COBRAMAN

Manager Coordinating Brownfield Redevelopment Activities

CENTRAL EUROPE Project 1CE014P4 COBRAMAN www.cobraman-ce.eu

Traning Handbook

WP No. 4
Output No. 4.3.2

Prepared by:
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last update: November 2011

CENTRAL EUROPE COOPERATING FOR SUCCESS. EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

TRAINING HANDBOOK

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1	**Training Plan** Participants contact Details
2	**1st seminar** Bydgoszcz (06.-07. October 2009)
3	**2nd seminar** Most (25.-26. November 2009)
4	**3rd seminar** Ostrava (10.-11. February 2010)
5	**4th seminar** Ferrara (19.-20. May 2010)
6	**5th seminar** Usti (21.-22. September 2010)
7	**6th seminar** Ljubljana (16. May 2011)
8	**7th Wrap-up seminar** Vienna (10. October 2011)
8	**Online seminars:** **1st** online seminar 12. November 2009 **2nd** online seminar 21 January 2010

1. Training Plan

1.1. Preface

The training plan was set up in the responsibility of PP2 Stuttgart by et environment and technology Dr. Thomas Ertel, Esslingen. The draft version has been finally discussed and approved by the partners in the WP4 preparation meeting held in Stuttgart on 20th of May 2009.

It is to be considered as a document to be further developed according to the progress of the work in detailing the seminar programme for the single trainings, getting agreement from additional experts to contribute as trainers, etc.
Document in hands is the third update set up on October 2011.

1.2. Format of seminars

- duration +/- 2 days
- ½ day site visit obligatory
- connection to local pilots
- 15 – 25 participants as optimal group size
- extension via e-learning as far as possible
- additional participants e.g. from associated institutions possible

1.3. Participants

PP nr.	Partner	WP Responsible	Training Participants – Brownfield managers	Email address
LP	City of Bydgoszcz	Katarzyna Napierala	1. Hanna Lewandowska	h.lewandowska@um.bydgoszcz.pl
			2. Natalia Weckwert	n.weckwert@um.bydgoszcz.pl
			3. Dragan Marinkovic	dragmarkg@gmail.com
2	City of Stuttgart	Regine Zinz	1. Regine Zinz	regine.zinz@stuttgart.de
			2. Michael Schweiker	michael.schweiker@stuttgart.de
			3. Matthias Schmid	matthias.schmid@stuttgart.de
			4.Maren Gunzenhäußer	Maren.Gunzenhaeusser@stuttgart.de
			5. Iwona Pelka	iwona@et-ertel.de
3	University of Bydgoszcz	Dominika Muszynska-Jeleszynska	1. Dominika Muszynska-Jeleszynska	dominika.muszynska@tih.pl
			2. Magdalena Jasinska	magdalena.jasinska@byd.pl
			3. Zuzanna Zacniewska	zuzanna.zacniewska@byd.pl
4	City of Most	Karel Borecky	1. Jaroslav Krch	jaroslav.krch@mesto-most.cz
			2. Tomáš Fiala	tomas.fiala@mesto-most.cz
5	VSB-University Ostrava	Alena Labodova	1. Hana Franková	hanny.frankova@seznam.cz
			2. Lukasz Pierzchala	luku19@wp.pl
			3. Edyta Sierka	esierka@us.edu.pl
			4. Dana Žampachová	zampachova.dana@seznam.cz
			5. Kamila Kašovská	kamila.kasovska.st@vsb.cz
6	City of Kranj	Janez Ziherel	1. Janez Ziherl	janez.ziherl@kranj.si
			2. Ana Gradišar	ana.gradisar@kranj.si
			3. Primoz Skrt	Primoz.Skrt@kranj.si
7	Usti nad Labem City	Marta Saskova	1. Marta Saskova	marta.saskova@mag-ul.cz
			2. Martina Splichalova	martina.splichalova@mag-ul.cz
			3. Sven Czastka	czastka.s@kr-ustecky.cz

PP nr.	Partner	WP Res-ponsible	Training Participants – Brownfield managers	Email address
8	SIPRO-Ferrara	Chiara Franceschini	1. Chiara Franceschini	chiara.franceschini@siproferrara.com
			2. Gianluca Bortolotti	gianluca.bortolotti@siproferrara.com
9	UPI Ljubljana	Boštjan Cotič	1. Boštjan Cotič	bostjan.cotic@uirs.si
			2. Barbara Mušič	barbara.music@uirs.si

1.4. Seminars time schedule

1.4.1 face to face training seminars

Meeting	Place	Date	Topic
Preparation	Stuttgart	20.05.2009	Training Plan
1. Training	Bydgoszcz	06. – 07.10 2009	Basics & Roadmap
2. Training	Most	25. – 26.11.2009	Management Instruments & Tools
3. Training	Ostrava	10. - 11.02.2010	Civil Eng. / Env. Technologies
4. Training	Ferrara	19. - 20.05.2010	Economic Aspects
5. Training	Usti	21. - -22.09.2010	Communication & Marketing
6. Training	Ljubljana	17.05.2011	Planning Aspects & Sustainability
7. Training	Vienna	12.10.2011	Wrap up Seminar

1.4.2 web-training / e-learning seminars

Meeting	Place	Date	Topic
1. web-meeting	virtual	12.11.2009	Introduction to e-learning, management tools
2. web meeting	virtual	21.01.2010	

1.5. Key topics to be covered

Basics and roadmap

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

Economic aspects

- Basics of real estate economics – to achieve a proper understanding and a common language
- Financing and funding instruments
- PPP
- Facility Management and long term operational aspects
- Land valuation of brownfields
- Dealing with the risks – insurance models
- Calculation of overall costs – life cycle costs

- European funding instruments like Jessica, Jeremy, ect.

Civil engineering / environmental technologies
- Deconstruction of buildings
- Dealing with Contamination, remediation
- Geotechnics
- Main infrastructure works
- Water management
- Soil protection
- Protection and creation of habitats
- Technical aspects of Industrial heritage

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

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

Management instruments & 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

1.6. Pool of trainers

Each partner nominated potential trainers which agreed to contribute. There trainers are recruited as staff of
- Project Partners
- Associated institutions or as
- External experts involved in local projects

PP nr	Partner	Nominated experts	Title of contribution	Date of Seminar
LP	City of Bydgoszcz	Mr. Wojciech Irminski, Ramboll Group Poland	The Old Gaswork in Bydgoszcz – history of land and water enivironment polution‘s research	Bydgoszcz, 06.-07.10.2009
LP	City of Bydgoszcz	Mr. Gerard Jilleba, City of Hengelo, NL	Managing brownfield development projects	Bydgoszcz, 06.-07.10.2009

PP nr	Partner	Nominated experts	Title of contribution	Date of Seminar
LP	City of Bydgoszcz	Dragan Marinkovic	The experience of regeneration in Kragujevac - the remediation of Zastrava factory	Ferrara, 19.-20.05.2010
2	City of Stuttgart	Mr. Petermann, WHS GmbH Ludwigsburg	Overview about the Facility Management and Economic feasibility study	Ferrara, 19.-20.05.2010
2	City of Stuttgart	Jörgen Treiber		Vienna, 12.10.2011
3	University of Bydgoszcz	Mrs. Sabine Kalke, City of Belfast, UK	Belfast experience	Bydgoszcz, 06.-07.10.2009
4	City of Most	Mr. Craig Mortimer, Aquatest	Land reclamation / techniques and environmental issues	Most, 25.-26.11.2009
5	VSB University of Ostrava	Mr., Mrs. Raclavska	Geochemistry and Brownfields Geotechnical aspects of Brownfields	Ostrava, 10.-11.02.2010
5	VSB University of Ostrava	Mrs. Barbara Vojvodikova	Structures on brownfields	Ostrava, 10.-11.02.2010
5	VSB University of Ostrava	Mr. Milos Matej	Brownfields and cultural heritage	Ostrava, 10.-11.02.2010
5	VSB University of Ostrava	Mrs. Svehlakova	Natural assets/ nature conservation aspects	Ostrava, 10.-11.02.2010
5	VSB University of Ostrava	Mrs. Monika Kosulicova and Hana Pavlu	Stepwise Approach to Brownfield Remediation	Ostrava, 10.-11.02.2010
6	City of Kranj			
7	City Usti	Mr. Jan Votocek	Project Management Plan	Most, 25.-26.11.2009
7	City Usti	Mrs. Jirina Bergatt Jackson (Brownfiled expert)	SWOT for What	Most, 25.-26.11.2009
7	City Usti	Mrs. Jirina Bergatt Jackson	Usti Brownfield Redevelopment Strategy; Stakehodler's involvement; Game: understanding stakeholders involvement	Usti, 21.-22.09.2010
7	City Usti	Ms. L. Sindelarova, DTZ Czech	Marketing of brownfield properties	Usti, 21.-22.09.2010
7	City Usti	Mr. Miroslav Bartak	Elements of marketing for public sector	Usti, 21.-22.09.2010
7	City Usti	Mr. Carsten Debes, District of Zwickau	ReSource for Cobraman Activities relevant for brownfiled managers	Usti, 21.-22.09.2010
7	City Usti	Mr. Frank Leipe (LEG Thüringen)	Promoting Brownfields- the Approach of the State Development Corporation	Usti, 21.-22.09.2010

PP nr	Partner	Nominated experts	Title of contribution	Date of Seminar
			of Thuringia	
7	City Usti	Mr. Martin Duris, PBA Czech rep.	Brownfields in UK and Czech Republic an enginner's experience	Usti, 21.-22.09.2010
7	City Usti	Mr. Olaf Penndorf	Brownfield register as a mobilizing regional planning tool	Usti, 21.-22.09.2010
7	City Usti	Mrs. Michaela Zackova, KPMG Czech Rep.	Case studies- brownfields in the Czech Republic and abroad	Usti, 21.-22.09.2010
7	City Usti	Mr. Jaroslav Koutsky	Creative cities and soft factors of development- ideological context of brownfields regeneration	Usti, 21.-22.09.2010
7	City Usti	Mrs. Blanka Markova	Ostrava- reactivating brownfields by culture	Usti, 21.-22.09.2010
8	SIPRO Ferrara	Mr. Antonello Stella	Civil engineering, restoration of buildings, urban planning	Ferrara, 19.-20.05.2010
8	SIPRO Ferrara	Mr. Paolo Rela	Basics of real estate economics: the experience of Europa Risorse	Ferrara, 19.-20.05.2010
8	SIPRO	Mr. Piero Atella	PPP and Project finance the experience of Fondo PPP Italia	Ferrara, 19.-20.05.2010
9	UPI Ljubljana		Financial aspects, PPP	
9	UPI Ljubljana	Mr. Ivan Stanic, City of Ljubljana	Partnership Šmartinska Ljubljana – the city in motion	Ferrara, 19.-20.05.2010
9	UPI Ljubljana	Mr. Mojca Sasek Divjak, IURS		Ljubljana, 17.05.2011
9	UPI Ljubljana	Mrs. Kaliopa Dimitrovska Andrews, UIRS	Urban Planning	Ljubljana, 17.05.2011
9	UPI Ljubljana	Mr. Matej Niksic, UIRS	Integrated urban Design	Ljubljana, 17.05.2011

2. 1st Seminar Bydgoszcz 06.-07.October 2009

2.1 Agenda of training seminar

Tuesday 6th of October		The First Brownfield Manager training seminar	
time		topic	speaker
9:00	9:30	Introduction, state of knowledge gained through previous projects, topic: tasks and responsibilities of a brownfield manager	Thomas Ertel
9:30	10:15	Team work/discussion aiming to develop the COBRAMAN definition for tasks and responsibilities	all participants
10:15	10:30	State of knowledge gained through previous projects, topic: skills and abilities of a brownfield manager	Thomas Ertel
10:30	11:00	Team work/discussion aiming to develop the COBRAMAN definition for skills and abilities	all participants
11:00	11:15	*Coffee break*	
11:15	12:00	legal framework of COBRAMAN thematic fields of interaction	Thomas Ertel
12:00	13:00	*Lunch*	
13:00	13:45	presentation external expert Gerard Jillebar	Gerard Jillebar
13:45	15:30	presentation external expert Sabine Kalke	Sabine Kalke
15:30	*15:45*	*Coffee break*	
15:45	17:15	speed-dating with experts	all participants and experts
17:15	17:45	conclusions of fist day leading to COBRAMAN job description	Thomas Ertel
Wednesday 7th of October		The First Brownfield Manager training seminar	
9:00	10:30	site bulletin, summary reports - access to information	Thomas Ertel
10:30	11:00	*Coffee break*	
11:00	12:30	brownfield SWOT	Regine Zinz
12:30	13:00	evaluation of seminar	Thomas Ertel
13:00		lunch and excursion at Mill Island, open end	

2.2. COBRAMAN Job description

2.2.1. Introduction, state of knowledge gained through previous projects, topic: tasks and responsibilities of a brownfield manager

2.2.2. State of knowledge gained through previous projects, topic: skills and abilities of a brownfield manager

Tasks and related skills	generic	technical	communication
Coordination of revitalization process within the municipal structures.	X	X	X
Time and resources management.	X		
Quality assurance and quality control.	X	X	
Efficient internal communication.			X
Coordinating information flow and work at any step in the development process.	X		X
Securing sustainability of well established information channels (personal contacts!).			X
Setting up and leading interdisciplinary working group	X		X
Preparation of SWOT and development visions.		X	
Securing that development plan which recognize existing policy, build on local needs and expectation.			X
"One stop shop" for investors as well as for site owners.			X
Acting as interface between policy makers and the technical specialists.		X	X
Involving community/neighborhood and other stakeholders in redevelopment process.			X
Marketing and branding.			X

CABERNET list [1] of key skills/abilities for a brownfield process manager

1. Ability to organize a multidisciplinary team
2. Communication and mediation skills
3. Consensus builder
4. Consultative skills
5. Creativity
6. Decisiveness
7. Deductive reasoning and forecasting based on past experience
8. Dependability (deadlines and commitments)
9. Diplomacy and tract
10. Empathy
11. Expertise
12. Flexibility/adaptability
13. Good listener
14. Good negotiator
15. Lateral and critical thinker
16. Leadership abilities
17. Mobilize local support
18. Pro-active, energy and enthusiasm
19. Realistic
20. Rhetorical abilities
21. Thoroughness, attention to detail

[1] CABERNET Position Paper – *Professional Skills in brownfield Regeneration, 1st Editions (April, 2005)*

2.3. Legal framework of COBRAMAN thematic fields of interaction

2.3.1 EU-Policies influencing brownfield remediation

Territorial Agenda of the EU Short policy paper incl. recommendations for an integrated

spatial development policy aims at mobilising the potentials of European regions and cities for sustainable economic growth and more jobs.

European Spatial Development Perspective (**ESDP**) - Towards Balanced and Sustainable Development of the Territory of the European Union Sets general targets and minimum environmental standards through mandatory “Directives”. Provides analysis and recommendations of member policies.

- Parity of Access to Infrastructure and Knowledge
- Wise Management of the Natural and Cultural Heritage

Leipzig Charter on Sustainable European Cities

- Integrated urban development should be applied throughout Europe and, in order to be able to do so, the appropriate framework for this should be established on a national and European level.
- Deprived urban neighbourhoods must increasingly receive political attention within the scope of an integrated urban development policy. Europe must reach all of its citizens.

2.3.2 EU Thematic Strategies

Thematic Strategy on the **Urban Environment**

- Guidance on integrated environmental mana-gement and on sustainable urban transport plans.
- Training
- Support for EU wide exchange of best practices.
- Commission internet portal for local authorities.

Communication “Towards a Thematic Strategy on **Soil Protection**“ (COM(2002) 179) eight threats to which soils in the EU are confronted:

1. erosion,
2. organic matter decline,
3. contamination,
4. salinisation,
5. compaction,
6. soil biodiversity loss,
7. sealing,
8. landslides and flooding.

2.3.3 EU Directives Affecting COBRAMAN

Polluter-pays principle at EU level was introduced in the European Community Treaty.

Environmental Assessment:

- SEA Directive 2001/42EC Strategic Environmental Assessment
- EIA Directive 85/33/EEC as amended by 97/11/EC Environmental Impact Assessment

Nature & Biodiversity

- FFH Directive 92/43/EEC conservation of natural habitats and of wild fauna and flora
- Birds Directive 79/409/EEC conservation of wild birds.

Aarhus Convention

- Directive 2003/4/EC on public access to environmental information
- Directive 2003/35/EC for public participation in respect of the drawing up of certain plans and programmes relating to the environment

New Air quality directive

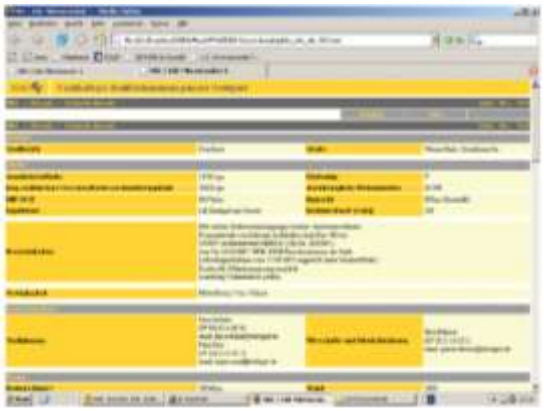
Air quality Directive 2008/50/EC new air quality objectives for PM2.5 (fine particles) including the limit value and exposure related objectives – exposure concentration obligation and exposure reduction target

Environmental Noise Directive 2002/49/EC

- Monitoring the environmental problem
- Informing and consulting the public
- Addressing local noise
- Developing a long-term EU strategy
- Finances
- Commission interpretative communication on the application of Community law on Public
- Procurement and Concessions to institutionalised PPP (IPPP) 2008/C 91/02
- Public procurement Directive 2004/18/CE and Directive 2004/17/CE

Regulation (EC) No 1370/2007 on public passenger transport services by rail and by road

2.4 The site bulletin



Site review Schoch-Areal Stuttgart

1. Rational and goals (as stated before)
    - Structuring available information
    - Bringing all working group members to the same level of knowledge
    - Basis for SOWT and vision development
    - Basis for marketing communication activities

2. Project site and his surrounding / Makrosite
    - Location within the city
    - Background project name, delineation neighborhood
    - How does it look “on site”
    - Development plans of neighborhood/wider surrounding

3. Historical and current use of the site
    - Type of use
    - Ownerships
    - Site specifics?

4. Conflicts and constrains for developments
    - Contamination Ü remediation
    - Heritage/nature protection
    - General urban planning constrains (fresh air corridors, green belts, large scale future
    - projcets,…)
    - Ownership structure, pre-emption rights
    - Political interests

5. Current state of planning
    - General planning principles of the city
    - Existing framework planning
    - Building plan
    - Development plan
    - Transport planning
    - Annex: all related planning documents

6. Related investigations (if existing)
    - External expertise / feasibility studies dealing with various planning options
    - Cost benefit models of various land use options
    - …any other expertise which is closely related in terms of location as well as in terms of
    - “circumstandces” to the development site

7. Current development / realisation of pre-emption right
    - Current planning development (incl. political/public interest)

8. Strength and visions for development
please refer to the chapter SWOT in this document

9. Requirements for preparation of land for building
    - Geology
    - Soil and groundwater contamination
    - Remediation concepts
    - Legislation relevant contaminated soil
    - Foundation
    - Social infrastructure

10. Technical activities for preparation of land for building
    - Demolition of buildings
    - Demolition of infrastructure
    - New local public infrastructure
    - Geotechnical investigation
    - Explosive ordnances investigation

11. Impact assesment of building activities
    - Occupational health and safety
    - Neighbourhood
    - Nature conservation

12. Financial aspects
    - PPP or other form of organisation
    - Marketing concept
    - Risk analysis
    - Project costs
    - Financing and Revenues

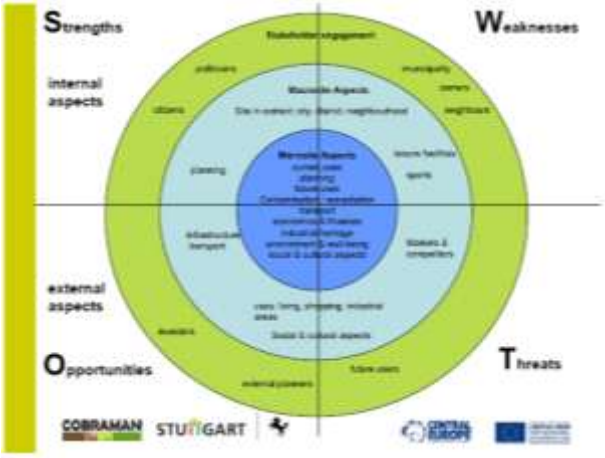
13. Time planning
    - Are there already any fix dates?
    - Are there any ongoing activities which might affect the schedule of project development
    - Definition of milestones
    - Definition of critical stages
    - …
    - Draft of project development schedule

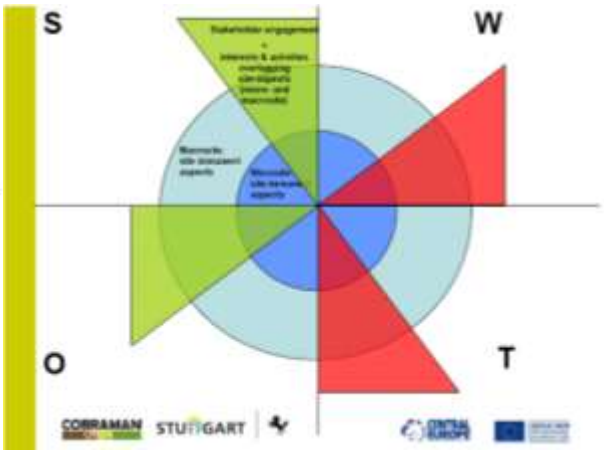
14. Summary and conclusions
have to updated regularly in parallel to the work progress
    - Summary of decisions taken within the interdisciplinary working group regarding direction
    - of development
    - Identification of next steps to be taken

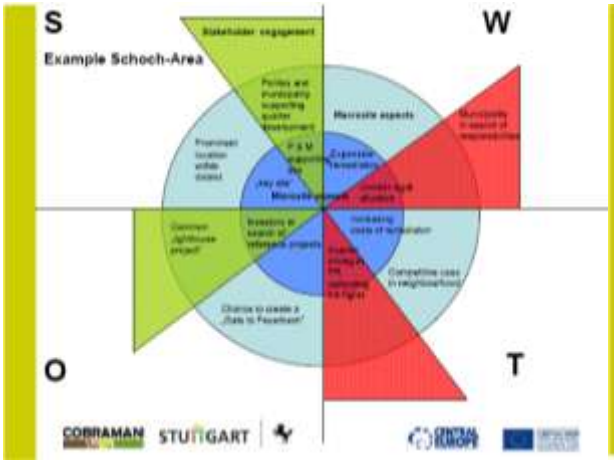
15. Bibliography / Annexes
    - Literature cited
    - Name and storage location of related expertise/reports
    - Overview table of people or organisations/departments already involved or contacted in
    - connection to the brownfield site

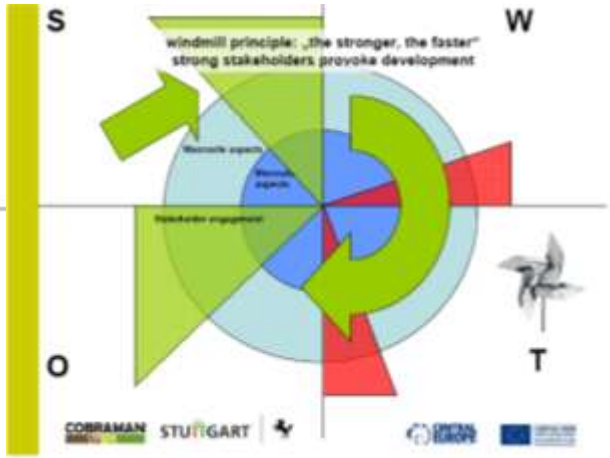
- Contact details of responsibles of various organisations/departments

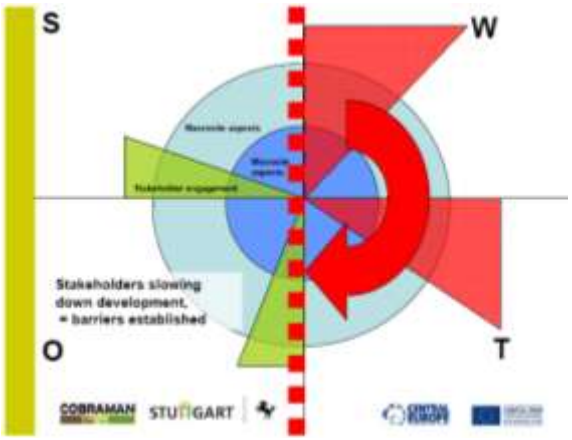
2.5. SWOT











Brownfield-SWOT-Matrix_ macrosite aspects

macrosite aspects / area in context	aspect	strengths	weaknesses	chances	risks
	city, district, neighbourhood				
	uses of surround				
	infrastructure / transport				
	planning at surround				
	industrial heritage				
	realtedm				
	markets & competitors				
	remediation				
	ecological aspects				
	sports / leisure				
	social & cultural aspects				

Brownfield-SWOT-Matrix_ stakeholder engagement

stakeholder interests & actions	aspect	strengths	weaknesses	chances	risks
	architects				
	municipality				
	departments of municipality				
	owners				
	aquirer				
	investors				
	future users				
	external planners				
	neighbours				
	district's citizens				

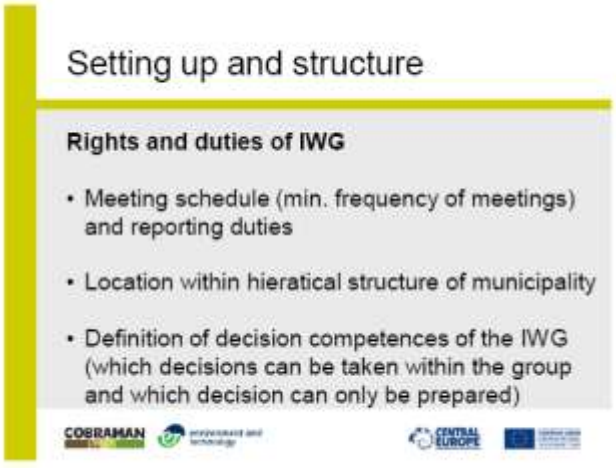
3. 2nd Seminar Most 25.-26.November 2009

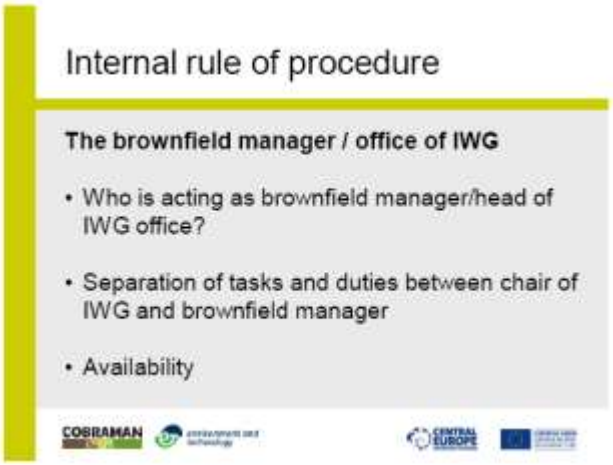
3.1. Agenda of training seminar

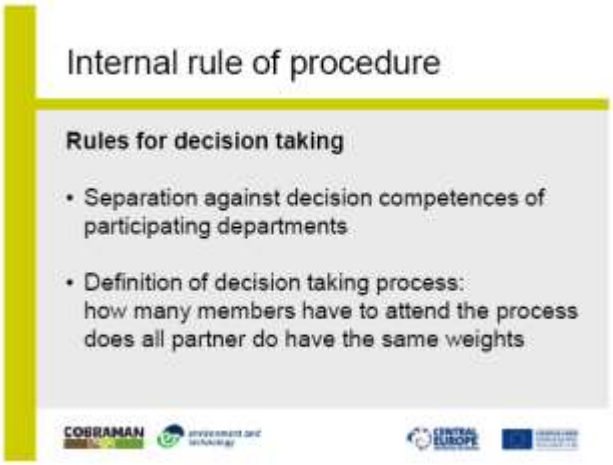
Wednesday 25 of November		**2nd Brownfield manager training seminar**	
time		topic	speaker
13:15	15:00	1. Interdisciplinary working group (IWG) - Identification of right persons to join the interdisciplinary working group, clarification of responsibilities and decision power, internal rules of decision making proces, rules in case of conflicts etc.	Dr. Thomas Ertel
15:00	15:15	Coffee break	
15:15	17:00	2. Legal framework - EU wide legal aspect related to the daily work of a brownfield manager.	Dr. Thomas Ertel
Thursday 26th of November		**2nd Brownfield manager training seminar**	
09:00	11:00	1. Basics in general project management and project development - key elements of a project management plan and recapitulation of site review and SWOT in connection to brownfield redevelopment.	
11:00	11:15	Coffee break	
11:15	13:00	Practical work on the issues project management, site rewiew and SWOT PART I. Working group 1: project management plan Working group 2: site review Working group 3: SWOT	
13:00	14:00	Lunch	
14:00	15:30	Practical work on the issues project management, site rewiew and SWOT PART II. Working group 1: project management plan Working group 2. site review Working group3: SWOT	
15:30	15:45	Coffee break	
15:45	17:00	Presentation of results of the three working groups, 15 min each group.	
17:00	17:30	Final feedback and next steps.	

3.2. Seminar Themen

3.2.1. Interdisciplinary working group (IWG) - Identification of right persons to join the interdisciplinary working group, clarification of responsibilities and decision power, internal rules of decision making proces, rules in case of conflicts etc.







3.2.2. Legal framework - EU wide legal aspect related to the daily work of a brownfield manager.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COBRAMAN
Workshop assessing existing concepts and tools, 25th of November, Most
Legal Framework of COBRAMAN Thematic Fields of Interaction
Dr. Thomas Ertel, et environment & technology, Germany
environment and technology
CENTRAL EUROPE


EU-Policies influencing brownfield remediation
Territorial Agenda of the EU
Short policy paper incl. recommendations for an integrated spatial development policy aims at mobilising the potentials of European regions and cities for sustainable economic growth and more jobs.
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EU-Policies influencing brownfield remediation
Leipzig Charter on Sustainable European Cities
• Integrated urban development should be applied throughout Europe and, in order to be able to do so, the appropriate framework for this should be established on a national and European level.
• Deprived urban neighborhoods must increasingly receive political attention within the scope of an integrated urban development policy. Europe must reach all of its citizens.
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EU-Policies influencing brownfield remediation
European Spatial Development Perspective ESDP Towards Balanced and Sustainable Development of the Territory of the European Union
Sets general targets and minimum environmental standards through mandatory "Directives".
Provides analysis and recommendations of member policies.
• Parity of Access to Infrastructure and Knowledge
• Wise Management of the Natural and Cultural Heritage
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EU Thematic Strategies
Thematic Strategy on the Urban Environment
• Guidance on integrated environmental management and on sustainable urban transport plans.
• Training
• Support for EU wide exchange of best practices.
• Commission internet portal for local authorities.
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EU Thematik Strategies

Communication "Towards a Thematic Strategy on Soil Protection" (COM(2002) 179)

eight threats to which soils in the EU are confronted:

1. erosion,
2. organic matter decline,
3. contamination,
4. salinisation,
5. compaction,
6. soil biodiversity loss,
7. sealing,
8. landslides and flooding.

EU Directives Affecting COBRAMAN

Polluter-pays principle

Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage

EU Directives Affecting COBRAMAN

Environmental Assessment

- **SEA** Directive 2001/42EC Strategic Environmental Assessment
- **EIA** Directive 85/33/EEC as amended by 97/11/EC Environmental Impact Assessment

EU Directives Affecting COBRAMAN

Nature & Biodiversity

- **FFH Directive** 92/43/EEC conservation of natural habitats and of wild fauna and flora
- **Birds Directive** 79/409/EEC conservation of wild birds.

EU Directives Affecting COBRAMAN

Aarhus Convention

- Directive 2003/4/EC on **public access to environmental information**
- Directive 2003/35/EC for **public participation** in respect of the drawing up of certain plans and programmes relating to the environment

EU Directives Affecting COBRAMAN

New Air quality directive

Air quality Directive 2008/50/EC new air quality objectives for PM2.5 (fine particles) including the limit value and exposure related objectives – exposure concentration obligation and exposure reduction target

EU Directives Affecting COBRAMAN

Environmental Noise Directive 2002/49/EC

- Monitoring the environmental problem
- Informing and consulting the public
- Addressing local noise
- Developing a long-term EU strategy

EU Directives Affecting COBRAMAN

Finances

- Commission interpretative communication on the application of Community law on Public Procurement and Concessions to institutionalised **PPP** (IPPP) 2008/C 91/02
- **Public procurement** Directive 2004/18/CE and Directive 2004/17/CE

EU Directives Affecting COBRAMAN

Regulation (EC) No 1370/2007 on public passenger transport services by rail and by road

EU Directives / national law

COBRAMAN goal

Setting up a catalogue with national chapters to guide COBRAMAN through all national regulations/laws which are national translation of EU directives/policies.

homework — Each partner compiles a list of national regulations / laws

Final layout of catalogue

Example of a nationaly entry

Country	name national code of EU directive	name of related national law	short summary [english]	summary and explanation how to apply in practice [national language]
D	FFH Directive 92/43/EEC conservation of natural habitats and of wild fauna and flora and Birds Directive 79/409/EEC conservation of wild birds	Federal Nature Conservation Act §§32 ff BNatG	an impact assessment of building framework plans is necessary in case the plans could affect significantly a protection area. In case the plan turns out to significantly affect the protection area the plan is impermissible. The impact assesment applies on planning level or on project level.	Bauvorhaben, die geeignet sind ein Schutzgebiet erheblich zu beeinträchtigen, sind vor Verabschiedung einer Verträglichkeitsprüfung nach §34 BNatG zu unterziehen. Der Plan ist unzulässig bei erheblicher Beeinträchtigung des Schutzgebietes. Findet die Verträglichkeitsprüfung schon im Rahmen des Bauvorhaben im Baugenehmigungsverfahren statt werden einzelne Bauleitplanverfahrens statt werden einzelne Vorhaben im Baugenehmigungsverfahren nicht mehr geprüft. Anders jedoch wenn ein Vorhaben im unbeplanten Innen- oder Außenbereich liegt, dann muss die Verträglichkeitsprüfung im Rahmen des Baugenehmigungsverfahren erfolgen.

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Thank you for your attention!

3.2.3. Basics in general project management and project development - key elements of a project management plan and recapitulation of site review and SWOT in connection to brownfield redevelopment.

3.2.4. Practical work on the issues project management, site rewiew and SWOT PART I.

- Working group 1: project management plan
- Working group 2: site review

- Working group 3: SWOT

3.2.5. Practical work on the issues project management, site rewiew and SWOT PART II.

- Working group 1: project management plan
- Working group 2. site review
- Working group3: SWOT

3.3. List of participants

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Annual Project Meeting, COBRAMAN, 1CE014P4
City of Most, Czech republic, 23.-26.11.2009

COBRAMAN Annual Project Meeting

List of Participants **Most, 23-26 November 2009**

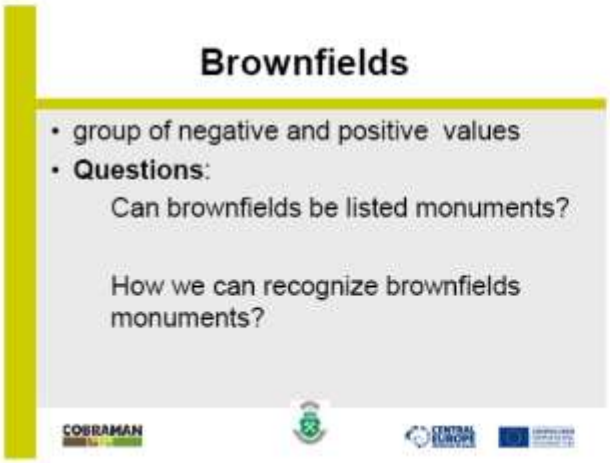
	Name:		Name:
1	Agnieszka Goździewska	26	Jaroslav Krch
2	Alena Labodová	27	Jiřina Bergatt Jackson
3	Ana Gradišar	28	Jitka Andršová
4	Barbara Černič Mali	29	Karel Borecky
5	Barbara Mušič	30	Kamila Kašovská
6	Barbara Stalmachová	31	Kamila Vávrová
7	Boštjan Cotič	32	Linda Hasmanova
8	Chiara Franceschini	33	Lukasz Pierzchala
9	Dana Žampachová	34	Maren Gunzenhäußer
10	Dominika Muszyńska	35	Marta Saskova
11	Edyta Sierka	36	Magdalena Jasińska
12	František Jirašek	37	Michael Schweiker
13	František Krurik	38	Miroslava Bendová
14	Grzegorz Boroń	39	Monika Košuličová
15	Gianluca Bortolotti	40	Natalia Weckwert
16	Hana Franková	41	Primož Skrt
17	Hanna Lewandowska	42	Petr Nikolič
18	Henrike Fisher	43	Roman Danel
19	Inga Katlewska	44	Sven Czastka
20	Iva Makurová	45	Tereza Dostalova
21	Iwona Pelka	46	Thomas Ertel
22	Jakub Tadych	47	Tomos Frak
23	Jakub Verner	48	Zdeněk Neustupa
24	Jan Votoček	49	Zuzanna Zacniewska
25	Janez Ziherl		

4. 3rd Seminar Ostrava 10.-11. February 2010

4.1. Agenda of training seminar

Tuesday 9th of February		3rd Brownfield manager training seminar	
time		topic	speaker
13:00		Opening speach by dean of the faculty of Mining and Geology	prof. Ing. Vladimír Slivka
13:00	15:00	Constructional aspects in heritage	doc. Matěj
15:00	15:15	Coffee break	
15:15	16:45	Natural assets/nature conservation aspects	Ing. Švehláková
16:45	17:15	Brownfields in Ostrava	Hana, Kamila, Lukas, Dana
Wednesday 10th of February		**3rd Brownfield manager training seminar**	
09:00	10:00	Geochemistry and Brownfields	prof. Raclavská
10:00	11:30	Stepwise Approach to Brownfield Remediation	Dr. Košuličová
11:30	11:45	Coffee break	
11:45	12:15	Geotechnical aspects of Brownfields	prof. Raclavská
12:15	13:00	Lunch	
13:00	14:30	Structures on brownfields	doc. Vojvodíková
14:30	14:45	Coffee break	
14:45	16:45	a role play on these technical aspects (supported by the experts from the morning session	prof. Raclavská, doc. Vojvodíková, Dr. Košuličová
17:00	18:00	Dinner	
Thursday 11th of February		**3rd Brownfield manager training seminar**	
09:00	13:00	Excursion to „Důl Michal“ mine	
13:00	14:00	Lunch	

4.2. Seminar themes
4.2.1. Constructional aspects in heritage



Demolition of coking plant Karolina

- Demolition of coking plant Karolina call up idea clear definitive – what and why save like monument of cultural industrial heritage,
- Followed detailed analysis of every single branch and attachment to each other

Demolition of coking plant Karolina

- Brownfields aren´t random and illogical scrums but they are historical and strictly logical incurred systems:
- Values pose key developed moments of each branch (mining, coking plants, metallurgy and their examples (deputies of typicalness and individuality)
- Value constitute´s not only single representative either representative system structures (natural conditions, coherent technological flows of every brunch, trafic corridors and social institutions)

Důl Neumann mine

- Typological analysis of development
- The oldest example of surface mine developed in this time without a mining tower
- Typological underground mine which conected to system of Jaklovecká štola galery
- Destroyed in 80´s of 20th century, nowadays it would be shrouded as only one representative of this typological developed phase

Důl Alexandr mine

- Typological developed analysis
- second oldest mining tower
- important architectural monument, transformation of composition of honour court (baroque palace composition) into industrial area
- local dominant near by Frýdecká street – orientation point

Důl Michal mine/ Petr Cingr, machine-room

- Typological development analysis – the first completely electrified mine
- Operationally modern solution, one big glazed machine-room, separation of accession of men (people way) and mining (coal way)
- Good quality architectonic solution

Power station Vítkovické železárny ironworks no. IV

- System connection analysis
- Powerful power station enabled mine electrification and replace of steam engine by modern electric motors

Coking plant Central

- System connection analysis, historical description
- Central coking plant destroyed in start of 20th century
- Today free area near by Silesian Ostravian castle, premises of very polluted soil and source of contamination underground water

Mine pit coking plant Centrálka

- System connection analysis – historical description
- Mine pit became part of central life of Ostrava, fun fair Tivoli
- Today exhibition area Černá louka

Vítkovické ironworks

- System connection analysis
- Demonstrative connection of the technological flow of coal mining, coking plant and iron working

Důl Hlubina and Vítkovické ironworks

Industrial city New Vítkovice

- System connection analysis
- Social institution – integral part of industrial agglomeration
- Example of efforts about stabilization of social situation due to system of social institutions (housing, meals, health care, education, cover in sickness or retire) and building city which ensures this

Ostrava – Svinov

- System connection analysis
- Railway pose key element in agglomeration development represented by station building
- Station building from 1847 – went through develop and transformation to representative gate to the city, then devastation..
- Today after reconstruction and modernizing and demonstrating respect of historical heritage and by contemporary architecture its representing nowadays modern railway

Amselm mine / Eduard Urx

- examples of new industrial monuments use
- Museum, traditional use which should be only limited number

Důl Hlubina mine, coking plant and Vítkovické ironworks

- – examples of new use of industrial monuments
- Combinated cultural use, enabled key parts of technological flow to visitors used for education and cultural actions
- Author of study **Prof. Helena Zemánková**, faculty of architecture VUT Brno

Důl Michal mine / Petr Cingr

- examples of new use of industrial monuments
- Combinated cultural use, enabled key parts of mine surface and using for education and cultural actions
- Exhibition of modern art in late chain cloakrooms

Odra mine

- example of new use of industrial monuments
- New production facility bathroom in late hall machine-room

Nordstern mine, Gelsenkirchen, Germany

- examples of new use of industrial monuments
- Use of surface mine buildings for administrative centre and landscape frame for recreation and sport

Hansa coking plant, Dortmund

- examples of new use of industrial monuments
- Use of surface mine buildings for cultural actions, education and use for minor administration

Textile factory Lodž, Poland

- examples of new use of industrial monuments, textile industry
- Use for traiding centre Manufacture

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Doc. PhDr. Ing. arch. Miloš Matěj PhD

Thank you for your attention!

