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DE.SMARTe: US – Germany Bilateral Cooperation

for the Development of an Internet-Based Decision Support System for Sustainable Revitalisation of Contaminated Sites



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The TASK Symposium: 23-24 June 2009
Leipzig, Germany***



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Outline

- **Background – The Early Years (Phases 1-2)**
- **Phase 3 – Redevelopment of Potentially Contaminated Sites**
- **SMARTe**
- **Phase 4 – Sustainable Land Revitalization**
- **DE.SMARTe**
- **Contact Information; Websites**





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History of Collaboration between US and Germany

A phased approach.....

- **Workgroup Began in 1990**
- **Initial Focus on Cleanup Technologies**
- **In 2000 -- Focus on Redeveloping Potentially Contaminated Sites**
- **In 2006– Focus on Sustainable Land Revitalization**





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Ultimate Goal



*Working together toward common goals
and a shared vision*



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Phase 3 Program Goal and Objectives

Develop Tools and Techniques to Facilitate Revitalization Of Potentially Contaminated Sites

OBJECTIVES:

- **Facilitate Equitable Land Use**
- **Facilitate Faster Redevelopment of Sites**
- **Allow Greater Independence from Public Money**
- **Enhance Benefits to Society**



Phase 3 Approach

- Step 1: Baseline workshops to **identify obstacles** to revitalization
- Step 2: Feasibility study to **determine which obstacles** the U.S.-German Bilateral Working Group could address
- Step 3: Research and develop **tools and techniques to overcome obstacles** to revitalization
- Step 4: **Beta-test tools and techniques** to determine if they facilitate revitalization



SHARE IDEAS AND EXPERIENCES

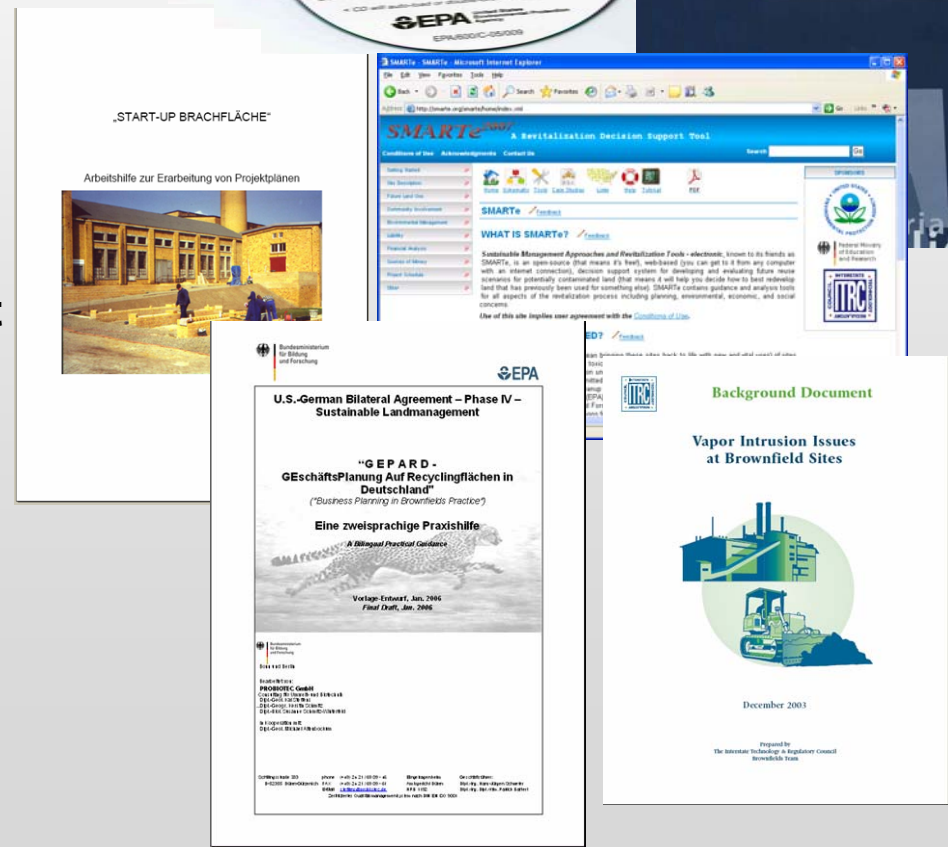


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Phase 3 Tools to Overcome Obstacles (Products 2000-2005)

