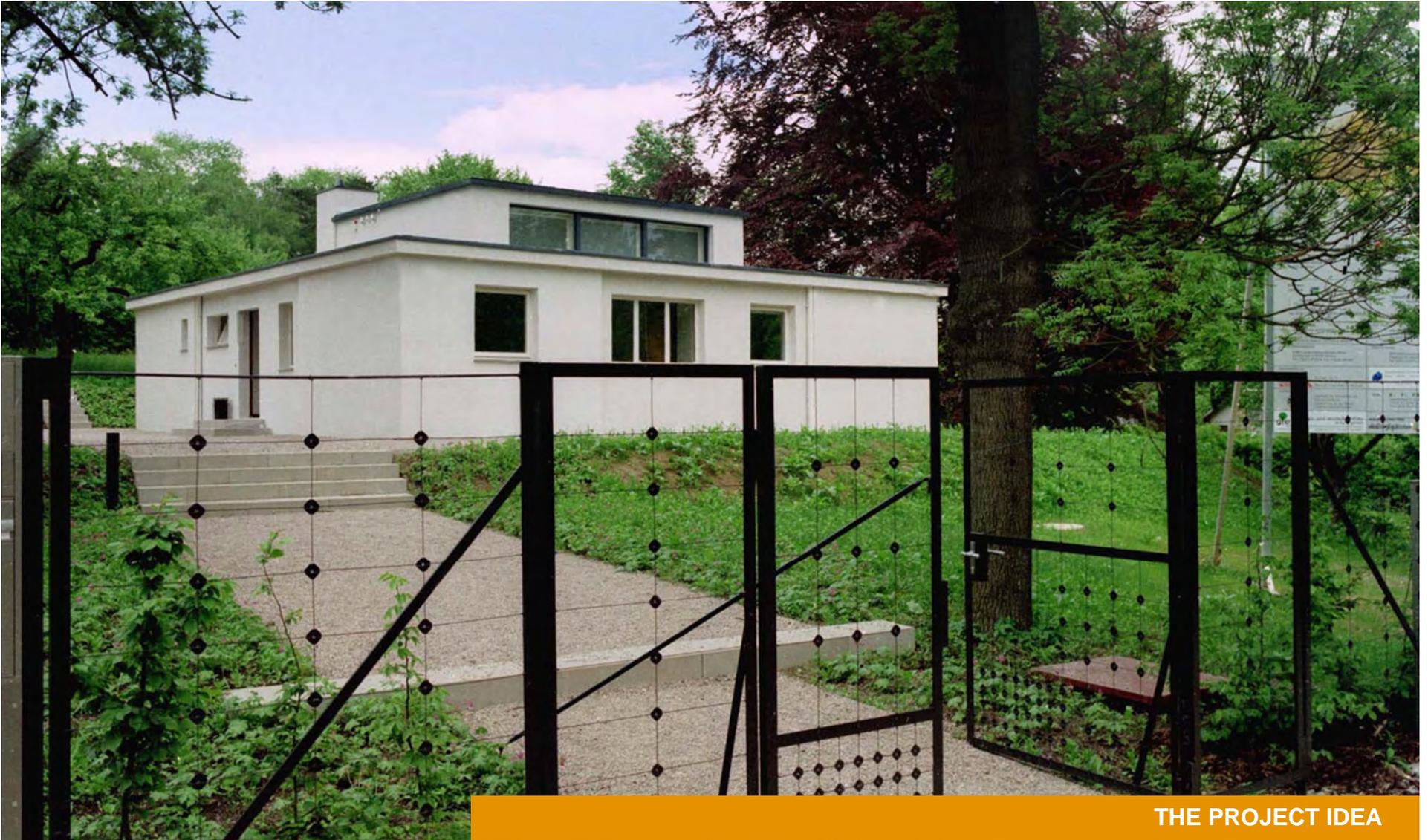




OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



THE PROJECT IDEA

Bauhaus Exhibition Weimar 1923: „Haus am Horn“

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



THE PROJECT IDEA

EXPO 2000 – the Weimar project: Development „Neues Bauen Horn“

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



THE PROJECT IDEA

Development "Neues Bauen am Horn"

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



THE PROJECT IDEA

Development plan „Neues Bauen am Horn“

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



REVALUATION BY REVITALISATION IN GERMANY ...