4.2.2. Natural assets/ nature conservation aspects (Ing. Švehláková)

4.2.3. Brownfields in Ostrava

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Manager Coordinating Brownfield Redevelopment Activities

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This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF

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Seminar Ostrava, 9th – 11th Feb. 2010, Czech Republic

WP4 „Training seminar III "

Brownfields of Ostrava

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Brownfields in Ostrava

Presentation content

- **General information – BF in Ostrava**
- **Karolina**
- **Slaughter – house in Ostrava**
- **OSTRAMO – Lagoons of Ostrava**
- **So – called Bottom Vitkovice area**

Brownfields in Ostrava

- Main reason - conversion of heavy industry
- Area – 15% of territory (214 km^2)
- Type : mining, industry and chemistry area and infrastructure
- Redeveloping process started in 1998

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Karolina

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General information

- Area of 36 ha useful landscape where were in history heavy industry plants
- City centre (28.října street)
- Two buildings represent industrial architecture of 19th and 20th century

Map

History

- **1985** – Closure of the coking plant Karolina
- **1990** – Superficial redevelopment
- **1994** – land preparation; surveys of contamination of geo - environment, Marketing study
- **1994 – 1998** – decontamination planning (financed by the National Property)
  - ecological auditing, analysis of risks, decision for the type of redevelopment

History

- **1998 –2003** – land decontamination
- **2006** – building-up proces by Multi Development company
- **spring 2008** – initiation of the building
- **autumn 2008** – crisis - building was interrupted

Remediation

- 1999–2005
- redeveloped locality of 7,9 ha
- termical desorption method
- costs approx. 6 500 EUR
- decontaminated
  - 350 000 tons of soil
  - 109 000 m3 of water
  - 602 tons of tar
- Limits for benzene, naphtalene, phenols, oil substances

Karolina Today

- Multi Development company is ready to continue with building – March
- Creating new urban centre
- Historical buildings – cultural educational centre

Ownership

- Statutory City of Ostrava OKD (KARBON INVEST)
- Now Multi Development company

Slaughter – house in Ostrava

General information

- Complex of buildings – city slaughter house – made of grey bricks
- Situated between railway, Janáčkova street, Pobialova street and Stodolní street
- One of the most important technological and cultural monuments in Ostrava city

Map

History

- City built slaughter house in **1881**
- **1902** - and between years **1924-27** significantly expanded
- **1921** - modernized by the City of Ostrava
- In function till **70´s of 20th** century
- **In 90´s** several buildings pulled down during the construction of Bauhaus supermarket

Slaughter – house today

- The most appreciate part – with the tower – fortunately still exists
- These days - cultural monument not used
- Included at the list of endangered sites MonumNet- the most endangered real estates monuments

Slaughter – house today

- Bauhaus (owner) made a promise to fix the slaughter – house
- Conditions getting worse - because of inactivity
- Repairs – new temporary roofs, removing solder trees
- Bauhaus is not going to use slaughter - house, attempts to sell
- One of the obtions – complete demolition

Ownership

- **1994** - closed disadvantageous contract -Moravian city of Ostrava and Přívoz with Swiss company Bauhaus
- According to the contract Bauhaus has to care only for tower site
- Currently owned by Bauhaus company

Posibilities of use

- Urbanistic proposal of use – shopping center

Public participation

- Concerts, a series of public debates since 2006 to 2009 - cafe Fiducia
  (Civil Association for Old Ostrava)
- Branch Ostrava boycott (stop shopping in the Bauhaus)

Lagoons of Ostrava

General Information

- Catastral area of Ostrava - Mariánské hory a Hulváky
- Complex of four lagoons (signed R0 to R3)
- Containing carcinogenic substance
- Threats of resources drinking water
- 350 000 m^3 of hazardous waste

Map

History

- Brownfield developement - end of 19th century
- There was rafinery plant– production of paraffinum and lubricating oils
- From 1981 – regeneration of lubricating oils, storage of waste from rafinery production to opening reservoirs with sprinkled dams
- End of working was in 1997

Remediation

- Done by – association of companies Clear Ostrava (Geosan, Aquatest and Železniční stavitelství Brno)
- Remediation process of project „Corrective Measures – LAGOONS OSTRAMO„
  1. Reusing of petroleum sludges to fuel mixtures
  2. Removal of hazardous properties of contaminated soil with indirect thermal desorption
  3. Remediation of contaminated lagoons' surroundings with hydraulic remediation and biodegradation in

Ownership

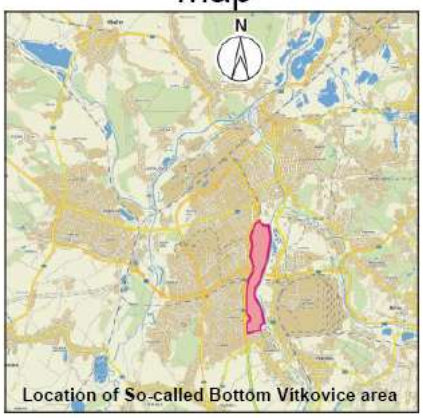
- Public areas – public company Diamo
- Previous – private areas
- These areas were bought by government for 1 crown

So-called Bottom Vítkovice area

General Information

- Type of industry: Heavy industry, mining and chemical industry
- 153 hectares useless area with historical industrial buildings and structures (colliery, coking plant, iron works)
- 98 % area practically without any serious ecological risk
- The coking plant - possible source of polution (hazardous chemicals still inside)

Map



History

- **1828** - Vítkovice steelworks were established
- **1836** - The first coke blast furnace in the monarchy was ignited
- **1998** - after 170 years of continuous activities in Vítkovice was terminated
- **2008** area were included in the European Cultural heritage

So-called bottom Vítkovice area 20th century

So-called Bottom Vítkovice Area Today

VÍTKOVICE MACHINERY GROUP is now preparing a really unique project of New Vítkovice that considers revitalization of so-called Bottom Vítkovice

Landscape of the National Cultural Heritage today

Ownership - New Vítkovice project

The projects are implemented:

- Reducing the old environmental load
- The program territorial renewal
- Reconstruction and reactivation some objects of the National Cultural Monument:
  - Gas holder
  - Fourth Power station
  - Blast furnace no. 1

New Vítkovice project

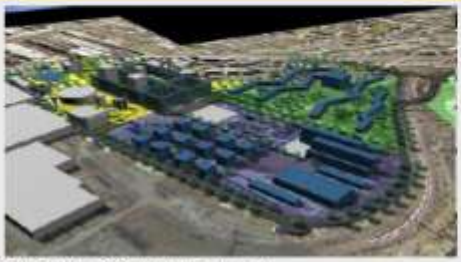
- Gas holder, should be turned into a multi-purpose hall with a capacity of 1,500 seats

Visualisation of first part of New Vítkovice project

New Vítkovice project

- The goal - preserve the industrial heritage also for next generations
- New modern and useful form, (build, university, scientific-research ,leisure time zones.)
- The target - built Ostrava's new centre in New Vítkovice
- Estimates of projekt are about CZK 60 bilion

New Vítkovice project



Visualisation of New Vítkovice project

Thanks for your attention

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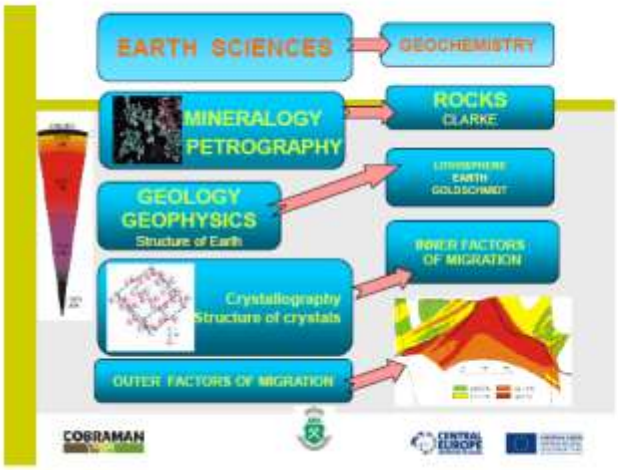
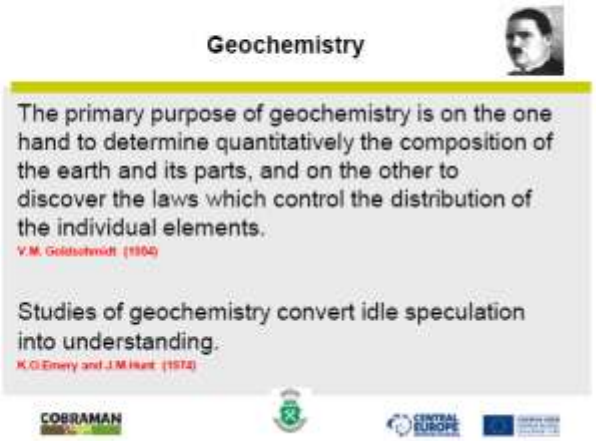
Name: Hana Frankeová, Kamila Kalevská, Lukasz Pierzchala, Dana Žemperková

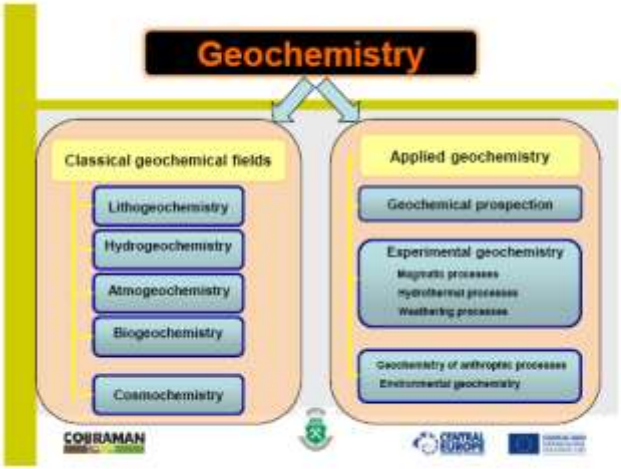
Institution: VŠB – Technical University of Ostrava

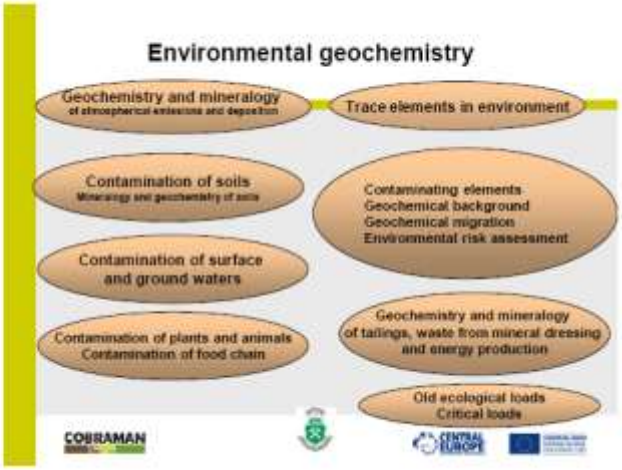
Thank you for your attention!

4.2.4. Geochemistry and Brownfields

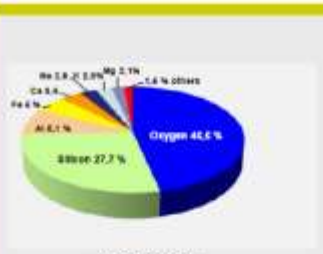








Earth´s crust – abundance

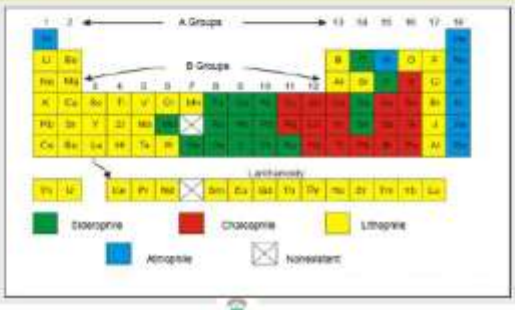


V.M.Goldschmidt

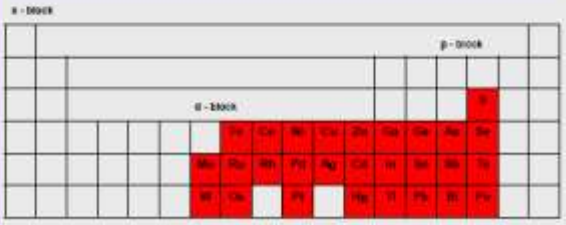
Element	mg/kg
O	466 000
Si	277 200
Al	81 300
Fe	63 000
Ca	36 300
Na	28 300
K	25 900
Mg	23 300
Ti	4 400
H	1 400
P	1 050
Mn	950
F	625
Ba	425
Sr	375
S	260
C	200

The geochemical cycle (B.Mason)

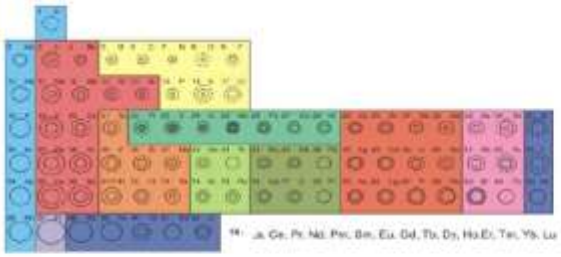
Geochemical classification of elements V.M. Goldschmidt



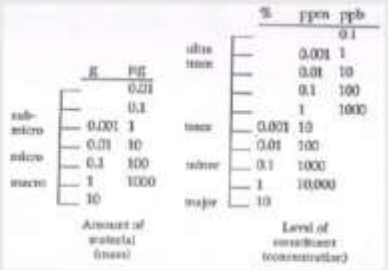
The chalcophile elements



Geochemical groups of elements – A.N. Zavarickii



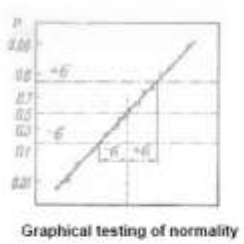
Concentrations of trace elements (log scale)



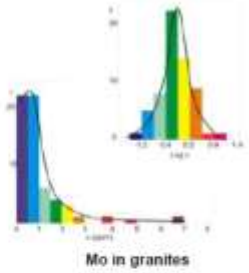
Geochemical background

Concentration
Unit: mg/kg (ppm)
Arithmetical mean: $x = \Sigma x_i / n$
x_i - analysis of sample, n – number of samples
Variance: $s^2 = \Sigma(x_i - x)^2/(n-1)$
Standard deviation: $\sigma = \sqrt{s^2}$
Threshold of geochemical anomaly: $x + 2\sigma \ldots x + 3\sigma$

Lognormal statistical distribution (L.H.Ahrens)

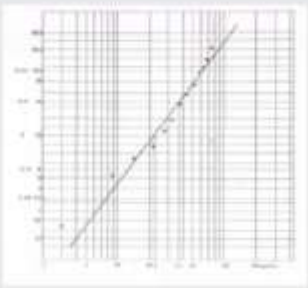


Graphical testing of normality



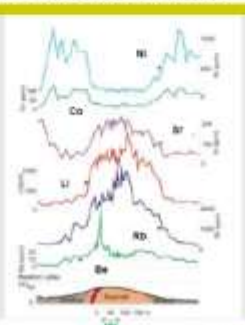
Mo in granites

Probability graph of concentration



Geochemical associations

Minor elements in soil



Factors of geochemical migration

1. Inner

Properties of elements

Properties of crystal structure of mineral phases

2. Outer

Properties of environment

Geochemical barriers

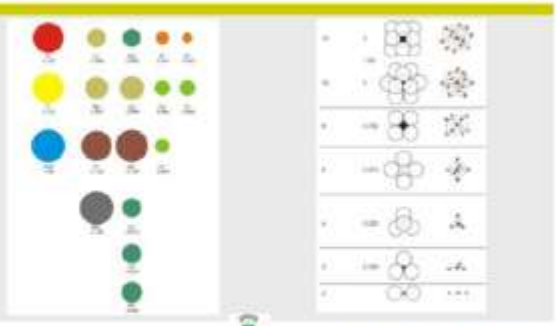
Inner factors of migration

Atomic number, atomic weight
Electron shell structure
Melting point, boiling point
Ionization energy
Electronegativity
Oxidation states
Stable isotopes
Atomic radius, covalent radius, ionic radius

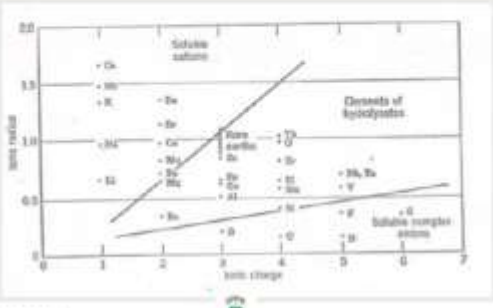
Structure of mineral phases
Isomorphism, polymorphism
Density, electric and magnetic properties

Ionic radii

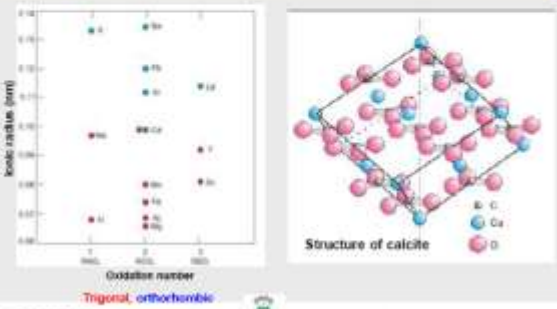
Ionic radii (nm), coordination numbers



Ionic potential



Effect of cation radius in determining crystal structure



Trigonal, orthorhombic

Redox potentials of some reactions of geochemical significance

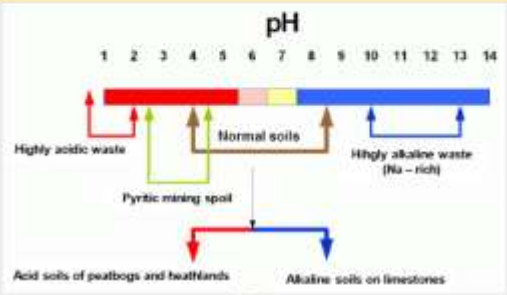
$Mn^{2+} = Mn^{3+} + e$	1.51 V
$Fe^{2+} = Fe^{3+} + e$	0.77 V
$S^{2-} + 4H_2O = (SO_4)^{2-} + 8H^+ + 8e$	0.14 V
$H_2 = 2H^+ + 2e$	0.00 V
$NH_3 + 9OH^- = (NO_3)^- + 6H_2O + 8e$	-0.12 V
$Fe(OH)_2 + OH^- = Fe(OH)_3 + e$	-0.56 V

Outer factors of migration

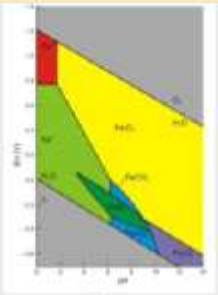
Concentrations of elements
Temperature
Pressure
Gravitation
Acidobasic reaction (pH)
Redox potential (Eh)

Presence of water
Colloids
Sorption
Biological activity

Acidobasic reactions in soils



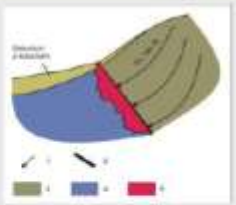
pH/Eh diagram for mineral phases of Fe,S and C



Geochemical barriers

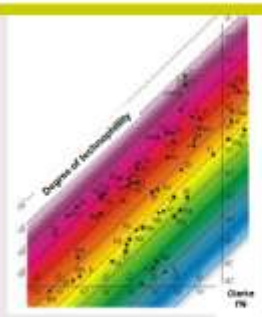
High gradient of outer factors of geochemical migration

Mechanical
Oxidation
Reduction
Acid
Alkaline
Concentration
Sorptive
Evaporate
Biogeochemical
Electrochemical
Mixing of waters

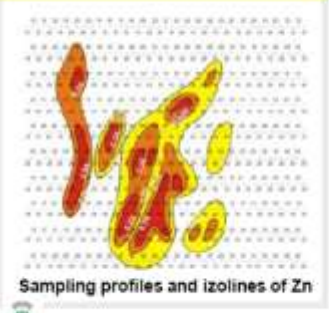


1 – Direction of water flow; 2 – Boundary of rock units; alkaline geochemical barrier; 3 – Acid crystalline rocks; 4 – Crystalline limestones; 5 – Enriched zone (Fe, Mn, Ni, Cu, Zn, Pb)

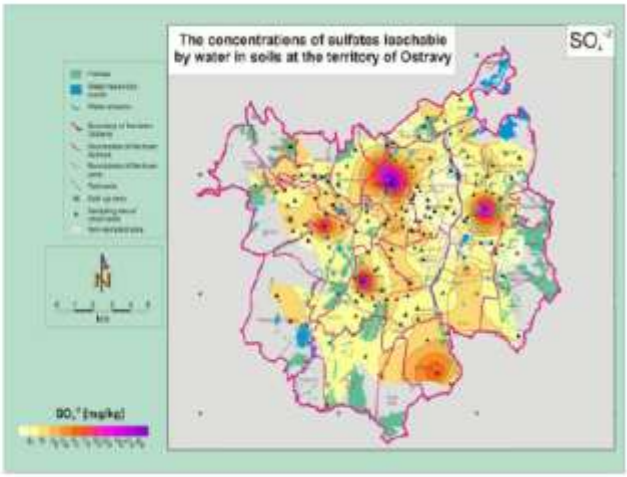
Utilization of elements in technology



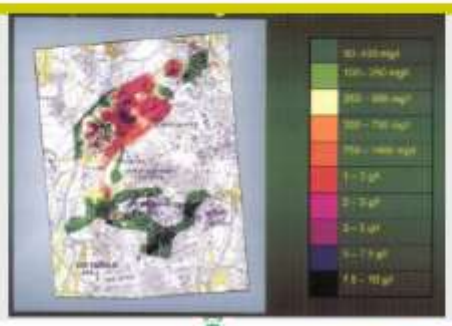
Soil sampling and data evaluation



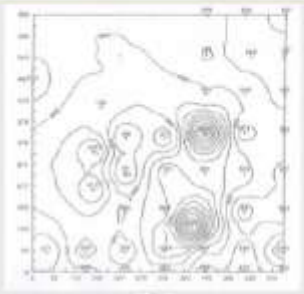
Sampling profiles and izolines of Zn

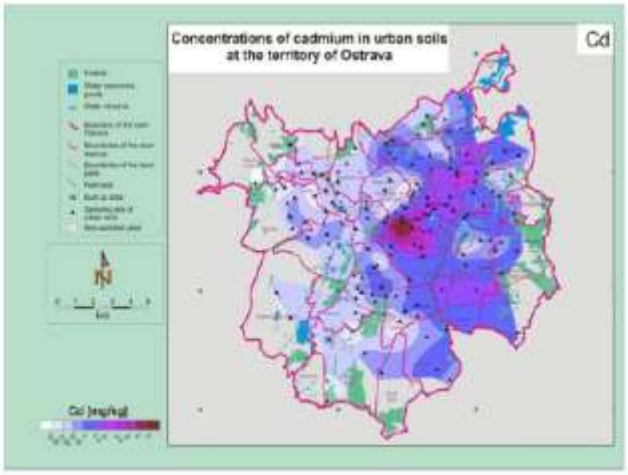


Sulfates in ground water, Ostrava

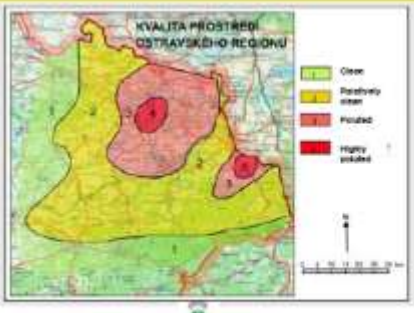


Pb izolines at industrially polluted site





Results of geochemical study:
Quality of environment in Ostrava region



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Thank you for your attention!

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

4.2.5. Stepwise Approach to Brownfield Remediation


AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation reviewed
General Information
site location
history of the site and its vicinity
geological and hydrogeological settings
capacity of the landfill, total/free space, volume of deposited waste in the past
description of operations (main products/services of the Company)
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation
General Information
Operating permits or Equivalent
Environmental Management
Air/Dust Emissions
Water Management
Waste Management
Hazardous Substances – Storage and Handling
Soil and Groundwater Contamination
Noise
Asbestos, Radioactive, PCB and ODS Materials
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation reviewed
EIA
Operating permits or Equivalent
land use permit and constructional permit
operational permit, integrated permit (according to Act. 76/2002 Coll. On Integrated Pollution Prevention and Control)
EIA
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation
General Information
Operating permits or Equivalent
Environmental Management
Air/Dust Emissions
Water Management
Waste Management
Hazardous Substances – Storage and Handling
Soil and Groundwater Contamination
Noise
Asbestos, Radioactive, PCB and ODS Materials
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation reviewed
Environmental Management
environmental policy
corporate directives (according to ISO 14001 standards ...)
certifications and licenses
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation
General Information
Operating permits or Equivalent
Environmental Management
Air/Dust Emissions
Water Management
Waste Management
Hazardous Substances – Storage and Handling
Soil and Groundwater Contamination
Noise
Asbestos, Radioactive, PCB and ODS Materials
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation reviewed
Air/Dust Emissions
• list of air emission sources (both heat generating and process sources)
• relevant permits/approvals issued by the Czech Environmental Inspection including terms and conditions of such permits/approvals
• protocols from inspections carried out by regulatory authorities
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation
- General Information
- Operating permits or Equivalent
- Environmental Management
- Air/Dust Emissions
- Water Management
- Waste Management
- Hazardous Substances – Storage and Handling
- Soil and Groundwater Contamination
- Noise
- Asbestos, Radioactive, PCB and ODS Materials
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation reviewed
Water Management
• permit for surface water and groundwater extraction
• permit for wastewater discharge to surface water and groundwater
• contract on water supply from municipal mains
• wastewater discharge to municipal sewer
• sewer plan including location of wastewater treatment facilities
• records on sewer inspections including integrity tests
• waterworks - approvals for use and operational instructions
• wastewater analysis data
• calculation of fees for wastewater discharge to surface water
• protocols from inspections carried out by regulatory authorities
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation
- General Information
- Operating permits or Equivalent
- Environmental Management
- Air/Dust Emissions
- Water Management
- Waste Management
- Hazardous Substances – Storage and Handling
- Soil and Groundwater Contamination
- Noise
- Asbestos, Radioactive, PCB and ODS Materials
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation reviewed
Waste Management
• hazardous waste handling permit
• operational waste records
• yearly waste statistics
• list of waste streams generated at the site including categorization, identification sheets and disposal methods/routes
• operational records on particular hazardous waste streams
• list of waste disposal contractors including their licenses
• all hazardous waste storage facilities
• protocols from inspections carried out by regulatory authorities
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation
- General Information
- Operating permits or Equivalent
- Environmental Management
- Air/Dust Emissions
- Water Management
- Waste Management
- Hazardous Substances – Storage and Handling
- Soil and Groundwater Contamination
- Noise
- Asbestos, Radioactive, PCB and ODS Materials
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation reviewed
Hazardous Substances – Storage and Handling
storage of chemicals, fuels and oil-containing products in underground or aboveground storage tanks - protocols of inspection on storage tanks, emergency sumps and piping (including integrity tests)
list of hazardous materials used at the site including respective material safety data sheets
all hazardous materials storage facilities
statement of the relevant state authorities on hazardous materials use, special handling terms including health and safety instructions
protocols from inspections carried out by regulatory authorities
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation
General Information
Operating permits or Equivalent
Environmental Management
Air/Dust Emissions
Water Management
Waste Management
Hazardous Substances – Storage and Handling
Soil and Groundwater Contamination
Noise
Asbestos, Radioactive, PCB and ODS Materials
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation reviewed
Soil and Groundwater Contamination
available geological and hydrogeological data
soil, groundwater and geotechnical investigation reports
remedial order(s) issued by regulatory authorities
remediation reports, monitoring reports
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation
General Information
Operating permits or Equivalent
Environmental Management
Air/Dust Emissions
Water Management
Waste Management
Hazardous Substances – Storage and Handling
Soil and Groundwater Contamination
Noise
Asbestos, Radioactive, PCB and ODS Materials
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
Environmental documentation reviewed
Noise
reports on outside noise measurements
records of public complains and legal proceedings
Asbestos, Radioactive, PCB and ODS Materials
list of materials used at the site containing asbestos, radioactive, PCB or ODS substances
records on disposal of these materials
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AUDIT, Risk assessment and Feasibility study
Phase I Environmental Site Assessment
PHASE I – conclusions and recommendations
„ based on findings made during this phase I environmental audit, is can be stated, that non-compliances with relevant environmental regulations have not been identified"
„categorization of potential emission sources at the X site is not clear. It is recommended therefore to clarify this issue with the respective Authorities"
„the following main legislative non-compliances were identified: (1) extraction of surface water without relevant permit, (2) discharge of wastewater from wastewater treatment plant without relevant permit. These non-compliances could result in imposition of a fine in case of inspection performed by the Authorities"
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AUDIT, Risk assessment and Feasibility study

Phase II Environmental Assessment

- Drilling, sampling, laboratory and analytical work
- Evaluation of obtained data and comparison with criteria of the Methodological guideline of the Czech Ministry of Environment from 1996
- Evaluation of the character, scope and severity of contamination on the site and in the vicinity
- Recommendation of further steps based on valid legislation

AUDIT, Risk assessment and Feasibility study

Phase II Environmental Assessment

Table of contents

AUDIT, Risk assessment and Feasibility study

Phase II Environmental Assessment

6. Conclusions and recommendations for further action

- soil and groundwater contamination was not discovered at the site
- it is recommended to take a new control samples in a month or two
- CONTAMINATION !!

Generally, in accordance with the Water Act (or others), identified contamination should be notified to the relevant State Authority!


AUDIT, Risk assessment and Feasibility study

Phase I and II Environmental Site Assessment

Timing

- Time schedule of Phase I ESA is dedicated from the size (extent) of respective site, in most cases we assume 1 week for performance of whole Phase I ESA.
- Regarding Phase II (investigation of pollution) time schedule, it depends on availability of permits for performance of field works issued by the site. Those are required in respect to Czech Geological Law. After completion of this step, 3 to 4 weeks are assumed to complete whole present (including field works-drilling, laboratory analyses, reporting, preparation of graphic outputs and proposing of further action).
- Outputs of phase I and phase II are in form of final reports with recommendation of further action and proposal of adoption of appropriate measures.
- *In general, final report could be considered as a part of purchase agreement*

Audit, RISK ASSESSMENT and Feasibility study

Environmental Risk Assessment of Contaminated Sites

The overall objective is an assessment of risks to the environment and human health resulting from soil, groundwater and building structure contamination as well as the impacts of waste disposal sites. The risk assessment usually has two essential parts:

1) the risk assessment itself,
2) the recommendation of clean-up levels.

Aims of ESA:
to quantify risk
to compare it to acceptable risk,
to reduce risk to an acceptable level,
to determine site specific target value

Audit, RISK ASSESSMENT and Feasibility study

The process of risk assessments consists of the following steps:

- description of the site (natural settings, land use, etc.)
- hazard identification (identification of the components of interest, the investigation of the contamination, determination of the priority contaminants)
- assessment of contamination spreading
- human health risk assessment
- ecosystem risk assessment
- recommendation of clean-up levels
- selection of the optimal remedial activity

- assessment of the effectiveness of the remedial activity or its stages
- up-dated risk analysis after performing complementary investigation or remediation


Audit, RISK ASSESSMENT and Feasibility study
Elaboration of risk assessment
Site data
Land use
Site settings
Risk assessment
Definition of scale of contamination based on investigation work
Definition of priority contaminants
Assessment of contaminant spread (groundwater flow and contaminant transport models)
Conceptual model for risk assessment for human health and ecosystems
Source of pollution (type, compound)
Recipient of pollution (groundwater, soil etc.)
Recipient of risk (population / ecosystem)
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Audit, RISK ASSESSMENT and Feasibility study
Human health risk assessment
1. Evaluation of dose – response relationship between a given dose and its toxic effect on organism (carcinogenic/non-carcinogenic)
2. Evaluation of exposure paths and quantification of exposure
3. Risk characterization
Carcinogenic effect
ELCR = LADD (CDI) x SF
1x10-6
1x10-5
1x10-4
Non-carcinogenic effect
HQ = LADD (ADD, CDI) / RfD
< 1
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Exposure scenarios
Audit, RISK ASSESSMENT and Feasibility study
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Audit, RISK ASSESSMENT and Feasibility study
Ecosystem risk assessment
➢ characterization of endangered ecosystems
➢ for risk assessment:
- characterization of risks (their negative impacts on ecosystems)
- specify the limits of contamination
➢ for risk assessment in CR is used comparison with binding legislative limits (61/2003 Sb.,13/1994 Sb., 376/2000 Sb., 223/2004 Sb.)
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Methodological Guidelines "Criteria on Soil and Groundwater Contamination" (for Czech Republic)
Limit A represents background values for naturally occurring compounds or detection limits. Values exceeding the A limit indicate contamination.
Limit B indicates the need for further investigation. Values exceeding the B limit indicate contamination with possible adverse affects to human health or the environment. The Methodological Guidelines state that it is necessary to obtain additional data to evaluate its significance and associated risks. Therefore, B limits represent trigger values for further investigation or action such as gathering of additional data, initiation of a monitoring program etc.
Limit C is indicative of soil/groundwater impact which may represent significant risk to human health or the environment. Values exceeding the C limit represent contamination which may indicate significant risk to human health or the environment. C limits are divided into three subgroups recommended for inhabited, recreation and industrial zones. The significance of risk can be verified only by risk assessment.
A
B
C
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Audit, RISK ASSESSMENT and Feasibility study
Selection of the optimal remedial activity
depends on several factors:
➢ type of contaminant
➢ saturated or unsaturated zone
➢ time
➢ budget
➢ all advantages and disadvantages of methods
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Investigation, Risk Assessment and FEASIBILITY STUDY
Feasibility study
an evaluation of a proposal designed to determine the difficulty in carrying out a designated task. Generally, a feasibility study precedes technical development and project implementation
Five common factors (TEC OR)
Technology and system feasibility
Economic feasibility
Legal feasibility
Operational feasibility
Schedule feasibility
Other feasibility factors (Market and real estate feasibility, Resource feasibility, Cultural feasibility)
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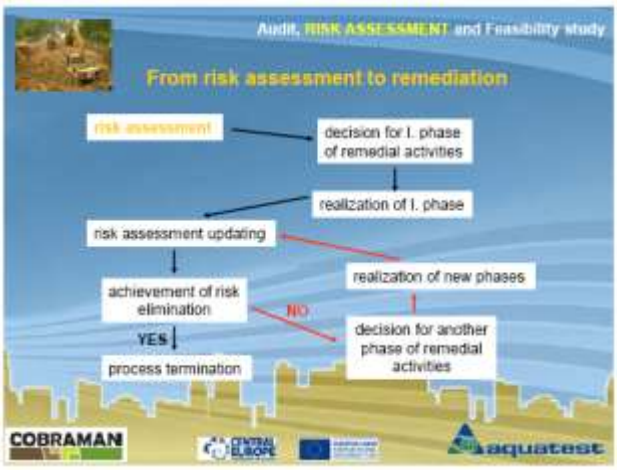
Audit, RISK ASSESSMENT and Feasibility study
From risk assessment to remediation
risk assessment
decision for I. phase of remedial activities
realization of I. phase
risk assessment updating
realization of new phases
achievement of risk elimination
NO
YES
decision for another phase of remedial activities
process termination
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REMEDIATION OF CONTAMINATED LOCALITIES
Hana Pavlů
COBRAMAN
aquatest


Cobraman Annual Project Meeting
Ostrava, Czech Republic
February 2010
Stepwise Approach to Brownfield Remediation
Monika Košuličová, Hana Pavlů
Prague, Aquatest a.s.
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Stepwise procedures in decontamination
1. part
Investigation (Audit), Risk assessment and Feasibility study
2. part
Remediation
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Stepwise procedures
Audit
Risk Assessment
Feasibility Study
Clean Up
Innovative Techniques
Monitoring and Revitalization
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REMEDIATION OF CONTAMINATED LOCALITIES
Remediation methods:
-IN SITU = latin phrase for „in the place"
-EX SITU = latin phrase for „off site"
-Biological methods
- Physical and chemical methods
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REMEDIATION
Soil Remediation
technologies, their limitations, an overview
Biological methods (procedures)
Bio-venting
Bioremediation
Phytoremediation a Rhizoremediation
Composting (ex situ)
Landfarming (ex situ)
Physical and chemical methods
Venting (soil vapor extraction)
Solidification and stabilization
Chemical oxidation/reduction (ex situ)
Others...
Electron Acceptor
Electron Donor
Electron Donor + Electron Acceptor → Respiration Products + Energy
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REMEDIATION
Bioventing
Adding of oxygen for better biological decomposition of contaminant
Application for: PH, PAH, BTEX a naphthalene, biological decomposable substances
Restrictions: minimal 1,5m of soil (unsaturated zone)
for low humidity of soil humidification important
the lower T the slower process
Timing: slow remediation technology (from 5 months to several years), speed depends on type of contaminant, its concentration and grade of weathering
Typical Bioventing System
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REMEDIATION
Bioventing
Adding of oxygen for better biological decomposition of contaminant
Aim: provide enough oxygen for aerobic decomposition of contaminants, reduce leak of pollutants into the air, reach the maximal biological decomposition
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REMEDIATION
Bioremediation (supported bioremediation)
Any process that uses microorganisms to return the natural environment altered by contaminants to its original condition
Application for: PH, some PAH, halogen/nitro compounds, organic acids
Restrictions: unsuitable for low permeable rocks
unsuitable for contaminants highly sorpted on soil
some agents or solutions can mobilize contaminant
danger of colmatage of bore (well) by bacteral accrual
the low temperatures the longer remediation process
Timing: from 6 months to 5 years, depends on concentration and distribution of contaminant, volume of contaminated soil, limits for remediation
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REMEDIATION

Phytoremediation a Rhizoremediation

Technology based on the ability of plants to absorb, stabilise or metabolise contamination present in groundwater or soil

Application for: different organic/inorganic substances, even heavy metals

Restrictions: high concentration or toxicity of contaminants
low humidity of soil restricts growth
the lower the temperature the longer remediation process
do not use contaminated plant as food or feed

Timing: long time (years/decades), low financial expenses

For the purpose of phytoremediation, plants are selected whose advantage is fast increment of biomass and which are able to vegetate in the conditions of the specific rehabilitated localities.

REMEDIATION

Composting (ex situ)

Soil is mixed with organic materials (straw, bark, sawdust, shavings, chips),ratio of C and N should be 30:1, so that a thermophilic decomposition would be optimal.

Application for: explosives (trinitrotoluene), PCB

Restrictions: if the volume of contaminant is too high, it can stop biodegradation
large biodegradation centres

Timing: several days up to 18 months, depends on concentration of contaminant and limits for remediation

REMEDIATION

Landfarming (ex situ)

Process that is performed in the upper soil zone or in biotreatment cells. Contaminated soils, sediments, or sludges are incorporated into the soil surface and periodically turned over (tilled) to aerate the mixture.

Application for: oily sludge and other petroleum refinery wastes, PAU, pesticides

Restrictions: before using to dispose volatile compounds
large biodegradation centres (max 35 cm)
manage issue of flow water, which is contaminated (rain)

Timing: soil (6 – 12 months), slugde (12 – 18 months), degraded pollutants (up to 3 years)

REMEDIATION

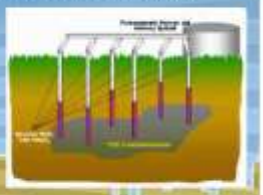
Chemical oxidation (in situ)

Decomposition of organic contaminants present in waste by strong oxidation agents (hydrogen peroxide, potassium permanganate). Final substances are CO2, water and Fe/Mn compounds, which are common in nature.

Application for: chlorinated hydrocarbon, PH, PAU, PCB, phenol

Restrictions: part of oxygen agent can react with organic substances
potassium permanganate does not oxidate all types of pollutants

Timing: very rapid method



REMEDIATION

Venting (soil vapor extraction)

Contamination is removed from soil by carrying it out through a medium such as air or steam. The extracted soil vapors are separated into liquids and vapors, and each stream is treated as necessary. It is important to do a pilot test befor venting.

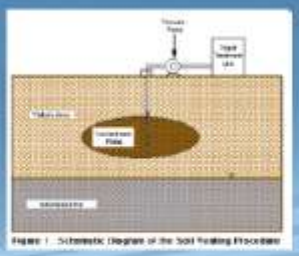
Application for: suitable for removing a variety of contaminants that have a high vapor pressure or a low boiling point compared to water, such as chlorinated solvents. SVE can handle high concentrations of contaminant, including contaminants in the form of a non-aqueous phase liquid (NAPL).

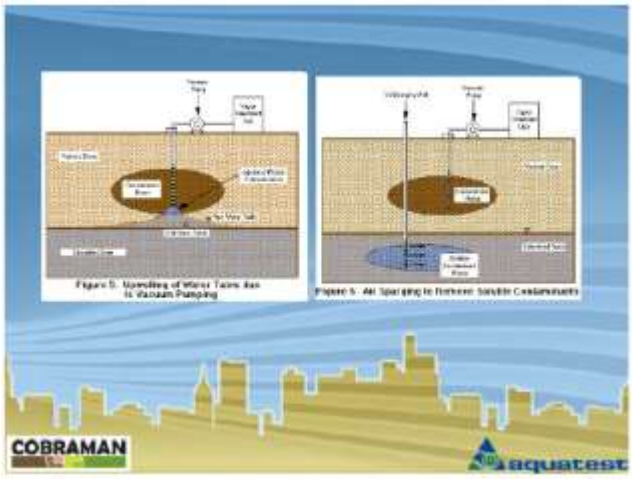
Restrictions: unsaturated zone should be higher than 1,5 m
high adsorption of soil – slower transition of contaminant into soil air
the higher humidity the lower effectivity
high permeability (low suction)

Timing: quick and effective remediation technique

REMEDIATION

Venting (soil vapor extraction)





Solidification and Stabilization

REMEDIATION

Solidification = physical transition (mixture with cement, ashes)
Stabilization = chemical binding of contaminants into stable form (some binding agents)

Application for: PAH, PH, phenol, chlorinated hydrocarbons, heavy metals (Pb, Hg, As, Zn, Cd, Cr)

Restrictions: some anorganic components may make the solidification dificult
need to be followed by monitoring
might cause complication with volatile components

Timing: relatively quick methods (depends on speed of reactions and time of solidification of binders), days up to weeks

Remediation of groundwater

technologies, their limitations, an overview

REMEDIATION

- Biological methods
  - Bioremediation
  - Biosparging
  - Bioslurping
  - Bio-barriers
  - Bioreactors (ex situ)
- Physical and chemical methods
  - Air sparging
  - Chemical oxidation/reduction
  - Barriers
  - Air stripping (ex situ)
  - Pumping

Bioremediation (supported bioremediation)

REMEDIATION

Bioremediation is the process towards decay, or biotransformation of the contaminants using the microbes activities. The principal of supported bioremediation subsist in optimation of the condition for the microbes activity

Application for: PH, some PAH, halogen/nitro compounds, organic acids, phenols

Restrictions: unsuitable for low permeable rocks
unsuitable for contaminants highly sorpted on soil
some agents or solutions can mobilize contaminant
danger of colmatage of bore (well) by bacterial accrual
the low temperatures the longer remediation process

Timing: from 6 months to 5 years, depends on concentration and distribution of contaminant, volume of contaminated soil, limits for remediation

Bio sparging

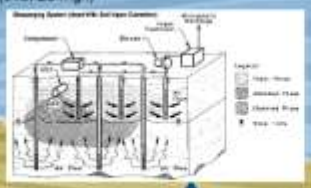
REMEDIATION

Process towards decay, or biotransformation of the contaminants using the microbes activities by blowing air directly into the ground water. The air, oxygen and hydrogen are used by the microbes , as an electron acceptor or donor

Application for: highly volatile substances with relatively low dissolubilty in water , hydrocarbons, chlorinated hydrocarbons

Restrictions: unsuitable for low permeable rocks
sites with the hight layer of product (undiluted contamination)
high ferrous concentration (over 20 mg/l)

Timing: 6 to 24 month



Bioslurping (Dual Phase Extraction)

REMEDIATION

Bio-slurping is the process for removal of free phase product from the surface of groundwater without the costly removal of large volumes of water. Bio-slurping also induces SVE on the unsaturated soil zone simultaneously.

Application for: fuel oil, petrol and other substances lighter than water.

Restrictions: emulsion is necessary to separate
colmatage of perforation
residual contamination in saturated zone will not be treated
if the rocks have high permeabilty – difficulties with vacuum

Timing: 6 – 24 months (depends on concentration of contaminant, type of contaminant, rock environment)

REMEDIATION

Bioreactors (ex situ)

Contaminated groundwater goes to bioreactor, where are special conditions for degradation of contaminant – water loses its toxicity

Application for: volatile organic substances, hydrocarbons ,fuels, phenoles, chlorinated hydrocarbons

Restrictions: high concentrations can lead to inhibition of reactions and to collapse of biological degradation, while too low concentration can be insufficient for the microorganisms growth
low remediation limits may not be reached
low temperatures of water slow down biological processes (warm water = higher expenses)

Timing: quick method – hours up to 3 days

REMEDIATION

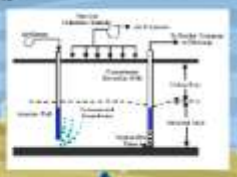
Air sparging

Process of blowing air directly into the ground water. Volatile contamination dissolved in the water is diluted into the air and rise to an unsaturated zone within. A soil vapor extraction system is usually used to remove vapors.

Application for: highly volatile substances with relatively low dissolubility in water, diluent, fuels (BTEX), chlorinated hydrocarbons

Restrictions: low filtration coefficient
artesian aquifer (or alternation of impermeable and permeable layers)
locations with underground electric cabels
high thickness of phase

Timing: 3 – 5 years
(generally higher the permeability, faster the remediation)



REMEDIATION

Chemical oxidation in situ (ISCO)

Chemical destruction of the contamination by aplication of oxidant into a ground water (saturated zone). The hydrocarbons are oxydized up to carbon dioxide and water. Often used chemicals: permanganate (potas), hydrogen peroxide, ozone...

Application for: chlorinated hydrocarbons, phenoles, nitrosolubles, some diluents, petroleum hydrocarbons (PH), BTEX, PAH, pesticides

Restrictions: safety factors (very strong oxidizers are used)
restrictions on enviromental limits
locations with underground electric cabels
very low permeability

Timing: 6 months to 2 years

permanganate (potas) solutions (concentrations 0.5 to 100 mg/l)

REMEDIATION

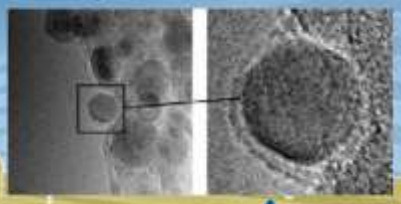
Chemical reduction in situ

Chemical destruction of the contamination by aplication of reductant into a ground water (saturated zone). As a reductant is used Fe, lately often nano Fe. The elementar Fe is used by hydrocarbons as an electron donor for their reduction.

Application for: chlorinated hydrocarbons, PCB, nitrosolubles, metals

Restrictions: very low permeability
locations with underground cabels

Timing: 6 months to 2 years



REMEDIATION

Barriers

Many types of barriers: reactive, waterproof (impermeable), drainage. Also biological barriers.

Reactive barriers (walls)
Reactive material (medium) degrades, binds, coagulates or somehow removes organic substances, metals and radionuclides

Application for: depends on suitable reactive media (filling), PAH, BTEX, chlorinated hydrocarbons

Restrictions: not long time inside barrier (wall)
colmatage of walls, wall has to have a higher permeability than the surroundings

Timing: wall lifetime (10 – 30 years)

REMEDIATION

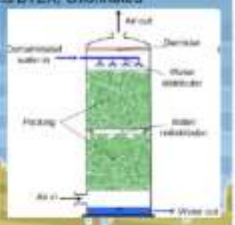
Air stripping (ex situ)

Transferring of volatile components from a liquid into an air stream. Volatile compounds have relatively high vapor pressure and low aqueous solubility characterized by the compound's dimensionless Henry's law coefficient, which is the ratio of the concentration in air that is in equilibrium with its concentration in water.

Application for: highly volatile solvents , hydrocarbons BTEX, chlorinated hydrocarbons

Restrictions: high concentrations of some elements can cause colmatation of equipment (concentrations Ca over 40mg/l, Mg 10, Fe 0,3, Mn 0,05)
only highly volatile solvents

Timing: very quick method (about 2 min)



REMEDIATION

REMEDIATION

Practical examples

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UNIPETROL Litvinov

Remediation – practical examples

- Groundwater remediation
- Soil biodegradation
- Monitoring (surface water and groundwater)

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Remediation – practical examples

Pump&treat / gravitational separator

UNIPETROL Litvinov

Remediation – practical examples

Venting (soil vapor extraction)

The principle of soil vapor extraction (SVE) is based on the removal of volatile organic substances from the ground environment by drawing off soil gas from suitably installed and designed extraction wells. Extracted air is drawn into decontamination equipment, in which present volatile substances are trapped and/or destroyed.

