surpluses to enable them to be reinvested.

The case study shows that PPPs to develop land can be established, at least in favorable contexts (as UK is), to set-up operational decision platform that include the political decision level.

Among main weaknesses of such approaches, risks both of promoting mainly neo-liberalist/elite-driven urban development schemes (state-lead gentrification?) and deteriorating democratic processes should be recalled.

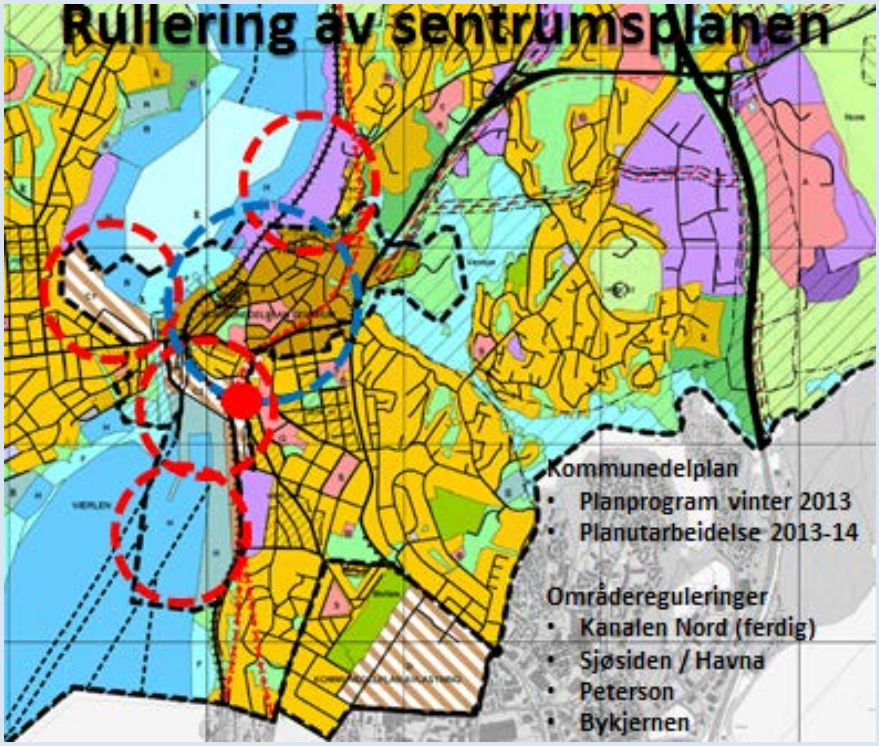
Using Town Plan to promote PPP: The Moss Experience

Moss, located in Østfold County, 65 Km far from Oslo, has 30 000 inhabitants, but shows a steady growth in population. It is currently the most densely populated municipality in Østfold. The area is experiencing some decline in job market, as it is moving from industry to accommodation for commuters. The city has a nice city center, but suffers hard competition from car based shopping centers in the surrounding area.

Not far from the city core, there is a former industrial site (the Peterson paper mill), closed down in 2012, with 230 jobs (at most they had 1600 people employed). It represents an important part of the town’s identity with 170.000 sqm of old industrial plot, between the sea, the Moss-river and some of the best preserved dwellings from the early industrialized era in Norway. Today the site is owned by «Høeg»-a high profile Norwegian developing company.

Moss municipality has been developing a “PPP strategy” to redevelop the Peterson site, together with other areas (see fig.4.9): the rationale is using the planning system to harmonize ideas and expectations of private investors with the overall goals for the Moss community.

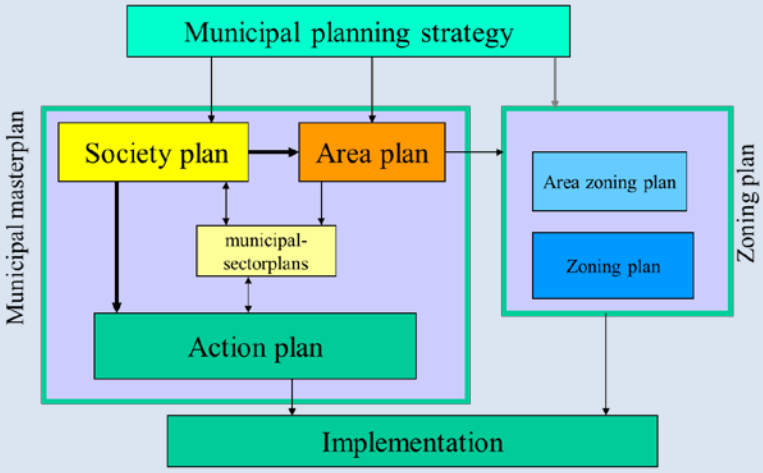
Fig. 4.9: Peterson site and further areas with potentials to be redeveloped around the Moss city core



So far, Municipality of Moss decided to provide a framework capable to reduce risk for private investors if they choose alternatives that comply with public development strategy and, at the same time, to induce ownership and enthusiasm for new development schemes in population.

Fig. 4.10 shows the relationships between targets ad planning strategy and tools. Private investors are affected by decisions regarding zoning plans, but a general coordination between general planning strategy, “society plan” (community goals) and action plan is ensured.

Fig. 4.10: Coordination between area plan and general municipality plan



Source: Linda Duffy, City of Moss, Østfold County, Case Study, USEAct Meeting, Istanbul, 26th February 2014

The "Naplest" experiment: when private subjects joint together to cooperate with public sector in urban regeneration

Naples is a city which has an important tradition in setting up cooperation frameworks between private and public sector to try to improve derelict urban areas (see, for instance, he already mentioned "Sirena Project" case). Although such cooperative frameworks not always appear – ex post - to be able to provide effective results, they have to be seen as positive (and sometimes rather "creative") experiences, as recognized by EU authorities too. This is the case of the so called "Napoli Est" project, which foresees intervention within the Eastern area of the city, an important part of the Naples metropolitan area, developed during the last decades of 1800 and early 1900. The area is characterized by mixed function and, after many industrial buildings have been abandoned, it is now a "peripheral" area, although it is placed near to the city centre.

As reported by Mr. Mollura, USEAct Lead Partner, Mr. Johannes Hahn, EU Commission, that has signed the approval of this project, has defined the project as "a *concrete example of how cohesion policy can make a significant contribution to the rehabilitation and renewal of an urban area strongly disadvantaged".*

Planned interventions are inspired by principles of urban "mixitè": housing, neighborhood facilities, spaces for cultural and leisure activities, industrial settlements for trade and logistics, but also for tourism and yachting, management activities, and crafts. High quality open spaces such as parks and meeting places are also planned.

Expected economic impact is significant: around 15,000 employed people will work during the construction phase and stable employment of 26,000 units has been estimated.

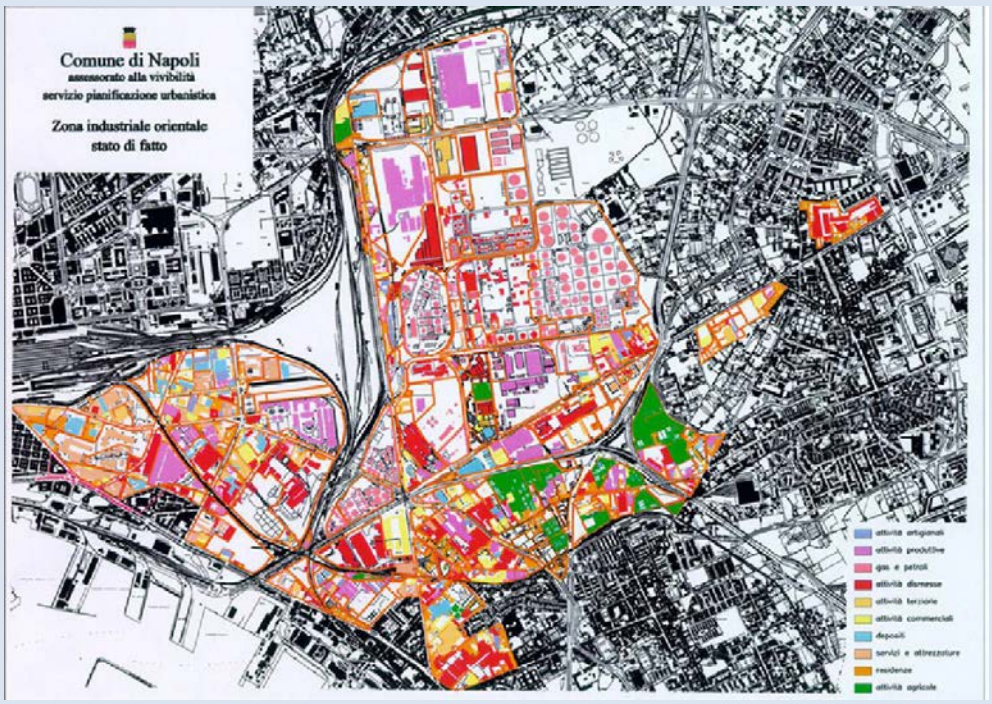
Private resources are expected around 2.3 billion Euros.

"NaplEST" is a committee formed by entrepreneurs interested in undertaking development projects in the area. The committee aimed at promoting and revitalizing the area, is formed by of 16 entrepreneurs engaged into real estate development plans and additional 8 subjects, included production companies already located in the area.

Two specific site redevelopment are targets for private development schemes, the so called “Brin 69” (recovering of the industrial site “Ex Mecfond”, already concluded), and the “Redevelopment of the former Tobacco Factory” – conclusion expected on 2016).

On the other hand, public intervention is aimed at providing the whole urban redevelopment framework, through the so called “Grande Progetto” NAPOLI EST” (see Fig.4.11), which is integrated into the recent “General Town Planning Scheme” of the city.

Fig. 4.11: “Grande Progetto” NAPOLI EST



Source: G.Mollura, Lead Partner, City of Naples, Case Study, USEAct Meeting, Østfold County, 27th – 28th May 2014

5 QUALITY (AND QUALITIES) OF INTERVENTIONS

5.1 NEW DRIVERS FOR DENSIFICATION AND HIGH-QUALITY CITY CENTRES IN LOW-DENSITY COUNTRIES. LESSONS FROM NORWAY

Mr. Michael Fuller Gee, during the USEAct thematic meeting organized in Norway, dedicated to “quality”, focused a key issue of the USEAct project: the (often problematic) relationship between urban density and urban quality[24].

The analysis carried on by Mr.Fuller Gee started from the Norway approach to urban “density.

In general, city centres are loved by people, in Norway too. Compared to some years ago, more people live, work and have fun in the centres, that are, in fact, the centres of local communities (”villages”). A lot more people visit these centres to shop, work and recreate there. A first challenge, to attract people, is therefore creating”Critical Mass” through synergy and quality of shops, services and entertainment.

Although people demonstrate growing interest for “concentration”, planning is often unable to provide solutions to this density challenge: the question asked by Mr. Fuller Gee - “Are we developing dense or”dense-stupid places?” – seems to have, unluckily, positive answer, as also showed by some funny pictures taken in Norway (Figure 5.1 and 5.2)

From a “marketing perspective” key customers of vibrant centres are families and young people firstly. The young people in every country are searching for the “Good Life”.

Dense and vibrant cities, as the “never sleeping” New York City offer layers upon layers of functions: housing, work places, shops, entertainment, parks, civic facilities schools.

[24] Main Source: M. Fuller Gee, *Quality in Transformation and qualification process,* USEAct meeting, Østfold County, Norway, 28th May 2014

Figure 5.1: “Nowhere Anywhere in Norway”

Source: M. Fuller Gee, *Quality in Transformation and qualification process*, op.cit

Figure 5.2: “Let’s meet in the parking area”

Source: M. Fuller Gee, *Quality in Transformation and qualification process*, op.cit.

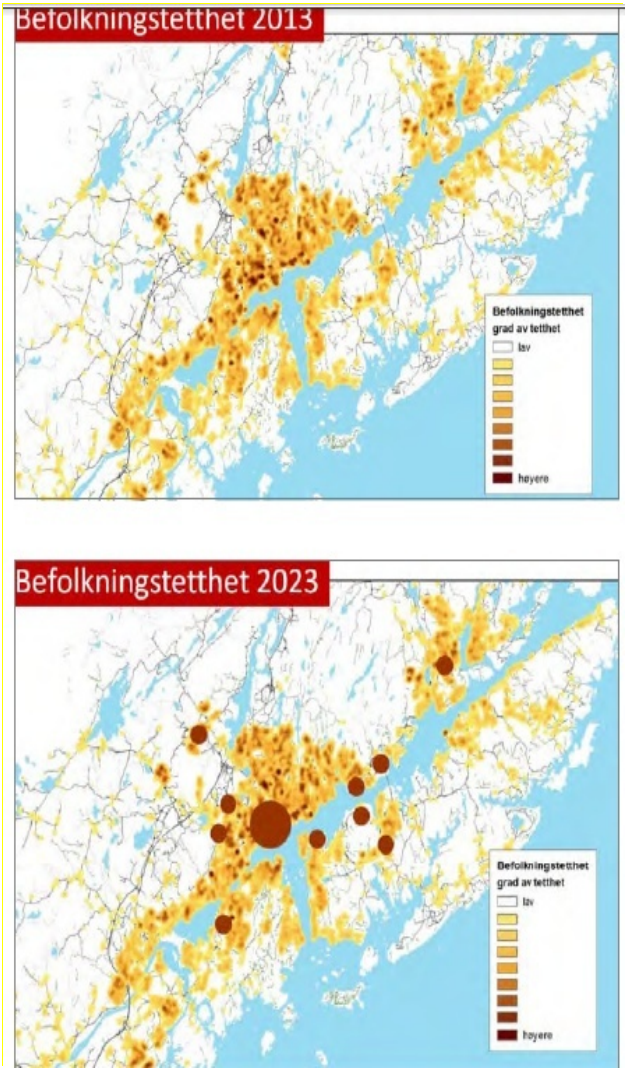
A first conclusion is that quality in transformation and densification projects counts. However, also for Norway, what is essential is focusing on people. “It’s all about people” since is the concentration of people using and enjoying their city, town or village centre that, in fact, represent the attractive aspect of urban “density”.

Minimizing distances (to “pleasure” and to activities) should be the target of any urban plan, focusing on walking distances and not driving distances.

Numerous local authorities in Norway will – and have - decreased in population the last and next 10 years. Negative social consquences are well known: young people (mainly women) leave, «only the old remain», companies move away and shops and schools close.

In general, urbanisation is an ongoing process in some Norway regions, as it possible to see in the «population/housing concentration trend» map (2013-2023) showed in Figure 5.3.

Figure 5.3: Oslo Region Housing and popolation polarisation. Forecasts 2013-20123

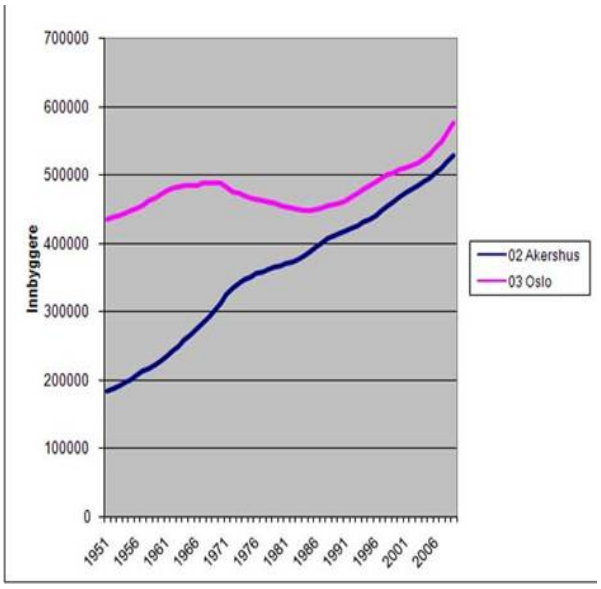


Source: M. Fuller Gee, *Quality in Transformation and qualification process*, op.cit.

Large cities with vibrant centres are the most attracting ones: Oslo and Stavanger regions are the new growth-areas in Norway and Oslo Region, in particular, is the fastest growing region in Europe (see Figure 5.4)

Densities in Oslo are high: on 4,6 sq km in Grünerløkka, Oslo, 45,000 people live. In such as situation «life» is created between the buildings.

Figure 5.4: Population growth in Oslo Region



Source: M. Fuller Gee, *Quality in Transformation and qualification process*, op.cit.

Oslo improved focusing on its seafront. Oslo Opera House helped to transform the old harbour into a waterfront open to the public, as showed in Figure 5.5

Figure 5.5: Oslo Opera House

Source: M. Fuller Gee, *Quality in Transformation and qualification process*, op.cit.

The place got a popular meeting place and can be defined as a “park with no grass”.

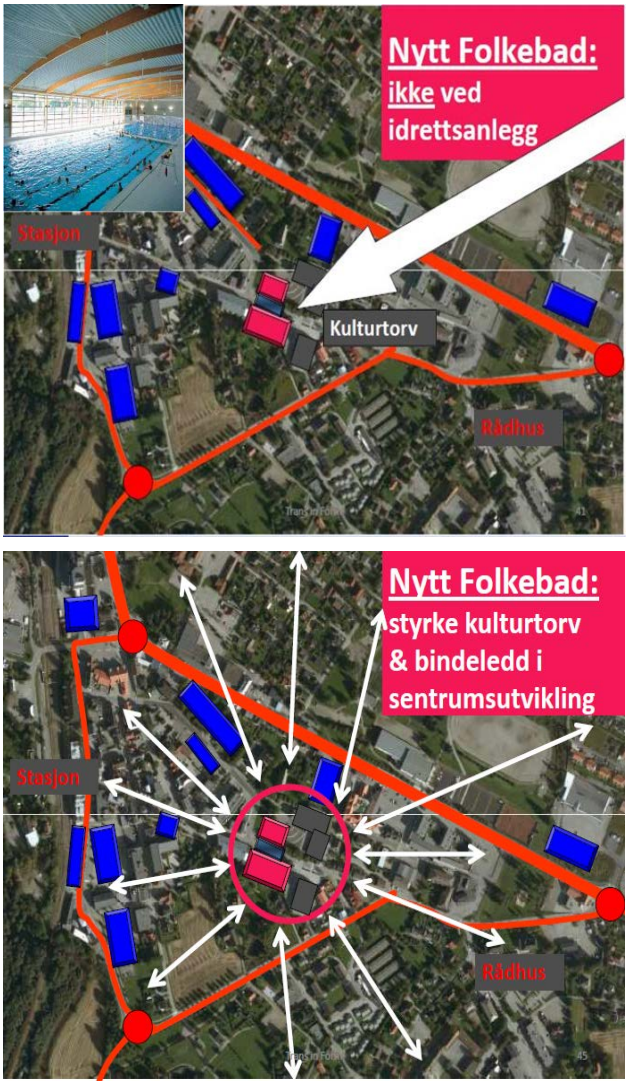
However, it should not be forgotten that Copenhagen – just for comparison - is four times as densely populated as Oslo.

However, the most difficult challenge is for small-medium towns that offer much less opportunities than large cities.

Some attempts to densify core areas in Norway can be considered as good practices for small and medium sized cities.

Figure 5.6 represent a strategy aimed at densifying a typical Norway low-density core urban area, with new residential blocks and through public “attractors” (swimming pool and cultural centre, in the example).

