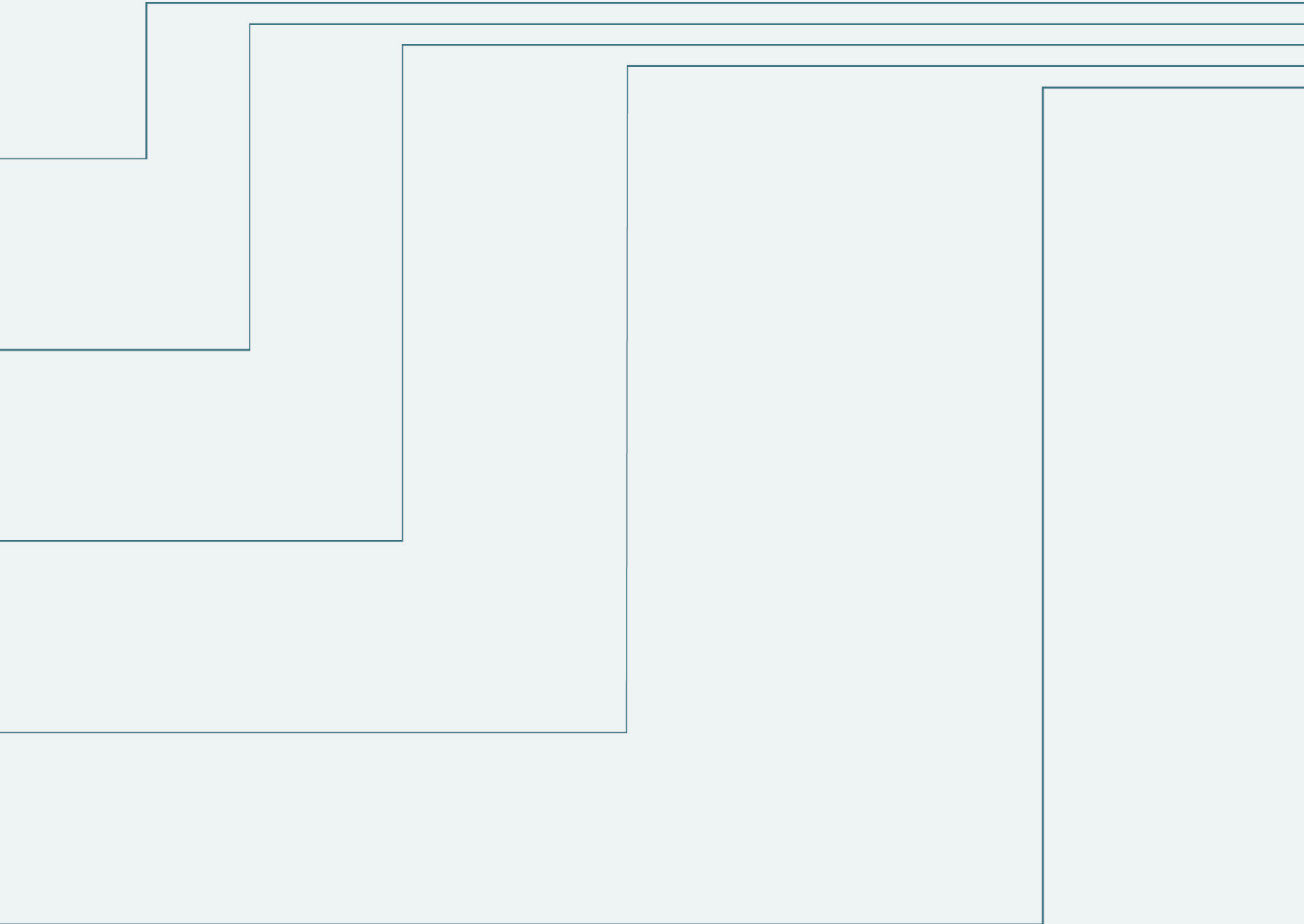


ASSESSMENT TOOL for Industrial Landscapes

trALLs to development opportunities



“The multi-thematic assessment of Alpine brownfield sites is a challenging process, as it involves many different disciplinary fields and an incredible amount of sectoral knowledge. The industrial landscapes Assessment tool designed and developed within the framework of trAIlS has proved to be successful in tackling this complexity. The tool helps to integrate the whole assessment procedure and makes it transparent, smooth in its practicability and, most important, capable to meet the needs of the stakeholders and communities.”

- Marcelo Modica, project lead
Technical University of Munich

About the project trAIlS

The decline of traditional heavy and manufacturing industries is today occurring even in peripheral and less urbanized regions, such as the Alps. Here, in the so-called “green heart of Europe”, this process is leaving behind impressive former productive landscapes of substantial size and complexity: Alpine Industrial Landscapes (industrial landscapes). The potential value of industrial landscapes in terms of the opportunities that they offer for sustainable transformation is strongly connected to Alpine-wide ecological, economic and social key challenges including the regeneration and improvement of blue and green infrastructures, the reactivation or upgrade of regional economies, and the promotion of local identity, as well as cultural heritage.

The project trAIlS aimed to generate significant knowledge about industrial landscapes and to develop and test sustainable transformation strategies that were applicable to, and replicable across, the whole of the Alpine area. Using a multidisciplinary, and transnational approach, the project combined expertise in the fields of spatial and landscape planning, socio-economic sciences, and ecologic restoration, whilst also directly cooperating with local communities in four pilot sites in Austria (Eisenerz), Italy (Borgo San Dalmazzo), France (L'Argentière-la-Bessée), and Slovenia (Tržič).

The project supported local and regional stakeholders in the complex process of sustainable industrial landscapes transformation, and provided them with strategic planning tools for the future as well as with useful hands-on experience.

trAIlS project mission statement,
www.alpine-space.eu/projects/trails/en/about

ASSESSMENT TOOL for Industrial Landscapes

trALLs to development opportunities

Title

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First issue of the publication in electronic format**Editor**

Tomaž Pipan

Graphic design and illustrations

Manca Krošelj

Lector

Bertie Dockerill

trALLs project lead

Marcello Modica, Udo Weilacher

Authors of assessment sections

Policy assessment: Manca Krošelj, Tomaž Pipan, Naja Marot

Socio-economic assessment: Lorenzo Migliorati, Gianluca Lanfranchi, Veronica Polin

Spatial assessment (regional scale): Julia Forster, Julia Pechhacker, Stefan Bindreiter, Michael Rinnerthaler

Spatial assessment (local scale): Elena Solero, Piergiorgio Vitillo, Paolo Galuzzi, Gabriele Pasqui

Environmental assessment: Katharina Strobl, Kerstin Bär, Markus Bauer

Endorsements: Gerfried Tiffner, Helena Cvenkel, Sonia Abluton, Thomas Kleitz, Zlatka Zastavnikovič

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Assessment Tool for Industrial Landscapes

trALLs to development opportunities

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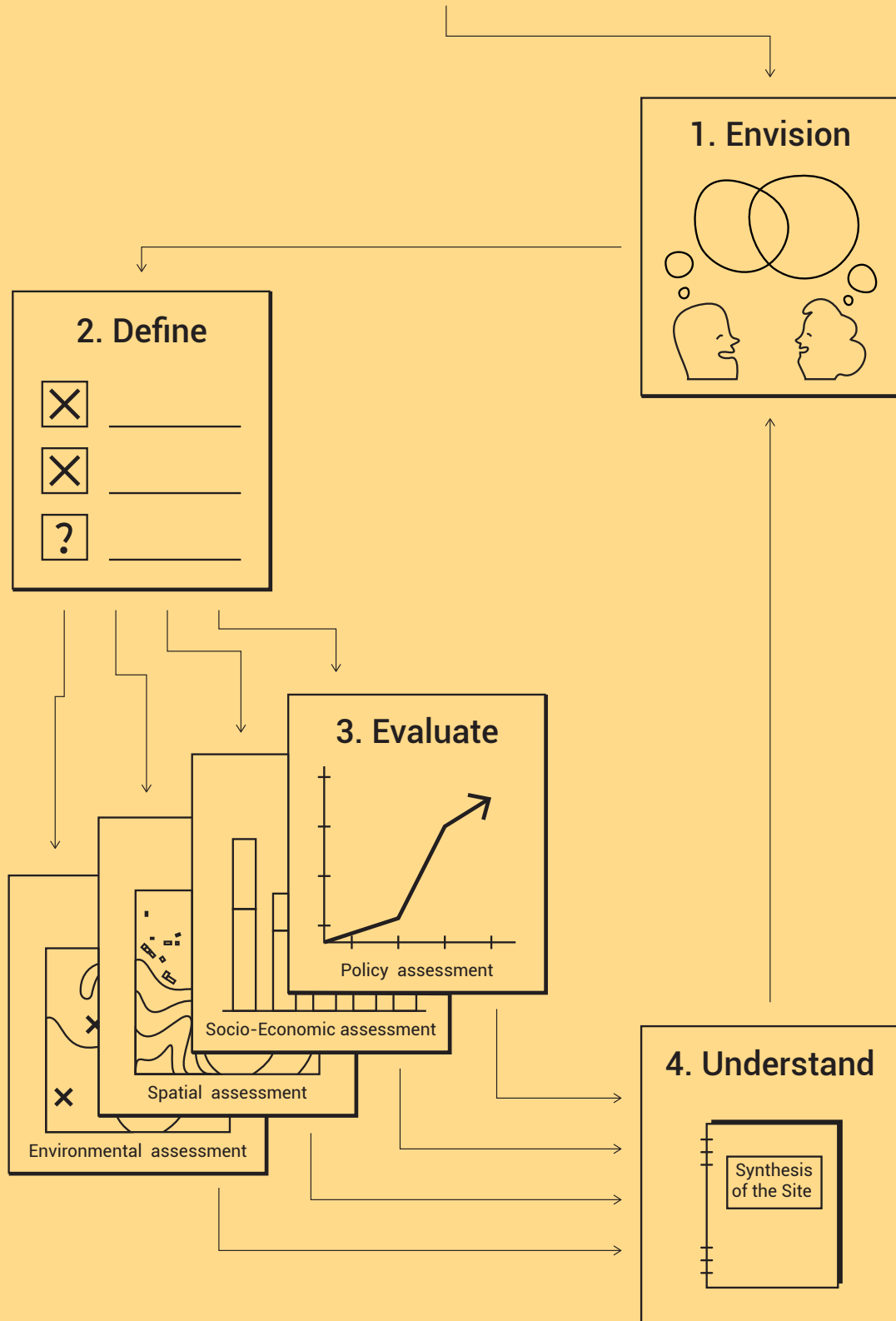
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How does the book work?



Introduction

Starting with the transformation of an industrial landscape is a daunting task. How to begin? What are its problems and potentials? Where should one turn for support? How much time and resources are required? Who needs to be included? Which experts can help?

This book is intended for public authorities, business-support organizations, and NGOs; more specifically: municipality officials, site owners, and others who would like to understand what type of work needs to be done in order to holistically assess disused industrial sites.

It is structured as a workbook where short questions help to identify necessary assessments, implementation steps, and resources.

It is designed in such a way as to give a feel and understanding of what each assessment does, its results, how time-consuming it is, and what it can offer. Each assessment is framed so as to show how certain questions can be solved.

*"Alpine industrial landscapes:
Where a transformation story begins."*



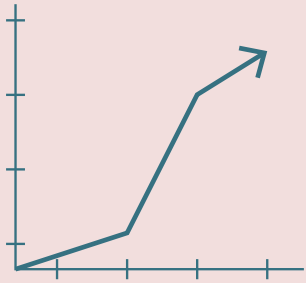


"In Eisenerz the four assessments helped us to understand the overall situation. The results were a good basis for developing approaches for the transformation of the site, and gave a clear and comprehensive picture of the area to both site owners and potential investors."

- Gerfried Tiffner, VESTE
pilot site: Munichtal blast furnace, Eisenerz, Austria

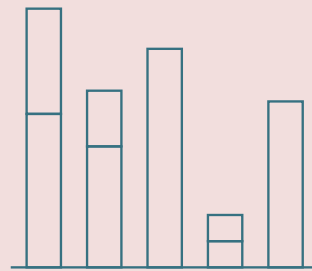
PoSESE potentials

Policy assessment



- What is the potential of institutional resources?

Socio-Economic assessment



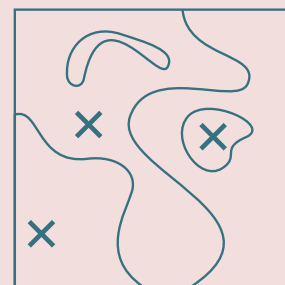
- What is the potential of local people and its economy?

Spatial assessment



- What is the spatial potential of the site, town, region?

Environmental assessment



- What is the environmental potential of the site?

1. Envision

How to start a transformation? What needs to be considered when challenged with a non-functional, degraded, or contaminated industrial site?

The Envision section talks about how to approach the assessment of industrial landscapes from the point of view of an owner / investor / municipality – an actor who would like to start a redevelopment. The section describes the four assessments and how they can help to identify a comprehensive set of potentials for derelict sites.

The Policy assessment explains what the potentials of institutional resources for a site can be. The Socio-Economic assessment looks at the potential of local people and the local economy. The Spatial assessment uncovers the spatial potential of the site and the town. The Environmental assessment shows the interesting yet sometimes overlooked environmental potential of a sites' wild species and habitats.

"The goal of this book is to PoSESE the understanding of sites' potentials. The knowledge contained herein seeks to enable the transformation of industrial landscapes into liveable and sustainable places that are economically viable for local and global communities through the use of existing resources."

POSESE

POTENTIALS

Four sets of assessments facilitate the production of a rounded set of potentials that industrial landscapes can offer.



Look at the short descriptions and assessment topics on the right side.

Depending on your knowledge, stage of the redevelopment process, and/or understanding of the site, you can use different parts of this book. You can do one of the following things:

1.

If you are **starting from scratch**, start at Chapter 2 and select a **transformation scenario** that identifies the key questions you need to work with.



2.

If you already have **ideas**, look at **individual assessments** in Chapter 3, what they are, how they are done, and who can undertake them.



3.

If you already **know** what needs to be done, look a bit deeper into individual **assessment questions** in Chapter 3: what is needed for them, how they are undertaken, and how much time and resources they require.



Po Policy assessment

What is the potential of the institutional resources?

- Understand which policy AIMS and MEASURES support your project.
- Find the FUNDS and INCENTIVES available for your project.
- Discover which INSTITUTIONS you should talk to.

SE Socio-Economic assessment

What is the potential of local people and the local economy?

- Understand the importance of the site for LOCAL IDENTITY.
- Evaluate residents' ATTITUDES toward site transformation.
- Measure the CONSEQUENCES of Socio-Economic transformation.

