

Brownfield regeneration management

From education to practice



Introduction

Management of Brownfield Regeneration Processes

All over Europe revitalisation of brownfield sites plays an important role in avoiding urban sprawl and improving the quality of urban environment, thereby helping to create the conditions necessary for sustainable development. Moreover it strives to combat related social and spatial segregation that is threatening the competitiveness of European cities. Rehabilitation will be of growing importance in the CE member states, which requires large investments. Alongside any EU subsidy measures the know-how transfer from western to eastern countries as well as transfer from research to practice should be stimulated in order to achieve effective capacity building. However brownfield land can also endanger public health and create environmental risks. This is why nine partners from Poland, the Czech Republic, Slovenia, Germany and Italy initiated the CORBAMAN project “Manager Coordinating Brownfield Redevelopment Activities”

One of the most important lessons learnt from previous European activities in the brownfield sector was that professional process management is a key factor for successful brownfield regeneration. Accordingly, in the basic rationale of the project is the introduction of a new professional discipline - the brownfield regeneration manager.

The brownfield regeneration manager

The project activities consist of:

- Drafting a detailed professional profile,
- Providing the knowledge base and management instruments,
- Brownfield regeneration training with selected staff of the partner cities by on-site advise and direct, project specific management support,
- Developing an educational scheme for a “European School for Brownfield Management”.

The project started from the basic definition:

Brownfields are sites that have been affected by the former uses of the site and surrounding land; are derelict or underused; have real or perceived contamination problems; are mainly in developed urban areas and require intervention to bring them back to beneficial use.¹

Forty two months of transnational cooperation in regeneration practise have revealed, which terms are used or preferred, e.g. brownfield redevelopment or regeneration or revitalisation, urban regeneration or renewal. From a process management perspective the challenges are always the same. The real or perceived contamination problem of brownfields is just an “add-on” to all the other facets to be tackled in dealing with inner urban development.

1 (CABERNET (2006): Sustainable Brownfield Regeneration, CABERNET network report, ISBN 0-9547474-5-3).

Events timeline

2009

①
Kranj
Slovenia
26-28 January 2009

Kick off conference
Setting tasks in detailed
and responsibilities of
project partners

②
Bydgoszcz
Poland
5-7 October 2009

Annual project meeting
and 1st **COBRAMAN**
Training seminar
Basics and roadmap

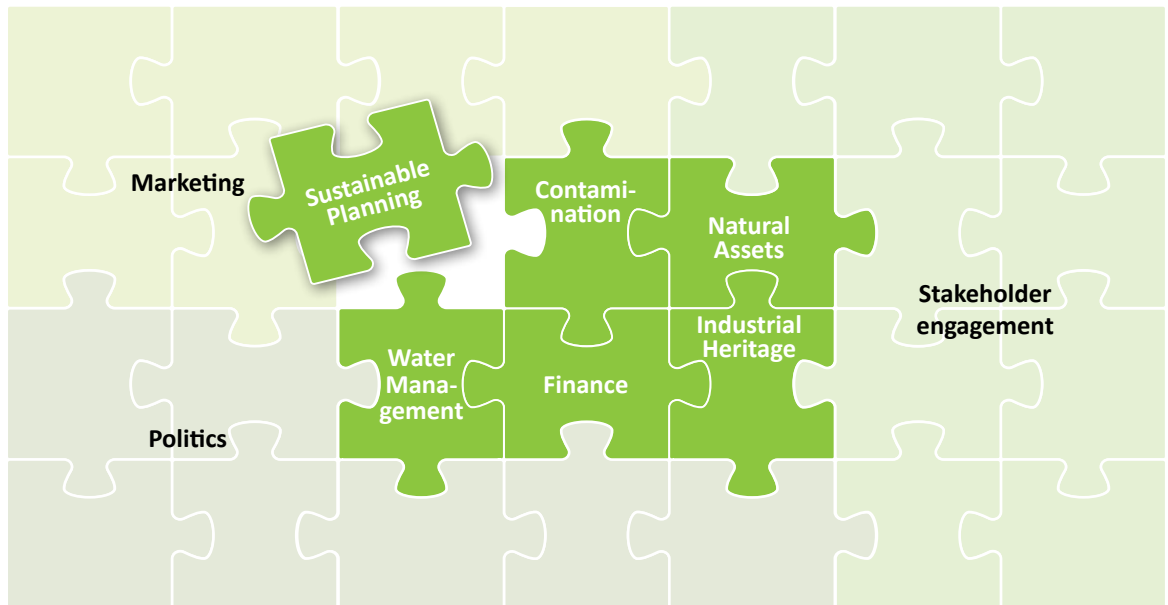
③
Most
Czech Republic
23-26 Nov. 2009

Annual project
meeting and
2nd **COBRAMAN**
Training Seminar
Management
instruments & tools

2010

④
Ostrava
Czech Republic
9-11 February 2010

3rd COBRAMAN
Training Seminar
Civil engineering
and environmental
technologies



Lengthy and complex revitalisation processes require professional management. At the international level available jobs are already described as brownfield project officer, brownfield manager, brownfield coordinator etc. They require many of the skills related to the topics represented in the REVIT puzzle above. The project team attempted to describe a comprehensive job profile for the regeneration manager.

Currently there is an abundance of methodological results, approaches and technical tools available from recent EU funded and national projects. They have been collected and assessed to be provided in a web guide. Management tools have been further developed according to the practical needs and now complement this guide.

The successful implementation of brownfield regeneration managers within European cities will enable effective and successful renewal and conversion processes. However, well-skilled staff is required alongside with the clarification of organisational aspects supporting such interdisciplinary tasks. Training for practitioners has been done in a series of training courses, all built around the practical requirements related to their local pilot projects. In a European framework the partners shared best practices, defined verified methods, applied them in practical cases and now finally offer them to others.

Specific professional or education standards do not exist yet. However educational courses and offers are evolving, both by planning and the environmental / civil engineering faculties, as well as the property management sector. Creation of training and educational schemes benefit from transnational cooperation between experienced academics as well as practitioners from the partner cities and their service providers. A master course, postgraduate courses and further e-learning courses have been set up to support students as well as already employed staff.