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Remediation – practical examples

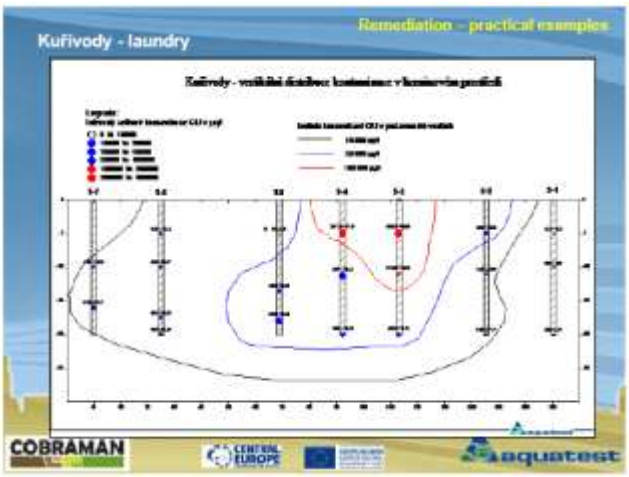
UNIPETROL Litvinov

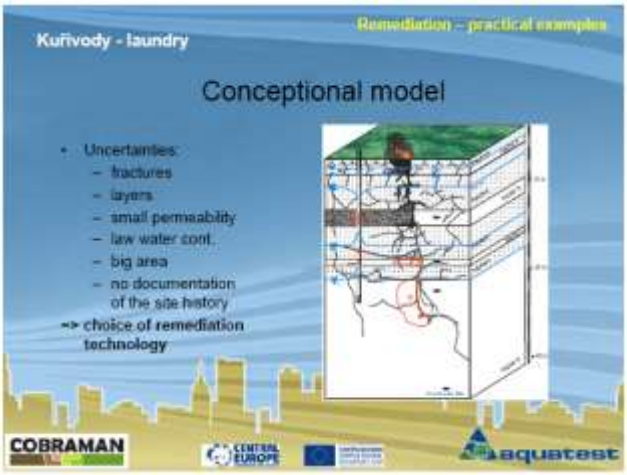
Remediation – practical examples

Soil biodegradation

Monitoring


Remediation – practical examples
Kuřivody - laundry
Application of in situ technologies
Principles and use of innovative remedial technologies
COBRAMAN
aquatest


Remediation – practical examples
Kuřivody - laundry
COBRAMAN
aquatest


Remediation – practical examples
Kuřivody - laundry
Conceptional model
Uncertainties:
fractures
layers
small permeability
law water cont.
big area
no documentation of the site history
=> choice of remediation technology
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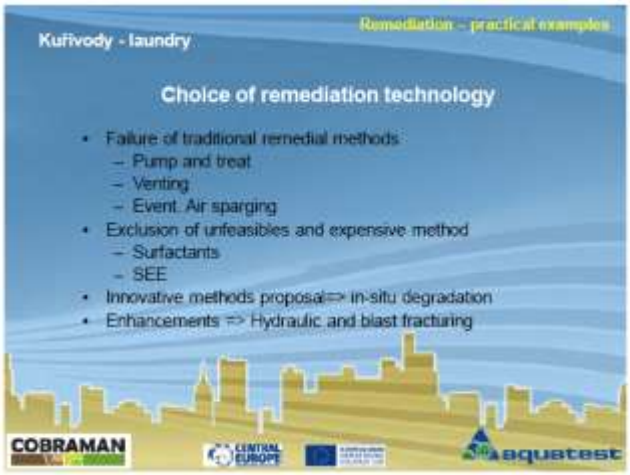
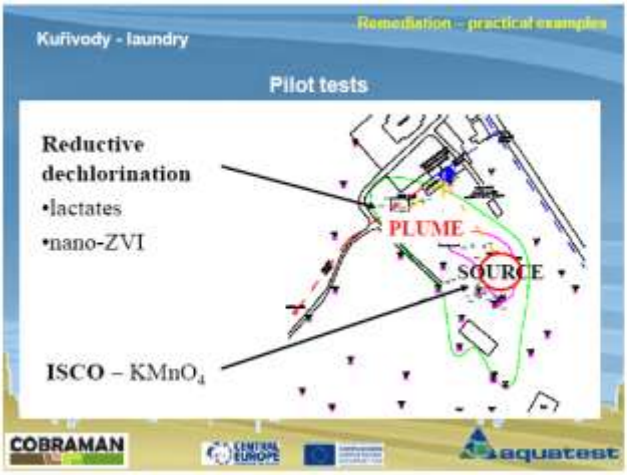

Remediation – practical examples
Kuřivody - laundry
Choice of remediation technology
Failure of traditional remedial methods
Pump and treat
Venting
Event. Air sparging
Exclusion of unfeasibles and expensive method
Surfactants
SEE
Innovative methods proposal=> in-situ degradation
Enhancements => Hydraulic and blast fracturing
COBRAMAN
aquatest


Remediation – practical examples
Kuřivody - laundry
Pilot tests
Reductive dechlorination
•lactates
•nano-ZVI
ISCO – KMnO4
PLUME
SOURCE
COBRAMAN
aquatest


Remediation – practical examples
Kuřivody - laundry
Hydraulic fracturing - principle
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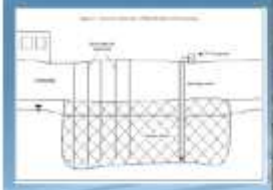
aquatest

Remediation – practical examples

Kuřivody - laundry

Blast fracturing - principle



Remediation – practical examples

Kuřivody - laundry

In-situ chemical oxidation (ISCO)

- Fastly growing for soil and groundwater remediation
- Commertially used during last 4-5 years
- Available oxidants:
  - unsaturated zone: H_2O_2 and ozone
  - saturated zone: H_2O_2 and Permanganate
- Relatively easy to use

Remediation – practical examples

SLOVNAFT Košice

Remediation of soil and groundwater polluted by LNAP in the area of former distribution terminal Košice- Slovak republic

Site of interest had been in operation since 1958 until 2004 like a distribution area of petrol, oil and the others oil products (fuel oil, engine oil etc.). In a present day the area is not used for a former exploitation.

Contamination of groundwater (quaternary clayed gravely aquifer polluted by LNAP and dissolved hydrocarbons) and arenaceous-clayed and clayed soil.

Aquatest a.s. like a providing company coordinate a complex remediation work in the area of interest since 1.1.2007. The end of remediation is scheduled in 2013.

Remediation – practical examples

SLOVNAFT Košice

Soil remediation:

The remediation of polluted soil is provided by a combination of ex-situ and in-situ techniques.

Ex-situ remediation was predominantly based on the output of contaminated soil. The monitoring of soil pollution took a place during the digging. Soil contaminated above the risk limit was deposited on a new isolated interior biopiles, where ex-situ bioremediation of contaminated soil were performed. Total capacity of 4 interior biopiles is app. 13 000 m³. In the first bioremediation season (05/2007 – 10/2008) totally cleaned 10 868 m³ soil with the initial average pollution app. 3500 mg TEH/kg. In the second bioremediation season (10/2008-present day) is disposed on the both biopiles 16 968 m³ polluted soil with the initial average pollution app. 8000 mg TEH/kg.

In situ remediation is based on the enhancement of bioremediation by a adding of inorganic amendments (source of N and P), autochtonic bacterial consortium and airsparging wells. There is also using an anionic surfactants to enhance a mobility of adsorbed oil. These compound are served into the soil and saturated zone with a pumped and cleaned underground water via drains and drainage wells. There is also a possibility to use a ISCO methods in the future.

Remediation – practical examples

SLOVNAFT Košice

Remediation – practical examples

SLOVNAFT Košice

Underground water remediation:

The remediation of underground water is also provided by a combination of ex-situ and in-situ techniques.

Ex-situ remediation is based on the pump and treat methods. In a present day there is a 11 pump wells. The average amount of pumped underground water is app. 15 000 m³/month. These pump wells are equipped with a lower pumps (to create hydraulic depression to avoid excesion of pollution out of site) and higher pumps (to take away LNAP collecting on the aquifer level). Unpolluted pumped water from a lower pumps is leaded directly into the drainage system. Polluted pumped water from a higher pumps is leaded into the remediation technology (coagulation, a granulate activated) where separation of LNAP and dissolved TAH in underground water in first step and cleaning of dissolved TAH by a sorption in the second step take place. Cleaned water from the remediation technology is also leaded into the drainage system.

In situ remediation is also based on the enhancement of bioremediation by a adding of inorganic amendments (source of N and P), autochtonic bacterial consortium and airsparging wells. There is also a possibility to use a ISCO methods in the future.


Underground reactive walls
Remediation – practical examples
AUTOPAL Hluk
- gravel sand, clay
- undeground water – 0.9-3.5 m
- contaminants in underground water: PCE, TCE, cis-1,2-DCE
construction of remediation holes
- pumping and treatment of groundwater
- construction of 4 underground cutoff walls with 7 reactive gates
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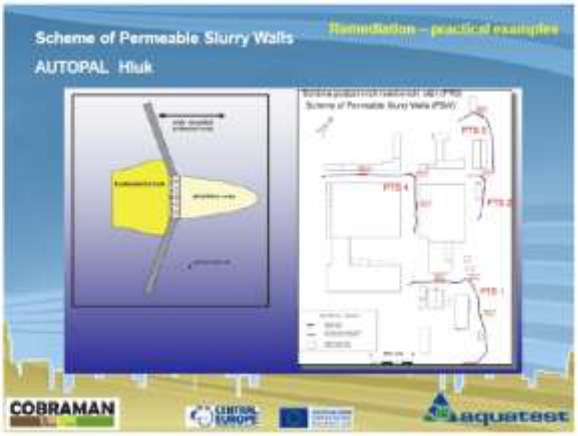
Scheme of Permeable Slurry Walls
Remediation – practical examples
AUTOPAL Hluk
COBRAMAN
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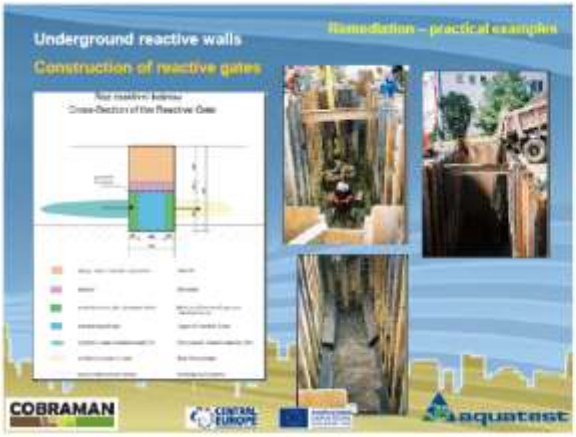
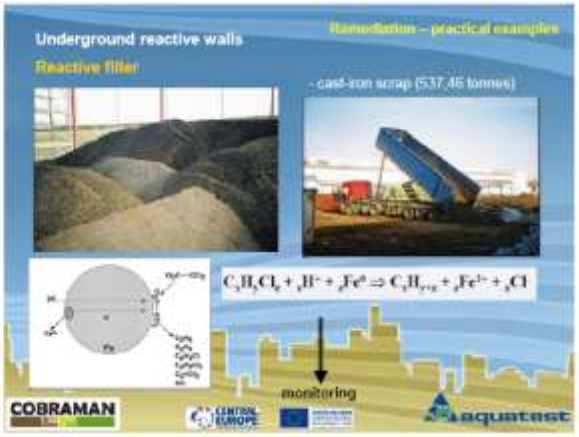

Underground reactive walls
Remediation – practical examples
Construction of reactive gates
COBRAMAN
aquatest


Underground reactive walls
Remediation – practical examples
Reactive filler
- cast-iron scrap (537.46 tonnes)
monitoring
COBRAMAN
aquatest


Thank you for your attention !
COBRAMAN
aquatest

4.2.6. Geotechnical aspects of Brownfields

Contamination Associated with Mine Sites

The sources and types of contamination at mine sites vary and can affect soil, ground water, and surface water.

- Mine drainage, waste rock, tailings, heap leaches (where ore is placed on lined pads in engineered lifts or piles before applying the leaching solution), and dump leaches (where ore is placed on the ground before applying leaching solution) are among the major sources of contamination.
- Surface-water runoff from open pits, tailings ponds and ore stockpiles can carry both *toxic and nontoxic materials to streams and lakes*. Seepage from impoundments or from water-filled pits and mine openings also can release contaminants to surface water and ground water.
- Waste from associated operations is another source of contamination at mine sites. Operations that may result in contamination include machine maintenance, vehicle repair, or other activities in which solvents, petroleum, lubricants, or other industrial chemicals may have been used. In addition, contamination may result if electrical transformers and capacitors, which can contain polychlorinated biphenyls (PCBs), were used to supply electricity to the site.

Contamination Associated with Mine Sites

Sources and types of contamination at mine sites sources	Type
Waste rock or spoil rock	Acid mine drainage (AMD) + metals
Tailing	AMD + radionuclides
Pits	AMD
Machinery	Solvents
Transformers/capacitors	PCB

Acid mine drainage (AMD) - occurence

Acid mine drainage (AMD), or **acid rock drainage** (ARD), refers to the outflow of acidic water from (usually abandoned) metal mines or coal mines.

However, other areas where the earth has been disturbed (e.g. construction sites, subdivisions, transportation corridors) may also contribute acid rock drainage to the environment.

In many localities the liquid that drains from coal stocks, coal handling facilities, coal washeries, and even coal waste tips can be highly acidic, and in such cases it is treated as ARD.

Acid rock drainage occurs naturally within some environments as part of the rock weathering process but is exacerbated by large-scale earth disturbances characteristic of mining and other large construcionactivities, usually within rocks containing an abundance of sulfide minerals.

AMD - effects

Very low pH < 3 of AMD can influence:

Many acid rock discharges also contain elevated levels of potentially toxic metals, especially nickel and copper with lower levels of a range of trace and semi-metal ions such as Pb, As, Cu, Zn and Mn.

Discharge of Al^{+3}, Fe^{+3}

Discharge of sulphates - corosivity on building materials

Acid mine drainage causing organisms can thrive in waters with pH very close to zero.

Production of AMD

Oxidation of pyrite has four phases, which can be expressed by following chemical reaction:

$FeS_2 + 3.75O_2 + 3.5\ H_2O \rightarrow Fe(OH)_3 + 2\ (SO_4)^{2-} + 4H^+ +$ heat (ca. 1490 kJ/mol)

$2\ FeS_2 + 7\ O_2 + 2\ H_2O \rightarrow 2\ Fe^{2+} + 4\ (SO_4)^{2-} + 4\ H^+$ (microbial oxidation)
$4\ Fe^{2+} + O_2 + 4\ H^+ \rightarrow 4\ Fe^{3+} + 2\ H_2O$ (microbial oxidation of Fe^{2+})
$4\ Fe^{3+} + 12\ H_2O \rightarrow 4\ Fe(OH)_3 + 12\ H^+$ (oxidation of S^{2-} with Fe^{3+})
$FeS_2 + 14\ Fe^{3+} \rightarrow 15\ Fe^{2+} + 2\ (SO_4)^{2-} + 16\ H^+$ (hydrolysis of Fe^{3+})

During weathering of pyrite is very important also microbial activity, during which oxidation Fe^{2+} to $Fe^{3+}$is supported by *Thiobacillus ferrooxidans*.
Optimal conditions for activity of bacteria exists in range pH 2 –3, at the pH value higher than 6 is activity of bacteria not important in comparison with abiotic processes.

Total capacity of Acid Mine Drainage

Total capacity of AMD

- Amount of sulfidic minerals
- Amount of neutralizing minerals
- Amount and type of ther risk elements and other contaminants

Speed of AMD origin

- Type of sulfidic mineralization (including crystal form)
- Presence of carbonate minerals
- Surface of minerals accesible for reation (degree of opening of grains in tailings, grain size composition)
- Accesibility of water and oxagen
- Microbial acitivity

Primary factor of AMD production

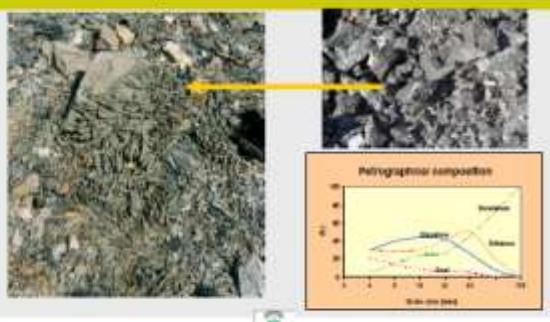
Sulfidic minerals, oxygen, water, Fe^{3+}, bacterial activity of Thiobacillus ferrooxidans

Oxidation of pyrite is influenced also by mineralogical properties of pyrite:

particle size and their morphology

Framboidal crystals or fine-grained aggregates are as a result of their large specific surface very reactive and they are oxidized first.

Fragmentation and decomposition of spoil rocks at dumps



Acid production potential (APP) Net Neutralizing Potential (NP)

APP – Acid production potencial

APP = 31.25 x S where: S = content of S_{tot} (%)

NP – laboratory determination with adition of acid (HCl) – titration pH3.5

$CaCO_3 + H_2SO_4 \rightarrow Ca^{+2} + CO_2 + H_2O + (SO_4)^{-2}$

$2\ CaCO_3 + H_2SO_4 \rightarrow 2\ Ca^{+2} + 2\ (HCO_3)^{-} + (SO_4)^{-2}$

NP/APP = Acid/Base Account (ABA).

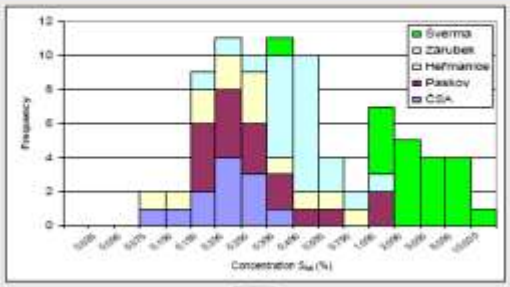
When AMD occure?

ABA > 3:1 low risk of AMD occurence

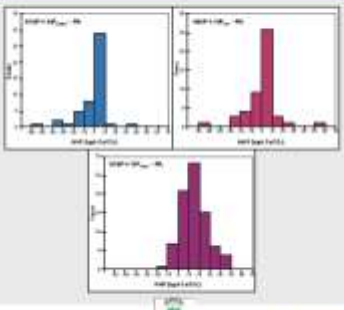
ABA 3:1 - 1:1 kinetic lechanig for verification of AMD production

ABA < 1:1 AMD is produced

Content of S_{tot} in spoil rocks of Ostrava-Karvina Coal District



Net neutralizing potential (NNP)



Passive AMD technology

The objective of passive AMD treatment is to use chemical and biological reactions that aid AMD treatment in a controlled environment at the mine site before the water enters the receiving stream.

These techniques include the following:

- Constructed wetlands (aerobic and anaerobic)
- Limestone rip-rap lined channels and flow-through dams
- Anoxic limestone drains
- Limestone diversion wells

Constructed wetlands

Constructed wetlands may include one or more ponds or compartments where AMD flows through preferably at a slow rate. The iron is oxidized and precipitated within the wetland. Acidity is neutralized by the vegetation photosynthesis and other biological activity which produces alkalinity.

Limestone rip-rap lined channels

Channels and flow-through dams constructed of limestone rip-rap have been designed and implemented to treat AMD as it flows over and through the rip-rap. However, limestone channels and dams may not provide long-term effectiveness if the rip-rap becomes coated with iron oxyhydroxide floc over time and is no longer reactive.

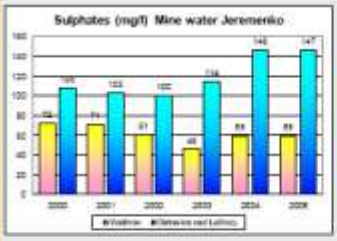
Anoxic limestone drain

- An anoxic limestone drain works similarly to a limestone channel. However, the drain is filled with flowing AMD and the AMD is not exposed to oxygen during passage through the drain.
- Hence, there is less potential for the limestone to become coated with iron oxyhydroxide precipitate. A limestone diversion well is also similar. This is a variation of an anoxic drain. In this design, AMD is diverted into the bottom of a vertical column (or well) of limestone under anoxic conditions. The agitation of the water flowing up the column helps keep fresh surfaces on the limestone and makes it easier to load new limestone as it is used up.

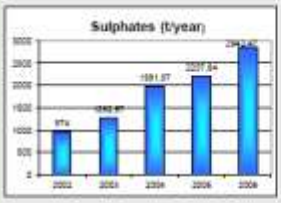
Efficiency of catchment and reduction of leachability of risk elements (Fe, Cu, Zn, Cd, Hg, Ag, Co, Ni)

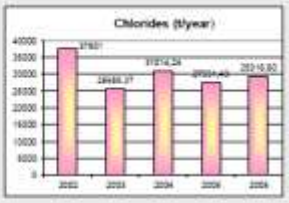
Technology	Risk elements	H+
Encapsulation	94	98
Bitumene	93	96
Bactericidal reagents	81	70
Phosphates	69	72
Limestone	48	68
Lime	33	48
Clay minerals - barriers	44	31

Mine water Jeremenko

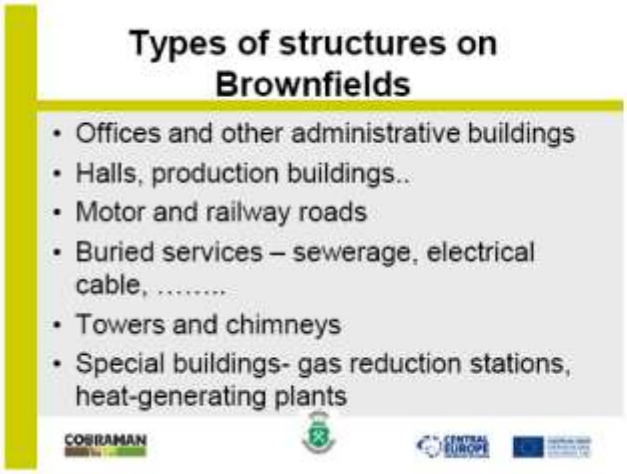


Mine waters from Ostrava Coal district – Jeremenko, inflow Ostravice river





4.2.7. Structures on brownfields



Lower Vitkovice site - railway

Lower Vitkovice site – area after factory train

Coal mine Heřmanice

Collector – foto Horní Suchá 2008

Tower Jindřich

Zeche Zolferein

Gasometer

Technical aspects of structures

- Transport availibility and technical infrastructure on the brownfield site
- Location and accessibility of the site
- Existing structures and its economical value
- Technical and moral value of structures
- Historical value of structures, industrial herritage

Transport availibility and technical infrastructure

- Existing road network, power supply system, telecommunication system, water supply system
- Connections with metropolis
- Accessibility to roads with vehicle transport
- Access to rail, water or air transport
- Public transport provision

Former power supply system

Former transport of coul

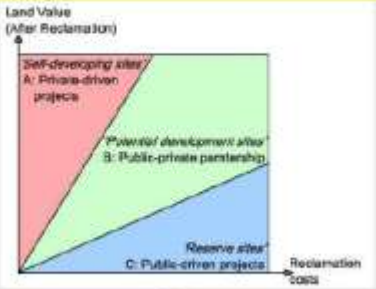
Rail system in Ostrava-Karvina region

Former Rail system in Ostrava-Karvina region

Existing structures and its economical value

- If the existing structures on site can be economically reused, their value is increased
- structures sometimes have negative value

ABC model - CABERNET



Technical and moral value of structures

- During utilisation the building loses its technical value
- Durability of the building materials.
- It is assumed that industrial buildings over 50 years old have no longer any technical value.
- The decreased technical value of industrial buildings - , as the industrial buildings are exposed to strong vibrations and shocks produced by machines
- Their life is also strongly limited by changes of industrial technologies and technical standards.
- A structure may be technically sound, but morally outlived.

Historical value of structures, industrial herritage

- Uniqueness (first, best, smallest, largest, etc…).
- Artistic or crafted quality of the structure.
- Connection to an important historical event or person.
- Urban context value (structure is valuable to the townscape).
- Skyline value (chimneys, spires and like…).
- Landscape value (building is valuable to the landscape).

Industrial heritage

Industrial heritage

Industrial heritage- Zeche Zolferien

Reuse potential of structures

3 categories of suitability to transformation

- Repair and strengthening of the structures
- Possibilities of industrial structures transformation
  - according the kind of industry
  - kind of building
  - possible new way of utilization
- Demolition – positive and negative effects

Repair of the structures

- A change in building function is almost always accompanied by the need for reconstruction.
- It is usually connected with change of building superstructure loads and necessitates the removal of some elements of the superstructure.
- The need for reinforcing and repair works may also result from long-lasting usage in difficult conditions causing many mechanical defects arising from durability limits of materials used for construction.
-

Repair of the structures

- Remodelling or strengthening existing buildings is sometimes much more difficult and costly than designing new ones.
- Knowledge of old building technologies, the ability to carry out materials testing and having the equipment to enable such strengthening is required.
- The final decision of possible forms of reconstruction can only be made by experts with many years of professional building experience.

Repair of the structures

- Also, some of the building material which is contained in the existing buildings may have been contaminated by the building's past use (oil, heavy metals, etc.....).
- The effect of pollution inside a building on humans is especially serious, as it may represent prolonged exposure.
- That is why the contaminated parts of buildings,if they are considered for reuse, need to be removed and replaced by new, sound materials.
- Decontamination of oil-soaked concrete structures may mean removing the contaminated concrete, a tedious and expensive business

Existing Structures reuse potential

officies	offices, flats
dinners	gastronomy
dressing rooms	offices, flats
washer room	offices, flats
laboratories	offices
low halls (up to 6m) insulated	warehouse, commerce, sport
high halls (over 6m) insulated	sports and entertainment halls

Examples

Examples

Examples

Transformation possibilities – deep mines

chain dressing rooms, baths	sport, gyms, museum
lamp rooms, control rooms	offices
sorting plant, washers	entertainment halls, commerce
hoist towers	Dismantling , can be kept as local focus point
shaft top and hoisting machine structures	dismantling

Examples

Demolition

Demolition results in the removal of structures or parts of structures from the land surface

Demolition and removal is often preferred by investors as an easy and fast option and it satisfies some of their objectives:

- it removes the stigma of pass use;
- it reduces the structural risks;
- it reduces contamination risks;
- it may help speed up the development process;
- it may prove to be more cost effective (cheaper then a complex reconstruction);
- it may produce higher development values for the site.

Demolition

Demolition can also have negative effects:

- it uproots the historical connections of location;
- it is a costly process, especially where there is a large amount of material to be dumped;
- it is a less sustainable option regarding material use or reuse (material is carted away and new materials need to be brought on to site);
- it is a less sustainable with regard to transport;
- there are increased accident risks to workers and the public;
- it can produce public nuisance due to extensive dust and vehicles.
-

Demolition

Demolition of structures usually also needs to be approved and is further regulated by national legislation (planning and environmental).

A specialist demolition contracting certificate may be required for some type of demolition.

Preparing or commissioning a demolition contract is specialist work.

Material reuse

- Recycling of builiding materials and construction components
- Recycling of demolition waste

Conclusion

- Structures on brownfields are advantages
- Structures on brownfields are disadvantages
- Structures on brownfields have big potencial
- Structures on brownfields have many problems

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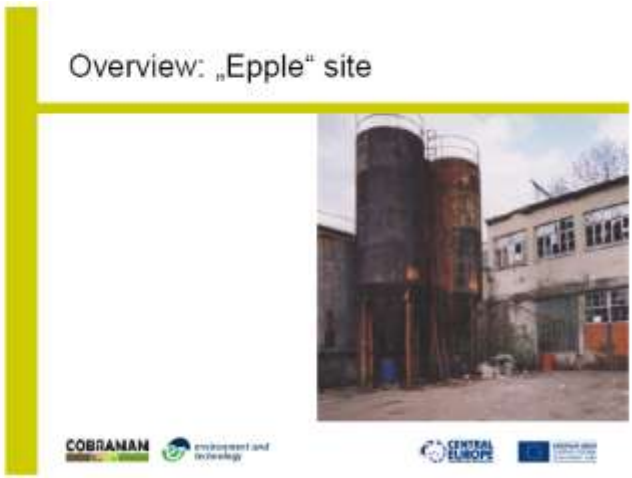
Name:
Institution:
Address:
Phone:
e-mail:
web site:

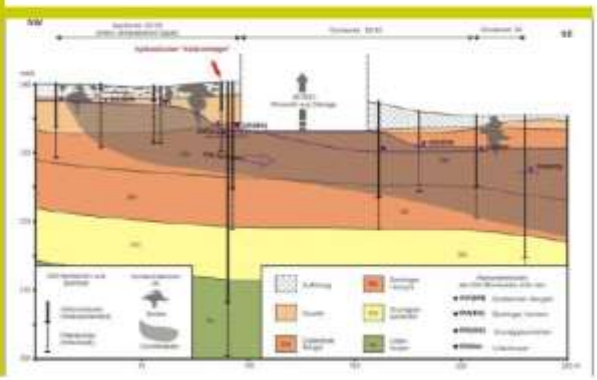
Thank you for your attention!

4.2.8. a role play on these technical aspects



Overview: „Epple“ site

Geological section „Epple“ site



„Epple“ site

„Epple“ site

Detail: contamination

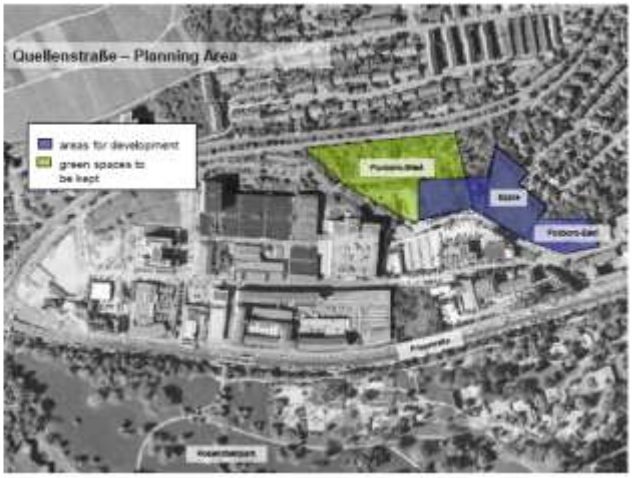
Dunkelrote Mergel; Kluftgrundwasserleiter

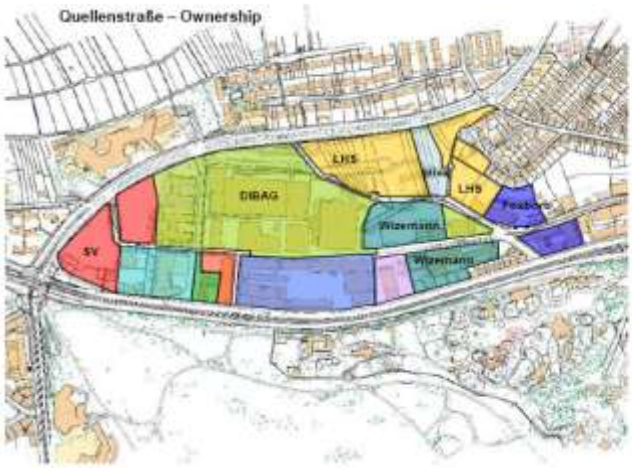
Detail: contamination

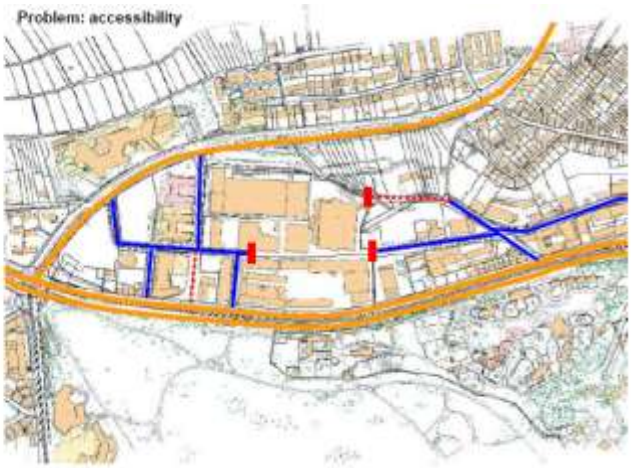
Schadstoffausbreitung in Phase

The „Epple“ site as it is now

Site characteristics – pollution situation:
- heavily polluted
- old industrial buildings to be demolished
- soil pollution to be remediated
- deep groundwater contamination
- location in a slope







The area „Quellenstraße“ as it is now

area characteristics – infrastructure situation:
- traffic / accessibility
- freshwater supply
- sewage system
- connection possibility to telephone/internet
- owner structure

B-Plan 2004
Foxboro West

The vision: Foxboro West

Characteristics of future use:
- trade and industrial use
- three floor building with production locations
- flat roof with green covering
- about 100 people working on this site
- parking area with about 50 parking lots
- free space for delivery traffic

B-Plan 1970
Epple & Foxboro-East

The vision: Epple

Characteristics of future use:
- future use as "Craftsmen's Yard"
- two floor building
- big central area for delivery services
- flat roof with green covering
- about 50 people working on this site
- parking area with up to 50 parking lots
- significant lorry traffic

The vision: Foxboro-East

Characteristics of future use:
- future use as "Centre of creative work"
- three floor building containing studios with loft character
- flat roof with roof terrace/garden on top
- about 180 people working on this site
- underground parking for about 80 parking lots

What concretely to do next?

Set up the key elements of project management plan

- Scope Management Plan
- Cost Management Plan
- Communication Management Plan
- Risk Management Plan

What concretely to do next?

Draw up a *work breakdown structure* (WBS)!
Categorise the single work steps to work packages like:

What has to be done
- in relation to the pollution?
- in relation to the infrastructure?
- in relation to communication?
- in relation to coordination/management?

What concretely to do next?

Basing on WBS…

develop a gantt chart with:
- Timeline
- Milestones and outputs
- Critical interconnections between the work steps

Work breakdown structure

What concretely to do next?

Basing on WBS…

develop a budget estimation plan:
- Which estimation method was used
- Who did the estimation
- Who is responsible for the output of this action
- Costs per unit as well as total costs

Budget Estimation

	action	responsible	duration	Cost estimation			
				estimated by	est. method	estimation per unit	total
		[name]	[month]	[name]	[name]	[€]	[€]
1	management						
1.1	tender						
1.2	meetings						
1.3	checks of milestones						
	total work package 1						
2	pollution						
2.1	remediation						
2.2	safety						
	total work package 2						
3	infrastructure						
3.1	traffic						
3.2	fresh/waste water supply						

Project Schedule

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4.3. List of participants

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WP4 – Seminar III Meeting, 1CE014P4
Ostrava,Czech Republic

Attendance list

	Name	9.2.2010	10.2.2010	11.2.2010
1	Bendová Miroslava			
	~~Bergat Jiřina~~			
2	Borecký Karel			
3	Boroń Grzegorz			
4	Cotič Boštjan			
5	Czastka Sven			
6	Čmielová Lenka			
7	Danel Roman			
8	Dostálová Tereza			
9	Ertel Thomas			
10	Fiala Tomáš			
	Fischer Henrike			
12	Franceschini Chiara			
13	Franková Hana			

COBRAMAN

WP4 – Seminar III Meeting, 1CE014P4
Ostrava,Czech Republic

Attendance list

	Name	9.2.2010	10.2.2010	11.2.2010
14	Gradišar Ana			
15	Jasinska Magdalena			
16	Jirásek František			
17	Kašovská Kamila			
18	Košuličová Monika			
19	Labodová Alena			
20	Lacková Eva			
21	Lewandowska Hanna			
22	Marinkovic Dragan			
23	Matěj Miloš			
24	Mušič Barbara			
25	Neustupa Zdeněk			
26	Nikolič Petr			
27	Pavlů Hana			
28	Pelka Iwona			

COBRAMAN

WP4 – Seminar III Meeting, 1CE014P4
Ostrava,Czech Republic

Attendance list

	Name	9.2.2010	10.2.2010	11.2.2010
29	Pierzchala Lukasz			
30	Raclavská Helena			
31	Schmid Matthias			
	Schug Bettina	—	—	—
32	Schweiker Michael			
33	Sierka Edyta			
34	Skrt Primož			
35	Stalmachová Barbara			
36	Šašková Marta			
37	Šeredová Denisa			
38	Šplíchalová Martina			
39	Štraus Stane			
40	Švehláková Hana			
41	Tadych Jakub			
42	Vodianovic Dragana			

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CENTRAL EUROPE

COBRAMAN

WP4 – Seminar III Meeting, 1CE014P4
Ostrava,Czech Republic

Attendance list

	Name	9.2.2010	10.2.2010	11.2.2010
43	Vojvodíková Barbara	[signature]	[signature]	[signature]
44	Weckwert Natalia	[signature]	[signature]	[signature]
45	Zacniewska Zuzanna	[signature]	[signature]	[signature]
46	Ziherel Janez	[signature]	[signature]	[signature]
47	Zinz Regine	[signature]	[signature]	[signature]
48	Žampachová Dana	[signature]	[signature]	[signature]
49	CACLAVSKÝ Konst.	[signature]	[signature]	[signature]
50	KIRCHNEROVÁ IRENA		[signature]	

CENTRAL EUROPE
COOPERATING FOR SUCCESS.

EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND

5. 4th Seminar Ferrara 19.-20.May 2010

5.1. Agenda of training seminar

Tuesday 18th of May		**4th Brownfield manager training seminar**	
time		topic	speaker
14:30	16:30	WP 4: "Training the organisation": a workshop for exchange experiences among PP	Stuttgart All PP involved
Wednesday 19th of May		***4th Brownfield manager training* seminar**	
Training seminar "Economic aspects"			
14:30	16:30	Basics of real estate economics: the experience of Europa Risorse	Investment Director - Paolo Rela
16:30	17:00	The experience of regeneration in Kragujevac - the remediation of Zastrava factory	Dragan Marinkovic
17:00		Excursion to Comacchio, visit of the site and the surronding lagoon	
Thursday 11th of May		**4th Brownfield manager training seminar**	
09:00	10:30	Finance instruments in brownfield redevelopment - a focus on PPP and urban development funds, e.g. Jessica programme (To be confirmed)	Thomas Ertel
10:30	11:00	Coffee Break	
11:00	12:30	The private developers viewponit: Overview about the Facility Management and Economic feasibility study,	Gerhard Petermann
12:30	13:00	The largest Regeneration Project in Slovenia - 230 ha.,	Ivan Stanic
13:00	14:00	Lunch	
14:00	14:30	Insurances and other instruments to cover risks from pollution/ Cooperation between economic and environmental experts in land valuation- a German approach	Thomas Ertel
14:30	16:30	Speed dating with 3 experts (Rela, Peterman, Stanic)	

5.2. Seminar themesWP 4: "Training the organisation": a workshop for exchange experiences among PP

5.2.2. Basics of real estate economics: the experience of Europa Risorse

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SECTION 1 | 1. THE DEVELOPER: TRACK RECORD

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SECTION 1 | THE BUSINESS PLAN

step 1 | step 2 | step 3 | step 4

PRELIMINARY ANALYSIS (MARKET, TECHNICAL, ZONING, ETC.) | DEVELOPMENT STRATEGY AND CONCEPT DESIGN | EVALUATION OF COSTS, REVENUES, RISKS | CALCULATION OF RETURNS AND SENSITIVITY ANALYSIS

The steps above are the basis for the drafting of the Business Plan that is proposed to investors and to lenders potentially interested in investing in the development project. The basis for the success of any business plan is the ability by the developer of planning and building a project matching the needs of three very demanding counterparts, whose consensus is fundamental:

COMMUNITY - MARKET- INVESTORS

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SECTION 2 | THE BUSINESS PLAN

STEP 1: PRELIMINARY ANALYSIS

↘TECHNICAL: existing buildings structures and systems, environmental,

↘ZONING: town plan, building norms, heritage protection and other limitations

↘MARKET: demand, competition, trends, location appeal, accessibility

↘FUNDING: availability and overall mix of equity and debt funding

The preliminary analysis is carried out through a check list and all major points are raised. Most projects are abandoned at this stage, i.e. before a business plan is even drafted.

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SECTION 2 | THE BUSINESS PLAN

STEP 2: DEVELOPMENT STRATEGY AND CONCEPT DESIGN

The definition of the development strategy aims at creating the maximum value through an intelligent transformation of the existing property. Maximum value creation is obtained by supplying the market with the product that best satisfies market expectations both in terms of use and in terms of quality, in full respect of current laws and regulations.

For instance, the definition of a development strategy for an abandoned industrial site located within a city urban area will include the definition of the new mix of uses (office, retail, residential) and the quantity of necessary building rights, all depending on the information about the market and on the permitting feasibility in terms of cost and timing.

Based on such strategy a concept design is drafted that will be used as a basis for the business plan. Such concept will be subject to many changes as information are collected with regard to the market, the permitting process and as alternative development ideas are conceived and compared.

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SECTION 2 | THE BUSINESS PLAN

STEP 3: EVALUATION OF COSTS, REVENUES, RISKS

Based on the concept design, the main Cost items to be evaluated are the following:

- **Construction costs**: demolition of existing buildings, refurbishment and/or new construction, landscaping, utility hook-ups, tenant improvements, etc.
- **Environmental costs**: Asbestos and MMMF removal and disposal, soil clean up, groundwater analysis and clean up if required
- **Permitting costs**: urbanisation fees and/or works, change of use fees, construction duties, legal costs for permitting agreements with the Municipality,
- **Design and engineering**: design team costs (architects, engineers), surveyors, cost planning and control, works supervision, H&S planning and control, specialists advice
- **Management**: development management, project management, construction management (depending on the tendering strategy)

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SECTION 2 | THE BUSINESS PLAN

STEP 3: EVALUATION OF COSTS, REVENUES, RISKS (continued)

- **Marketing costs**: leasing fees (office and retail), sale fees (residential), marketing tools (Web, brochures, gadgets, events, etc.), advertisement and specific marketing campaigns.
- **Administrative and operating costs**: legal fees, vehicle administration costs (bookkeeping, auditing, etc.), notarial fees, etc.
- **Security and insurance** relating to the acquired site
- **Financial costs**: up-front fees, loan administration fees, commitment fees, cost of guarantees on deferred payments, legal costs and other costs reimbursed to the lender
- **Interest charges** on senior loan and on VAT loan
- **Exit costs**: brokerage, legal costs for drafting of sale docs, set up and management of the data room

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SECTION 2 | THE BUSINESS PLAN

STEP 3: EVALUATION OF COSTS, REVENUES, RISKS (continued)

- **Site acquisition**: this line item is calculated as the residual value of the site based on the results of the Discounted Cash Flow (DCF) analysis, it is then compared with the asking price.
- **Contingencies**: an allowance for unforeseen costs, which is proportional to the variability risk of the estimated costs.

On the **Revenues** side, the main elements are the following:

- **Rental income** from the leasing up of the new buildings
- **Sale** of the rented assets

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SECTION 2 | THE BUSINESS PLAN

STEP 4: CALCULATION OF RETURNS

By means of a DCF model, several economic and financial parameters are calculated that help the investment committees of the equity investors and of the lending banks to take a decision about the investment:

- **Economic results**: development margin, development yield, equity multiple
- **Financial results**: unlevered Internal Rate of Return (IRR), equity IRR

Sensitivity analyses are run to understand how the investment results vary upon variation of cost and revenues assumptions and therefore to identify the assumptions that are most critical to control, to ensure that the results actually materialize. Montecarlo analysis may be run to attach a probability to a certain set of results.

SECTION 3 | CASE STUDY: THE MACIACHINI PROJECT

HISTORY: THE CARLO ERBA FACTORY

- 1892 construction commence of the Carlo Erba Farmaceutical Factory. The location of the new factory allowed access to a large supply of workers and proximity to the Hospital for Contagious Diseases, in collaboration with which it was intended to carry out clinical testing of pharmaceutical products.
- 1923 the site is included in the Municipality of Milan
- 1980s latest demolitions and construction of a 10.000 sqm warehouse for packaging activities
- Early 1990s the factory is closed
- 2003 acquisition of the abandoned site by Daughty Hanson/Europa Risorse

SECTION 3 | CASE STUDY: THE MACIACHINI PROJECT

ABANDONED SITE IN 2003

SECTION 3 | CASE STUDY: THE MACIACHINI PROJECT

FIRST VISIT TO THE SITE IN 2002

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THE OPPORTUNITY

The abandoned site was on the market in 2002 and it was considered interesting as the following main opportunities were identified:

- Market: there was a "window" of three to five years where demand for high quality office space was to be higher than the offer
- Location: the site was located in the semi-centre of Milan in an area that was not considered prime but with a high growth potential; a new metro station was about to open close by, accessibility by car was good
- Zoning: recently approved Regional laws allowed change of use from production to office for 100% of the existing building rights; Municipality looked favorably to Europa Risorse following the success of the Bicocca Center urban regeneration project that was close to completion in Milan.

SECTION 3 | CASE STUDY: THE MACIACHINI PROJECT

LOCATION

SECTION 3 | CASE STUDY: THE MACIACHINI PROJECT

EVOLUTION OF MASTERPLAN

A concept design was developed to be a base for the business plan (first on left below); after acquisition the master plan evolved into its final shape following the agreements reached with the Municipality that allowed more existing buildings to be demolished and following inputs from the market (eg. request for build-to-suit headquarter buildings by major corporations).

SECTION 3 | CASE STUDY: THE MACIACHINI PROJECT

The Agreement with the Municipality was signed in 2006. It provides for the project to:

- design and build within the site a Theatre/Museum, an underground public car parking facility, a public piazza, a public green area and a new public road crossing the site; all these works and the corresponding land are to be transferred to the Municipality ownership at the end of the project.
- design and build outside the site a bycicle route (about 3km) linking the metro station with the large public park to the north of the site and beautification works on all roads surrounding the site;
- the cost for the construction of the above works are offset from the amount of permitting fees due to the Municipality for change of use and construction;
- the developer has to provide guarantees to the Municipality for an amount equalling the cost of the agreed public works (about 12 million euro).
- the total permitting fees and duties amount to about 24 million euro.

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FINAL MASTERPLAN

The mix of uses includes mostly office spaces with ancillary buildings for fitness, retail and restaurants. Based on the requests by the Municipality, part of the permitting fees were agreed to be used to build an underground car park and a theatre/museum.

1. MUSEUM/THEATRE
2. PUBLIC SQUARE
3. PUBLIC PARK WITH U.G. CAR PARK
4. FITNESS CENTER AND SHOPS
5. FOOD PARK
6. FEATURE OFFICE BUILDING
7. OFFICE BUILDINGS

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The main elements of the development strategy:

- Creation of a business park with high quality office buildings and a pleasant environment for workers including ancillary services; accessible by public transport and by car; affordable for the corporates with an asking rent markedly lower than the city centre benchmark;
- The design of the office building was to provide maximum efficiency in terms of space planning, flexibility to adapt to any tenant, up to date systems to allow energy efficiency and low maintenance costs; the design was also to maximise lettable space exploiting as much as possible the zoning regulations
- In order to minimize and control risk, the development was to be phased: phase 1 to include buildings that could be put on the market in a very short time in order to exploit the window of opportunity in the market; upon success of phase 1, the following phases could be developed based on the market demand

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Project phasing:

Phase 1: about 30,000 sqm of office space with about 300 car spaces underground; permitting through DIA (fast track construction permitting)

Phase 2: about 30,000 sqm of office space with about 300 car spaces underground, developed after a general planning agreement was signed with the Municipality

Phase 3: about 10,000 sqm, mixed use, retail, fitness centre, feature office building, restaurants, all served by private and public car parks

Phase 4: about 30,000 sqm of office space with about 300 car spaces underground

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Construction costs

		quantity	unit cost €	total cost €
Demolitions			n/a	5,800,000
Environmental clean up			n/a	6,300,000
Construction costs				
- Phase 1	mq	28,500	1,200	34,200,000
- Phase 2	mq	30,240	1,500	45,360,000
- Phase 3	mq	11,200	1,000	11,200,000
- Phase 4	mq	29,890	1,300	38,857,000
- Underground car parking (private)	#	[illegible]	13,000	[illegible]
Landscaping	mq	52,500	120	6,300,000
Other costs (utilities, security system, etc)			n/a	600,000
Total construction costs				161,347,800

The evaluation of the construction cost was based on a per sqm estimate based on previous experiences. The Environmental clean up was an estimate based on specialist advice during the due diligence process and on the results of soil and ground water sampling.

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The table below shows the estimate of the Total Development Cost, including estimation of how the cost would occur over time based on the development time schedule.

TOTAL DEVELOPMENT COST	Total	2003	2004	2005	2006	2007	2008	2009	2010
1 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-
2 [illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-	-
3 [illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	-	-
4 [illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
5 [illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
6 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-
7 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
8 [illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
9 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
10 [illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
11 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
12 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
13 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
14 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
15 [illegible]	[illegible]	-	-	-	-	-	[illegible]	-	[illegible]
16 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
A Total development cost	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VAT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total costs including VAT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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SECTION 3 | CASE STUDY: THE MACIACHINI PROJECT

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lease rates and exit values

		quantity	lease rate €/sqm year	annual rent €	cap rate %	Exit value €
[illegible]						
- Phase 1	mq	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
- Phase 2	mq	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
- Phase 3	mq	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
- Phase 4	mq	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
- Underground car parking (private)	#	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total				[illegible]		[illegible]

The table above shows the estimate rental income and exit values for all the buildings of the project based on market lease rates and cap rates and based on the peculiarities of each phase.

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SECTION 3 | CASE STUDY: THE MACIACHINI PROJECT

DRAFT

The table below shows the estimate unlevered cash flow and the calculation of the development margin, the unlevered cash flow and the unlevered IRR.

[illegible]	Total	2003	2004	2005	2006	2007	2008	2009	2010
[illegible]	[illegible]	-	-	-	[illegible]	[illegible]	[illegible]	-	[illegible]
[illegible]	[illegible]	-	-	-	-	-	[illegible]	-	[illegible]
B Total revenues	[illegible]	-	-	-	[illegible]	[illegible]	[illegible]	-	[illegible]
[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total revenues including VAT	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]								

[illegible]	Total	2003	2004	2005	2006	2007	2008	2009	2010
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
[illegible]	[illegible]	-	-	-	[illegible]	[illegible]	[illegible]	-	[illegible]
Cash flow before tax and leverage		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]								

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SECTION 3 | CASE STUDY: THE MACIACHINI PROJECT

DRAFT

The table below shows the estimate levered cash flow and the calculation of the levered IRR and of the equity multiple.