down town Zella-Mehlis

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



... OR IN THE UNITED STATES

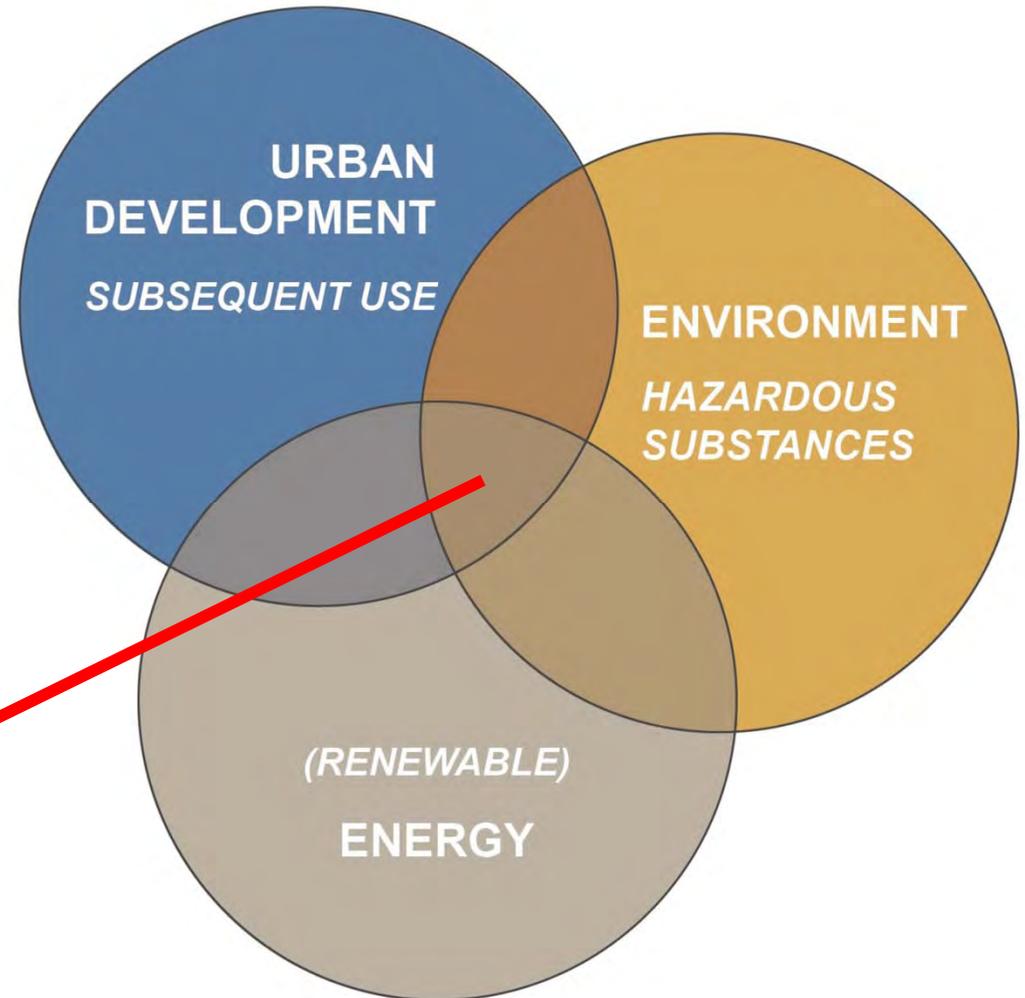
Poihu, HI

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

optirisk® was developed in the frame of research project REFINA of the BMBF and means:

*“**Optimization** of the site development for polluted, unused properties based on identification and monetary valuation of liability and investment **risks**”*

potential of optimization

**THE APPROACH**

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



multidisciplinary

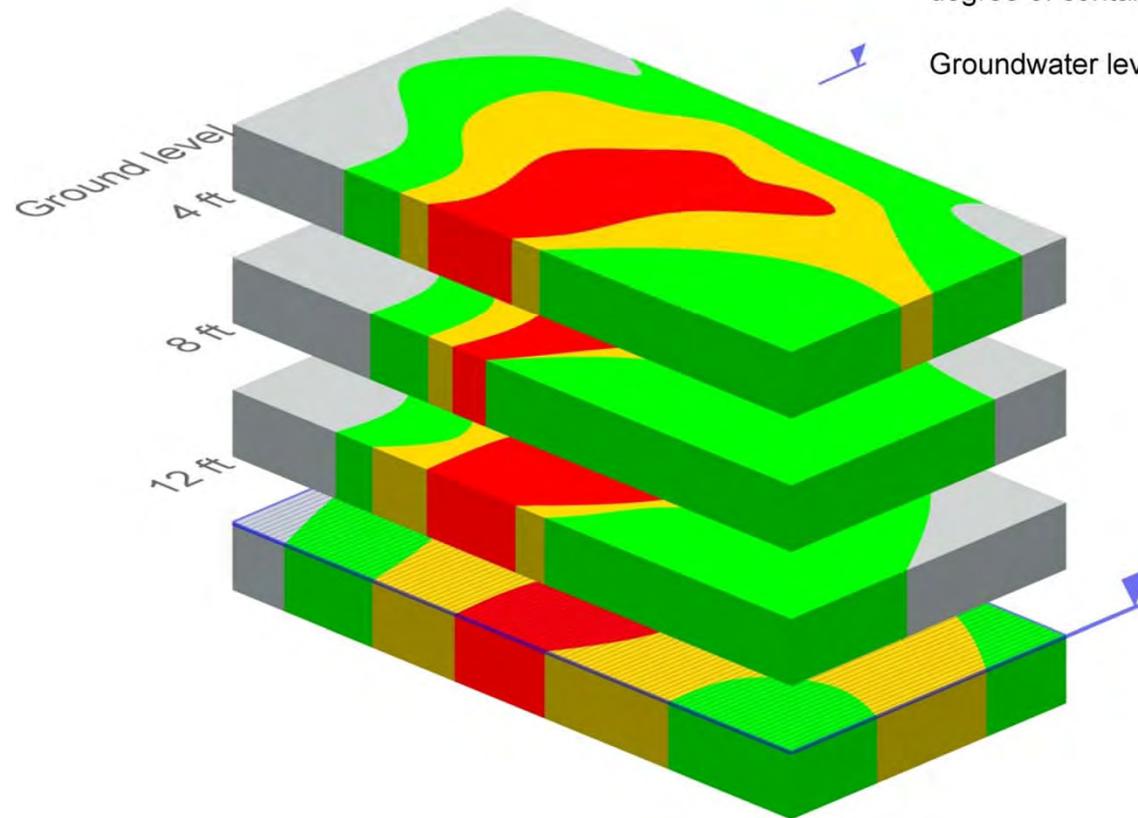
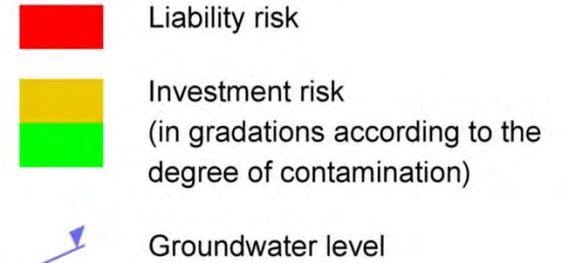
OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