2011

- | | | | | |
|---|--|--|---|--|
| <p>5
Ferrara
Italy
17-20 May 2010</p> <p>Annual project meeting and 4th COBRAMAN Training Seminar Economic aspects</p> | <p>6
Ústí nad Labem
Czech Republic
21-22 Sep. 2010</p> <p>5th COBRAMAN Training Seminar Communication and marketing</p> | <p>7
Stuttgart
Germany
22-24 November 2010</p> <p>Annual project meeting</p> | <p>8
Ljubljana
Slovenia
16-18 May 2011</p> <p>Annual project meeting and 5th COBRAMAN Training Seminar Urban planning and sustainability</p> | <p>9
Vienna
Austria
10-12 October 2011</p> <p>Wrap up of the trainings with delivered certificates to the trainees</p> |
|---|--|--|---|--|

A professional profile of brownfield manager

In a nutshell

Brownfield regeneration processes are often long term, complex and involve a wide range of professional disciplines, as well as political actors and different stakeholder groups. Co-ordination and communication are essential to sustain complex projects. The management of the process as such more evidently facilitates the redevelopment than sole technical aspects. Key tasks for professional regeneration managers are to develop and deliver opportunity plans and to steer revitalisation processes. The responsibilities of the brownfield manager comprise further community involvement and marketing activities.

The following paragraphs briefly describe the profession “brownfield regeneration manager”. A more detailed description is included in the COBRAMAN best practice manual.

Doing the job – tasks and responsibilities

The widespread area of responsibility of the regeneration manager requires excellence in coordination and communication. However this is not simply a moderating role but is strongly target-oriented. Basic knowledge in a broad range of disciplines is prerequisite. Open-minded attitude towards unconventional and innovative approaches also characterize the visionary and holistic thinking to be combined with managerial leadership.

The following table summarizes tasks and responsibilities from the public perspective - the brownfield regeneration manager in the city administration. However these issues can be easily reflected with a wider perspective including jobs in the private sector. Then the aspects of forming the link between different levels from policy via the decision-making level down to technical implementation might be less dominant due to lean structures in the private sector. However it will be extended by the bridging function from the private sector to those different administrative levels, which all play a role in regeneration processes.

Tasks	Responsibilities
<ul style="list-style-type: none"> • Provision of relevant and well targeted information for specific groups • Identification and involvement of community/ neighbourhood and other stakeholders in redevelopment process 	<ul style="list-style-type: none"> • “One stop shop” for internal and external stakeholders (e.g. investors as well as for site owners) • Initiator and moderator of the stakeholder engagement process
<ul style="list-style-type: none"> • Internal communication in the municipality, short and direct channels enable faster project results • Set-up and steering a project-specific interdisciplinary working group 	<ul style="list-style-type: none"> • Acting as interface between policy makers, administration and the technical specialists • Coordinating information flow and work at any step in the development process
<ul style="list-style-type: none"> • Developing the visions/development plans, which recognize existing policy, build on local needs and expectations. • Preparation of political decisions, financial and institutional framework • Identification of potential partners • Adoption of an interdisciplinary project team approach 	<ul style="list-style-type: none"> • Triggering the regeneration process
<ul style="list-style-type: none"> • Facilitating efficient project delivery • Coordination of revitalisation process including time schedule and cost management • Quality and risk management • Coordination of all works and services required 	<ul style="list-style-type: none"> • Project manager
<ul style="list-style-type: none"> • Branding – building a positive image for the area under regeneration • Marketing – initiating target group specific marketing activities 	<ul style="list-style-type: none"> • Initiator and coordinator of public relations and marketing activities

Basic skills

As mentioned previously the principal skills required by a brownfield regeneration manager are not only technical. Skills of conceptual thinking, leadership and consensus building and the ability to understand the regeneration needs of communities are of utmost importance for this position.

The profound knowledge needed can be categorized in 6 groups:

**Management**

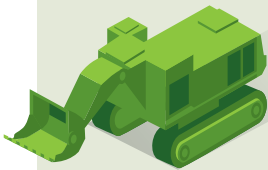
- General project management
- Conceptual and visionary thinking
- Leadership - strong team player
- Organisational skills

**Communication**

- Communication management
- Moderation, negotiation, mediation
- Marketing and campaigning
- Ability to describe even complex and multidisciplinary issues in illustrative and simple words - spokesman qualities

**Planning and Design**

- Landscape and urban planning
- Architecture
- Socio-economic dimension of urban development

**Environmental and civil engineering**

- Civil and construction engineering
- Environmental engineering, geo-technology
- Health and safety measures

**Property development industry**

- Basic knowledge in project financing and calculation
- Market mechanisms and trends
- Life cycle considerations of property investments

**Legal and administrative aspects**

- Basic knowledge in all related legal areas
- Municipal administration and structures
- Understanding of municipal decision-making processes and a keen sense of political feasibility

The position within municipal structures

Dealing with brownfields in city administrations can have a strong strategic-coordinative component (e.g. land management in general, information systems etc.) or can be more focused on the role of a project manager in specific site developments. The generalist performing well in both components will be preferred in smaller cities, but in bigger towns sharing of work between several persons allows more specific dedication of the duties.

In some western countries, e.g. UK, regeneration departments are already established. In most European countries these tasks are still split within the traditional structures to different departments. Nevertheless, as strong brownfield regeneration managers are rare, the experiences among the project partners show, that "if there is a person in an organisation considered to be fit to do this job, the task will find the person". Current practice further indicates that project specific appointment of staff in special purpose vehicles like development agencies (*city regeneration as an agency or Ltd.*), PPP constructions (*site development corporation Ltd*), etc. can be one way out of the dilemma.

Training Practitioners in Brownfield Regeneration Management

The concept

The successful implementation of brownfield regeneration managers within European city administrations will enable effective and successful renewal and conversion processes. However, well-skilled staff in the respective departments is required alongside with the clarification of organisational aspects related to such interdisciplinary tasks and working groups. With the COBRAMAN project, training for practitioners has been done in a series of training courses, all built around the practical requirements related to their local pilot projects.

According to the professional requirements the topics to be tackled with the seminar cycle were defined as:

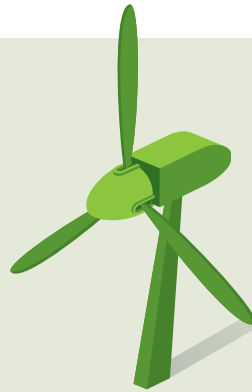
- State of knowledge in brownfield regeneration in general,
- Basic (project) management knowledge and instruments,
- Economic aspects,
- Civil engineering / environmental technologies,
- Planning aspects and sustainability,
- Communication and marketing.

Training seminars for brownfield regeneration managers were organised in the following form:

- Duration cca. 2 days,
- ½ day obligatory site visit,
- Connection to local pilot sites,
- 20 – 30 participants as optimal group size,
- Extension via e-learning as far as possible and required.