S Spatial assessment

What is the spatial potential of the site and the town?

- Check the environmental and landscape SIGNIFICANCE conditions of the site.
- Identify PROBLEMS and OPPORTUNITIES regarding settlement frameworks.
- Detect the given site's degree of ACCESSIBILITY.
- Check the AVAILABILITY of supply and disposal networks.
- Identify the planning RULES in force.

E Environmental assessment

What is the environmental potential of the site?

- Check the ECOLOGICAL ROLE of the site within its landscape.
- Identify BIODIVERSITY HOTSPOTS and rare or protected species.
- Detect PROBLEMATIC SPECIES.
- Check for POLLUTION, EROSION and FLOOD risks.

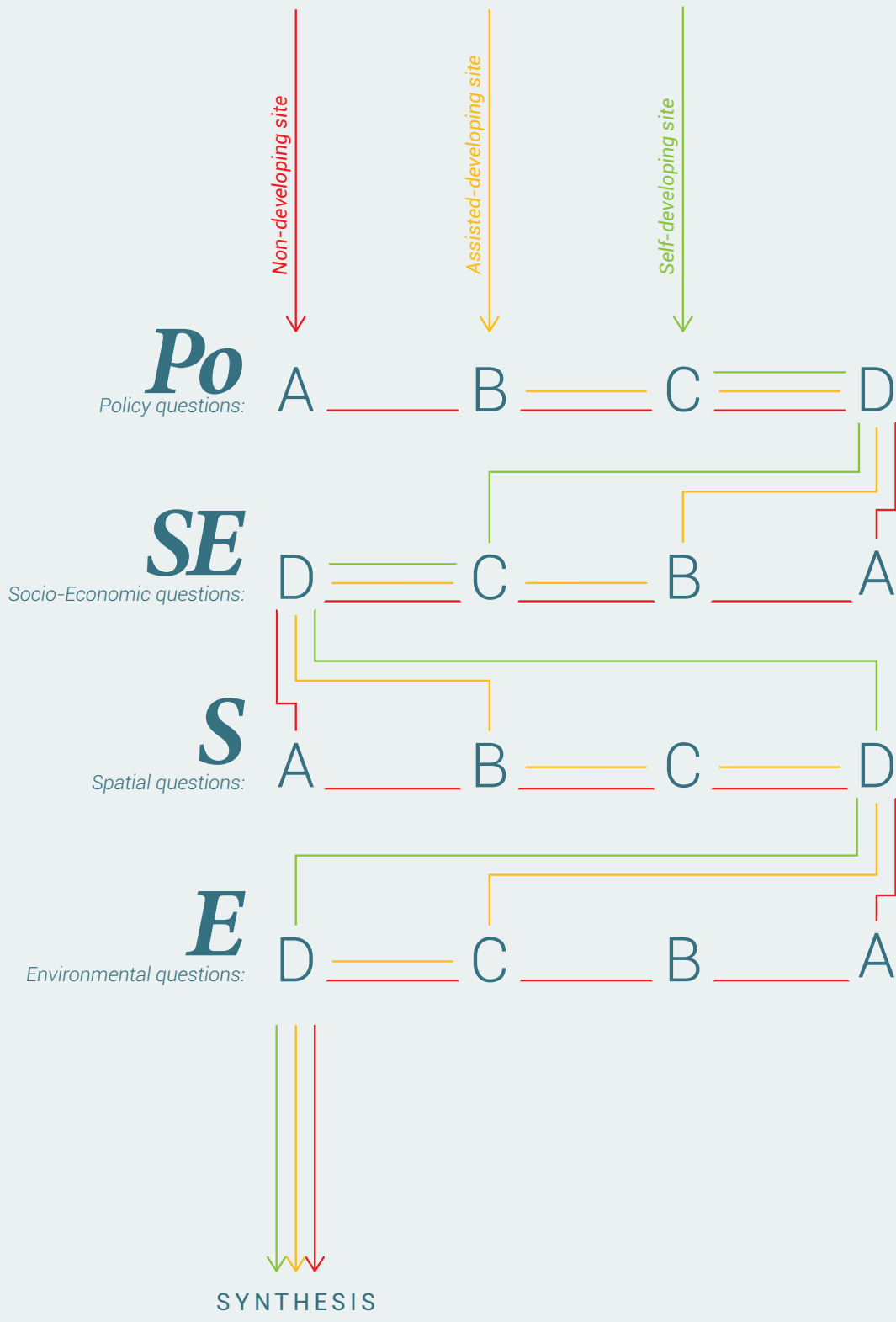


"The data concerning the quality of life and the attitudes towards the pilot site were most interesting because they could become the base for future territorial work."

- Sonia Abluton, LAMORO
pilot site: Italcementi factory, Borgo San Dalmazzo, Italy



Follow the trAIL of questions depending on site's condition



2. Define

If you are only beginning with the transformation and you do not know anything about the site, then start here. If you have already identified some problems, or if you already have a good understanding of the site, you can move to Chapter 3: Evaluate.

In order to define the problems and potentials of an industrial site, it is important to first identify the main areas in which problems exist. This chapter helps to identify how hard or how easy the transformation of your site will be, and helps you to scope both the support and engagement that will be needed to get the redevelopment process started.

In this section you can use a simple decision-making tree to tailor the assessment tool and gain an understanding of different assessments that are suitable for your particular site. This is achieved by following a diagram and simple questionnaire that guides you to a set of appropriate assessments for your particular situation. Through answering basic questions pertaining to the site, you can define key topics that are important for your site, and follow one of the three recommended paths of transformation.

Find out which key questions are important for your site

Understanding what key questions are important for your site's transformation is very important. There are different ways to go about this. It is likely that you will end up using a mix of the following approaches:

- Asking the local community – undertake a **survey** of the wider public.
- Asking professionals – undertake a **focus group** meeting and ask professionals what they think.
- Your experience to date – have a **site visit** with owners and colleagues to sharpen your understanding of the site's problems and opportunities.



Discuss three preliminary questions about the site and define priority questions for the transformation

To get you started, here is an exercise that encourages you to think about the role of the site and its transformation. With your network of colleagues try to discuss the following questions and identify how important they are for your site. Think about your site's "start position" in order to envision which redevelopment scenario (red, yellow or green) is the most viable:

Question	Explanation	Answer
What is the local/ regional importance of the site?	<p>Discuss and estimate the site's importance in spatial and socio-economic terms. Discuss the following questions:</p> <ul style="list-style-type: none"> - How well is the site equipped with infrastructure (road connections to the important regional/global centres, ICT network, public transport, public services such as schools, health care institutions, stores, recreational/public spaces and so on)? - How is the site currently contributing to the economic and social wellbeing of the area (jobs, awareness, and so on)? 	<p>The site's importance is:</p> <p><input type="checkbox"/> High</p> <p><input type="checkbox"/> Moderate</p> <p><input type="checkbox"/> Low</p>
What is the site's current value?	<p>Estimate the current condition of the site in terms of the investment that it requires and its current development momentum.</p> <ul style="list-style-type: none"> - How big is the underdeveloped or degraded area and how much investment is needed? - Are there any resources on site that can already be utilised? - Is there any proactive economic activity on site that shows forward motion? - Is there a feasible pool of users in the area (young people, workforce, and so on)? 	<p>The site's current value is:</p> <p><input type="checkbox"/> High</p> <p><input type="checkbox"/> Moderate</p> <p><input type="checkbox"/> Low</p>
What is the environmental importance of the site?	<p>Estimate the attraction of the site based on the state of its present environmental conditions.</p> <ul style="list-style-type: none"> - Is the site unpolluted? Will it not need substantial investment to clean? - Are there any natural resources/features that make the site more appealing, such as forest, agriculture or energy? - Is the site inhabited by any endangered species of flora/fauna? 	<p>The site's environmental value is:</p> <p><input type="checkbox"/> High</p> <p><input type="checkbox"/> Moderate</p> <p><input type="checkbox"/> Low</p>

If the majority of answers to the questions are **"low"**

Due to the significant number of negative factors that the site possesses, its redevelopment is more challenging and it will need heavy external support if it is to be successfully redeveloped. The site is in the category of **non-developing sites**. These kind of sites carry high development risks as they have to undergo heavy remediation processes. These sites are most common in old industrial regions. To successfully implement redevelopment, many interventions are needed to transform the site into an assisted-developing site. Such redevelopment needs a thorough assessment to establish all of the site's possible problems and potentials.

Follow the red trail

If the majority of answers to the questions are **"moderate"**

The site is stagnating, but it has good potential for redevelopment if some support and assistance is forthcoming. It is an **assisted-developing site** that has some good conditions but lacks others. Perhaps it is of high local/regional importance or moderate property value. However, the site also exhibits some development risks, such as pollution, declining population, and/or low job availability; it requires assistance with planning and funding.

Follow the yellow trail

If the majority of answers to the questions are **"high"**

The site already possesses momentum as a **self-developing site** due to its high local/regional importance, its high property value and/or its low remediation costs. There is a good chance that the site's development will continue and that its value will increase. There is no need for a specific intervention or development support. However, there some key assessments that could further assist the site's development.

Follow the green trail

Policy questions:

D
What are the current transformation practices in your region?

B
Which policy sectors and themes should you consult with in the transformation process?

C
Who are the key actors and what are their roles in the project?

A
How well is the decision-making power distributed amongst administrative levels?

Socio-Economic questions:

B
Which transformation perspectives are perceived as important?

A
How important is the brownfield in the definition of local identity?

C
How much can the final project shape the definition of the local identity?

Spatial questions:

E

What are the planning rules/guidelines at different scale levels (state, regional, local) and why is it useful to know these?



D

What electricity, thermal and information infrastructure are available and how are water supply and wastewater disposal organized?



B

What problems and opportunities can understanding of the settlement give?



C

How can the reachability of the region / municipality / industrial abandoned site be assessed/evaluated?



A

Which spatially significant conditions have to be considered at different scale levels?

Environmental questions:

C

Where are any problematic species located?



A

What is the ecological potential of the site within the landscape?



B

Where are the biodiversity hotspots and rare or legally protected species within the site?



D

Is there a risk for pollution, erosion or flooding?

Synthesis

*"The biodiversity of the place was tackled for the first time.
The results will be used for further development of green
infrastructure at the site and beyond."*

- Helena Cvenkel, BSC Kranj
pilot site: BPT Company, Tržič, Slovenia



"Statistic data revealed only part of the situation of a pilot area. What people feel, how they perceive the space in which they live, and their desires can only be determined through interviews and interaction with them. This is an important added value of this project and this assessment tool."

- Zlatka Zastavnikovič, EZVD



Overview of this chapter

POLICY ASSESSMENT	20	<i>Purpose of the Policy Assessment, how to benefit from it and how to do it.</i>
	22	A: <i>How well is the decision-making power distributed amongst administrative levels?</i>
	24	B: <i>Which policy sectors and themes should you consult with in the transformation process?</i>
	26	C: <i>Who are the key actors and what are their roles in the project?</i>
	28	D: <i>What are the current transformation practices in your region?</i>

SOCIO-ECONOMIC ASSESSMENT	30	<i>Purpose of the Socio-Economic Assessment, how to benefit from it and how to do it.</i>
	32	A: <i>How important is the brownfield in the definition of local identity?</i>
	34	B: <i>Which transformation perspectives are perceived as important?</i>
	36	C: <i>How much can the final project shape the definition of the local identity?</i>

SPATIAL ASSESSMENT	38	<i>Purpose of the Spatial Assessment, how to benefit from it and how to do it.</i>
	40	A: <i>Which spatially significant conditions have to be considered at different scale levels?</i>
	42	B: <i>What problems and opportunities can understanding of the settlement give?</i>
	44	C: <i>How can the reachability of the region / municipality / industrial abandoned site be assessed / evaluated?</i>
	46	D: <i>What electricity, thermal and information infrastructure are available and how are water supply and wastewater disposal organized?</i>
	48	E: <i>What are the planning rules/guidelines at different scale levels (state, regional, local) and why is it useful to know these?</i>

ENVIRONMENTAL ASSESSMENT	50	<i>Purpose of the Environmental Assessment, how to benefit from it and how to do it</i>
	52	A: <i>What is the ecological potential of the site within the landscape?</i>
	54	B: <i>Where are the biodiversity hotspots and rare or legally protected species within the site?</i>
	56	C: <i>Where are any problematic species located?</i>
	58	D: <i>Is there a risk for pollution, erosion or flooding?</i>

3. Evaluate

Different assessments can shed light on different problems and potentials. If you already know what the problems are that you wish to tackle, or if you identified your main problems in Chapter 2, this chapter will help you to select assessments that will give you the best answers to identified problems.

The chapter is divided into individual assessments. Each assessment has a set of questions that can be answered. The assessment introduction explains what its main uses and benefits are. The question sections explain what needs to be done, how long it will take, and who can undertake the work needed to answer the question[s].

If you already identified a problem, you can go to specific questions within each assessment. If not, you can go through the questionnaires at the beginning of each assessment and identify the main actions that you wish to take. The actions you want to take will point to the questions you need to answer.

Decide which assessments - and which questions within those assessments - are needed for you to identify who can undertake the assessments

For each thematic assessment assign the person who will be in charge of delivering the thematic results. Discuss whether an external expert is needed for your specific case.

Thematic assessment	Expert needed	Assigned person
Policy assessment	Geographer, Planner, Landscape Architect, Urbanist or Architect	
Socio-economic assessment	Quantitative and Qualitative Sociologist, Economist	
Spatial assessment	Urban planner, Urban designer	
Environmental assessment	Landscape Planner, Conservation and Restoration Ecologist	



PO POLICY ASSESSMENT

Policy documents are one of the main instruments to steer developments. They contain either general or sector-specific policies (e.g. for the environment, industry, energy and so on). The latter focus on the specific problems identified in the sector and present objectives and measures to address them. Policies also guide EU decision making, as well as that within its member states, regions, and local communities. With regard to local level policies; these present frameworks for the detailed spatial plans and provide land-specific development guidelines. Besides location and the type of the spatial intervention, policy documents determine how investment money or absorbed EU funds should be used.

HOW TO BENEFIT FROM UNDERSTANDING POLICY ASSESSMENT

Development of a project

If you understand what policies there are in your area and in what ways they support the transformation of industrial landscapes, you can use this knowledge to adapt the aims and the objectives of your projects accordingly. Through so doing, they are more likely to receive incentives and available funding from either the EU or the state. The policies also reveal the key actors that need to be involved at different stages of the preparation and implementation of the project which aims to secure industrial landscapes transformation. By working closely with these actors from the start of the project, you increase the chances of a successful and effective transformation.