Risks:

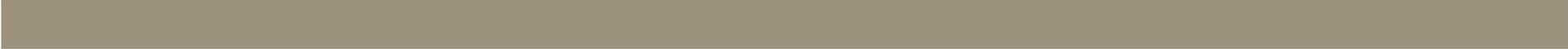
Liability risk



**Investment risk /
waste disposal risk**



THE RISK PROGNOSIS MODEL



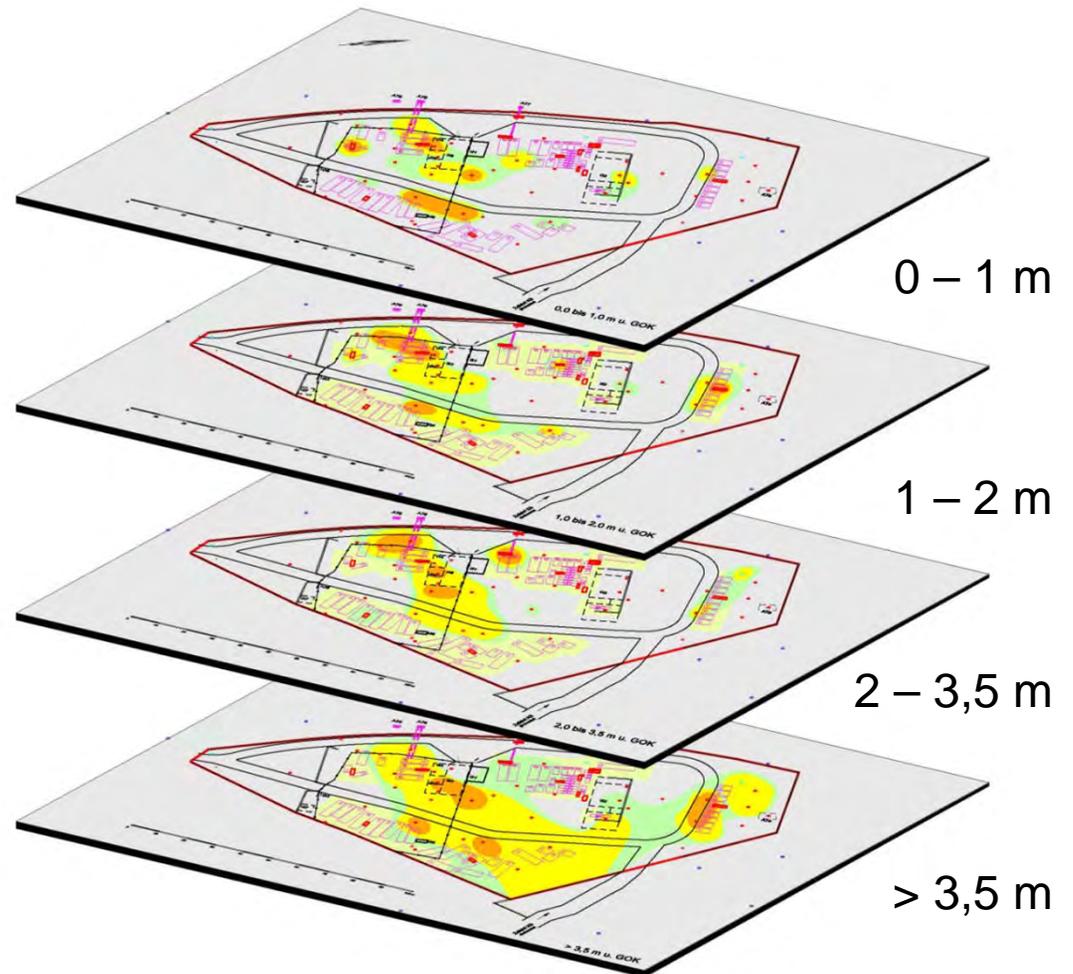
OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