Figure 5.6: Strategies to densify Norway low-density areas

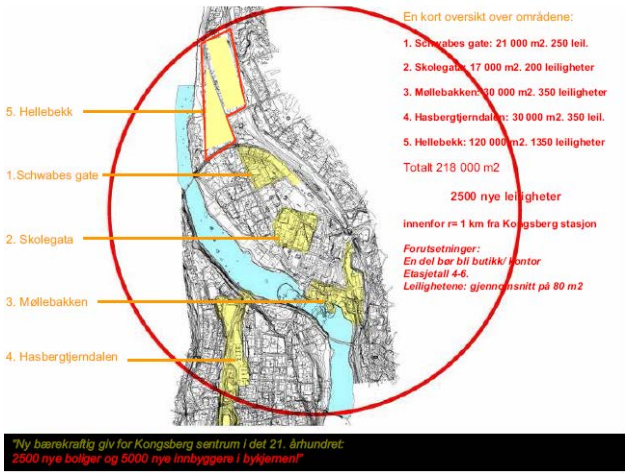


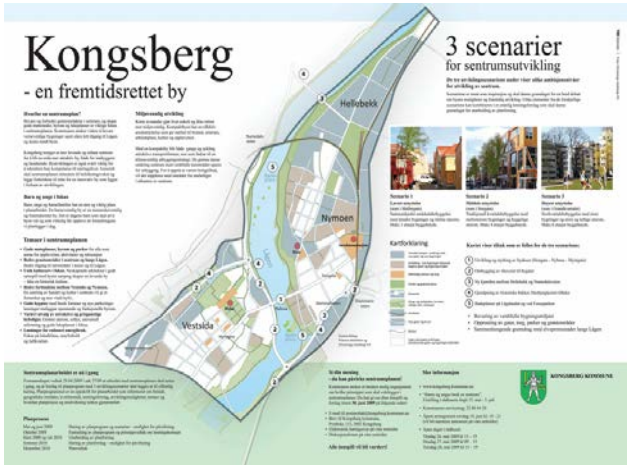
Source: M. Fuller Gee, *Quality in Transformation and qualification process*, op.cit.

As it is possible to see, distances between new “attractors” and further facilities (station, municipality offices) are minimized.

The Kongsberg “densification” strategy, with 2.500 new flats and 5.000 new inhabitants in the town centre, within a one-kilometer radius, as showed in Figure 5.7, is another successful example.

Figure 5.7: Densification strategy for Kongsberg (red circle: 1Km radius)





Source: M. Fuller Gee, *Quality in Transformation and qualification process*, op.cit

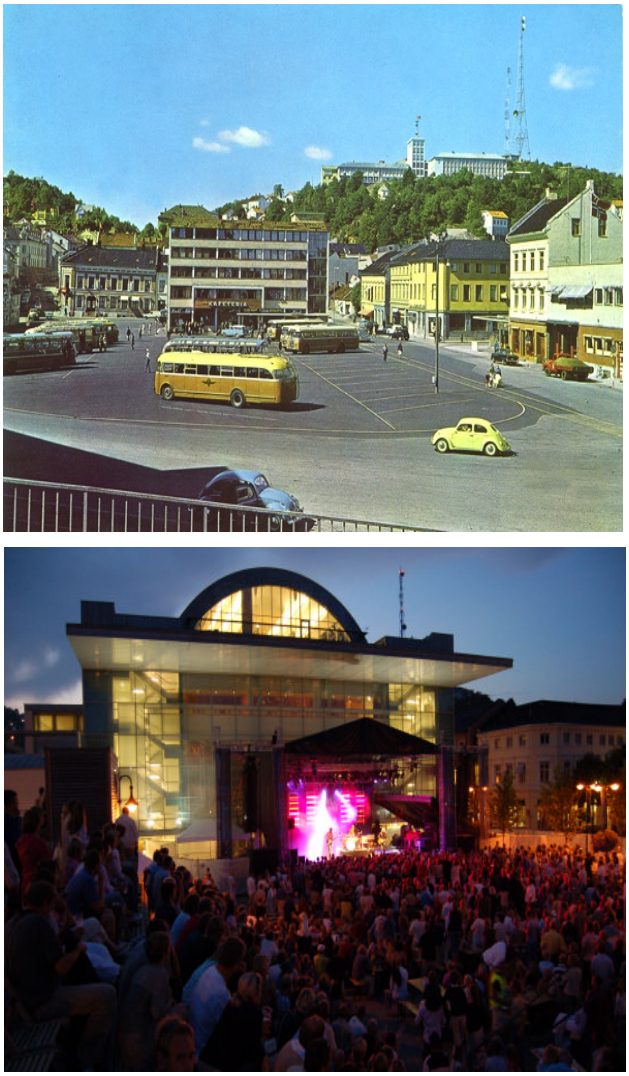
In Kongsberg, three degrees of settlement density has been proposed, with different options for new housing (three, four or six floors). Moreover, to revitalize the city core, it was planned to "close" the student campus located more than 1km far from the city core (it hosts around 800 students) and to build an another education facility just in the town core.

Locating schools (and, in general, education facilities) out of the city core is probably one of the most detrimental decisions in terms of attractivity. However, proposals to relocate schools outside town centres are still frequent, as the recent "Arendal High School" case shows. The school (1.000 pupils) was built in 1881, but the County Council would like to move it to "the middle of a forest", as Mr. Fuller Gee said.

Arendal is, anyway, a city that is developing effective strategies to revitalize its city centre.

How Figure 5.8 a) and b) show, new integrated retail/leisure facilities have been built and a "parking out of the city" strategy has been introduced.

Figure 5.8 a) b): Arendal city centre, in 2003 and 2005



Source: M. Fuller Gee, *Quality in Transformation and qualification process*, op.cit

Two-thousand are planned to be built, in Arendal, within 1Km radius from the "Town Hall" within 2023, to support expected population growth (from 42.000 to 48.000 inhabitants).

"The town centre must be more concentrated, higher, more child-friendly and full of people", Mayor of Arendal told, to communicate the citizens the planning approach of the city government.

Figure 5.9 a) and b) show further examples of how densification strategies could be developed in low density/low vibrancy contexts.

Figure 5.9: a) b) Densification in low density/low vibrancy contexts.

Source: M. Fuller Gee, *Quality in Transformation and qualification process*, op.cit

In general, all these urban densification and re-vitalization policies can be coupled with further social targets and policies. Reducing perceived loneliness (which is linked to a very high suicide rate); improving health conditions, through reducing car trips and increasing daily walking or biking activity; developing new kinds of facilities – with common spaces - for elderly people who wish to move from their existing house to a flat in the centre of their town, are examples of how urban densification policies can contribute to a more general social wellbeing.

It has to be recognized that achieving all the above mentioned goals, for a country – as Norway is – which traditionally loves the “detached house” model it is not an easy task.

Village planning requires focus and disipline and rradical changes are probably required also at level of national planning legal framework. Forbidding single dwellings ("eneboliger") could be “the definitive solution”, but it is clear that more gradual steps are easier to be successful, also at politic level.

5.2 “QUALITY OF INTERVENTION”: HOW TO SELECT OPTIMAL FUNCTIONS FOR VACANT LAND TO PROMOTE ECONOMY?

Economic development as a quality for reusing urban areas and facilities

Many USEAct partners – see the above mentioned strategies currently in development in Østfold and Buckinghamshire Counties - stressed the fact that one of the most important challenges of “reusing vacant or underutilized urban area and facilities” is related to the “functional” issue, in a long-term sustainability perspective. Which are functions that best fit the long- term local development requirements? And how is it possible to develop them within vacant or underused urban areas?

In many European cities, past developments and redevelopments schemes were characterized by huge investments in retail and/or housing sectors, without any consideration about long term economic sustainability. Housing bubbles and saturated retail markets often are legacy of these past decisions.

In the European context, which is still facing a protracted economic downturn, paying attention on how to “restart” production activities within urban areas is a fundamental issue.

Planning and implementing effective strategies to attract business into vacant urban areas and facilities (existing buildings) is not an easy task, particularly in areas with structural economic difficulties.

However, urban areas – both in big and medium/small cities - can potentially offer numerous advantages (e.g. in terms of accessibility and services for employed people or companies).

A long term sustainable development perspective should be able to recognize positive values and impacts economic activities generate for local communities in the long term. Higher short term costs borne to attract business into urban areas

Quality for preferring towns: The Aylesbury Regeneration Case Study

Aylesbury, Buckinghamshire, is a town placed in one of the most dynamic areas of UK, within the London/Oxford/Cambridge triangle (see Fig. 5.10).

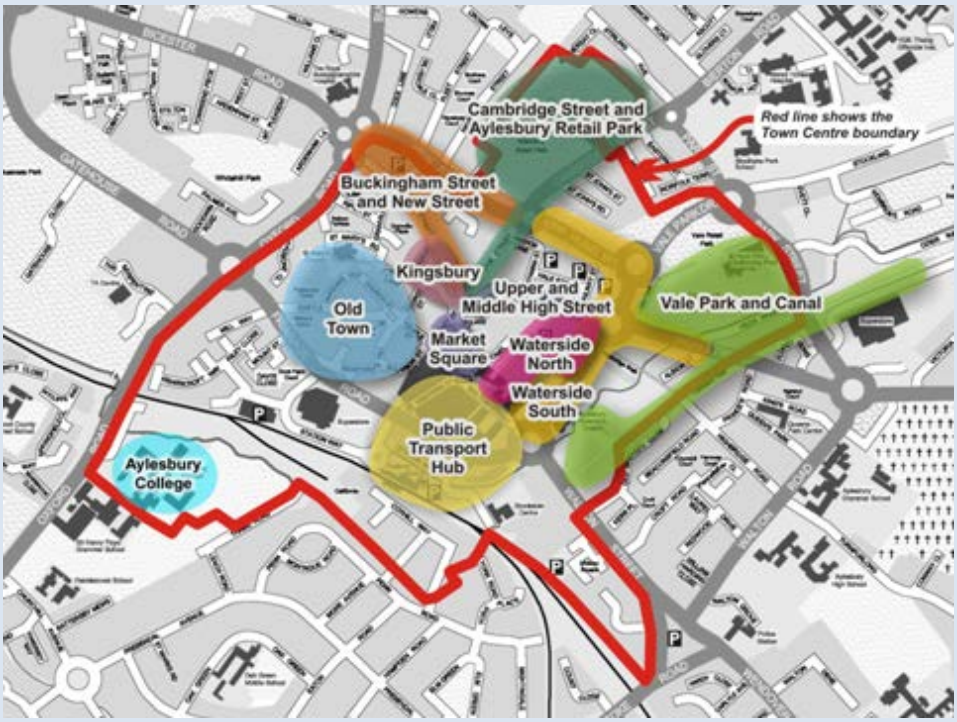
Fig. 5.10: Aylesbury location

As other Buckinghamshire cities, Aylesbury is focusing on “how attracting value” onto its territory. Quality of life and, therefore, quality of urban living spaces are an essential part of this strategy. So far, Aylesbury has started to manage a regeneration process of some deprived areas of the city centre, paying specific attention to the urban quality issue, as an opportunity to enhance values and guarantee a long term success for the intervention.

As it is possible to see in Fig. 5.11, the regeneration strategy has affected different areas of the city, within an integrated framework.

It is a four stage strategy, started from the renewal of the so called “Waterside South” area and continued through a new town centre plan. The plan establishes some fundamental targets, that can be summarized as follows: promoting the city as the cultural heart of the county and a leisure and event destination; a “great place to live”, with good road and public transport links with parking provision. More specifically, the scheme foresees a modern retail centre, placed in the core of the city and high quality public spaces.

Fig. 5.11: Regeneration strategy in Aylesbury (UK)



To ensure the best perceived quality for urban spaces, topologic features of the open spaces have been designed in cooperation with an important consultant, (“Space Syntax”) providing advanced modelling approaches for urban spaces design.

Fig.5.12: “Riverside North” area

In the so called “Riverside North” area, a vision based on keywords as “less new Big Box retail”, “more variety of shops”, “internet shopping” and "click and collect” has develop and more emphasis has been given to leisure time (quality environments, public space, as restaurants, cafés etc, with adjacent parking provision), as fig. 5.12 shows.

Mixed use development is also foreseen, with small residential developments (22 new houses and apartments) on former Civic Centre site.

A planning application submitted in March 2014 foresees the demolition of several buildings (among the former Police buildings) and the “Old County Offices” redevelopment, with mixed development, a food & Beverage Outlet, residential area and community usage.

Other interventions are planned in Walton Square, with high quality improvement and an attractive link between Theatre and Market Square and reprioritization in favour of pedestrian use.

Buckinghamshire County Council is considering its use of its property portfolio within Aylesbury to provide further enhancements to the town centre. Buckinghamshire County Council is considering its use of its property portfolio within Aylesbury to provide further enhancements to the town centre.

Source: R. Harrington, Aylesbury Town Centre Regeneration, USEAct Meeting, Østfold County, 27th – 28th May 2014

are mostly compensated by larger relevant social and economic benefits.

Trying to attract business requires sound and focused actions anyway.

The first step is realistically assessing (and benchmarking) the structural attraction potential of local urban contexts.

Starting from a benchmarking perspective: the KPMG study on business location costs

The recently published KPMG's Guide to International Business Location Costs (2014 Edition), entitled "Competitive Alternatives"[25] shows very clearly which are the main drivers of business attraction for cities, within the current global competition environment.

As discussed during the Viladecans Bilateral/Trilateral Meeting[26], the KPMG's Guide is a point of reference for local communities that aspire to update their business attraction strategies.

A first message of the KPMG's study is that costs are still a key variable for attracting business. This aspect should never be forgotten, since re-development schemes often represent more expensive solutions than green-field alternatives.

[25] The document is available at: http://www.competitivealternatives.com/reports/2014_compalt_report_vol1_en.pdf

[26] Main source: V.A. Torbianelli, How to attract business after the economic downturn?, USEAct II Bilateral/Trilateral Meeting, Viladecans, 25th June 2014

It is also true, that other factors are very relevant as well, as showed in Table 5.1 a) and b), but a clear target-costing approach is a good starting point for any local strategy aimed at attracting businesses.

Table 5.1 a) and b): KPMG Key Site Selection Factors

Key Site Selection Factors

	Cost Factors	Other Key Factors
Business	**Business Costs** • Facilities: industrial, office • Labor: wages, salaries, benefits • Transportation and distribution • Utilities • Financing • Federal, regional, local taxes	**Business Environment** • Labor availability and skills • Access to markets, customers, suppliers • Road, rail, port, airport infrastructure • Utility, telecom, internet services and reliability • Suitable sites and facilities • Regulatory environment
Personal	**Cost of Living** • Personal taxes • Cost of housing • Cost of consumer products and services • Healthcare costs • Education costs	**Quality of Life** • Healthcare facilities • Schools and universities • Crime rates • Climate • Culture and recreation

Site Selection Factors, by Indicated Importance[1]

	Percentage of Respondents Citing as Important (Rank)				Analyzed in *Competitive Alternatives* Chapter	
	2013		2011		Ch. 5	Ch. 6
Availability of skilled labor	95.1	(1)	88.4	(2)		✓
Highway accessibility	93.5	(2)	93.8	(1)		✓
Labor costs	90.8	(3)	88.4	(2)	✓	
Occupancy or construction costs	87.4	(4)	85.9	(5)	✓	
Availability of advanced ICT services	84.6	(5)	76.6	(13)		✓
Available buildings	83.3	(6)	76.3	(15)	✓[3]	
Corporate tax rate	82.4	(7)	86.0	(4)	✓	
State and local incentives	81.9	(8)	85.9	(5)	✓[2]	
Low union profile	81.4	(9)	81.0	(10)		✓
Energy availability and costs	80.8	(10)	84.8	(7)	✓	✓
Tax exemptions	80.6	(11)	83.6	(8)	✓[2]	
Right-to-work state	80.6	(11)	77.5	(12)		
Available land	80.3	(13)	73.9	(16)	✓[3]	
Expedited or "fast-track" permitting	76.3	(14)	72.4	(17)		
Proximity to major markets	75.6	(15)	83.0	(9)		✓
Availability of long-term financing	74.8	(16)	70.0	(18)		
Environmental regulations	71.7	(17)	76.4	(14)		✓
Inbound/Outbound shipping costs	70.9	(18)	79.2	(11)	✓	
Proximity to suppliers	67.7	(19)	67.8	(19)		
Raw materials availability	60.5	(20)	52.8	(22)		

1 Area Development, 2013 and 2011 Corporate Surveys. Factors considered by more than 60% of total respondents in either year to be "very

Source: KPMG 2014, op.cit.

In general terms, Europe is competitive for international business attraction, but there are many differences among different countries and cities. Moreover, it seems that I many cases, “business attraction target” is not sufficiently focused on by local administrations.

With the aim of “benchmarking” cities (or regions) it is important to identify the relevant parameters for cost assessment.

In general, it should be recognized that different manufacturing or services sectors face different requirements when they have to select a site and, therefore, are sensitive to “different” variables or show different sensitivity-levels for specific costs.

KPMG identifies, for each manufacturing or services sub-sector, an ideally “representative” company that can be used as a point of reference to assess the expected/perceived site costs.

In Table 5.2, the operating parameters for a representative company of the digital sector is showed, just an example of the methodology adopted. The KPMG report contains similar tables for different sub-sectors.

Table 5.2: Operating parameters for site-cost calculation: a representative case

Digital Services - Operating Parameters	
Facilities Requirements	
Class A office space leased	21,375 ft² (1,986 m²)
Other Initial Investment Requirements	
Office equipment - US $'000	$2,300
Equity financing - % of project costs	67%
Workforce	
Management	6
Sales and administration	22
Dedicated product development	71
Customer support	6
Total employees	105
Energy Requirements	
Electricity monthly consumption	60,000 kWh
Electricity peak demand	180 kW
Other Annual Operating Characteristics	
Sales at full production - US $'000	$21,000
Operating costs - % of sales	11%
Investment in tax-eligible R&D - % of sales	10%

Source: KPMG; 2014, op.cit

Focusing on the (potential) location related costs for different sectors – and benchmarking them with international competitors – allows, among others, to get what are, potentially, the activities that, more than other, could be interested in local sites and, consequently, to develop more targeted attraction policies. For most USEAct partners is plausible that services sector shows greater potentials of using redeveloped “urban” sites, than the manufacturing sector.

It is interesting to have a closer look to cost factors that depend, more than other ones, on the specific (re)development process: facility cost is likely the most important one.

Table 5.3 a) and b) provide respectively a picture of the relative significance of key location sensitive costs factors (for both services and manufacturing sector) and a specific focus on facility costs.

Table 5.3 a) and b) Relative significance of key location sensitive costs factors (for both services and manufacturing sector) b) Facility costs – Offices and Factory Leasing Costs

Relative Significance of Key Location-Sensitive Cost Factors	Services Sector[1]	Manufacturing Sector[2]
Labor costs	**74% – 90%**	**44% – 60%**
Salaries and wages	*52% – 64%*	*31% – 42%*
Statutory plans	*9% – 11%*	*5% – 7%*
Other benefits	*13% – 16%*	*7% – 10%*
Facility costs (office, factory leasing)	**4% – 16%**	**2% – 6%**
Transportation costs (road, sea, air)	**n/a**	**7% – 24%**
Utility costs (electricity, natural gas)	**1% – 1%**	**2% – 8%**
Cost of capital (depreciation, financing)	**0% – 7%**	**9% – 21%**
Taxes	**2% – 10%**	**6% – 14%**
Income taxes[3]	*0% – 11%*	*4% – 11%*
Property taxes	*0% – 0%*	*1% – 3%*
Other taxes	*0% – 1%*	*0% – 1%*

1 Range for 7 services sector operations included in the overall results.
2 Range for 12 manufacturing sector operations included in the overall results.
3 Varies with revenue. Modeled operations are assigned revenues in line with typical industry targets.