[illegible]	Total	2003	2004	2005	2006	2007	2008	2009	2010
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cash flow after tax and leverage	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	Total	2003	2004	2005	2006	2007	2008	2009	2010
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equity cash flow	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]								

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The DCF analysis provides also the amounts needed for equity, senior loan and VAT loan for the full development of the project.

Based on this, and taking into consideration the phased approach to the development of the project, approval was reached for the funding of the acquisition of the site and the development of Phase 1 as well as permitting and environmental remedial costs.

After Phase 1 was successfully marketed and agreement reached with the Municipality on construction permitting for phases 2, 3 and 4, approval was given by equity investors and funding banks to proceed with the full development of the site.

DRAFT

PHASE 1 | Business Park

Four office buildings let to several tenants

Architect: Maurice Kanah

PHASE 2 | HQ ZURICH ITALIA

Offices and ancillary spaces

Architect Alessandro Scandurra

DRAFT

PHASE 3 | Fitness, shops and leisure

office building

Virgin Active Fitness centre, Land's Italia HQ

Architect Italo Rota

PHASE 3 | FOOD PARK

Restaurant and Bar

Architect Paolo Pasquini

DRAFT

PHASE 3 | EXHIBITION AND MUSEUM

3.000 sqm

Architect Italo Rota

DRAFT

PHASE 4 | Business Park

Four office buildings

Architect: Skidmore Hutton

DRAFT

DRAFT

BODIO CENTER

The abandoned site of the former Alcatel factory in semi-central Milan was put on the market in year 2000 and acquired by Doughty Hanson / Europa Risorse in 2007. The existing built area was about 65.000 sqm of old office and production sheds.

The project was named "Bodio Center"

DRAFT

BODIO CENTER

Evolution of the Masterplan to its final shape: 47.000 sqm of office space; about 600 car spaces underground, two ancillary buildings with restaurants and fitness.

DRAFT

BODIO CENTER

This investment was successfully completed, the Bodio Center was fully let and sold on to a core investor (a German pension fund) in 2004. The main results for the investors are summarized as follows:

- Total Development Cost: 162 million euro
- Total Revenues: 202 million euro
- Development margin: 24.6%
- Un-levered IRR: 15.2%
- Levered IRR: 23.1%
- Equity multiple: 1.76

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DRAFT

SECTION 4 | OTHER URBAN REGENERATION PROJECTS

BODIO CENTER

COBRAMAN MAY 2010

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SECTION 4 | OTHER URBAN REGENERATION PROJECTS

In 2002 an abandoned office site of 20.000 sqm (built area) was put on the market by the bank that had moved to a new modern HQ. The site was located in one of the most prestigious residential areas in the historic centre of Milan. In December 2002 the site was acquired by Doughty Hanson / Europa Risorse.

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SECTION 4 | OTHER URBAN REGENERATION PROJECTS

The project was named Orti Antichi. The strategy was to develop a luxury residential complex. Europa Risorse had been studying the trends of the luxury residential market and evaluating successful and innovative experiences in Italy and abroad. This research yielded a clear indication that was then used for the definition of the product that was offered at Orti Antichi: an exclusive apartments with exclusive services.

The residents of Orti Antichi have the following available: a **fitness centre**, a social room surrounded by green gardens particularly suitable for having parties or for the more traditional use as a meeting room, small **meeting/reception rooms** next to the entrance hall, where one can meet friends or work relations in full privacy but outside one's apartment, a playing room where kids can enjoy in full safety; a 24/7 security service with video surveillance; an active **Property Management** service covering the statutory condominium administration but more than that providing for a professional management of the property. The client of Orti Antichi hasn't just bought an apartment but has joined an exclusive club.

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SECTION 4 | OTHER URBAN REGENERATION PROJECTS

The investment was successfully completed, Orti Antichi was fully sold (115 apartments plus 210 linked up garages on two levels underground). The main results for the investors are summarized as follows:

- Total Development Cost: 135 million euro
- Total Revenues: 178 million euro
- Development margin: 24%
- Un-levered IRR: 13.0%
- Levered IRR: 22.0%
- Equity multiple: 2.10

5.2.3. The experience of regeneration in Kragujevac - the remediation of Zastrava factory

The experience of regeneration in Kragujevac - the remediation of FIAT Cars Serbia (ex Zastrava Car factory)

Dragan Marinkovic
Dragana Vidojevic

Ex Zastrava car factory

Zastava industrial complex

- FIAT Cars Serbia (ex Zastrava Car factory) is industrial conglomerate in Serbia.
- Based in the City of Kragujevac, 138 km southeast of Belgrade.
- Run as a joint venture between the Fiat Group (67 %) and the Serbian government.
- It is best known by car manufacturing, which began assembling in 1955 for Eastern European markets.
- Factory has a long industrial history.

History

- The roots of Zastava lay in the 1851 founding of the Army Technical Institute in Kragujevac.
- The institute developed a cannon foundry division in 1853.
- At the end of the 19th century the cannon foundry changed its name to the Military Engineering Works.

History

- After the World War II, the plant was renamed to "Red Flag Factory" (*Zavodi Crvena Zastava*).
- Sub unit for the production of cars was formed in 1953.
- That year, 162 Willys Jeeps left factory's production lines.

History

- On 12 August 1954 Zastava signed a historic agreement with Fiat.
- Three months later, Kragujevac began assembling the Fiat 1400,
- the Fiat 1100 B

- and the Fiat AP-55 Campagnola.

- The production of a model Zastava 750, a license built version of the Fiat 600 named "Fića" started in 1955.
- In total, between years 1955 and 1985, 923 487 "fića" cars were produced .

History

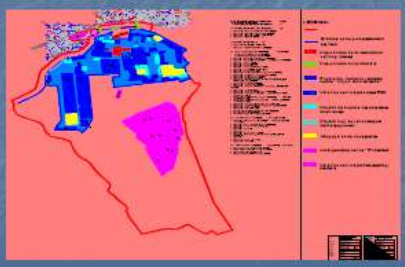
- The production of its first own middle-class vehicle Zastava "101", started in 1971.
- In 1980., Production capacity was expanded to 200,000 cars a year.
- That same year, began a production of "Yugo koral" and "Zastava 128"
- By year 1991, "Zastava cars" produced over 4.1 million cars

Own production models

Location

- Factory is located near the center of town.
- Represents the most significant industrial complex of the city.
- FAS (FIAT Cars Serbia) covers an area of 126 ha.
- Besides FAS, at the site of the former GROUP "Zastava" there are 10 companies operating.
- The entire complex has a working area of 173 hectares.
- During expansion and growth of the factory, the principles of sustainable development were not respected.
- All companies of the former Group "Zastava" are polluters of the environment (water, air and soil).

"Group of Zastava " Detailed regulation plan



- After the break up of former Yugoslavia and economic sanctions by the international community (from 1991. to 2000.) it was a difficult period in the history of "Zastava."
- During this period the tendency was to continue the production and sale of cars.

NATO bombing and the damage done to the environment

- During NATO's 1999 bombing, the "[illegible]" was destroyed
- There has been severe damage and and technological equipment.
- 160,000 square meters of productio
- A large quantity of waste (debris) w

NATO bombing and the damage done to the environment

After the explosion there was a fire of combustible materials in the warehouse of finished products and production facilities. On that occasion the following was burned:

- 46665kg rubber based technical goods,
- 8800kg Bituminous products
- 28 440kg of Plastic parts
- 3 000kg of textile,
- 2200kg of sealants,
- significant number of varnished car bodies,
- and a certain amount of paint and solvents

NATO bombing and the damage done to the environment

- Two transformers that used **Polychlorinated biphenyls (PCB)** as coolant were destroyed, PCB leaked out and caught fire.
- It is assumed that all quantity of PCB oil was poured out.
- PCB contaminated wastewater was collected in six technology pits.
- Because of heavy rainfalls that followed the bombing, it was assumed that with rain water, the leaked PCB, poured into the manholes and into the sewers and the existing technology pits.

Decontamination projects

- For the decontamination project Contract was signed in 2001 between Zastava Cars and UNEP / UNOPS, after which the realization of defined and approved solutions followed.
- Five projects have been carried out:
  - Removal of PCB-contaminated concrete, adding a new layer of concrete in the paint hall.
  - Cleaning of the water pits and
  - decontamination of the water
  - in the paint hall

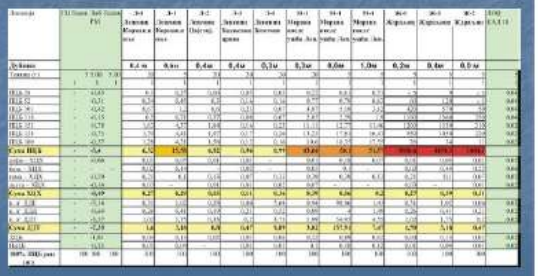
Decontamination projects

- Survey and monitoring on the extent of contamination of soils, surface and ground water in the surroundings of Zastava car factory.
- Removal of PCB-contaminated concrete and sand, adding a new layer of concrete at power station
- Transportation and treatment of 242 tons of PCB and PCDD/F - containing waste abroad

Monitoring

- For the purposes of the project APOPSBAL ICA2-CT2002-10007 and examination of soil:
  - 6 piezometers were set (at a depth of 8 meters),
  - 3 structural holes were made (at a depth of 6 meters),
  - the level of groundwater and surface water levels of rivers Lepenica and Zdraljica were monitored on the locations shown in the picture.

RESULTS OF PCBs CONCENTRATION (ng/g) IN SOIL SAMPLES ALONG OF THE RIVERS ŽDRALJICA, LEPENICA AND V.MORAVA 08.05.2003
(RECETOX-lab. Brno)



RESULTS OF PCB: CONCENTRATIONS (ng/g) IN SOIL SAMPLES IN FACTORY CRVENA ZASTAVA 25.03.2005
(RECETOX-lab. Brno)

Conclusion

- The results indicated that the PCB concentration in the water were relatively small.
- The greatest amount of contaminated soil, materials and water were removed during the decontamination projects implemented under the supervision of UNEP.

FIAT Cars Serbia

- Fiat Group Cars has signed a Memorandum of understanding with the Serbian government for the acquisition of Kragujevac's Zastava factory on 7th May 2008.
- The memorandum of understanding foresees a new company being set up in which the Italian group would have a 70% percent stake and the Serbian government retaining 30% percent.

- The new company would make a total investment of around 700 million euros, with the government of Serbia contributing 200 million euros. The Zastava plant will produce two new Fiat models.

- The last Zastava branded car rolled out off factory on 21st November 2008.

What has been done

- City of Kragujevac made a new detailed plan of the former industrial site of the Group "Zastava".
- Strategic environmental assessment of the Plan.
- All waste found in the perimeter of Zastava was cleared before the signing of a contract with FIAT.
- Feasibility study is produced.
- The Contract with Italian "Fiat" foresees that the State rehabilitates the polluted industrial zone' of 'Zastava car factory".

What has been done?

- Environmental due diligence analysis given to the Swiss company "SGS" was carried out.
- Examination of soil and water at the site of the factory "Zastava" was carried out.
- After an extensive examination it was shown that there is a pollution of groundwater and soil with hydrocarbons.
- Remediation plan of Zastava was made.

Remediation

- The Government of Serbia has entrusted the agency "Mace" (MACE) with management of the following projects.
- From 120 locations within the factory all waste was removed and the decontamination of certain parts of the plant or soil was performed. Approximately 2,000 tons of waste paint were removed


Remediation

- 300 tons of partially oiled wooden cubes from the floors were removed
- Since the beginning of the implementation of the contract with Fiat, the Kragujevac factory has removed 40,000 cubic meters of construction debris that was created during NATO bombing,
- The following was recycled:

- 315 000 liters of six-valence chromium, the product that was produced


Remediation

- So far, 40 out of 60 tones of electronic waste was recycled
- 40 tons o
- Large an noved from the

Historical pollution

- As for the historical pollution (especially pollution of underground water and soil), the investigative work has been completed.
- They showed that under a mechanical warehouses there is a pollution with hydrocarbons, which are a potential danger to workers.
- Groundwater and soil are also contaminated.
- The plan is to extract the soil which would be purified by thermal desorbtion.
- The process involves heating the soil, which leads to evaporation of the hydrocarbons (i.e., neutralization), after which the soil would be returned to the location from which it was taken.
- Ground water would be treated in a similar manner and returned after treatment.

What is done so far?

- According to initial estimates, for remediation purposes, almost 18 million Euros should be put aside.
- Works on the dismantling of the hall and dislocation of the equipment are currently being performed.
- During dismantling, waste containing asbestos is selected and separated, using all prescribed safety measures.
- When setting the new equipment, the complete installation of the infrastructure will be changed.
- Environmental impact assessment procedure of reconstruction of the factory hall is carried out under the supervision of local government.

What is done so far?

- Memorandum on the construction of main gas pipelines of high pressure is signed.
- It should enable the supply to company FIAT Cars Serbia, with 30,000 cubic meters of gas.
- Gasification project is a part of the contractual obligations of Serbia and the Italian Fiat.
- The project of building the pipeline according to estimates from the feasibility study, is worth 8 million Euros.

What is done so far?

- A new power block is under construction for which the EIA procedure is currently being done.
- 9.3 million euros were invested in the construction of the waste water treatment facility.
Local government gave a consent on the EIA for its operations.

Conclusion

- Under the requirements of "FIAT", for the complete infrastructure and environmental pre-arrangedment of "Zastava", it is necessary for the state to allocate more than 80 million euros.
- The value of this work is estimated on the basis of documents (feasibility study) made for the purpose of contract signing between the Serbian government and Fiat about a joint venture in Kragujevac's factory.
- On the request of Fiat, Serbia has invested a lot of money and effort to bring the factory into order.
- It is expect that the new owners will meet the worlds environmental standards.
- The implementation of continuous monitoring is mandatory.
- For the construction of new factories for FIAT's subcontractors, new industrial locations are defined.

5.2.4. Finance instruments in brownfield redevelopment - a focus on PPP and urban development funds, e.g. Jessica programme (To be confirmed)

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Manager Coordinating Brownfield Redevelopment Activities

www.cobraman-ce.eu

CENTRAL EUROPE

EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF

COBRAMAN

Ferrara, 17th-20th May 2010

Jessica

Joint European Support for Sustainable Investment in City Areas

Dr. Thomas Ertel, et environment and technology, Stuttgart

STUTTGART

CENTRAL EUROPE

EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND

Financial Support – Development Funds

JESSICA (Joint European Support for Sustainable Investment in City Areas) – A new way of using EU funding to promote sustainable investments and growth in urban areas

JESSICA provides the EIB new opportunities to support urban development projects:

- Potential "Holding Fund" Manager
- Technical advice

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Financial Support – Development Funds

JESSICA Basic Concept:

- EIB as a Holding Fund
- supporting regional urban development funds UDF
- which, in their turn, implement projects
- UDF basically as revolving funds (profit-oriented)
- UDF solely as PPP

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CENTRAL EUROPE

European Union Regional Policy

JESSICA Operations

9 Holding Fund agreements signed between the EIB and:

Lithuania
Wielkopolska (PL)
Western Pomerania (PL)
Portugal
Andalucía (SP)
London (UK)
Northwest England (UK)
Sicily (IT)
Moravia Silesia (CZ)

3 operations implemented with national financial institutions:

Estonia (KredEx)
Brandenburg (ILB)
East Midlands (King Sturge)

6

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CENTRAL EUROPE

European Union Regional Policy

JESSICA Operations

Fund	Type of Interventions
Wielkopolska (PL)	Urban Development and Regeneration
Andalucía (SP)	Urban Regeneration / Energy Efficiency
Western Pomerania (PL)	Urban Regeneration / Urban Infrastructure
Lithuania	Energy Efficiency (Housing)
Portugal	Under discussion (Possible Urb. Reg. / Energ. Effic.)
London (UK)	Energy Efficiency in Urban Infrastructure
Northwest England (UK)	Urban Regeneration
Sicily (IT)	Urban Development / Energy Efficiency
Moravia Silesia (CZ)	Urban Regeneration (Brownfield revitalisation)
Estonia	Energy Efficiency (Housing)
Brandenburg (DE)	Urban Development and Regeneration
East Midlands (UK)	Urban Regeneration

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Financial Support – Development Funds

JESSICA offers the EIB as a Holding Fund grants in terms of:

- Equity interests in UDFs;
- Guarantees;
- Subordinated loan;
- other forms of risk assumption aiming to **facilitate the participation of private capital.**

Systematisation of Urban Development Funds

Projects of public interest

- which are too risky for private investors and banks,
- from which project developers expect only low yields or which have too high capital requirements for the public sector to be able to act,
- which are too unprofitable and have a large indirect profitability

should be supported by the JESSICA initiative

Possible Improvements

- Reducing management costs
- Reducing the share of interest-bearing capital at the fund level
- Raising the interest rate of the funds loans
- Earlier loan redemption
- Reinvestment of capital flowing back into projects with a higher interest rate
- Reducing grant funding to partial financing
- Selection of projects with shorter repayment periods

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Thank you for your attention!

COBRAMAN

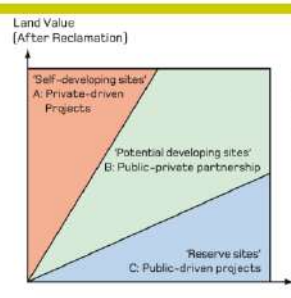
Training seminar about "Economic aspects" , 20th of May, Ferrara

Key aspects of PPP

Short summary of REVIT results
available at www.revit-nweurope.org

Dr. Thomas Ertel & Dr. Bettina Schug, et environment & technology, Germany

Focusing on B sites



The ABC Graph developed by CABERNET – on which sites private and public sectors operate ?

PPP ≠ PPP

In general 4 different types can be distinguished:

I. Mere private development
II. Mere public development
III. Procurement & Concession
IV. Alliance

Reality is in between

Model / Stage	I. Private development	II. Public development	III. Procurement & concession PPP	IV. PPP Alliance
Initiative	Private	Public	Public	Private, public
Planning	Private, with public assistance	Public	Possibly private	Private, public
Financing	Private, with public financial assistance	Public	Possibly private	Private, public
Site development	Private	Public	Possibly private	Private, public
Building	Private	Public	Possibly private	Private, public
Operating & maintenance (commercial facilities)	Private	Private, public	Possibly private	Private, public
Maintenance of public facilities	Public	Public	Public	Private, public

Ten critical success factors for PPP

1. All parties involved should have a **clear idea of their own objectives** and constraints regarding the project.
2. It is necessary to have acquired a sufficient degree of insight into the extent **to which PPP can add value**, in relation to other, more traditional contract forms (private development, public development).
3. Before procuring the public authorities that are involved should have formed a "**public consortium**" defining project organisation, authority, mandates, delegation, financing and the required authorisation, zoning and planning
4. The **earlier** the private sector is involved in the preparation of a particular project, the **greater the chance of success**.
5. Selection of private parties should be **based on competition as much as possible**. The overall number of parties involved should be minimised.

Ten critical success factors for PPP

6. Involvement of **neighbours** is important, but requires specific arrangements rather than including them as "part of the consortium".
7. A PPP contractor should be selected on its ability to **manage the process and the inherent risks**.
8. Involvement of **financial institutions** such as the European Investment Bank (EIB) is a **must**.
9. The scope of a PPP-project should be sufficiently financially substantial to justify the upfront investments in terms of **transaction and management costs**.
10. The composition of and the culture within the **teams** are a crucial success factor.

Conclusions

- A Public Private Partnership is not a target in itself but must have advantages for both partners
- Both parties must have a clear view beforehand of their own ideas and expectations
- Transparency in co-operation and communication throughout the whole project period is essential.
- Private partners should be selected in an open, transparent tendering procedure via a "competitive dialogue".
- High quality management performance required to oversee these complex redevelopments.
- Finance is just one aspect of the redevelopment: the "social context", both within the project team and in the community, is also an important consideration.

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5.2.5. PPP and Project finance the experience of "fondo PPP Italia"

EQUITER

PPP AND PROJECT FINANCE
THE EXPERIENCE OF "FONDO PPP ITALIA"

Piero Attilia
Head of Investment Team, Fondo PPP Italia

20 Maggio 2010

INTESA SANPAOLO

Index

Dismissed areas

Dismissed areas are sites that can often be used to locate new public infrastructures as:

- Hospitals
- Accommodation facilities (universities, public buildings, etc)
- Social housing
- Sporting centers
- Public parks and parking

The advantages of such activities can be identified in:

- restructuring of dismissed areas
- giving new urban destination to such areas
- offering public services (schools, social housing, parking, etc.)

Infrastructure projects in Italy - 1/3

With regard to expenditure on infrastructure also by recuperating dismissed areas, the Italian public sector has lagged behind that of its European partners. Recent comparisons of EU infrastructure levels rank Italy in 14th place.

There is a very high request for new infrastructures, mainly at local level (schools, sporting centers, parking lots, thermas, hospitals, etc.), as well as there are the areas that need to be recuperated from an urban point of view (i.e. dismissed military sites, industrial sites, very old buildings, etc.), but very few are public financial resources.

It is only recently that the political climate in Italy has changed sufficiently to allow greater levels of private participation in the financing, construction and management of public infrastructure.

The basic dichotomy of containing public expenditure while actively promoting infrastructure projects, has been resolved by facilitating working relationships between the public and private sectors.

Infrastructure projects in Italy - 2/3

Two main investment areas can be identified:

Strategic Infrastructures

NATIONAL IMPACT

Transport represents circa 90% of the strategic infrastructures identified.

Non-strategic Infrastructures

LOCAL IMPACT

Projects characterised by a smaller investment size. Public buildings and environment are the main sectors involved.

Infrastructure projects in Italy - 3/3

Public Authorities in Europe, including Italy, are strongly and increasingly committed to improve infrastructure system also by restructuring dismissed areas, focusing both in strategic as well as local infrastructures projects.

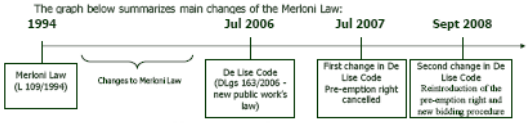
Moreover, considering that public funds are not sufficient to finance the large demand for public investments, private operators have been involved in order to boost investment and therefore developing partnerships between public entities and private investors.

Legal framework of PPP infrastructure projects in Italy

The legal tool, that allows private investors and operators to operate with a long term strategy in the public work area financing also the realization of infrastructure, was introduced with the new law on public works issued in 1994 (the so called Legge Merloni n. 109/94) and is the:

CONSTRUCTION AND OPERATING CONCESSION

The graph below summarizes main changes of the Merloni Law:



Main Features

B Different procedures exist:

- based on art. 143 de Lise Code (former art. 19 Merloni Law) entrepreneurs bid on a project designed by public administrations;
- based on art. 153 de Lise Code (former art. 37-bis Merloni Law). entrepreneurs may propose projects to public administrations. (where bid may be split into two steps or in one single bid "gara unica").

A PROJECT COMPANY can be created.

The market of PPP infrastructure projects in Italy – 1/2

Between 2002 and 2009 public administrations have proposed approximaletly 6,700 PPP schemes for a total investment of € 81.5 billion Euros.

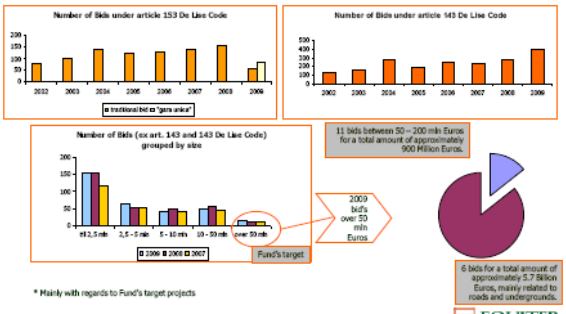
Bid in the period 2000-2009:

number of deals	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
art. 37 - proposal	72	92	295	629	703	625	471	493	366	39
art. 37 - tender	4	6	78	100	138	125	128	139	156	55
"gara unica"									1	84
art. 19 - tender	23	115	126	161	280	183	249	228	272	797
Total number	99	213	441	890	1,121	933	848	860	695	575

size	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
art. 37 - proposal	1,020	1,410	1,462	4,115	7,246	5,762	9,259	9,464	2,405	899
art. 37 - tender	74	46	902	1,174	1,127	2,009	3,709	4,194	4,423	4,092
"gara unica"									11	2,462
art. 19 - tender	147	866	528	3,287	1,299	2,212	1,796	1,124	1,358	1,859
Total size	1,241	2,322	2,893	8,575	9,672	10,813	13,724	14,782	8,197	9,313

Source: Osservatorio Project Finance

The market of PPP infrastructure projects in Italy – 2/2



* Mainly with regards to Fund's target projects

Infrastructure Funds

The evolution process in the PPP market

In Italy the PPP Market has hardly changed since its beginning. Especially for:

- type of projects
- quality of the projects
- length of the bid procedures
- role played by subjetcs involved

Infrastructure Funds

Why a market for infrastructure funds

Main industrial operators that are active in the PPP market are construction and facility management companies.

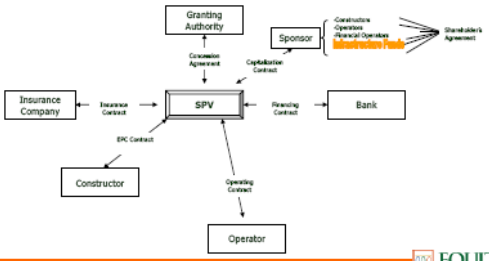
Even if industrial operators have the technical know-how and expertise to develop public infrastructure, they can not afford to capitalise, on a long term base, SPVs.

This is especially true for Italian companies that have a low level of capitalization compared to European ones.

In the last years some of the main industrial players have been looking for establishing medium-long term partnership with financial investors.

Infrastructure Funds

Role of the Infrastructure Fund



Infrastructure Funds

Benefits

There are several benefits in establishing a partnership with infrastructure funds (IF):

- **Financial Know-how** → IF, with their know-how, can optimize the financial strategy of the project.
- **Project Know-how** → IF have often a wider and more diversified project portfolio being able to indicate benchmarks and project strategies.
- **Diversified Portfolio** → IF, thanks to their diversified portfolio, can offer synergies to reduce operating costs.
- **Easy Divestment** → IF can offer to industrial operators more exit strategies maximizing capital gains.
- **Focus on the project** → IF do not have interests in the construction and management of the project, but their pay out comes only from the success of the project, then they represent for Public Authorities a guarantee for the project success.

Infrastructure Funds

Evaluation criteria

Infrastructure Funds

Types

Infrastructure Funds can be classified based on different elements:

- **SECTOR:** → Transportation, public utilities, energy, networks and pipelines, local projects, PPP, etc.
- **PROJECT LIFE-CYCLE:** → Greenfield, Brownfield or both.
- **SIZE OF INVESTMENT:** → Large, Medium, Small investment.
- **GEOGRAPHIC FOCUS:** → World wide, Europe or focused on a specific country or area.

The Fund PPP Italia — Main Features

The Fund	**The Fondo PPP Italia** is the first closed-end investment vehicle established under Italian law specialised on infrastructure. It has been authorised by the Bank of Italy on September 2006.
Investment	**The Fondo PPP Italia** is aimed at private equity investments in infrastructures projects developed under PPP schemes and company or projet concerning local public utilities and renewable energies. **The Fund has an hands on approach.**
Commitment	**The Fondo PPP Italia** has a total commitment from investors of 120 Mln Euro.
Target	**The Fondo PPP Italia** aims to invest in 20/25 projects.
Time	**The Fondo PPP Italia** has a 12-year term. The term may be extended for a 3 year period upon decision of a qualified majority of investors.

The Fund PPP Italia — Structure

The Fund PPP Italia — Investors

They are eight primary institutional investors, both Italian and Foreign.

The Fund PPP Italia

Management Company

The Management Company of the Fondo PPP Italia is Fondaco Sgr SpA.

It is an independent asset management company established in 2002, authorised by the Bank of Italy, and located in Turin.

Shareholders of Fondaco are:

- Compagnia di San Paolo (40.0%)
- Fondazione Cassa di Risparmio di Padova e Rovigo (23.4%)
- Fondazione Cassa di Risparmio di Bologna (9.6%)
- Fondazione Cassa di Risparmio di Cuneo (8.6%)
- Ersel Finanziaria (20%)

Fondaco Sgr is exclusively dedicated to Institutional Investors.

Fondaco Sgr at the present manages, in addition to the Fondo PPP Italia, four open-end funds with assets under management of 2.9 billion Euros.

The Fund PPP Italia

Advisor

Equiter is a company of Intesa-Sanpaolo Group. It is aimed to invest in infrastructure projects and public utilities.

Equiter brings together specialists from different sectors within the Group such as project finance, equity investment, infrastructure, renewable energy and legal expertise which can boast a proven track record in the financing of infrastructure projects, renewable energy and public utilities.

Currently Equiter has a diversified project portfolio invested in 4 big areas: public utilities, infrastructure, public real estate and environment). The total portfolio amount is equal to 227 million euro, 55% of which invested in infrastructures.

Equiter is responsible, under an advisory contract, for sourcing, screening, and monitoring the investments for the Fondo PPP Italia.

To carry on the advisory for the Fondo PPP Italia, Equiter has fully dedicated an Investment Team.

The Investment Team, independently from the investors and from any external third party, has:

- to identify, assess and monitor investment opportunities;
- to submit investment proposals to the Investment Committee;
- to monitor investments performance and to update portfolio valuation;
- to propose follow-on investments and exit strategies to the Investment Committee.

The Fund PPP Italia

Investment Strategy 1/3

The Investment Strategy of the Fondo PPP Italia has the following features:

STAKE The Fondo PPP Italia aims to acquire qualified minority stakes (20-40%), by investing in equity and mezzanine financial instruments in non/limited recourse PPP projects and local public utilities.

SECTORS The Fondo PPP Italia is focused mainly on the following sectors:

INVESTMENT SIZE The Fondo PPP Italia focus its investments on projects whose size is between 10 and 400 mln euro, with a minimum commitment in each project of 1 mln euro.
The total amount invested with a same partner can not exceed 25% of the total Fund commitment.

GEOGRAPHIC FOCUS The Fondo PPP Italia focus its investments on projects located in Italy, but up to 20% of the aggregate commitment can be invested in cross-border projects.

The Fund PPP Italia

Investment Strategy 2/3

Investments will be chosen with the aim of attaining a good diversification both from the point of view of industry type and life-cycle.

Risk/Return Matrix

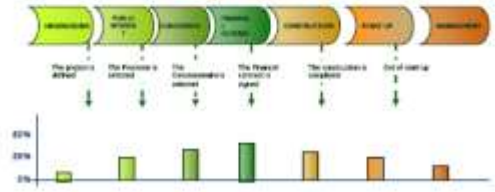
	PUBLIC BUILDING	ENVIRONMENT	URBAN DEVELOPMENT	TRASPORTS	PUBLIC UTILITIES
SIZE of INVESTMENT	MEDIUM-LOW	MEDIUM-HIGH	MEDIUM-LOW	HIGH	HIGH
RISK	LOW	MEDIUM	MEDIUM	MEDIUM-HIGH	MEDIUM-HIGH
YIELD	MEDIUM	HIGH	HIGH	MEDIUM-HIGH	MEDIUM-HIGH
TENOR	MEDIUM-HIGH	MEDIUM-HIGH	MEDIUM	HIGH	MEDIUM
INVESTMENT POLICY OF THE FUND	40-50%	10-20%	10-20%	5-10%	10-20%

The Fund PPP Italia

Investment Strategy 3/3

The Fondo PPP Italia can invest in different phases of the project life-cycle, even though its activity is focused on brownfield projects.

PROJECT LIFE CYCLE



Advantages of PPP schemes

BENEFITS FOR PUBLIC BODIES FROM PPP SCHEMES

	[illegible]	[illegible]
Projects which final cost has increased with respect to initial contractual price	73%	22%
Delay in project delivery	70%	24%

Case Studies - 1/3

Società di Biotecnologie

Società di Biotecnologie is concessionaire of a 20 years concession in order to design, build, finance and operate the new biotechnology school of the Turin University (Piedmont region).

The bidding procedure was under article 37bis of the Italian public works law.

The granting authority is the University of Turin.

The Project represents the first PPP deal in the university building sector in Piedmont. The building can host approximately 1.000 students and 200 academic staff.

The structure is a 5 level building with a total area of more than 20.000 Sqm which will host lecture halls, administration offices, research laboratories, an incubator area and a parking block for about 140 cars.

The concession contract requires the concessionaire to provide, after the construction completion occurred in September 2006, the following services to the University:

- security and cleaning,
- heating and conditioning,
- ordinary and extraordinary maintenance,
- operation of the car park.

Currently the Project in in operation phase

Case Studies - 1/3

Società di Biotecnologie

What it has been built

Ground floor 3508 sqm




ER

Case Studies - 1/3

Società di Biotecnologie

What it has been built

First floor 4442 sqm




ER

Case Studies - 1/3

Società di Biotecnologie

What it has been built

Second floor 964 sqm




ER

Case Studies – 2/3

Sporting Village Novara

The sporting centre is located in the Eastern part of Novara over an area of about 140,000 sqm, in the "Terdoppio" park area.

The multi-function centre, which has an investment amounting to approximately 34.5 Million Euros (excluding VAT), is structured as follows:

- an indoor Olympic Swimming Pool standing on a 6,200 sqm area, with 10 lanes, 50-m length, children and fitness lanes, hydro-massage and fitness area, health club, in addition to changing rooms and bathrooms; this Swimming Pool can have 14 different configurations allowing several activities to be performed at the same time;
- a Sports Hall standing on a 4,950 sqm area, dedicated to sporting activities, concerts, exhibitions, conferences and work-meetings; this building can have 54 different configurations with a maximum total capacity of 5,000 persons;
- a Club House standing on a 1,650 sqm area, designed to contain bars, restaurants, shops and services for the family;
- an outdoor Swimming Pool for entertainment activities, with fitness and hydro-massage areas, a wave pool and a 2 beach-volley playgrounds;
- a Parking Area of 33,000 sqm, offering 1,138 car parking spaces, 682 motorcycle parking spaces and 6 coach parking spaces.

Currently the Project in in operation phase

Case Studies – 3/3

Sicily PV Plant

The Project consists of building a photovoltaic plant in Sicily on private land with a contract for a 20 year surface right ("diritto di superficie"). The investment is approximately 18 Million Euros.

A newco has been setup in order to develop and manage this PV initiative.

The PV plant is based on crystalline technology with a mono-axis tracking system for a total capacity of approximately 4 MWp. The table below summarizes main features of the plant:

Installed capacity	Kwp	3,997
Construction Start	Year	2009
	Month	12
Construction Period	Months	7
Operation	Year	2010
	Month	7
Long Term Production	Useful hours guaranteed	2002
	Useful hours expected	2052

Currently the Project in in construction phase

Conclusions

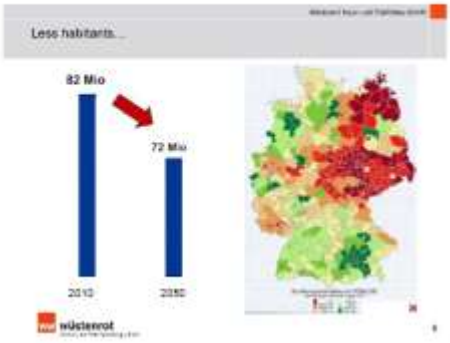
Il PPP può essere un valido aiuto per superare l'attuale momento di crisi in quanto esistono dei punti di forza che si sono sviluppati in questi anni:

- Accelerazione delle **procedure di gara** per effetto delle novità introdotte dal terzo decreto correttivo al codice De Lise
- Stakeholder con maggiore **know how**
- **Good practice**
- Disponibilità di **capitali** finanziari

E' però necessario superare alcuni elementi di debolezza ancora esistenti

- Limitato numero di nuove iniziative e di **studi di fattibilità** adeguati
- Spesso **prevale** ancora la **logica dell'appalto** sia da parte degli operatori industriali che delle stazioni appaltanti
- Difficoltà del **mercato creditizio**

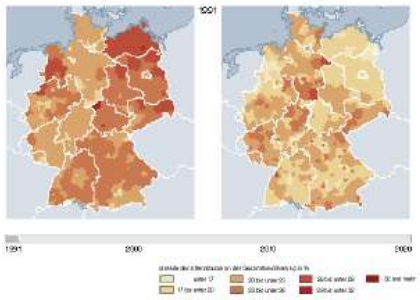
5.2.6. The private developers viewponit: Overview about the Facility Management and Economic feasibility study



Wüstenrot Haus- und Städtebau GmbH

Population Development Germany

under 20 years | over 60 years



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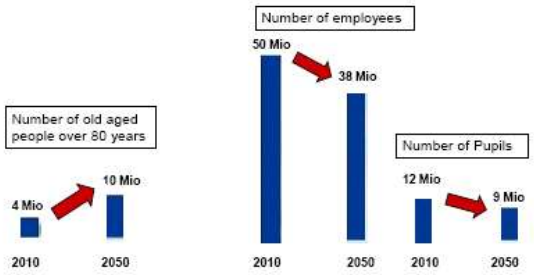
Wüstenrot Haus- und Städtebau GmbH

Society is getting older…



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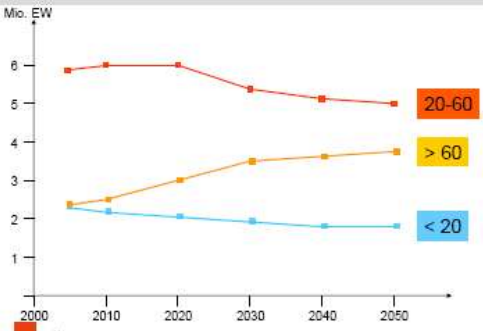
Wüstenrot Haus- und Städtebau GmbH

Demographic Change

wüstenrot

Wüstenrot Haus- und Städtebau GmbH

Population Development Baden-Württemberg until 2050



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Wüstenrot Haus- und Städtebau GmbH

Demographic Change

Wüstenrot Haus- und Städtebau GmbH

Climate Change

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Wüstenrot Haus- und Städtebau GmbH

Practise Example (I): Heidenheim – Ploucquet Areal

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Practise Example (I): Heidenheim – Ploucquet Areal

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Wüstenrot Haus- und Städtebau GmbH

Practise Example (I): Heidenheim – Ploucquet Areal

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15

Wüstenrot Haus- und Städtebau GmbH

Practise Example (I): Heidenheim – Ploucquet Areal

Former Textile Processing

Closeness to inner-city area

Anticipated requirement:

-> Health Center

-> Houses for disabled people

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Wüstenrot Haus- und Städtebau GmbH

Practise Example (II): Künzelsau – Quartier an der Stadtmauer

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Practise Example (II): Künzelsau – Quartier an der Stadtmauer

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Practise Example (II): Künzelsau – Quartier an der Stadtmauer

Inner development

Redevelopment Area

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Practise Example (II): Künzelsau – Quartier an der Stadtmauer

Mixed development Zone

Taking investors opinion into account

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20

The realistic view…

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Feasibility Study

Inventory	Planning law classification, location
Macroanalysis	Investments, retail sites
Microanalysis	Connectivity
Developing concept	Structure plan
Infrastructure costs	Pipeline
Urban planning estimate	static, dynamic

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Feasibility Study

Inventory	Planning law classification, location
Macroanalysis	Investments, retail sites
Microanalysis	Connectivity
Developing concept	Structure plan
Infrastructure costs	Pipeline
Urban planning estimate	static, dynamic

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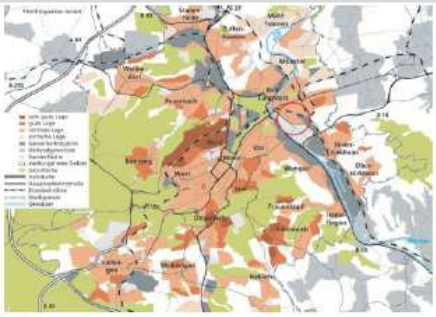
Folie 24

Market Analysis



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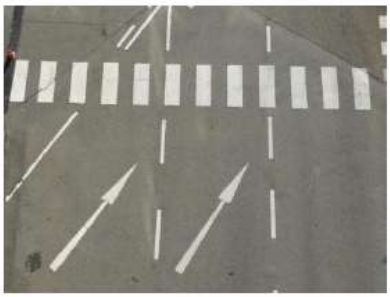
Feasibility Study

Inventory	Planning law classification, location
Macroanalysis	Investments, retail sites
Microanalysis	Connectivity
Developing concept	Structure plan
Infrastructure costs	Pipeline
Urban planning estimate	static, dynamic

Developing concept



Competitive locations

DIE MIETEN UND PREISE AUF EINEN BLICK

Feasibility Study

Inventory	Planning law classification, location
Macroanalysis	Investments, retail sites
Microanalysis	Connectivity
Developing concept	Structure plan
Infrastructure costs	Pipeline
Urban planning estimate	static, dynamic

Infrastructure costs

Feasibility Study

Inventory	Planning law classification, location
Macroanalysis	Investments, retail sites
Microanalysis	Connectivity
Developing concept	Structure plan
Infrastructure costs	Pipeline
Urban planning estimate	static, dynamic

Wüstenrot Haus- und Städtebau GmbH

Urban Planning Estimate

	Draft:
Expenditure	
Purchase price	
Design (lump sum)	
Eviction	
Building demolition	
Surface access demolition	
Contamination remediatin	
Munitions clearance	
Development	
	Road
	Water
	Wastewater
	Other infrastructure (gas, power, broadband,...)
	Landscaping
	Ecological balance
social infrastructure (kindergarten, school)	
Total costs	
Remaining costs	
Revenues	
Housing	
Mixed-use	
Commercial	
Total return	
Balance	

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Wüstenrot Haus- und Städtebau GmbH

Calculation - example

Timeline

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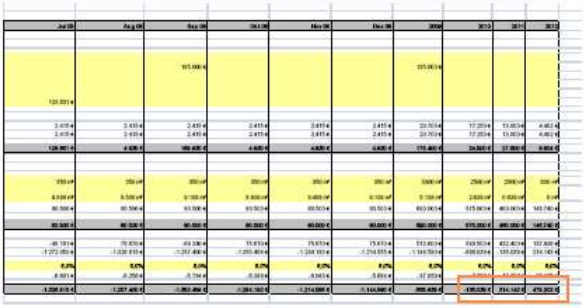
Wüstenrot Haus- und Städtebau GmbH

Calculation - example



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Wüstenrot Haus- und Städtebau GmbH

Image

unique selling points

image – links with strengths

„lighthouse" – projects

revaluation of existing residential areas nearby

positive name

wüstenrot

Wüstenrot Haus- und Städtebau GmbH

Sales calculation - sample

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Wüstenrot Haus- und Städtebau GmbH

Report of project status

wüstenrot

Report of project status

Status lights

Report of project status

Status lights

Kornwestheim Stuttgarter Straße

Kornwestheim Stuttgarter Straße

Kornwestheim Stuttgarter Straße

Kornwestheim Stuttgarter Straße

Wüstenrot Haus- und Städtebau GmbH

Kornwestheim Stuttgarter Straße


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Wüstenrot Haus- und Städtebau GmbH

Kornwestheim Stuttgarter Straße


wüstenrot

Wüstenrot Haus- und Städtebau GmbH

München-Haidhausen Kirchenstraße

wüstenrot

Wüstenrot Haus- und Städtebau GmbH

München-Haidhausen Kirchenstraße

wüstenrot

Wüstenrot Haus- und Städtebau GmbH

München-Haidhausen Kirchenstraße

wüstenrot

Wüstenrot Haus- und Städtebau GmbH

München-Haidhausen Kirchenstraße

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71638 Ludwigsburg
Tel.: 0049 +7141 149-0
Fax: 0049 +7141 149-101
E-Mail: whs@wuestenrot.de

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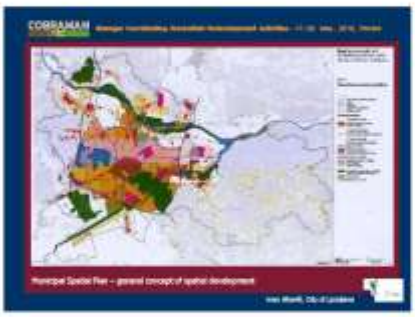
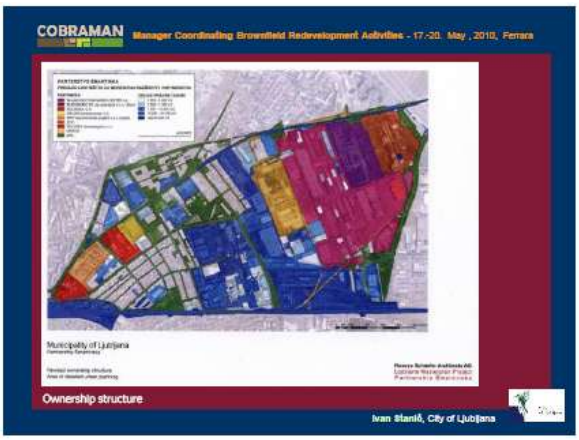
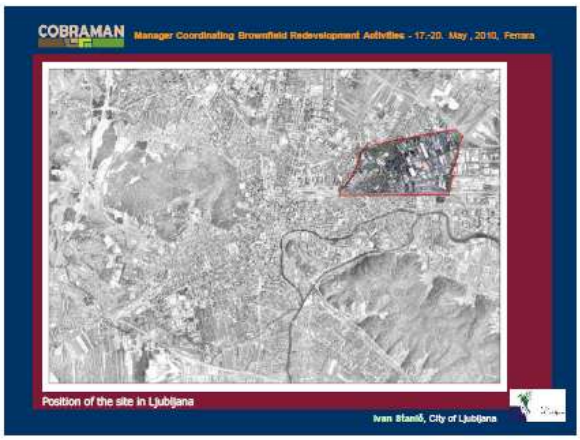
5.2.7. The largest Regeneration Project in Slovenia - 230 ha.