The content

Following the rationale of the professional profile the content of the seminars has been defined. Dr. Thomas Ertel designed and led the seminar cycle as a subcontractor of the project partners. Each partner hosted a seminar and provided external experts to present specific topics to support the project team in the implementation of the seminars. The covered seminar topics are summarised in the following table:



1 Basics and roadmap

- Main tasks of a brownfield manager
- Basic skills & requirements
- Job description
- Administrative & organisational aspects
- Management instruments
- Main working tools
- Horizontal issues process facilitation

2 Communication and marketing

- Communication strategy & plan
- Stakeholder involvement – participative approaches
- Marketing of brownfields
- Creating an image
- Securing political dialogues

3 Civil engineering / environmental technologies

- Deconstruction of buildings
- Dealing with contamination, remediation
- Geo-technology
- Main infrastructure works
- Water management
- Soil protection
- Protection & creation of habitats
- Technical aspects of industrial heritage

Implementation All partners nominated practitioners from their organisations to participate in the COBRAMAN seminar cycle. Finally, in total 30 colleagues coming from different departments within the partnership could receive their certificates after the last seminar held in Vienna in October 2011.

The training seminar cycle included:

- **6 classroom seminars according to the topics mentioned above with additional final wrap-up seminar**
- **6 site visits to partner's pilot project sites**
- **2 web-based trainings**
- **Field trip to the UK.**

All face-to-face seminars included group exercises, in-depth discussions with the trainers and individual components like speed-dating etc.

The trainers and presenters of the different seminars were:

- Practitioners from other cities in Europe and from regional /national agencies,
- Scientists from leading European institutions,
- Management staff of planning and development companies as well as consultants,
- Project managers from the financial sector,
- Representatives of non-governmental organisations.

The content of the trainings and all presentations are available with the training handbook at the project website.



Brownfield manager trainees with certificates



4 Planning aspects and sustainability

- Sustainable urban development – key topics
- Management of planning processes in urban redevelopment
- Main bottlenecks – tackling key problems
- Participatory planning – Social aspects
- Landscape aspects
- Dealing with natural assets
- Industrial heritage & architecture



5 Management instruments and tools

- Basics in general project management and project development
- The brownfield SWOT
- Management plan – organising the jigsaw puzzle
- Information and documentation
- The link to policy
- Role plays and best practice



6 Economic aspects

- Basics of property development economics
- Financing & Funding (e.g. Jessica)
- PPP
- Facility Management, operational aspects
- Land valuation of brownfields
- Risk management – insurance models
- Calculation of overall costs – life cycle costs

Regeneration Management in Practice – 4 Key Management Tools

The management of regeneration processes requires the application of established management tools. There is a wealth of existing instruments and tools to be used in process and project management. Those which proved to be the most important have been specifically adapted by the COBRAMAN partnership to the regeneration business. In the following sub-chapters they are allocated to the respective responsibilities of the management staff. A much more detailed description of these tools is included in the CORBRAMAN manual “Best Practise in Brownfield Management – BPBM”.

Coordination – the interdisciplinary working group

There might be many ideas about the best name to be assigned to a project specific working group – but it is consensus that such a working group with all actors represented is a must for coordinating the manifold activities around the brownfield regeneration process. The term “interdisciplinary working group” reflects the composition of this group comprising various departments and specialists involved. The working group structure will depend on the specifics of each case, and it might vary during the subsequent phases of project implementation. It is recommendable to set up a formal statute for the **working group**, outlining:

- Aims and objectives, lifetime, meeting schedule
- Membership, representation and participation
- Competences and duties of the members
- Rules for decision making
- Chair and secretariat.

The more responsibilities and decision-making power assigned from the different departments to such a group, the more effective will be their work. Taking over the chair or secretariat is a key role for the regeneration manager.

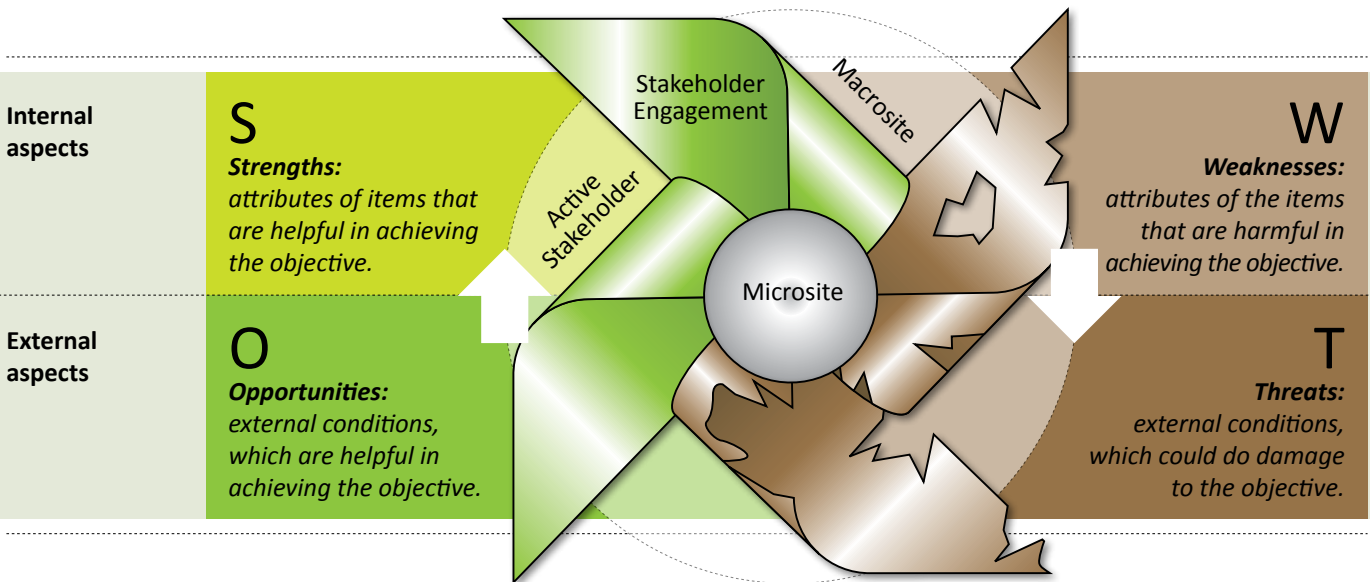
Information and communication – the site review

From the beginning of a project a multitude of information, planning documents, technical reports etc. will be produced by various involved actors. Keeping the overview, structuring and filing, assessing according to relevance and target groups, as well as drawing appropriate conclusions are fundamental tasks to ensure the information flow within the project and its environment.

The site review is the mother document, outlining and summarising all relevant aspects, and linking to the wealth of existing specific documents. It is an internal working document continuously updated, collecting information from all members of the working group. It helps to bring all working group members to the same level of knowledge and should be made easily accessible. It should not be focusing on different target groups, but to be considered as the source for specific documents (e.g. SWOT) and target group related information, e.g. marketing communication activities.

As many cities are already operating brownfield registers or similar information systems, it has to be decided:

- Which parts of the information,
- To which level of detail and
- In which time intervals the transfer of updated content will be done from the site review to these public info systems.