Public management and raising awareness

Reviewing current policies and comparing them with development goals can reveal gaps in policies that need to be addressed by public authorities. The gaps can be used to suggest amendments to policies and, if implemented, create a solid foundation for the better development of industrial landscapes in general.

Operational guidelines

Policies are often seen as obstacles in the industrial landscapes transformation process, or their content is simply ignored. By understanding key points and objectives policies talk about, you can identify their usefulness for your project. In that way, you will understand the background needed to apply for financial means that require adherence to these policies.



What actions would you like to take?

There are various uses for policies. Here are a few Actions that Policy Assessments can help you achieve.

1. Look at the Actions on the left and decide how important each is (Low, Moderate, High).
2. Look on the right as to which Questions are required for the Action to be achieved. You can also read about each Question in the table on the right.
3. Tackle the Actions of High importance first.

Actions the Policy Assessment can help with	Action importance			Question needed			
	Low	Mod	High	A	B	C	D
Identify implementation gaps and list measures to improve the implementation process.				✓	✓		
Test the operability of administrative levels and suggest changes in the decision-making process.					✓		

Actions the Policy Assessment can help with	Action importance			Question needed			
	Low	Mod	High	A	B	C	D
Identify if any sectorial policies are in conflict before starting the project.				✓	✓		
Identify your conversation partner[s] for incentives when undertaking a redevelopment project.				✓	✓		
Improve the skills present in your environment to help your project.						✓	✓
Identify the main actors and how they can contribute to the project. Connect major actors in a project network.				✓		✓	
Identify the main incentives and funds which can financially enable your project.				✓	✓	✓	
Identify who can potentially hinder implementation of the project.					✓		✓
Start raising awareness of the issue at a local level.				✓		✓	✓

HOW TO DO THE POLICY ASSESSMENT

Here are 4 basic Questions, from A to D, which policy assessment can answer and that are relevant for the transformation of industrial landscapes. Depending on your transformation scenario from Chapter 2 or the Actions matrix above, you can identify which questions you need to answer.

	Question	Explanation	Main use of the output
A	<i>How well is decision-making power distributed amongst administrative levels?</i>	<i>We explore the vertical and horizontal coordination of stakeholders and institutions at different administrative levels (local, regional, national and EU) to identify which level supports the implementation of transformation projects and how it does so. Good working connections need to be revealed and co-operation gaps addressed.</i>	<ul style="list-style-type: none"> - Identify policy gaps and make policy recommendations to remove them - Test the operability of levels by reviewing the strategic aims of policy documents and the measures of achieving them by evidencing transformation tools, such as planning tools, financial mechanisms, incentives, and so on.
B	<i>Which policy sectors and themes should you consult with in the transformation process?</i>	<i>Based on your goals, it is important to know which sectorial policies support the given redevelopment project. It is also important to identify synergies amongst different sectorial policies.</i>	<ul style="list-style-type: none"> - Identify your target policy sectors and, through so doing, identify a conversation partner for investment incentives. - Identify the main incentives and funds relevant to your project by knowing the priorities and aims of these funds and financial support programmes.
C	<i>Who are the key actors and what are their roles in the project?</i>	<i>Understand who the key institutional actors supporting the implementation of the project are. Learn how to setup a successful project network to ensure the longevity of the transformation's effects.</i>	<ul style="list-style-type: none"> - Identify the relevant actors in your local environment who will implement or support the implementation of your project. - Identify the roles of the main actors and how they can help the project. - Connect the relevant actors in a project network.
D	<i>What are the current transformation practices in your region?</i>	<i>Review transformation projects in your area as well as the incentives used by these projects in order to avoid previous mistakes and create a better project.</i>	<ul style="list-style-type: none"> - Identify which incentives have already been used and how well their financial resources have been absorbed. - Identify the internal and external challenges of applying for incentives - Identify the required knowledge and skills which are important to support the given transformation project.

A How well are decision-making powers distributed amongst administrative levels?

This question looks at how decision-making power is distributed between local, regional, national, and supranational (EU) levels. The main interest in this part of policy assessment is to identify how the distribution of governing powers amongst these levels enables or disables the implementation of redevelopment projects. Additionally, areas for improvement in the transformation process can be identified. For brownfield redevelopment projects, the four test areas of trAILS show that a more decentralised model of governance may yield better results. This means that more decision-making and power should be transferred from national and regional levels to the local level.

Before suggesting what kind of decision-making processes should be enabled, there is a need to understand how relevant authoritative bodies are organised and structured (for example: which decision-making bodies set up the priority areas for incentives; is it the supranational, national, regional or local level?). There is also a need to understand if the relevant institutions are performing well; and how to suggest improvements for negative aspects.

How it is done

Firstly, there is a need to pursue the analytical steps of the assessment; there is a need to list and gather all transformation relevant documents at national, regional, and local administrative levels. Secondly, there is a need to read through the policy documents in order to identify relevant sectors and their bodies, as well as the different power jurisdictions that exist at different levels. Content-wise this means reading through the official statements of the sectors, and their flagship documents (policies, strategies, strategic plans) setting the transformation framework. This then enables the preparation of a roadmap of actors their administrative role in the process. The review also reveals what instruments these actors possess that may be able to assist the transformation process.

The documents can be easily found on the websites of relevant ministries (for example, the Industrial strategy of Slovenia can be found on the site of the Ministry of Economic Development and Technology).

One of the main hurdles of this activity is the volume of the documents to be investigated. Therefore, there is a need, as much as possible, to limit the list to the policies which are directly linked to transformation; such as the policies in planning, industry, environment, energy, culture, agriculture, and tourism.

Reviewed policy documents by policy sectors

General sector

- Europe 2020 Strategy (*European Commission, 2010*)
- DG REGIO: Strategic Plan 2016-2020 (*European Commission, 2016*)

Planning sector (spatial, regional)

- Territorial Agenda of the European Union 2020 (*European Commission, 2011*)
- Leipzig Charter on Sustainable European Cities (*EU Member States, 2007*)
- Alpine Convention from 1991 (*Alpine Convention, 2010*)
- EU Strategy for Alpine Region - EUSALP (*European Commission, 2015*)
- EUSALP: Action Group 2 (AG 2) (*European Commission, 2015*)
- *European Landscape Convention (Council of Europe, 2000)*

Industry sector

- DG GROW: Strategic Plan 2016-2020 (*European Commission, 2016*)
- A renewed EU Industrial Policy Strategy (*European Commission, 2017*)
- Strategies for resilient, inclusive and sustainable growth (*European Commission, 2017*)

Biodiversity sector

- EU biodiversity strategy to 2020 (*European Commission, 2011*)

Energy sector

- Energy 2020 (*European Commission, 2011*)

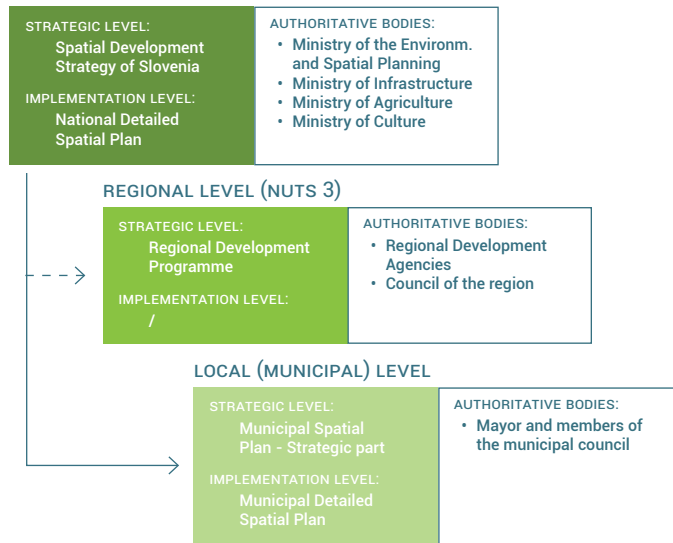
Culture sector

- A New European Agenda for Culture (*European Commission, 2018*)
- 2019 Annual Work Programme of the "Creative Europe" Programme (*European Commission, 2018*)

Agriculture sector

- Common Agricultural Policy (*European Commission, 2001*)

NATIONAL LEVEL



Advice on implementation

Contact the expert in policy analysis, presuming that there is a policy analyst with the knowledge of planning and territory related issues, e.g. a geographer, planner, landscape architect, urbanist, or architect. Doing a policy analysis requires a lot of deskwork and reading. It means searching official sites (ministries, municipalities, and so on) for documents (policies, action plans, strategic plans, and so on), reading the documents, and gathering information on how they support industrial landscapes. Usually, a spreadsheet or other tabular summaries are created to make final synthesis easier. Additionally, you can also assist the process by using text analysis computer tools such as Atlas, nVivo or similar.

We recommend using keyword search in order to speed-up the process of filtering the most relevant information targeting AILs.

TIPS AND TRICKS

PREVIOUS PAGE: In researching the administrative levels and the distribution of decision-making powers, we recommend collecting a variety of policy documents; as we did for the supranational level in the trAILS project. By doing so, you begin to understand the dimensions of administrative levels, their various documents, and the policy sectors which are relevant for industrial landscapes.

LEFT: In the trAILS project we were specifically interested in the variety of the transformation tools available such as the planning tools of different administrations used in Slovenia.

AILs keywords

Negative connotation

Brownfield, degradation, derelict, fallow land, marginal, pollution, vacant, wasteland

Without connotation

Alps, alpine, cultural heritage, industry/industrial, landscape, mountain, periphery/peripheral, rural, small- and medium-sized town

Positive connotation

Reactivation, reconversion, redevelopment, regeneration, remediation, restoration, reuse, revitalization, transformation, transition

Needed resources and information

- Information on the organisational structure of the domestic governance framework.
- Policy documents (spatial plans, strategies, strategic plans, action plans, annual programmes, treaties, and so on) from all administrative levels and from those sectors that cover relevant industrial landscape topics, such as planning, industry, environment, energy, culture, agriculture, and tourism.

Required time and expertise

- A professional experienced in policy analysis.
- Examples of these include: geographers, economists, sociologists, policy analysts, planners, landscape architects, urbanists, and architects who have previously dealt with policy, governance or institutional analysis.
- Desk-work for 1-3 weeks depending on the volume of the documents and the depth of investigation.



B Which policy sectors and themes should you consult with in the transformation process?

This question is useful in two ways. First, it helps you to identify policy sectors which address the industrial landscapes or specific objectives of your project. Secondly, it gives you a preliminary notion as to how to define the project's objectives so that they correspond to EU policies and funds. Since industrial landscapes are currently not a major point on EU agenda, you need to look across sectors to find relevancy. In the trAILS project we identified six main transformation topics represented in the policies which were relevant to transformation projects.

These topics were: Knowledge, Innovation and Research, Sustainability (alternative resources, circular and low-carbon economy, greener environment etc.), Territorial Cohesion, Environmental Protection, Cooperation between Countries and Governance. The majority of the objectives at the supranational level were found in the policies that set the general framework of the EU member states, spatial planning and industry sector-related policies. Incentives for transformations were found in INTERREG programme, LEADER/CLLD, HORIZON 2020 and others.

How it is done

After you have identified the governance framework and undertaken the basic keyword search analysis (question A), you need to return to the database of the policies and narrow down your initial findings. You need to identify objectives and measures which directly or indirectly target industrial landscapes. You should note in which sectoral policy certain keywords describing your objectives appear, and in what context they are used. Synthesize these into a spreadsheet. Write down the summary of the contents of documents as well as details pertaining to authorship and the sector that published it.

Focus on the most recent policy documents and do not forget to check the appendix of documents to see if the policy document lists any thematic or specific objectives that each sector is aiming for. Be thorough in your investigation; note how the sector/administration plans to achieve their set goals. Do they propose any new instruments, plans or incentives?

Advice on implementation

We advise searching for relevant policy sectors and objectives on the lower governance levels (regional and local) as they might be more concrete. This may depend on your administrative framework (see question A).

Some of the policy documents might be vague with regards to their objectives and measures. This may also be the case in spatial plans de-

veloped by the higher administrative levels. Also, make sure to check the references of the document to see if these refer to any other existing plans of action.

TIPS AND TRICKS

ON NEXT PAGE: For the four test areas of the trAILS project the domestic policy documents listed over 60 objectives and measures that, in one way or another, addressed industrial landscapes. They mostly came from the spatial, urban development and regional planning sectors. The content of identified objectives and measures should be sorted into core themes to make them easier to relate to your project. The most common topics are Territorial Cohesion, Sustainability, Governance, and Environmental Protection.

Needed resources and information

- The goals of your project should be realistic and should be formulated within the project team. Furthermore, you should do your best to match them to policy objectives in order to be eligible for incentives that spread across different sectors.
- A bullet-point list of the relevant policy documents should include information on the year of endorsement, authorship (administrative official), sector type, and thematic scope. Reference to specific objectives and/or measures, and other policy relevant documents should be made.

Required time and expertise

- A professional who is familiar with the aim of the projects and strategic programming.
- Deskwork of one week depending on your thoroughness and experience of the topic.



Examples of objectives by core themes and its coverage by administrative levels

	National level	Regional level	Local level
1. Territorial Cohesion	<ul style="list-style-type: none"> Identify priority areas for industry and commerce of regional or supra-regional importance, ensuring land potential for business settlements (ICT). (AT, SI) Support sustainable urban development by establishing control over the use and quality of public space and housing stock, activate disused land, reduce conflicts of investments on greenfields, preserve and strengthen identity of space and landscape. (AT, FR, SI) 	<ul style="list-style-type: none"> Identify priority areas for industry and commerce of regional or supra-regional importance, ensuring land potential for business settlements (ICT). (AT) Promote regional tourism and cultural heritage. (FR) 	<ul style="list-style-type: none"> Develop conditions for development of small and middle-size entrepreneurship which would contribute to the reduction of daily work migrations through the renewal and reactivation of degraded areas. (SI)
2. Sustainability	<ul style="list-style-type: none"> Strengthen land recycling trends and the activation of brownfields. (AT, FR) Support rational, prudent and sustainable uses of space by redevelopment and change of use of brownfield instead of greenfield sites. (AT, FR, SI) 	<ul style="list-style-type: none"> Support rational, prudent and sustainable uses of space by redevelopment and change of use of brownfield instead of greenfield sites. (AT, FR, SI) 	<ul style="list-style-type: none"> Support rational, prudent and sustainable uses of space by redevelopment and change of use of brownfield instead of greenfield sites. (AT, SI)
3. Governance	<ul style="list-style-type: none"> Develop place-based strategies for rural development. (AT) 	<ul style="list-style-type: none"> Promote and implement participatory approaches and actions that limit environmental impact (EIA) and stimulate transformations through a better and more efficient coordination of relevant actors and multifunctional usage of sectoral policies, vertically and horizontally. (FR) 	<ul style="list-style-type: none"> Spread awareness of brownfield sites. (AT) Promote and implement participatory approaches and actions that limit environmental impact (EIA) and stimulate transformations through a better and more efficient coordination of relevant actors and multifunctional usage of sectoral policies, vertically and horizontally. (SI)
4. Environmental Protection	<ul style="list-style-type: none"> Support land recycling and remediation of unused areas, brownfield sites and former mining and industrial areas in order to reduce space consumption. Reuse polluted sites for an urban renovation to contribute more effectively to the fight against climate change and the preservation of the environment. (AT, FR, SI) 	<ul style="list-style-type: none"> Support land recycling and remediation of unused areas, brownfield sites and former mining and industrial areas in order to reduce space consumption. Reuse polluted sites for an urban renovation to contribute more effectively to the fight against climate change and the preservation of the environment. (FR) 	<ul style="list-style-type: none"> Support land recycling and remediation of unused areas, brownfield sites and former mining and industrial areas in order to reduce space consumption. Reuse polluted sites for an urban renovation to contribute more effectively to the fight against climate change and the preservation of the environment. (AT, FR, SI)

C Who are the key actors and what are their roles in the project?