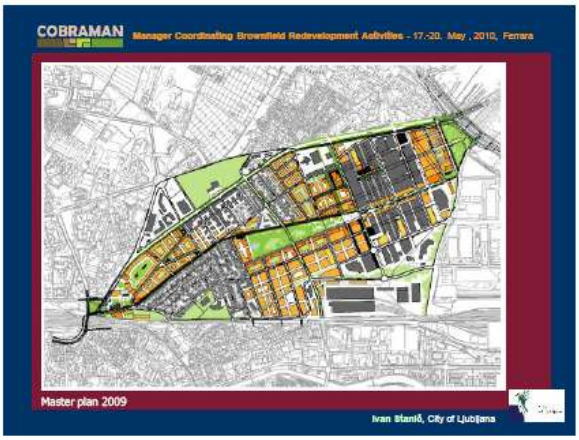


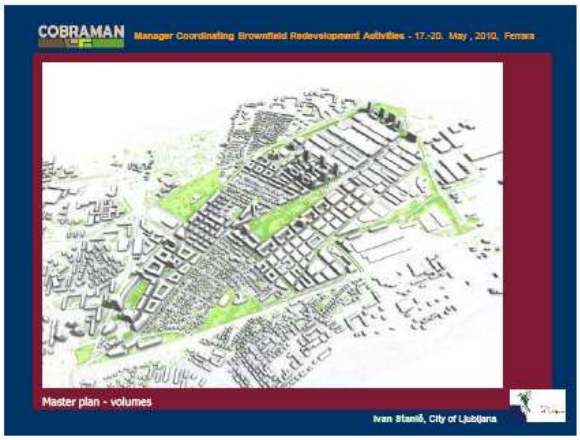

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
Municipality of Ljubljana
Ownership structure
Ivan Stanič, City of Ljubljana


COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
Position of the site in Ljubljana
Ivan Stanič, City of Ljubljana


COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
3 Partnership Šmartinska
Objectives:
Urban renewal: transformation into a recognisable, programmatically rich and active part of the city, with intertwining activities enabling dwelling, working and leisure.
Economic renewal: creation of conditions for an economically prosperous city district where the former employment in processing industry will be offset by new activities.
Social renewal: creation of conditions for a socially alive city district, with homes in the private market and social rented housing, local service businesses and global production companies.
Ecological renewal: ecology-promoting city district, cleared off old environmental burdens; enabling energy-efficient construction that utilise energy-efficient technological solutions.
Ivan Stanič, City of Ljubljana

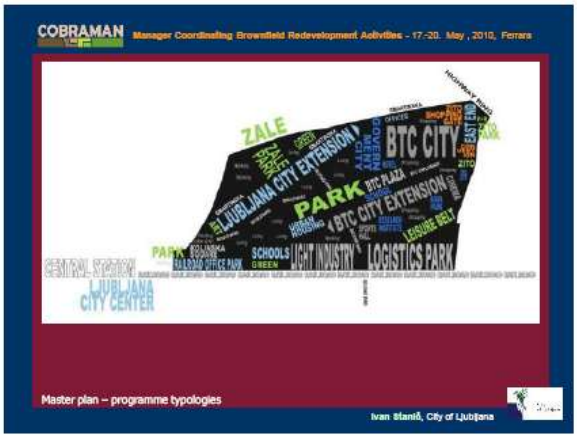

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
3 Partnership Šmartinska
Process
Letter of intent: signed 21st May 2007
12/2007 – 5/2008: international town planning competition, organized by the City Municipality of Ljubljana, Chamber of architects, town planners and landscape architects of Slovenia, European Council of Spatial planners – ECTP,
Winner: Hosoya Schaefer Architects, Zürich, Switzerland
Summer 2008-Spring 2009: Expert guidelines for new Municipal Spatial Plan (Master plan for the Partnership Šmartinska area)
Summer 2010: Municipal spatial plan adopted
Summer 2010: Partership Šmartinskla PPP Project office set up
Winter 2010: first detailed plans adopted
Autumn 2008–Spring 2011: first architecture and engineering projects, competitions etc.
Spring 2011: Permitting and 1st phase of construction begins.
Ivan Stanič, City of Ljubljana

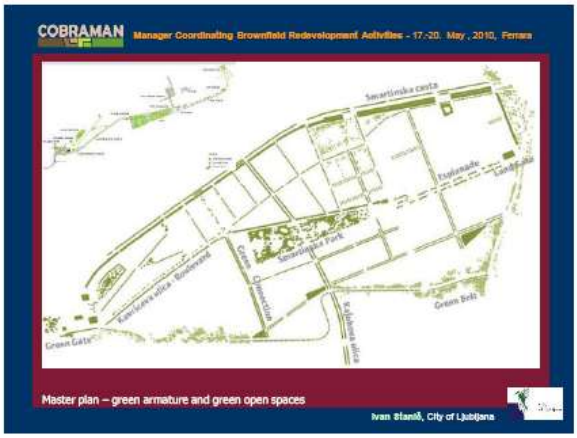

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
Master plan 2009
Ivan Stanič, City of Ljubljana

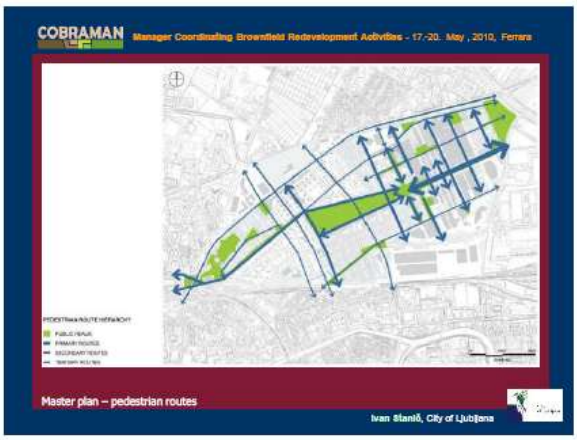

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
Master plan - volumes
Ivan Stanič, City of Ljubljana

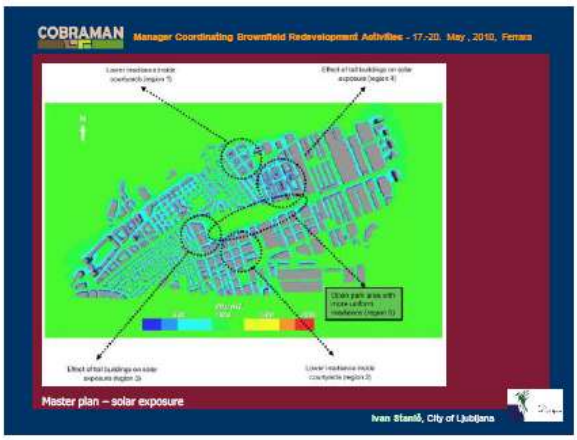

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
CONTEXT SITE APPROACH
Ivan Stanič, City of Ljubljana

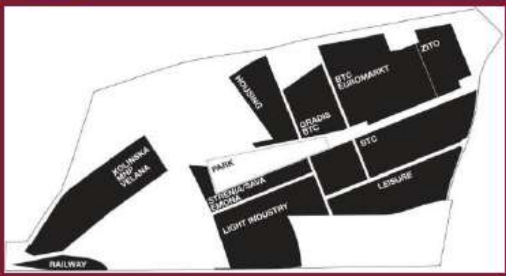

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
Master plan – building typologies
Ivan Stanič, City of Ljubljana


COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
ZALE
BTC CITY
CITY EXTENSION
PARK
BTC PLAZA
LJUBLJANA
LOGISTICS PARK
LIGHT INDUSTRY
SCHOOLS
CENTRAL STATION
LJUBLJANA CITY CENTER
Master plan – programme typologies
Ivan Stanič, City of Ljubljana


COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
Master plan – green armature and green open spaces
Ivan Stanič, City of Ljubljana


COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
Master plan – pedestrian routes
Ivan Stanič, City of Ljubljana


COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May , 2010, Ferrara
Master plan – solar exposure
Ivan Stanič, City of Ljubljana



Master plan – detailed planning areas

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May, 2010, Ferrara

The "Gemini" project, construction 2011

The "Crystal Palace" project, construction 2010

Ivan Stanič, City of Ljubljana

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May, 2010, Ferrara

Master plan – view of the central park

Ivan Stanič, City of Ljubljana

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May, 2010, Ferrara

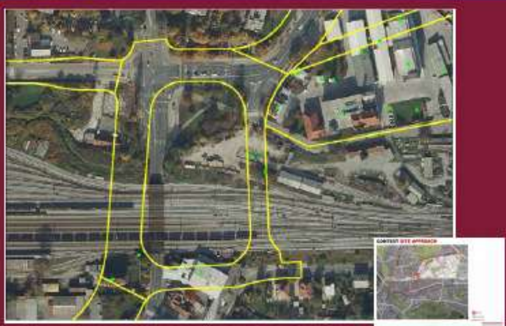
4 Devising funding strategies

Centering on the Ljubljana Passenger Centre, several independent, yet compatible projects will be joined and undertaken in the next financial period:

- The Ljubljana Passenger Centre
  (*public logistic part – railway station, road accesses*)
- Civitas Elan (FP 7)
  (*pilot case – Slovenska Street, public transport vehicles, management scheme*)
- Partnership Šmartinska
  (*railway underpass, city entrance, public park*)

Ivan Stanič, City of Ljubljana

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May, 2010, Ferrara



Public funding – the "Šmartinska" underpass

Ivan Stanič, City of Ljubljana

COBRAMAN Manager Coordinating Brownfield Redevelopment Activities - 17.-20. May, 2010, Ferrara

Master plan – the central park

Ivan Stanič, City of Ljubljana

5.2.8. Insurances and other instruments to cover risks from pollution/ Cooperation between economic and environmental experts in land valuation- a German approach

Cost Cap Policies (CCP)

- A CCP may include a deductible as an amount above the estimated cleanup costs that an insured is obligated to pay before the policy is activated.
- The most common deductibles range from 10% to 30% of the estimated cleanup cost.
- Because CC policies are based on estimated cleanup costs, an insured party must complete a thorough site assessment before an insurer will review the engineering and provide a policy

Pre- Funded Programs (PFP)

- Involve up-front payment of the anticipated expenses
- Include a CC component
- May include PL coverages
- Require extensive site assessments

Pre-Funded Programs (PFP)

- The policy is used for cleanup expenses, which the insurer pays as they are incurred by the remediation contractor.
- If the cleanup costs are higher than expected, the policy pays the additional costs up to the policy limit.
- The programs are appropriate for brownfields where cleanup costs are high (most commonly 5-50 Mio.€) and remediation is expected to take multiple years

Summary

- Early stage of investigation, no need for cleanup visible by early screening → **PLP**
- Cleanup necessary, remediation plan set up → **CCP**
- As 2., in case of long lasting + extensive remediation → **PFP**

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Thank you for your attention!

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

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Manager Coordinating Brownfield Redevelopment Activities

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EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND

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Ferrara, 17th – 20th Mai 2010

Valuing of Brownfields

Dr. Thomas Ertel, et environment and technology Dr. Ertel, Stuttgart

STUTTGART | CENTRAL EUROPE

Activities connected with valuing of brownfield sites

- ITVA-Scientific.technical association for brownfield redevelopment – Working Group Valuing
- Project „PROSIDE – PROmoting Sustainable Inner urban Development" – INTERREG III B CADSES

proside

Additional funds from Federal Ministry of Education and Research

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Financial valuing of ecological damages at brownfield sites

ITVA guide

- Part1: Definition of interface between finance and environmental expert persons
- Part2: Enquiry of site/ riskanalysis – computerised tool with comments
- Part3: Cost prognosis – computerised tool with comments

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Definition of interface (1)

- Risks connected to claims
- Risks connected to investments
- Risks connected to usage

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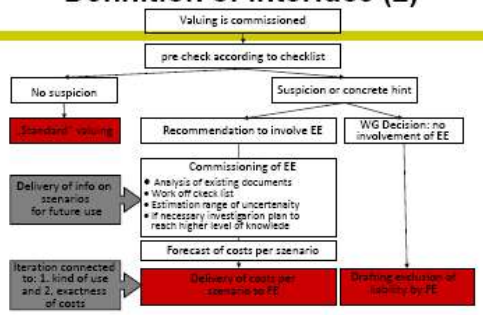
Definition of interface (2)



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Definition of interface (3)

Additional expenditures

- Regeneration or safeguarding activities
- Involvement of external expert and documentation
- Obligations to prove
- Surplus costs for disposal
- Fees
- Health and safety actions for work

Enquiry of site/ risk analysis (1)

Decision support for non experts in the field of environmental pollution.

When do suspicions or concrete hints lead to a significant influence on the environment?

Involvement of an environmental expert:
YES or NO?

Enquiry of site/ risk analysis (2)

Ad hoc:

- which pollutants
- Quality and quantity of chemical substances
- Potential to disperse/transport behaviour into surrounding/other environmental compartments

Typical factors for costs according to:

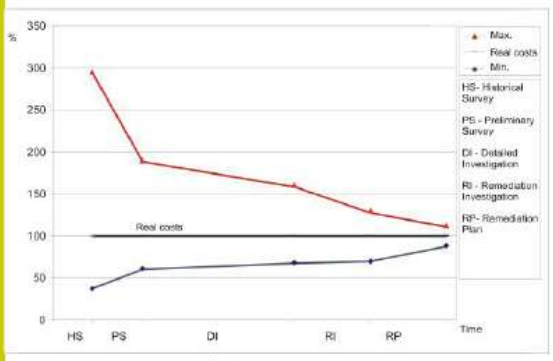
- Size of the site
- Duration of use influencing the environment
- Accidents, known pollutant spread, loss in course of usage (filling station,..)
- Location of potentially polluted site

Cost prognosis

Guidance for experts in the field of environmental pollution as well as for well experienced finance persons involved in the evaluation of real estate

„Easy to use and transparent cost prognosis even on a low level of information“

standardisation, prevention of the risk for legal liability



Main objective

- unpretentious collection of existing data
- unpretentious estimation of expected costs

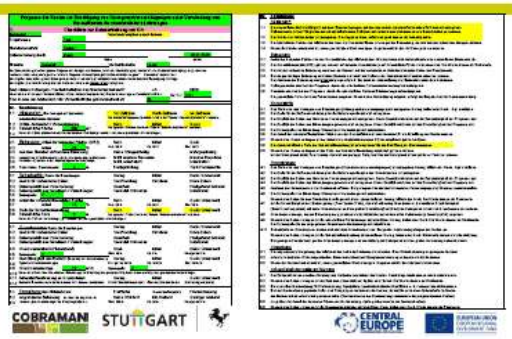
Critical circumstances

- Low level of knowledge at the moment of estimation / usage of cost prognosis tool

Solutions

- Check lists for data collection and data analysis
- Simple algorithm for estimation of expected costs
- Solution for critical circumstances: Definition on required specific data right form the beginning already in the check lists.

Screenshot cost prognosis tool



- Transparent and well defined interface between all actors.
- Objective criteria for involvement of an environmental expert.
- Feasible and transparent cost prognosis.
- Easy to update and upgrade.
- Easy to use computerised tool available.

more info at

www.itv-altlasten.de

www.proside.info

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5.3. Risk management by insurance options

Besides the methodology of proper engineering as described above, the market offers a variety of insurance solutions to be applied in the brownfield rehabilitation process. Although such solutions were applied in the US since the early 90ties they were rarely used and hardly known in Europe. The broad variety of options modified according to the national legislations can be grouped in 3 main categories:

Pollution Liability Policies (PLP)
Pollution Liability (PLP) policies are the most widely used and oldest brownfields insurance product. They provide protections against claims for third party cleanup costs, bodily injury and property damage arising out of pollution conditions on, under, or migrating from an insured site; legal defense expenses arising from third party claims; and cleanup conditions discovered by the insured at an insured site.

PL policy periods range from one year to a maximum of ten years. Insurers offer Extended Reporting Periods (ERPs) that lengthen the time which a claim may be made against the insured and reported to the insurer as long as the claim arises out of pollution conditions that commenced prior to the end of the policy period. Policies available typically range from 1 Mio. € up to 50 Mio. €. They all include deductibles for the insured party and premiums result at a few (2-5) percent of the policy, according to the anticipated risks of the specific brownfield site. Due to their nature to cover risks of unexpected contaminations PLPs were typically used in the early project phases (HS + PS) at sites, where no contaminations are to be expected according to the early screenings.

Cost Cap Policies (CCP)
Cost Cap (CC) policies help protect against costs incurred by an insured party that exceed the estimated cleanup costs based on a remediation plan.

The policies are not appropriate for cleanups of less than 1 million € to 2 million €. Given the fixed costs of necessary site engineering and the ease with which cost overruns can occur on small projects, the premium insurer would need to charge renders the policies cost-ineffective for small cleanups. Policy periods vary with the time it takes to conduct a remediation. The most common length varies from three to ten years, with ten being the maximum. Policy limits range from 50% to 200% of the estimated cleanup costs. Estimates of premiums by insurers range from 6% to 25% of the estimated cleanup costs at a site.

A CCP may include a deductible as an amount above the estimated cleanup costs that an insured is obligated to pay before the policy is activated. The most common deductibles range from 10% to 30% of the estimated cleanup cost. Because CC policies are based on estimated cleanup costs, an insured party must complete a thorough site assessment before an insurer will review the engineering and provide a policy.

Pre-Funded Programs (PFP)
Pre-Funded (PF) programs involve up-front payment of the anticipated expenses at a brownfield site where a cleanup is planned. They include a CC component and may include PL coverages. Like CC policies, the programs require extensive site assessments and are individually structured for specific projects. Four of the nine insurers in this study offer PF programs. One of these offers the programs infrequently and on a limited basis. For the remaining three, the programs function as follows.

At the inception, the insured pays the policy premium and the portion which represents the net present value of the expected cleanup costs is credited to a “notational commutation” account held by the insurer. The policy is used for cleanup expenses, per the terms and conditions of the policy, which the insurer pays as they are incurred by the remediation contractor. If there is a balance remaining in the notational commutation account at the end

of the cleanup, the insured can commute the remaining funds, thus receiving the account balance (which includes the interest accrued) and releasing the insurer from coverages associated with the program. If the cleanup costs are higher than expected, the policy pays the additional costs up to the policy limit. The programs are appropriate for brownfields where cleanup costs are high (most commonly 5-50 million €) and remediation is expected to take multiple years.

PFP are to be considered more or less as financial market products which include insurance components instead of representing a kind of insurance policy.

The analysis of the options described can be summarized with the following conclusion. Cost risks can be managed by insurance policies in case of
Early stage of investigation, no need for clean-up visible by early screening → PLP
Cleanup necessary, remediation plan set up → CCP
as 2. , in cases of long lasting + extensive remediation →PFP

5.4. List of Participants

Training Seminar 19/5/10

COBRAMAN, 1CE014P4
Ferrara, Italy, 17-20 Maggio 2010

Title	First name	Name	Organisation	Signature
	Tomiš	Fick	City of Most	[illegible]
	Primož	Šud	MOK Kranj	[illegible]
	Martina	Hrabalová	Gmina Nowy Targ [illegible]	[illegible]
	DANA	ŽAMPACHOVÁ	VSB-TUO	[illegible]
	Anna	Francková	VSB - TUO	[illegible]
	JARMILA	JAŠOVAVÁ	-//-	[illegible]
	František	JIRÁSEK	CITY OF MOST	[illegible]
	Hanna	Lewandowska	CITY OF BYDGOSZCZ	[illegible]
	Barbara	Stalmachová	VŠB-TU OSTRAVA	[illegible]
	Alena	Lakosová	VŠB-TU Ostrava	[illegible]
	KAREL	BODECKÝ	CITY OF MOST	[illegible]
	Janez	Žibert	City of Kranj	[illegible]
	Sven	Czastka	City of Ústí n.L.	[illegible]

Dragan Crnomarković City of Kragujevac [illegible]

4

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Training seminar 19/5/10

COBRAMAN, 1CE014P4
Ferrara, Italy, 17-20 Maggio 2010

Title	First name	Name	Organisation	Signature
	ILONA	PELKA	ET DR. ERTEL	[signature]
	Thomas	Ertel	- " -	[signature]
	Grzegorz	BORON	Municipality of Bydgoszcz	[signature]
	Dominika	Mierzejewska-Tuszyńska	University of Economy in Bydgoszcz	[signature]
	Zuzanna	Zacharska	University of Economy in Bydgoszcz	[signature]
	Natalia	Wachowiak	City of Bydgoszcz	[signature]
	Magdalena	Janiak	UMB Bydgoszcz	[signature]
	Michał	Zaborowski	- // -	[signature]
	ŁUKASZ	PIERZCHAŁA	VŠB	[signature]
	Adriana	MARITTI	UNIVERSITÀ FE	[signature]
	Bostjan	Vrtič	VIRS	[signature]
	Tina	GRADIŠAR	CITY OF KRANJ	[signature]
	Nina	Goršič	UPIRS	[signature]
	Zdeněk	Neustupa	VŠB-TU OSTRAVA	[signature]
	Jakub Michał	Tomaszewski Zaborowski	University of Economy in Bydgoszcz / Uni of Bydg.	[signature]

5

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Attendance List

COBRAMAN, 1CE014P4
Ferrara, Italy, 17-20 Maggio 2010

Title of meeting: ECONOMIC TRAINING SEMINAR

The meeting is related to WP 4

Location and date of meeting: 20/5/10

Meeting is hosted by:

Title	First name	Name	Organisation	Signature
	Henrike	Fischer	City of Stuttgart	[signature]
	DANA	ZAMPACHOVÁ	VŠB-TUO	[signature]
	Hana	Franková	VŠB-TUO	[signature]
	František	JIRÁSEK	CITY OF MOST	[signature]
	KAREL	BOŘECKÝ	CITY OF MOST	[signature]
	Ivan	Stanič	City of Ljubljana	[signature]
	Maren	Gunzenhäuser	City of Stuttgart	[signature]
	LENKA	JAKUBCOVÁ	VŠB-TU OSTRAVA	[signature]
	NINA	GORŠIČ	UPIRS	[signature]

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Title	First name	Name	Organisation	Signature
	Boštjan	Vrtic	VIRS	
	LUKASZ	PIERZCHAŁA	USB OSTRAVA	Łukasz Pierzchała
	PRIMOŽ	SKRT	MOK - KRANJ	
	DANEL	ROMAN	VŠB OSTRAVA	Daniel R.
	Tomi	Rele	City of Trnič	
	Gerhard	Petermann	Wüstenrot Haus- u. Städtebau	
	PETRA	ZIPF	CITY OF STUTTGART	
	JANEZ	ZIHERL	city of Kranj	
	MARTA	SASKOVA	UTP of USTI	
	MICHAEL	SCHWEIKER	CITY OF STUTTGART	
	DRAGANA	VIDOJEVIC	SERBIAN EPA	
	Sven	Gresch	City of Ustí n.L.	
	PETR	NIKOLIČ	— " —	

COBRAMAN, 1CE014P4
Ferrara, Italy, 17-20 Maggio 2010

Title	First name	Name	Organisation	Signature
	BARBARA	ČERNIČ MALI	UPIRS	
	TEREZA	DOSTÁLOVÁ	CITY OF ÚSTÍ NAD LABEM	
	STANE	STRAUS	KRANJ	
	Thomas	Ertel	ET	
	Ivana	Pelka	ET DR. Ertel	Pelka
	DRAGAN	MARINKOVIĆ	CITY OF KRAGUJEVAC	
	Jakub	JADYCH	University of Economy Bydgoszcz	
	DOMINIKA	MOSZYŃSKA - TRZEŚNIOWSKA	— " — " — " —	
	Ana	GRADIŠAR	CITY OF KRANJ	
	Magdalena	Jeruzalska	University of Economy in Byd	
	Zdeněk	Neustupa	VŠB-TU OSTRAVA	
	Zuzanna	Zaczmarska	University of economy Bydgoszcz	
	Hanna	Lewandowska	CITY OF BYDGOSZCZ	
	Thomas	Zügel	Stadt Stuttgart	

Title	First name	Name	Organisation	Signature
	NATALIA	WACŁAWCZYK	City of BYDGOSZCZ	
	MICHAŁ	ZABOROWSKI	Uni of Bydgoszcz	
	MARTINA	[illegible]	Municipality of Ústí nad Labem	
	BARBARA	STRUMIŃSKA	VŠB - TU OSTRAVA	
	Adam	Laboda	VŠB - TU Ostrava	
	Matthias	SCHMID	City of Stuttgart	

6. 5th Seminar Usti 21.-22. September 2010

6.1. Agenda of training seminar

Tuesday 21th of September		5th Brownfield manager training seminar	
time		topic	speaker
09:00	09:15	Opening by the hosting and WP4 responsible partner	Frantisek Podrapsky / Thomas Ertel
09:15	10:00	Elements of marketing for public sector	Miroslav Bartak
10:00	10:30	Promoting Brownfields- the Approach of the State Development Corporation of Thuringia	Frank Leipe
10:30	11:00	Coffee break	
11:00	11:30	Marketing of brownfield properties	L. Sindelarova
11:30	12:00	Brownfield register as a mobilizing regional planning tool	Carsten Debes / Olaf Penndorf
12:00	12:30	Case studies- brownfields in the Czech republic and abroad	Michaela Zackova / Katerina Erbenova
12:30	13:30	Lunch	
13:30	14:00	Speed dating with experts	
14:00	16:30	City BF tour	Lenka Kindlova / Petr Nikolic
16:30	17:00	Discussion and closing down	Jirina Bergatt Jackson
Wednesday 22th of Semtember		**5th Brownfield manager training seminar**	
09:00	09:30	Creative cities- new approach to brownfield's redevelopment	Jaroslav Koutsky
09:30	10:00	Ostrava- reactivating brownfields by culture	Blanka Markova
10:00	10:30	Pilsen – European Capital of Culture 2015	Milan Svoboda/ Katerina Chabova
10:30	10:45	Coffee break	
10:45	11:15	Stuttgart marketing approach to brownfields	Regine Zinz / Michael Schweiker
11:15	11:45	Czech and British BF marketing experience comparison	Martin Duris
11:45	12:15	Discussion	
12:15	13:15	Lunch	
13:15	13:45	Marketing of brownfields in Usti	Marta Saskova
13:45	14:15	Usti Brownfield Redevelopment Strategy	Jirina Bergatt Jackson
14:15	14:30	Tea	
14:30	15:45	Workshops:	
		Brief introduction on stakeholders role in bfs redevelopment process	Jirina Bergatt Jackson
		Communicating and marketing brownfields: identifying the issue and including the issue in city priorities	Thomas Erte
		Engaging stakeholders and partners- role play	Jirina Bergatt Jackson / Lucie Dolezelova
15:45	16:00	Closing up discussion	

6.2. Seminar themes

6.2.1. Elements of marketing for public sector

Elements of Marketing

What is marketing?

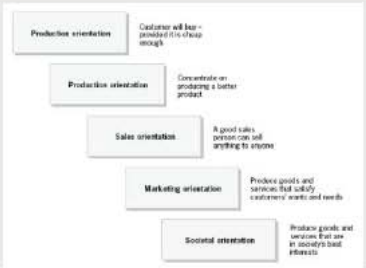
- Marketing is the process whereby society, to supply its consumption needs, evolves distributive systems composed of participants, who, interacting under constraints - technical (economic) and ethical (social) - create the transactions or flows which resolve market separations and result in exchange and consumption.

Elements of Marketing

What is marketing?

- Marketing focuses on the satisfaction of customer needs, wants and requirements.
- The philosophy of marketing needs to be owned by everyone from within the organization.
- Future needs have to be identified and anticipated.
- There is normally a focus upon profitability, especially in the corporate sector. However, as public sector organizations and not-for-profit organizations adopt the concept of marketing, this need not always be the case.
- More recent definitions recognize the influence of marketing upon society.

Elements of Marketing



Elements of Marketing

Public sector marketing

- In the 1990s, the public sector in various European countries started to see its clientele as customers and perceived the benefits of applying marketing tools and
- strategic marketing planning in order to 'sell' policies to citizens.

Elements of Marketing

Public sector marketing

- Public organizations employ four types of marketing, which differ from each other in the objectives underlying them.

Elements of Marketing

Public sector marketing

- First, 'marketisation' means that certain aspects of public sector activities become akin to commercial marketing in the private sector by subjecting products and services to the competitive forces of the commercial marketplace.
- The aim is to bring down the price level and to bring the standard of quality more into linewith customer demands (Chapman and Cowdell, 1998).

Elements of Marketing

Public sector marketing

- Second, all organizations use marketing for promoting their self-interest.
- For instance, Burton (1999) suggests that public organizations use stakeholder marketing to secure their continued existence by support from the market and society.

Elements of Marketing

Public sector marketing

- Third, in the case of local authorities, marketing is used to promote the area under the responsibility of the public organisation, such as city marketing.
- Finally, marketing may be instrumental in promoting key political objectives, i.e. the realisation of social effects.

Elements of Marketing

Public sector marketing

- Marketing skills developed in the private sector can be employed in the public sector to promote and deliver non-profit-motivated services.

Elements of Marketing

Public sector marketing

- The public sector is constrained in terms of the services it is obliged to provide and hence may be unable to implement a customer-led approach even if this is desired.
- Constraints may include (Bean and Hussey, 1997):

Elements of Marketing

Public sector marketing

- legislative restrictions,
- political philosophies,
- lack of physical resources,
- lack of financial resources.

Elements of Marketing

Public sector marketing

- Many public sector organisations provide services for the public good which are often restrictive and controlling in nature. In such cases the user is far from
- public sector does not depend on individual users for its survival: many organisations are in place due to legislation, government policies…

Elements of Marketing

Public sector marketing

- This does not mean that the public sector organisation loses customers, because it may be (Bean and Hussey, *Ibid.):*

Elements of Marketing

Public sector marketing

- a monopoly provider so the customer has no choice but to accept the service on
- offer even if it does not fully meet its requirements (e.g. social services);

Elements of Marketing

Public sector marketing

- offering a free service so the customer has to accept that something is better than nothing – this is especially so if the customer cannot afford to pay for an equivalent service (e.g. basic education services);
- providing a service to customers which they must have even if they do not want it (e.g. Revenue & Customs services).

Elements of Marketing

Public sector marketing

- In the pursuit of marketing objectives an organisation requires a strategy that makesuse of the *marketing mix. This term, originally used by Borden (1965), comprised o*fthe 4Ps (Product, Price, Promotion and Place).
- The original 4Ps of the marketing mix were considered by many to be too restrictive, particularly with the developing service economy.

Elements of Marketing

Public sector marketing

4C – an alternative approach

- Customer needs and wants
- Cost to the customer
- Convenience
- Communication

Elements of Marketing

Public sector marketing process

- Segmentation
- Positioning
- Value oriented marketing
- Marketing tools in managerial decision making process

6.2.2. Promoting Brownfields- the Approach of the State Development Corporation of Thuringia

2. LEG – the Development Corporation

- attracts investors to Thuringia,
- manages Thuringia's international activities,
- coordinates the transnational activities within ESF & ERDF,
- supports technologies,
- brings firms and personnel together in Thuringia,
- develops industrial sites,
- markets real estate,
- converts former military bases,
- supports cities and regions,
- revitalizes brownfields.

4. Promoting brownfields – our approach

- Identify the brownfields,
- assess the potential re-use of the brownfields,
- align the demand for land with the suitable brownfields,
- mobilize the real estate,
- attract the investor to the brownfield,
- form an alliance between the actors – PPP.

3. Brownfields in Thuringia - the dimension

- There are over 6.800 ha of brownfields in Thuringia.
- In terms of figures this would cover the demand for additional settlement area in Thuringia for more than 20 years.
- 50 % of the brownfields are suitable for renaturation.
- 40 % of the brownfields are in public ownership.

4.1 Tracking down the brownfields – statewide survey of brownfields

The statewide survey of brownfields produced:

- a quantitative and qualitative overview,
- showed the spatial distribution,
- formed a decision-making basis for politics and regional bodies,
- made brownfields accessible to investors.

4.1 Tracking down the brownfields – statewide survey of brownfields

- The survey was carried out between 2003 and 2006,
- it identified 7.228 brownfields,
- with an overall size of 6.801 ha.

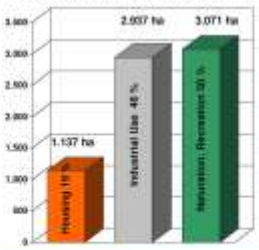
4.2 Identifying the potential re-use

4.1 Tracking down the brownfields – statewide survey of brownfields

Proportion of brownfields compared to the land area in 2006

4.2 Identifying the potential re-use – statewide survey of brownfields

Potential re-use of brownfields in Thuringia in 2006



4.2 Identifying the potential re-use - housing

- Cities experience a depletion of the inner city and urban sprawl.
- Initiative "GENIALzentral – our house in the city" started in 2002,
- Involves 35 cities with 60 sites (overall > 100 ha),
- aims to bring young families back into the city,
- by creating homes on brownfields in the inner city.
- The development corporation manages the process and assists the cities.

4.2 Identifying the potential re-use - ecological compensation measures

- Impact regulation under nature protection law requires compensation for building activities,
- the construction of new motorways and large-scale industrial areas cause a vast demand for compensation measures,
- farmers increasingly refuse to sell land for compensation measures,
- making the search for compensation measures difficult and expensive for the investor.
- Thus, brownfields become an interesting alternative for carrying out compensation measures.

4.2 Identifying the potential re-use - commercial and industrial use

- Young firms need cheep business space.
- They are willing to cut back on standard and appearance.

The development corporation:

- identifies brownfields with a potential for commercial re-use,
- compiles the necessary information (handout),
- cooperates with the Chamber of Crafts and the Chamber of Industry and Commerce to make the brownfields available for those companies.

4.2 Identifying the potential re-use - ecological compensation measures

The development corporation:

- identifies brownfields suitable for being restored to nature,
- checks the conditions under which the real estate is available,
- checks the eligibility with the nature conservation authority,
- estimates the costs for demolition and for restoring to nature,
- creates a pool of verified compensatory sites,
- offers these sites to investors.

4.2 Identifying the potential re-use - renewable energy: solar parks on brownfields

- Requirements:
  brownfield site, unshadowed, square shaped, electrical connection, minimum size between 1 ha (inner zone) and 4 ha (outer zone), complies with planning law.
- Result:
  56 brownfields with overall 400 ha identified.
- Potential output:
  160.000 MWh per year,
  providing the electricity for 80.000 households.

4.3 Mobilizing the property

The LEG effects the transfer of ownership e.g. by means of:

- thorough research of the ownership,
- appointment of a trustee for an owner incapable of action,
- forced sale – to remove all land charges from the land register.

4.3 Mobilizing the property

Transfer of ownership is a main obstacle. Typical problems are:

- land owner is unavailable (dead, unknown, on the run),
- land owner is known but incapable of action (bankruptcy, divided community of heirs),
- numerous land charges registered in the land register exceed the value of the property.

4.4 Bringing the Investor to the Brownfield

The development corporation:

- accepts requests from investors (e.g. photovoltaics),
- matches the requests with sites in the database,
- addresses potential investors directly (e.g. hotel),
- analyzes economcis, planning law, ownership of the site,
- provides sites made-to-measure.

6.2.3. Marketing of brownfield properties

Marketing of Brownfield properties

Introduction

DTZ is a leading global real estate adviser with over 10,000 staff operating under the DTZ brand across 148 cities in 43 countries providing solutions for clients around the world. Since 1992 DTZ in the Czech Republic provides a broad spectrum of property-related services including advice in the purchase, sale and lease of property, representation of tenants, valuation, property and asset management, consulting and research.

DTZ Consulting & Research

- ✓ Specialised unit within DTZ
- ✓ Leading adviser in CEE on Brownfield regeneration strategies
- ✓ Excellence in Market Analysis, Economic Feasibility Assessment, Concept Design and Regeneration Strategies
- ✓ Experienced in advising both private and public sector

Major Brownfield projects of DTZ Consulting & Research in Czech Republic:

- ✓ 27 ha railway site of Orco Property Group in Prague 7,Czech republic
- ✓ 123 ha site of Tractorul Brasov, Romania

Brownfields in Czech Republic after crisis

Possible impacts of the economic crisis on Brownfields:

„Emergence of new Brownfields resulting from bancrupcies and lack of finance from private and public funds for existing Brownfields"

X

„End of the Greenfield development era, return of developers to the centres and Brownfields in favourable locations"

DTZ Brownfield Portfolio Matrix

DTZ Brownfield Portfolio Strategy

Brownfield versus Greenfield

Location -Location - Location:

Pros: Brownfields often in good location within cities, utilities networks in place, proximity to other infrastructure, highways

X

Cons: Brownfield sites in many cases surrounded by other Brownfields, difficult situation for the first developer to start building up the location

Case - Vysočany, Prague 9

Marketing of Brownfield property to investors & developers

Marketing to investors / developers:

- ✓ International
- ✓ Czech - local small investors x large Czech investors with national or international significance

International and large Czech Investors:

- ✓ Risk aversion
- ✓ Minimum development transactions even not Greenfields
- ✓ Focus on income generating schemes
- ✓ Investments of larger lot sizes
- ✓ Prague

Small Czech investors:

- ✓ Private equity
- ✓ Development transactions including smaller Brownfields

Marketing Brownfield Property

Říčany

- 2.5 ha site
- Small lot size CZK150-200 milion
- Former liquer factor
- Local private investor entrepreneur Josef Teska with equity intends to create a small shopping centre with a municipal cultural hall, covered market place, services,..
- First phase to be completed 2011
- Site bought 4 years ago
- Construction progressing

X

Pragovka, Prague 9

- 22 ha site, of of the largest BF in Czech Republic
- CZK 1 billion
- heavily poluted former manufacturing site
- 500 milion CZK decontamination costs
- Monumentally listed and protected buildings
- Marketed beginning 2008, interest from international investors, large Czech Investors

DTZ

Marketing Brownfield properties

Real Estate Market Basics:

✓Supply versus Demand
✓Profit versus Cost – Brownfields often negative value (demolition and decontamination costs)

Brownfields difficult to finance, difficult to sell end product

Municipalities need to offer more with Brownfields than with Greenfields

✓Large attractive Brownfields in Prague and large regional cities already sold to investors
✓In smaller regional cities limited real estate market for large investors
✓Small Czech investors do not have large equity
✓Municipalities to decrease the risk levels for investors (PPP)

DTZ

Marketing Brownfield properties

Marketing Brownfield properties
Vaňkovka Brno

➢Excellent location in the inner city
➢Unique selling point to the investors – natural footfall from Main Train Station to the Bus station
➢Good timing - ECE came in 2000, start of construction 2004, completion of the mall in 2005

DTZ

Marketing Brownfield property to occupiers

Specifics of marketing Brownfields to occupiers:

➢Brownfields often have an **Image problem** – need to make the location attractive

➢Need of a complex long term **vision** based on solid indepth analysis of long term market supply and demand, SWOT analysis, cost and benefit analysis

➢Importance of **cooperation** of the developer with the city (municipal investments into infrastructure)

DTZ

Marketing Brownfield property to occupiers

Marketing tools
✓Brand the project & use visualisations, showrooms, other visual aid for marketing

✓Create **Unique Selling Points** – historical heritage, high ceilings, high floor loading capacity, natural footfall, power supply

✓Create **landmark** project – Zlatý Anděl

✓Provide amenities and services

✓Attract anchors

✓ Add non-commercial functions to increase attractivity of commercial space (Cultural, Creative Industries, Public institutions,...)

DTZ

Marketing Brownfield property

Nové Vysočany

✓ 250 ha area in Prague 9
✓ Developers in the area: Codeco, Ablon, AFI, Creviston, FINEP, CPI, IMOS Development, BCD Group

DTZ

Marketing Brownfield property

Sheffield cultural industries quarter

➢ District in the centre of Sheffield, UK

➢ Cluster of music, film and science based businesses in the area. Businesses based in the area include:

- ✓ Showroom cinema (art cinema in a 1936 art deco building which was formerly a car dealership)
- ✓ Red Tape Music studios
- ✓ Leadmill night club and venue (in the former flour mill)
- ✓ Sheffield Hallam University Students' Union
- ✓ Sheffield Institute of Art Gallery
- ✓ Sheffield Live Site Gallery
- ✓ Spearmint Rhino

DTZ

Questions?

Lenka Šindelářová
Consulting & Research

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Tel: +420 226 209 100
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6.2.4. Brownfield register as a mobilizing regional planning tool

LANDESDIREKTION CHEMNITZ | Freistaat SACHSEN

Brownfield register as a mobilizing regional planning tool

COBRAMAN workshop „brownfield marketing 21/09/2010 in Usti sad Labem

LANDESDIREKTION CHEMNITZ | Freistaat SACHSEN

- Points of departure from a soil protection perspective
- Points of departure from a regional administration´s view
- Set-up and operation of the brownfield register

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Points of departure from a soil protection perspective

- German conference of Länder ministers for environment supports the idea to counter balance measures that increase soil permeability with interventions in nature. In specific cases, this can include demolition measures. (63th conference of Länder ministers for environment, Nov 04)
- German conference of Länder ministers for spatial development agrees to the national sustainability strategy. One of its objective is the substantial reduction of land consumption by settlement and infrastructure until 2020. Settlement activities should concentrate on inner development of cities and municipalities. (36th conference of Länder ministers for spatial development, Jun 09)
- Already from 2000 to 2006 Saxony earmarked substantial resources for funding quarter development and brownfield revitalisation by using ERDF funds. This earmarking was continued in the period 2007 to 2013, supplemented by the administrative regulation of the Saxon Ministry of Interior on revitalisation of brownfields in 2009.
- On 28/04/09 an action programme was launched for reduction of land consumption in Saxony as main target of a sustainable development strategy.
- The current governing coalition in Saxony agreed (1) to provide sufficient space for industrial settlements, (2) to reduce land consumption. (Coalition treaty Saxony, Sep 09).
- The current governing coalition in Germany agreed to give priority to recycling of space and compaction of inner city areas over additional land consumption. Brownfield registers have to be improved. (Coalition treaty German Federation, Oct 09).

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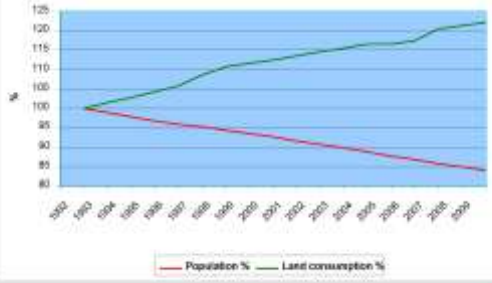
Development of population over land consumption in the regional state district Chemnitz



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Points of departure from a regional administration´s view

Brownfields are an important field of action because of

building law relevance,
environmental law relevance,
relevance for municipal budgeting,
relevance for spatial development,
for economic-political implications,
tourist relevance.

- Urban regeneration
  old building quarters are prone to neglection, modernisation necessary
- Urban conversion
  enhancing traditional urban regeneration, urban development has to be adapted to decreasing population and difficult economic framework conditions with permanent apartment vacancies
- Interim uses
  Spaces currently out of use are not permanently re-directed to other uses because of lacking perspectives (e.g. demolition with interim greening)
- Renaturation
  Conversion of vacant buildings and permanent brownfields by renaturation as upgrading measure

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- → in awareness of these necessities and options,
- → in responsibility for finding solutions, and
- → in awareness, that these solutions cannot be reached without partners in municipalities and counties

the regional work group „Brownfields"

was founded in 2000 on initiative of the president in the district Chemnitz with following tasks:

- cross-sectoral and cross-border bunching,
- support of revitalisation of selected brownfields,
- set-up of a database with the objective to compile, evaluate, and develop brownfields

The brownfield register was developed as a computerised tool and improved from 2005 onwards. It is continuously fed with internal information from the regional state administration, but also external information from the media. Further actors, especially economic development agencies and environmental administrations were included in the work group und their data inserted in the database.

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Advantages of the brownfield register

for the regional state office:	basis for assessment and actions, e.g. for targeted allocation of funds as well as spatial development recommendations
for municipalities:	source of information and basis for action regarding spatial plannings and investments
	promotion of revitalisation of brownfields
for potential byers:	brownfields can be marketed via a computer-based system for development agencies and – if released – also via internet (KWIS – Kommunales Wirtschafts-Informations-System)
	relevant information for public planning agencies, e.g. for checking suitability as compensating area
	precise information on land and buildings
	profound information, incl. owner and municipal contact option
for owners:	free-of-charge marketing with high efficiency

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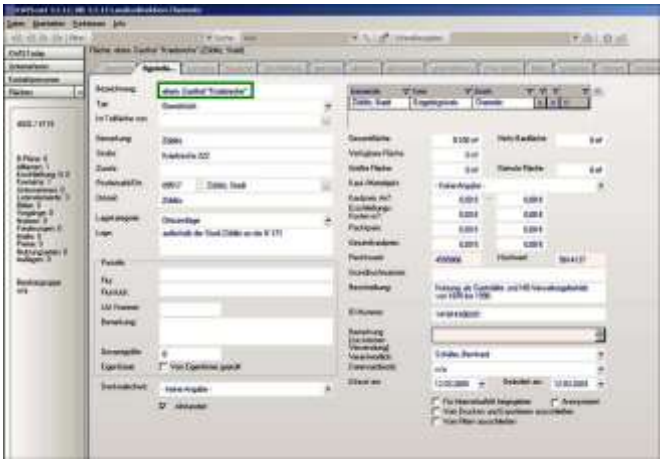
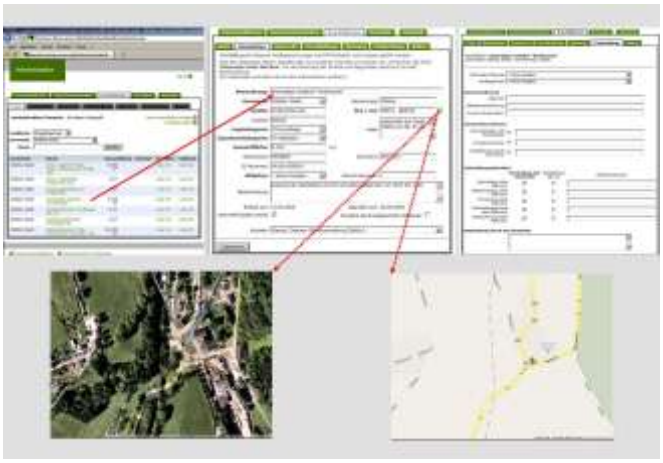
Steps towards the brownfield register

- Continuous registering of brownfields from 2005 onwards using KWIS 2.7
  currently 3924 datasets
- Promotion of municipal brownfield registers
  amongst others cities of Brand-Erbisdorf, Chemnitz, Freiberg, Plauen, Reichenbach/Vogtl.
- Import of municipal data in the KWIS 2.7 database of the regional state office Chemnitz
- Migration of all internal data from KWIS 2.7 into KWIS.net
  currently > 4232 Datensätze
- Latest development: consistency checks, supplementation, and additions of new data sets by the municipalities via the free-of-charge online tool KWIS.web
- Decision of municipality together with owner regarding marketing in internet





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Ausblick

- Anleitung der Kommunen- und Landkreise im Umgang mit der Online-Ein-/Ausgabemaske (KWIS.web)
- Kontinuierliche Erweiterung und Pflege des Katasters durch die Gemeinden und Betreuung durch PG Brachen der Landesdirektion
- Stufenweise Vervollständigung der Datensätze auch durch die Projektgruppe als Informations- und Handlungsbasis im Hinblick auf Angaben zum Flächenverbrauch und zur Wiedereingliederung von Brachflächen in Wirtschafts- oder Naturkreislauf für Gemeinden, Landkreise und die Landesdirektion
- Gemeindeübergreifendes Informationsportal zum interkommunalen Interessensausgleich
- Schaffung fachlicher Grundlagen für die Brachenbewertung in Hinblick auf Nachnutzungsmöglichkeiten, insbesondere auf Grundlage der Erfahrungen des LfULG
- Schaffung einer rechnergestützten Bewertung der Brachflächen
- Erfassung / Verknüpfung der geographischen Lage im / mit dem KWIS
- Modellhafte Überführung des Kataster für die Arbeit im gesamten Land (vorrangige Maßnahme im sächsischen Handlungsprogramm zur Reduzierung der Flächeninanspruchnahme)

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Zusammenfassung

Erfassen	→	KWIS.net, KWIS.web
Bewerten	→	Bündelungsfunktion für die vielfältigen Ansätze im Direktionsbezirk
Mobilisieren	→	Zusammenstellung aller notwendigen Informationen für die Kommunen auf der LDC-Homepage Einbringung des gesamten Sachverstandes des LDC in die Lösung der Brachenproblematik

ReSource Turning Problems into Potentials

ReSource for Cobraman
Activities relevant for brownfield managers

Carsten Debes
Project coordinator ReSource
County of Zwickau

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

ReSOURCE Project

Relevant activities
Work group "Natural potentials"

Biomass production on mining land

- 4 thematic studies finalised by PPs from DE, SI
- Joint thematic report under elaboration
- 2nd open thematic workshop planned for 8 or 9/12/10 in Großräschen (DE)
  > external participants welcome!
- idea of specific **spin-off** EU project ...