Project management – the brownfield regeneration management plan

This plan is similar to a classical project management plan. It is a formal, approved document that defines how the redevelopment project is executed, monitored and controlled. Depending on the complexity of the site it may be summarised or detailed and may be composed of one or more subsidiary management plans and other planning documents.

It is like a roadmap for all project team members, but especially dedicated to the brownfield management. It explains how the intended project scope will be reached, guides through the stations from initiating, planning, executing, monitoring and closing the redevelopment project and helps to take care of various project constraints like scope, quality, schedule, budget, resources and risks. Once agreed and approved by at least the project team and its key stakeholders the plan is the binding framework for all activities during the redevelopment process.

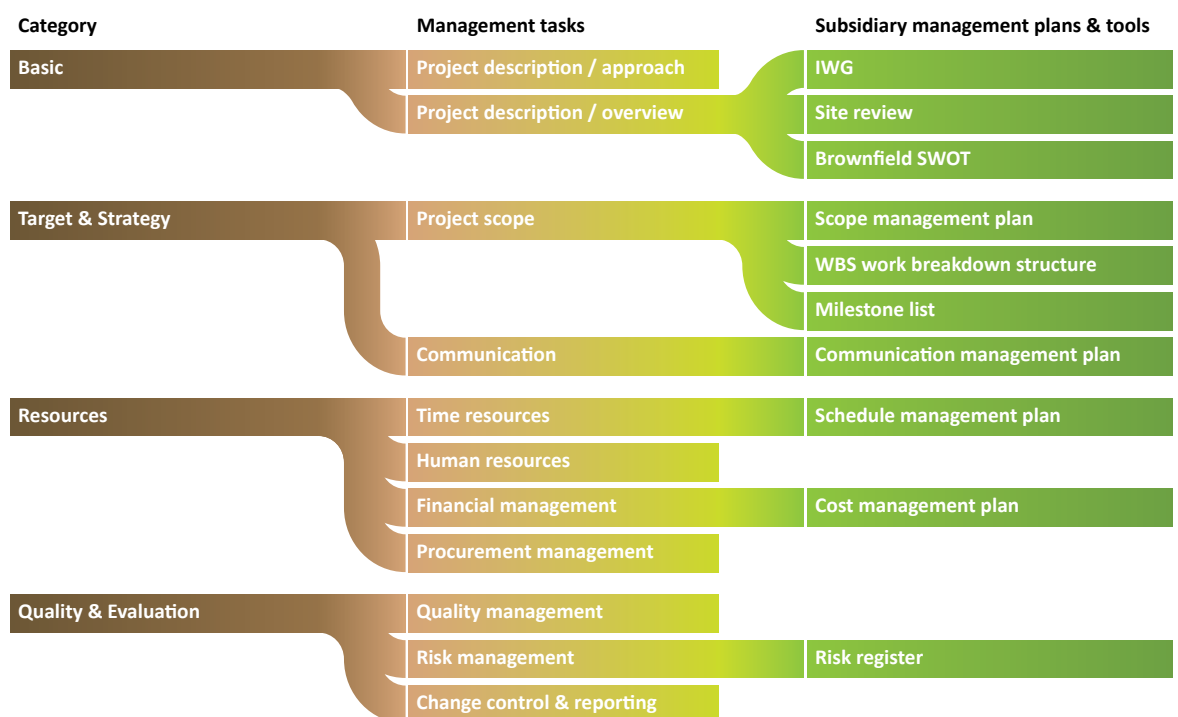
What makes the difference? As in general project management matters it is all about persons, their aims & goals, the financial framework, the time planning, public relation and documentation. But the special situation in a redevelopment projects even enlarge the complexity of a project. This complicates the definition of clear and broadly accepted objectives, structures and main work flows and subsequently setting up of subsidiary plans for schedule, cost, risk and quality management as well as stakeholder engagement plans.

Although at the project start the urban development framework and targets seem to be well defined, the longevity of the processes or technical risks and related modifications may imply changing boundary conditions, entrance of new stakeholders or substantial shifts in stakeholder's attitude towards the development.

These unknowns hinder the set-up of well defined management plans. On the other hand they underline the particular importance of their strict application.

The general structure is divided into 4 categories (see following figure) and helps to maintain an overview. The structure is as simple as possible but as complex as needed to cover all aspects of the redevelopment project in an adequate way. The importance of the single elements may vary from case to case but the general structure can be applied to all kinds of redevelopment projects. The number of categories does NOT indicate the importance of the elements but reflects the logical and partly chronological sequence of a redevelopment process.

General Structure of BRMP



Strategy and marketing – the brownfield SWOT

SWOT Analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project or in a business venture.

In SWOT analysis a careful identification of individual SWOT items is essential because subsequent steps in the process of planning for achievement of the selected objective may be derived from the SWOT. For a brownfield regeneration specific SWOT items have been categorised into:

- Micro-site aspects, e.g. current and future use, ecological aspects, financial issues, social and cultural aspects etc.
- Macro-site aspects, e.g. neighbourhood uses, infrastructure / transport situation, market situation & competitors etc.
- Stakeholder engagement, e.g. owners, investors, citizens in neighbourhood, politicians etc.

This third category is considered to be the key function driving or blocking development.

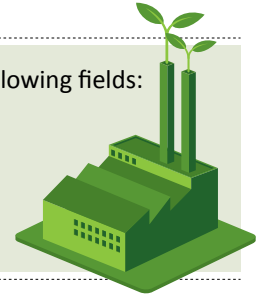
Education in Brownfield Management

Master Course

One of the key outputs of the COBRAMAN project is a master course programme titled **European Master's School for Brownfield Redevelopment**. Currently there are no professional or educational standards in the EU for brownfields revitalisation and therefore this project, whose main objective is to find the way to solve brownfield issues, has been started. The purpose of study courses is to produce graduates – experts who will be focused on the complex care of the environment in industrially influenced areas (including agriculture, mining or military areas). The main aim of the study course is to ensure that graduates will be able to manage projects and other related activities concerning the restoration and development of abandoned industrial areas – brownfields.

Graduates will have the necessary skills to carry out professional activities in the following fields:

- Environmental assessment of brownfields
- Civil engineering and technical assessment
- Economic and socio-economical assessment
- Remediation and regeneration of areas
- Environmental protection and design



The study program is presented as a multidisciplinary study that is based on the combination of natural, economic, construction and technical sciences. Teaching and education has its base in scientific disciplines such as mathematics, physics and chemistry. It is expected that graduates of the bachelor study programme have acquired this basic knowledge. The Study plan consists of the following core subjects: Environmental Geochemistry, Engineering Geology, Contamination Hydrogeology, Waste Management, Municipal Development, Urban Planning, Brownfield Management, Industrial Architecture, Introduction to IT, Information Systems in Landscape Cultivation, Modelling for Landscape Management, Greenery Establishment and Maintenance, Remediation and Risks in Brownfield Redevelopment, Social and Economic Tools for Brownfield Redevelopment, Investment Processes, Applied Ecology, Quality Management in Civil Engineering.