- Documentation of 7 International Practitioners-workshops
- **Sustainable Management Approaches and Revitalization Tools – electronic (SMART-e) [U.S.EPA] available at smarte.org**
- **Start-Up-Brachfläche – Arbeitshilfe (Germany) available at www.vegasinfo.de/startup/**
- **Report: Vapor Intrusion Issues at Brownfields Sites; Land Use Controls (ITRC)**
- **GEPARD – Bilingual Business Plan - Outlines an Interactive Calculation Tool**





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Phase 3: Workshop Summary (2000-2005) – CD Ordering information at smarte.org

<u>Workshop</u>	<u>Location</u>
Economic Tools <i>11-12 November 2002</i>	Charlotte, North Carolina
Project Management and Market Strategies <i>7-8 May 2002</i>	Saarbrücken, Germany
Risk Assessment/Communication Tools <i>23-24 October 2003</i>	Portland, Oregon
Social Aspects <i>17-18 June 2004</i>	Leipzig, Germany
Sustainable Reuse <i>16-17 September 2004</i>	St. Louis, Missouri
Summary Conferences <i>31 Oct-1 Nov 2005; 18-19 April 2005</i>	Berlin, Germany Denver, Colorado



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SMARTe Overview

Sustainable Management
Approaches and Revitalization
Tools – electronic

Overcome Revitalization Obstacles

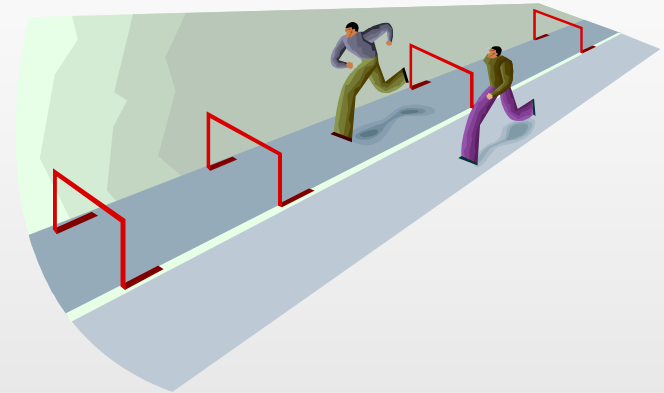
Content: Information, Resources, Case Studies, Links; Identify questions to ask
Analysis Tools/Checklists: Technical and Non-Technical
Search Engine: Find Specific Info
My Project: Evaluate Reuse Options



SMARTe 2009 is **freely** available at: smarte.org

Obstacles to Revitalization

Challenge: To remove
obstacles to revitalization



Short list:

- Identifying market and non-market costs and benefits of revitalization options
- **Identifying private and public financing options**
- Evaluating and communicating environmental risks
- **Identifying and evaluating characterization, remediation, and long-term monitoring technologies**
- Identifying state-specific information

SMARTe.org

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Search Go

Getting Started

Site Description

Future Land Use

Community Involvement

Environmental Management

Liability

Financial Analysis

Sources of Money

Project Schedule

Other



Studies

Links

Help

Tutorial

PDF this page

Overview

Vision

Previous Plans

Revitalization Motivation

Regional and Local Needs

Marketing the Project Benefits

Sustainable Practices

Keys to Success

Innovative Project Features

Construction/Demolition

Resources and Tools

Feedback

Approaches and Revitalization Tools - *electronic*, known to its friends as SMARTe (that means it's free!), web-based (you can get to it from any computer with an Internet connection) support system for developing and evaluating future reuse scenarios for contaminated sites (that means it will help you decide how to best redevelop land that has been contaminated with something else). SMARTe contains resources and analysis tools for all aspects of site revitalization including planning, environmental, economic, and social concerns.

For more information, please read our [agreement with the Conditions of Use](#).

NEEDED? [Feedback](#)

Revitalization (a word we use to mean bringing these sites back to life with new and vital uses) of sites contaminated with environmentally toxic or hazardous materials is a global concern. (The earth is only so big, right? If we keep building on undeveloped sites, soon we won't have any more open spaces to enjoy.) Many countries have committed extensive resources to addressing environmental, social, and economic issues related to the cleanup and redevelopment of environmentally impacted sites. The U.S. Environmental Protection Agency (EPA) and the German Federal Ministry for Education and Research (Bundesministerium für Bildung und Forschung [BMBF]) have initiated a cooperative effort to share such information and evaluate new solutions for the redevelopment of contaminated sites. The goal of this web site is to help users identify, apply, and integrate tools and technologies to facilitate the revitalization of sites in the United States (that is, to give you a hand along the way during the complex process of site redevelopment). This website will be updated as new tools, technologies, and approaches become available for revitalizing previously used lands.