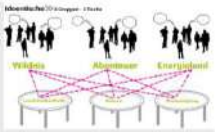
Geothermal energy from mining sources

- 4 thematic studies finalised / under elaboration by PPs from DE, SI, CZ
- 2nd open thematic workshop on XXXXXX
  > external participants welcome!
- Joint application for specific IEE spin-off project launched in June

Relevant activities
Work group "Integrative Approaches"

Masterplans for mining land

- 4 masterplans finalised / under elaboration by PPs from DE, SI, CZ, e.g. application of scenario techniques, civic participation



Urban conversion approaches

- 1 concept finalised, 2 competitions under elaboration by PPs from DE, AT for conversion of railway terminal and improvement of urban mining settlements

Relevant activities
Work group "Cultural Potentials"

Tourist routes of mining attractions

- 5 implementation plans under elaboration by PPs from DE, SI, CZ, HU

Tourist utilisation of mining railways

- 1 concept finalised, 1 concept under elaboration by PPs from AT, HU

Relevant activities
Work group "Scientific support"

European Initiatives Analysis

- Collection of 50 good practise examples
- Collection of 23 centres of knowledge

> in thematic clusters (e.g. biomass, geothermal energy, tourism)

- Presentation on maps
- To be developed towards a public accessible "post-mining knowledge base" via internet until 2011

Next events

- **Fair presentation of ReSource at EUREGIA** in Leipzig: 25-27.10.10, public
- **Mid-term symposium "There is life after mining"** as part of the EUREGIA on 27.10.10, public
- Further thematic meetings **biomass, geothermal energy, tourism** end of 2010, semi-public
- **April 2011**: Thematic symposium "**cultural potentials**" in Leoben (AT), public
- **Oct 2011**: Thematic symposium "**integrative approaches**" in Sokolov (CZ), public

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Mid-term symposium "There is a Live After Mining"

- *Mike Ballantyne (Heart of the Nat. Forest Foundation, Bath Yard, GB):* **Coal to Conkers – Transforming coal mines into a tourist attraction**
- *Prof. Dr. Oliver Scheytt (Executive Director RUHR.2010, Essen, D):* **Capital of Culture RUHR.2010 – Mobilisation of cultural potentials in an old industrialised region**
- *Brigitte Scholz (IBA Fürst-Pückler-Land, Großräschen, D):* **IBA Fürst-Pückler-Land 2010 – New opportunities for post-mining landscapes**

... 27/10/10 in Leipzig (Germany) at the EUREGIA fair ...

8

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Project results:
www.resource-ce.eu

Subscription to ReSource newsletter, additional news-flashs via network MINEC:
www.minec.org

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9

6.2.5. Case studies- brownfields in the Czech Republic and abroad

6.2.6. Creative cities- new approach to brownfield's redevelopment

Creative cities and soft factors of development – ideological context of brownfields regeneration

Jaroslav Koutský
Ústí nad Labem, 22.09.2010

Structure of the presentation

- Introduction
- Trends in spatial development
- Actual academic discourses
- Soft factors of development
- Discussion

Trends in spatial development

- City (centre) renaissance
- Emergence of new economic industries
- Specific concentration of talented people, economic power and decisions (local buzz versus global pipelines)
- Rising of symbolic and aesthetic function of places. Urban design and image of places go forward
- Localization factor change. Emergence of soft factor of development (amenities, milieu)

Connection and implication to our topic:

„Localization and (from other perspective) regional/local situation matters more then ever"

Strong relation to physical changes of cities, losing of old functions for some places and buildings, strong pressure for regeneration process

Actual accademic discurs

- Notion of innovations – Spatial dimension of knowledge economy (Phil Cook, Bjorn Asheim etc.)
- Notion of creative industries and people – Economy led by creative people (Richard Florida)
- Notion of resilience- Adaptation/Adaptibility of places (Andy Pike)

Who and what is creating regional advantage? What are key factors of changes and progress?

Making of regional development – Czech Republic

- Very week collaboration of private and public sector
- Scepticism for innovations and new concepts
- Lack of elites, visions and community involvement
- Week links among research and practical sphere
- Overrating of Cohesion Policy of EU

Soft (entrepreneurial and individual) factors of development

SF have in/-direct impact on spatial mobility of human resources and businesses and the economic performance

For example:

- Business friendly public administration
- Image of the locality and local identity
- Quality of housing, shopping, public transportation
- Quality of built amenities – sport and culture infrastructure,
- Quality of environment and perception of natural amenities;
- Quality of education in the locality
- In broade sense: **Social capital** and quality of communication and cooperation in the locality, quality of innovation system, innovative Milieu, ...

Soft factors of development - selected hypothesis

- In the most developed localities **in Western Europe** (but not only) is the improvement of **soft factors** important and broadly discussed **by academics and practicioners** (in the framework of high road development strategies) after ***hard factors*** became ***ubiquitous***
- The cities and regions **in Western Europe** create institutions and implement strategies for ***improvement of SF*** (local governance structures and policies) and subsequently attracting creative class and businesses with high added value
- But due to **„cognitive lock-in"** in **postcommunist countries** and their mainly urbanised and industrialised regions there is **no academic discussion** and no practical systemic activity in the field of development of soft factors

Central Europe - soft factors

- In Central Europe *„low road strategies"* (via low costs) and re-industrialisation are forced by governance structures: emphasis on the improvement of hard factors (large industrial zones, investment incentives ...), no attention to soft factors
- There is a need for academic critical discussions on growing importance of SF and a need for consequent implementation of new development strategy for the old industrial regions in the Czech Republic (not „only" hard factors but soft factors as well)
- Through know-how transfer from analogous localities and fine-tuned adaptation / imitation (best practice approach) of strategies for the improvemt of soft factors it is possible to improve the quality of life in OIA and attract or stabilized high quality human resources

Research questions

- What are the most important hard/soft factors of development / restructuring / regeneration of old industrial areas in general?
- Why are the soft factors becoming so important in current socioeconomic development?
- What role do the soft factors of development play in the restructuring of OIR in cities of Europe (Germany, Austria, GB)?
- How can be improved the quality of particular soft factors (in Europe/EU)? What are the strategies in analogous localities / regions?
- What is the current quality of soft factors in our 2 OIRs in CR?
- What has to be done to improve significantly the quality of soft factors in OIRs in the Czech Republic?

Preliminary conclusions

Nowadays the **city and regional marketing** are the institutional instruments for the improvement of soft factors like image, cultural infrastructure and events, housing, ...and for the improvement of the attractivity of the city in order to attract more creative industries and creative people

Thank you for attention ☺

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6.2.7. Ostrava- reactivating brownfields by culture

COBRAMAN

Manager Coordinating Brownfield Redevelopment Activities

www.cobraman-ce.eu

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF

COBRAMAN

Brownfield Manager Training Programme – 5th Training, 21. - 22. 9. 2010

Ostrava – reactivating brownfields by culture

Mgr. Blanka Marková

Black meadow

- 27 ha, situated 150 m from a central city square on a former brownfield, greenery and several pavilions of the exhibition grounds.
- The Puppet Theatre, the Moravian-Silesian National Theatre, Ostrava Castle stand close to the area.
- Black Meadow is part of the development area neighboring the national cultural monument of the extensive industrial complex known as the Lower Area of Vítkovice (European Cultural Heritage), and the area of the future downtown business and residential zone known as "Nová Karolína."

Cluster

- The term cluster comes from the spheres of **computer technology** ("a group of cooperating computers") and economics ("designating an association of cooperating economic subjects"). A cultural cluster is defined as **an area of the city with a high concentration of cultural and social institutions**.
- In the past two decades, cultural clusters ("cultural quarters") have become a **dynamic concept** in the development of a city's cultural environment; in the United States and Great Britain it has become a **defining idea of city development**.
- Physical proximity (the process of clustering) brings a number of advantages to the urban model: a reduction in transaction costs, increased capital and information circulation, support for social solidarity, a simplified and more intensive exchange of information, goods, and services, personal contact, the emergence of a creative environment, education, and an exchange of practical knowledge and experience.
- A cultural cluster may produce a fundamental identifying element for local inhabitants and strengthen regional identity. Beyond absolute value, it increases the symbolic value of a place: it becomes one of the dominant media images and general conceptions of a city.

Examples of clusters

- Museum clusters: MuseumsQuartier (Vienna), Museumsinsel (Berlin).
- Cultural mix: Witte de Withstraat (WdW) in downtown Rotterdam is a dense network of museums, galleries, and other cultural institutions, as well as stores, restaurants, and cafés (it was once a neglected city area with a high incidence of crime and drug abuse). Westergasfabriek (WGF), a former gasworks west of downtown Amsterdam, has become the locus of hundreds of cultural institutions, festivals, an companies typical for the creative industry.
- Zeche Zollverein concept cluster in Essen (a former mining complex, UNESCO monument) highlights the element of sustainability – Die Zollverein School of Management and Design.

Cluster Black Meadow

- In contrast to other European cultural clusters, Black Meadow offers enrichment of another dimension. Its value added can be found in its social, sociological, and ecological aspects. The cluster is conceived as integral to the living space.
- It synergistically locates residential buildings with schools of all types: preschool, elementary, and high school, connecting them to a green environment, a river, and to the buildings of the Exhibition Pavilion, Puppet Theatre, Concert Hall, and Municipal Gallery, among others.
- Its moderate size, cost of construction and reconstruction, and its demands (ecological, financial, and aesthetic) offer a new perspective.
- Budget: 134, 000, 000 EUR
- Humanization of the Ostravice River

Cluster Black Meadow

Winning concept of Cluster Black Meadow

Winning concept of Cluster Black Meadow

„New Vítkovice"
Reactivation of the Lower Area of Vítkovice

- 253 hectares, numerous industrial structures, extensive brownfields (reclaimed), as well as functioning businesses.
- Part of the area, comprising 47.3 hectares, includes a national cultural landmark of industrial buildings. In 2008, the industrial area of Lower Vítkovice was added to the European Cultural Heritage monuments list.
- This technologically exceptional closed mining cluster integrated coal mining, coking, and the production of electrical energy and iron. At the same time, the complex became a distinctive vertical morphological element on the urban panorama, a "provincial beacon" that serves as a distinctive feature of Ostrava's image.

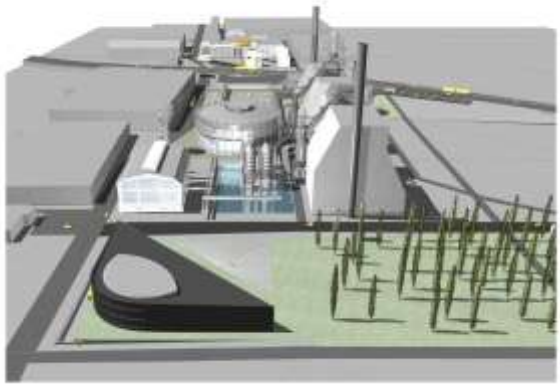
Lower Area of Vítkovice

- The first phase of the reactivation of the Lower Area of Vítkovice includes the regeneration of the blast furnaces and coking plant – using the existing buildings (under historical preservation) for multi-functional purposes. The individual subprojects in the areas of culture, education, and production have turned the site into a new urban space, symbolizing a modern nexus of the region's past, present, and future.
- The main focus of future non-commercial uses of the national cultural landmark will be educational activities and expanding the cultural uses and services in the region with all the attendant positive effects of its existence.

Lower Area of Vítkovice

Three projects make up the first phase of reactivation:

- 1. Functional reconversion of the Energy Central into the "World of Technology" interactive museum while retaining its historical equipment.
- 2. Conversion of the former gas holder into a community and convention centre with a large-capacity, multi-function auditorium and restaurant.
- 3. A tour route which will present and explain all technological processes. The spatial proximity and integration of the production complex is unique in Europe.
- The appearance of the Lower Area site will be the result of an architectural competition, the requirements of historical preservation, and the needs of private owners for the commercial use of the property.



Lower Area of Vítkovice – funding

Item name (project) investment expenditures *in millions of* EUR

- Ostředna (Energy Central) 6,9; Blast furnace no. 1 2,0; Gas holder 10,4; Management, administration, and overhead 0,7
- **TOTAL 20,0**
- - investment costs 19,3
- - non-investment costs 0,7
- **Investor: Lower Area of Vítkovice, associations of legal entities**
- **Sources of funding: 100% EU Structural Funds,** IOP operations program, Priority axis 5 – national support for regional development, Area of intervention 5.1 – national support for utilizing potential cultural heritage; Funded activities 5.1b – realization of model projects for renewing and using the most significant components of the Czech historical properties fund. VAT in the amount of 3,800,000 EUR will be continuously financed by the Associations' own resources
- **Term of project realization: 12/2008-12/2013**
- **Annual estimated operational costs: 210,000 EUR**

The FACTORY, a cultural centre for the young generation

- Ostrava candidacy catalysed the youngest generation towards an independent initiative to establish the Factory, which provides the conditions for the perceiving, reflecting on and creating art by young people and offers space for experimentation, movement, multimedia creation, progressiveness, participation and integration.
- The initiative gained its own space in the building of the so-called Old Bathrooms (1800m2) within the complex of the Hlubina Mine national cultural monument.
- Operations of the Factory began on 1. May 2010.
- The Hlubina Mine is in a strategic location in close proximity to the Lower Area of Vítkovice and the Black Meadow Cluster.

PROVOZ HLUBINA - IDEOVÝ PROJEKT

a.R architekti

COBRAMAN

www.cobraman-ce.eu

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e-mail: markova.blanka@gmail.com
web site: www.osu.cz

Thank you for your attention !

6.2.8. Pilsen – European Capital of Culture 2015

Plzeň 2015

Revitalization of Brownfield Světovar in term of preparation the Pilsen city to ECoC 2015

Kateřina Chábová, Milan Svoboda

Brownfield Manager Training Programme
5th Training, 21. - 22. 9. 2010

Plzeň 2015

Pilsen towards the ECoC title

2006 - start of preparation
2007 - official approval of the City Council
2009 - 1st round Ostrava, Hradec Králové, Pilsen
2010 - 2nd round Ostrava and Pilsen
2011 - Pilsen will be named for ECoC by European Council

Key Investment to Cultural Infrastructure

- 4x4 Světovar "Cultural Factory"
- Design and Lifestyle Museum
- New Theatre Building
- New West Bohemian Gallery Building
- Revitalization of the Štruncovy sady area
- Greenways in the River walleys
- Use of Public Spaces for Culture

Plzeň 2015

Světovar – Location

- south - eastern suburb of the city
- close to highway
- good connection to public transport /tram/

Světovar – history

1910 - 1913 – brewery was built
1932 - brewery became the part of Pilsner Urquell
1933 - production was stopped
1934 - 2004 – area was used as warehouse and army area
2004 - City negotiates with Czech Army the possibility to get this area under its own property
2006 - east part of area given to the City ownership
2008 - historical building are protected as a historical heritage
2009 - decision of usage of two historical building for culture

Světovar – planning

2004 - planning started – how to use area for housing and public infrastructure
2005 - public discussions and workshops
- feasibility study
2008 - land use plan changed
2009 - study for 4x4 CF, City Archive and Museum
2010 - two questions
? how to connect culture and other usage
► architectural competition
? how to manage cultural centre effectively and sustainably
► several workshops incl. Future City Game

One of the first proposal of urban design

The winning proposal from architectural competition 2010

Conference and Future City Game 03/2010

Plzeň 2015

Světovar – 4x4 Cultural Factory

Two parts

1. Hall for 2000 visitors, café/bar with 100 seats, lobby, offices

2. Rooms, studios, ateliers, accommodation, reception

Plzeň 2015

Světovar – Cultural events

2006, 2009, 2010 - International theatre festival Divadlo
2010 - Graffiti Jam
2010 - Světovaření http://www.svetovareni.eu

Plzeň 2015

Světovaření

- cultural festival taking place from 30th of August to 9th of September
- intent: to test this area how could be used in a future after its revitalization
- program:
  - exhibitions
  - workshops
  - light show
  - video art
  - dance
  - music
  - ...and more

Plzeň 2015

Světovaření

Exhibitions

- creative residence and artists' exhibition – special creations, painting
- videoart – installations of theses of the UUD Plzeň multimedia students
- exhibition of light art of the students from SSUŠ Zámeček
- exhibition of the proposals from architectural competition 2010

Note: 19.9. exhibition Sladíme Evropu aneb evropské mapy/ Sweetening Europe or European maps – women through the eyes of Forman Brothers

Plzeň 2015

Světovaření

Workshop / 30. 8. – 6. 9.

- workshop BUTÓ dancer Ryuzo Fukuhara in collaboration with Days of Japanese culture and Johan Centrum

...and more

- café, tea room, bar
- workshop production of light lanterns under the guidance of Mr. and Mrs. Bručka
- 4 PM - daily screenings of documentary films about human rights Jeden svět / One world
- animation film projections created on site during the animation

Plzeň 2015

more information
www.plzen2015.eu

email contact
info-plzen2015@plzen2015.cz

Plzeň 2015

Thank you for your attention

6.2.9. Stuttgart marketing approach to brownfields

COBRAMAN

COBRAMAN Training Seminar | 22.09.2010 | Usti nad Labem

Stuttgart Marketing Approach to Brownfields

Michael Schwelker & Regine Zinz | City of Stuttgart

STUTTGART | CENTRAL EUROPE

Stakeholders

- Department for Real Estates & Housing
  → sale of municipal areas for housing
  → contact point for housing investors

- Department for Municipal Economic Development
  → sale of municipal indust./ commercial areas
  → contact point for all kinds of investors
  → service orientation

- Project related:
  Brownfield Managers supporting upcoming developments
  → connecting interests (mixed use areas)
  → creating awareness of potentials / problems

COBRAMAN STUTTGART | CENTRAL EUROPE

Information platform www.stuttgart.de

Same area – different appearance

COBRAMAN STUTTGART | CENTRAL EUROPE

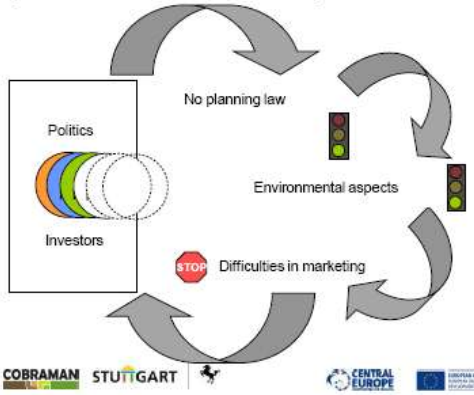
Facts

- Strict separation of stakeholders concerned either with housing or industrial / commercial developments weakens intregrated approach to Brownfields
  → „passing the buck"

- Vanity Fair instead of dialogue
- Investors interested in personal contacts, less in information platforms
- BF redevelopment = long process, no quick success!

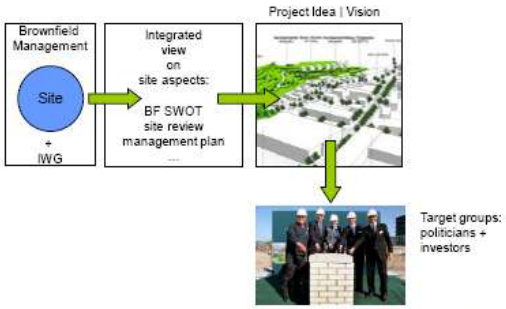
COBRAMAN STUTTGART | CENTRAL EUROPE

„Try and Error" - Political influence versus practical constraints



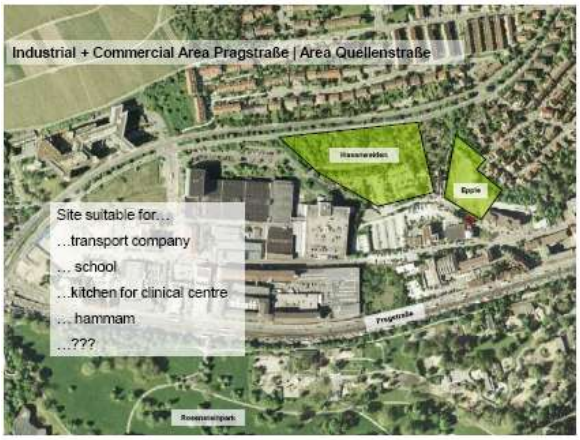
COBRAMAN STUTTGART | CENTRAL EUROPE

Brownfield Management: „To show what is possible“



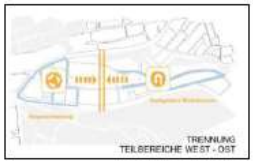
Experiences & further activities

- Brownfield management as useful interlink between departments covering aspects beyond marketing → all interests to table
- „Look behind the scenes“ (political interests) hardly possible → municipality has to take an active and self confident role
- „Together we´re strong!“ – IWG
- in COBRAMAN: further development of integrated web presence for Brownfield Sites



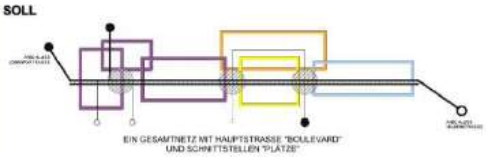
Impacts

separated structures



separated accessibility

Idea



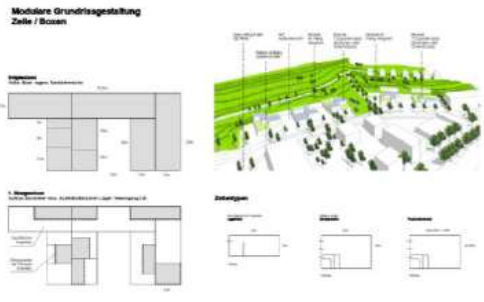
Masterplan

„Craftsmen Centre 2.0."

Phases of Construction

Perspective Macrosite

Perspective Microsite



Further Steps

- reaching municipal consensus on Mayor´s level: plannings correspond with planning law, market situation, environmental aspects…
- Information of political committees
- Contact of Craftsmen Associations to define exact needs
- Deepening contacts to private owners
- Public relations & promotion of Area Quellenstraße

6.2.10. Czech and British BF marketing experience comparison

Brownfields in UK and Czech Republic An Engineer's Experience

Presentation for COBRAMAN Training Programme
5th Training, 21st – 22nd September 2010

Dr. Martin Duris

Peter Brett Associates LLP

Introduction

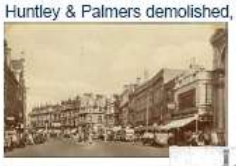
- PBA – Engineering Consultancy
- 500 staff in total
- 400 staff in UK, 100 overseas
- Prague Office since 1999
- Brownfields Regeneration and Land Development are the main business areas
- HQ located in Reading, former industrial centre in SE England

Reading

- History – industrial city: brewing, biscuits (Huntley and Palmers), bulbs, bricks
- Dull, undesirable place to live in or visit

Reading

- Regeneration over the past 20 years has changed Reading out of recognition
- Production changed to high tech IT companies (Microsoft, Oracle) with offices in the centre, leading to pedestrianisation
- Huntley & Palmers demolished, just one building left



Reading

- City centre regeneration included construction of a major shopping centre – The Oracle

Reading

- New business was also attracted with extensive regeneration of edge of town sites:
  - Thames Valley Park, former coal-fired power station
  - Green Park, former landfill & other low grade land
  - Madejski Stadium, former landfill, now home to a Premierships team

Reading




Reading



Reading

- Reading is now one of the top SE destinations for retail (The Oracle Centre)
- The Reading area is one of the best performing regions in the country
- It has become a desirable destination


Prague & Czech Republic

- Has not benefitted from the post-WWII growth as UK
- Many old factories, dilapidated industrial estates
- Poor maintenance, poor quality of construction, heavy pollution
- Sometimes arrogant decision-making by the ruling party left big scars
- Proper regeneration activities started only 10 to 15 years ago
- Issues identical to UK, but delayed, some issues more prominent, lack of public funds

Prague

- Zizkov Cargo Station redevelopment
- Former cargo station, full of old tracks, buildings and contamination
- Massive size – 55 ha
- Two private developers – Discovery and Sekyra Group
- Discovery – northern part, 30 ha, 1st phase 6 ha
- Future uses – residential, office, retail (300m x 120m), hotel
- Project value CZK 6 billion

Zizkov Cargo Station

Zizkov Cargo Station

Zizkov Cargo Station

Prague

- Laser Centre Dolni Brezany
- ELI – Extreme Light Infrastructure (laser)
- Former wood processing plant
- Site 8 ha, buildings 35,000 m2
- EU-funded, supported by Ministry of Education & Institute of Physics of the Czech Academy of Sciences
- Four buildings: laser hall, labs, offices, lecture halls, library, gallery
- Project value CZK 1 billion

ELI Laser Centre

ELI Laser Centre

Engineer's role

- Developments can be Engineer - led
- Green Park – PBA were approached by the landowner 25 years ago for advice on how to develop the land
- Opportunities identified, PBA approached Prudential as a potential investor
- Green Park has become one of Pru's flagship projects
- Same story with Thames Valley Park
- PBA still look to introduce potential investors to land that needs another use (quarries, landfill sites, etc)

Brownfield vs. Greenfield

- Often high clean-up costs, public funding often necessary (gas works, heavy metal manufacturing particularly onerous)
- Service diversions and tight access frequent issues
- Advantages in town centre – connectivity to public transport and well served by the utilities
- Greater attention now given to retain & restore industrial buildings – more sustainable, retains character of the site
- Greater emphasis placed on retaining or establishing communities through mixed use developments, even business parks
- Some recent redevelopments were too sweeping, removed character & critically damaged or destroyed communities

Image & Wealth

- Regeneration stimulates growth, but:
- Needs to be supported by local availability of skills
- Businesses need to be willing to relocate and/or expand (attractive image)
- New communities must be created
- Mix of old character and new imaginative landscaping
- Public money needed for clean-up

Image Change

6.2.11. Marketing of brownfields in Usti

COBRAMAN

Manager Coordinating Brownfield Redevelopment Activities

www.cobraman-ce.eu

CENTRAL EUROPE

EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF

COBRAMAN

5th Training Seminar, 21. – 22. 9. 2010 Usti nad Labem, the Czech Republic

Communication and marketing of brownfields in Usti

Petr Nikolic, Sven Czastka, Marta Saskova
Usti nad Labem City Hall, Department of strategic Development, Section of Investment Support

Communication and Marketing of Brownfields in Usti

Before COBRAMAN:
Communication of BFs was supplied by communication of squats, deprived areas or old industrial areas

- Mostly individual plots/ properties
- Long term concepts mainly missing
- Maximum/ only effort put into "hot potato" cases

Communication and Marketing of Brownfields in Usti

Before COBRAMAN:
we pioneered with "Revitalisation of Krasne Brezno and Nestemice" project

- Urban study introduced to stakeholders, MM and the public
- Trade fair presentations
- Articles in professional magazines
- Pilot activity in the CIRCUSE project

Communication and Marketing of Brownfields in Usti

MF Dnes Daily
5. 12. 2008

Communication and Marketing of Brownfields in Usti

www.krasnebrezno.cz

Communication and Marketing of Brownfields in Usti

www.usti-aussig.net

Communication and Marketing of Brownfields in Usti

Concurrently to COBRAMAN:
we have been working on promoting Lake Milada area since 2006
- graphical design
- www.lakemilada.com
- 3rd year of Cycling race and Kids' day
- Analytical and Strategic Study for Tourism Development
- Appeared in the COBRAMAN database

Communication and Marketing of Brownfields in Usti

www.lakemilada.com

Communication and Marketing of Brownfields in Usti

What is our experience during COBRAMAN:
communicating BFs is a very complicated task from the very beginning
- BFs in Usti are mostly owned by private owners
- Not everybody knows what it is
- It's not easy to explain
- It's often replaced by other meanings

Communication and Marketing of Brownfields in Usti

What is our experience during COBRAMAN:
we organised 3 meetings with brownfield owners
- The owners were mostly surprised
- How to attract participants if there is no money/ funding involved
- How to maintain attendence at all meetings
- It is essential to reach out to people during the coffee breaks ☺

Communication and Marketing of Brownfields in Usti

What is our experience during COBRAMAN:
we inform the public about COBRAMAN at

www.usti-nad-labem.cz

Communication and Marketing of Brownfields in Usti

What is our experience during COBRAMAN:
Our most powerfull tool is supposed to be the DATABASE.
We are aware it's not the database itself, but PEOPLE who operate it.

Communication and Marketing of Brownfields in Usti

Importance of communication and marketing for brownfields redevelopment in Usti

Usti Brownfield Redevelopment Strategy
↓
practical ways of marketing
↓
avoiding mistake of theoretical marketing "wisdom"

Communication and Marketing of Brownfields in Usti

Usti Brownfield Redevelopment Strategy

PRIORITY 1
- Exploiting all the legal, formal and informal tools, which aid brownfields reuse

PRIORITY 2
- Active identification of financing sources and resources with an aim of maximizing a leverage effect

PRIORITY 3
- Increase of information flow and improvement of development skills

PRIORITY 4
- Improving quality of life in the city

Communication and Marketing of Brownfields in Usti

Usti Brownfield Redevelopment Strategy

PRIORITY 3 - Increase of information flow and improvement of development skills

- Information campaign to communicate the brownfields strategy to public
- Upkeep and publicity of the brownfield inventory
- Increasing development skills of the city executives and administrators
- Increasing development skills of brownfields´owners
- Connecting to international project enabling sharing brownfields and development experiences →

Communication and Marketing of Brownfields in Usti

Usti Brownfield Redevelopment Strategy – priority 3

Activity 1: Information campaign to communicate the brownfields strategy to public

→

integrated approach
"one communication"

Responsible:
Department of Strategic Development

Communication and Marketing of Brownfields in Usti

Usti Brownfield Redevelopment Strategy – priority 3

Activity 2: Upkeep and publicity of the brownfield inventory

→

public database

Responsible:
Department of Strategic Development
Department of Spatial Planning

Communication and Marketing of Brownfields in Usti

Usti Brownfield Redevelopment Strategy – priority 3

Activity 3: Increasing development skills of the city executives and administrators

→

support to education networking

Responsible:
City Hall Directory

Communication and Marketing of Brownfields in Usti

Usti Brownfield Redevelopment Strategy – priority 3

Activity 4: Increasing development skills of brownfields´owners

→

continuous communication

Responsible:
Department of Strategic Development
Department of Spatial Planning

Communication and Marketing of Brownfields in Usti

Usti Brownfield Redevelopment Strategy – priority 3

Activity 5: Connecting to international project enabling sharing brownfields and development experiences

→

responsible and longterm thinking

Responsible:
Politicians
Department of Strategic Development

Communication and Marketing of Brownfields in Usti

What will secure continuity of BFs marketing activities AFTER COBRAMAN?

CircUse project
- running CE project
- Revitalisation of Krasne Brezno and Nestemice" Pilot commercial property due diligence

Communication and Marketing of Brownfields in Usti

What will secure continuity of BFs marketing activities AFTER COBRAMAN?

Partnership for Czech brownfields
- applied for recently
- programme supporting competitivness through education
- multilateral experience of communicating BFs within the Czech environment on different levels

COBRAMAN

www.cobraman-ce.eu

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web site: www.usti-nad-labem.cz
www.invest-usti.cz

Thank you for your attention!

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

6.2.12. Usti Brownfield Redevelopment Strategy

1

Usti Brownfield Redevelopment Strategy

www.brownfields.cz
IURS- institut pro udržitelný rozvoj sídel o.s.
Jiřina Bergatt Jackson

3.9.2010 IURS

IURS

About IURS

2

IURS is a non-profit advocacy, research and project implementation organization, which aims are:

- working to support sustainable land use development practices,
- strongly focused on issues of underused urban land, containment of sprawl and sustainable urban development,
- to foster broad coalitions that enhance the competitiveness of accessible and equitable urban development and redevelopment.

IURS

Presentation content

3

- Process of preparing the strategy
- Analyses
  - Location, spatial impact and
  - Brownfields indicators
  - Graphical analyses
  - Key locations
  - Policies, Main trends and Key issues analyses
- Principles of approaching brownfields in a non market situation
- Local examples of a creative brownfield reuse
- Strategy main goal
- Strategy main priorities and measures
- How to improve a strategy
- How to implement a strategy
  - Indicators of the strategy deliverance

IURS

Process of preparing the strategy

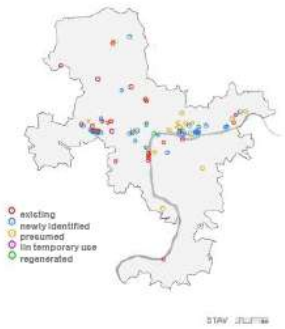
4

- Data collection in an analysable format
- In depth analyses, which helped to understand city´s brownfield situation
- 3 public meetings with stakeholders
- Consultation with political leadership
- Close cooperation between the consultant and the city Strategic development department
- Publishing of the short strategy version on the city web for commenting

IURS

Analyses outcomes Location of brownfields

5



IURS

Analyses outcomes Spatial effect of brownfields

6

IURS Analyses outcomes Brownfields indicators

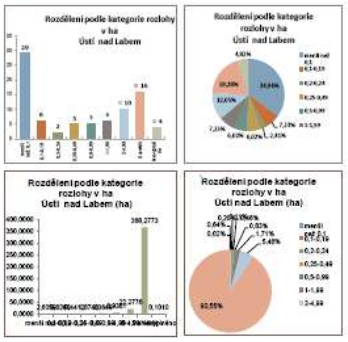
7

BA	indikátor	2010	co indikátor vypovídá
BA1	počet brownfields	37 (72)*	kolik je brownfields v území
BA2	plocha brownfields	425,50ha (204,40ha)*	jaký mají plošný dopad na území
BA3	Úhel regen. brnfld. od minul. investic brownfields (ha)	0,54%	jak efektivní je regenerace
BA4	Σbrownfields (ha) s100a Σzastavěného území (ha)	11,7% (5,6)*	index brownfields v zastavěném území
BA5	Σbrownfields (ha) x 100 Σzastavěného území (ha)	68%	index brownfields a rozvojových ploch
BA6	Změřilo rozvoj. přírůstku (ha)x100 Σbrownfields (ha)	?	doba, za kterou bychom brownfields vyčerpali v případě, že by veškerý rozvoj směřoval na ně
BA7	Σbrownfields (ha) .x 100 Σpravého území (ha)	4,57% (2,17)*	index podílení území brownfields

* Kalkulace bez předpokládaných brownfields

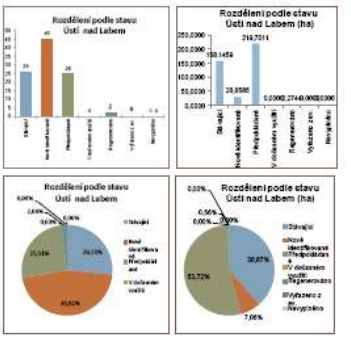
IURS Analyses Impact of sizes

8



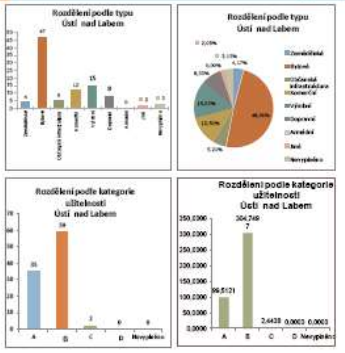
IURS Analyses Status of brownfields

9



IURS Analyses ABC category and use type

10



IURS Key brownfield locations

Tovární

11

IURS Key brownfield locations

Střekov

12

IURS

Key brownfield locations

Krásné Březno

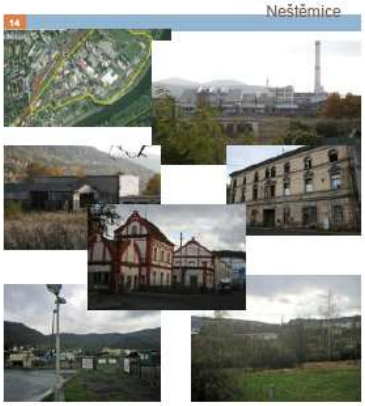
13

IURS

Key brownfields locations

Neštěmice

14



IURS

Key brownfield sites

Předlice

15

IURS

Analyses Main trends

16

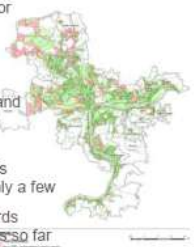
- Location on infrastructure +
- Environmental quality +
- Inner city quality improvements +
- Regional city status +
- Demography figures -
- Education attainment -
- Market -

IURS

Analyses Approaches and policies

17

- Brownfields as an issue are identified in the document „City Development Strategy until 2015") priority 3.1, Creation of quality urban development (approved *2007*)
- The first proposal for the new local plan (March 2010) is paying not much attention to brownfields reuse and it is deregulating a vast amount of Greenfield land for development
- City feels powerless because it owns only a few brownfields
- City activities towards brownfields´ owners so far brought not much of a positive outcome



IURS

Analyses outcomes Key issues

18

- 79 brownfields,11.7% of build up area
- 429ha of brownfields (cc 2.4 ha regen.)
- At this rate regeneration would take around 300 years
- 3 large areas, all with state/state companies owned land in their midst
- 22% of city B. land is owned in this form and there is a little cooperation so far
- Competition between large brownfield locations for development activities
- New proposal for the LP adds to this another cc 700ha of Greenfields (together cc 1100ha of developable land!)
- Low market and competition of other large regional towns
- Low proactively of local government
- No regional partnership,
- Insufficient and uncoordinated policy

Approaching brownfields in low market situation

19

1. **Partnerships and public sec. proactivity**
   - Regional partnerships
   - Stakeholders cooperation
   - Pro-activity of local government
   - Creating delivery vehicles
2. **Development tools**
   - Integrated development approach especially for large brownfields areas
   - Curbing the Greenfields deregulation
   - Taking brownfields from the regime of developable land
3. **Economic tools**
   - Supporting development of bankable projects
   - Placing public project onto brownfields
   - Improving development skills
4. **Marketing tools**
   - Improving city image
   - Marketing development opportunities
5. **Mitigation measures**
   - Supporting temporaly use for brownfields
   - Creating alternative uses for brownfields

Examples of a local creative brownfield reuse

20

Main goal of the strategy

21

- In 10 years to reduce brownfield land by 100ha (23,28 % reduction), while creating conditions, which enables owners and investors finding new uses for brownfields , so that brownfields stop being a burden and start to bring city an income or other wider benefits.

(100% = 429,5ha)

Priorities

22

PRIORITY 1
- Exploiting all the legal, formal and informal tools, which aid brownfields reuse

PRIORITY 2
- Active identification of financing sources and resources with an aim of maximizing a leverage effect

PRIORITY 3
- Increase of information flow and improvement of development skills

PRIORITY 4
- Improving quality of life in the city

Measures - Priority 1

Exploiting all the legal, formal and informal tools, which may aid brownfields reuse

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Measure 1.1
- *Seeking and crating tools and measures supporting brownfields reuse in partnership with the other stakeholders*

Measure 1.2
- *Stressing seriousness of the brownfields threats in the new land use plan and other policy documents*

Measure 1.3
- *Creating partnerships of the local government and other stakeholders, which would support brownfields redevelopment*

Measure 1.4
- *Establishing internal structures for management, realization and monitoring of this brownfield strategy aims*

Measure1.5
- *Active cooperation with the owners, locating of potential invertors and active support of acceptable development proposals*

Measures - Priority 2

Active identification of financing sources and resources with an aim of maximizing leverage effect

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Measure 2.1
- *Exploiting all possible financial resources, which can be dedicated to preparation of projects and lead to creation of bankable projects*

Measure 2.2
- *Lobbying on regional national and international level for direct and also indirect resources, allowing support of brownfield reuse*

Measure 2.3
- *Active use of possible grant finance and financial instruments leading to development activities on brownfields*

Measure 2.4
- *Placing public investments on brownfields*

Measure 2.5
- *Using land in city ownership to lever development on brownfields*

Measures - Priority 3

Increase of information flow and improvement of development skills

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Measure 3.1
- Information campaign to communicate the brownfields strategy to public

Measure 3.2
- Upkeep and publicity of the brownfield inventory

Measure 3.3
- Increasing development skills of the city executives and administrators

Measure 3.4
- Increasing development skills of brownfields´owners

Measure 3.5
- Connecting to international project enabling sharing brownfields and development experiences

Measures - Priority 4

Improving quality of life in the city

26

Measure 4.1
- Preparation and realization of steps leading towards improvements to the city approach access routes

Measure 4.2
- Identification of brownfields most damaging city image and preparation of modes of their revitalization

Measure 4.3
- Preparation of measures improving quality of life for residents of areas worstly affected by brownfields

Measure 4.4
- Support to measures reducing brownfields areas and support to temporally uses on brownfields

Measure 4.5
- Support to measures incorporating brownields into public domain or greening of brownfields

How to improve this strategy

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?

MORE

CONSULTATION

Preconditions for delivering a stategy

28

PUBLIC ACCEPTANCE

POLITICAL SUPPORT

PARTNERSHIPS

PLAN OF ACTION

DELIVERY VEHICLE

BUDGETS IN PLACE

Process of implementing a strategy

29

- Brownfield strategy is adopted by the political leadership.
- Action plan for the next 3 years is agreed.
- Targets are set of what need to be delivered and how.
- Staff and budgets are allocated.
- Monitoring framework is established, to measure fulfillment of the agreed targets.
- Outputs outcomes are regularly monitored and if need be, the strategic priorities/measures are amended.

Indicators for the strategy deliverance

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Project Cirsuse

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Many regions are confronted with massive urban sprawl, economic crisis and effects of demographic changes, which are all causing unsustainable land use patterns and have an impacts on competiveness and on climate change.

Circular land use management is an integrative policy and governance approach, philosophy can be expressed with the slogan: ***"avoid – recycle –compensate".***

Main project outputs are:

- Development of an overall strategy towards circular land use management
- Tools and instruments of Circular Land Use Management
- Pilot Projects

12 Partners from 6 countries,
project duration 3/2010 – 02/2013,
Project No: 2CE174P4, www.circuse.eu

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Project BRIBAST

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Project BRIBAST http://fast10.vsb.cz/bribast - Brownfields in Baltic States – Lifelong Educational Project was designed to introduce education about brownfields into Baltic states. Project had 7 partners from 4 countries and was financed by the Lifelong Learning Programme. Project BRIBAST was an adaptation of its predecessor, the project LEPOB http://fast10.vsb.cz/lepob, which originated concepts of these educational materials.

Outcome of BRIBAST project are:

Brownfield handbook, Brownfields course and Teachers notes in English, Lithuanian and Latvian languages.

PARTNERS ARE BEING SOURT TO TRANSFER THE PROJECT TO BALCAN STATES

If interested to partner a new project please

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Thank you for your attention

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6.3. Workshop

6.3.1. Brief introduction on stakeholders role in bfs redevelopment process

Acknowledgement:

This work is based on the outputs of the projects LEPOB http://fast10.vsb.cz/lepob and BRIBAST http://fast10.vsb.cz/bribast supported by the European Commission under the LEONARDO da VINCI action programme on vocational training.

Leonardo da Vinci

IURS

About IURS

IURS is a non-profit advocacy, research and project implementation organization, which aims are:

- working to support sustainable land use development practices,
- strongly focuse on issues of underused urban land, containment of sprawl and sustainable urban development,
- to foster broad coalitions that enhance the competitiveness of accessible and equitable urban development and redevelopment.

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Difference between stakeholders involvement and partnerships

- Stakeholders are all those parties or individuals who have, or may have, an interest in solving outstanding matters and are prepared to contribute their experiences or efforts to such a solution.
- Partners are all those parties or individuals, who have between themselves a form of contractual relationship addressing certain matters (shared budgets, shared objectives, shared project, shared properties est.) and work together with a common aim for a „win-win" solution.

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What is the value of stakeholders input?

- Bring in an individual point of view
- Bring different skills and experiences
- Bring in users reality
- Enrich solutions with new ideas
- Can introduce new uses
- Represent the community and users interest
- Improve an overall acceptance of a final product
- Help to market the solution to „their" section of community

BUILDING UP OF A SYNERGY WHERE

IURS 1+1= 3

Horizontal and vertical cooperation

- To achieve a success in solving brownfields regeneration, both the horisontal and verical integration of stakeholders need to take place.
- Policymaker are usually impotent withouth understanding the local issues, which need to be addressed.
- Such an integration can be achieved by broad stakeholders involvement, not only in the policy preparation, but also in local or regional brownfield regeneration.

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Types of stakeholders

7

Personal stakeholders
Owner of the brownfield
Problem solving consultant
Individual NGO member
Individual administrator
Project manager

Local stakeholders
Local brownfields owners
Local investors
Local government
Local financial institutions
Local consultants
Local citizens
Local NGOs
Local interest groups
Local construction companies

Regional stakeholders
Regional government
Regional financial institutions
Regional development agencies
Regional regulators
Regional owners, investors, consultants and contractors
Regional public and NGOs and professional interest groups

National stakeholders
Government and Parliament
Ministries, national agencies, national regulators
National NGOs, interest and professional groups, public.....
National financial institutions
National owners, investors, consultants, contractors.....

Global and EU stakeholders
EU commission, EU parliament and EU departments
Global investors, global finance and owners
Global NGOs

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What can an individual stakeholder do

8

- All individual drive and commitments are of great benefit
- The are many brownfield owners, who remediate their brownfields because they have a vision what to do and a commitment to do it.
- There are examples from the administrative, consultant and the NGO world, which illustrate the same.
- When a very strong personal commitment is expressed supporting finance for the activity can be usually achieved easier.

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What can stakeholders do locally

9

On a local level, especially in an area of low commercial demand and large brownfield volume, the stakeholders involvement, support, cooperation while trying to regenerate brownfields and stop further decline is very important.

In a situation of low commercial demand it is often the community and
its civic needs that can provide the new uses for local brownfields.

Owners and civic stakeholders need to be assisted in development of
their projects and supported by their local authorities as well as by the local professional advisers, who in turn needs to understand the principles and rules of this type client and this type of procurement.

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What can stakeholders achieve regionally

10

- Multiple brownfields, and especially the mitigatory measures need to be addressed on the regional bases
- There a broad stakeholders involvement is invaluable.
- In cooperation with the national stakeholders, program grant and legal aspects can be sorted out
- In a cooperation with the local stakeholders the individual projects and beneficiaries can be identified.
- In cooperation with local regional, national and international consultants, public and NGOs, novel way can be identified how to address the issue.

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What can stakeholders do on national level

11

- They can encourage and motivate vertical and horizontal cooperation
- The national level stakeholders can act in a strategic manner
- They can implement the required changes of the legislation and initiate the funding programs

NATIONAL STAKEHOLDERS NEED VERTICAL INPUT, MAINLY FROM REGIONAL AND LOCAL LEVELS

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What can professional stakeholders do

12

TOOLS, PROGRAMS AND CHANGES TO LEGAL FRAMEWORK WILL NOT HAPPEN, IF NOT DEMANDED BY THE STAKEHOLDERS

Professional consultants in their work deal with brownfield reuse and regularly meet barriers to such reuse. Their hands-on experience can not be substituted. This is why they need to be involved personally and also through their professional bodies on a national level and push for:

- a dialog
- tools
- legal framework changes
- suitable programs

PROFESSIONAL STAKEHOLDERS CAN EXPAND THEIR EXPERIENCE

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Which consultants are involved?