As the studies propose the use of specialised software and necessary IT equipment, a COBRAMAN Classroom, projected for 20 students including a workstation for teaching with interactive presentation technique has been set up. Software installed in the classroom allows students to work on biostatistics processing, architectural design, using CAD or GIS systems during the exercises and thesis project.

Graduates will obtain detailed knowledge of environmental, ecological and technical disciplines, modern information technologies, database applications, and European environmental legislation. Upon successful completion of the study course graduates have the right to use the title Dipl. Ing. (Engineer; Czech equivalent of MSc). They will be able to find employment as managers and technological specialists in companies focusing on the revitalisation of derelict industrial buildings, landscapes and areas or as professionals and executive directors in municipalities, urban planning centres; as experts in renovation in reuse of abandoned areas or also can be involved in research.

Training Courses

Two cycles of **non-accredited training courses** “European School for Brownfield Redevelopment” amounting to 10 seminars over 8 hours of instruction were organised. The main aim of these courses was to test prepared lecturing materials before the master programme will be introduced as a regular part of university studies offer. The participants of the courses were awarded with a certificate of lifelong learning. In total 207 students graduated. During the courses students carried out anonymous evaluation by the questionnaires (task fulfilment, quality of teaching and applicability). Evaluation results confirmed the effectiveness and high level of professional courses; the average rating was very positive.

E-learning

An additional output of the COBRAMAN project is the E-learning Course designed for students and graduates. The structure of individual course modules was organizing in such a way that participants of various backgrounds and experiences can benefit from it. To cover brownfields, contents of individual modules need to be quite broad, usually comprising more than one field of expertise. This is why the module content was broken down into individual sections. Only when this is done, the actual content of each module is clear. In order to ascertain the level of desired educational achievement, it is necessary to break each section into subsections, to which a level of educational achievement can be assigned.

Assuming that most of the participants are new to the brownfields as a subject the first module consists of a holistic introduction to the brownfield issue. In the first module „Holistic approach to revitalisation“ are the following sections: Civil law aspects of the revitalisation of cities and settlements, Financing revitalisation, Introduction to management and organisation, Project management, Socio-cultural aspects of revitalisation. The second module “Brownfield revitalisation” explains main problems connected with revitalisation. The third module “Environment protection” consists of the following sections: Types of environmental pollution, Anthropogenic impacts of environmental pollution, Tasks of the environmental protection and Costs of the environmental protection. The fourth module “Urban planning” was divided into three sections: Introduction to urban planning, Planning framework and Urban design regulation. The last module “Cultural heritage” consists of the following sections: Understanding industrial cultural heritage, Organisational and systematic framework for urban regeneration of degraded areas and Examples of urban regeneration of degraded areas and industrial cultural heritage.

E-learning modules are accessible through <http://www.cobraman-ce.eu/> (section Education) or direct link <http://onte.wsg.byd.pl/cobra/>.

Postgraduate Courses

The Postgraduate Study for Brownfield Management has been accredited and started at the University of Economy in Bydgoszcz, Poland. Brownfield management requires a wide knowledge in the field of effective management, property management, architecture and urban planning, environmental protection, socio-economic sciences and law.

The postgraduate study is for: councillors, government and municipal administration employees, private sector representatives interested in investing, geographers, architects, urban planning and construction engineers etc. The first testing course, which was attended by 35 students, was passed and full-cycle courses have been started. The study programme includes a large number of seminars and workshops aimed at carrying out the tasks of analysis and conceptual planning and brownfield management. At the same time the students conducted an evaluation of the course with focus on both content and implementation, and also the level of lectures, tutorials and seminars. The evaluation by the students was very positive – courses obtained value from 4.49 to 4.21 on scale from five (very positive) to one (negative). Lecturers of postgraduate courses are: professionals from the University of Economy in Bydgoszcz, lecturers from the Technical University of Ostrava (lectures on invitation), practitioners from Central Europe and Poland (lectures on invitation).

All courses prepared in the frame of COBRAMAN project were highly interesting for students. The non-accredited LLL courses in Czech Republic were extremely attractive and students demanded more lectures. The same result was reported in Poland. There the postgraduate course was fully booked and the e-learning webpage is also used in either the Polish or English versions. This indicates quality and innovative content of project outcomes.

Detailed Information about the postgraduate study courses is available at <http://onte.wsg.bdg.pl/cobra/file.php/1/pdf/postgraduate.pdf>

COBRAMAN EU School for Brownfield Management



Guide to brownfield management

In the processes of revitalisation an exchange of experience between countries of Eastern and Western Europe is necessary, as well as between the educational institutions and practitioners (best practitioners). Its aim is to establish acknowledged methods of revitalising cities, practical use of methods, tools and project solutions and offering them to others within European structures.

One of the crucial aims of the COBRAMAN Project was to create a database including information about projects of revitalising post-industrial areas in central Europe. The database was used in education process (education of future managers dealing with coordination of works during revitalisation of post-industrial areas). Another aim of the database is to promote and spread good practices concerning revitalisation of the post-industrial areas among people, institutions and self-governments involved in the processes of transformation of such areas.

Effective management of post-industrial areas, based on previous experiences, notions and tools, is to support a necessary paradigm driven by globalization and the management of new knowledge.