MY PROJECT LOGIN

Project ID

Password

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[Home](#)[Schematic](#)[Tools](#)[Case Studies](#)[Links](#)[Help](#)[Tutorial](#)[PDF this page](#)SMARTe [Feedback](#)WHAT IS SMARTe? [Feedback](#)

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WHY IS SMARTe NEEDED? [Feedback](#)

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SMARTe

[Feedback](#)

WHAT IS SMARTe?

[Feedback](#)

Sustainable Management Approaches and Revitalization Tools - **electronic**, known to its friends as SMARTe, is an open-source (that means it's free!), web-based (you can get to it from any computer with an internet connection), decision support system for developing and evaluating future reuse scenarios for potentially contaminated land (that means it will help you decide how to best redevelop land that has previously been used for something else). SMARTe contains resources and analysis tools for all aspects of the revitalization process including planning, environmental, economic, and social concerns.

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WHY IS SMARTe NEEDED?

[Feedback](#)

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SMARTe Tool Collection [Feedback](#)

Project Vision [Feedback](#)

Tools	Checklists
<ul style="list-style-type: none"> Community Involvement Techniques Potential Stakeholders The Vision to Action is currently available only through registering and logging in a Project.	<ul style="list-style-type: none"> Land Reuse Options Select a Consultant Select a Lawyer Purchasing a Brownfield Property Finding an Insurance Broker Do I need a permit? Selecting a Developer Understanding Units of Measurement Writing a Request for Proposals for Environmental Site Assessment or Cleanup What are Quality Assurance Project Plans?

Environmental [Feedback](#)

- [Human Health Risk Calculator](#)
- [Site Characterization](#)
- [Monitoring Data Analysis](#)
- [Fate and Transport](#)

Economic [Feedback](#)

- [ANALYSIS OF THE ECONOMIC IMPACT OF ENVIRONMENTAL REMEDIATION](#)

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SMARTe 2009 – My Project



Park



Speedway



Housing



Phase 4

Sustainable Land Revitalization





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Phase 4: Program Goal and Objectives (2006-????)

Develop Tools and Techniques to Facilitate Sustainable Land Revitalization

OBJECTIVES:

- Facilitate **Environmentally, Socially, and Economically Viable** Land Use
- Facilitate **Transfer of Information Both Nationally and Internationally**
- Allow Greater Independence from Public Grants
- Enhance Benefits to Society **and the Environment**

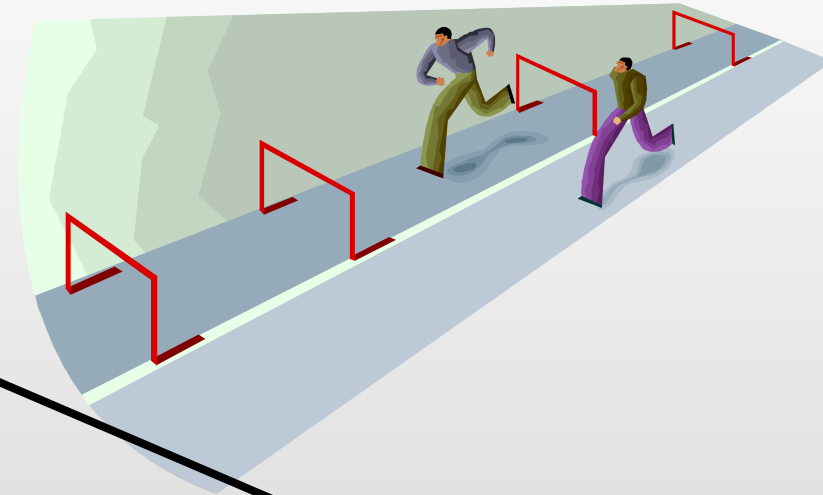
Phase 4 – Approach (2006-????)

Step 1: Baseline workshops to identify obstacles to **sustainable land revitalization**

Step 2: Feasibility study to determine which obstacles the U.S.-German Bilateral Working Group can address

Step 3: Research and develop tools and techniques and technologies to overcome obstacles to **sustainable land revitalization**

Step 4: Beta-test tools and techniques to determine if they facilitate **sustainable land revitalization**



REFINA



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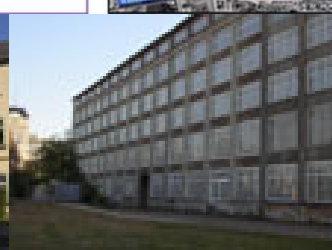
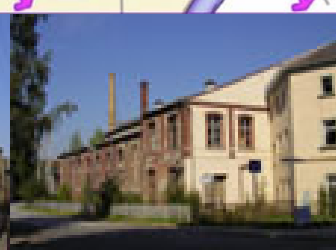
Bilateral Cooperation – Phase 4

- Cooperation based on REFINA projects with „volunteer“ practitioners in the US
- Projects should drive and benefit from the cooperation
- International cooperation
 - to learn from each other
 - to prove REFINA concepts
 - to strike new and unconventional paths in both countries



Phase 4 – Focus Areas (2006-????)