Disposal costs:

Liability risk



Investment risk / waste disposal risk



> 3,5 m below ground level construction water maintenance / cleaning of contaminated ground water

THE RISK PROGNOSIS MODEL



OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



THE MODEL SITE IN TROUTDALE (OR)

Aerophoto

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



THE MODEL SITE IN TROUTDALE (OR)

Workshop . Bauhaus-University Weimar

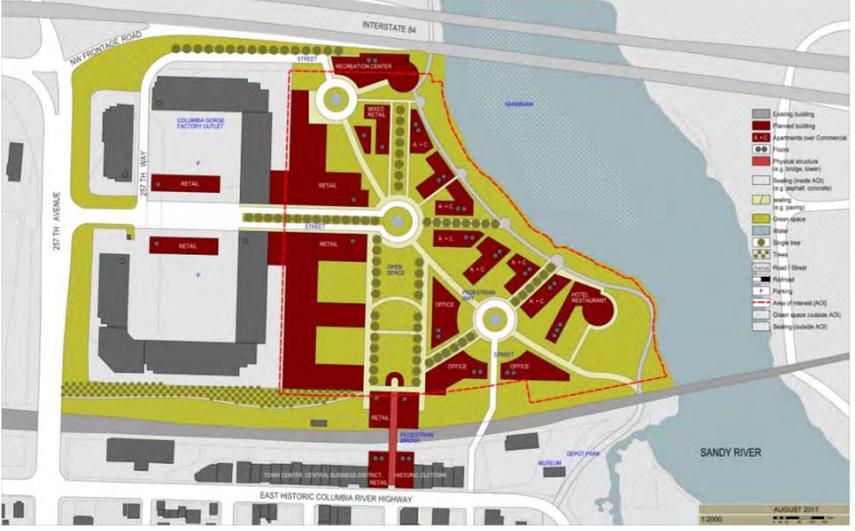
OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



TOWN PLANNING RATING SYSTEM

impromptu design

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



TOWN PLANNING RATING SYSTEM

redevelopment concepts

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



Urban Development Evaluation Matrix

OPTIMIZATION OF SITE DEVELOPMENT CONCEPTS FOR ECOLOGICALLY BURDENED SITES

Urban Development Evaluation Matrix

For municipalities, urban apartment corporation, design counselor, juries, etc.

The urban development evaluation matrix is a tool for comparing and evaluating urban concepts.

Criteria / Development Goals

Step 1: Definition of the specified categories

Importance for the site development

Step 2: Weighting of categories

Draft evaluation

Step 3: Review of the urban draft

Evaluation

Step 4: Overview of the urban drafts

(c) 2011 JENA-GEOS® | Legal notice

MATRIX:

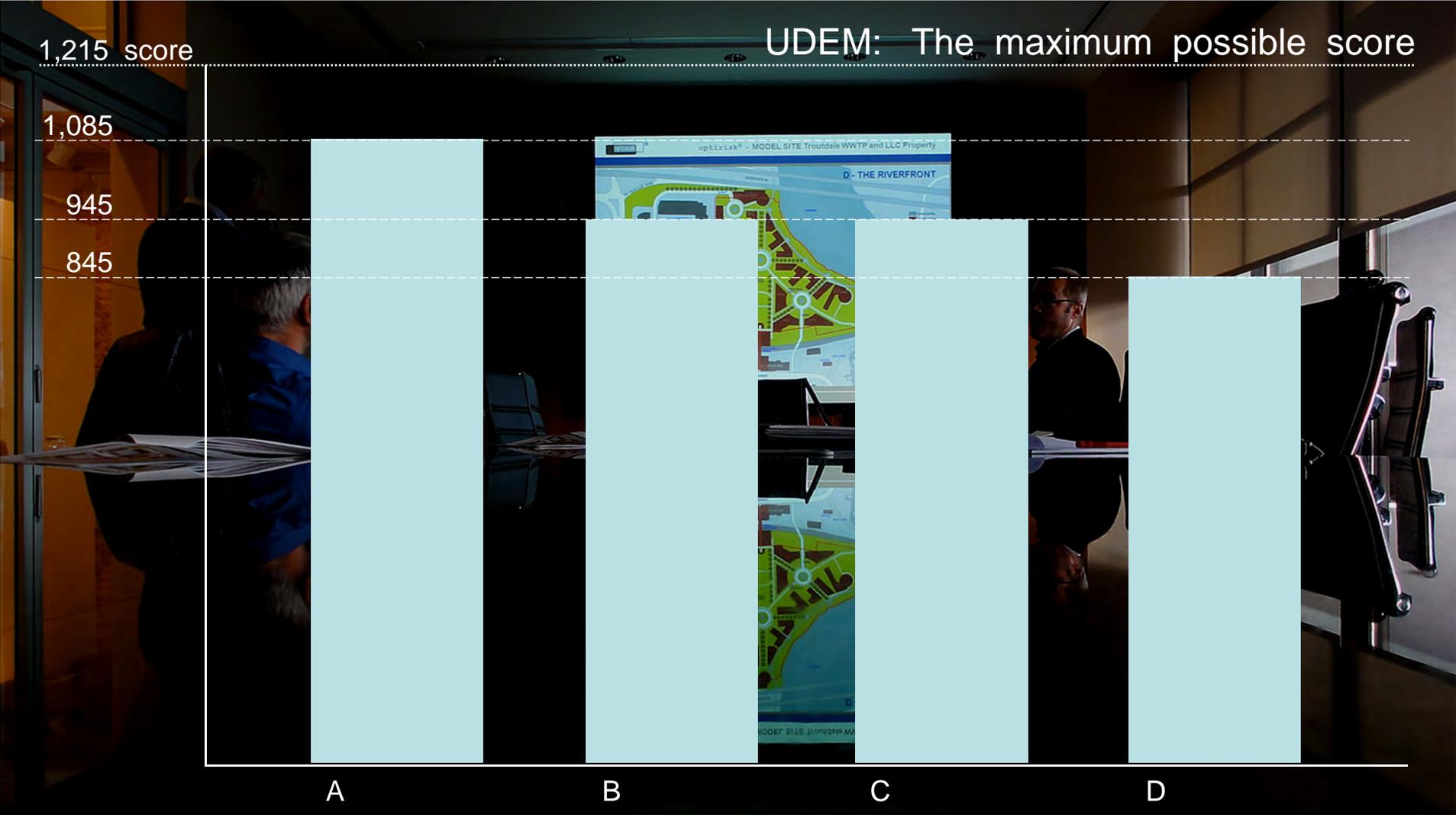
- townscape and landscape
- urban spatial structure
- conflict potential
- improvement potential