Brownfields reuse projects are more complex, more time consuming and more risky than are a new built ones.

Achieving an appropriate site solution usually require an involvement of a large variety of consultants.

- Real estate consultants
- Environmental and remediation consultants
- Cost consultants
- Project managers
- Design consultants
- Technical consultants
- PR consultants
- Community and employment consultants
- Est.

IURS BROWNFIELDS REMEDIATION REQURIES

Cross professional solutions

The team work, creativity and stakeholders participation are essential to success of brownfields projects.

Cross-professional working and sharing of experiences, which is so necessary for brownfields redevelopment, makes projects:

- Bankable
- Usable
- Financeable
- Novel
- Exiting
- Equitable

IURS ALSO ENHANCED BECOMES THE UNDERSTANDING OF

Benefits of involvement of citizens as stakeholders

- Improves community equity
- Give project public legitimacy
- Helps project acceptance
- Reduces the animosities and thus saves costs of vandalism
- Introduces novel ideas

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BRIBAST project

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PARTNERS ARE BEING SOURT TO TRANSFER THE PROJECT TO BALCAN STATES.

IURS If interested to partner the new project lease contact

CircUse projec

Numer of regions are contronted with massive urban sprawl, the current economic crisis and the effects of the demographic change, causing unfavorable land use patterns. This is neither competitive nor sustainable. Dispersed land use patterns with their high demands of land, soil and energy accelerate the process and the impacts of climate change.

Circular land use management represents an integrative policy and governance approach, which presupposes a changed land use philosophy with regard to land utilization. This modified land use philosophy can be expressed with the slogan **"avoid – recycle –compensate"**.

IURS is one of12 Partners from 6 countries, who are working together in the project CircUse to face these problems and develop strategies to solve them.

Main project outputs would be:

- Development of an overall strategy towards circular land use management
- Tools and instruments of Circular Land Use Management
- Pilot Projects

IURS Duration 3/2010 – 02/2013, Project No: 2CE174P4, www.circuse.eu

Thank you for your participation

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IURS 14.7.2011

6.3.2. Communicating and marketing brownfields: identifying the issue and including the issue in city priorities

COBRAMAN

Training seminar about "Communication and marketing", 22th of September, Ust

Marketing brownfields

Basis taken from www.einab.de

Dr. Thomas Erbel & Dr. Bettina Schug, ei environment & technology, Germany

environment and technology

CENTRAL EUROPE

What is the idea behind?

"Marketing is the art of exploring chances, develop them and benefit from them." - Philip Kotler

Marketing basics

The 4 P's of marketing – Marketing Mix

Product: redeveloped site

1. Product innovation: the redevelopment of the site
2. Name of product: link to promotion, basis for future cognition of the site
3. Branding: either A) the developer is introducing its own brand to create customer expectation of quality or B) introduction of a general brand for the whole business of brownfield redevelopment like: eco logo "redeveloped sustainably"
4. Services provided: introducing a brownfield manager as contact point for investors as well as end users

Price: depending on owner structure

1. Price: A) Private owner to maximize profit, B) City as owner also taking into account external effects (social, environmental,…)
2. Discount/Incentives: may be used to attract anchor projects to steer the development in a direction
3. Funding programmes in cases of heavily contaminated sites, various financing models (PPP)

Promotion: different levels to communicate to

1. Marketing communication targeted towards the commercialization of the site
2. Transfer of information towards general public and several stakeholder groups, aiming to improve the awareness and acceptance of the project.
3. Communication towards investors.
4. Internal communication within IWG.

Distribution: who sells where

Brownfield site represents "a unique good" but decision has to be taken who and where the product should be sold.

Question of contact point!

Marketing basics

The 4 P's of marketing – Marketing Mix

Where we are – where we would like to end up ?

SWOT again: Basis of marketing strategy is a comprehensive, critical and realistic SWOT of the site

Site review: Important step towards development of a future vision

Guiding questions for drafting a marketing strategy

First draft of a marketing strategy :

1. Are all customer / investor relevant info given?
2. Is an analysis of demand and supply on real estate market available? Is the site able to satisfy these demands?
3. Are framework conditions prepared for the redevelopment?
4. Are unique opportunities and properties of the site highlighted in comparison to competing sites? What makes the site unique?
5. Is a summary / list available, which focuses especially on the opportunities and strength of the site?

Guiding questions for evaluating the draft

Is the draft able to:

- ...support efforts highlighting the realistic potentials of the site?
- ...act as basis for the development of the future vision for new use of the site?
- ...act as basis for communication at all levels?

Goal oriented promotion in steps

How to improve the image?

Three different approaches to improve the mostly negative image of a brownfield site:

1. Creating an own CI including,
   - corporate design
   - corporate communication
   - corporate philosophy
2. Interims / temporary use of the site
3. Anchor projects

Corporate Identity – more than a logo

Aim of CI is to impart an own identity to a project, so that it is recognized as „person" with habits and characteristics.

1. corporate design:
   draft a logo, select colors, fonts, key pictures/ photos
2. corporate communication:
   establish a project name, create a slogan/claim
3. corporate philosophy:
   negotiation on rules, quality standards and values

Corporate Identity – more than a logo

NIKE — JUST DO IT.

KitKat — Give me a break, give me a kitkat

IKEA — Make a house a home

HafenCity — Maritime flair – metropolitan imprint

Quarter der kurzen Wege — The quarter of short ways

Interims use of the site

New design / furniture / or use of the brownfield site without change of ownership and without the need to adapt or change planning right.

All options for future use are secured BUT urbanistic scarcities or negative effects should be improved, new qualities generated.

Interims use of the site

Interims use of the site

Anchor projects

Selected representative pioneer projects, attracting other potential users.

Elophilharmonie

laying foundation stone of a primary school

Communication

Link to communication management plan! as part of the project management handbook.

Marketing specific communication

Marketing communication following AIDA model:

A - Attention (Awareness): attract the attention of the customer/investor.

I - Interest: raise customer/investor interest by focusing on and demonstrating advantages and benefits.

D - Desire: convince customer/investor that they want and desire the product (site) and that it will satisfy their needs.

A - Action: lead customers/investors towards taking action and/or purchasing.

Marketing specific communication

Public relation – not only focusing on commercialization but following several different aims:

- Informing general public to raise and sustain awareness for the project.
- Establish and sustain contact between different actors in the field of redevelopment project.
- Promote and improve image of the site and the revitalization plans
- Take over social functions and improve acceptance between actors and for the revitalization project.

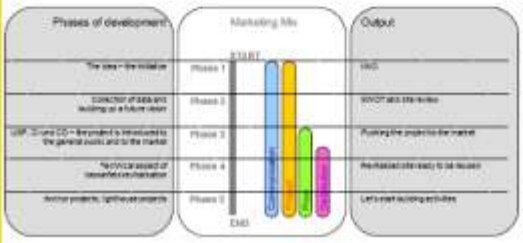
Marketing specific communication

Investor relation – mainly a question of organizing the contact and information flow.

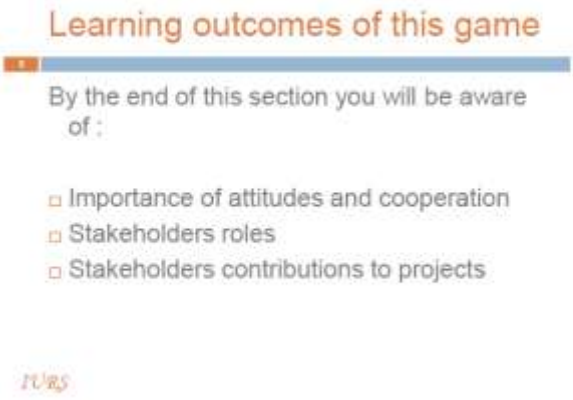
The one and only solution: installing a

C O B R A M A N

Timing: marketing and revitalisation process



6.3.3. Engaging stakeholders and partners- role play



The Stakeholders´roles

7

1 – Local councilor or council development officer
2 – Project promoter/developer
3 – Member of local interest group
4 – Real estate advisor
5 – Environmental consultant
6 – Next door owner, business man
7 - Next door owner, infirmed pensioner
8 – Radical NGO
9 - Site owner of a site with a multi-ownership
10- Civil engineer consultant
11- Lawyer
12- Local architect
13- Member of a local club for historical heritage
14- Local public services representant
15- Local paper reporter
16 -Brownfield coordinator

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Role cards rules

8

- When choosing your role, you must not chose to play your own profession.
- Individual stakeholder role parameters are described on their role cards.
- Individual role card parameters shall not be shown to other players.
- Role cards are part of the teachers notes. Only when participants select their roles, they will be given their role parameter card.

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GAME TASK

9

A Participants devise themselves into groups. Min. group size is 7 persons, max 15.Each group chooses from the Problem List, which type of project they would like to develop1-3.

B Each group chooses from the Site Description List a suitable site 1-5 for their project.

C Each participant shall choose a role from the , describing the type of a stakeholder that each participant would represent.

- Time allocated for task A+ B = 15 minutes

D Participants of each group will take part in an initial stakeholders´ development meeting behaving in line with their allocated role and attitude.

- first the game is played with a non-cooperative attitude
- then the game is repeated with a cooperative attitude

Group facilitator shall be chairing the stakeholders´meetings as a brownfields coordinator and also playing the „devils advocate role", prompting the participants to develop their role.

- Total time to play both versions is cc. 40 minutes.

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PLAYING RULES

10

1 - The red marked roles are compulsory, other roles are optional.
2 - If more than 15 participants take part, then the game is played in 2 separate groups, one with a negative and the other with a positive attitude, the group that is not playing at the time can watch as public.
3 - All participants in each group have to speak but for a reporter, who does not speak but writes.
4 – At the end of session each Reporter writes down the news release on what happened, max 300 words on each attitude version.
5 – The negative attitude version is plays until stakeholders response causes an impasse. (usually this takes place in a few minutes).
6 – The positive attitude version is played until the time is out, or until the participants see a value in it).
7 - Reporter's press release will be read at the beginning of the next teaching session.
8 - Participants will be debriefed about the game at the beginning of the next teaching session.

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Attitude

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1 – Negative attitude, no interest to compromise, seeing only ones own objectives.

2 - Positive, open and cooperative attitude.

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Agenda for stakeholders´ meeting

12

Brownfield coordinator opening the meeting	2 min
Developer introduction of the project	3 min
Advisors report on the project	4x2 = 8 min
Local council response to the project	2 min
Stakeholders questions and answer session	12 min
Discussion	10 min
Developer's summing up	3 min
Local councilor's summing up	2 min
Brownfields coordinator closing the meeting	3 min
	45 min

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CircUse project

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Thank you for your participation

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GAME - UNDERSTANDING STAKEHOLDERS INVOLVEMENT

References and available literature of good practice

- For those who can read Czech we also recommend the www.brownfields.cz a www.brownfieldsinfo.cz.
- As a good example of a City approach we also recommend www.brno.cz Project BRIBAST http://fast10.vsb.cz/bribast and LEPOB http://fast10.vsb.cz/lepob , handbooks and their course materials,
- An excellent and extensive US source is the www.Smarte.org,
- For a comprehensive understanding of other countries approaches we recommend:Final report International Brownfields Development, A Comparison of Brownfields Cleanup and redevelopment in Canada, Germany, United Kingdom and Netherlands, Prepared for the US EPA
- We consider as an absolute must is the CABERNET Final report www.cabernet.org.uk
- The newest resource it the World Bank Guidance Note (2010) The Management of Brownfields Redevelopment.

Advice to the teacher

Before you attempt to study or to deliver these two sections,, please familiarize yourself with the
project BRIBAST Brownfields Handbook and the Brownfields Course. Lots of a complementary knowledge, which will help you to present the game, can be derived by studying these materials. For delivering the game effectively and retaining your students' interest you need to include, where ever you can, local examples of good or bad practice and also local pictures!!!!. Use also your specific professional knowledge to illustrate the points and findings arising from these presentations. You can also contact the author of these sections and ask for a consultation on jjackson@iurs.cz

THE GAME

This is a game designed to teach students several things:

- Formulation of group decisions,
- Various roles of stakeholders,
- Various contributions that stakeholders can make to project,
- An importance of cooperation between stakeholders,
- An importance of an observer´s standpoint.

This game is intended to be played by min. 8 people and max. 15 people. If there are more than 15 participants, we suggest, that the game is played in 2 groups. This however puts larger demands on the teacher. In such a situation we recommend that the teacher has an assistant to help him to lead the second group. The game is played twice, firstly with a negative and then with a positive attitude. To benefit fully from playing the game, it is important that 40-60 minutes is available for the role play game. CC 15 minutes is also needed for a start up and similar time is needed at the end of the game for debriefing.
Not in every country are the role-play games a common format of teaching. This is why the participants may initially have some inhibitions. It is therefore important to make a "light " start, for example by saying an appropriate joke about luck of cooperation amidst professionals est..
Initially participants may find it difficult to identify themselves with their roles. Also the whole group may find it difficult to choose the project to develop and an appropriate site for it. We recommend that if it is at all possible, the game is posted up at the end of previous teaching lesson. At this point the participants are also given the role play cards. This way the participants can formulate and discuss their ideas during the brake and take less time to

cohere the group decision, which project and which site to choose. Participants are not to play the same role as is their own work or profession.

For the participants to be able to play the game, they need constantly to refer to slides 4, 5,6,7,9 and 11. This is why each participant needs to have them printed and in hand. We recommend printing the whole set of slides 1-12, 6 slides to a page and giving them to participants, prior the session starts.

For the game to be successful a substantial support to the group from the teacher (in a role of brownfields coordinator) needs to be given. The teacher therefore needs to familiarize himself/ herself with basic principle of property development decisions and development control decisions. Required knowledge need to be gained by reading up an appropriate literature or joining a course or conference directed to property development issues. The teacher also needs to be able to guide the participants in such a way, that when in the first run of the game they played with a negative attitude, they quickly achieve an impasse. For an example, one of the stakeholders says: I will not do this or I will not allow that, est..... If there is an impasse and no agreement it is the end of that game. Then the game is replayed again with a positive attitude. Ideally 10-15 minutes should be devoted to playing the game with a negative attitude and the rest of the time should be devoted to playing the game with a positive attitude.

In their designated roles participants take place in a public meeting discussing the development of the selected brownfield project they on a site they have selected at the beginning of the game. The teacher chairs the meeting, controls the timing of contributions 2-7 and make sure that all participants speak. The teacher also prompts participants to offer a response and encourages their creativity. At the end the teachers sum up the agreements, cooperation and compromises that have arisen from the meeting. When the "positive" version of the game is played, the teacher needs to guide participants towards a cooperative solution or formulation of a compromise. It was found, that participant may not be able to thing sufficiently flexibly and quickly in order to achieve such a compromise in the time given for the game. This is why the teacher has often to step in with suggestions, indicating how such a compromise can be achieved or by what means cooperation can be offered. We have found, that participants then adopt and further develop such suggestion enjoy expanding it and the game progresses quickly.

Reporter's role is an important part of the learning process. When participants play the game they are involved and in forming compromises est... The reporter is an outsider to the group, who only observes. His observations of the process however are very important to the group and also to the teacher.

It is also important to achieve participants debriefing and feedback on what they have learned from the session and to have some time for participants to receive the reporter's press release.

CONTENT OF SLIDES

1	Understanding stakeholders involvement	Title slide -please retain the author name but you can add your name as a coauthor, if you have modified this game.
2	Learning outcomes	
3	Presentation outline	
4	The problem list	This slide sets the problem that is to be addressed. B type town means a town, away from main transport infrastruction, where the development and reuse demands are low and when they come they come mainly from the initiative of local investors.

		3 possible local investors are introduced.
5	The Side description	There are 5 sites to consider by the participants, each giving certain limitation to development (for example the site 5 is in a conservation area, has a limited access and probable environmental pollution).
6	The stakeholders roles	This slide describes various stakeholders. Inherent part of the game are the game cards, they are included at the end of the text.. It is up on the teacher to decide if he/she lets participants to choose their own roles or if he/she allocates these roles (considering of course, that no participant is to play a role that corresponds with his/her profession or occupation). Roles market in blue are necessary to play the game, the other roles are optional and the teacher can decide, according to the group size and profile which roles will be omitted. Each role card roughly outline role's parameters and gives participant an agenda of interest they are to protect during the game. Participant should not see the other participants' role parameters and the agenda of their role's interest are revealed to others only during the course of play.
7	Role cards rules	Slide regulates rules for the Role cards.
8	Game Task	This is a key slide that sets the parameters for the game. Group may find it difficult to settle on a site in 5 minutes that's why we recommend posting the game up et the end of previous lecture.
9	Playing rules	Describes main limitation on the game.
10	Attitudes	In the first game all the participant have totally negative and uncompromising attitudes. This should lead to an impasse, which stops the game. The success here is to block the game as fast as it is possible. In second game all participants have to offer an openness, understanding and capacity for compromise. The success is the number of achieved compromises and cooperative outcomes. Scores can be kept for the game by the teacher to encourage groups' competitiveness.
11	Agenda for stakeholders meeting	This is a model agenda. In the negative attitude version, it is assumed that the game will stop on somewhere on the point 4 or 5. For the positive attitude version if possible more than 20 minutes should be allocated. This will give participants more time to form and negotiate compromises. If scores are collected by the teacher, the actual timing for the duration of the positive attitude meeting should be also given. This way an indicator of 1compromise per/ unit of time can be made est…..
12	Conclusion	debriefing
13	Closing slide	Dtto as slide 1 about author.

Role play cards

	Role	role parameters	agenda of a particular interest
1	Local councilor or council development officer	wants development, bud does not want any upsetting of local electorate, prefers local solutions and local investors	to create more jobs in the town
2	Project promoter/developer	wants to realize project quickly	to protect his project profit margins
3	Member of local interest group	wants development amenities to be available for all citizens	to protect interest of handicapped part of the community
4	Real estate advisor	wants to encourage a quality commercial development, that raise value of surrounding property and encourage increase in real estate transaction	to get a consultancy for a real estate transaction
5	Environmental consultant	wants to make sure that the environmental issues and values are understood and identified	to protect trees on site and to get the consulting job from the council
6	Next door owner, business man	wants the new development to add advantages to his existing property and business	to increase of sales of his business and not to block view onto his building
7	Next door owner, infermed pensioner	wants peace, no noise, no traffic,	no development
8	Radical NGO	wants to use the development issue to agitate for his own purposes	to get settlement of argument payment
9	Site owner or one of the site owners	to maximize his site value	to have a fast deal
10	Civil engineer consultant	wants to be sure, that his client (the developer) project is buildable	to have a satisfied and paying client
11	Lawyer	wants to capitalize on his local site history knowledge	to get fee for his know-how
12	Local architect	wants to demonstrate his abilities to formulate fast alternative solution	to have a satisfied and paying client
13	Member of a local club for historical heritage	wants to protect historical relevance of the site	to present the past site events memory
14	Local services member	wants to ensure that the relevant infrastruction is appropriate for the type of proposed development	to have a highest possible specification for services products
15	Reporter	wants to inform about local happenings	to have his press report accepted in national press
16	Brownfield coordinator	teacher sets own parameters	

6.4. List of participants

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COBRAMAN, 1CE014P4
Attendance Sheet, Statutory City of Ústí nad Labem, the Czech Republic, September 2010

Training seminar for brownfield managers – Marketing and communication

21. 9. 2010 Best Western hotel Vladimir, Ústí nad Labem, 9.00 do 17.00 hodin

	Name	Organisation	Country	Signature
1.	Barták Miroslav	UJEP Ústí nad Labem	Czech Republic	
2.	Bergatt Jackson Jiřina	IURS	Czech Republic	
3.	Boroń Grzegorz	Bydgoszcz	Poland	
4.	Bořecký Karel	Most	Czech Republic	
5.	Chiara Franceschini	SIPRO	Italy	
6.	Černe Tomaž	IGEA	Slovenia	
7.	Čotič Boštjan	UPIRS	Slovenia	
8.	Čotič Igor	UPIRS	Slovenia	
9.	Czastka Sven	Ústí nad Labem	Czech Republic	
10.	Černič Mali Barbara	UPIRS	Slovenia	
11.	Debes Carsten	District of Zwickau	Germany	
12.	Doleželová Lucie	IREAS	Czech Republic	
13.	Dostálová Tereza	Ústí nad Labem	Czech Republic	
14.	Erbenová Kateřina	KPMG Czech Republic	Czech Republic	
15.	Ertel Thomas	Environment and technology	Germany	
16.	Fiala Tomáš	Most	Czech Republic	
17.	Franceschini Chiara	SIPRO	Italy	
18.	Franková Hana	VŠB – TU Ostrava	Czech Republic	
19.	Goršič Nina	UPIRS	Slovenia	
20.	Gradišar Ana	Kranj	Slovenia	

1

COBRAMAN

COBRAMAN, 1CE014P4
Attendance Sheet, Statutory City of Ústí nad Labem, the Czech Republic, September 2010

Training seminar for brownfield managers – Marketing and communication

21. 9. 2010 Best Western hotel Vladimir, Ústí nad Labem, 9.00 do 17.00 hodin

	Name	Organisation	Country	Signature
21.	Gunzenhäuser Maren	Stuttgart	Germany	
22.	Hasmanová Linda	Most	Czech Republic	
23.	Hromková Kateřina	Euroconsultants	Czech Republic	
24.	Jasińska Magdalena	Bygdoszcz University	Poland	
25.	Jirásek František	Most	Czech Republic	
26.	Kašovská Kamila	Technical University Ostrava	Czech Republic	
27.	Kindlová Lenka	Ústí nad Labem	Czech Republic	
28.	Kloska Arkadiusz	Bydgoszcz	Poland	
29.	Kuželová Lucie	Ústí Region	Czech Republic	
30.	Leipe Frank	State Development Corporation of Thuringia	Germany	
31.	Marinković Dragan	Kragujevac	Serbia	
32.	Nikolič Petr	Ústí nad Labem	Czech Republic	
33.	Pelka Iwona	Environment and technology	Germany	
34.	Penndorf Olaf	District of Zwickau	Germany	
35.	Pierzchala Lukas	Technical University Ostrava	Czech republic	
36.	Podrápský František	Ústí nad Labem	Czech Republic	
37.	Schmid Matthias	Stuttgart	Germany	
38.	Schweiker Michael	Stuttgart	Germany	
39.	Sierka Edyta	Technical University Ostrava	Czech Republic	
40.	Skrt Primož	Kranj	Slovenia	

2

Training seminar for brownfield managers – Marketing and communication

21. 9. 2010 Best Western hotel Vladimir, Ústí nad Labem, 9.00 do 17.00 hodin

	Name	Organisation	Country	Signature
41.	Šašková Marta	Ústí nad Labem	Czech Republic	
42.	Šindelářová Lenka	DTZ Czech Republic	Czech Republic	
43.	Šplíchalová Martina	Ústí nad Labem	Czech Republic	
44.	Štraus Stane	Kranj	Slovenia	
45.	Tadych Jakub	Bygdoszcz University	Poland	
46.	Vávrová Kamila	Most	Czech Republic	
47.	Weckwert Natalia	Bydgoszcz	Poland	
48.	Zacniewska Zuzanna	Bygdoszcz University	Poland	
49.	Ziherl Janez	Kranj	Slovenia	
50.	Zinz Regine	Stuttgart	Germany	
51.	MARKOVÁ BLANKA		CZ	
52.	[illegible] MILAN	PLZEŇ	CZ	
53.	JAROSLAV KOUŠEK	UJEP	CZ	
54.	PETRA OLSOVÁ	UJEP	CZ	
55.	PETR HLAVÁČEK	UJEP	CZ	
56.	KATEŘINA [illegible]	PLZEŇ	CZ	
57.	MICHAELA ŽÁČKOVÁ	PRAHA	CZ	
58.				
59.				
60.				

Training seminar for brownfield managers – Marketing and communication

22. 9. 2010 Best Western hotel Vladimir, Ústí nad Labem, 9.00 do 17.00 hodin

	Name	Organisation	Country	Signature
1.	Bergatt Jackson Jiřina	IURS	Czech Republic	
2.	Boroń Grzegorz	Bydgoszcz	Poland	
3.	Bořecký Karel	Most	Czech Republic	
4.	Čeme Tomaž	IGEA	Slovenia	
5.	Cotič Boštjan	UPIRS	Slovenia	
6.	Cotič Igor	UPIRS	Slovenia	
7.	Czastka Sven	Ústí nad Labem	Czech Republic	
8.	Černič Mali Barbara	UPIRS	Slovenia	
9.	Debes Carsten	District of Zwickau	Germany	
10.	Doležeková Lucie	IREAS	Czech Republic	
11.	Dostálová Tereza	Ústí nad Labem	Czech Republic	
12.	Ďuriš Martin	PBA Czech Republic	Czech Republic	
13.	Ertel Thomas	Environment and technology	Germany	
14.	Fiala Tomáš	Most	Czech Republic	
15.	Franceschini Chiara	SIPRO	Italy	
16.	Franková Hana	VŠB – TU Ostrava	Czech Republic	
17.	Goršić Nina	UPIRS	Slovenia	
18.	Gradišar Ana	Kranj	Slovenia	
19.	Gunzenhäuser Maren	Stuttgart	Germany	
20.	Hasmanová Linda	Most	Czech Republic	

COBRAMAN

Training seminar for brownfield managers – Marketing and communication

22. 9. 2010 Best Western hotel Vladimir, Ústí nad Labem, 9.00 do 17.00 hodin

	Name	Organisation	Country	Signature
21.	Hromková Kateřina	Euroconsultants	Czech Republic	
22.	Chábová Kateřina	Pilsen 2015	Czech Republic	
23.	Jasińska Magdalena	Bygdoszcz University	Poland	
24.	Jirásek František	Most	Czech Republic	
25.	Kašovská Kamila	Technical University Ostrava	Czech Republic	
26.	Kloska Arkadiusz	Bydgoszcz	Poland	
27.	Koutský Jaroslav	UJEP Ústí nad Labem	Czech Republic	
28.	Kuželová Lucie	Ústí Region	Czech Republic	
29.	Marinković Dragan	Kragujevac	Serbia	
30.	Marková Blanka	Ostrava 2015	Czech Republic	
31.	Nikolič Petr	Ústí nad Labem	Czech Republic	
32.	Pelka Iwona	Environment and technology	Germany	
33.	Pierzchala Lukas	Technical University Ostrava	Czech republic	
34.	Podrápský František	Ústí nad Labem	Czech Republic	
35.	Pondělík Martin	Ústí Region	Czech Republic	
36.	Schmid Matthias	Stuttgart	Germany	
37.	Schweiker Michael	Stuttgart	Germany	
38.	Sierka Edyta	Technical University Ostrava	Czech Republic	
39.	Skrt Primož	Kranj	Slovenia	
40.	Svoboda Milan	Pilsen 2015	Czech Republic	

COBRAMAN

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43.	Tadych Jakub	Bygdoszcz University	Poland	
44.	Vávrová Kamila	Most	Czech Republic	
45.	Weckwert Natalia	Bydgoszcz	Poland	
46.	Zacniewska Zuzanna	Bygdoszcz University	Poland	
47.	Ziherl Janez	Kranj	Slovenia	
48.	Zinz Regine	Stuttgart	Germany	
49.	RNDLOVÁ LENKA	ÚSTÍ NAD LABEM		
50.	STANĚ ŠTRAUS			
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7. 6th Seminar Ljubljana 16. May 2011

7.1. Agenda of training seminar

Monday 16th of May		6th Brownfield manager training seminar Urban Planning	
time		topic	speaker
08:30	09:00	Registration	
09:00	09:15	Introduction to Urban Planning: City and urbanization	Dr. Kaliopa Dimitrovska Andrews
09:15	10:00	Contemporary Urban Planning: Theory and Practice	Dr. Kaliopa Dimitrovska Andrews
10:00	11:00	**Workshop 1: Urban planning in action** (we divide in 3 groups): • Group1 lead by Dr.Mojca Šašek Divjak and Dr.Thomas Ertel • Group2 lead by Dr.Kaliopa Dimitrovska Andrews and Boštjan Cotič • Group3 lead by Dr.Matej Nikšič and mag.Igor Cotič	
11:00	11:15	Coffee break	
11:15	12:00	Integrated Urban Design: Urban Design Criteria	Dr. Matej Niksic
12:00	13:30	**Workshop 1: Urban planning in action** (we divide in 3 groups) • Group1 lead by dr.Mojca Šašek Divjak and dr.Thomas Ertel • Group2 lead by dr.Kaliopa Dimitrovska Andrews and Boštjan Cotič • Group3 lead by dr.Matej Nikšič and mag.Igor Cotič	
13:30	15:00	Lunch	
15:00	15:30	Urban Planning: Brownfiled development in particular	Dr. Thomas Ertel
15:30	16:30	Summing up: what we have learned	Dr. Kaliopa Dimitrovska Andrews Dr. Thomas Ertel
16:30		Training ends	

7.2. Seminar Themes

7.2.1. Introduction to Urban Planning: City and Urbanisation

COBRAMAN

16th Nov 2011, Ljubljana, Slovenia

TRAINING SEMINAR: Urban Planning and Sustainability

1. Introduction to Urban Planning: City and Urbanisation
2. Contemporary Urban Planning: Theory and Practice
3. The Urban Development of Ljubljana: Historical Overview & New Direction

prof.dr. Kaliopa Dimitrovska Andrews, Urban Planning Institute of the Republic of Slovenia

Section 1:
INTRODUCTION TO URBAN PLANNING

Basic terminology

URBAN PLANNING: *(city planning, town planning, nem stadtplannung, l'urbanisme)* planning and designing the development of urban agiomerations of cities and towns. Beside technical point of view equally consider also economic, social, enviromelnal, leagal, artistic and other components.

URBAN DESIGN: a part of the proces of spatial planning, dealing with the architectural composition of buildings and spaces; the most complex component of planning – synthesis of function, structures and forms.

RENEWAL: Systematic substitution of new elements for old in order to satisfy or correspond to a new conception of the town or new needs

Section 1:
INTRODUCTION TO URBAN PLANNING

City and urbanisation

From the Middle Ages to modern times, Europe's social, cultural and economic development has been based on the cities. Their common history has given Europen cities a common face: the organic, irregular urban blocks and small streets of medeval centres, the grand works of eighteenth century princes, the great transformation of the nineteenth and early twentieth centuries, the growth of suburbs and dormitory towns, joined later by giant shopping centres and light industry, the decline of housing in favour of commercial and administrative activities in a number of city centres, the invasion of traffic congestion and uniform and mediocre architecture in centres and periphery alike.
However, in the twenty-first century, Europe's cities will continue to be the main centres of economic activity, innovation and culture (Green paper on the urban environment, CEC,1990,18-19).

Section 1:
INTRODUCTION TO URBAN PLANNING

THE ROLE OF CITIES
Urban growth results from a combination of economic, social, cultural and political dynamics:

the economic dynamic:
the city is synonymous with proximity, providing the multiple contacts and activities that make it an information hub and creative centre. It is the ability to assemble the economic actors involved in all stages of production, research and consumption that draws firms to the urban centres.

the social dynamic:
the city brings together a wide variety of social facilities.
The city also concentrates employment opportunities. More generally, the city represents choice: of social relations, education, services and work.

the cultural dynamic:
depends on density, proximity and choice. These factors facilitate the 'production' of culture as much as its 'consumption'. The historic heritage of the city allows unique economic activities linked to culture, including tourism.

the political dynamic:
more than any other place, the city must respond directly to demands by its citizens for 'good government'. It is a place where, direct participation is possible and increasingly practised, and where the individual can develop most freely his sense of personal and civic value.

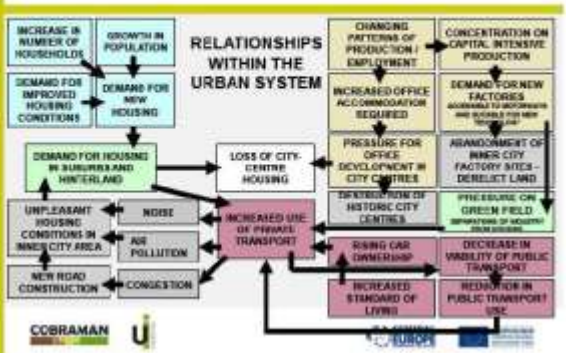
source: Green paper on the urban environment, CEC, 1990, 18-19

Section 1:
INTRODUCTION TO URBAN PLANNING

The problem facing urban environment are varied: pollution (air, water, noise, soil, waste), (re) development of the built environment (buildings, roads, open spaces, recreational areas), protection of nature (greenery and wildlife in the cities).

In focusing on individual problem areas, it is important to know that the urban system is a complex and interrelated whole. A diagramatic representation of some of the main cause-and-effect relationships influencing urban development are set out in the figure *'Relationships within the urban system'* (CEC, 1990). The extent of these interrelationships demonstrates the potential danger of ad hoc decision-making; the solution to one problem is often the cause of another. Effective management of our urban environment requires a strategy based on both integration between land use and transportation planning and integration between the city and its hinterland (functional urban region).

Section 1:
INTRODUCTION TO URBAN PLANNING



Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

The evolution of twentieth-century urban space can be traced predominately by studying the Garden City movement and the paradigm of Modernism – Functionalism, Post Modernism and Sustainable Development.

Modernism - Functionalism

Modernism or rather the paradigm of Functionalism is based on ideals of pure forms and unbounded, flowing space. The 'tower in the park' was intended to break the urban block of the traditional city and give a newfound freedom to the urban residents.

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

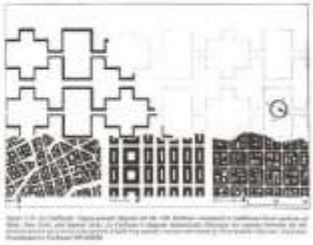
Modernism - Functionalism

Le Corbusier 's urban design principles that influenced modern urban space design are following:
(1) The open urban block that allows free flowing landscape, sun and light,
(2) The vertical separation of movement systems,
(3) The linear building as a large-scale urban element which define districts or social units.
Le Corbusier's aphorism for house was a 'machine for living' in which all elements without a direct function were eliminated.

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Modernism - Functionalism

Le Corbusier's figure-ground diagram on the Ville Radieuse compared to traditional urban block of Paris, New York and Buenos Aires dramatically illustrates the contrast between the traditional urban patterns of evolved city and the free flowing spatial structure proposed by Functionalist theorists



Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Modernism - Functionalism

Freestanding buildings in straight, parallel rows, set on a wide, open plaza or green space, rigidly separated traffic systems and carefully zoned function (living, work, leisure) has been a main concept in shaping modern urban space.

Most of the plans upon each 'large parts' of our cities were built in 1950s, 1960s and 1970s were prepared on the bases of Functionalist concept. Today, most of these areas are borownfilds and in need of comprehensive renewal and regeneration.

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Modernism - Functionalism

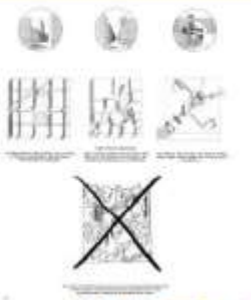
Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Modernism - Functionalism

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Postmodernism - Rationalism

In the early 1970s there have been several groups of architects who have critically examined the Functionalist paradigm. A new Postmodern movement looks at historic models of towns for inspiration, promotes a concept for public open space and considers context and regionalism in the design of building forms or build environment.



Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Postmodernism

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Postmodernism

Bitnje - Kranj, Sovenia: postmodern concept of the new housing development

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Postmodernism

Bitnje - Kranj, Slovenia: postmodern concept of the new housing development

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Postmodernism

Zupančičeva jama, Ljubljana: postmodern urban design layout

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Postmodernism

Zupančičeva jama, Ljubljana: postmodern urban design layout

Main features

MODERNISM	POSTMODERNISM
Concept "tower in a park" "house is a machine for living" "*Less is more*"! Mies van der Rohe	Concept "back to historic models of city" "promotion of public open space" "*Less is bore*" / Venturi
Land use zoning – separation of activities	Mixed uses -reintegration of activities
Open urban block layout	Perimeter (closed) urban block layout
Vertical separation of movement systems	Mixes movement system
Building typology: linear building in rows, standardisation, universal 'modern' style	Variety in building forms design, consideration of context and regionalism in the design of build environment

movements / groups / author

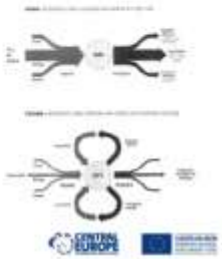
MODERNISM	POSTMODERNISM
Bauhaus (1918) Gropius, Breuer, Van der Rohe,..	Venturi, Leon in Robert Krier, Rowe, Bofil, Jencks,..
De Stijl (1920) Mondrian, Van Doesburg, Rietveld,..	
Le Corbusier (1920-1960)	
Team 10 (1950) Alison in Peter Smithson, Bakema,..	
Ruski konstruktivizem (1918-1930) Miljutin, Vesnin	
CIAM (Congrès International D'Architecture Moderne 1928), Atenska listina 1934	

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Sustainable development

The United Nations proposed the concept of 'sustainable development' as the backbone of global economic policy: 'we should aim to meet our present needs without compromising future generations ...'

Cities must be viewed as ecological systems. Their design and management should be a circular 'metabolism' process, where consumption is reduced by implementing efficiencies and where re-use of resources is maximised.
The concept of a 'Compact City' model, a dense and socially diverse city where economic and social activities overlap can bring major ecological benefits.

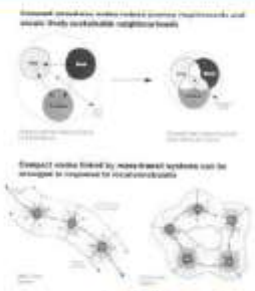


Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Sustainable development

The Compact City features:

- city grows around centres of social and comercial activity located at public transport nodes,
- these nodes of mixed uses provide the focal points around which neighbourhoods develop, the residental densities decreasing with the distance from transit stop,
- each neighbourhood has its own parks and public spaces accommodating a diversity of overlapping private and public activities.



Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Sustainable development
KRONSBERG, HANNOVER: A model of sustainable urban community

The design of this EXPO settlement, along the new tram line to the Expo grounds, considers ecological, urban design, socio-economic and cultural issues:

ECOLOGICAL OPTIMISATION
CITY AS A GARDEN
CITY AS A SOCIAL HABITAT

Applying planning for sustainability placed considerable obligations on all stakeholders to secure the highest possible quality of life and to use natural resources sparingly.

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Sustainable development
KRONSBERG, HANNOVER: A model of sustainable urban community

The design of this EXPO settlement, along the new tram line to the Expo grounds, considers ecological, urban design and socio-economic and cultural issues:

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Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Sustainable development
KRONSBERG, HANNOVER: A model of sustainable urban community

The first phase is organise in two housing clusters north and south, 6.000 dwellings, each one with a green area – park in the centre and a local centre in between.

Grid layout of the blocks, avenue-like streets and open space planning unite, many different construction forms and architectural styles in a harmonious townscape.

Built structure follows the principle of decreasing density, the highest FSI 1.2 (4-5 storey blocks) along the main access road, which decrease approaching the countryside.

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Sustainable development
KRONSBERG, HANNOVER: A model of sustainable urban community

Section 2:
CONTEMPORARY URBAN PLANNING: theory and practise

Sustainable development
KRONSBERG, HANNOVER: A model of sustainable urban community

Reduction of energy consumption is achieved through low energy house building methods, optimised energy provision (two cogeneration plants), the integration of wind and solar power, and by specific measures on the consumer side (CO2 emissions reduced by 60%).

KRONSBERG, HANNOVER:
A model of sustainable urban community

The microclimate zones have large areas of glass between heat storage walls completing the external structure. Serves as a buffer (20% less heat loss through transmition). The microclimate roof is made up of three layers of ETFE sheeting; the middle and upper laws are printed with a reflective pattern. In summer these two layers form a reflective roof. In winter they are apart, so the sun can pass.

KRONSBERG, HANNOVER:
A model of sustainable urban community

KRONSBERG, HANNOVER:
A model of sustainable urban community

The 'Lummerlund' passive houses are heated and cooled all year round without a separate heating distribution system using passive technologies. In winter, if neccessary, each house can tap into the district heating system, when warm air is distributed by the ventilation system. Supplementary heating needs are around 15kWh per m2; a passive house consumes one-seventh of the heating energy of a conventional new house.

KRONSBERG: URBAN DEVELOPMENT CONCEPT

URBAN DESIGN CONCEPT	SOCIO-CULTURAL AMENITIES	ENVIRONMENT
COMPACT LAYOUT	BALANCED SOCIAL MIX OF FUTURE RESIDENTS	ECOLOGICAL STANDARDS
MIXED USE: RESIDENTIAL AND COMMERCIAL	CENTRAL FACILITIES - arts, community and advice centre - church and neighbourhood centre - health centre, shops	ENERGY energy use optimization district heating system low energy buildings electricity saving measures use of renewal energy& innovative technologies
RESOURCE-EFFICIENT CONSTRUCTION		
CONSULTAITVE PLANNING PROCEDURES	SOCIAL INFRASTRUCTURE - 'kinderhouse' with community bakery - kindergardens - primary school & middle/ secondary school - 'FOKUS' housing project - 'Habitat' international housing project - decentralized support for senior citizens - space allocation for community use	WATER rainwater management concept drinking water economy measures
TRAFFIC MINIMALISATION CONCEPT tram route D all amenities within easy walking distance cycle priority zones parking space restrictions		WASTE ecologicaly compatible building materials building waste concept domestic and commercial waste concept
OPEN SPACE QUALITY courtyards avenues neighbourhood parks green corridors district park	NUTRITION - market, Kronsberg Farm	SOIL soil management inherited pollution - removal or containment
		ENVIRONMENTAL COMMUNICATIONS KUKA - Kronsberg Environmental Liaison Agency

KRONSBERG, HANNOVER:
A model of sustainable urban community

KUKA, environmental liaison agency, monitores and promotes the ecological development of the Kronsberg sustainable city district in the areas of energy, waste, soil, water, landscape, farming and mobility. Working with its partners, KUKA provides a comprehensive skilling and qulification programme used in ecological advisory and training measures for planners, craft workers, and residents of Kronsberg.

COBRAMAN

www.cobraman-ce.eu

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Phone: +386 (0)1 420 13 15
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web site: www.uirs.si

Thank you for your attention!

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF

7.2.2. Integrated Urban Design: Urban Design Criteria

COBRAMAN

Training Seminar Urban Planning and Sustainability Monday 16th May 2011, Ljubljana, Slovenia

Integrated Urban Design
URBAN DESIGN CRITERIA

dr. Matej Nikšič, Urban Planning Institute of the Republic of Slovenia

Cobraman Training Seminar / Urban Planning and Sustainability

Integrated Urban Design

URBAN DESIGN CRITERIA

matej.niksic@uirs.si

Urban Planning Institute of the Republic of Slovenia, Ljubljana, May 16th 2011

Urban Design Criteria

Quantitative

Quantitative urban design criteria are important planning tools which indicate the intensity of land use in particular site and give some indication of massing volumes.

Floor space index (FSI)
Foot print index (FPI)
Dwellings per hectar (dph)

Qualitative

Qualitative urban design criteria are important planning principles that are not quantitative but have major impact on the quality of a living environment.

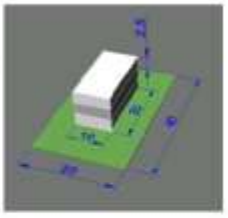
Context
Permeability
Variety
Legibility
Robustness
Visual appropriateness
Richness
Personalisation
Co-dwelling

Foot print index (FPI)
express the ratio between ground flor area and site area.

Floor space index (FSI)
or floor area ratio (FAR) express the ratio between gross floor area and site area.

The same FSI can be achieved by using different building's typology or different FPI.

Dwellings per hectar (dph)
is most commonly used measure by the planning system and developers because it is easy to monitor, with each house completion being registred. However, it gives useful information as to how dense a development will look only by knowing the typology of buildings or housing types.



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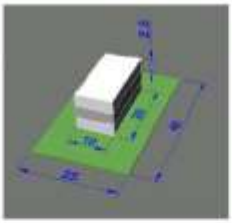


Higher density does not mean building tall. Good design can enable higher densities to be achieved using a range of building and layout types as show tha following slides.

Higher densities can help to create successful places by supporting local businesses, services and facilities.