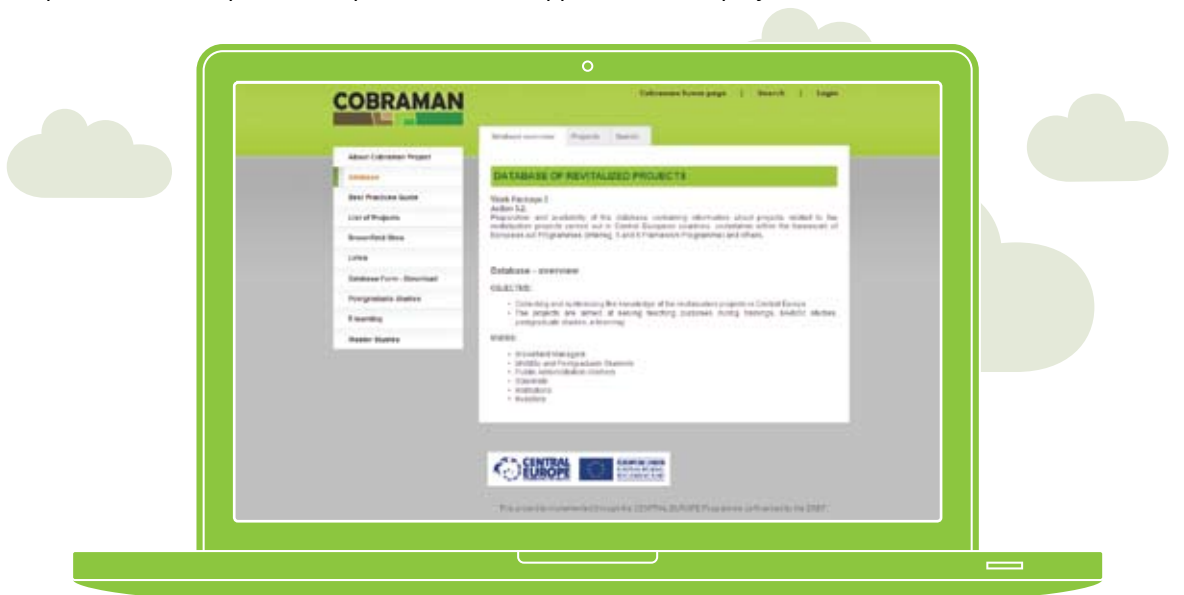
One task of the project was to gather experience connected with European project fulfilment, referring to revitalisation of post-industrial areas. Within this task the best practices presented in European projects were reidentified, analysed and described. The scope, tools and key definitions essential to sustainable development of post-industrial areas were also defined. In order to present to the public and disseminate the results and effects of project work a public database as well as an Internet guide were prepared. The guide also presents different aspects about practical use of certain tools used in post-industrial transformation. These include various aspects, such as:

- **Environmental**
- **Economical and financial**
- **Project management**
- **Marketing**
- **Legal**
- **Social**
- **Cultural**
- **Technical**
- **Sustainable urban planning and design**

The choice of these aspects was based on the evaluation of previous projects concerning the transformation of post-industrial areas. The key elements of sustainable development are such issues as: economical, environmental and social, based mainly on the improvement of the quality of life in the rural areas, involving the local community in the decision-making process and planning, which concern their local area, and informing citizens about the on-going transformation.

The interdisciplinary approach in the completion of revitalisation projects, which involves observing different methods and tools helping in the completion of the aims in all the above mentioned aspects, is apparently crucial. The guide allows browsing through identified tools and concepts in European post-industrial area revitalisation projects and is organised according to categories. The user may find information about the main benefits of specific tools and practical implications of the applied tool on a project's success.

Web page of the Database



Pilot sites



- 14 **Green stop-over at the Brda River**
Contamination of the Past
City of Bydgoszcz
- 15 **Area Quellenstraße**
Marketing for a sleeping beauty – from bad image to seminal address
City of Stuttgart
- 16 **Most Lake**
From digging to swimming
City of Most
- 17 **Railway station Kranj**
Inclusive spatial planning and design from the beginning: the success factor
City of Kranj
- 18 **Former sugar mill of Comacchio**
Key renewable energy solutions for regeneration processes
City of Ferrara
- 19 **Ústí Brownfield Strategy**
Brownfield regeneration needs a strong leader
City of Ústí nad Labem

Green stop-over at the Brda River

Contamination of the Past

Remediation of the site

Area

1130 m²

Owner

City of Bydgoszcz

Former use

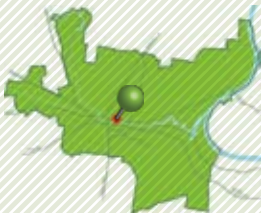
Gasworks, warehouses, train depot

Planned use

Recreation area

Pollution & Remediation

PAHs, BTEXs, phenols and oils



Location of the pilot site in the City of Bydgoszcz



Location of the pilot site in the City of Bydgoszcz



Visualisation of the future development



Pilot project scope

The aim of the pilot investment was to conduct a transparent process of regeneration coordinated by a brownfield manager. It was planned to clean up the soil and develop the site for the recreational use.

About the site

Bydgoszcz City is the 8th most populated city in Poland that covers the area of 175,98 km². The city is located in northern Poland on the Brda River and Bydgoszcz Canal which define the face of the city. Thanks to the convenient location, the city has become an economic, cultural and water sports hub. Admittedly, the industry spins the economy but it also leaves traces. In the COBRAMAN project the City of Bydgoszcz put the focus on contamination of soil that poses a deterrent in the process of brownfield regeneration.

The area selected to be developed within the COBRAMAN project is owned by the City of Bydgoszcz and it was an unused brownfield at the time of selection. The site covers the area of 1 130 sq metres and yet, as small as it may seem, it is vividly noticeable to the passers-by who stumble upon a scary-looking wall remnants and ruins in the very heart of the city along the picturesque riverbank. To make matters worse, it also turns out that the soil quality remains an issue due to the 150-year-long industrial use associated with the processes of gas treatment and production of tar board. The investigations revealed the existence of PAHs, BTEXs, phenols and oils.

Activities during the project

The works on the pilot site comprised ground and groundwater investigations, demolition of the previous infrastructure remains and the remediation works. The soil was cleaned up through the process of excavation of contaminated soil and bioremediation. On the newly purified ground, a leisure area was developed for citizens who can find now a breathing space by the Brda River in the busy hub of the city.

What have we learned?

The unquestionable advantage of the project for the local community is the removal of the ground contamination and hence the improvement of local environment.

For the institutions, the integrated brownfield management concept will result in an effective approach towards post-industrial areas in the city. What is not a brownfield today, might become a brownfield tomorrow.

Area Quellenstraße

Marketing for a sleeping beauty – from bad image to seminal address

Feasibility study

Area

30.700 m²
(8.700 m² + 22.000 m²)

Owner

City of Stuttgart

Former use

Mineral oil recycling company – commercial uses

Planned use

Craftsmen Centre 2.0. – industrial / commercial uses

Pollution and Remediation

Soil and groundwater damages due to mineral oil recycling business



Pilot project scope

Due to its history as a mineral oil recycling business, the municipal COBRAMAN Pilot Site suffered huge image problems. Though remediated completely, all promotion activities failed. The main targets of COBRAMAN's activities were to improve the existing bad image and to create an "Address Quellenstraße".

About the site

Stuttgart, the State Capital of Baden-Württemberg (581.000 inh.), covers about 207 km². The pilot site is located in the north-western part, within the traditional industrial quarter "Pragstraße". Due to structural changes, industrial, commercial, cultural and administrative uses and heterogeneous structures characterise this quarter. Area Quellenstraße consists of two single plots: The former Epple Company (8.700 m²) and the neighbouring site "Hasenweiden" (22.000 m²). Epple was active in the petroleum and car-oil recycling business since the end of the 19th century and suffered serious damages during World War II. Soil and groundwater were heavily contaminated. In the mid 1990s investigation of the site was intensified; until 2003 about 63.500 tons of contaminated soils were excavated. In 2005 the city of Stuttgart became the owner of the site, which is now ready for new uses.