TOWN PLANNING RATING SYSTEM

download from www.optirisk.de

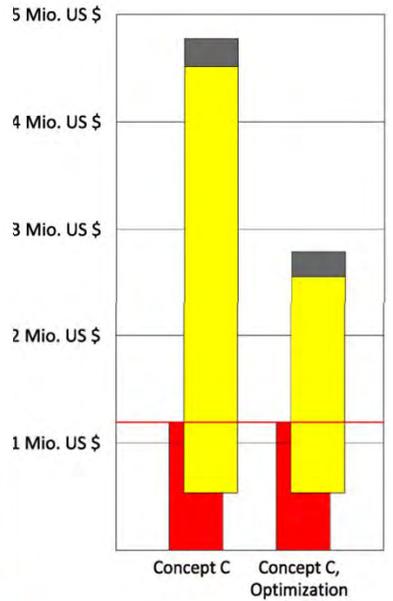
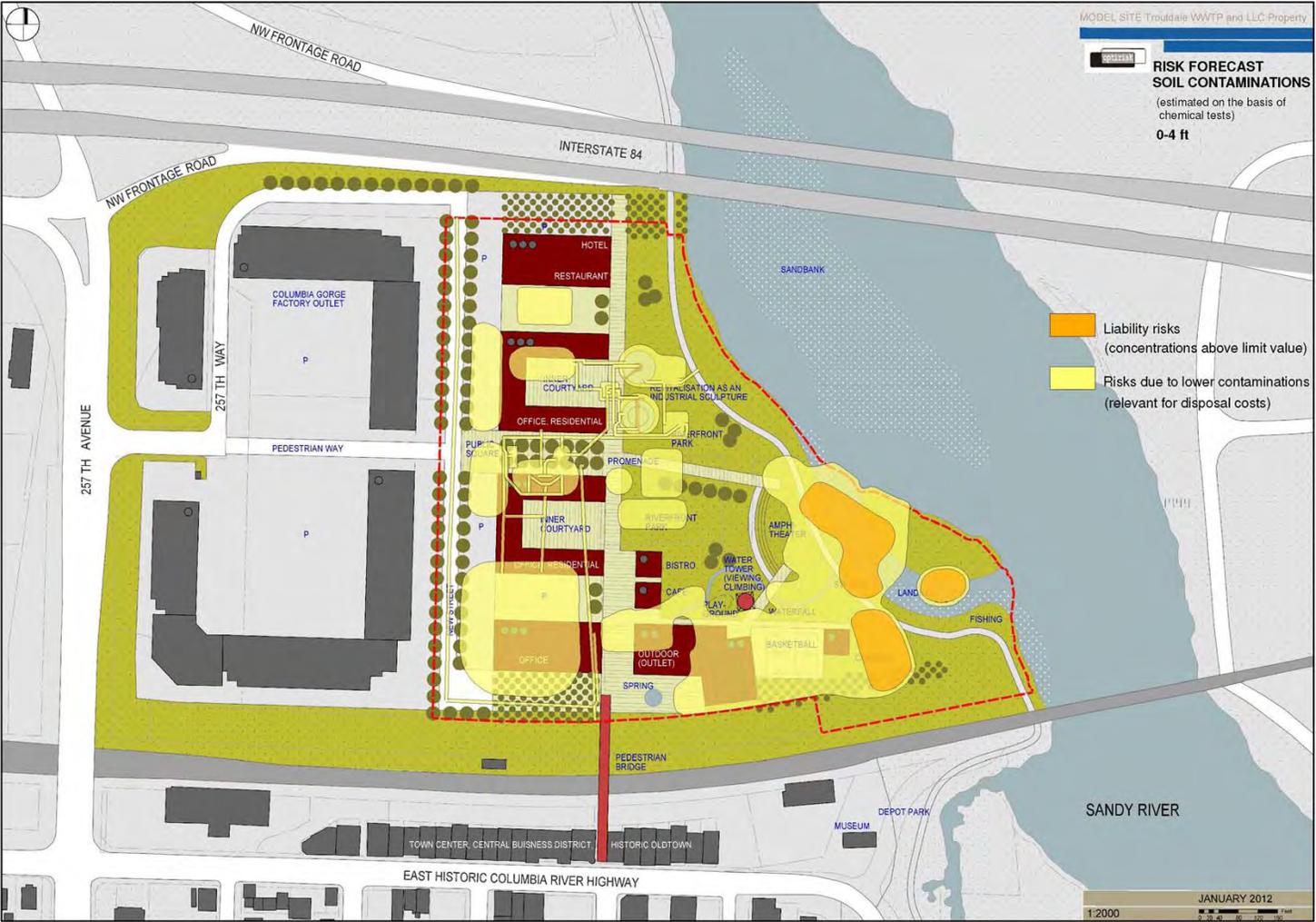
OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