This question looks at the key actors who should be included either in the preparation or implementation of the project. In other words, they are your stakeholders who have enough governance power to steer the transformation or are otherwise important for the project. An actor can be either an individual expert/consultant or an institution with a role specific to the redevelopment project. In addition to the table, a network chart can be drawn, based on how the actors are interconnected and how powerful any such connections are.

The table and the chart support future discussions as to who should fulfil subsequent activities and roles in the project so as to optimise its implementation.

How it is done

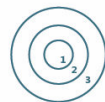
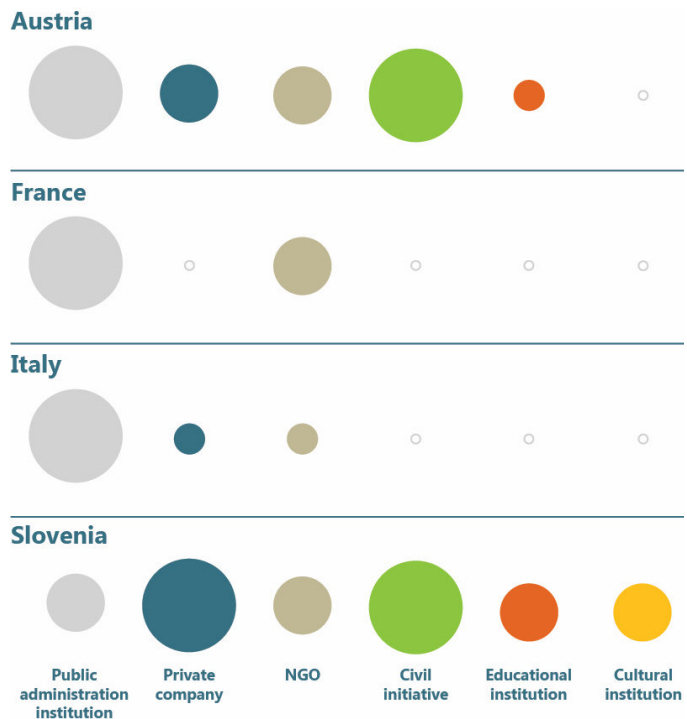
For each of the actors: define their type (such as administration, private company, NGO, civil initiative, education, and so on) role (application preparation, networking, financial management, decision-making, special expertise, and so on) and the level of influence that they exert over the whole process (minor, moderate and major).

Once you have identified the actors and what/how they can contribute to the project, consider bringing them on board as project collaborators, support members or experts. Consider organizing other network-supporting events which cater for your actor network.

Advice on implementation

To design the network scheme, think about the main actors in your region or city. If you do not have such knowledge, ask around your office or delegate the task to someone who is familiar with the local/regional situation. It would be best if the person is a resident or current user of the area in question.

Schedule time and organize a team brainstorming discussion on the impact of your project on the actors and their impacts on the project. Try to have an open discussion to refine the aims and activities of your project.



Levels of influence:
1 - minor
2 - moderate
3 - major

Austria**France****Italy****Slovenia****TIPS AND TRICKS**

ON PREVIOUS PAGE: According to the results of the four pilots, the actors in the TRAILS project were classified into six categories.

LEFT: The most significant category encompassed those from public administration institutions; evaluated to be the most influential bodies to steer the transformation of industrial landscapes. They are responsible for environment protection, quarry and mine management, economic development, tourism, planning, cultural heritage, and so on. Other significantly influential actors were identified to be the owners of the site, such as private companies and other agencies with responsibility for land management. In addition, one should not forget about civil initiatives (local inhabitants) who, in some countries/regions, play an important role in transformation processes.

Needed resources and information

- Information on the main actors in your town, city, or region.
- Enough time to discuss the power of identified actors.

Required time and expertise

- Knowledge of institutional analysis and actor networks in your town, city or region relevant to spatial planning.
- Brainstorming exercise with the whole project team, 1-3 hours; detailed description of the actor networks of up to 1 week. If interviews are undertaken with the actors to gather more detailed information allow at least one month for the process.



D What are the current transformation practices in your region?

This question identifies current transformation projects in your area, and elaborates how successfully they have used existent policy instruments and incentives (for example EU funding). This question has a shape of a questionnaire to be filled-out by the Regional Development Agency or other institution with knowledge of the implantation of past/current projects. A set of questions is designed to identify which incentives have already been used, how well they supported redevelopment projects, what the internal and external challenges of applying for project funding are, and which specific competencies one requires to implement a redevelopment project.

How it is done

The questionnaire should consist of up to ten questions. We advise that each question should be closed-ended; i.e. they should have a list of predefined answers to choose from. However, there is also a need to leave room for the answer "other" to allow respondents some flexibility and creativity. Examples of questions from the project trAILS include:

1. *What incentives have you been utilizing in the running financial period (2014-2020) for the purposes of brownfield redevelopment? Please specify the project name and thematic priorities.*
2. *What are the reasons you have not used certain incentives? Please specify the challenges and barriers for each incentive.*
3. *From your experience, how useful are EU incentives for brownfield redevelopment?*
4. *How much funds have you absorbed from EU and national incentives in the last 6 years (2014-2020) that supported any kind of brownfield redevelopment in your region? Please, explain briefly what these actions were.*
5. *What knowledge and skills do you find important to support a successful brownfield redevelopment from your point of view and which of the "important" and "very important" knowledge and skills for a successful brownfield redevelopment does your organisation or network of partners in the region most lack?*

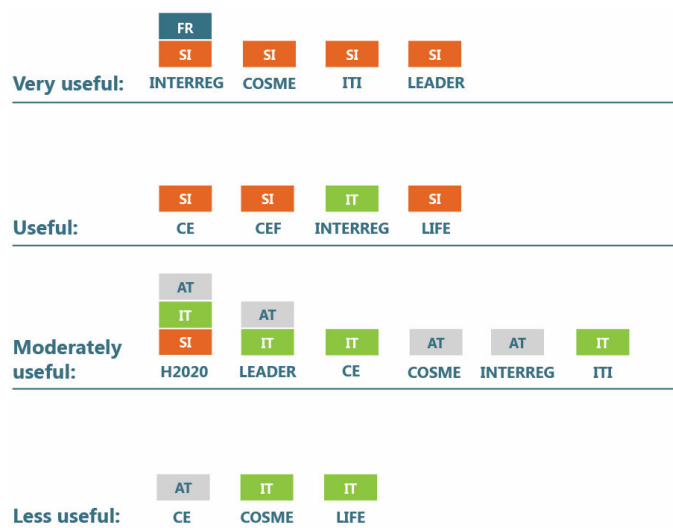


Needed resources and information

- Information on past experiences of using EU and other funds, institutions' expertise in dealing with the redevelopment of brownfield sites.
- A list of currently running and completed redevelopment projects.
- A list of stakeholders and institutions organizations that were key players in these redevelopment projects.

Required time and expertise

- A professional who has good knowledge of EU funds and other incentives, and has basic knowledge in formulating questions for a questionnaires/interview, collecting and synthesizing answers.
- Desk-work of 1 hour to 1 week or field-work of few days - if the questions are administrated in person (interview). One should also be mindful of the time that it takes for questions to be answered via questionnaire; they should be available to targeted audience for at least 1 month.



TIPS AND TRICKS

ABOVE: In the trAILS project, we identified that the biggest challenges for using a certain incentive were: lack of connections to potential project partners, application forms and processes being too demanding, a lack of human resources, and a lack of specific expertise. Through using the questionnaire we found that the most useful EU incentives for brownfield redevelopment included the INTERREG programme, LEADER/CLLD and others.

BELLOW: The questionnaire also identified knowledge and skills that are important or missing in the organisation/network to support a successful brownfield redevelopment. The actions most commonly supported by EU funds were utilisation of place-based strategies, such as industrial cultural heritage as an economic supporting activity, or other innovative approaches of implementing pilot investments to rehabilitate brownfields.

Most important and lacking knowledge and skills

Lacking knowledge and skills:	AT	FR	IT	SI
• Marketing, promotion and business settlement	×	×	×	×
• Creative thinking	×			×
• Expertise in specific analyses, such as SWOT		×		×
• Networking skills		×		×
• Strategic thinking			×	
• Spatial planning expertise			×	×
• Non-financial or low-financial development motivation				×

SE SOCIO-ECONOMIC ASSESSMENT

The primary aims of the assessment are to identify and evaluate the social and the economic impacts that brownfield sites have on the local social structure. The mountain industrialization process defines local community at both cultural and identarian levels: past, present and future issues related to the site need to be probed and, to do that, investors and stakeholders (at all levels) need to involve people who experience the de-industrialization daily. Residency is the best witness of a site's history, that is why it is important to have a residency picture first (using secondary data), and then engage the local community.

HOW TO BENEFIT FROM UNDERSTANDING SOCIO-ECONOMIC ASSESSMENT

Past: Cultural and Identarian frame

Industrial sites leave behind different consequences: the history of a site is strictly connected with the history of its community. The cultural and identarian weight of an industrial reality needs to be taken into account at the decision making level in order to better understand what the site means for local traditions.

Present: What can we do now?

When a transformative project is ready for implementation, it is useful to ask the people who live in the community about their needs and opinions of the final transformation.

Future: Citizenship shared consensus toward final project

Including citizens in the transformative process helps both investors and stakeholders to better understand the feelings, opinions, needs and expectations that the local community has towards the site. People engagement stimulates senses of social cohesion amongst the community and also helps to fill the gap between those who decide (investors and stakeholders) and those who will experience the final project.



What actions would you like to take?

The uses of Socio-Economic Assessment can be revealing. Here are a few Actions that the Socio-Economic assessment can help you achieve.

1. Look at the Actions on the left and decide how important each is (Low, Moderate, High).
2. Look on the right as to which Questions are required for the Action to be achieved. You can also read about each Question in the table on the right.
3. Tackle the Actions of High importance first.

Actions the Socio-Economic Assessment can help with	Action importance			Question needed		
	Low	Mod	High	A	B	C
Identify and evaluate the socioeconomic impacts of the brownfield (at the local scale).				✓		✓
Identify inhabitants' expectations towards the site.					✓	✓
Identify the main local stakeholders.					✓	✓

Actions the Socio-Economic Assessment can help with	Action importance			Question needed		
	Low	Mod	High	A	B	C
<i>Involve the local community throughout the redevelopment project.</i>				✓	✓	✓
<i>Identify the local social and economic structure.</i>				✓		
<i>Reach a participative consensus on the choices to be made.</i>					✓	✓
<i>Understand inhabitants' priorities (as a community).</i>				✓	✓	
<i>Stimulate new ideas towards the projects.</i>						✓

HOW TO DO THE SOCIO-ECONOMIC ASSESSMENT

Here are 3 basic questions, from A to C, which socio-economic assessment can answer and are relevant for the transformation of industrial landscapes.

	Question	Explanation	Main use of the output
A	How important is the brownfield in the definition of local identity?	<i>Heritage connected to the industrial brownfield can be felt by the community in different ways. It follows that transformations connected to the site have different impacts on the identarian definition of the local community.</i>	<ul style="list-style-type: none"> - Identify whether site issues are "present" amongst citizens. - Communitarian feelings and sensations towards the site can be used as a compass for the transformation process.
B	Which transformation perspectives are perceived as important?	<i>It is important to know the shared sentiments that people have towards the industrial site; in a decision-making process the local community needs to be taken into account: successful transformation projects start in peoples' minds!</i>	<ul style="list-style-type: none"> - Understand how the community imagines itself in the future (e.g., as a touristic locality, or an industrial one). - Choose a future scenario that can better fit with the citizens' idea.
C	How much can the final project shape the definition of the local identity?	<i>It is important to consider the wishes of the local community about the development of the site in order to support and enhance the local identity.</i>	<ul style="list-style-type: none"> - Define the project's direction according to the community's will. - Witnesses and ideas can be used as guidelines in the implementation process.

A How important is the brownfield in the definition of the local identity?

The heritage connected to the industrial brownfield can be felt by the local community in different ways. It follows that transformation of the site will have different impacts on the identity definition of the local community.

This question looks deeper into the community. The main interest is to test the social ground of the local community. Using qualitative analysis - for example interviews - it is possible to understand the importance of the site for the local community. Industrial heritage involves locals' history, culture, and economy, so citizens' perceptions can be used as to guide the decision-making process. In order to have credible data it is important to engage people with different demographic, social and economic characteristics (clusters): age, gender, educational level and employment can also be used as relevant indicators.

Identifying remote and present issues connected to the site and analysing their importance to the socio-economic local situation can help stakeholders in the decision-making process. Residency gives the local community the best knowledge of the brownfield, enables them to know the historical problems and enables them to propose concrete solutions!

Main use of the output:

- Identify if site issues are "present" between citizens.
- Communitarian feelings and attitudes toward the site can be used as a compass for the transformation process.

How it is done

It is possible to use more than one tool of analysis to obtain different relevant results. Mix qualitative (e.g. interviews) and quantitative (e.g. survey) analysis if possible. It is possible to find online national and local open-source databases with socio-demographic and economic information that can be filtered by years, ages, genders and other parameters. All this information can be used to build a preliminary picture of a community's social structure.

The final aim is to investigate inhabitants' perceptions toward the brownfield: it is important to cluster the local population as mentioned above, and then to analyse their perceptions and feelings towards the site. To do that, it is important to organize some simple open questions about past and current issues related to the site: for example, "How much do you know about the events related to the Tržič industrial site?" or, "Do you think inhabitants should be involved in the transformation processes of the Tržič industrial site?"