Activities during the project

After an intense analysis of the Brownfield Managers, an external feasibility and marketing study to obtain a vision for development was commissioned in March 2010. The ideas focused on a connecting boulevard to create local identification. For Area Quellenstraße three alternatives were drafted: office buildings, indoor-playground and Craftsmen Centre 2.0. The last option was identified as the most promising and market-driven. Access to the area should be improved by extension and revaluation of the Quellenstraße. In autumn 2010 political decision-makers gave a positive feed-back.

To turn the vision into a professional marketing campaign, a strategy workshop with representatives of all affected municipal departments, experts from the property business and local stakeholders was carried out in June 2011. This workshop was also the kick-off for the Interdisciplinary Working Group Quellenstraße (IWG). The department of economic development will proceed in marketing following the ideas developed in COBRAMAN.

What have we learnt?

Professional Brownfield Management is important to clarify and communicate all relevant interests before the commission of external studies. After the process, a common vision of the municipality can be communicated clearly towards future users, citizens and neighbours. The IWG is the most relevant supporter in dissemination of the activities, but political support is indispensable.



Epple company in 1998



Pilot site today

Most Lake

From digging to swimming

Architectural study of the area

Area

12.520.000 m²

Owner

State, City of Most,
23 small private owners

Former use

open cast mine

Planned use

leisure, housing, high-tech industry

Pollution and Remediation

Abandoned open cast mining and storage of building rubble, basic reclamation works finished (drainage, surface treatment, lake water filling)



Pilot project scope

The old city of Most, as part of the coal basin, had in the 70s of the twentieth century to give way to mining in the volume of about 100 million tons of brown coal. The chosen technological method of extraction was open cast mining, which is very effective but brings massive and nearly irreversible damage to the affected landscape. The new city of Most was built. After demolition of the old town and coal excavation the brownfield of enormous dimensions was created. Part of the area has undergone extensive reclamation, resulting in a new shape of the landscape. The pit, remaining after coal extraction was flooded to create a large lake, which can be used as a new city potential. One of the activities associated with this brownfield site has been the involvement of this vast territory of the future Most Lake as a pilot project site to COBRAMAN.

About the site

Most is the capital city of the Most District, situated between the Czech Central Mountains and the Ore Mountains. It is situated around 80 km northwest of Prague along the Bílina River and close to the German border. The pilot site Most Lake covers an area of nearly 1500 ha. It is a complicated territory, consisting of a land fill, natural terrain, remains of industrial activities, water surface and industrial communications, also partly influenced by former underground mining.

Activities during the project

For the area of the future Most Lake site, 10 projects are planned or already completed. It is necessary to find the appropriate land use for all parts of this area, whether for industrial, housing or leisure activities. Four COBRAMAN studies dealt with brownfield problems from several aspects: technical and urban design, economic development, marketing strategy and management system. The study of technical and urban design aimed at gathering all previously known data on the given territory to capture all known projects, plans and identify sub-areas in the locality, applicable for construction, recreation or as a nature reserve. The economic study analyzed the costs of basic maintenance, the costs of planned projects and the estimated amount of investment in basic infrastructure. The marketing strategy showed how to deal with the brownfield site as a future "good". In the frame of the project COBRAMAN also hydro geological and geotechnical surveys of parts of the territory were undertaken. A student's architectural and urban study of resettlement of the future Most Lake area, created in 2009 by students of the Faculty of Architecture - Technical University in Prague, was another outcome.

What have we learned?

The lake Most pilot site showed that extensive analyses of the area are necessary for effective future development. All these studies form a large complex collection of data, procedures and methods of working on such an extensive territory, the remnant of former industrial activities. This is a unique collection, which serves as an example of good practice in preparation for large investments in brownfields. This case will be useful also for other European cities, professional institutions, specialists and development companies.



Most Lake with City of Most behind



Area of the geotechnical survey with the locations of probes

Railway station Kranj

Inclusive spatial planning and design from the beginning: *the success factor*

Winning project for Information centre at the Kranj railway station

Area

90.000 m²

Owner

Ministry of transport, Merkur (trader), other smaller landowners

Former use

Warehouses, train station

Planned use

Passenger centre (train station, bus station, public area), offices, other services

Pollution and Remediation

Asbestos, noise pollution



Degraded industrial areas in the City of Kranj



Construction works for the Info point



Pilot project scope

In the past 20 years liberal government policies and the booming property development sector, shifted most development into the hands of the private sector. Brownfield regeneration in Central Europe was all about transforming degraded areas mostly into shopping malls or private housing. The pilot project in Kranj tried to promote publicly driven sustainable development of degraded areas through innovative spatial planning instruments.

About the site

Kranj is the capital city of the Gorenjska region. It has almost fifty five thousand inhabitants (June 2011) and is the third largest city in Slovenia. At the end of the 19th century it became the most important industrial city in the Gorenjska region, with the production plants mainly situated near the Sava River. Cheaper production and labour force costs in other countries affected the city and triggered the issue of degraded areas. The area of nine hectares of land around the main Railway station was chosen as the pilot site, due to the mixed public and private ownership and location close to the city centre and Sava River.

Activities during the project

In 2008 the Municipality adopted its sustainable development strategy where brownfields regeneration became one of the main objectives of future development. In 2009 the Municipality prepared a vision to transform the railway station area into a passenger and business centre. Main efforts were focused on attracting public and private investors with adequate development plans. Redevelopment of the railway station area was also integrated in the Municipal Strategic spatial plan. The planning process included change of land use and identification of potential programmes for the area. The planning process continued with the preparation of expert guidelines for the Detailed Municipal spatial plan. Additionally, an innovative informal spatial planning document was prepared as a tool for easier negotiation between the City and potential investors during the regeneration process. An important step forward was the placement of the Information point inside the pilot area. The information point will promote brownfield redevelopment of the area to potential investors and the general public. It is also a start-up project, which shows the municipality's interest in brownfield regeneration. Its design was obtained through a students' competition at the Faculty of architecture of Ljubljana.

What have we learned?

The Site review proved to be a useful document/tool in the process of urban regeneration. It was used to collect information from different databases, personal input from various municipal departments, expert studies and other important sources. The main advantage was that it represented the state-of-the-art of the pilot area. The information from the Site review was an interesting source of information for the Mayor, Municipal departments, city council members, potential investors and different media. Using the Site review as a tool in the regeneration process was also helpful as a management tool, but also as a communication and marketing tool. The municipality decided to use this tool in other urban regeneration processes in the future as well.