UDEM: The maximum possible score

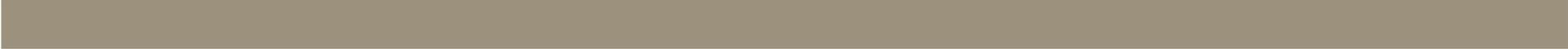


TOWN PLANNING RATING SYSTEM

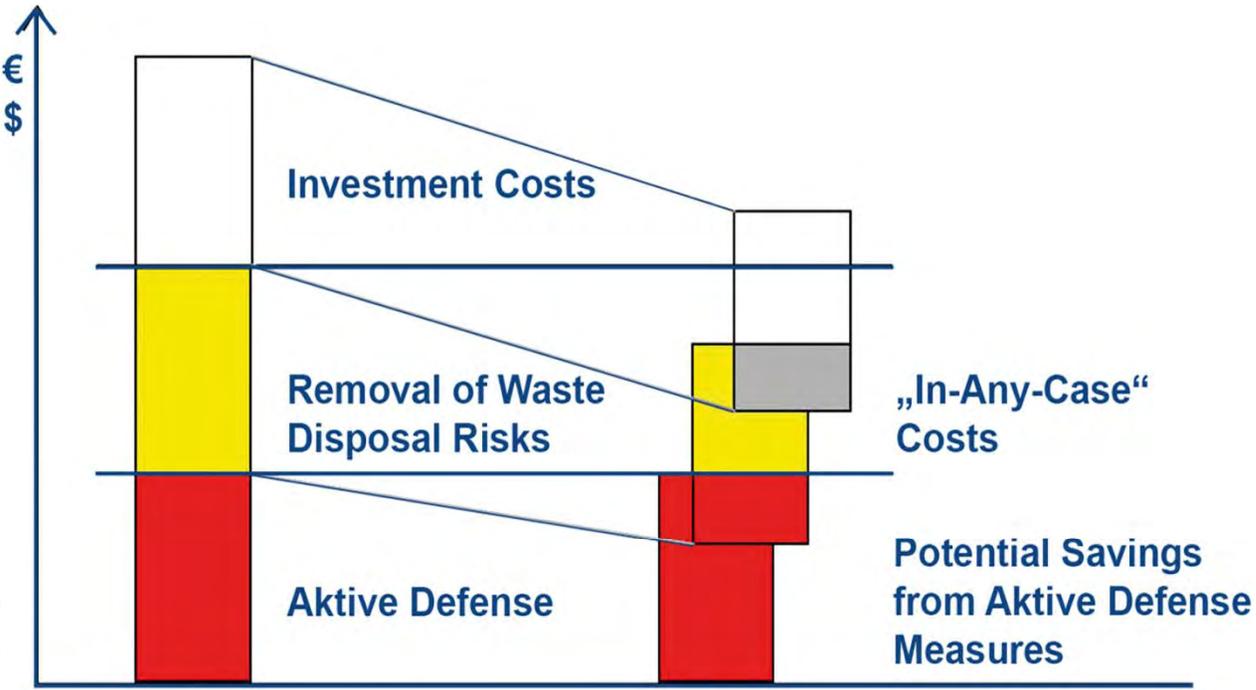
OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



THE INTEGRATED SITE DEVELOPMENT CONCEPT



OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



THE INTEGRATED SITE DEVELOPMENT CONCEPT

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



! NOVELTY
Development of a tool to find the most suitable kind of renewable energy for this site in consideration of licensable follow-up use