Facility Costs[1]: Office and Factory Leasing Costs	Services Sector – Office Lease[2]				Manufacturing – Factory Lease[3]	
	Suburban		Downtown		Suburban	
	US$ per sq.ft.[4]	Rank	US$ per sq.ft.[4]	Rank	US$ per sq.ft.[4]	Rank
North America						
Canada	$27.06	4	$44.32	4	$5.49	4
Mexico	$27.25	5	$23.93	2	$5.14	3
United States	$27.95	6	$40.20	3	$4.70	1
Europe						
France	$42.39	10	$63.54	8	$8.02	7
Germany	$25.78	2	$45.82	5	$7.50	5
Italy	$26.41	3	$52.82	7	$7.96	6
Netherlands	$15.30	1	$15.29	1	$5.09	2
United Kingdom	$37.29	8	$101.21	10	$12.30	9
Asia Pacific						
Australia	$35.72	7	$47.50	6	$9.75	8
Japan	$40.44	9	$96.32	9	$14.18	10

1 Results are the average for the comparable cities selected for the international results. Care should be exercised in interpreting the country averages due to the significant variations in costs among cities within each country.
2 Gross rent for office facilities includes all operating, tax, and insurance costs passed on by the landlord to the tenant as additional rent.
3 Net rent only for a prime bulk industrial facility. All operating costs are in addition and are borne directly by the tenant.
4 Equals 0.09 m²; 10.76 sq.ft. = 1 m².

Source: KPMG 2014, op.cit.

Key messages and key questions for USEAct Partners

The key message derived from the KPMG studies is likely that the degree of variation in business costs between major cities in some countries is quite remarkable, and this highlights the importance of having up-to-date data on cost competitiveness. This information is important to businesses making investment decisions and governments seeking investment.

However, further specific questions to be answered arise for USEAct partners interested in developing “business functions” within vacant or underused urban areas.

Are cities or local communities carrying on any benchmarking research to monitor their city’s positioning within the “cost ranking” global (or national) scenario? Are potential competitors clearly identified? Is there a clear “target-costing” strategy, as a component of the whole urban marketing strategy aimed at attracting production activities? What is the level of “facility costs” – and of other real estate related costs – which could be (or actually are) affected by the “redevelopment decision framework”? What other location costs are (or could be under control of local authorities? Are they fully known and monitored, or considered as a possible tool of an integrated attraction policy? What (and how relevancy) costs are specifically related to urban reuse targets (e.g. soil rehabilitation, etc). Are they compatible with the “market requirements”? What about further planning related potential constraints or duties (e.g. urban uses)? What is the role played by other non-cost related factors and what could be the importance of further “quality” features of new developments (e.g. industrial parks, urban design, etc.)

All the above issues are a clear example of how any “urban reuse” policy aimed at reaching ambitious but fundamental targets (as business attraction is) should be soundly assessed and deeply integrated into broader strategic policy and marketing frameworks.

Regrettably, wishful planning alone is not enough to attract economic activities.

Learning from unsuccessful attempts to attract businesses: the “Aerospace Park” in Viladecans

During the Bilateral/Trilateral meeting organized on “Differentiating Interventions” in Viladecans, Mr. Eric Serra presented and discussed with other partners a very stimulating case study on an unsuccessful initiative developed in Viladecans with the aim of attracting companies of the aero-space industry.

The origin of the “story” dates to 1976, when the Metropolitan General Plan (PGM) established “industrial use” for a not developed but very accessible area located not far from the coast, the main infrastructures and from the airport. It’s a triangular-shaped zone with a surface about 450.000 sqm.

Over second half of Eighties, most of the land was acquired by the Institut Català del Sol (INCASOL), the development and housing agency of the Catalan Regional Government.

INCASOL presented several urban planning proposals, aimed at developing logistics activities on the area. The City Council did not agree with this use and never proceeded, since the City Council was interested in developing activities capable to provide higher “value added” and more jobs for the area.

Municipality started to develop its own strategy and – without carrying out any in depth SWOT analysis or risk analysis of potential different options – and published (in 2002) a "Feasibility study” for an Industrial aeroparc in Viladecans”

The study was carried out by “Aeroport Management and Promotion SA”, the local company owned by the Chamber of Commerce, Industry and Navigation of Barcelona, under the commission of the City Council.

The study defined Viladecans as an optimal location for an “aeroparc”, due to the reported existence of a growing industrial cluster in the Barcelona region (“Barcelona Aeronautics and Space” cluster BAiE) and of a robust involvement of official stakeholders (government, business and financial community, university, etc.).

In 2003, the Government of Catalonia (Department of Territorial Policy and Public Works, the Department of Labour and Industry), the Viladecans City Council and the Chamber of Commerce of Barcelona signed a "cooperation framework agreement for the promotion, implementation and joint management of the Aerospace and Mobility Park in Viladecans” and, in 2004, the Government of Catalonia published jointly an agreement on the promotion of local aerospace industry.

In 2005, “Aguirre Newman” consulting published a new study aimed at assessing economic viability of the project, considering the potential business demand.

The study once again highlighted the advantages potentially provided by the Viladecans “Aerospace and Mobility Park” (such as excellent accessibility, optimal position in relation to the centre of Viladecans, proximity to BCN Airport and to the University, services and product potential suppliers located there) in comparison with alternative locations, characterized by lower industrialization/specialization levels.

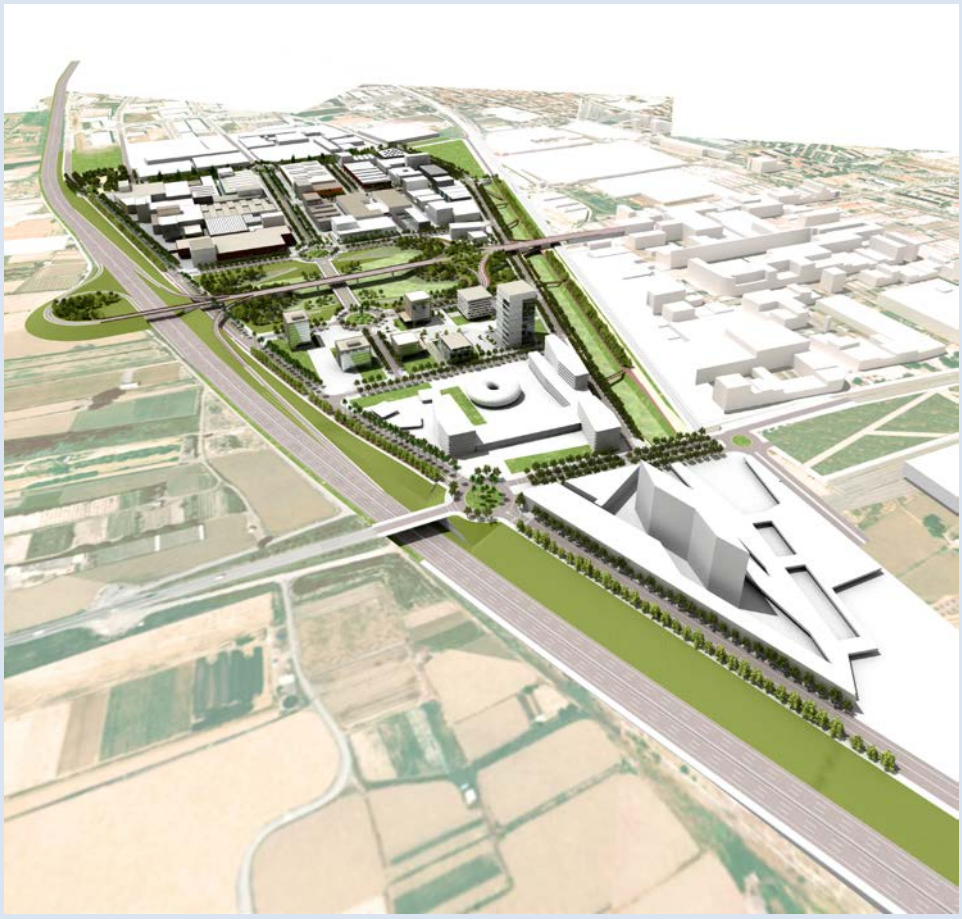
In 2006, a public Consortium for the development of the Aerospace and Mobility Business Park was established, with the aim of implementing urban planning framework and public works.

The detailed development scheme (2009), illustrated in Fig. 5.13, was also awarded with a mention in the Premi Catalunya d’Urbanisme, 2009 (IEC. SCOT).

The “Aerospace Park” lay-out was splitted into three main areas (“Productive park”, “Technology Park”, “Services Node”). The Consortium worked in continuous contact with the aeronautical industry companies to try to fit industry requirements at the best. The Consortium also tried to improve the attraction potential of the facility through key projects, such as the “Wind Tunnel project” or through locating advanced technology catalysts, as CTAE (Aerospace Technology Center)

Although the road map adopted appears to be an exemplary “good practice model”, the process in fact has not being implemented: because of several exogenous reasons (such as economic downturn, and collapse of the real estate, reduced availability of public funds for subsidies and construction, and lack of vitality of the aeronautical sector companies) the project was abandoned in 2010.

Fig.5.13: The proposed development Plan of the “Aeroparc” in Viladecans (2009).



Source: IEC. SCOT

It is clear that the dramatic structural drop (2006-2010) of real estate values (and in particular of soli values 9 in comparison with the construction costs strongly affected the sustainability of the financial framework.

However, it is also plausible that carrying on an accurate, independent and not locally-driven appraisals of the true attraction potential of the area for the aerospace industry (considered at global level) may have put in evidence weaknesses and risks of such a project, strongly boosted – mainly for political reasons?– by local authorities.

Source: Enric Serra, Learning from unsucceed proposals: the Aerospatial Park in Viladecans, Case Study, Bilateral Trilateral meeting Viladecans, June 25th 2014

Lay-out redesign for former industrial areas: the recent advancement of the Viladecans LAP

Municipality of Viladecans is, of course, one of the USEAct partners that are specifically interested in reusing underused urban areas as an opportunity to attract business activity. The already mentioned “Aeroparc” area is not the only zone imagined for that aim.

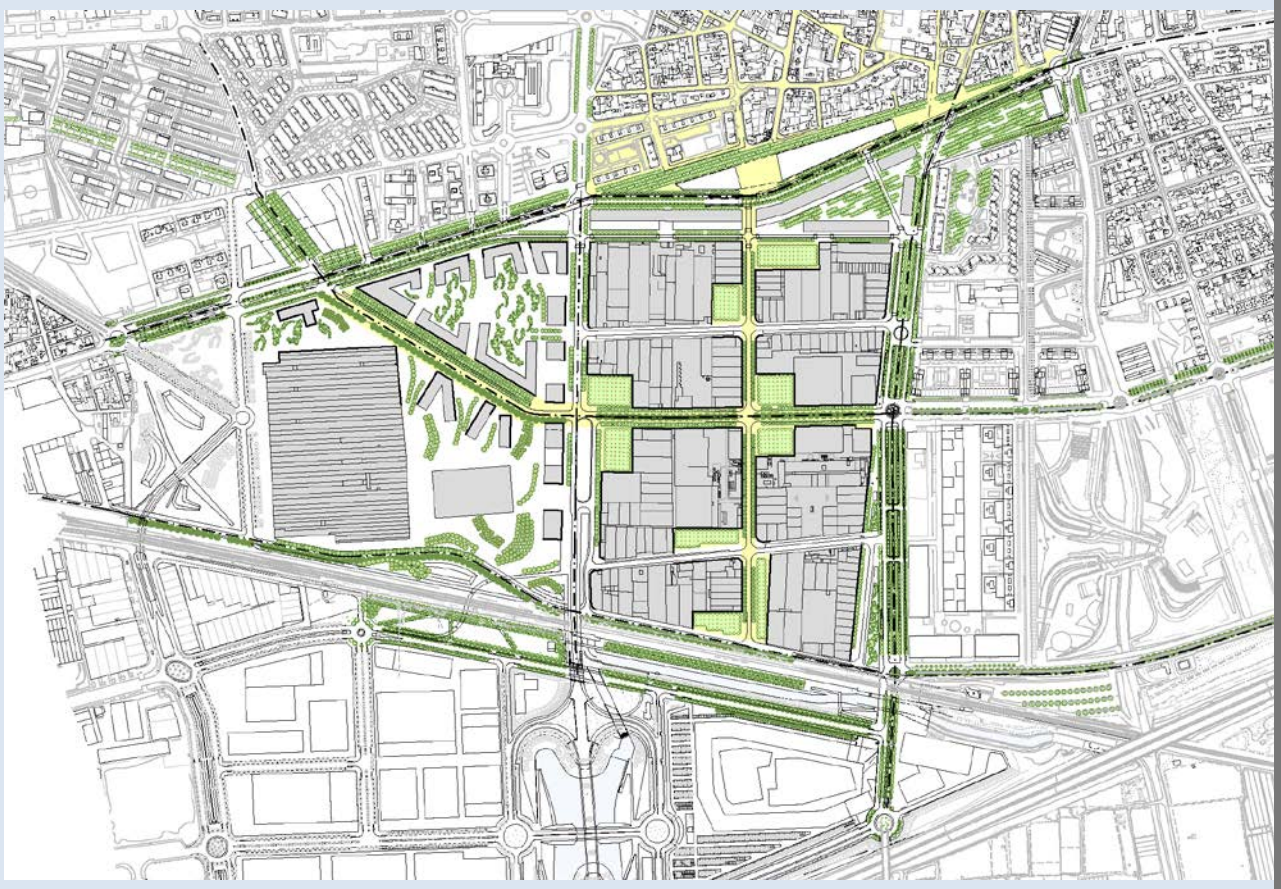
The so called “Polygon Centre” – it is the existing (now underused) industrial site located just outside the city-core of Viladecans, focused on by the Viladecans “Local Action Plan” – represents, at the moment, the major economy-oriented redevelopment target for the local community.

Recently, “Batlle I Roig Arquitectes”, on behalf of the Viladecans City Council, started to deal with the “lay-out design issue, to explore general lay-out solutions able to better fit the “innovation and knowledge activities” attraction policy.

The research focused on the lack of public space problem and the role played by the structure of open spaces in the transformation of the urban environment.

The study identifies the main features of the existing spatial/economic setting of the “polygon” (mixture of different sizes of business, originally small plots but with some very large properties today, type of activities and functions located), and the main constraints and problems (low integration within the urban fabric, insufficient public spaces – only 15% of the total surface -, presence of not utilized spaces within large plots). Specific attention is paid to identify the current ongoing processes (sprawling of new small businesses and retail; etc)

Fig. 5.14: Viladecans - Proposal for public open space within the Polygon area



Source: Batlle I Roig Arquitectes, 2014

The study proposes, as main output, some possible lay-out strategies to create new high-quality open spaces and “paths” that could be of use to improve the links with the city core and to enhance the attractiveness of the area. Moreover, a planning/design strategy aimed at suggesting, for different sub-areas, different degrees of transformation and project detail.

All the proposals allow to maintain, at least at a certain degree, the existing activities located in the area.

Fig. 5.14 shows a possible proposal for the layout of public open space within the Polygon.

Source: Batlle I Roig Arquitectes, Design Study for the Polygon in Viladecans, Case Study, Bilateral Trilateral meeting Viladecans, June 25th 2014

6 VISUALISATION FOR PROACTIVE PARTICIPATION AND CREATION OF VALUE

Image from empathiccities.org

6.1 FROM INTEGRATION TO PARTICIPATION THROUGH VISUALIZATION

The USEAct projects has clearly has putted in evidence that local administrations often face difficult challenges to communicate and promote, among citizens, optimal land use policies, and in particular the need to densify central or, in general, urban areas. Section I already focused on some basic aspects of "visualization". In this section, more attention is paid to the "implementation oriented" function of visualization tools.

Participation and communication are as expected, fundamental pillars of any policy related to reducing land-take targets.

Visualization, in particular, is getting more and more important, due to increasing and widespread use of web-integrated tools.

Some general principles, already emerged during the USEAct meeting in Nitra, should be recalled here.

Firstly, visualization" should not be a "separate room": it has firstly to be integrated with other design and planning tools, in particular with GIS planning tools and with strategic planning "cockpits" (in general).

A second aspect is related to subjects in charge of developing the processes. "Who" does develop and control the visualization tool? It is clear that focusing on "integration" and coordination between bodies/departments/stakeholders is a necessity.

As third point, visualization should be considered as an "interactive" tool for policy appraisal and, more specifically, for project appraisal. More specifically, visualization tools should be: a) "populated" with many high quality and relevant territorial GIS based data; b) capable to interact with appraising tools (e.g. spatial accessibility assessment tools and "maps"; economic impact assessment tools). Further more technical aspects are also remarkable. For example, it seems to be important that – to be beneficial for urban «re-use» purposes - visualization tools are integrated with databases (and management programs) dedicated to «vacant land parcels».

Some questions arise about data sources: could data include “open data” as well? Some room for “innovating” approaches to involve public into the “think your territory” issue does likely exist. Another question related to open data is the following one: what are possible relationships between “open data” (to be seen as a new form of active participation) and “issues” that are relevant for visualization?

Integration between visualization tools and “urban marketing oriented data” to attract investments seems to be another strategic aspect.

Appraising development projects is another application field. To identify and «show» potential impacts – “bad and good” ones! - “handy” impact models should be developed and linked to the visualization tools.

Showing environmental impact (visual impact, sensitive areas, etc.) is essential, but it should important provide tools able to inform about economic impact from different activities. Basic indicators of potential economic impact (as simulations) should be included into “project visualization outcomes”.

Figure 6.1: Functional links between visualization tools and urban planning targets

A related question arises: what “indicators” could/ be integrated into the (GIS)/visualization system to better appraise and communicate the “redevelopment potential” for vacant spaces and to “market” them at the best?

In conclusion, as showed in Figure 6.1, visualization tools should be able to play different roles and specifically: a) working as a “cross functional (and cross-subjects) tools; b) being connected to qualified databases; c) being interconnected with relevant apprising tools (e.g. accessibility maps, economic impact scenarios) to guarantee more objective policy assessment scenarios/ development schemes, also to by-pass “politicians decision black-boxes”); d) being capable to provide outcomes both useful to “community involvement” (participation) and “urban marketing” oriented tools (to attract business or, in general, users).

Visualization tools, therefore, should be considered just as a component of wider tools (platforms) aimed at providing value and utility to the community and allowing a better link between public administration and population, useful to support public choice.

6.2 GIS AND OTHER TECHNOLOGIES: FOCUSING ON NEW “DRIVERS” AND VALUES

GIS (Geographic Information Systems) are in general a powerful tool to improve public administration capabilities of managing urban issues, but a full utilization of such tools to overcome the “Big Data Challenge”, requires to embed them into integrated data and process frameworks and to create value.

As Mr. Jim Seems putted in evidence, during the Bilateral/Trilateral USEAct Meeting held in Naples, on “Smart use of data”[27], GIS has been introduced since many years, but until now not high percentage of GIS use in planning has been related to thematic maps (description) and simple analyses (prediction).

The scopes for GIS use are however very broader, including functions as Urban Planning, Regulatory enforcement, Development Design, Utility Provision, Biodiversity & Habitat Impacts.

[27] Main source:Jim Sims, Partner – BTVLEP/Virtual Viewing, Smart Use of Data and Visualization tools, Case Study, IV Bilateral/Trilateral meeting, Naples (Italy) July 15th, 2014

Moreover, they may support “proactive participation”, through informing the public and some further uses for public participation and special projects.

GIS benefits for planning are not easily quantified and can vary very much, but it is recognized that best results and mostly linked to administrative tasks in cities with a sound managerial setup for GIS.

Relevance of GIS related outcomes for public administrations is also increasing in relation to new social and technological “drivers” that, together with diffusion of new software applications, allow GIS to be integrated into innovative strategic frameworks facing cities.

Just to recall some of these drivers, we can mention the “Smart City” construct, the “Big Data” challenge (and opportunity), the Public Sector driven “Open Data Initiative (ODI). Further important drivers, of a more socio-economic nature, are tied to tight public sector finances, to the need to innovate and transform business models, to opportunity for ‘triple-helix’ collaborations and to ‘democratize’ urban decision key processes. Further room for innovation are also linked to the opportunity to develop feedback loops to incentivize residents and encourage behavior change, as to the need to ‘shift’ procurement models (away from traditional tendering processes) and to move towards creation of more integrated ‘platforms’.