- Brownscape Design
- Regional and Local Land Revitalization Planning
- Project Management





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Phase 4 – NY Workshop topics (8-9 May 2008)



Regional Infrastructure and
Transboundary Management



Brownscape Design



Financial Management



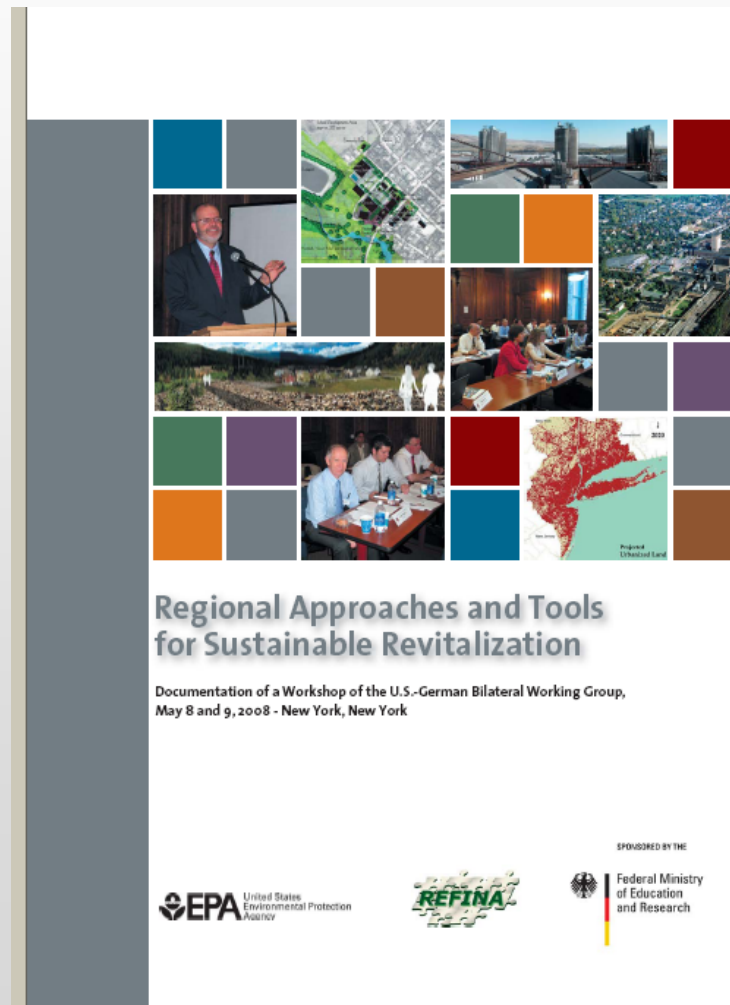
Cross-cutting – Regional planning
Criteria for Site Prioritization



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Workshop Report - Published





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Phase 4 – Move Bilateral from REFINA to TASK

- **DE.SMARTE**
- **DE.SMARTE/SMARTe Tools and Expansion**

Possible Future Products

- Sustainability Planning Criteria and Assessment
- Project Management Tools/Approaches (schedule, budget, maintenance, training programs)
- Model Design Approaches (including visual simulation tools)
- Case Studies
- Other Revitalization Tools