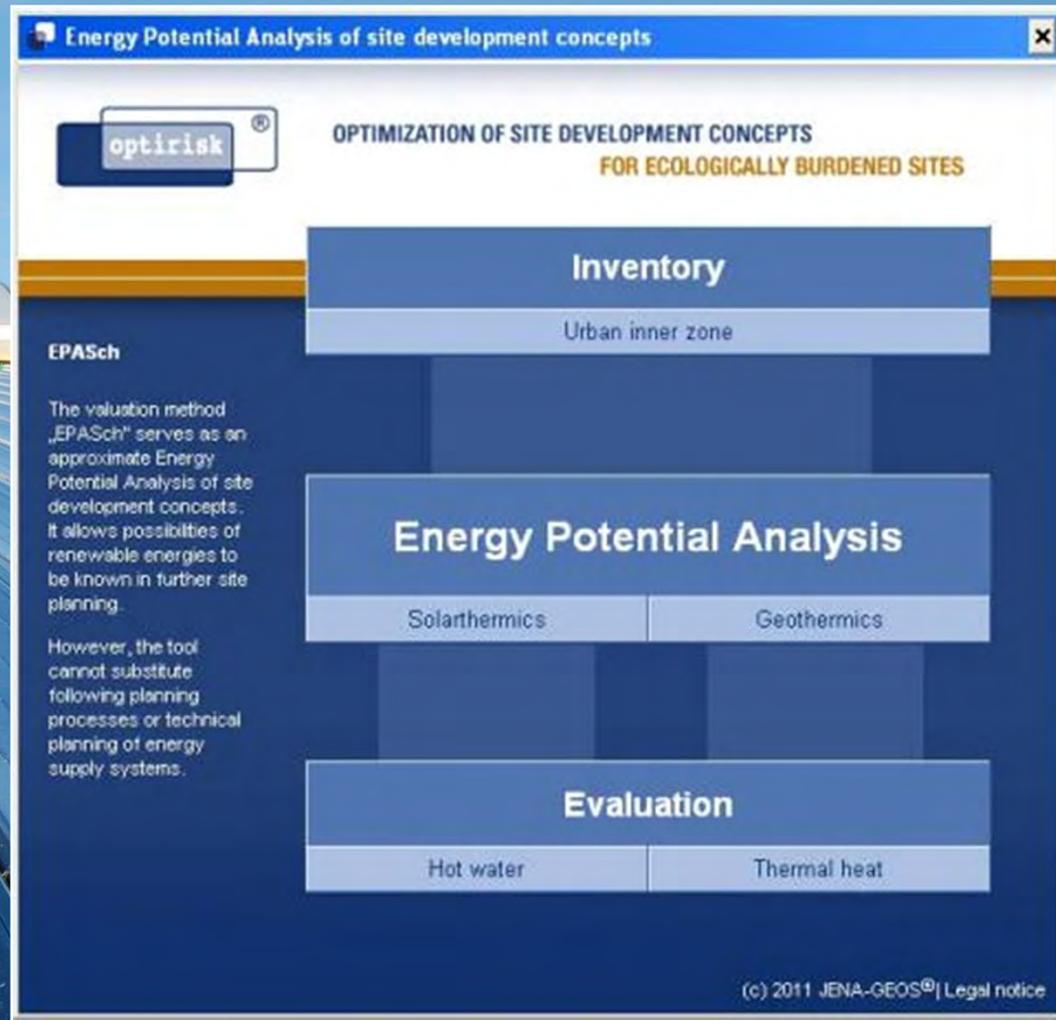
RENEWABLE ENERGIES

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

Wide-area supply:
Appreciation of areas through
use options of energy
production, conversion and
distribution