The sample of your analysis can be helpful to more than one aim. For example: during the decision-making process it could be relevant to ask elderly people questions related to historical is-

suues connected to the site. In contrast, it may be more pertinent to ask younger people, who may experience the new industrial site, questions on how to re-develop open green areas around the brownfield. It should also be remembered that it is important to consider data as a whole, in order to have a complete appreciation of the situation.

Advice on implementation

A word cloud made with inhabitants' adjectives gives a first interpretative frame of local feelings towards the site. It is not the only thing that we need but, if well integrated and analysed, it is the purest and most direct witness of a site's history.

We recommend choosing a heterogeneous sample: mixing ages, gender and other socio-demographic variables. This will give a statistically significant result.

TIPS AND TRICKS

ON NEXT PAGE: National and local socio-demographical databases are useful to better understand the social issues of the local community: analysing these first gives a preliminary image of local structure. A good method here is to ask people for two adjectives that they connect to the site. The results can later be reorganized into a word cloud.



Needed resources and information

- National and local statistical databases.
- Identify the stakeholders who need to be engaged (especially for the interviews).

Required time and expertise

- Data analysis knowledge is important for the quality of the subsequent research.
- Software (for the statistical analysis).
- Desk work from 20 hours to 1 week.



B Which transformation perspectives are perceived as important?

It is important to know the shared sentiments that people have toward the industrial site; in a decision-making process the local community needs to be taken into account: successful transformation projects start in peoples' minds!

This question aims to better understand how people would like to "re-destine" the brownfield. Successful transformation projects start in peoples' minds and through shared ideas. That is why all the stakeholders should consider how the local community sees itself in the future. At the decision-making level, it is important to take into account all the socio-economical aspects surrounding the brownfield area: the local economy and employment opportunities; social relations amongst the inhabitants of the municipality; the quality of the environment. All of these can be identified as being more or less significant in local perceptions of the transformation.

Before suggesting transformation, stakeholders need to develop a stable and efficient communication network between the actors in the municipality, as well as the institutions, and investors who can facilitate the re-qualification works. Through identifying inhabitants' needs – as evaluated through this assessment – it is possible to identify which aspects are most important.

Main use of the output:

- Understand how the community imagines itself in the future (e.g. as a touristic locality, or an industrial one).
- Choose a future scenario that fits with inhabitants' desires.

How it is done

This assessment comprises a series of tools that can be combined in order to test all the different aspects. Asking the inhabitants to evaluate these variables on a scale of 1 to 5 can help to establish a priority scale. Renderings of how the site might look like in the future (scenarios) can also be given to the interviewers as a first sight of the new site. Scenarios need to be real (or perceived as real) by inhabitants, they need to convey a possible concrete transformation project. It is important to take into account the brownfield site as a whole, including all the socio-economical, historical-cultural and spatial issues connected with it.

Images and texts are the best vehicles in doing this evaluation: images have a strong value of communication; texts help to explain what eyes cannot. From the analysis of preferences, pros and cons, it is possible to obtain a clear and oriented position of the local community towards the project. By so doing, it is possible to reduce the gap between investors and the local stakeholders.

The final aim of this evaluation is to understand the expectations of people who live in the mu-

nicipality and use the site. It is important to formulate different closed questions such as: "Do you believe that a transformation of the site could lead to..." (adding here alternatives related to socio-economics variables) or "Do you think that young people living here consider the possible transformation of the site as an opportunity for their professional future?" These kinds of questions are helpful to gain local perceptions of the site and the importance level of different socio-economical aspects.

Advice on implementation

Investors and shareholders need to have clear ideas about the transformation. Based on local perceptions and needs, it is possible to create renderings of how the site might look to test the local preference for the direction of the transformation. Adding a short text will help people to understand the graphic representations.

We recommend showing different types of scenarios. For example, radical, moderate and conservative examples (see Tips and Tricks). If it is not possible to divide into clear alternatives, it is important to try to communicate to inhabitants all the possible different intervention choices.



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TIPS AND TRICKS

LEFT: Design and test different alternative scenarios. Normally it is helpful to create three main groups:

1. Radical scenarios, where the old industrial buildings are demolished and the acquired space can be used for new buildings and activities (for example, the site could be transformed into an open campus, used for climate-change studies);
2. A moderate scenario, where parts of the old industrial buildings remain but are used for something new and different (for example, the outer walls of buildings could remain but the building is used as a new local multifunctional room);
3. A conservative scenario, where the old industrial site is renovated but maintains all of its existing functions and operations (re-used as an industrial site).

The scenario needs to clearly underline what will remain and what will be changed from the original industrial site. It is important that both graphic representation and accompanying text convey the same significance, otherwise it will be a waste of time... and resources.

Needed resources and information

- Architect and Graphic-Designer / someone who knows the industrial site, changes in the investors' and shareholders' minds and how to create renderings and representations with CAD and other software.
- A list of concepts for discussion, that municipality perceives as important: work, social relations, quality of environment, and so on.

Required time and expertise

- Architectural and design software.
- Software for the statistical analysis.
- Desk work from 1 week to 5 months.



C How much can the final project shape the definition of the local identity?

It is important to consider the wishes of the local community about the development of the site in order to support and enhance the local identity.

Re-thinking and re-designing a public space in a small community has different consequences at a social-economical level. Normally an industrial brownfield area has a deep connection with the collective memory of the local community so, at the decision-making level, this aspect needs to be taken in account. The transformation of a brownfield involves (directly and indirectly) the entire social structure of an area: employment, income, probably positive migration balance, tourism, and so on; it also reacquires additional services such as public transport, hotels and rooms for rent to satisfy eventual increases in demand.

Involving inhabitants in public events which discuss the transformation project alongside investors and shareholders will help to address gaps between investors and local community. It can also avoid any imbalance between expectations and realisation. For example, if the community sees itself as craftsmanship-based, transformation of the brownfield into heavy-industry production could produce unwanted effects!

Main use of the output:

- Define the development of the project according to the community's ideas and will.
- Witnesses and their ideas can be used as guidelines in the implementation process.

How it is done

This assessment requires multiple subjects: it is necessary to involve all stakeholders in a participatory and active debate on the issues concerning the brownfield. Institutions, investors, local inhabitants, and unions can be brought together in focus groups on the topic of on-going activities. Energizing this debate enables the community to express their opinions and ideas concerning the transformation and, at a social level, strengthens community cohesion.

Thematic groups involving different social actors can stimulate participatory debate; institutions and different partners can organize public conferences, speeches and other events to inform citizens about what is going on: people living in the area want to be informed.

The final aim is to implement the previous socio-economic evaluations in the transformation project itself. Therefore, a preliminary analysis of the social fabric needs to be undertaken. This can be done through the use of available databases to understand, for example, the number of activities present in the area and the types of these activities; or if there are any local worker associations or enterprises that are important. According to the outcomes, it is possible to take different

transformation directions: into a touristic area with an indoor sport multifunctional centre; into a craft-based production/education area, or it can house different boutiques or educational and formative spaces for the young.

Advice on implementation

First, it is important to differentiate the key stakeholders who need to be involved first. A transformation project touches a community at individual, collective, and structural levels. In addition, the "sample" in all socio-economic work needs to be heterogeneous. It is necessary to involve local consortia, artisans, authorities, students as well as the elderly in organized and active debate.

According to the involved stakeholders it is fundamental to write a list of concrete issues and realistic themes that will be discussed in the debate session. It is important to let participants freely discuss their ideas so as to create an open-flow discussion that supports the emergence of interesting arguments.

Try to give back something to the community. Come back to your focus group often, keep it informed about development phases and how the work progresses.



TIPS AND TRICKS

LEFT: By consulting documents, registers, and on-line data it is possible to identify local organizations and their components that are active in the local community such as associations, local movements, craft workers and students. An accurate choice of the stakeholders involved in the assessment can help to ensure important feedback.

With all the authorization needed, it is a good idea to record all the organized meetings and show the scope of work produced for each focus group sessions at the end of the project. Organized and well-structured workshops with different types of activities related to the site issues is one of the best tools to use in this evaluation.

Needed resources and information

- Lists of all the activities connected with the local community.
- Organized and well-structured workshop activities.
- Venue space in which to host debates and meetings.

Required time and expertise

- Knowledge of focus group and workshop organization.
- All the materials necessary to develop workshop activities.
- From 1 month onwards (come back to the community using this method when the project ends).



S SPATIAL ASSESSMENT

The spatial analysis focuses on the main spatial elements needed for the development of planning pathways at a multi-scale level. Two scales can be selected for the analysis: a regional scale (1:5000 and above) to get an overview of the specific location and to identify characteristics within the region; a local scale (smaller than 1:5000) for more in-depth analysis which focuses on the pilot area and its immediate surroundings.

HOW TO BENEFIT FROM UNDERSTANDING SPATIAL ASSESSMENT

Raising awareness of the environment and landscape

Knowledge of the topography and terrain, the location and type of nature protected areas, land use, blue and green connections and danger zones enables the identification of possibilities and limitations involving the future urban design processes of a specific area in a spatial context.

Awareness of existing settlement frameworks

Mapping and understanding the typologies of settlements, their historical buildings, uses and functions allows the identification of problems as well as the challenges and potentials regarding the future development of a specific area. Cumulatively, this allows the establishment of an adequate project framework. The settlement assessment helps to identify urban polarities and provides references for further planning processes.

Knowledge of mobility and accessibility

The analysis of mobility involves collecting data about roads and road networks, as well as information about public transport. The mobility assessment helps to identify the level of accessibility that is fundamental to the future development of the territory.

Investigation of supply and disposal infrastructure

An analysis of ICT supply, water supply and wastewater disposal infrastructure, as well as of the sewage and energy supplies allows identification of the possibilities and the limitations of existing networks as well as consequent needs to implement developments.

Identifying (legal) restrictions

Knowing local and supralocal rules regarding national, regional, and local networks helps you to understand the direction in which the future development is headed and what restrictions you have to take into account.



What actions would you like to take?

Spatial assessment is a very complex field. There are numerous assessments and analysis that can be undertaken. To make things more operational, here are a few Actions that the Spatial Assessments can help you achieve.

1. Look at the Actions on the left and decide how important each is (Low, Moderate, High).
2. Look on the right as to which Questions are required for the Action to be achieved. You can also read about each Question in the table on the right.
3. Tackle the Actions of High importance first.

Actions the Spatial Assessment can help with	Action importance			Question needed				
	Low	Mod	High	A	B	C	D	E
<i>Identify environmental and landscape conditions.</i>				✓				
<i>Identify danger zones - restrictions for the transformation.</i>				✓	✓			✓
<i>Identify settlement typologies and urban polarities.</i>					✓			
<i>Identify potentials and limits of mobility and accessibility.</i>						✓		✓

Actions the Spatial Assessment can help with	Action importance			Question needed				
	Low	Mod	High	A	B	C	D	E
Identify potentials and limits of supply and disposal infrastructure.							✓	✓
Identify legal restrictions.				✓	✓	✓	✓	✓

HOW TO DO THE SPATIAL ASSESSMENT

Here are 5 basic questions, from A to E, which spatial assessment can answer and are relevant for the transformation of industrial landscapes. Depending on your needs, you can set out to answer as many as you wish or just skip to the most relevant.

	Question	Explanation	Main use of the output
A	Which spatially significant conditions have to be considered at different scale levels?	As a result of the Environmental and Landscape analysis the user receives, for example, information about the topography and terrain, the location and type of nature protected areas, land use, and danger zones.	Identification of possibilities and limitations. Basic preparation work to set urban designs and ideas into a spatial context.
B	What problems and opportunities can understanding of the settlement give?	Mapping and understanding the typologies of settlements, the historical buildings, along with uses and functions allows identification of problems, challenges and potentials regarding the future development of a specific area, in order to establish the best project framework for it.	Identification of the basic information to be considered in designing scenario(s) for development.
C	How can the accessibility of the region / municipality / industrial abandoned site be assessed/evaluated?	Through the analysis of the mobility network, as well as the accessibility analysis, data about the road and rail network, as well as information about public transport and accessibility is collected.	In order to be able to redevelop a location, it requires, amongst other factors, insights about mobility and accessibility.
D	What electricity, thermal and information infrastructure are available and how are water supply and wastewater disposal organized?	The acquisition of an holistic system view requires analysis of supply and disposal infrastructure. Therefore, the ICT supply, the water supply and disposal infrastructure, as well as the sewage and the energy supply are examined.	In order to show the potential of the location for possible reuse, it is important to include the existing supply and disposal infrastructure in the planning process.
E	What are the planning rules/guidelines at different scale levels (state, regional, local) and why is it useful to know these?	Identification of the local and supralocal rules that are present in national, regional and local plans/programs.	In order to understand the direction of future development and to understand planning that apply in the area.

SUMMARY OF ADVICE ON IMPLEMENTATION

- Language barriers can often be an obstacle in data searches. Many country-specific platforms, as well as the available data, are only prepared in the official language of the country.
- Translation tools can provide an important aid to data research.
- Get the help of local experts who can give you an introduction to the most important data portals in the region for the respective analysis topic. In addition, the language barrier can be overcome by consulting a "local".
- Furthermore, a local expert can point out issues relevant for planning that are difficult to identify as an external expert.
- The data required for GIS analysis will usually be provided free of charge by the planning authorities of the relevant state in the form of geoportals. In addition, regions often also provide a region-specific geodata portal.
- If you need data beyond country-specific portals, the EU provides a comprehensive database for geodata through the INSPIRE geoportal.
- When searching for planning relevant data, it is advisable to use different search engines and different languages.

A Which spatially significant conditions have to be considered at different scale levels?

Analysis of the environment and landscape identifies opportunities and limitations at both scale levels. In this context basic information on land use will help to indicate past use and illustrate the framework for future use (sealed or paved soil). In addition, the generated content can be used, for example, to develop strategies for risk prevention and to strengthen resilience of the site.

In the course of this question, the environment and landscape are analysed at two different scales:

- Local scale (pilot site within the municipality) and
- Regional scale (municipality within the region and beyond).