Former sugar mill of Comacchio

Key renewable energy solutions for regeneration processes

Aerial view of the former sugar mill



Area

345,000 m²

Owner

SIPRO Local Development Agency

Former use

Sugar mill

Planned use

3 scenarios have been outlined,
1 chosen regeneration plan:
"Energy Park"

Pollution and Remediation

Concluded (asbestos removed and hydrocarbons in the soil eliminated)

Pilot project scope

The aim of the project was to outline a regeneration plan which could deal with the past achievements considering the "sensible" site's location (conditioned by environmental, historical and tourism development reasons), as well as the effort to define a process complementary to former studies implemented in the past years.

About the site

The area is located in the outskirts of the town of Comacchio (some 22,400 inhabitants) located in the Province of Ferrara. Comacchio and its valleys are one of the main centres in the Po Delta Park area. The sugar mill was built in 1951. After its closure in the year 2000, SIPRO purchased the entire plot. The industrial estate covers an overall surface of about 345.000 m², 145.000 m² of which are occupied by offices and residential buildings, industrial plants, warehouses, deposits, loading and parking areas and roads. The rest of the surface, about 200.000 m², is occupied by the sugar beets washing and processing waste water settlements tanks. The site clean-up activities ensured the disposal of hazardous waste scattered throughout the area: asbestos was finally removed, pollution due to hydrocarbons of point type remediated and all the buildings that could not be recovered were demolished.

Activities during the project

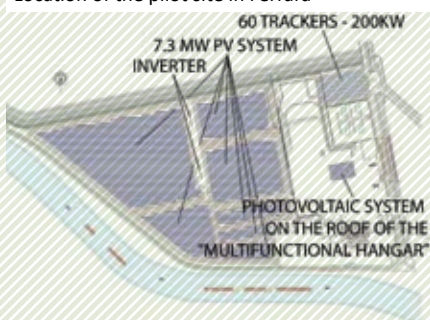
Along with environmental surveys, a few urban and functional regeneration hypotheses have been put forward in the area, also considering that the local Urban Planning Regulation foresees the site use as a freight and logistics centre. It is possible to integrate or modify it in view of a site regeneration project aspiring to enhance the local economy, but also with respect to the following constraints: no residential areas and large-scale retail trade; Historical importance of the town of Comacchio; reuse and remediation of the buildings not demolished and benefits for the local community. In the effort to preserve greenfields and considering the size of the site, SIPRO has studied the possibility to reuse it as an experiment in the field of renewable energies and photovoltaic systems, which also includes collaboration with the University of Ferrara and setting up a test laboratory (which might become a didactic laboratory).

What have we learned?

The regeneration process is a unique chance to tackle territorial development issues; the involvement of local stakeholders offers the opportunity to strengthen the relationship with the territory, to "treat a wound" with the local community and find project solutions satisfying all the actors. The final redevelopment solution should contribute to defining an "offer" for potential investors including a remediated area and an agreed and approved Municipal spatial plan. Several are the Threats that can stop the process are numerous: Regional and local elections; risk of a period of political instability; prolonged period needed for the negotiation process with stakeholders; risk of private investors' loss of interest.



Location of the pilot site in Ferrara

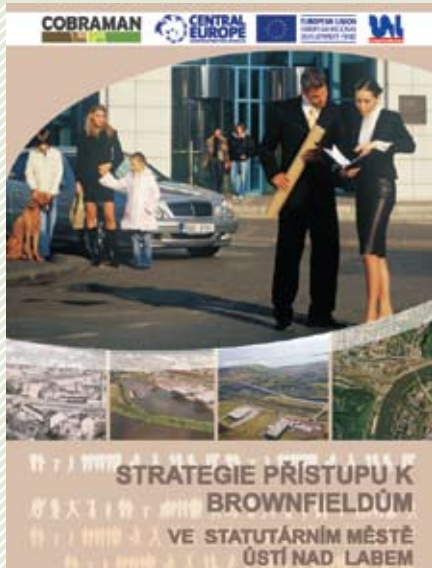


Plan of the Energy Park

Ústí Brownfield Strategy

Brownfield regeneration needs a strong leader

GIS of the degraded areas in the City of Ústí nad Labem



Cover of the Ústí Brownfield Strategy



Presentation of the database of degraded areas in the City of Ústí nad Labem



Demolition of a building in a degraded area

Pilot activities base

The Ústí Pilot Application focused on developing an inventory of brownfields (collecting data and creating a database), which can provide the necessary information needed by both officials and local administration, but also (international) investors when evaluating investment opportunities for future development of the City. It should be noted that prior to the implementation of the COBRAMAN project, no such sample of quality data existed for the district of Ústí nad Labem.

Activities during the project

The Pilot Application entailed the execution of an initial analysis, the development of a targeted methodology for inventory development and the outlining of a strategy for access to brownfields. The Brownfield Card was created as an instrument for data collection that would ensure unified results, comparable according to single features. Also, the simple layout and editing of the database ease updating. Within the scope of the Pilot Application, other activities associated with the inventory were carried out, namely the creation of GIS-layers of brownfields and facilitating broader public access to the brownfields inventory via the establishment of an online database of local brownfields. The public map application is made in user friendly design thanks to the ESRI software products, which is important to provide a high visit rate of the web site and ensure repetitive visits.

The inventory results clearly show that the development of the Statutory City of Usti nad Labem is endangered with underutilized and neglected areas (a total of 429.5 hectares). In every city there brownfields can be found; if the share of brownfields in built-up area exceeds 3 % we can say that positive city development is endangered. The analysis result was a core message to the city about the necessity of long term focused work. This was the reason for creating the Ústí Strategy of brownfields revitalisation that identified priorities and specific objectives to measure better conditions for development of the city. The main goal of the Strategy is to diminish brownfield areas by 100ha until 2020. The risk for brownfield regeneration in Ústí is that in fact they are competing with each other; the situation asks for coordination activities by the city.

What have we learned?

Pilot activities continue with implementation of the Strategy. Interaction with both experts and the general public constitutes an integral part of the project. The Strategy draft was discussed in detail during a meeting of brownfield owners on 28th June 2010. The most important outcome of the session was that in brownfield revitalisation the city should be more active and act supportively whenever there are private brownfield redevelopment activities incubating. We have learned that establishing grounds for cooperation and partnership between politicians, public administration, interest groups, investors and owners of brownfields is essential for success in brownfield regeneration.

What is next?

We will continue working towards diminishing the quantity of brownfields also via a project called the Czech Brownfield Partnership that is planned for the next three years.

Cobraman Project Promotion

www.cobraman-ce.eu



1 City of Bydgoszcz
Poland



2 City of Stuttgart
Germany



3 The University of
Economy in Bydgoszcz
Poland



4 City of Most
Czech Republic



5 VSB-Technical University of
Ostrava
Czech Republic



6 City of Kranj
Slovenia



7 City of Ústí nad Labem
Czech Republic



8 SIPRO-County Board
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Italy



9 Urban Planning Institute
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