The real possibility that GIS related processes play key roles in such deeply changing urban technological and socio-economic environment depends also on several specific challenges at organizational level. Rapidly changing environments require new mindset and new skills for professionals. Organizations need to learn to collaborate and to think in a cross disciplinary way (energy, planning, land use etc.). Public Sector specifically needs to link these developments to service transformation models. Private sector that invest in technology is also called to innovate models: business models often need a strong ‘invest to save’ approach and organizations need to identify use cases with strong cost/benefit returns and to find ways of monetizing peoples interaction with these new systems.

6.3 FUNCTIONS, OUTPUTS, VALUES OF VISUATLIZATION PLATFORMS

What functions and what values, in relation with the “land take reduction” targets are offered by visualization platforms? Cases studies presented during USEAct meetings show the wide scope of visualization platforms and the opportunity to cover costs through creating market value

The SITI “Invito” Case

SiTI is a nonprofit association established in 2002 between the University “Politecnico di Torino” (Italy) and the foundation “Compagnia di San Paolo”. It proposes different geo-visualization tools integrated to platforms that can be considered as an exemplary case of innovative tools for urban spatial management and communication[28].

SiTI carries out research and training activities to provide advanced services aimed at improving sustainability and integrates different key spatial-related fields, such transport and logistics, environmental resources management and protection, urban redevelopment, and related field.

Strategic target is developing services and tools for “geo-visualization”, the discipline that allows to “see the unseen” (as McCormick, De Fanti and Brown affirms) and that can contribute to create common shared knowledge useful to improve spatial-related processes.

Geo-visualization allows “*the exploration and analysis of spatial information through interactive visual interfaces” (International Cartographic Association, ICA, Commission on Geo-visualization).*

Figure 6.2 exemplifies different potential functions of Geovisualization

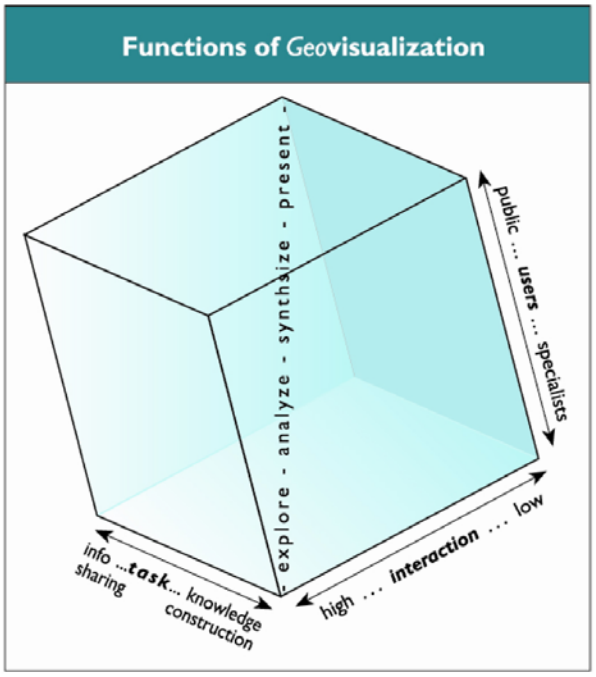
The general aim of the company is to develop and implement the “Interactive Visualization Tool”

[28] Main Source: Elena Masala, InViTo: Interactive Visualisation Tool for supporting decision making in spatial planning processes, Case Study, IV Bilateral/Trilateral meeting, Naples (Italy) July 15th, 2014

concept (InViTo) to be used, in different situations and different specific targets, for supporting decision making.

Tools for supporting spatial planning and decision processes require, in fact, higher communication value, user friendliness and high interaction. The InViTo concept is a tool aimed at creating a shared language for supporting the dialogue between actors overcoming different geographical and disciplinary barriers.

Figure 6.2: Functions of Geovisualization



Source: Elena Masala, op.cit

From different projects developed by SiTI it is possible to get how a single visualization tool concept can be used in different ways and with different purposes.

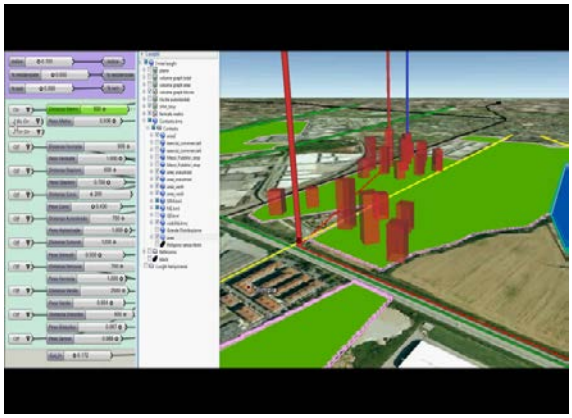
In the “Turin Pilot Application”, a project aimed at providing information related to a wide area located in the northern part of the city, many different elements have been processed and visualized (see Figure 6.3)

Moreover, possibility to carry on surveys to citizen and tools to identify specific spatial effect of each element (through mathematical functions) has been added to the platform, together with graph Volume and Quantitative Output Visualization.

Another project (COST) allowed SiTI to focus on 3D modeling. 3D models are increasingly used in different cities and countries for wide range of applications beyond mere visualization.

Figure 6.4 shows some visualization outcomes of the project which has been developed to visualize different spatial elements and relationships (see the box included

Figure 6.3: “Turin Pilot Application” Project



Area: 2,5 km x 0,6 km
Grid: 20 m
urban function / facilities

Considered elements (for residential):
bus stops, subway stops, railway stations, green areas, public services, motorway exits (network distance)
main streets, railway and motorway tracks, industrial sites (euclidean distance)
Survey to citizen
to identify specific spatial effect of each elements as mathematical function
Graph Volume and Flats Distribution
Output Visualization

Source: Elena Masala, op.cit

InViTo has been also utilized within the well-known “CircUse” Project (Circular Flow Land Use Management), a land-use management oriented project focused on promoting sustainable development of brownfields, greyfields and degraded greenfields in urban and peri-urban areas[29].

Further InViTo implementations have been also developed in occasion of projects on accessibility, urban mobility, impact of infrastructure corridors, etc.

What are main lessons that can be learnt from the specific InViTo experience?

Firstly, that an integrated visualization concept – with related tools and applications - can be developed (with remarkable economies of scale) for many different purposes and for different geographical scales. Secondly, that many functions and data can be integrated on locally driven platforms that are not single-purpose, but work as

[29] See “First Thematic Paper”.

integrated service providers. This is a challenge also for local authorities interested in implementing such kind of platforms: heavy integration among departments (and with other subjects/bodies) and broad strategic visions are essential, to avoid "platform multiplication" with high risk of cost-inefficiency and low quality outcomes.

Service oriented and self-financing smart data platforms: the Buckinghamshire way

As just recalled above, capability to integrate targets, functions and subjects are a key issue for developing visualizations tools. This implies specific organizational choices. What are, for public administrations, possible organizational approaches to develop "smart use of data"?

In the UK different alternative solutions to face the issue have been adopted, as illustrated by Mr. Jim Seems during the USEAct meeting dedicated to "smart use of data"[30].

A first approach could be called "Inward Investment & Development Promotion" (see, for instance, the activity carried out by Southampton Port Development and York City Council).

A second model could be defined as "piloting the development of certain applications".

Examples of such kind of approach, often promoted by private providers of public utility services, are the so called "Energy model" developed in partnership with cities or the initiative called "British Telecom campus".

A third approach is founded on horizontal cooperation between different subjects of local/regional governance system.

This "open" approach, aimed at building the base data layer mainly through collaboration, is the option adopted in the Buckinghamshire County, to develop the so called "Buckinghamshire Virtual Model"[31].

An example of such general approach is represented by an advanced platform now in development, focused on the transport system.

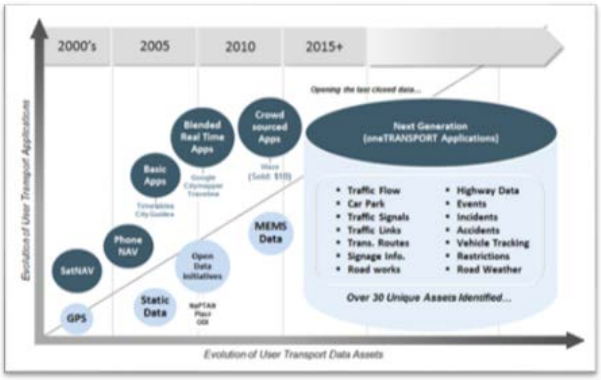
[30] Main source: Jim Sims, Partner – BTVLEP/Virtual Viewing, Smart Use of Data and Visualization tools, Case Study, IV Bilateral/Trilateral meeting, Naples (Italy) July 15th, 2014

[31] For detailed information see: http://bcc.vvhosting.co.uk;

http://bcc.vvhosting.co.uk

The system now in development is planned to include and integrate transport data assets and advanced transport applications, to provide a wide range of real time transport related services and information to the users, as showed in Figure 6.5.

Figure 6.5: Development phases of the integrated platform for transport sector



Source: Jim Sims, op.cit

The platform is designed with the aim of generating returns (investment perspective) thanks to its capability to provide value to the customers. In general, to develop such systems on a business/service oriented perspective, it is essential to identify societal problems which lend themselves to 'Big Data' solutions, together with potential datasets and potential use-cases for potential 'killer applications'.

As showed in Figure 6.6 total revenues depend on the territorial scale the service is produced and sold at. More regional subjects are engaged into the development within the cooperation, more resources are expected to flow to finance the project.

Moreover, financial returns from the platform model have to be guaranteed, together with funds to enable projects to be pump-primed. In general, another winning approach is to identify model for migrating other existing platform to one which can be revenue generating and to secure partner commitment.

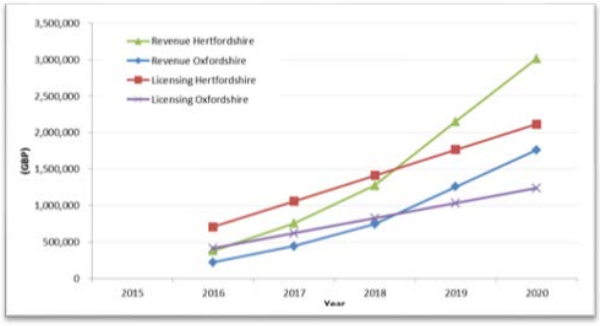


Figure 6.6: Expected revenues (splitted by areas)

Source: Jim Sims, op.cit

GIS and data use in NaplesGIS and spatial decision support systems

Municipality of Naples, in cooperation with the local University and other technical partners, is currently developing and enhancing the use of GIS with spatial planning purposes.

Among the main challenges emerged along the process, the following ones appear to be of particular importance: clarifying the role of upper level government and research institutions, for data collection and elaboration; establishing efficient procedures and skills to manage the same data for different purposes and processes, without duplications or overlapping functions; guaranteeing improved participation in the planning process, through new GIS-based tools capable, for instance, to involve citizens and further stakeholders, in large projects too.

Further remarkable difficulties also arose because of the low level of IT/public communication investment by public administration that allowed carrying on only low or no-budget actions only.

In general, available data are limited - most data are collected at regional scale - with virtually no detailed sources at municipality level.

Although these difficulties, important results have been reached. GIS tools allowed, for instance, quantifying and categorizing urban green areas.

However, one of the most important aspects of the developing phases of the Naples GIS management is related to participation. In general, several effective participation processes in Naples were previously carried out without any support from GIS. In particular, capability to quickly extract different data (such as environmental constraints, etc) to be showed to the people during the participative sessions appeared a very appreciable opportunity.

GIS also facilitate a web-site based participation process. This allows, for instance, estimating how many people have been informed about the project; receiving proposals for public discussions and dialoguing with people that cannot be present at the participation sessions. A tool for filing and retrieving information for each project,

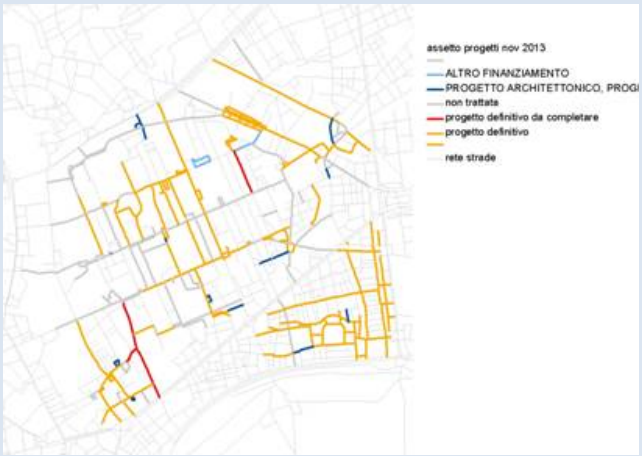
With regard to the main USEAct target for Municipality of Naples – that is improving real estate/housing assets located in the historic centre - GIS may provide valuable services to improve management of restoration process in the historic quarters...

Fig. 6.7 shows a map of a historic urban area, with GIS bases information on ongoing projects

A first goal to be achieved in that field is guaranteeing, through GIS based assessments, improved preservation processes for heritage. Moreover, through GIS-based database, several information on restauration works (physical and legal setting, work procedure status, urban planning constraints, etc.) could be managed and processed.

A second goal is related to real estate management. Detailed data about city council properties, state properties (public domain), private properties, and church properties are potentially useful to maximize benefits for the community, for example through facilitating alternative uses – tourist and cultural uses as well - of underused public properties, or supporting maintenance processes.

Fig. 6.7:GIS information in Naples' historic centre



Source: Francesca Pignataro, GIS and spatial decision support systems - managing knowledge for planning issues, Case Study, IV *Bilateral Trilateral meeting,* Naples**,** July 15th 2014

Setting up information, monitoring and spatial planning decision support systems: the experience of Riga Planning Region and Riga City

Riga Planning Region and Riga City are cooperating for developing integrated decision support systems based on GIS technology. Both local administrations are developing projects aimed at improving capacity in monitoring and managing land use.

Riga Planning Region established a general framework for data management (definition of “statistical areas” and development of a Regional statistical area database pilot project).

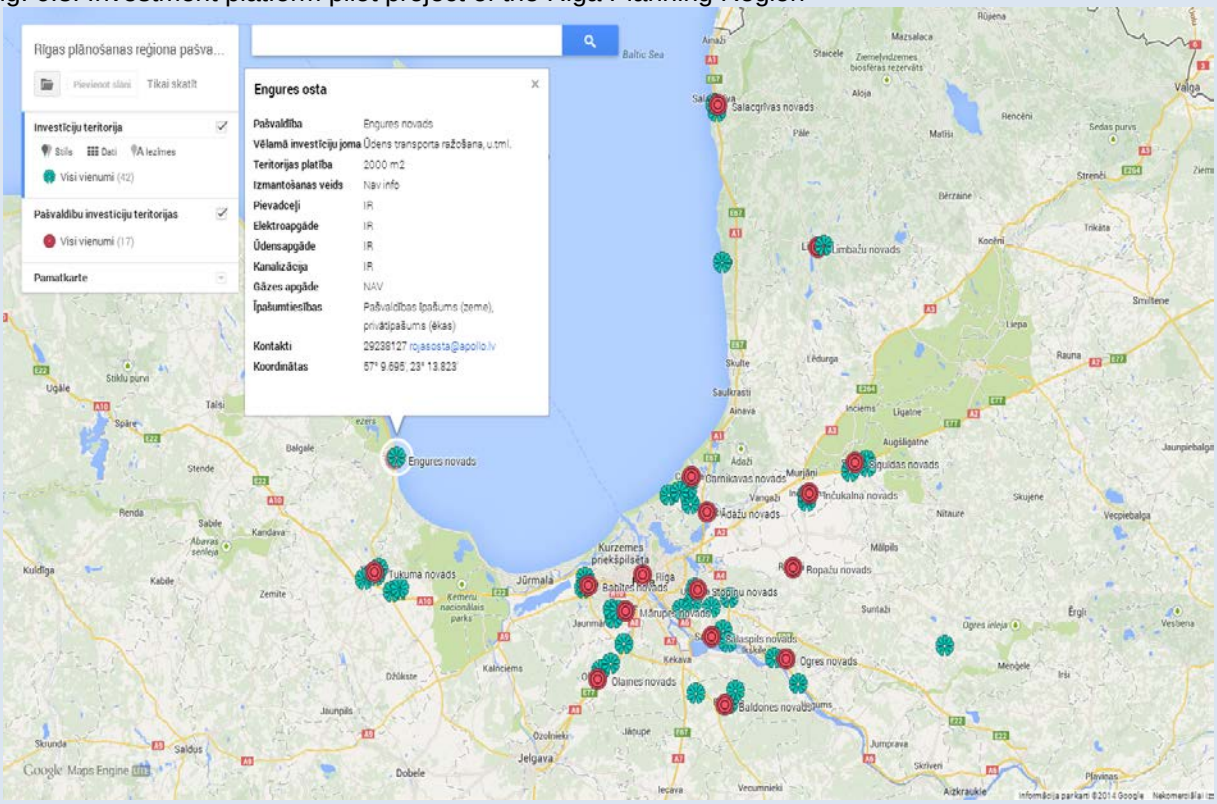
With reference to the main targets of USEAct project (urban management and land take containment at an inter-municipality scale), defining (GIS bases) statistical areas at a regional level to be filled with detailed data at local level is fundamental. RPR statistic areas database collects information not only on 28 “Novads” of the Region but on all 412 territorial units of the Riga Planning Region.

The project allowed to “fill” each territorial unit with data on: number of inhabitants and distribution, inhabitant’s income tax data and employment data. Moreover, the system allow visualizing them on a free of charge “Google Maps” cartographic base and elaborating pictures in pdf format

Because of data can be used as marketing tools with the aim of promoting potential investment areas, a specific tool, called “Investment platform of the RPR local governments”, to integrate information related to each local government, was developed.

Fig.6.8 illustrates the web interface of the “Investment Platform”

Fig. 6.8: Investment platform pilot project of the Riga Planning Region



On the other hand, Riga City carried out other projects (Communication and information tool for Riga City subdivision units; Riga City Strategy for monitoring system; Interactive map of investment projects) that represent essential steps of a strategy aimed at reinforcing the role of GIS based data assets for urban management.

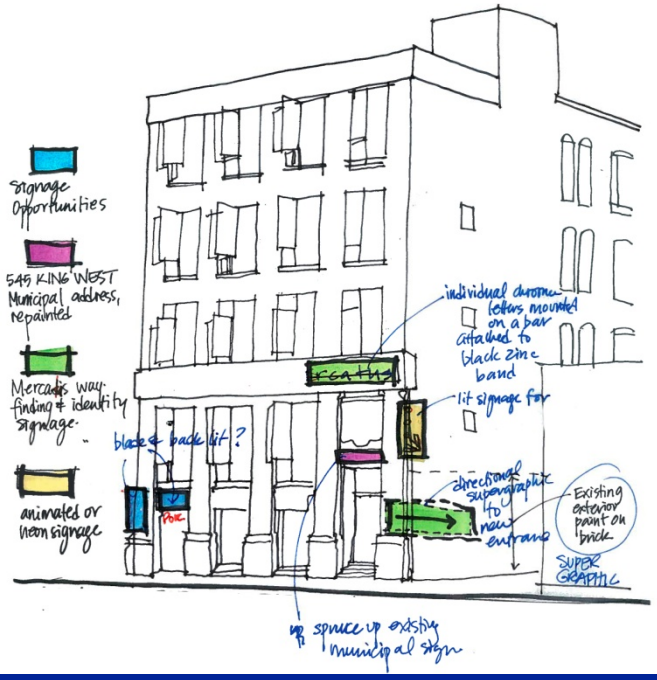
The “Communication and information tool for Riga City subdivision units” offers extensive information about each Riga territorial subdivisions and is valuable to the various target groups (citizens, professionals, investors, non-governmental organizations, students, researchers, policy makers). This tool is used by Riga City as a platform to inform public not only about public events but also planning and development activities, often as a participation and consultation facilitator.