How it is done

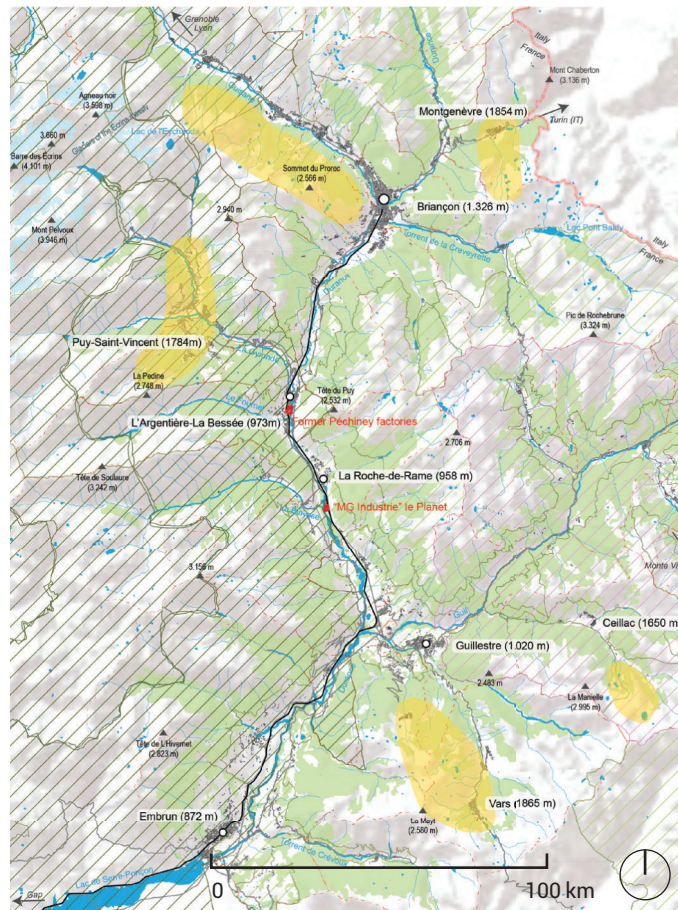
By using GIS data, various elements related to the environmental and landscape analysis can be analysed:

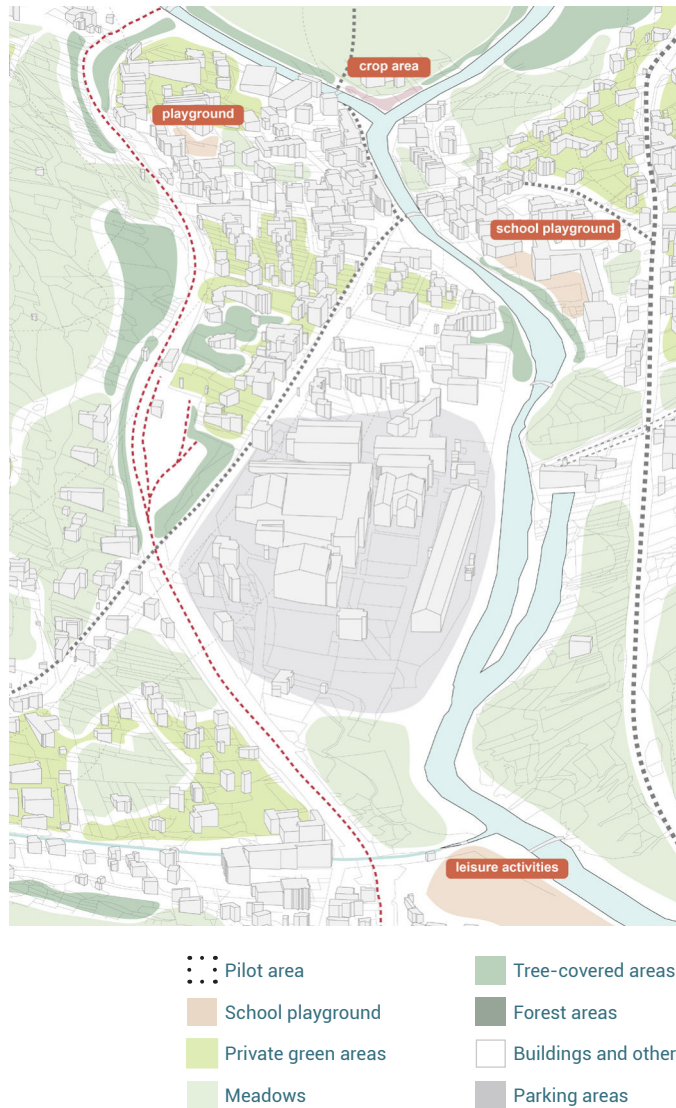
- Analysing the topography and terrain means mapping and providing a qualitative description of the topography via contour lines and terrain base maps in GIS. Additionally, a 3D model of the terrain can be created to enable a spatial analysis in digital form. With these outputs, the possibilities and limitations of the terrain can be identified.
- With the help of mapping nature protected areas in GIS the type and localization of the protected areas can be determined.
- By using the CORINE land cover the land use can be analysed and interpreted quantitatively using GIS.
- GIS can also be used to map hazard zones (floods, mudflows and avalanches) and other territorial fragilities. Based on this analysis step development possibilities and limitations can be identified.

In addition to GIS analysis, visual impressions can be obtained via on-site visits and through photo documentation. These impressions can be integrated into the spatial analysis.

TIPS AND TRICKS

RIGHT: Example of the environmental and landscape analysis in the French pilot region. The figure displays a topographic map with further elements of the environmental and landscape analysis of the Durance river valley between Briançon and Embrun.





TIPS AND TRICKS

ABOVE: Example of the environmental and landscape analysis in the French pilot area. The map displays the features of open spaces (green areas, playgrounds, meadows, and forest areas).

Needed resources and information

- Access to geodata portals that provide the necessary GIS data to conduct analysis on the environment and landscape.
- Local know-how to gain background knowledge in addition to readily available data.
- Access to detailed information on the existing conditions (a working relation with the municipality officials).

Required time and expertise

- An expert with the know-how to analyse environmental and landscape content, who carries out GIS analysis using available data and generates outputs such as maps.
- Estimated time of 50 hours for the research and preparation of the maps.

Expected output

- Maps that represent the current environmental and landscape situation in the region and situate the region in a wider context.
- Maps that represent the current environmental and landscape situation at a local scale and highlights the specific area.

B What problems and opportunities can the understanding of settlement provide?

The analysis of the settlements allows an understanding to be gathered of the urban layout in which the pilot area is located, as well as the urban polarities, the typologies of the buildings and their state of use. It is also interesting to know settlement history and different construction phases (this last point refers mainly to the local scale). The results of such analysis can be used, for example, to develop strategies relevant to future uses and the typologies of the pilot area, in order to establish the best project framework for it.

The settlement framework and features are analysed at two scales:

- Local scale (pilot site within the municipality) and
- Regional scale (municipality within the region and beyond).

How it is done

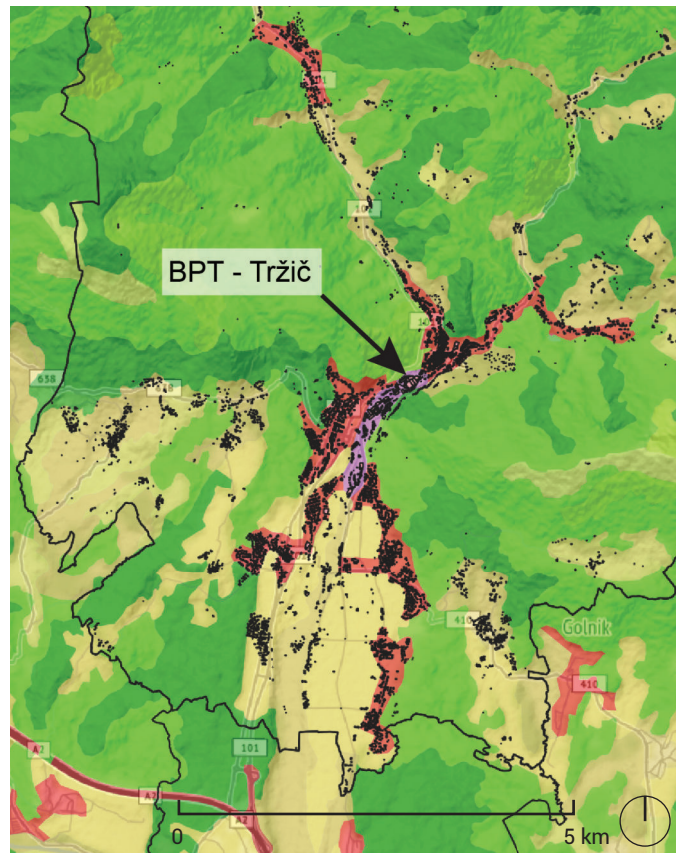
The settlement analysis can be carried out using GIS data, aerial photos, and specific documents. The following settlement elements can be analysed:

- Desk research, based on the GIS data allows analysis of the prevalent uses. The work involves mapping and categorization of residential, industrial and commercial functions, as well as of public facilities both on the regional and on the local scale.
- By using the CORINE land cover, the land use can be analysed and interpreted quantitatively using GIS data.
- Consulting municipal documents and online research allows mapping of urban polarities. The work involves finding out the main urban attractors for uses as well as historical and documentary value or landmarks in the area.
- At the local scale, by collecting info from the municipality, abandoned and non-abandoned buildings can be mapped.

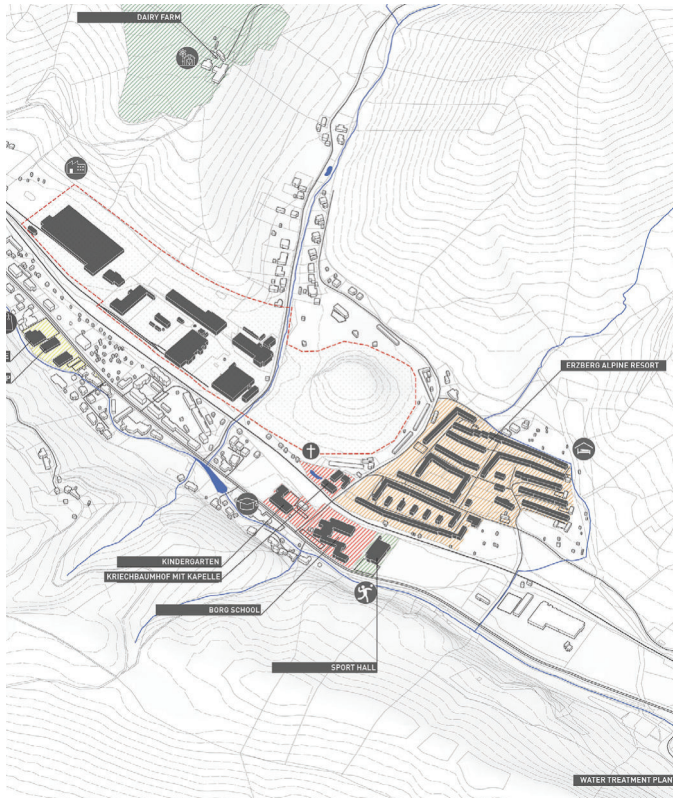
In addition to GIS analysis, visual impressions can be obtained by on-site visits and photo documentation. These impressions can be integrated into the spatial analysis.

TIPS AND TRICKS

RIGHT: Example of settlement analysis at the regional scale in the Slovenian pilot region. The figure shows the territory and its different functional characteristics.



Discontinuous urban fabric	Coniferous forest
Industrial or commercial units	Mixed forest
Road, rail networks, associated land	Natural grasslands
Pastures	Moors and heathland
Complex cultivation pattern	Transitional woodland-shrub
Agric. land with areas of natural veget.	Bare rocks
Broad-leaved forest	Sparsely vegetated areas



TIPS AND TRICKS

LEFT: Example of settlement analysis at the local scale in the Austrian pilot area. The figure shows the urban polarities surrounding the pilot area.

Needed resources and information

- Access to geodata portals provide the GIS data necessary to conduct analysis on settlement framework.
- Local know-how to gain background knowledge in addition to readily available data.
- Access to the municipality officials that will provide detailed information regarding existing site conditions.

Required time and expertise

- An expert with the know-how to analyse settlement content, who carries out GIS analysis using the available data and generates outputs such as maps.
- Estimated time of 50 hours for the research and preparation of the maps.

Expected output

- Maps that represent the current settlement situation in the region and situate the region in a wider context.
- Maps that represent the current settlement situation at a local scale and highlight the specific area.



C How can the reachability of the region / municipality / industrial abandoned site be assessed/evaluated?

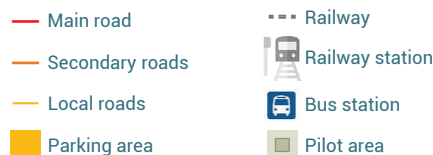
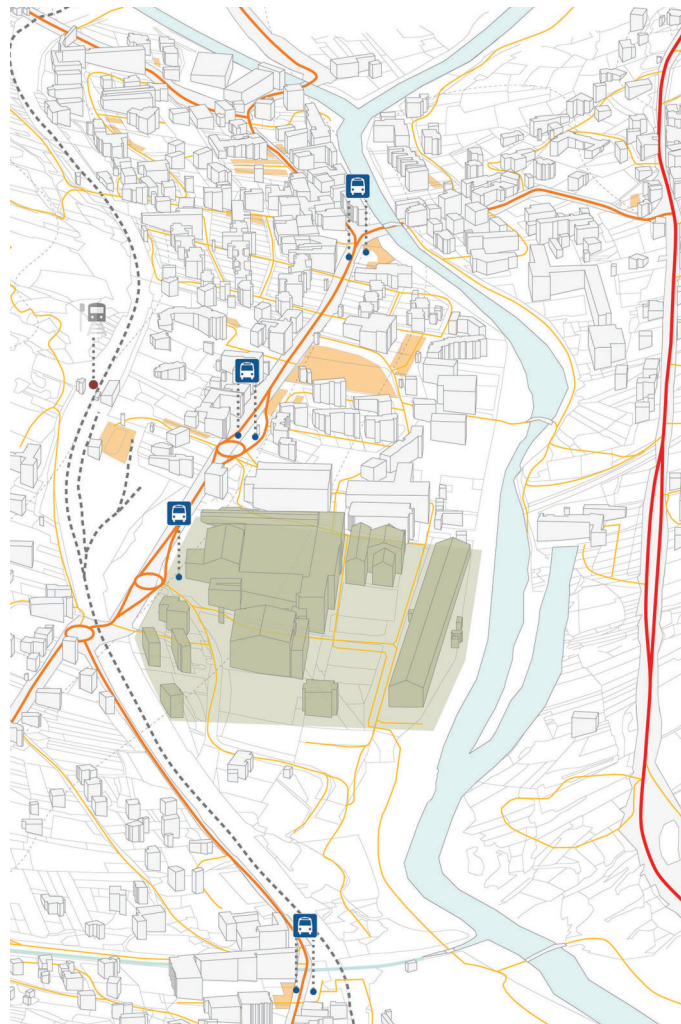
In order to be able to redevelop a site, its accessibility is important. By determining accessibility, a spatial impression of the location of the region / the municipality / the pilot site can be established, both within the country and with reference to neighbouring countries. The accessibility should be analysed for different modes of transport (passenger & freight transport by road, rail and air). At a regional level, bicycle traffic may also be relevant for tourist aspects and (increasingly) with regard to commuting.