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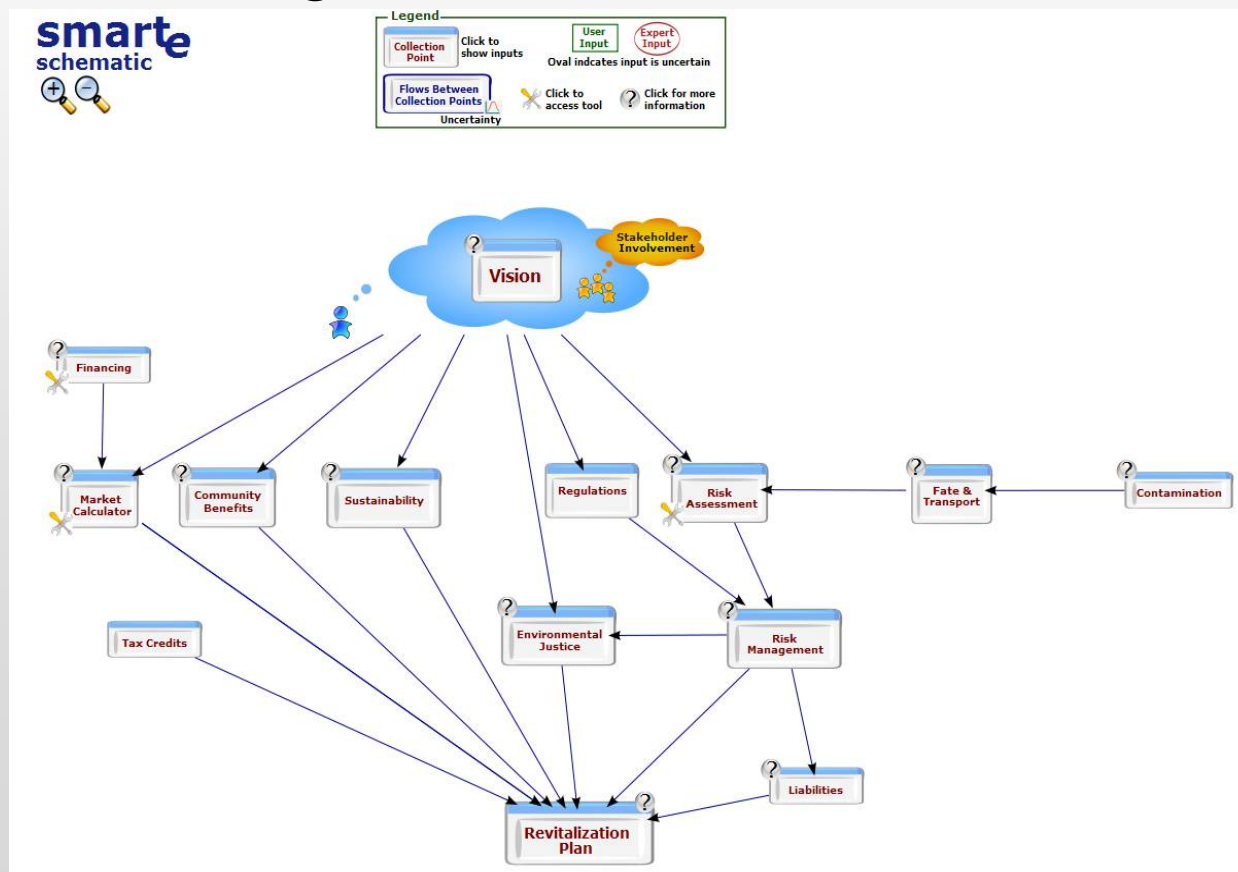


DE.SMARTe

- Joint Co-operation Project U.S.EPA/UFZ/TASK
- 2008 – 2011
- “Mirror” Site DE.SMARTe.org
- New Tools (sustainability, cost estimation, spatial planning)
- “Re-Mirror” back to SMARTe
- Beta Tests with External Experts
- Joint U.S. EPA/TASK Workshops 2009, 2010

DE.SMARTe – cont'd

- Stock Taking SMARTe Architecture





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DE.SMARTe – cont'd

- Translation of Applicable Tools and Guidelines:
 - Risk Assessment
 - Risk Management
- Extension of Existing Tools:
 - Property Valuation/Stigma Effects
 - Quantification of Sustainability Criteria
- New Tools
 - Selection of Land Restoration Technologies
 - GIS Based Land Use Maps
 - GIS Based Probabilistic Conflict Analysis



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DE.SMARTe – cont'd

- DE.SMARTe.org will:
 - Be Publicly and Freely Available
 - Be Based on Open-Source Software
 - Integrate Approaches from Brownfield Revitalization Projects (REFINA, SAFIRA II)
 - Provide Tools for External Use (SMARTe.org)
 - Offer Training Courses on GIS Based Brownfield Revitalization Planning



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Web Sites

US-German Bilateral Working Group

[*http://www.bilateral-wg.org/*](http://www.bilateral-wg.org/)

REFINA

www.refina-info.de

TASK

www.task-leipzig.info

SMARTe

[*smarte.org*](http://smarte.org)

START-UP Plan

[*www.vegasinfo.de/startup/*](http://www.vegasinfo.de/startup/)

Interstate Technology and Regulatory Council

[*www.itrcweb.org*](http://www.itrcweb.org)