A more specifically planning oriented tool is the so called “Riga City Strategy monitoring system”. It includes statistical data on Riga City, information on planning and development activities, data on implementation of local strategies (also with performance “charts”), database for research. It also includes maps (e.g. degraded areas, investments etc.) and further information on city development.

Interactive map of Riga City focuses on investment projects. It works as an open interactive map, aimed at showing the 2014-2020 development programs for Riga as well as investment plans and projects. Interactive tools allow getting detailed multifaceted information on each project.

Source: Agnese Bīdermane, Detailed information, monitoring and spatial planning decision support systems -The experience of Riga Planning Region and Riga City, Case Study, IV Bilateral Trilateral meeting, Naples, July 15th, 2014

SECTION III



7 RETROFITTING PROGRAMS FOR ENERGY SAVING: LEARNING FROM CASES STUDIES

Sketch of proposed exterior graphics at 545 King St W, image courtesy of Quadrangle Architects

7.1 REFITTING AND REGENERATING INHABITATED BUILDINGS AND AREAS: STARTING FROM ENERGY

Within the context of the built environment, the term 'retrofit' has been used to imply substantive physical changes to a building or buildings (normally, mitigation activities to improve energy efficiency), and often linked to the concept of 'adaptation' (i.e. intervention to adjust, reuse or upgrade a building to suit new conditions or requirements). However, at a city level it can be argued that the term 'retrofit' is distinguishable because the defining characteristics of urban retrofitting are its comprehensive nature and large scale and its integrated nature

Dealing with energy efficiency and energy consumption trends: a case study in the UK

As clearly showed in the recent research carried out by Jomes, Lannon and Patterson (Welsh School of Architecture, Cardiff University)[32], energy consumption is still growing in Europe. Where we consider the UK as a representative European example, "despite measures to improve the energy efficiency of dwellings, over the last 40 years the overall household energy consumption has increased by about 12.5%.

"Heating is still the dominant energy use in housing, although in recent years there is an indication of a reduction in heating energy demand.

[32] Main Source: Phil Jones, Simon Lannon and Jo Patterson (2013), Retrofitting existing housing: how far, how much?, Building Research and Information, Vol. 41, No. 5, 532–550. Relevant parts of that article have been used in this chapter.

Improvements in heating energy efficiency have been offset by increases in indoor air temperatures, by an average, with a shift to whole-house heating. Nevertheless, on the other side, there is a considerable increase in electrical demand for lighting and appliances which affects costs".

"Nevertheless, if the savings through insulation and heating efficiency improvements from 1970 onwards had not been made, then energy consumption would be around twice the current levels".

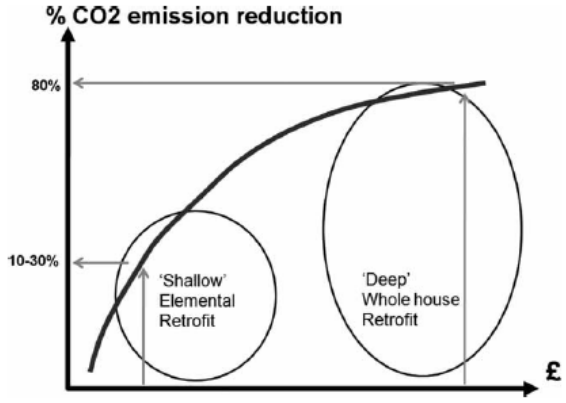
In general, measures have included loft insulation, double-glazing and more efficient boilers, measures that can be regarded as "easy tasks" (often colloquially referred to as 'low hanging fruit') and natural replacement.

"These are measures where occupants can generally see cost-effective real benefits, not only in greater energy efficiency, but also in increased thermal comfort".

"Measures can be implemented at an 'elemental' approach: individual measures, such as cavity-wall insulation, or a 'whole house' approach, which integrates a number of measures tailored to the specific property".

The trend in cost increase associated with going from relatively simple elemental 'shallow retrofit' measures to a multifaceted whole-house 'deep retrofit' approach is heavy, as showed in Figure 7.1.

Figure 7.1: Diminishing return in CO2 emission reductions



Source: Jones, Lannon & Patterson (2013)

As found by Jones, Lannon and Patterson, "multiple measures tend to follow the law of diminishing returns, where energy saving from a combination of measures is not necessarily the sum of savings from individual measures".

Improving knowledge about possible outcomes

As clearly showed in the mentioned article, an important factor is the ability to predict at a large-scale the impact (costs included!) of retrofitting with energy-saving measures.

Of particular concern is identifying the most appropriate package of measures to be applied to specific

"In order to assess the impact of upgrading the performance of existing housing Energy, Environmental and cost prediction are required.

Predicting cost and performances at "local level" is particularly important to carry on relevant policies in the field. This is, however, not an easy task and models are needed.

Figure 7.2 shows an example of a model adopted by a local community (Port Talbot, UK) to predict energy efficiency improvements.

Figure 7.2: Predicting impacts at «local area» level: the Port Talbot example

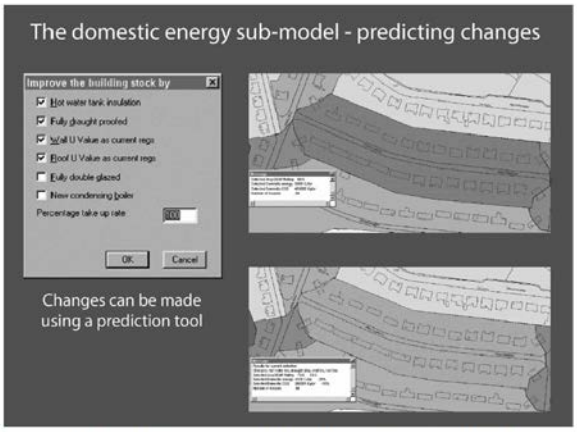


Figure 6 Output of the Energy and Environmental Prediction (EEP) model as a thematic map indicated energy demand at 'postcode' level for before (top) and after (bottom) energy demand condition, and the menu for applying energy conservation measures

Source: Jones, Lannon and Patterson (2013)

The prediction model (EEP) was used in Neath Port Talbot as a test-bed for its application.

EEP is based around a 'geographical information system' (GIS), which contains information on all the housing within a local authority area.

Standard Assessment Procedure "are needed to categorize buildings.

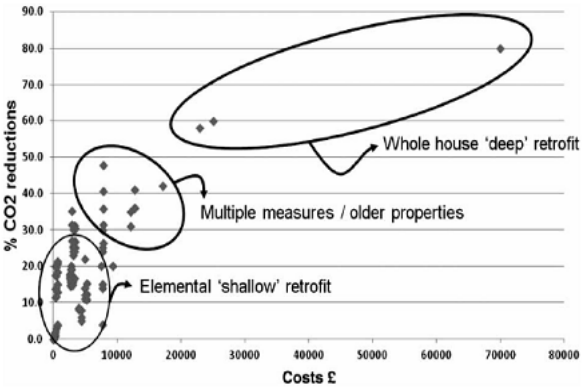
It is clear that prediction models adoption has to be embedded into actual retrofitting programs.

In Neath Port Talbot between 2004 and 2007, a large programme of energy-efficiency retrofitting of existing housing was carried out.

The “retrofitting technical and economic challenge”

As demonstrated by Jones, Lannon and Patterson, the Wales refitting programs (see Box above) clearly showed that, in general, attaining relevant energy savings through refitting programs can be hindered by high costs/benefits ratios

Figure 7.3: Wales Refitting Programs - %CO2 reduction versus costs



Source: Jones, Lannon and Patterson (2013)

“Although the Wales scheme initially aimed to take a whole-house approach, the projects within the Warm Wales programme took more of an elemental approach, improving many properties with fewer measures. Majority adopted one measure only, because of the diminishing returns law”.

Difficult pay-backs are, in conclusion, a main challenge, as stressed by the scholars: “as the cost of measures rises in relation to predicted savings (partly due to the easy measures having already been applied), reasonable paybacks, assuming some sort of (current) loan system, become difficult to achieve”.

Key message is that it is unlikely to comply with strong targets (e.g. an 80% reduction in CO2 emissions) and that “realistic” retrofit standard targets” have to be established.

Another issue is related to the fact that calculations often do not reflect ‘take back’ due to higher temperatures, or ‘in use’ factors resulting in underperformance, both of which would reduce the energy savings in practice and make payback even more problematic.

In general, some lessons from the Wals experience can be learnt, Jones, Lannon and Patterson conclude. As a first, it is important to be able to target the most beneficial combination of packages of energy-saving measures and renewable energy supply, for specific house types or units, avoiding any “general approach”.

Adopting models for prediction framework (appropriate packages of measures can be targeted for specific house types) to achieve maximum savings in relation to costs, is important too, but it is not easy.

Moreover, there are ‘in-use’ factors now being applied to account for lack of predicted performance in practice, especially solid-wall insulation (better assessment of performance in use are needed).

It appears rather clearly that internal benefits are often too low compared to costs, thus wider benefits of large scale activities not specifically referred to the energy saving target (“externalities”) should be accounted to assure positive cost/benefit ratios.

In fact, there are additional benefits from whole-house retrofitting including improving the general aspects and quality of the building and, in more in general, improving quality of life of occupants, although these benefit can highly vary from case to case.

Many programs demonstrate the importance of including other socio-economic activities, such as job creation, start-up companies, training and benefits advice, within large scale retrofit programs, taking advantage of the opportunities provided through large-scale interventions.

The cost–benefits from these additional activities are not generally accounted for in retrofit programs, but they might be used to better target government support funding.

Wales Refitting Programs

This program was carried out by Warm Wales Ltd, a ‘not for profit’ community-interest company that delivers home energy-saving measures,

It particularly targets the poorer sectors of the community, and in many cases provides help for those who would otherwise not be eligible for financial support.

The main funding was obtained through the utility company National Grid (electricity and gas suppliers were obligated by government to achieve targets in domestic energy efficiency).

Other funding sources included the local authority.

All householders participating in the scheme were also eligible to request free benefits advice relating to government financial support (they were offered a home visit and help with the application process).

The Warm Wales Program of work included the installation of Cavity-Wall Insulation, External Wall Insulation (EWI), Loft Insulation (and loft ‘top-ups’) and Hot Water Cylinder Insulation Jackets. It also included a replacement boiler or full central heating system.

Figure 7.4: “Warm Wales”: pictures from the web-site

Source: Warm Wales

The ARBED scheme was initially set up to take a 'whole house' approach to install energy-efficiency measures and building integrated renewable energy supply systems

Around £60 million of funding from a range of sources, including the government, and direct funding from Registered Social Landlords and local authorities

Twenty-eight projects took place across Wales with work on site starting in April 2010 (more than 6000 homes)

Sources: http://www.warmwales.org.uk/

http://wales.gov.uk/topics/environmentcountryside/energy/efficiency/arbed/?lang=en

Main challenges of retrofitting programs

Many retrofits tend to demonstrate a continuing performance gap between predicted energy savings and actual energy savings.

Challenges include:

- highly variegated housing stock,
- a low rate of property turnover,
- disruption and inconvenience to occupants
- undesirable payback periods
- lack of occupant interest in energy efficiency,
- lack of a knowledgeable and competent workforce to advise homeowners and implement energy-efficiency strategies (balkanized character of the retrofit industry).

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- a low rate of property turnover;
- disruption and inconvenience to occupants;
- undesirable payback periods;
- lack of occupant interest in energy efficiency;
- lack of a knowledgeable and competent workforce to advise homeowners and implement energy-efficiency strategies (balkanized character of the retrofit industry)

What scale for long term «refitting» policies?

Retrofitting oriented policy frameworks are, in general, fragmented, with different regulations, incentives and programmes. Yet, large-scale urban retrofitting requires systemic change in the organization of built environment and infrastructure, and the integration of socio-technical knowledge, capacity and responses. In this sense, a focus purely on "buildings" leads to lack of strategic focus, in the long term. Existing infrastructure and the built environment tend to change very slowly because of 'sunk' investments that create path dependencies that can only be adjusted through strong and high-level governance and supporting policies. "In reality it is impossible to deal with deep "energy strategies" related to buildings without simultaneously tackling energy issues not only at the neighborhood but also at city levels, if there is to be any sense of coherence across energy policies." (Stevenson, 2103). Yet," the capability and capacity to mobilize the stakeholders necessary to steer complex long-term systems innovations across multiple socio-technical 'regimes' (housing, non-domestic buildings, urban infrastructure), scales ("building", "neighbourhood", "cityregion"), and domains (energy, water, resources use) coherently, and in a coordinated way, is currently extremely limited at a city scale" (Dixon & Eames, 2013). Coordination between energy policies at different scales has been hampered by political, operational and incentives regimes. Development of a complete new integrated perspective on long-term deep socio-technological systems innovation is required (Socio Technical Transition).

7.2 CONVINCING PEOPLE AND FINANCIAL INSTITUTIONS TO RETROFIT

Technical and economic challenges, discussed in the above paragraph, are just a facet of the "refitting" challenge. In reality, retrofitting is a part of a very complex system, with lots of moving parts. Social aspects play a key role and strong people engagement is definitely a strategic feature. Financial aspects are, moreover, another sensitive aspects[33].

The socio-technical perspective to retrofitting

As clearly recalled by Karvonen (2013), retrofitting cannot easily reduced to simple explanations (e.g. 'it's technology not people' or 'people are selfish') or simply policy approaches (e.g. 'just get the prices right' or 'it's just that financial incentives are needed') [34].

Householders often opt for increased temperatures rather than greater energy and cost savings: it suggest that people prioritize their comfort, convenience and aesthetics. Conversely, things that are important to occupants are often neglected in occasion of retrofitting programmes.

The Karvonen paper, on people feelings towards retrofit, shows that main concern is related to aspects such as providing access to the belongings and clothes (which were stored offsite!) or avoiding damage to the carpets.

"The phenomenological concepts of breakdown and ready-to-hand are key elements of the disruption the occupants experienced during retrofit. If retrofitted dwellings provide fewer affordances than before they are unlikely to be popular with occupants, as energy, in fact, is not a priority matter for many families.

Retrofit is a significant 'moments of change' when the occupants' activities and perceptions can shift dramatically. The social practices approach is particularly useful in recognizing that retrofit is neither simple nor can it be solved with a 'one-size-fits-all' approach.

Also the "sociological" perspective suggest that is important providing customized solutions to domestic retrofit that follow a community-based social practice approach.

The complexity of the retrofit problem means that solutions need to be specifically tailored to the building or group of buildings in question, through community based partnerships (Stafford et al., 2011) and to develop customized solutions to local groups of houses through facilitated engagement between occupants, housing providers, community groups, local authorities and construction professionals.

As the focus is on changes in the existing socio-technical configuration of materials, competences and images of domestic energy practices, information provision has to be considered as a key factor, as stressed by Karvonen.

Information strategies and tools are important, as showed in Figure 7.5 (from the Karvonen research paper), displaying recent examples of information campaigns related to refitting programmes in the UK.

Information provision and incentives are an important part of these programmes, but they should be complemented in "socio-technical" programs by further activities. These activities mainly are:

- Surveys (in families) and consultations with homeowners and occupants,
- Community events and activities
- Cost estimates and energy models at "area" level
- Coordination of building work
- Feedback with the occupants during works and after the work is completed, and long-term performance monitoring

[33] Main Sources of this paragraphs are the following research papers: Andrew Karvonen (2013), Towards systemic domestic retrofit: a social practices approach, Building, Research & Information, 41:5, 563-574; Malcolm Eames, Tim Dixon, Tim May c & Miriam Hunt (2013), City futures: exploring urban retrofit and sustainable transitions, Building Research and Information, Vol. 41, No. 5, 504–516; Tim Dixon and Malcolm Eames (2013), Scaling up: the challenges of urban retrofit, Building Research and Information, Vol. 41, No. 5, 499–503; Chris Tweed (2013), Socio-technical issues in dwelling retrofit, Building Research and Information, Vol. 41, No. 5, 551–562; Andrew Karvonen (2013), Towards systemic domestic retrofit: a social practices approach, Building, Research & Information, 41:5, 563-574

[34] A previous research outcome, by Lutzenhiser, (2008) is cited.

Figure 7.5: Information strategies in refitting programmes – examples in the UK

Table 2 Examples of information resources and demonstration projects on UK domestic retrofit

Centre for Refurbishment Excellence www.core-skills.com	A new education facility funded by private industry, Stoke City Council, Stoke College, and the Building Research Establishment (BRE) to train the domestic refurbishment workforce. The centre will eventually include an exhibition space for displaying building products and hosting events
National Refurbishment Centre (NRC) www.rethinkingrefurbishment.com	A joint initiative between the Energy SavingTrust (EST) and the BRE Trust to develop an online database of 500 refurbishment exemplars. The database provides the building sector with information on best practices and regulatory frameworks as well as quantitative and qualitative data on real-world projects
Low Energy Building Database	An online database with case studies of houses that participated in the Technology Strategy Board's Retrofit for the Future programme. Each case study includes technical information, brief descriptions and photographs
Great British Refurb Programme www.greatbritishrefurb.co.uk	A partnership between the UK Green Building Council (UKGBC), *Grand Designs* magazine and the World Wildlife Federation (WWF) that includes refurbishment case studies for homeowners and the building industry
Existing Homes Alliance www.existinghomesalliance.org.uk	A cross-sector partnership of experts and practitioners of domestic refurbishment providing reports and guidance to the building sector
The Green Register www.greenregister.org.uk	A not-for-profit organization that provides training to the building industry as well as a directory of accredited building professionals for homeowners
The Superhomes Network www.superhomes.org.uk	An online database of over 100 exemplar older houses that have achieved at least a 60% reduction in carbon emissions. The network hosts open days in March and September to provide public tours of some of the houses. The network also provides reviews of consultants, builders and suppliers, as well as courses and advice on refurbishment
VictorianTerrace Project at BRE www.bre.co.uk/podpage.jsp?id=2426	The Building Research Establishment's (BRE) 'flagship refurbishment project' will act as a laboratory for new products and design strategies for retrofitting existing houses
Birmingham Zero Carbon House zerocarbonhousebirmingham.org.uk	A home-grown demonstration project of an 1840s semi-detached house in Birmingham that has been refurbished by the homeowner to meet Level 6 (Zero Carbon) of the Code for Sustainable Homes