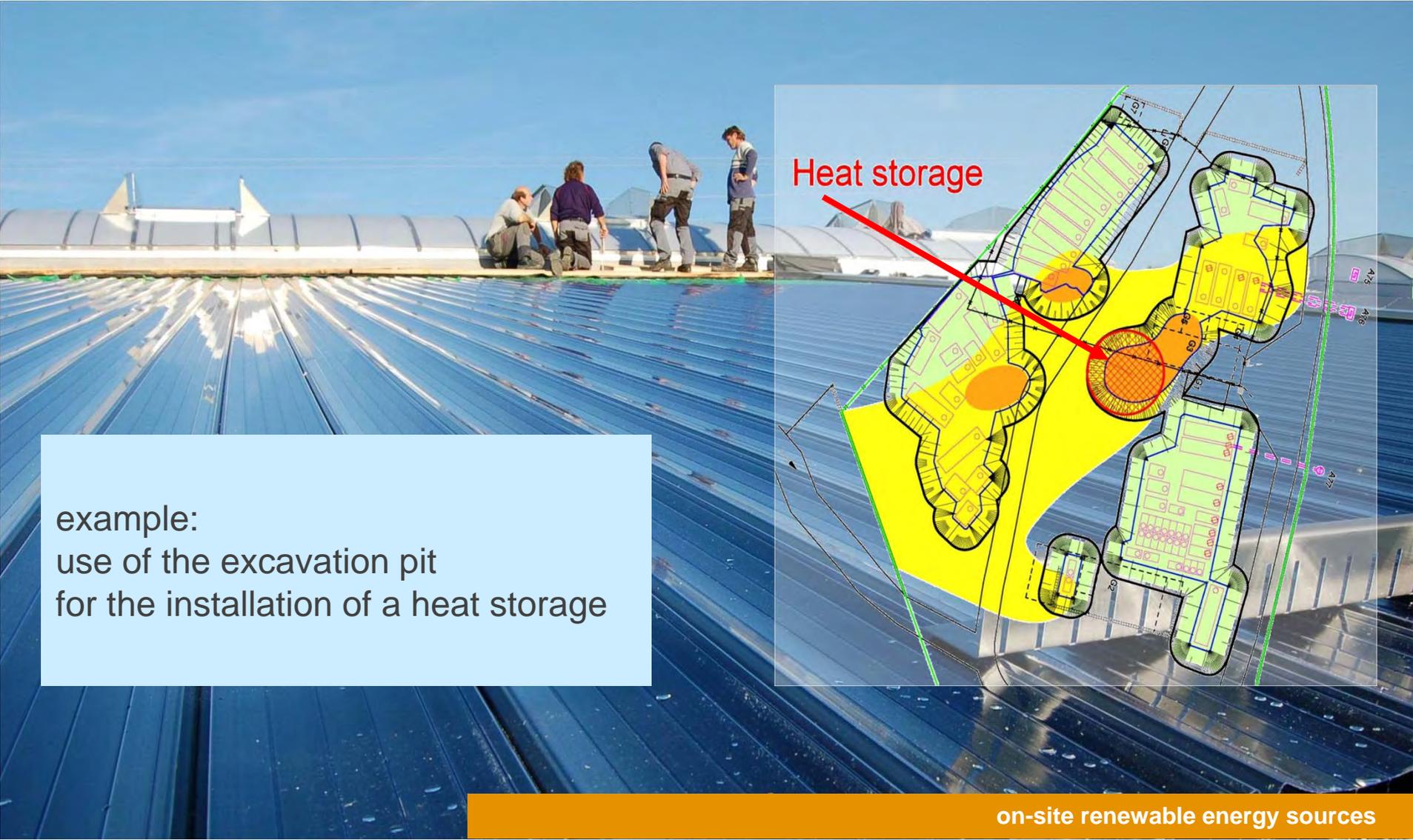
With the decision algorithm
EPASch options to the
implementation of renewable
energies can be deduced for
the specific site considering
the intended
re-use.



RENEWABLE ENERGIES

download from www.optirisk.de

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



example:
use of the excavation pit
for the installation of a heat storage

on-site renewable energy sources

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

- topography
- property owner
- building structure
- contamination on spec
- biotope



- real contamination
- risk prognosis
- urban design
- overlay: building pit, contamination and urban design
- optimization



GIS: SITE-ATLAS

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

	Model site	Optimized preferred variant (Integrated Site Development Concept)	Kind of optimization potential					Amount of achieved optimization		
			Liability	Exposure	Investment	,In-one-go'	,In-any-case'	in T\$	in %	
			I	II	III	IV	V		of original variant	of property value
	A	<i>„Housing & recreation“</i>	-	X	X	-	-	590	35	45
	B	<i>„Forest & viewpoint“</i>	-	X	X	-	-	550	54	532
	C	<i>„Institute“</i>	X	-	X	X	X	257	31	39
	D	<i>„Mixed-use area“</i>	X	-	X	-	-	661	84	219
	E	<i>„Festival ground/fair“</i>	-	X	X	X	-	1.189	38	105
	F	<i>„Photovoltaics“</i>	X	X	X	-	-	170	39	87
	G	<i>„Outpost“</i>	X	X	X	-	-	1.982	37	128

THE INTEGRATED SITE DEVELOPMENT CONCEPT

amount of achieved optimization

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES



THE MODEL SITE IN TROUTDALE (OR)

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

- 
- A wide-angle landscape photograph showing a calm body of water in the foreground, reflecting the sky and surrounding greenery. A paved path curves along the left side of the water. In the background, there are trees and a small bridge crossing the water. The sky is a pale, hazy blue, suggesting an early morning or late afternoon setting.
- multidisciplinary teamwork
 - integrated strategy
 - transparency
 - lateral thinking
 - long breath
 - financial support
 - top priority (matter for the mayor)
 - concerted activity (municipality)
 - external knowledge

CONCLUSIONS

Bad Liebenstein, world largest Cd-contamination

OPTIMIZATION OF REDEVELOPMENT CONCEPTS FOR ENVIRONMENTALLY BURDENED SITES

Thank you...



TASK

Martin Bittens
Alena Bleicher
Stephan Bartke



Bilateral Group

Anne Vega
Verle Hansen
Sabine E. Martin
Andrew Bracker



Troutdale OR

Major Kight
& the city of Troutdale