Accessibility is analysed at two scales:

- Local scale (pilot site within the municipality) and
- Regional scale (municipality within the region and beyond).

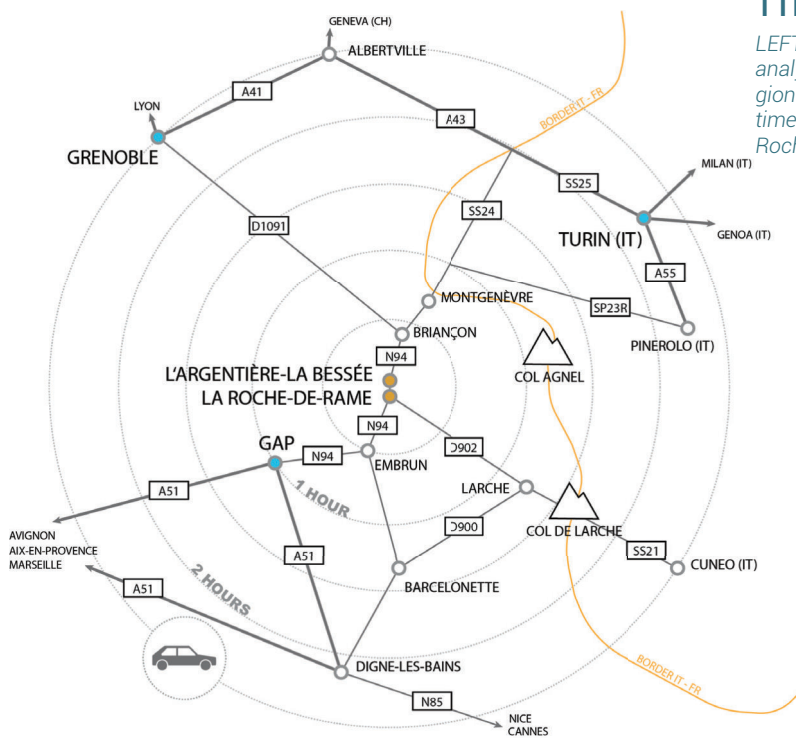
How it is done

- Collect concrete information from municipalities - particularly with regard to the local scale.
- Collect concrete information from the region - particularly that which is related to the regional scale.
- The analysis is based on desk research, which can be carried out in the form of GIS analysis. For this purpose, the following mobility-relevant topics can be analysed:
 - analysis of road networks involves mapping and categorising road networks and identifying main connections;
 - similar to the analysis of the road network, the rail network can also be analysed. The focus is on used and unused rail infrastructure and its use (passenger or freight);
 - in order to get a complete overview of the rail network, the public transport system will also be analysed;
 - the previously described analysis pertaining to mobility accessibility can be put into the context of accessibility by qualitative descriptions. For this purpose, mapping of distance and travel time can be provided.



TIPS AND TRICKS

RIGHT: Example of the mobility and accessibility analysis at the local scale in the French pilot region. The figure shows the road hierarchy, the public mobility network, and the parking areas.



TIPS AND TRICKS

LEFT: Example of the mobility and accessibility analysis at the regional scale in the French pilot region. The figure displays the accessibility and travel time of the pilot sites L'Argentière-la-Bessée and La Roche-de-Rame via the road network.

Needed resources and information

- Access to geodata portals provide the GIS data necessary to conduct analysis on the existing mobility of the region.
- Access to timetable information, route planners and websites of local transport associations
- Local know-how to gain background knowledge in addition to readily available data.
- Access to municipality officials that provide detailed information regarding the existing site conditions.

Required time and expertise

- An expert with the know-how to analyse mobility content, who carries out GIS analysis using available data and generates outputs such as maps.
- Estimated time of 30-40 hours for the research and preparation of the maps (researching different modes of transport).

Expected output

- Maps that represent the current mobility situation in the region and situate the region in a wider context.
- Maps that represent the current mobility situation at a local scale and highlight the accessibility to the specific area via private and public transport means.



D Which electricity, thermal and information infrastructure are available, and how are water supply and wastewater disposal organized?

Analysis of the supply and disposal infrastructure shows development potentials and limitations at both scale levels. In order to redevelop a site, an analysis of the existing supply and disposal infrastructure is also required in order to obtain a holistic system view. For example, when ICT supply is analysed it provides an overview of the availability of different types of existing information and communication technologies (fixed-line, mobile communication network, broadband network).

This can be analysed at two different levels:

- Local scale (pilot site within the municipality) and
- Regional scale (municipality within the region and beyond).

How it is done

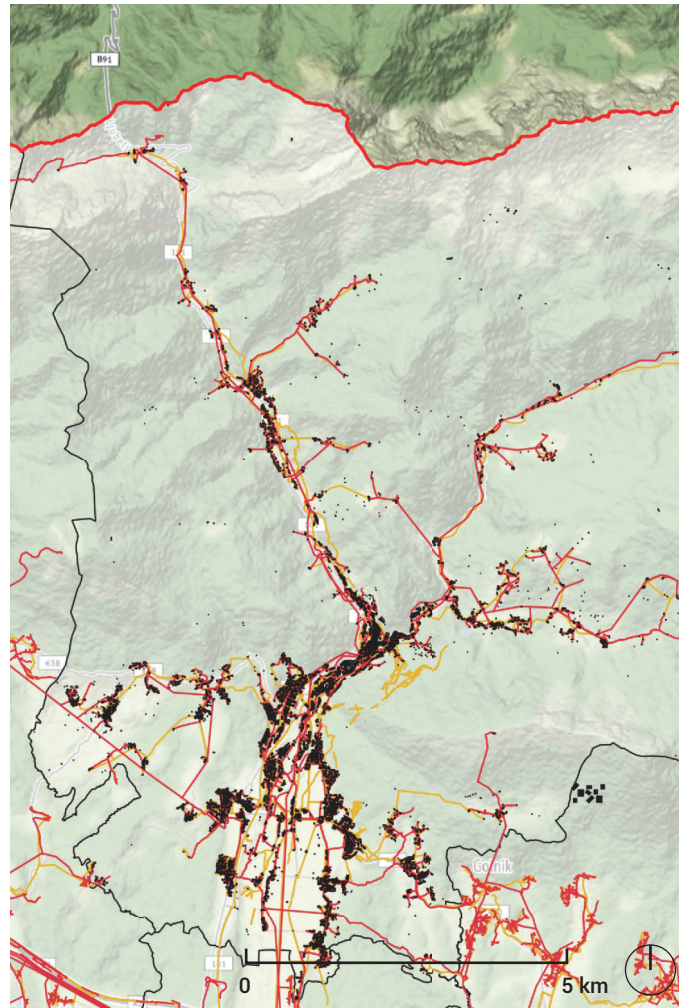
The settlement analysis can be carried out using GIS data, aerial photos, and specific documents. The following settlement elements can be analysed:

- ICT supply and communication technology.
- The organization of water supply and wastewater disposal can be also analysed.
- Energy supply for a future redevelopment (includes, for example, the supply of electricity and thermal energy).

TIPS AND TRICKS

RIGHT: Example of the analysis of supply and disposal infrastructure in the Slovenian pilot region. The figure displays a topographical map with the electricity and IT infrastructure in the municipality Tržič.

ON NEXT PAGE: Example of the analysis of the supply and disposal infrastructural (in particular the water supply network) in the Slovenian pilot region. The figure shows the existing water supply network.



- Electricity - infrastructure
- IT infrastructure
- Buildings
- Municipality border
- National border



Needed resources and information

- Access to geodata portals that provide the GIS data necessary to conduct analysis of the supply and disposal infrastructure.
- Local know-how to gain background knowledge in addition to that which is readily available.
- Access to municipality that provides detailed information regarding existing conditions.

Required time and expertise

- An expert who carries out GIS analysis using available data and generates outputs such as maps.
- Estimated time of 20-25 hours for the research and preparation of the maps.

Expected output

- Maps that represent the current supply and disposal infrastructure situation in the region and situate the region in a wider context.
- Maps that represent the current supply and disposal infrastructure situation at a local scale.



E What are the planning rules/guidelines at the different scale levels and why is it useful to know them?

In order to redevelop a site, it is necessary to know all the rules governing that particular area. We have to know in which direction future development will progress and which restrictions we have to take into account for the project. In addition to obligatory constraints and restrictions, it is useful to identify the guidelines of steering documents that suggest potential transformation scenarios for areas.

The identification of local and supralocal rules in national, regional and local plans/programs can be carried out at two scales:

- Local scale (pilot site within the municipality) and
- Regional scale (municipality within the region and beyond).

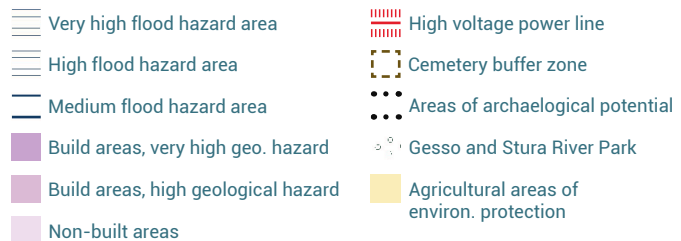
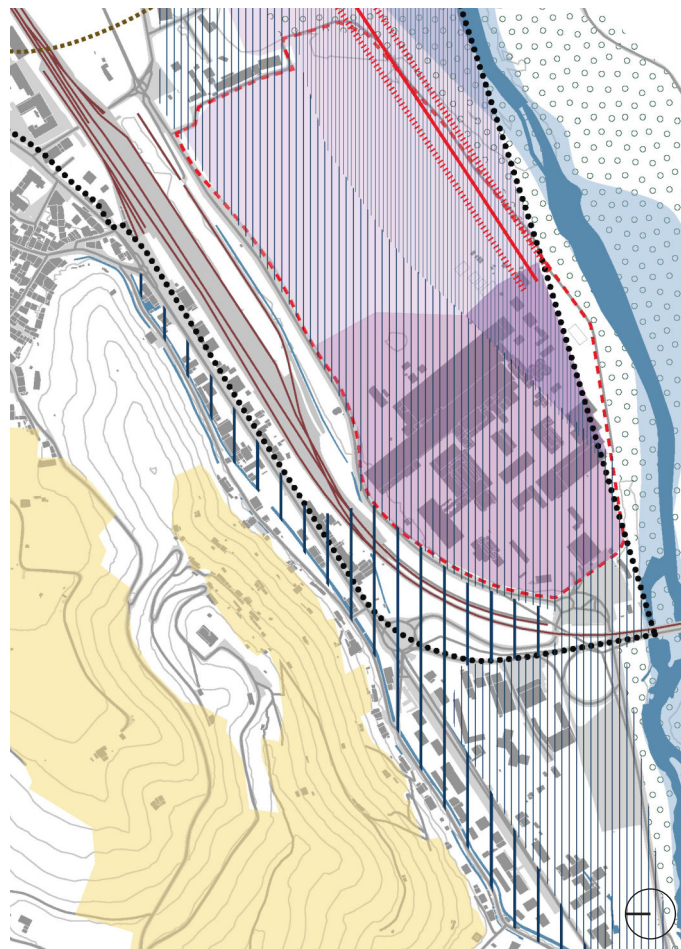
How it is done

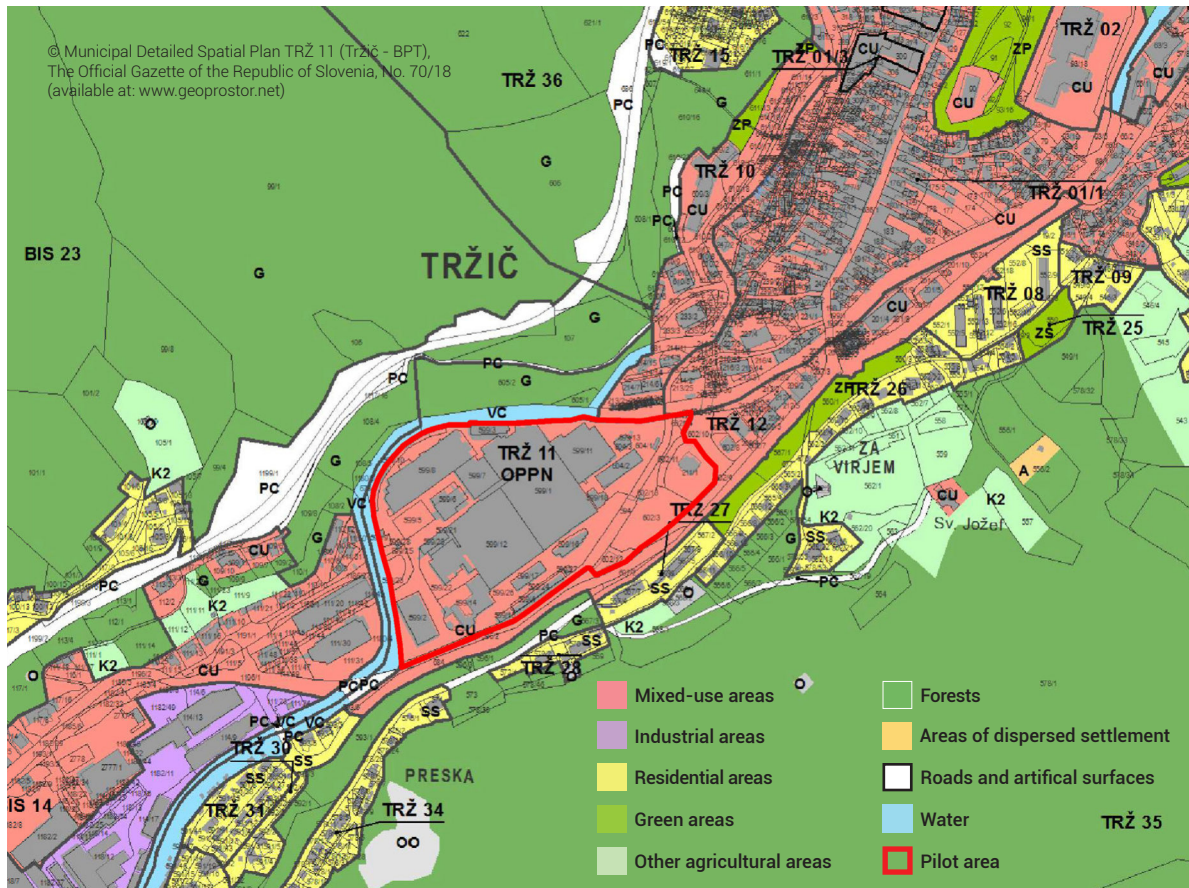
- Collect concrete information from municipalities, particularly related to the local scale.
- Collect concrete information from the region, particularly related to the regional scale.
- Desk research may be possible if the documents are made available on digital platforms. In these cases, research can be carried out in the form of GIS analysis. For this purpose, the following planning topics can be analysed:
 - local rules; sample plans, programs, projects;
 - supralocal rules; national, regional, supra-municipal plans, programs, projects;
 - specific and thematic documents and reports.