Source: Karvonen, 2013

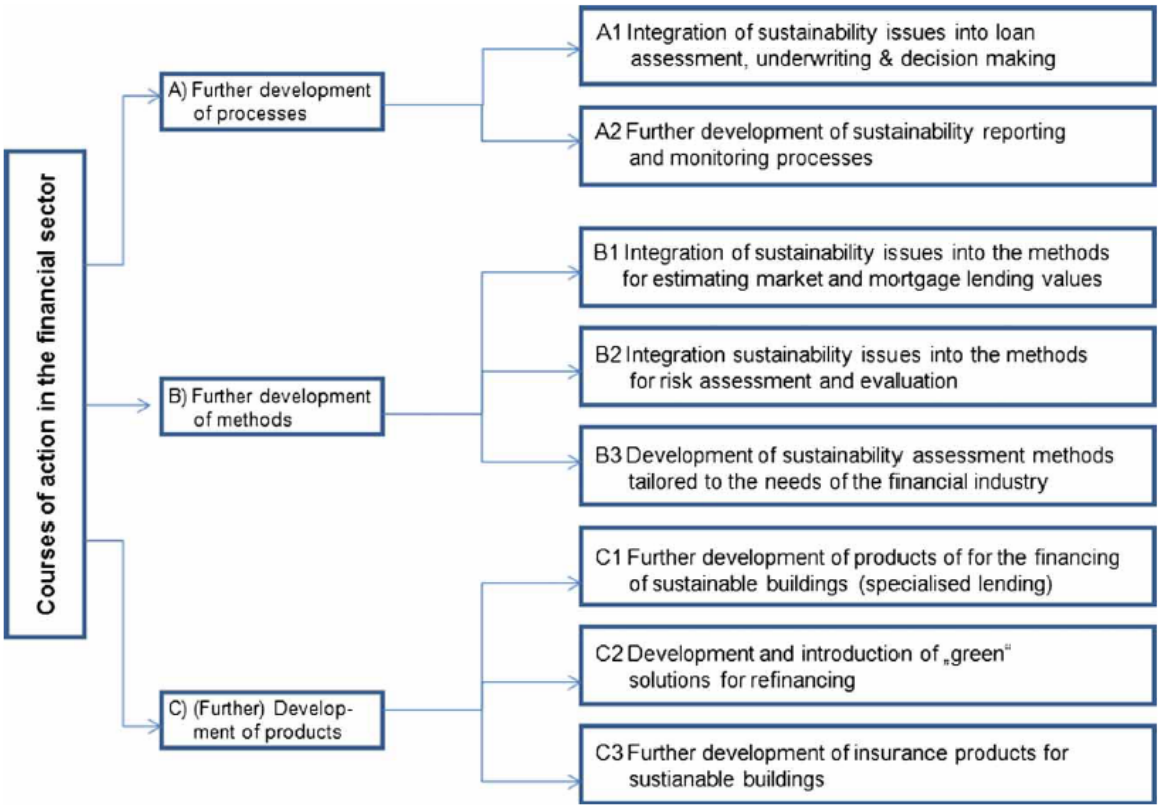
Retrofitting Innovation through community learning: the Warm Zones UK case

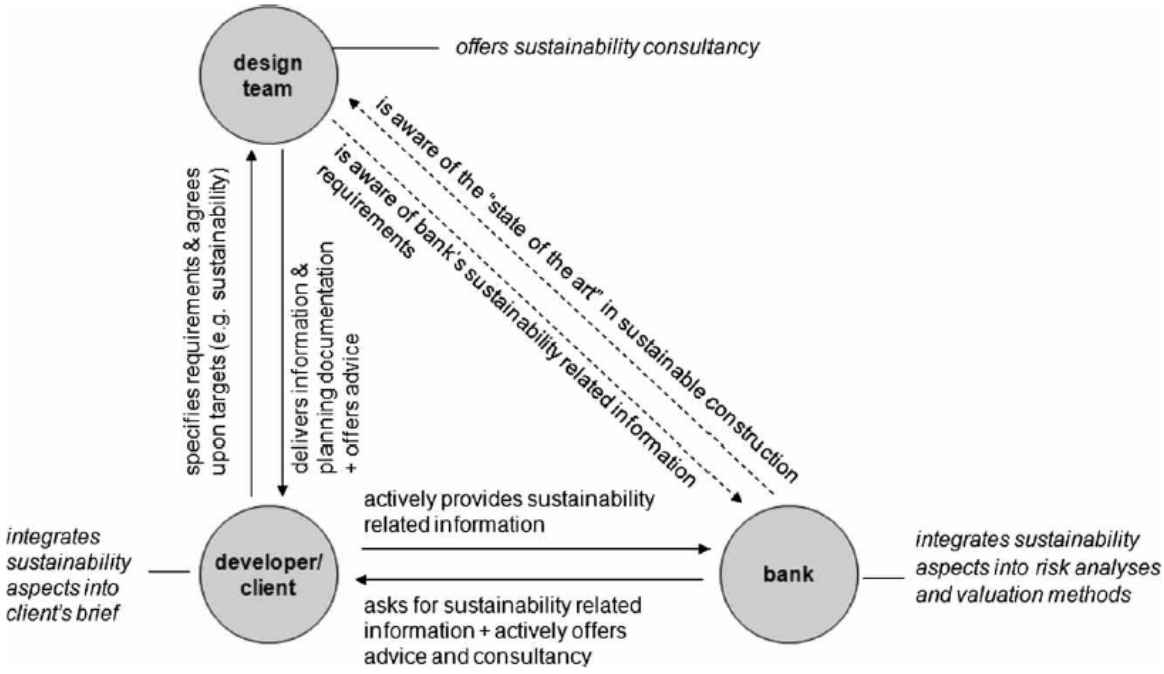
A larger example of innovation through community learning is "UK Warm Zones", a not-for-profit subsidiary of National Energy Action (Warm Zones, 2013).

A «Warm Zone" is a local or regional partnership that includes the local authority, energy suppliers, housing companies and other organizations from various sectors to coordinate and target domestic energy-efficiency strategies.

Source: http://www.warmzones.co.uk/

Figure 7.6: Stakeholders of the financial sector and possible relationships





Source: Lützkendorf, et al.(2011)

Innovating "financial institutions" [35]

Financial institutions are another "social" institution that need to be structurally oriented to refitting.Public sector usually tries to intervene, through specific support, as personal carbon allowances combined with local authority-run 'Low Carbon Zone' improvement areas. However, such solutions require substantial government intervention and upfront investment for "energy related" infrastructures that are often not more available.

The real challenge here, is how to deliver these initiatives more effectively through the private sector or public–private partnerships. In practical terms, the need for realistic loan systems is required, with use of 'lifetime mortgages' funded through a 'green investment bank'. The Australian 'Green Lease' scheme, mentioned by Newton, (2013), is a remarkable example.

Generally, as acknowledged by Lee (2013), financial sector has not yet linked its existing processes for both commercial and residential buildings (e.g. risk management, assessing buildings' lending values and determining financing/insurance conditions) with the need to integrate sustainability aspects.

Figure 7.6 show the stakeholders of the financial sector in the "refitting" market arena and (below) relationships that should be established to guarantee new approaches in terms of coordination. However, banks and institutional investors have not yet created the financial instruments and infrastructure to provide external capital with easy access to investments in energy efficiency retrofits of commercial buildings.

Financial stakeholders' engagement will likely increase in the coming years in order to meet their very own interests and goals. However, the shifting of more sustainable practices into mainstream operation cannot be expected to happen in the short term. In any case, capital will only flow at acceptable terms and price into sustainable building-related activities if financial stakeholders can identify, price and/or mitigate associated investment.

Risk is another sensitive variable. Adequate risk management requires not only the further development of appropriate methods and processes for risk assessment and valuation, but also their widespread adoption and application in practice, which is a longer-term process.

[35] Main source of this paragraph is the research paper: Lützkendorf , Fan & Lorenz (2011) Engaging financial stakeholders: opportunities for a sustainable built environment, Building Research & Information, 39:5, 483-503

Readings

Retrofitting is, as clearly showed above, is a broad and challenging issue.

A "reading list", is provided below. Some of the papers and sources have been used for this chapter, some have not been mentioned but represent, in fact, remarkable sources on the issue.

Brenda Boardman, Achieving Zero: Delivering Future-Friendly Buildings, Environmental Change Institute, Oxford, 2012

Lützkendorf , Fan & Lorenz (2011), Engaging financial stakeholders: opportunities for a sustainable built environment, Building Research & Information, 39:5, 483-503

Peter W. Newton (2013), Regenerating cities: technological and design innovation for Australian suburbs, Building Research & Information, 41:5, 575-588

Malcolm Eames, Tim Dixon , Tim May c & Miriam Hunt (2013) City futures: exploring urban retrofit and sustainable transitions, Building Research & Information, Vol. 41, No. 5, 504–516

Andrew Karvonen, (2013) Towards systemic domestic retrofit: a social practices approach, Building Research and Information, Vol. 41, No. 5, 563–574

Phil Jones, Simon Lannon and Jo Patterson (2013), Retrofitting existing housing: how far, how much?, Building Research and Information, Vol. 41, No. 5, 532–550

Tim Dixon and Malcolm Eames (2013), Scaling up: the challenges of urban retrofit, Building Research and Information, Vol. 41, No. 5, 499–503

Chris Tweed (2013), Socio-technical issues in dwelling retrofit, Building Research and Information, Vol. 41, No. 5, 551–562

Lee Ann Nicol (2011), The role of institutional regimes in motivating change for sustainable housing Building Research and Information, 39(5), 459–472

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http://www.warmzones.co.uk/

http://www.warmwales.org.uk/

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URBACT II Operational Programme, Working Group, HOPUS, Housing Praxis for Urban Sustainability Baseline Study

URBACT II Capitalisation, Cities of Tomorrow Action Today, Building energy efficiency in European cities, http://urbact.eu/fileadmin/general_library/19765_Urbact_WS6_ENERGY_low_FINAL.pdf

Key message about retrofit

- **Refitting is not an easy tasks. Evidences demonstrate it well (failures are frequent!)**
- **Existing incentives are fragmented and do not always get successful results.**
- **Right predictions and right «refitting packages» are required, with improvements of «in use» implementation on broad areas.**
- **Very high local-case customization is required, but broad scale (city level but also governmental one) is definitely strategic – integrating different levels.**
- **Paybacks remain a problem: strong public involvement is still required.**
- **Socio-technical approach is needed, through community based retrofitting programs; understanding “disruption” is important.**
- **Financial markets are not fully ready for the challenge: innovation (and time) is required to “connect” financial operators with the issue (assessing risks, etc.).**
- **Structural systemic «transition» (long term!) is needed to get more substantial targets at city level and at financial level.**

8 ADAPTIVE REUSE: FROM HISTORIC BUILDINGS TO URBAN AREAS

8.1 ADAPTIVE REUSE OF HISTORIC BUILDINGS: MAIN CONCEPTS AND CHALLENGES

Improving energy efficiency of existing buildings, through refitting, is an important strategy to develop urban reuse. However, energy efficiency improvement is just an aspect of "building reuse" and in many single cases and urban areas (as, in particular but not only, in historic buildings/districts) a more multifaceted "adaptive reuse" policy of existing building is required.

Main challenges of building retrofitting for energy-saving purpose have been discussed above, in paragraph 7.2.

Comparable (or even more problematic) challenges have to be overcome when the purpose of "refitting" is broader, including redefining the function of the building. This is the so called "Adaptive Reuse" (AR) issue.

AR can be broadly defined as "any building work and intervention to change its capacity, function or performance to adjust, reuse or upgrade a building to suit new conditions or requirements" (Douglas, 2006).

AR is a "process by which (structurally sound) older buildings are developed for economically viable new uses.

AR, clearly, often requires energy saving oriented refitting approaches as well, but it is different in nature.

Challenges for «Adaptive Reuse» of heritage buildings.

Heritage buildings (and districts) are one of the most relevant target for AR.

As correctly pointed out by Bullen and Love, in a research paper on AR in Australia[36], when AR is aimed at heritage buildings, the new use should, in general, ensure the appropriateness of potential uses in the light of the assessment of significance and take into account the medium and long-term financial (and cultural) viability of the site.

[36] Bullen, P.A., Love, P.E.D. (2010) The rhetoric of adaptive reuse or reality of demolition: Views from the field, Cities 27, 215–224

Balancing cultural significance and economic viability is one of the major challenges in the reuse of historic buildings (Murtagh, 2006).

Market potential and benefit/cost ratio are both strategic variables for AR.

The building condition, scope of refit, overall cost saving, value of the building and land should be all considered for the purposes of a private perspective cost-benefit analysis.

As Bullen and Love affirm, AR works if the bottom line is fully measured i.e. that all the costs and benefits are factored in over the projected lifecycle of the building.

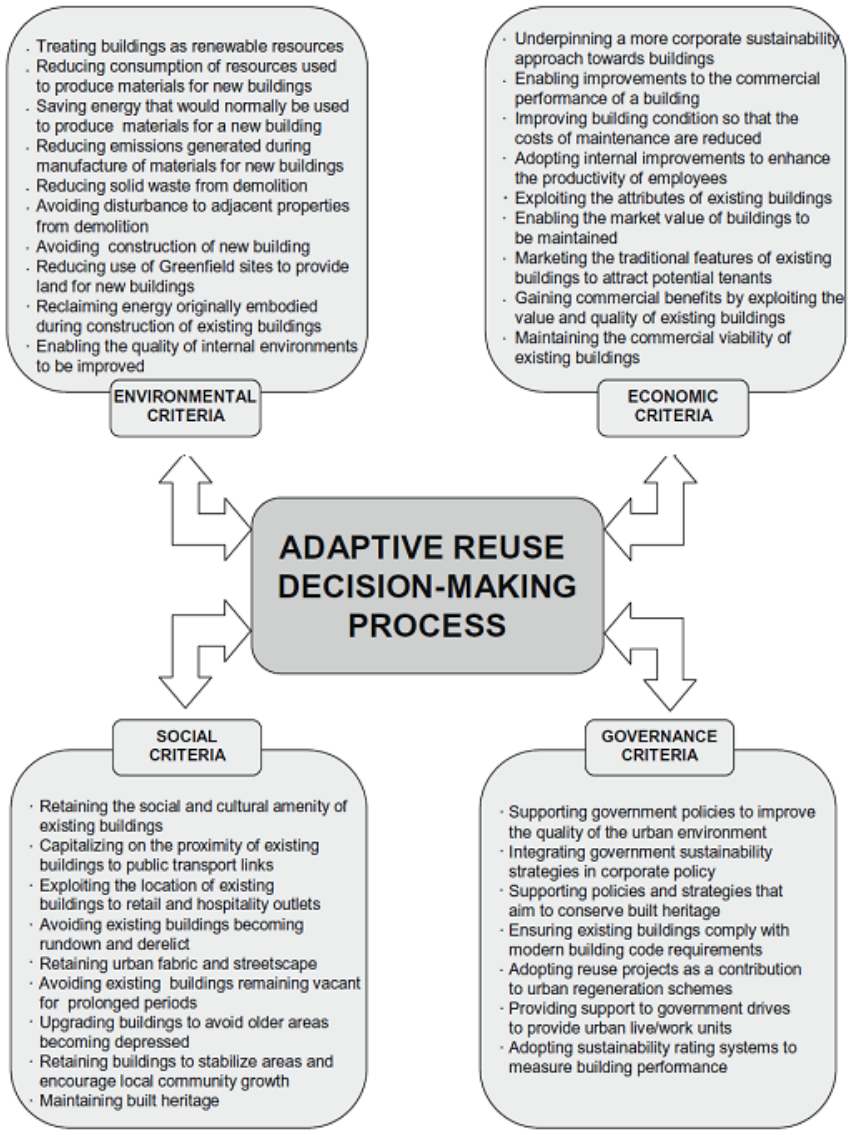
Adaptive reuse may not be an economically viable option when the structure of a building requires extensive strengthening to be undertaken. Also for public authorities, there is a strong economic case for regenerating historic buildings, since the benefits relate not only to the individual building, but also to the wider area and community

Figure 8.1 illustrates a typical Adaptive Reuse decision-making process, which relates to “four” different criteria categories (environment, economy, social and governance).

Involving the community can build support for a project, help to avoid opposition later and may uncover unexpected resources.

The success of many adaptive reuse projects can result in revitalization of a block or neighborhood.

Figure 8.1: Adaptive Reuse Decision Making Process



Source: Bullen and Love, 2010

Building Obsolescence and AR

In general, attributes that make a building suitable or unsuitable for adaptive reuse are the following ones.

- impact of adaptive reuse on stakeholders;
- circumstances in which adaptive reuse or demolition are considered (for not “designated” sites);
- effectiveness of adaptive reuse as a strategy to achieve sustainability (e.g. integration with energy saving refitting but also at “urban level”);

But more in general, the possibility to develop AR of a building basically depends on the degree of “obsolescence” of the building. Obsolescence should be considered as a combination of four obsolescence factors.

1) Physical obsolescence:

While all buildings experience natural decay over time, accelerated deterioration leads to reduced physical performance and obsolescence. Natural decay is not considered an attribute of obsolescence but rather of age.

2) Economic obsolescence:

The period of time over which ownership or use of a particular building is considered to be the least cost alternative for meeting a business objective governs investor interest and obsolescence based on economic criteria. Economic obsolescence can also include the need for location change.

3) Functional obsolescence:

Change in owner objectives and needs leads to possible functional change from the purpose for which a building was originally designed

4) Technological obsolescence:

The building or component is no longer technologically superior to alternatives and replacement is undertaken because of expected lower operating costs or greater efficiency.

5) Social obsolescence:

Fashion or behavioral changes (e.g. aesthetics, religious observance) in society can lead to the need for building renovation or replacement.

6) Legal obsolescence:

Revised safety regulations, building ordinances or environmental controls may lead to legal obsolescence.

Source: Langston & al. 2008

Discovering AR potential at urban scale Importance of inventories and "quick scans"

Facing the AR challenge by local administration require sound strategic approach, in particular when assets to be potentially reused are many.

Independently on the fact that buildings are or not "heritage", may be useful ranking existing buildings in an organization's portfolio or existing buildings across a city or territory, according to AR potential. Inventories can be powerful preservation tool for vacant or underutilized buildings. They can reveal potential developments to for-profit and nonprofit developers.

In order to be able to judge buildings on their potential for transformation, a "transformation meter" was developed by Geraedts and Van der Voordt (2003, 2007). Hek, Kamstra, and Geraedts (2004) developed an instrument called 'programmatic quick scan', which consisted of four phases.

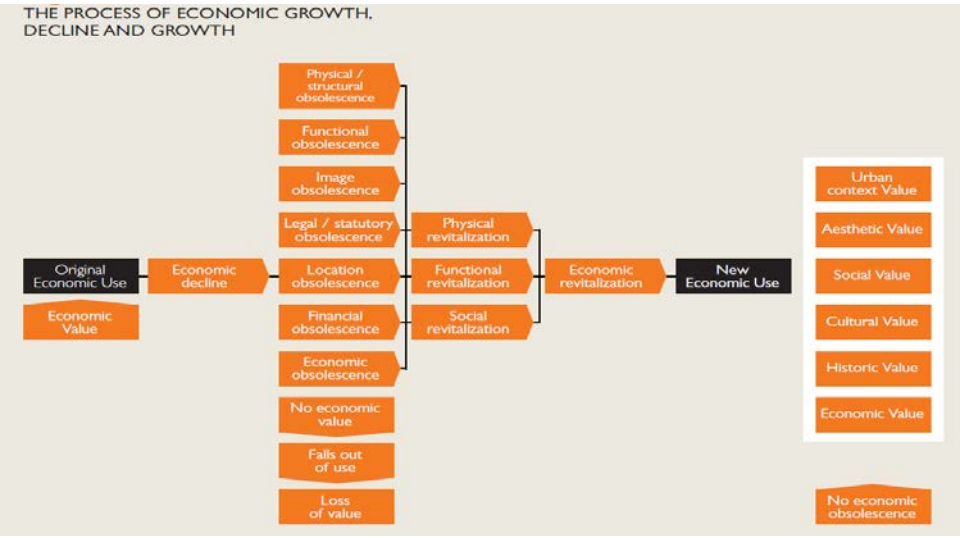
For example, the so called "Adaptive Reuse Potential Model" allows assessing "*useful life"* of the building. It requires an estimate of the expected physical life of the building, the current age of the building, an assessment of the level(s) - from 0 to 20 - of physical, economic, functional, technological, social and legal obsolescence[37].

The need to take in consideration different "obsolescence" facets, is widely recognized, as showed in Fig. 8.2, published in a recent UK "guideline" on adaptive reuse[38].