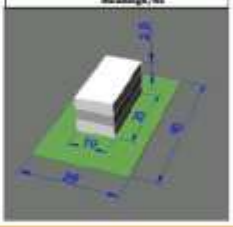
Quantitative urban design criteria

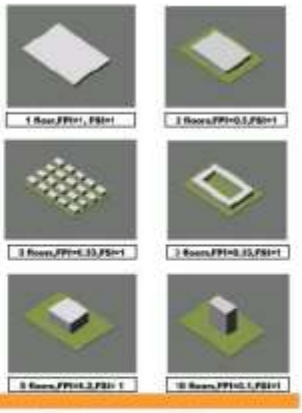
Floor space index FSI = $\frac{20 \times 10 \times 2}{25 \times 40} = 0.6$

Foot print index FPI = $\frac{20 \times 10}{25 \times 40} = 0.2$

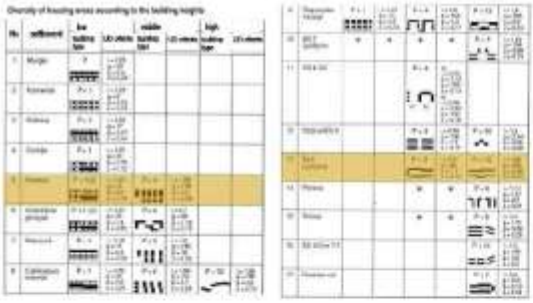
Volume space index = $\frac{20 \times 10 \times 3 \times 2.8}{25 \times 40} = 1.5$

Density = persons/ha
dwellings/ha

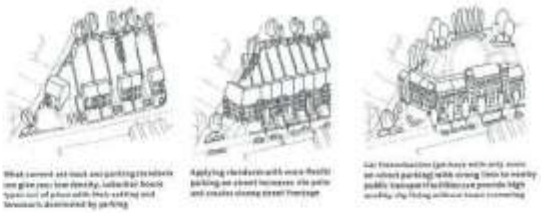




Comapartive review of urban design criteria



Densities, facilities and form



Quantitative urban design criteria, Case Study

Koseze, Ljubljana

building typology:
collective housing

building heights:
middle
5 floors (ground+4)

FSI=1.99
FPI=0.38
dph=158

building typology:
individual housing

building heights:
low
2 floors (ground+1)

FSI=0.24
FPI=0.14
dph=12

Quantitative urban design criteria, Case Study

Šiška, Ljubljana

building typology:
collective housing

building heights:
middle

FSI=0.51
FPI=0.13
dph=86

building typology:
collective housing

building heights:
high

FSI=1.68
FPI=0.19
dph=238

FPI and FSI limitations in relation to land use

(Source: Spatial Order of Slovenia; ! regulations vary throughout Europe)

Land use	*Foot print index: FPI*	*Floor space index: FSI*
Housing areas	0,4	1,2
Leisure areas		
Housing with agricultural households	0,2	0,4
Areas of civic infrastructure	0,6	1,8
Central areas – urban centres	0,8	2,5
Mixed-use areas	0,6	1,2
Production areas	0,5	1,4

The limitations can be exceeded exceptionally only if:

- this is demanded by exclusive urban planning conditions
- excesses can be balanced with the existing situation in the neighbouring areas
- this is not against the public interest


LJUBLJANA
MESARSKA ULICA
FSI: 1,7


Urban Design Criteria
Quantitative
Qualitative
Quantitative urban design criteria are important planning tools which indicate the intensity of land use in particular site and give some indication of massing volumes.
Floor space index (FSI)
Foot print index (FPI)
Dwellings per hectar (dph)
Qualitative urban design criteria are important planning principles that are not quantifiable but have major impact on the quality of a living environment.
Context
Permeability
Variety
Legibility
Robustness
Visual appropriateness
Richness
Personalisation
Co-dwelling


1. Context
Context
guiding the design of physical forms in accordance with characteristics of a site in terms of topography, landscape, image of a city, city silhouette, important views, land use and scale

QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

1. Context

QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

1. Context

QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

1. Context

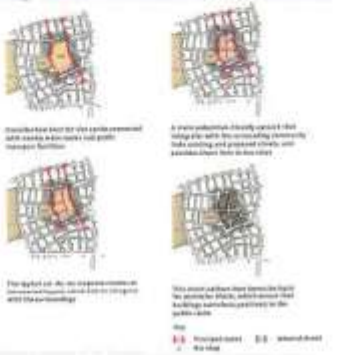
QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

1. Context

2. Permeability

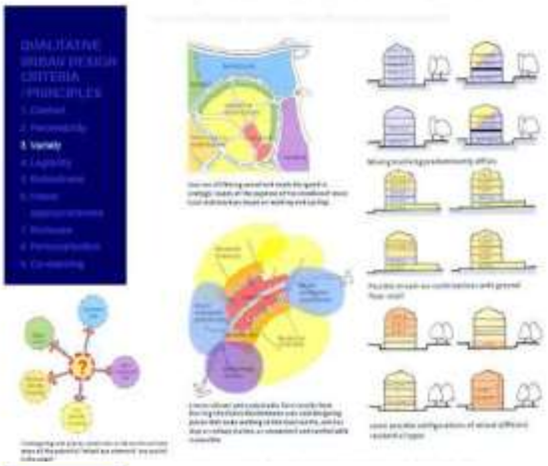
Permeability

providing a number of routes through an environment to choose from;



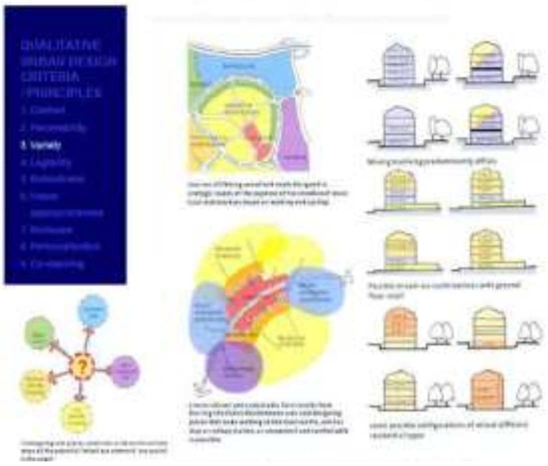

PUBLIC
PUBLIC


Variety
assuring a range of uses and choice of experiences;
car park




PUBLIC
PUBLIC


Variety
assuring a range of uses and choice of experiences;
car park



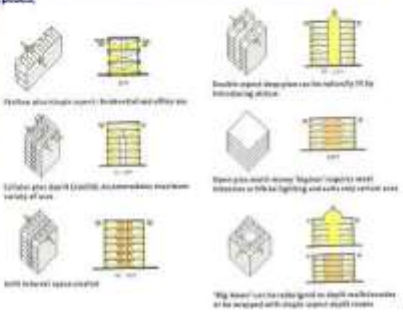
QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES
4. Legibility

Legibility
setting up a layout that is easy for people to understand;

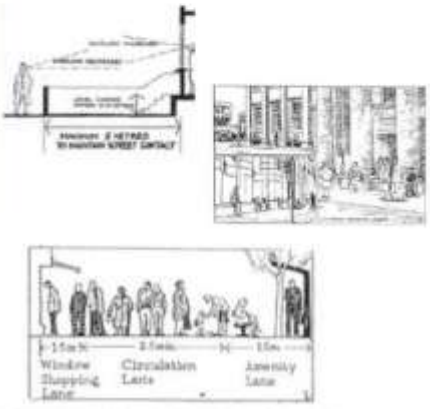
QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES
4. Legibility

QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES
5. Robustness

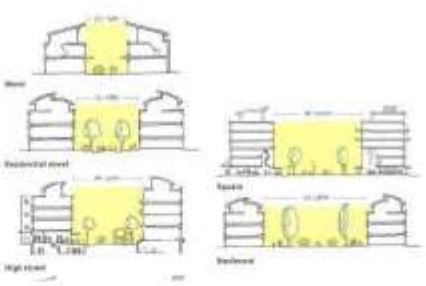
Robustness
achieving a certain degree to which people can use a given place for different purposes;



QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES
5. Robustness



QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES



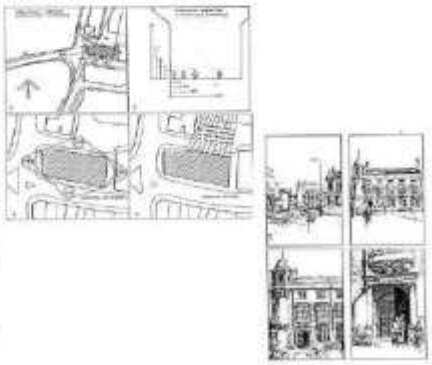
QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

Visual appropriateness
assuring the appearance of the place that makes people aware of the choices available;

QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

Richness
providing a wide choice of enjoyable sensory experiences;



QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

7. Richness

QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

8. Personalisation

Personalisation
allowing users of spaceto put their own stamp on a place;

QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

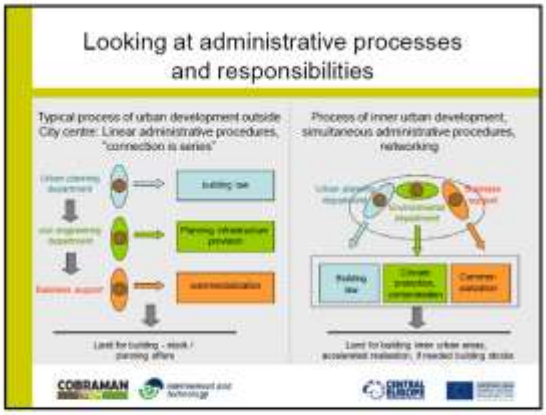
8. Personalisation

QUALITATIVE URBAN DESIGN CRITERIA / PRINCIPLES

9. Co-dwelling

Co-dwelling
enabling a cohabitation of human and non-humans in certain environment.

7.2.3. Urban Planning: Brownfiled development in particular



Brownfield development – what makes the difference?

	General project site	Brownfield site
Persons	- List of people involved clear from the beginning Responsibilities clearly delegated - coordination of interdisciplinary work groups	- List of people involved may vary during the development process - May include „hidden actors". - stakeholders and community to be involved - coordination of multi-disciplinary and inter-institutional work groups
Aims & goals	- profit oriented - sustainable	- aspects addressing general public interest encompassing profit oriented aims, e.g. improve quality of life, enhance attractiveness of city centre - sustainable

Brownfield development – what makes the difference?

	General project site	Brownfield site
Financial framework	- managing predominantly well established financial constructions	- raising and managing public funds or complex financial constructions - PPP or other financial alliances
Time planning	- defined processes during development enable reliable planning with fixed start and end date	- required flexibility impeding reliable time planning with fixed milestones, clear start and end dates - always calculating second option for unexpected disturbances

Brownfield development – what makes the difference?

	General project site	Brownfield site
Public relation	- General information channels -Target group specific information	As general PMP plus - very close contact to investors from an early stage - sometimes improving bad image
Risk assess-ment	Risks most often known from other processes	Number of risks higher than in well known processes, most often risks are not predictable

What about Sustainability?

What about Sustainability?

What about Sustainability?

Various projects and working groups around Europe working on this topic. Some examples:

- REVIT, An evaluation tool measuring and monitoring sustainable development on brownfields.
- RESCUE, The SAT (Sustainability Assessment Tool).
- The German Sustainable Building Council, A Certificate system.
- CL:AIRE, Sustainable remediation forum UK, definition of indicators.

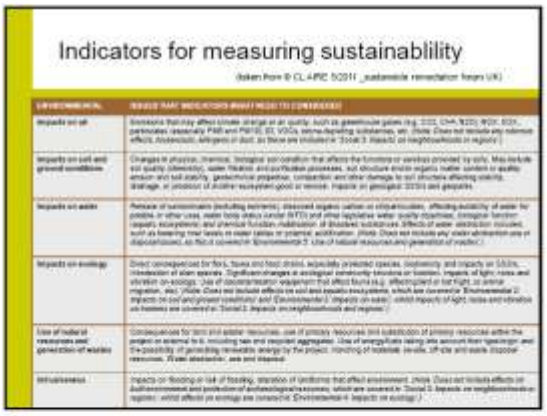
What is sustainablility?

.... not in any case!

During the brownfield redevelopment process as well as during the use of the revitalised site:

- energy and natural resources are used;
- wastes can be generated;
- disturbance to neighbours can be caused (more traffic, dust etc.);
- health and safety risks can be introduced.

(taken from © CL:AIRE 5/2011 „sustainable remediation forum UK)


Indicators for measuring sustainablility


Indicators for measuring sustainablility


Indicators for measuring sustainablility


Conclusions
??????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7.2.4. Summing up: what we have learned- Results of the workgroups an casestudy “Nove Poljane” Ljubljana

TRAINING SEMINAR: workshop summing up

Urban planning brief

Workshop
Nove Poljane
Brownfield development of former barrack site

Urban Design Proposal

- Connectivity with neighbouring and city wide morphological structure
- Concept of built structure design
- Concept of traffic design
- Concept of landscape design
- Concept of energy supply strategy
- Economic viability of the proposal

TRAINING SEMINAR: workshop summing up

Urban planning brief

Workshop
Nove Poljane
Brownfield development of former barrack site

TRAINING SEMINAR: workshop summing up

Urban planning brief

Workshop
Nove Poljane
Brownfield development of former barrack site
5,83 ha

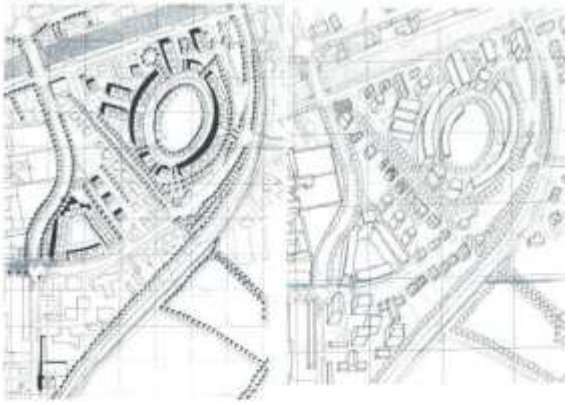
PLANNING PROCESS

1. phase	ANALYSES Existing situation & possibilities for development	• Sectors • Environment • Physical forms • Identification of the main problems & potential of the urban environment * SWOT • Definition of the determinants for future development
2. phase	DEFINITION OF GOALS & criteria for implementation	• General Goals • Specific goals • Standards
3. phase	CONCEPTS OF URBAN DEVELOPMENT	• Alternative development concepts • Valuation * • Selection and preparation of planning document
4. phase	IMPLEMENTATION & monitoring	Implementation strategy • Administrative mechanism • Financial mechanism • Legislative mechanism DEVELOPMENT

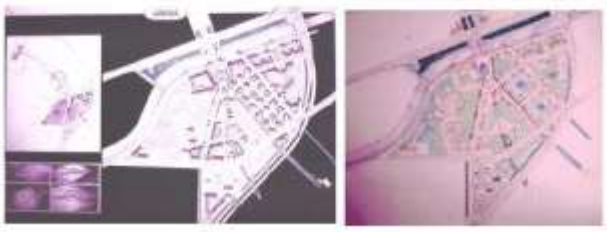
* public participation

Nove Poljane
Competition:
1. PRIZE

Nove Poljane, ELISS, Competition: 2. PRIZE



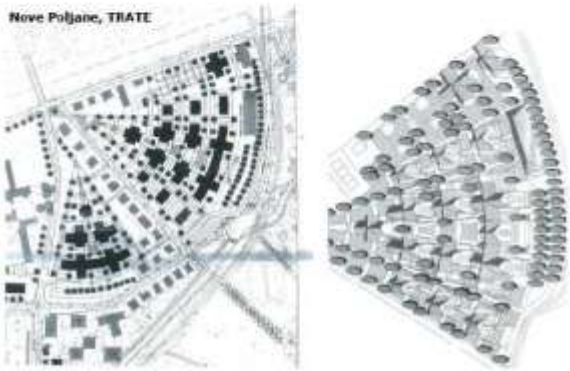
Nove Poljane
ANIMA, Competition: 3. PRIZE



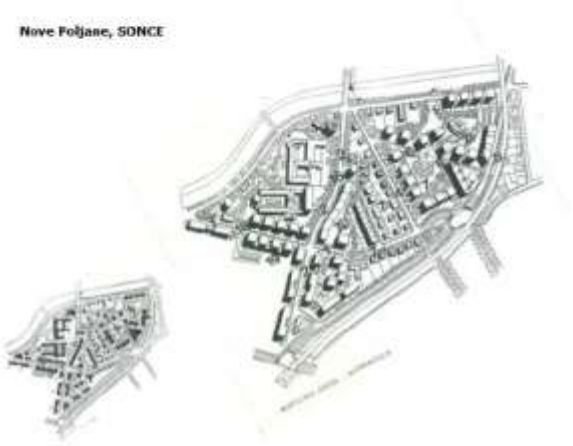
Nove Poljane
ANIMA, Competition: 3. PRIZE

The use of qualitative urban criteria

Nove Poljane, TRATE

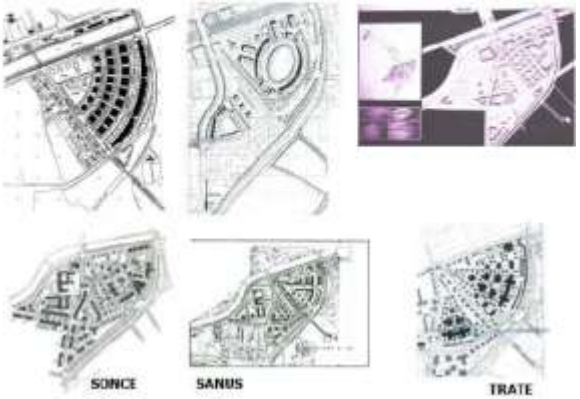


Nove Poljane, SONCE



Nove Poljane, SANUS

1. PRIZE ELISS, 2. PRIZE ANIMA, 3. PRIZE



SONCE SANUS TRATE

QUANTITATIVE URBAN DESIGN CRITERIA

Competition work	Housing m2	Offices, shops m2	Built total m2	FSI
Elisse	38.222	4.029	42.251	0,75
Anima	45.562	6.868	52.430	0,94
Sonce	33.420	12.000	45.420	0,81
Trate	32.525	5.629	38.154	0,68
Sanus	32.704	3.300	36.004	0,64
winner	30.300	1.170	31.470	0,62

QUALITATIVE URBAN DESIGN CRITERIA: VALUATION

Competition work	CONTEXT	PERMEABILITY	VARIETY	LEGIBILITY
Elisse				
Anima				
Sonce				
Trate				
Sanus				
winner				

Broadgate, London

Planning 'game'
'negotiated urban form'

Planning goals:

- good pedestrian permeability of the site
- design of open public space
- mixed uses
- context – continuity in the massing of the built fabric

Negotiation Agreement:

- an increase of FSI from 3 to 5,

includes:

- refurbishment of Liverpool Street Station a
- renewal of the near-by buildings facade

COBRAMAN

www.cobraman-ce.eu

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web site: www.uirs.si

Thank you for your attention!

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF

7.3. List of participants

COBRAMAN

Conference, COBRAMAN 1CE014P4,
Ljubljana, Slovenia, 16th-18th of May 2011

Attendance List, Monday, 16th of May 2011

Reg.nr.	PP_nr	First Name	Surname	Country	Siganture	Returned list of meals
1	9	Igor	Bizjak	Slovenia		ne
2	4	Karel	Borecky	Czech Rp.		X
3	LP	Grzegorz	Boroń	Poland		X
4	9	Boštjan	Cotič	Slovenia		X
5	9	Igor	Cotič	Slovenia		X
6	9	Barbara	Černič Mali	Slovenia		X
7	5	Roman	Danel	Czech Rep.	Danel R.	X
8	9	Kaliopa	Dimitrovska Andrews	Slovenia		X
~~9~~	~~LP~~	~~Bojana~~	~~Divac~~	~~Serbia~~		
10	7	Tereza	Dostalova	Czech Rep.		X
11	2	Thomas	Ertel	Germany		X
12	4	Tomáš	Fiala	Czech Rp.		X
13	8	Chiara	Franceschini	Italy		X
14	5	Hana	Franková	Czech Rep.		X
15	9	Nina	Goršič	Slovenia		X
16	6	Ana	Gradišar	Slovenia		X
17	2	Maren	Gunzenhäußer	Germany		X
~~18~~	~~3~~	~~Magda~~	~~Jasinska~~	~~Poland~~		
19	5	Kamila	Kašovská	Czech Rep.		X
20	3	Inga	Katlewska	Poland		X
21	7	Lenka	Kindlova	Czech Rep.		X
22	5	Alena	Labodová	Czech Rep.		X
23	5	Eva	Lacková	Czech Rep.		X
24	LP	Hanna	Lewandowska	Poland		X
25	LP	Dragan	Marinković	Serbia		X
~~26~~	~~3~~	~~Dominika~~	~~Muszynska-Jeleszynska~~	~~Poland~~		

The project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

CENTRAL EUROPE

EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND

1

COBRAMAN

Conference, COBRAMAN 1CE014P4,
Ljubljana, Slovenia, 16th-18th of May 2011

Attendance List, Monday, 16th of May 2011

Reg.nr.	PP_nr	First Name	Surname	Country	Siganture	Returned list of meals
27	9	Barbara	Mušič	Slovenia		X
28	5	Zdeněk	Neustupa	Czech Rep.		X
29	9	Matej	Nikšič	Slovenia		X
30	2	Iwona	Pelka	Germany		X
31	5	Lukasz	Pierzchala	Poland		
32	7	Marta	Saskova	Czech Rep.		X
33	2	Matthias	Schmid	Germany		X
34	2	Michael	Schweiker	Germany		X
35	6	Primož	Skrt	Slovenia		X
36	7	Martina	Splichalova	Czech Rep.		X
37	5	Barbara	Stalmachová	Czech Rep.		X
38	9	Ivan	Stanic	Slovenia		
39	9	Mojca	Šašek Divjak	Slovenia		
40	6	Stane	Štraus	Slovenia		
41	4	Kamila	Vavrova	Czech Rp.		X
42	3	Marcin	Wasilewski	Poland		X
43	LP	Natalia	Weckwert	Poland		X
44	LP	Krystyna	Wojtaś	Poland		
45	6	Janez	Ziherl	Slovenia		X
46	2	Regine	Zinz	Germany		X
47	5	Dana	Žampachová	Czech Rep.		X
48		Frantisek	KRUŽÍK	CZ		X
49		Antonin	LE BOT	France		X
50						
51						
52						

The project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

8. 7th Wrap up Seminar Vienna 10 October 2011

8.1. Agenda of training seminar

Wednesday 12th of October 2011

7th Brownfield manager training seminar			
09:00	10:00	WRAP- UP seminar	Thomas
10:00	10:30	Coffee break	
10:30	12:00	WRAP-UP seminar	Thomas
12:00	13:00	Lunch in Hotel	
13:00	15:00	Management Instruments: - site review - SWOT	Thomas
15:00	15:30	Coffee break	
15:30	17:00	Management Plan	Thomas

8.2. Seminat themes

8.2.1. How to deal with contamination of soil and groundwater, based on original presentation of Monika Kosulicova and Hana Pavlu from 3rd Seminar in Ostrava February 2010

8.2.2. Pros and Cons of PPP, based on original presentation of Dr. Thomas Ertel from 4th Seminar in Ferrara May 2010

8.2.3. Key issues calculations and evaluation in real estate development, based on presentation provided by Jürgen Treiber

How to calculate evaluation in real estate development

Jürgen Treiber - Treiber Consulting
Real Estate Project Development
Hanne-Schorp-Pflumm-Weg 44 - 70569 Stuttgart
Fon: 0711- 74069236 - mobil: 0174-1888866
mail: jt-tc@gmx.de

Cost Elements

- Construction costs: demolition of existing buildings, refurbishment and/or new construction, landscaping, utility hook-ups, tenant improvements, etc.
- Environmental costs: Asbestos and MMMF removal and disposal, soil clean up, groundwater analysis and clean up if required
- Permitting costs: urbanization fees and/or works, change of use fees, construction duties, legal costs for permitting agreements with the Municipality,
- Design and engineering: design team costs (architects, engineers), surveyors, cost planning and control, works supervision, H&S planning and control, specialists advice
- Management: development management, project management, construction management (depending on the tendering strategy)

Cost Elements/2

- Marketing costs: leasing fees (office and retail), sale fees (residential), marketing tools (Web, brochures, gadgets, events, etc.), advertisment and specific marketing campaigns.
- Administrative and operating costs: legal fees, vehicle administration costs (bookkeeping, auditing, etc.), notarial fees, etc.
- Security and insurance relating to the acquired site
- Financial costs: up-front fees, loan administration fees, commitment fees, cost of
- guarantees on deferred payments, legal costs and other costs reimbursed to the lender
- Interest charges on senior loan and on VAT loan
- Exit costs: brokerage, legal costs for drafting of sale docs, set up and management of the data room

Cost Elements/3

- Site acquisition: this line item is calculated as the residual value of the site based on the results of the Discounted Cash Flow (DCF) analysis, it is then compared with the asking price.
- Contingencies: an allowance for unforeseen costs, which is proportional to the variability risk of the estimated costs.

On the Revenues side, the main elements are the following:

- Rental income from the leasing up of the new buildings
- Sale of the rented assets

The main results

By means of a DCF model, several economic and financial parameters are calculated that help the investment committees of the equity investors and of the lending banks to take a decision

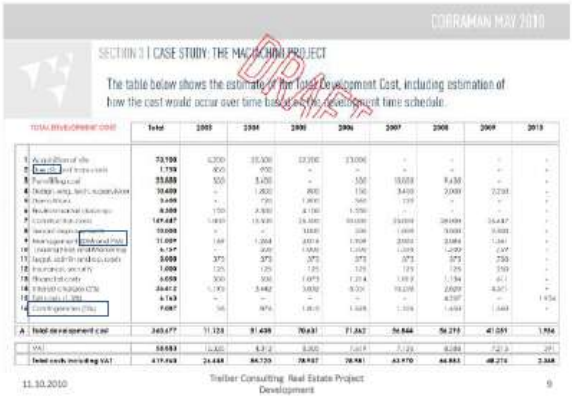
- Economic results: development margin, development yield, equity multiple
- Financial results: unlevered Internal Rate of Return (IRR), equity IRR

Explanation

- development margin/development yield: being net profit as a percentage of total development costs, being 15-20%+ in the first analyses. Variation depends i.e. on the development period, the size of the development and the type of the property.
- equity multiple: The number expresses the multiplication factor of the invested equity in comparison to the income generated by the project result.

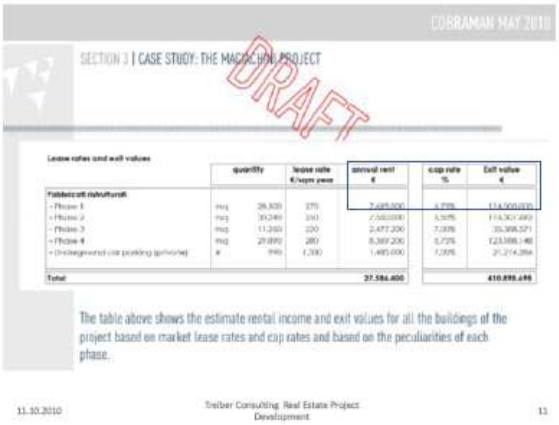
Explanation/2

- unlevered Internal Rate of Return (IRR): the present value - via DCF-calculation – of the cash flow before financial costs and tax.
- equity IRR: the present value - via DCF-calculation – of the cash flow including all project related payments like equity, loans, tax etc.



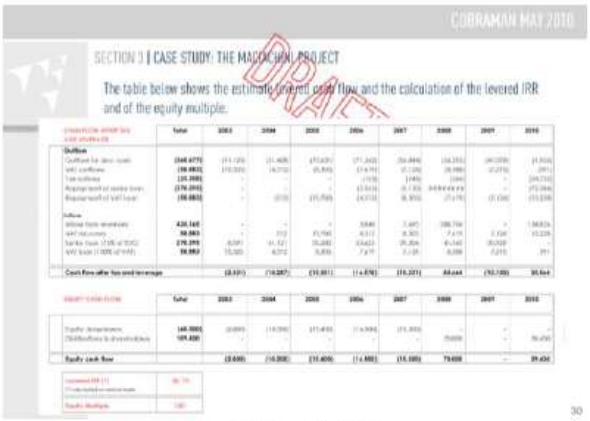
Explanation/3

- Due diligence: Examination prozess including all economical, technical and legal aspects.
- DM and PM: Development Management and Project Management
- Contingencies: Possible costs that may occur during development
- Annual rent/cap rate = Exit value



The influence of time

PRESENT VALUE CALCULATION						
The following shows how to calculate the present value as the sum of the present values of the each flows.						
Interest rate	10%					
Payment	1.000					
Year	0	1	2	3	4	5
Payment		1.000	1.000	1.000	1.000	1.000
Present value factor	100%	91%	83%	75%	68%	62%
PV of payment		909	826	751	683	621
PV of all payments	3.791					



Thank you for your attention!!!

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Real Estate Project Development
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Fon: 0711- 74069236 - mobil: 0174-1888866
mail: jt-tc@gmx.de

8.2.4. Brownfield Marketing, based on original presentation of Dr. Thomas Ertel from 5th Seminar in Usti, September 2010

8.2.5. SWOT based on draft output 4.2.1

8.2.6. Management Plan, based on draft output 4.2.2

8.3. List of participants

List of Participants

COBRAMAN

Project:	COBRAMAN 1CE014P4
Meeting:	**Training seminar WP4 Tagungsraum 9**
Venue:	Hotel Flemings Wien
Date:	12.10.2011

Nr.	Name	Surname	Organisation	Signature
1	Gianluca	Bortolotti	SIPRO Ferrara	
2	Bostjan	Cotic	UPI of the Republic of Slovenia	
3	Roman	Danel	VSB - Technical University of Ostrava	
4	Tereza	Dostalova	City of Usti nad Labem	
5	Thomas	Ertel	et environment and technology	
6	Tomas	Fiala	City of Most	
7	Chiara	Franceschini	SIPRO Ferrara	
8	Hana	Franková	VSB - Technical University of Ostrava	
9	Ana	Gradišar	City of Kranj	
10	Maren	Gunzenhäußer	City of Stuttgart	
11	Magdalena	Jasinska	University of Economy Bydgoszcz	
12	Frantisek	Jirasek	City of Most	
13	Kamila	Kašovská	VSB - Technical University of Ostrava	
14	Lenka	Kindlova	City of Usti nad Labem	

CENTRAL EUROPE COOPERATING FOR SUCCESS. EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND

1

List of Participants

COBRAMAN

Nr.	Name	Surname	Organisation	Signature
15	Eva	Lackova	VSB - Technical University of Ostrava	
16	Hanna	Lewandowska	City of Bydgoszcz	
17	Dominika	Muszynska-Jeleszynska	University of Economy Bydgoszcz	
18	Iwona	Pelka	et environment and technology	
19	Lukasz	Pierzchala	VSB - Technical University of Ostrava	
20	Frantisek	Podrapski	City of Usti nad Labem	
21	Marta	Saskova	City of Usti nad Labem	
22	Matthias	Schmid	City of Stuttgart	
23	Michael	Schweiker	City of Stuttgart	
24	Primož	Skrt	City of Kranj	
25	Martina	Splichalova	City of Usti nad Labem	
26	Lenka	Sucha	City of Usti nad Labem	
27	Marcin	Wasilewski	University of Economy Bydgoszcz	
28	Natalia	Weckwert	City of Bydgoszcz	
29	Zuzanna	Zacniewska	University of Economy Bydgoszcz	
30	Dana	Žampachová	VSB - Technical University of Ostrava	
31	Janez	Ziherl	City of Kranj	
32	Regine	Zinz	City of Stuttgart	

CENTRAL EUROPE COOPERATING FOR SUCCESS. EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND

2

List of Participants

COBRAMAN

Nr.	Name	Surname	Organisation	Signature
33	Jaga	Kołeczska	University of Economy in Bydgoszcz	
34				
35				
36				
37				
38				
39				
40				

CENTRAL EUROPE COOPERATING FOR SUCCESS. EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND

3

9. Online Seminars:

9.1. 1st online seminar

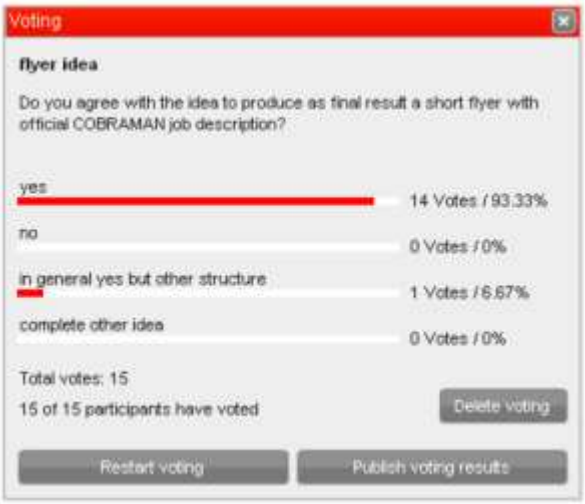
Final output:

Flyer of 3 pages which can easily serve as job ad.

Proposed structure:

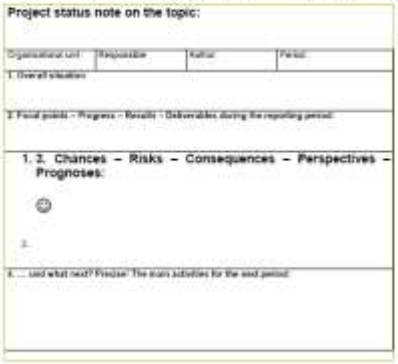
A) short description of daily work
B) list with tasks
C) list with skills

2 follow up



Helpful tool: project status note

Municipality Stuttgart, Michael



3 Project management

Indicate your level of experiences in interdisciplinary project management

3 Project management

Helpful tool: gantt chart

- MS Project; the original but expensive
- Openproj; freeware software, different languages *http://openproj.org/openproj*
- P2ware and architect enterprice; different licences available

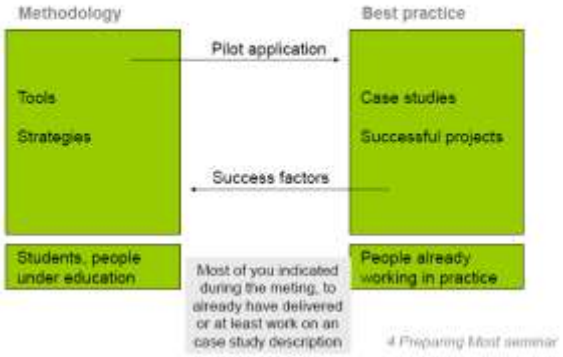
3 Project management

5 key issues for Most meeting

1. Interdisciplinary working group (IWG)
   Homework: template rules of operation
2. Legal framework
3. Project management
   Homework: helpful tools for IWG management
4. Site review
   Homework: each partner to draft a first version of his pilot project
5. SWOT
   Homework: each partner to draft a first version of his pilot project

4 Preparing Most seminar

Linking WP4 to WP3



Pros & cons

Should we have further online trainings?

YES, because....

....but to technical
....but try other tools
....new information, stay in touch
....to clarify the actions and know what to do next
....it is great to hear you:)
....but connection is sometimes with feedback and it is hard too understand
....saves money and time but only if everyone has the possibility of an own line. The connection would be to bad.
....I wonder how much we will pay for the phone....

NO, because....

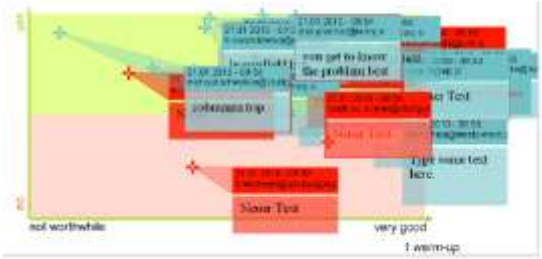
....In case of need of a fast interaction of PP

9.2. **2nd online seminar**

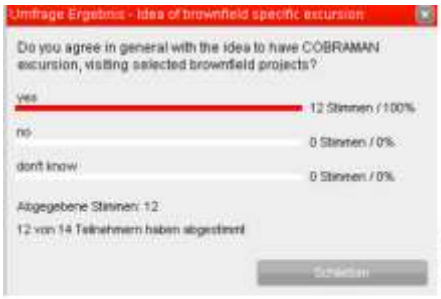
Today's training programme:

1. Technical check / warm-up
2. Project management plan template
3. Key subsidiary plans
4. Clarification homework
5. Questionnaire feedback summary

Did you ever participate in a brownfield specific excursion and was this excursion worthwhile?



1 warm-up



One participant additionally agreeing, connected only via telephone

The following procedure was proposed:

- The excursion is now planned for April 2010 as WP4 activity.
- The lead in planning and organizing will taken over by the partners from Usti.
- Marta will be preparing a draft letter to JTS to ask for approval of this workplan amendnement.
- Hanna as Lead Partner representative will be sending the letter to JTS.

Template project management plan

Template based on the PMBOK Guide

2 PMP

Template project management plan
(our COBRAMAN
project management handbook)

1. Introduction
2. Project Management Approach
3. Project Scope
4. Milestone List
5. Schedule Baseline and Work Breakdown Structure
6. Project Change Control Process
7. Subsidiary Plans
8. Risk Register
9. Resource Calendar
10. Cost Baseline
11. Quality Baseline

2 PMP

Subsidiary plans

Spontaneously:
Can you think of best/worse practice examples providing to the partners?

Template project management plan key elements

7. Subsidiary Plans
   - Scope Management Plan
   - Cost Management Plan
   - Communication Management Plan
   - Risk Management Plan

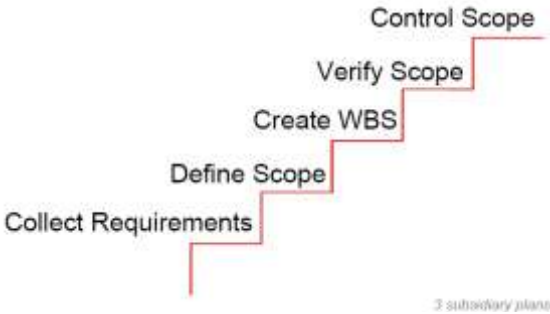
The templates shown during the seminar in the download section are still available. You may find the download section by following the link of you email invitation

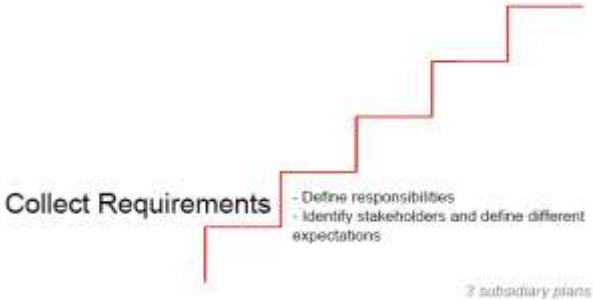
Scope Management Plan

Work that must be performed to deliver a product, service or result with the specified features and functions (Definition taken from BMBOK©, 2008)

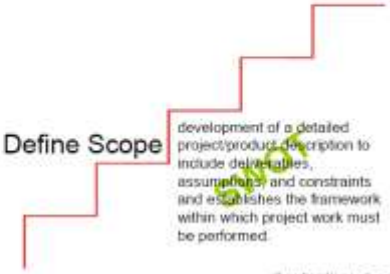
Scope Management Plan
Five steps to manage Scope

Scope Management Plan
Five steps to manage Scope

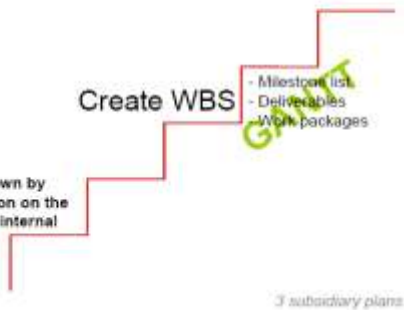




Scope Management Plan
Five steps to manage Scope



Scope Management Plan
Five steps to manage Scope



NOTE: **the examples shown by Thomas are available soon on the COBRAMAN homepage, internal part.**

Scope Management Plan
Five steps to manage Scope

Define how the deliverables will be verified against the original scope. Process of acceptance deliverables.

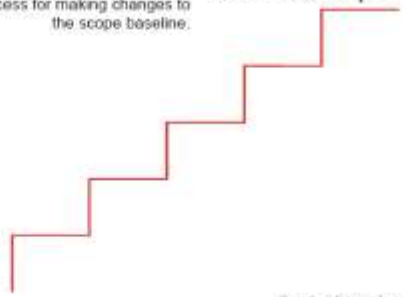
Verify Scope

3 subsidiary plans

Scope Management Plan
Five steps to manage Scope

Monitoring projects progress. This section also details the change process for making changes to the scope baseline.

Control Scope

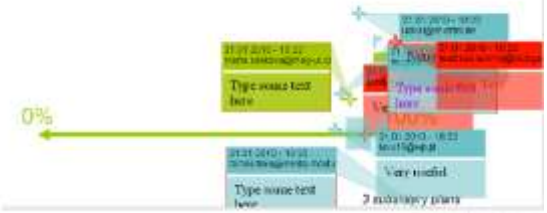


3 subsidiary plans

Scope Management Plan

What do you think?

Do you think a scope management plan is useful for a brownfield redevelopment projects?



3 subsidiary plans

Cost management plan

Project costs Management includes the processes involved in ***estimating***, ***budgeting*** and ***controlling*** costs so that the project can be completed within the approved budget (Definition taken from BMBOK©, 2008)

3 subsidiary plans

Cost management plan

- Who is *responsible* for managing costs
- Who has the *authority to approve changes* to the project or its budget
- How *cost performance is quantitatively measured* and reported upon
- *Report* formats, frequency and to whom they are presented
- *Detailed project budget* based on WBS

3 subsidiary plans

Cost management plan

Tools for estimating brownfield project costs:

a. Expert Judgment
b. Analogous Estimating (from previous projects)
c. Buttom-up estimating (starting from very detailed estimation per work-package and than summarising to higher level)
d. Three point Estimation PERT (Most likely C_M, Optimistic C_O, Pessimistic C_P)

$$C_E = \frac{C_O + 4C_M + C_P}{6}$$

e. Reserve Analysis

3 subsidiary plans

Cost management plan

Budget monitoring:

- Control account (WBS component) vs current costs
- Define reporting periods / sequences
- Define budget flexibility rules (control thresholds)

3 subsidiary plans

Communication management plan

What do you think?

How many of his working time a project mana[illegible]mmunicating?

In literature it is stated that good project manager communicate up to 85% of their whole working time (PMBOK ©, 2004)

3 subsidiary plans

Communication management plan

Define roles

- Intersiciplinary Working Group (IWG) / Change Control Board
- Brownfield Manager
- Staff only temporarily involved in the IWG
- Key Stakeholders
- Program Managers (superior authority, mayors office, public funds office)

...and set up project team register

3 subsidiary plans

Communication management plan

Internal Communications Matrix

Communication Type	Objective of Communication	Medium	Frequency	Audience	Owner	Deliverable
Kickoff Meeting	Introduce the project team and the project. Review project objectives and management approach.	•Face to Face	Once	•Project Sponsor •Project Team •Stakeholders	Project Manager	•Agenda •Meeting Minutes
Project Team Meetings	Review status of the project with the team.	•Face to Face •Conference Call	Weekly	•Project Team	Project Manager	•Agenda •Meeting Minutes
Technical Design Meetings	Discuss and develop technical design solutions for the project.	•Face to Face	As Needed	•Project Technical Staff	Technical Lead	•Agenda •Meeting Minutes
Monthly Project Status Meetings	Report on the status of the project to management.	•Face to Face •Conference Call	Monthly	•PMO	Project Manager	
Project Status Reports	Report the status of the project including activities, progress, costs and issues.	•Email	Monthly	•Project Sponsor •Project Team •Stakeholders •PMO	Project Manager	•Project Status Report

3 subsidiary plans

Communication management plan

3 subsidiary plans

Communication management plan

Define roles

- Intersiciplinary Working Group (IWG) / Change Control Board
- Brownfield Manager
- Staff only temporarily involved in the IWG
- Key Stakeholders
- Program Managers (superior authority, mayors office, public funds office)

...and set up project team register

3 subsidiary plans

3 subsidiary plans

The whole toolkit is ready to download at:

http://www.revit-nweurope.org/selfguidingtrail/27_Stakeholder_engagement_a_toolkit.pdf

The framework structure sheets in doc are also available in the download section of the web-conference.
Please use the link you received with you online invitation.

Risk management plan

Objective:

Increase the probability and impact of positive events, and decrease the probability and impact of negative events in the project. (Definition taken from BMBOK©, 2008)

3 subsidiary plans

Risk management plan

1.step: define risk categories

such as technical, external, organizational, project management. *Note:* in each category risks on several project objectives can be listed

Example:

technical risk; unknown groundwater pollution, risk on project objective time (significant time increase) risk on project objective cost (significant cost increase)

external risk; extremely cold winter, risk on project objective time (significant time increase)

3 subsidiary plans

Risk management plan

2.step: identify risks

- Brainstorming
- Delphi technique
- Interviewing

...to built up a risk register where the risks and their potential responses (measure and responsible persons) are listed.

3 subsidiary plans

Risk management plan

3.step: perform qualitative risk assessment
by allocating risk probability and possible impact to each risk in the risk register

...to built update the risk register with a priority list of project risks

1. risks requiring near-term responses
2. risks requiring particular attention
3. risks requiring additional analysis and response
4. watchlist of low–priority risks

3 subsidiary plans

Very short feedback to this content part of the online seminar

Clarification homework according to email sent 11.12.09

IWG and organisational aspects

All participants to state briefly to which administrative unit the trainees belong to, to provide an organisation chart indicating their position, what are their experiences in this role so far and where the brownfield manager should be preferably located (organisation) according to your experiences. Homework to be delivered as plain text until end of December

Legal framework

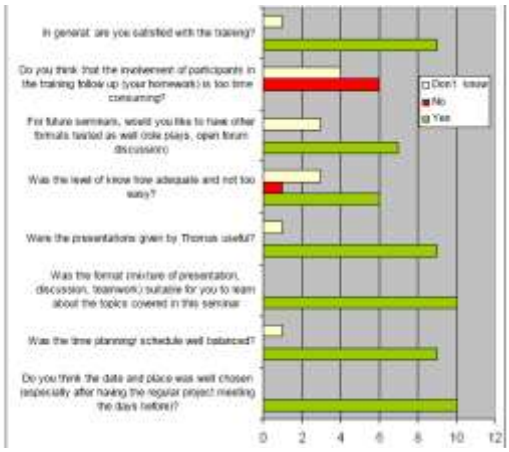
It is our aim to set up a catalogue of legal framework affecting brownfield management, including national chapters to guide all COBRAMAN through national regulations / laws, which do implement or are related to European directives. The national partners clarify by themselves, who will do what. Homework to be done by the partners (see presentation) until end of January 2010

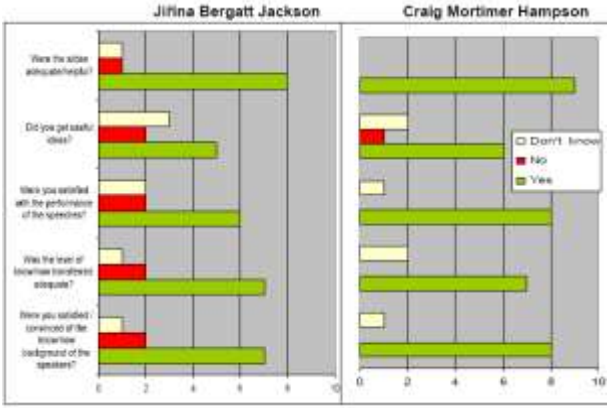
project management instruments (2nd day of seminar)

All partners are asked to establish SWOT and site review for their local project if possible. These documents should be provided in a publishable version (indicate where confidential information is deleted), until Febr. 2010, contributing to our collection of best practise.

4 homework

Questionnaire: General organization





Future seminars

- more teamwork, more examples of BF projects from the past
- There should always be an active part in the training. This could be working in small groups, plays, ... If the group splits up in smaller units to conversation is facilitated. The task of each seminar and each working step should be clear for the presenters and working group before starting to present/work.
- apparently people talk more with each other when they are put into small groups and when they have precise task-oriented activities to fulfill though the groups should always have the strongest link inside as so many PP are inexperienced and yet with ideas that if there is a "leader"(ab more experienced) present the work group is not a waste of time, also when the questions are very specific not general, the line of working seems easier (though probably less creative)
- less presentations, more interactive group discussions, demand for more WP leaders responsibility saving time for training programme (instead of repeating WP3 database discussions having time to do BF manager training activities)
- forms of work: Workshops, working group, possibility to apply the acquired knowledge in practice
- Topic of seminar: Tools of revitalization
- Studies tours
- Actually I do not have any. Perhaps, due to my own field of interest, I would add more training concerning project management.
- forms of seminary: workhops, working group, study tours
- topic of seminary: methods of planning revitalisation proces, tools of revitalisation proces
- more involvement of partners and their experiences; expert effort to give general hints starting from specific experiences

More practical work, more practice examples

Handbook

- presentations, general information
- "In truth, I do not know what to add segmently, but I will be very happy if a whole handbook helps me as a guide or mentor of work with brownfields in practical matters. Not just as a collection of theoretical presentations (Of course very important)."
- all presentions, list of participants and a summary of each training
- I liked the reference to the legal framework and website links. Sth on building partnerships with stakeholders? Maybe, the community inclusion strategy (public involvement plan), remediation plan, barriers to redevelopment
- information about pilot sites excursions (photos and description)
- Foundations of theory
- Case studies
- In my opinion the training handbook included everything I need, therefore I can not state what could be added
- case studies, basic of theory/knowledge of revitalisation brownfiel, tolls of revitalisation proces
- power point presentations, all documents provided by experts, relevant internet websites, summary of tackled topics

presentations, info given during seminars, practice examples

The paper in hand reflects the author‘s views and the Managing Authority of the INTERREG IV B CENTRAL Programme is not liable for any use that may be made of the information contained therein.

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