3737 For obsolescence classification and description of ARP Model see e.g.: Craig Langston, Francis K.W. Wong, Eddie C.M. Hui, Li-Yin Shen, Strategic assessment of building adaptive reuse opportunities in Hong Kong, Building and Environment 43 (2008) 1709–1718

[38] "*Heritage Works - The use of historic buildings in regeneration. A toolkit of good practice*", British Property Federation, Deloitte Real Estate, English Heritage, RICS, 2013, http://www.deloitterealestate.co.uk/cmspages/getfile.aspx?guid=45fa1ce8-8a10-41af-95e9-f28a79b0dd20

Figure 8.2: The process of economic growth, decline and growth



Source: Heritage Works - The use of historic buildings in regeneration. A toolkit of good practice, 2013

Another model to assess the adaptive reuse potential is the so called «Adapstar» Model. As showed in the Fig. 8.3, a specific list of design criteria has been identified within this multi-criteria evaluation framework.

The model develops, among other, a new concept of 'future building adaptive reuse', which is now defined as a strategy to prolong the useful life of new buildings before they reach physical, economic, functional, technological, social, legal or political obsolescence. But it is clearly useful to assess ARP of existing assets, as well.

Figure 8.3: Adapt Star Model criteria

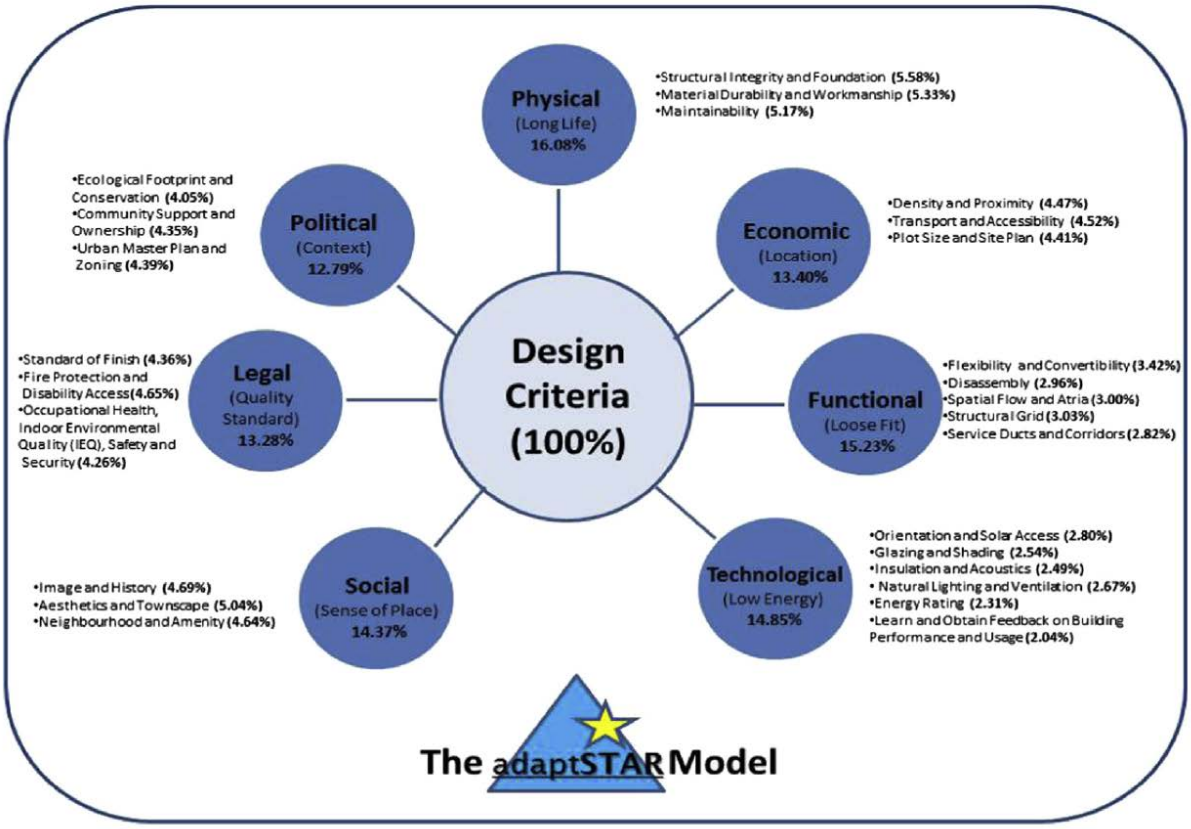


Fig. 1. The *adaptSTAR* model (final development).

Source: Conejos & al., Habitat International 41 (2014) 85e91

Free Riga – revitalizing movement of empty houses

Re-using residential buildings not always requires deep restructuring. Sometimes, “lighter” approaches could be sufficient.

Riga City Central areas are undergoing a “shrinking city” process, with a remarkable amount of empty houses resulting in the city area.

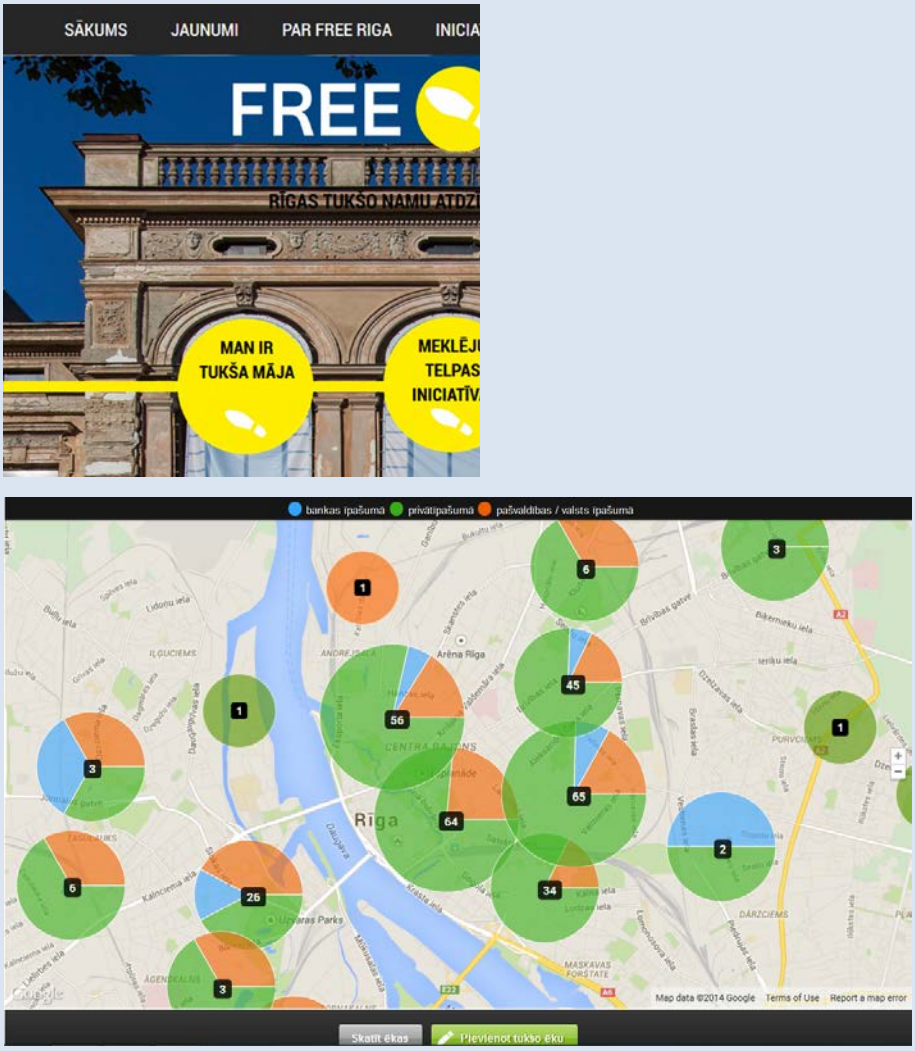
Riga ‘lost’ 1/3 of inhabitants during last 25 years. About 14 % of Riga’s buildings are empty or ‘idle’ for a long time and Inhabitants of the city do not live in Riga, since more and more people live in “Pieriga” municipalities, thus inducing heavy “urban sprawl” in the area.

To deal with this challenge, a bottom-up and “market based” answer has been proposed.

The initiative, called “Free Riga”, based on a web-portal, see Figure 8.4) provides tools to facilitate renting empty and unused houses.

Maps and information on un-occupied residential units are visualized, together other useful information and “networking” occasions.

Figure 8.4: Free Riga web portal



Free Riga also promotes temporary initiatives to reuse those assets (see for example the event “occupy me”), paying attention in particular to the requirements of creative industries.

Source: http://freeriga2014.lv/

8.2 "ADAPTIVE REUSE OF HERITAGE BUILDING: THE GEORGIAN HOUSES IN DUBLIN

"Georgian Dublin" is a collection of elegant landmark buildings in an urban setting of tall brick terraces. Dublin City Council is developing a multi-action strategy aimed at improving the adaptive-reuse potential of the "Georgian houses" built heritage in Dublin. The strategy is based on several activities related to pilot projects in different "Georgian Townhouses" and is focused on building knowledge and experience on how to deal with the multifaceted reuse challenge.

South Georgian Dublin Townhouse Reuse Study[39]

The South Georgian townhouse has a rich history of use within the city of Dublin. It has been considered by planners, architects and architectural historians as one of the more robust and resilient building and urban typologies, which the continual and diverse pattern of use confirms.

It also comprises the basic component of the distinctive urban set-pieces of internationally significant form and character within the historic centre of Dublin City.

The growing importance of the City's built environment and public realm to Dublin's success in competing against other capital cities for investment, tourism, is a key issue.

Georgian Dublin is perhaps the defining physical character of Dublin.

More than a tourist image, the Georgian city evokes a deeply urban city, full of fine proportioned and light-filled rooms and generous public gardens (squares) set within a calm, coherent "urbanscape". That this urbanity is well used and well tended is of significant importance to the wider City's well being.

This can facilitate the promotion of the South Georgian core as a place which can (continue to) accommodate quite a range and scale of uses.

Despite this long tradition and acknowledged importance, the ongoing suitability of the Georgian townhouse to accommodate certain uses is today being challenged.

This challenge has led to a growing public and policy concern over the future of the South Georgian townhouse.

The objective to support Dublin's designation as a World Heritage City (currently on the tentative list).

The study on "South Georgian Dublin Townhouse Reuse", carried on by Shaffrey Associates Architects, is an important initiative, therefore, to confront the apparent anomalies between a history of continuous and diverse occupation of the Georgian townhouse (comprising the full plot), a history which shows a relatively safe occupation, and, today's regulatory and economic context which appears to be limiting the potential for re-use.

As explained in next paragraph, the introduction of Disability Access Certificates has raised a number of conflicts between conservation objectives and compliance with accessibility regulation, and associated implications.

On the other side, after recent downturn, situation has moved from a severe fall-off in demand for property to a gradual revival and the South Georgian core is emerging slowly from a low-value base.

The continuing perception that these buildings are difficult to adapt may temper any property price escalation in the South Georgian core, which may be a positive situation in the long term. Moreover, evolving demographics and patterns of living and property use are further important variables.

In relation to the Conservation objectives issue, it should be recalled that statutory footing of conservation since 1999 has had a profound impact on the management of use and intervention within the South Georgian city.

This is supported by a growing knowledge base of research and survey, which ranges from the construction practices, materials and decorative finishes to the way in which the urban unit

[39] Main source of this paragraph is the presentation by Shaffrey Associates Architects, during the USEAct Bilateral Meeting on adaptive reuse of heritage buildings held in Dublin.

operated and the social city it supported. Many of these studies and significant inventories have been led by Dublin City Council.

The range of typology and condition is another important aspect of the project. There exists a range of historic typologies and plan forms, but also the extent and nature of alteration which has occurred over the years has to be considered.

Anyway, as showed in Figure 8.5, there are opportunity for diversifying internal uses of buildings and dealt with the "division of property boundaries" challenge.

Figure 8.5: Possible division of property boundaries

Source: Dublin City Council/Shaffrey Associates Architects

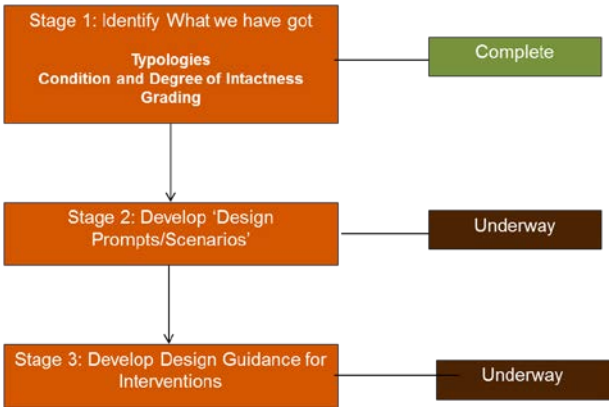
The erosion of the plot and the dominance of rear gardens/sites as car parking is another challenging issue. Compounding this is the premium value of car parking with the historic city centre.

The Pilot Project is related to broader initiatives, as the "Living City Initiative" and other incentives.

The recently expanded Living City Initiative offers the opportunity to incentivise strategic approaches and standards to be developed within the South Georgian Dublin Townhouse Re-use guidance document.

Figure 8.6 shows project structure and stages

Figure 8.6: "South Georgian Town Study" – development stages



Source: Dublin City Council/Shaffrey Associates Architects

From the technical point of view, emerging issues can be shortly summarized as follows.

Reusing Georgian Townhouses in Dublin - Emerging issues

- **Alteration of historic spatial sequences and hierarchies**
- **Accessibility** – vertical circulation – narrow basement areas (see next paragraph) - may lose historic water tanks
- **New stairs** – Part M TGD dimensions challenging to meet
- **Returns** – alterations or rebuild
- **Open space provision**
- **Division of property boundaries** – challenging if '**floor by floor'**
- **No car parking** (resident permits)

The study has clearly demonstrated that, a strategic approach, it is better to work with buildings characteristics than try to fit 'standards' into existing proportions.

This means that there is a strong need to work with Building Control Officers as well as planning and conservation.

From “people stories” to “conservation courses” in Georgian Dublin:

The Henrietta Street Conservation Plan

Among specific initiatives carried on by Dublin City Council to promote reuse of Georgian Houses, the “Henrietta Street Conservation Plan” has to be mentioned.

Henrietta Street is a place “full of history” and “people stories” in Dublin.

An accurate study about the story and socio-economic features of the place across time has been carried out and shared with inhabitant, to feed an “urban memory project” to collect and disseminate recollections and stories on tenement life beginning with Henrietta Street.

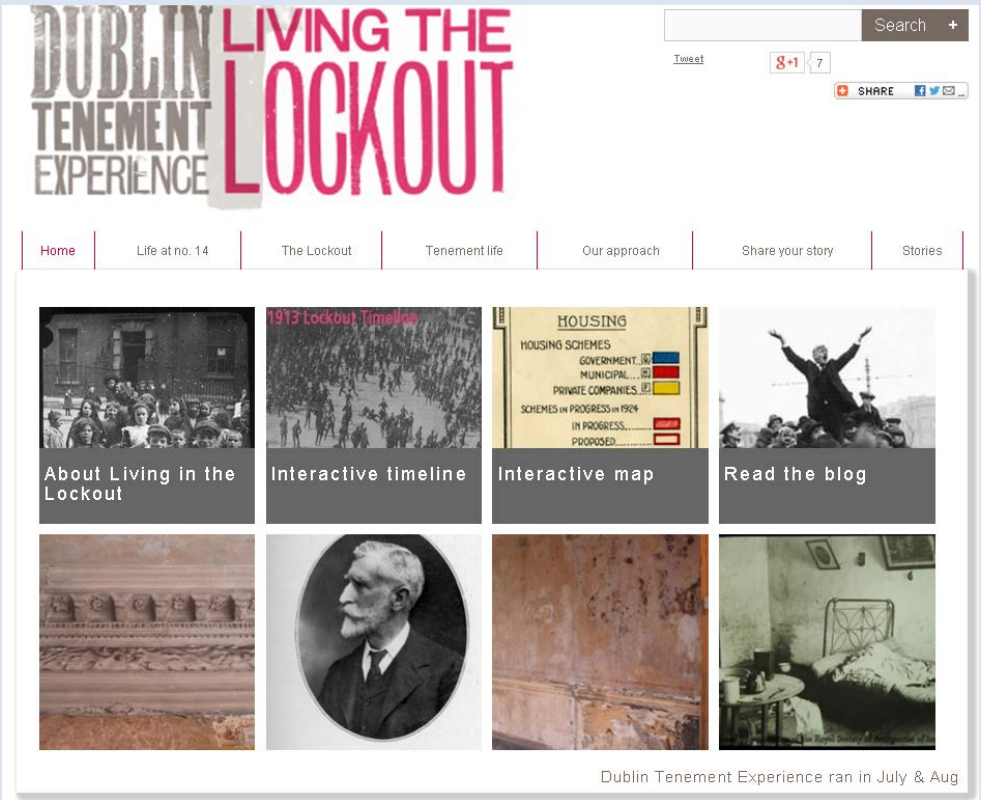
Themes which have emerged from initial research into tenement life are, just for example, “the invisible people”, the role of women, children, migration, cultural diversity and religion, education, employment and occupations and citizens.

Flexible exhibition/performance spaces with a digital self-guided exhibition and interactive website have been provided, in one building, to promote initiatives.

The house used to host the exhibition center (with space for temporary exhibition and performance) is the “primary artefact” and therefore low level installation of digital technology will be developed to allow the qualities of the house as object.

The “cultural” project is aimed at providing: immersive exhibition experience through digital exhibition and smart phone technology, people engaging and dynamic website, “Urban Memory Project” (potential collaboration with National Folklore Foundation currently being scoped), “Public events programme”, including talks, seminars, recitals on themes related to Georgian and Tenement Dublin (through a website – see Figure 8.8, tours of cultural and architectural history of North Georgian Dublin, “Youth programme” and “Heritage trades programme.

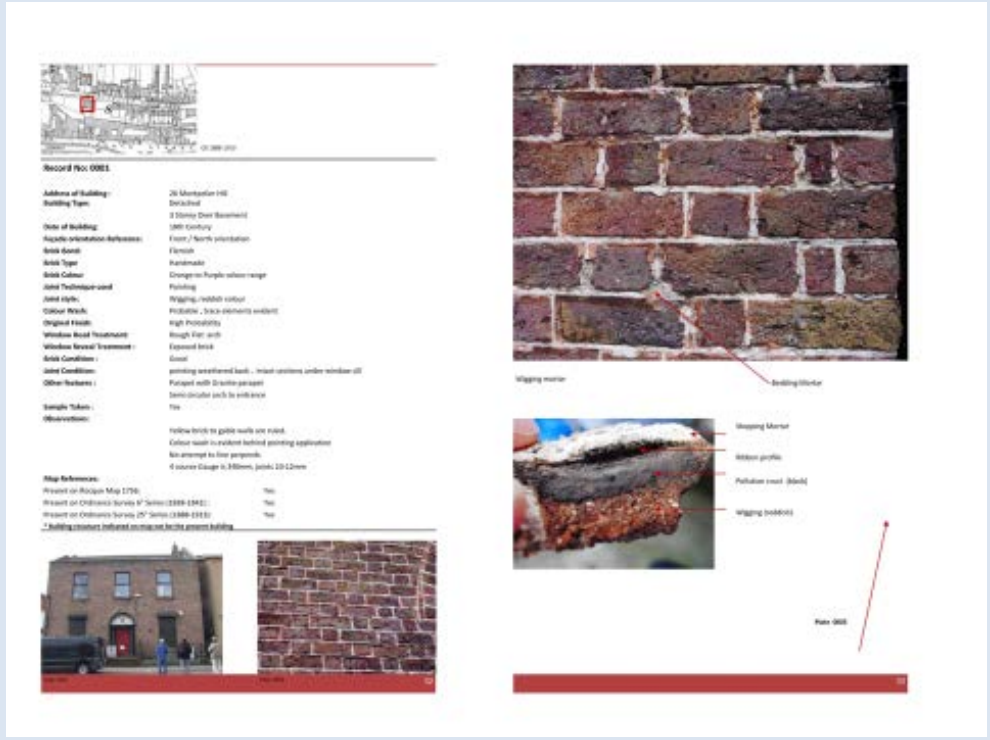
Figure 8.7: The website of the “Dublin Tenement Experience” (Urban Memory Project).



Source: Dublin City Council / Urban Memory Project

The specific plan, for 2016, also includes delivery of other "tools" to be integrated into the project such us: the "Dublin City Council Advice to Homeowners" on how to maintain buildings, a "Decorative Plasterwork Guidance Document", a "Brick Pointing and Façade Finishes guidance" (see Figure 8.8), a "Conserve Your Period House" home-owners course and a technical guidance on "Energy Efficiency in Pre-1945 Historic Dwellings in Dublin City". These tools are useful to owner and building/refurbishment sector people to improve any kind of intervention on Georgian Houses in Dublin.

Figure 8.8: A page of the "Brick Pointing and Façade Finishes guidance"



Source: Dublin City Council

Universal Access to Georgian Heritage Buildings[40]

Within the general "adaptive reuse" target of Dublin Georgian Houses, one specific challenge is to make these heritage buildings accessible to everyone.

Accessibility is one important variable of the "reuse" matter, not only for technical and market reasons, but also for "social" ones. The Requirement is that People can safely and independently approach, gain access and use a building, its facilities and its environs. As understandable – see just for example Figure 8.9 – Georgian Buildings face several "access" challenges, starting from external steps.

Figure 8.9: External steps of a Dublin Georgian Building

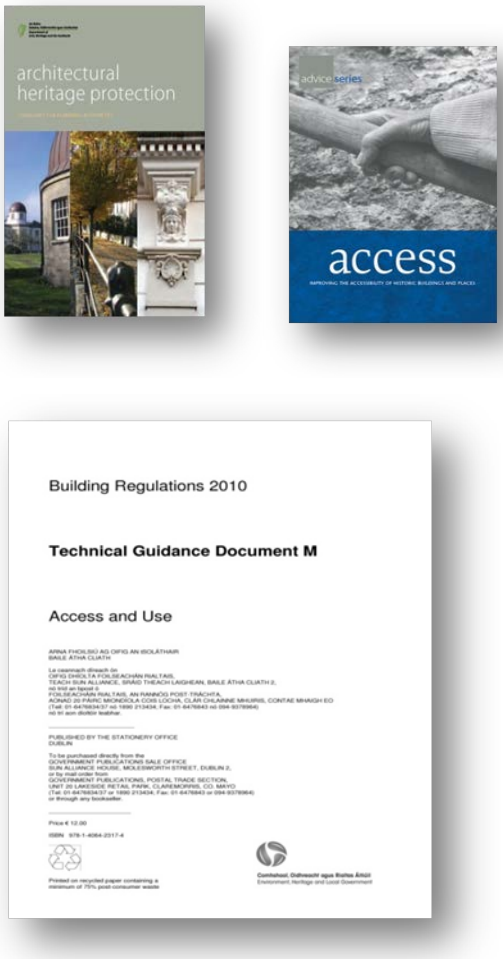
Source: Dublin City Council

[40] Main source of this paragraph is the presentation by Dublin City Council (Mrs. Clare Hogan), at the USEAct Bilateral Meeting on adaptive reuse of heritage buildings held in Dublin.

In Ireland, in general building regulations apply to construction of new buildings, new extensions and material alteration to existing buildings. Under the 2007 Building Control Act - a new building or a building that has been altered or extended shall not be opened, operated or occupied unless permits related with accessibility has been granted by the building control authority.

It is interesting recalling the recent Roadmap to Disability Legislation in Ireland. Across the 2000 – 2010 period, Planning & Development Acts have developed, and in particular, "Advice series from DoAHG Access" to improve the accessibility of historic buildings and places along with "Architectural heritage protection guidelines" for planning authorities (see Figure 8.10).

Figure 8. 10: Documents and guidelines produced by Irish Government related to Architectural Heritage and "Access"

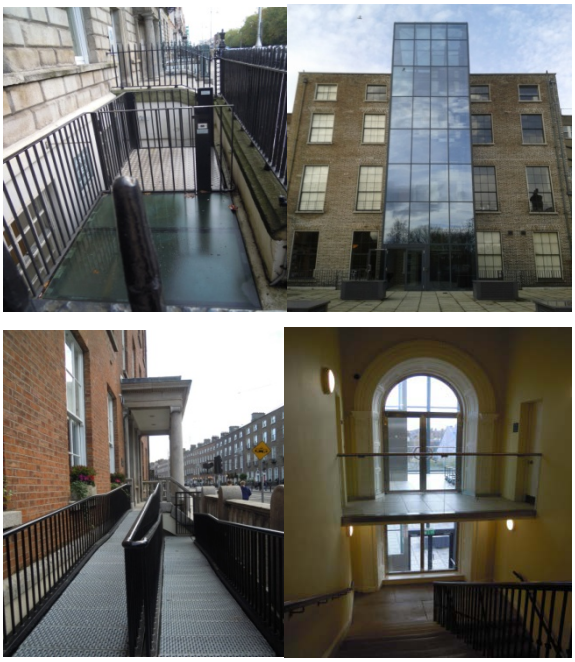


It is clear that to achieve effective "adaptive reuse" targets, "getting the balance right" between contrasting exigencies is important. "Practicability" is a key word, since many critical aspects (as structural conditions of buildings, different ownership, use, specific planning conditions, etc.) have to be dealt with.

Concrete "accessibility issues" related to the typical Georgian building are usually related to the following features of such buildings: front: entrances generally raised above street level, accessed by granite steps, original wrought or cast iron railings, fire exits from basement, compact plan with vertical hierarchy of rooms, ornate staircases with ½ landing and return buildings at different levels.

However, innovative "replicable" solutions can be applied, as demonstrate some "pilot cases" of reuse (see Figure 8.11).

Figure 8.11: Example of innovative solution to allow access to a Georgian Building in Dublin



Source: Dublin City Council

Figure 8.12: Dublin National Gallery Millenium Wing – and Lord Edward Carson's buildings

Source: Dublin City Council

The role of public sector in developing pilot solutions for accessibility has been relevant in Dublin. As the Disability Act 2005 applies to public bodies, they are required to ensure that the services provided to the general public are accessible to persons with disabilities. Heritage sites are included and a “protected structure” is defined as a heritage site. This means that any protected structure owned by Dublin City Council and open to the public must comply by 2015.

Clearly, developing high quality reuse projects often requires serious and “creative” design approach, with “audacious” solutions.

Recent reuse interventions (as the “National Gallery - Millennium Wing” or the “Lord Edward Carson’s buildings” showed in Figure 8.13, are eloquent examples.

Pilot projects, identification and testing of “replicable” smart solutions, guidance, and in depth analysis of opportunities to comply with (national) regulations through “practicable” approaches are, in conclusions, strategies that can be stimulated and promoted by local authorities, but that require, at the same time, very punctual – site by site – activity and efforts, with involvement of high profile professionals.

Adaptive Reuse in Riga – Wooden Architecture

In Riga, 19th century wooden architecture represents a distinctive feature of the local urban heritage, although not several buildings survived until now.

Three recent cases of adaptive reuse of wooden buildings in Riga appear to be of particular interest to understand potentials and possible strategies.

Interventions took place respectively in the “Grizinkalns” areas (‘Koka Rīga’), in Kalnciema Street (residential building) and in Miera Street (“Creative quarter”).

Koka Riga is a small area in Riga, where the construction of wooden buildings was commenced in the seventies of the 19th century. Buildings are designed as the two-storey wooden tenement houses. In May 2013, a “wooden buildings renovation centre”, called “Koka Rīga’’ has been opened. It works as a “community centre” aimed at promoting intergenerational dialogue but also at stimulating reuse of other buildings in the area.

In Kalnciema Street twenty-three two-storey and one-storey wooden buildings, decorated with exquisite details are located.

This heritage represents an outstanding example of “classic” 19th Century wooden architecture in Europe. Buildings of the area are used for business and cultural events, aimed at – among others – to promote the area, within initiatives which are supported through a website.

In Miera Street houses can host various projects by local artists – galleries, clubs, workshops, cafes, hair saloons and small shops selling works by local artists. “Miera Street Republic” has been developing as the city’s newest art-district. Buildings located on cobblestone Miera Street were constructed between the 19th and the beginning of the 20th century.

Figure 8.13: Initiatives to reuse wooden architecture in Riga: Koka Riga (fig.a), Kalnciemaiela (fig.b), and “Miera Street” (fig.c)

Figure 8.14 a

Figure 8.14 b

Figure 8.14 c

Source: Riga Planning Region

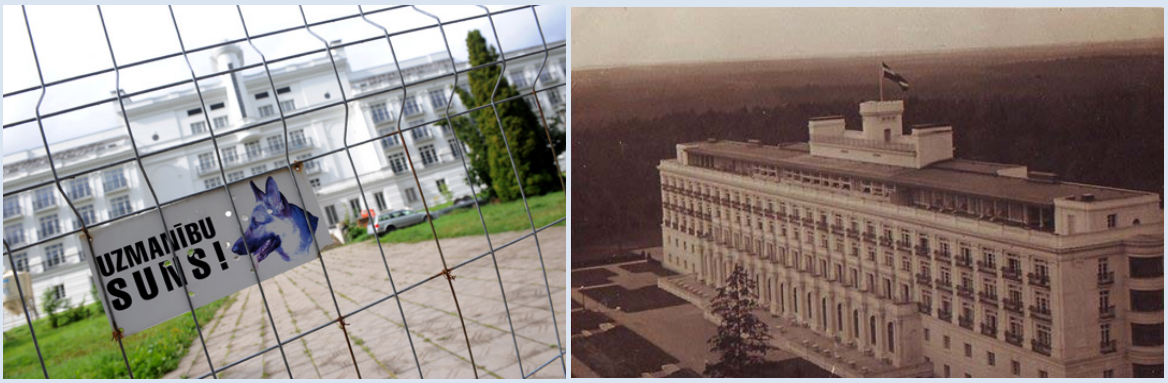
“Industrial” Heritage in Riga Region

Riga was the third largest industrial city in Czarist Russia. This explains the reason why in the area many vacant, industrial areas and objects from beginning of 20th century can be found.

Moreover, in Riga Region, at the beginning of 20th century, several “resorts” were built, as the large “spa resort” (sanatorium) in Jurmala, Kemeri, today abandoned.

More recent hotels, currently deprived, are also potential redevelopment sites.

Figure 8.15: Former “Liva Hotel” – Riga Region



Such is the case of the former “Liva” Hotel, which is now property of bank, after owner insolvency. There is no information about the actual condition of the building, which is in fact a “dangerous object”, with strong negative environmental impacts. Massive industrial buildings are also located in the region. The Ogres knitwear factory is a massive (partly) vacant brownfield, which is a legacy of the “Soviet time” Industrial system, that – until now – has not been redeveloped yet.

Figure 8.16: The Ongres knitwear factory – Riga Region

Source: Riga Planning Region

8.3 DIFFICULTIES AND SUCCESSES IN REUSING BUILT HERITAGE IN EASTERN EUROPEAN SETTINGS: FOCUSING ON NITRA CASE

Small and middle sized towns in Eastern European settings face specific challenges on reusing heritage buildings. Slovakia is exemplary. The governance system related to the Heritage Preservation and some “rigidities” of rules defining different categories of heritage do not fully comply real needs. However, further factor play key roles.

In Nitra, for example[41], main difficulties seems to be to “the low cultural awareness, education and ignorance of inhabitants”, that would require more interactive communication, although some small activist groups are active in Nitra. Low education in the field of heritage preservation is another challenge, but there are, on the other side, institutions that play important roles, as SAV and Department of Archaeology at the University of Constantin the Philosopher. Low education interest of young architects and engineers in heritage renovation is another factor discouraging adaptive reuse. Strong need of financing renovation and reconstruction of monuments and historic structures is rather evident, since financial burden including special requirements of the Regional Monuments Board is carried out by the owner.

This situation, which is common in many places in Slovakia tends to induce a mis-understanding of heritage values, and, as a consequence, the development of low quality “new” structures, along with rough intervention and devastation of heritage values, without any understanding of site values and “genius loci”. The problem is evident also in relation to the “Industrial heritage protection and preservation” issue, which is a specific and important issue in Slovakia.

Some positive example of adaptive reuse, anyway, can be mentioned. The Design Factory in Bratislava, which includes Prefabrication hall, Gallery and multi functional space can be considered as a success.

In Piešťany, the “Power station”, transformed into a gallery and museum is another good example.

Also in Nitra, some recent interventions tried to reuse industrial heritage buildings. Nitra had, in the past, a remarkable range of historically valuable industrial structures and complexes built in 18th–19th century, but nowadays just a small number has been preserved, as showed in Figures 8.17, 8.18, 8.19.

Figure 8.17

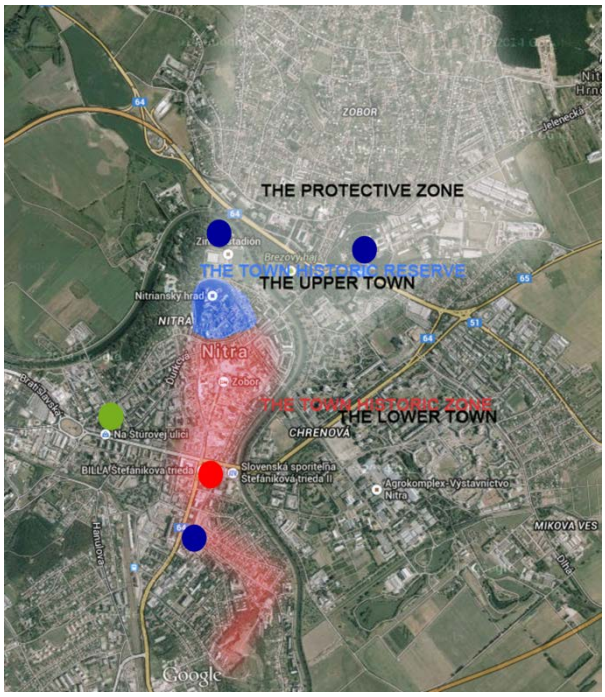
Figure 8.18

Figure 8.19

[41] See: Zuzana Holičková, City of Nitra, Presentation at USEAct Dublin Bilateral/Trilateral Meeting

Among them, the Mlyny (Flour Mills), the Mestský pivovar (City Brewery), the Vodárenský objekt (Pumping Station) in the town park and the Kasárne (Military Barracks).

Figure 8.20: Industrial Heritage in Nitra



Appropriate redevelopment occurred only in some cases.

The case of Flour Mill, located in the city centre is exemplary as negative case. High pressure from the investor for complex demolition lead the way to creation of a new modern shopping centre. However, according to the Regional Monuments Board, this valuable structure should have been kept; but the investor ignored this request, demolition was done without any notice and just a fine has been charged.

Positives aspects of the intervention are that it has solved parking problems in the city centre and represents, anyway, a positive transformation of a former brownfield site into a more vibrant site. On the other side, however, negative aspects are tied to disruption of the historic structure and urbanism, loss of heritage values and outflow of people from the pedestrian zone in the historic city centre into the shopping mall.

Trafostanica (Power Sub-Station) in Nitra is a good example of adaptive reuse. Interest and initiative came from the investor that implemented a successful and sensitive conversion of the structure into an Art Gallery with coffee, Centre of culture and social life open for exhibitions, concerts, presentations, as showed in Figure 8.21

Another industrial heritage building, the Mestský pivovar (City Brewery) – see fig. 8.22 - is currently facing an adaptive reuse process, thanks to a Master plan elaborated and approved for the whole are of the former brewery. Conversion of some historic buildings with heritage value is a part of the project complemented by new structures of multifunctional and housing use. Regional Monuments Board was an important member of the project committee. The project, which has started in 2009, is under development and will provide a multifunctional complex including two housing buildings are finished. The most valuable brewery structures are still untouched.

Figure 8.21: Trafostanica (Power Sub-Station) in Nitra

Source: Municipality of Nitra

Kasárne (Military Barracks) is, probably, the most relevant heritage building in Nitra that could benefit from a deep adaptive reuse process. Barracks are a National Cultural Monument and a very important archaeological site. Built at the end of the 19th century for the military garrison force, it was one of the five military campuses in Hungarian Kingdom.

Currently, the site is without any function, and appears to be the largest brownfield derelict site in the city. The owners are Municipality of Nitra – 31 buildings, the Archaeological institute SAV – 11 buildings, and the Roman, Catholic Church, Nitra Bishopric, which owns the land (plots). Several architectural studies and university projects have proposed solutions in order to reuse the site with new functions.

Figure: 8.22: Nitra – “City Brewery” redevelopment

Source: Municipality of Nitra

Figure 8.23: Proposed redevelopment plan of the “military barracks” in Nitra

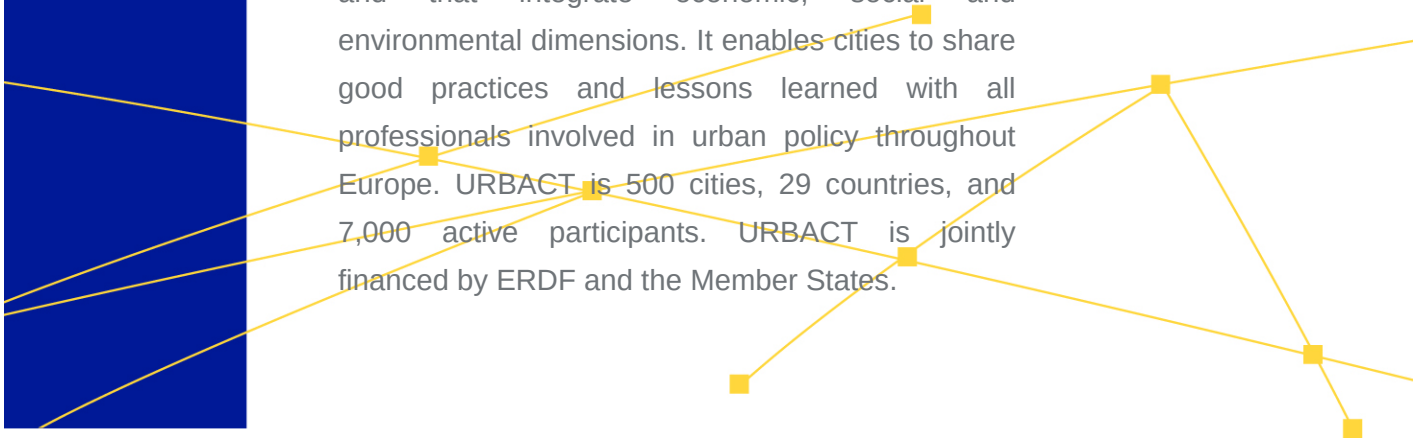
Source: Municipality of Nitra

Regeneration of old structures and park is required, but many questions should be answered. Is creative industry a solution for the site? Has to be carried on a brownfield regeneration? There is room for PPP, and if yes, how? URM (Sustainable development of cities) let imagine that there is the possibility of funding the project with 18-20 millions Euro (see Figure 8.21), but many questions have to be answered before.

URBACT II

URBACT is a European exchange and learning programme promoting sustainable urban development.

It enables cities to work together to develop solutions to major urban challenges, reaffirming the key role they play in facing increasingly complex societal changes. URBACT helps cites to develop pragmatic solutions that are new and sustainable, and that integrate economic, social and environmental dimensions. It enables cities to share good practices and lessons learned with all professionals involved in urban policy throughout Europe. URBACT is 500 cities, 29 countries, and 7,000 active participants. URBACT is jointly financed by ERDF and the Member States.



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