TIPS AND TRICKS

RIGHT: Example of the planning rules on regional scale in the Italian pilot area. The figure displays the supralocal rules for the Italcementi area. In particular it shows the geomorphological/hydrogeological hazards and suitability of the area for urban use.

ON NEXT PAGE: The municipal spatial plan in the Slovenian pilot area. The figure displays the permitted and non-permitted uses of the site and other spatial planning conditions.





Needed resources and information

- Access to geodata portals that provide the GIS data needed to conduct analysis on the planning rules/guidelines.
- Local know-how to gain background knowledge in addition to that data which is already freely available.
- Access to municipality that provides detailed information regarding existing and project conditions.

Required time and expertise

- Estimated time of 50 hours for the research and preparation of the maps.

Expected output

- Maps that represent the current planning conditions in the region.
- Maps that represent the current rules/guidelines at a local scale.

E ENVIRONMENTAL ASSESSMENT

An ecological assessment is essential when aiming at the transformation of alpine industrial landscapes. This is because brownfields can increase regional biodiversity as they contain a network of open areas with irregular management and contrasting site conditions. Such ruderal habitats support numerous pioneer species and rare ecosystem processes. However, brownfields are at least partly polluted, and they are often colonized by invasive species, calling for costly interventions and long-term management to protect human health and biodiversity. On a landscape level, brownfields can contribute to habitat networks and such habitat patches and corridors should be integrated when planning the transformation process.

HOW TO BENEFIT FROM UNDERSTANDING ENVIRONMENTAL ASSESSMENT

Raising awareness of biodiversity and environmental problems

Learning about the ecological conditions of a brownfield site enables stakeholders to learn about the potentials for biodiversity and the ecosystem as well as the area's environmental, economic or health risks. The environmental assessment helps to identify areas with high ecological value and environmental problems.

Planning ecological restoration

Ecological restoration should be sought for areas with a high potential to foster biodiversity or ecosystem services. The ecological assessment helps to identify targets for guiding restoration and will also help to suggest a suitable management strategy for their achievement.

Identifying (legal) restrictions

Some species or habitat types occurring on brownfields might be legally protected by European or national law. Furthermore, the development of the site might be restrained by pollution or flood risks. Identifying risk areas helps to plan measures that can or cannot be actioned.



What actions would you like to take?

Environmental problems can open new perspectives and opportunities for the site's transformation. Here are a few Actions that the Environmental Assessments can help you achieve.

1. Look at the Actions on the left and decide how important each is (Low, Moderate, High).
2. Look on the right as to which Questions are required for the Action to be achieved. You can also read about each Question in the table on the right.
3. Tackle the Actions of High importance first.

Actions the Environmental Assessment can help with	Action importance			Question needed			
	Low	Mod	High	A	B	C	D
Identify areas and species with high ecological value.					✓		
Identify the ecological potential of the site within the region.				✓	✓		
Identify potential risks and restrictions for the transformation (e.g. protected species or habitats, erosion, flooding).					✓		✓
Identify potential environmental problems related to the site (e.g. pollution, problematic species).				✓	✓	✓	✓

Actions the Policy Assessment can help with	Action importance			Question needed			
	Low	Mod	High	A	B	C	D
<i>Plan ecological restoration and create new habitats.</i>				✓	✓	✓	✓
<i>Restore ecosystem services (healthy environment, recreational function, cooling function, erosion control, habitat function).</i>				✓			✓

HOW TO DO THE ENVIRONMENTAL ASSESSMENT

Here are 4 basic questions, from A to D, that environmental assessment can answer and are relevant for the transformation of industrial landscapes. Depending on your needs, you can set out to answer as many as you wish or select just the most relevant questions.

	Question	Explanation	Main use of the output
A	What is the ecological potential of the site within the landscape?	<i>Especially in intensively used and poorly structured environments, brownfield sites can enhance regional biodiversity. They can serve as habitats or dispersal corridors for plants and animals.</i>	<ul style="list-style-type: none"> - Identify the value of the site for regional biodiversity. - Identify the importance of the site for a habitat network.
B	Where are the biodiversity hotspots and rare or legally protected species within the site?	<i>Biodiversity hotspots should be considered during the planning of the transformation process. This is especially true of areas hosting many rare or legally protected habitats (e.g. grassland, wood, water, ...) or species (e.g. plants, birds, butterflies) which should be preserved.</i>	<ul style="list-style-type: none"> - Identify the value of the site for local biodiversity by mapping habitats, legally protected or rare species. - Define management for protecting and improving habitats. - Identify potential for restoration.
C	Where are any problematic species located?	<i>Invasive (alien) species can be problematic, since they might increase management costs and threaten local or regional biodiversity.</i>	<ul style="list-style-type: none"> - Identify potential threats to biodiversity, economy or human health caused by plants. - Define measures for eradicating invasive species, if necessary.
D	Is there a risk of pollution, erosion or flooding?	<i>Contaminated soil needs special treatment. Areas prone to erosion and flooding might cause problems for future use and these issues should be considered during the planning process.</i>	<ul style="list-style-type: none"> - Identify potential soil pollution due to former activities. - Identify areas, prone to erosion or flooding. - Define countermeasures, if necessary.

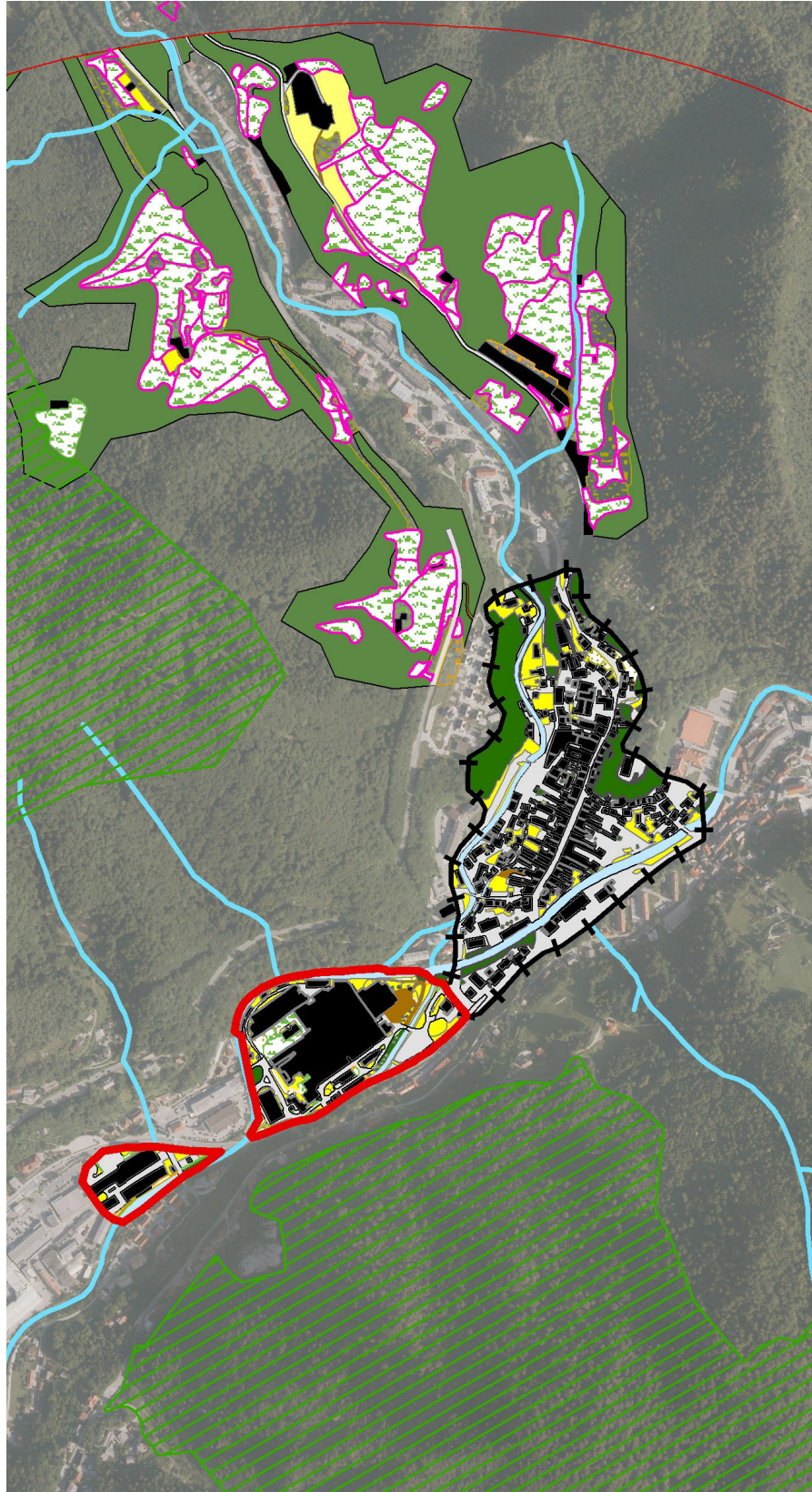
A What is the ecological potential of the site within the landscape?

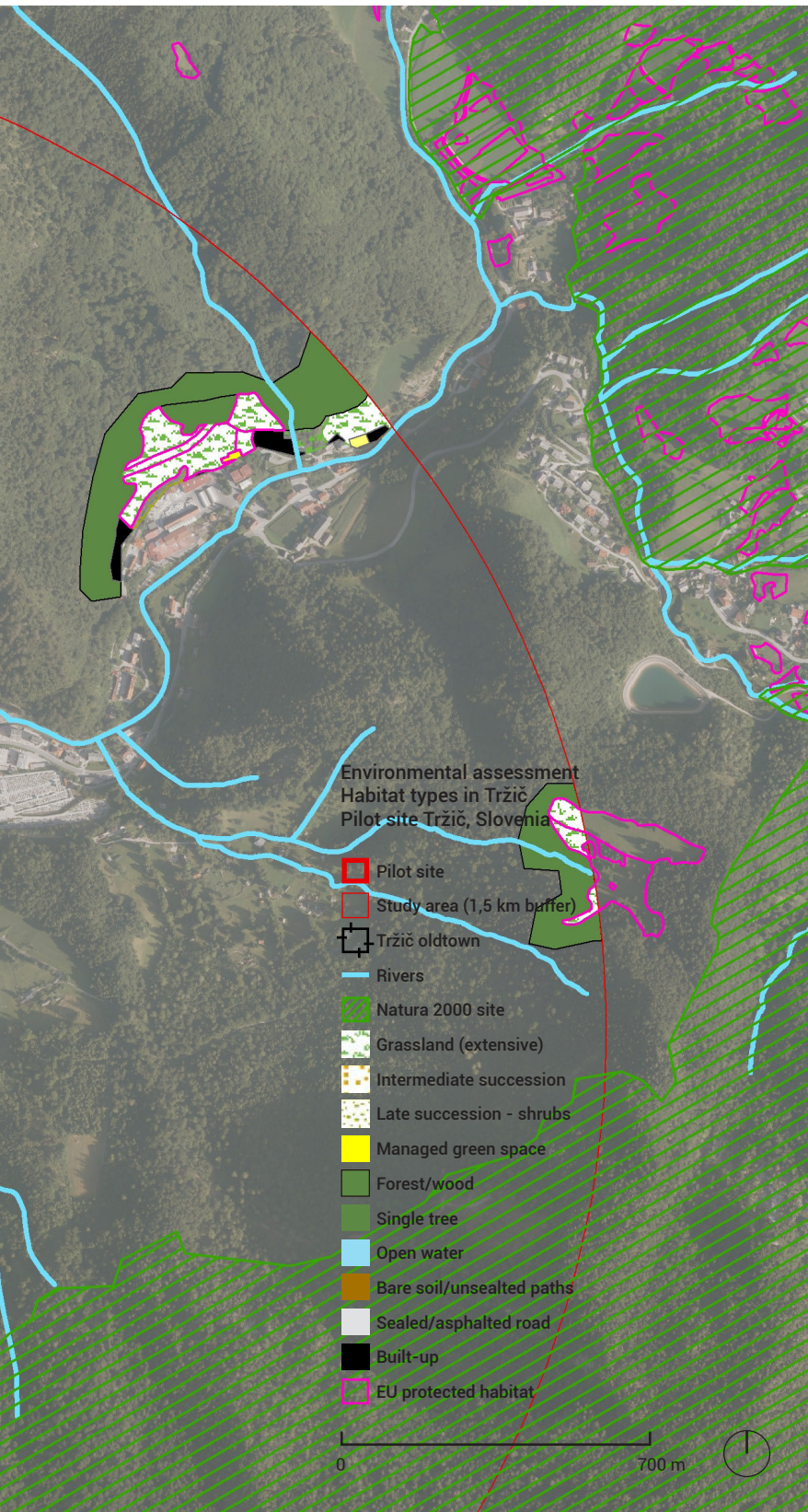
Alpine brownfields can enrich regional biodiversity, but also impact the dispersal of plant and animal species. They frequently host less intensively managed open or semi-open habitats, trees, shrubs, and pioneer vegetation; additionally, abandoned buildings can attract wildlife. This diversity of habitats makes them different from surrounding urban or rural habitats or adjacent slopes with pastures or forests. Therefore, they can add an ecological value to the landscape, which is particularly true in intensively used and poorly structured environments.

Within Alpine valleys, they can serve as a valuable habitat and as a steppingstone in a habitat network. However, (former) industrial infrastructure can also obstruct the dispersal of plants and animals, especially in narrow Alpine valleys.

How it is done

- Gather existing data on the occurrence of rare or protected habitats and their network in the region, e.g. from local authorities and NGOs (see also question B).
- Map habitats within the brownfield and the surrounding landscape and identify the unique habitats of the brownfield.
- Identify valuable ecological habitats (riverine habitats, verges of railroads) in the surroundings (e.g. nature conservation or Natura2000 areas, biotope networks, dispersal corridors).
- Identify potential dispersal barriers within the site (e.g. river embankments, dams, fences, walls, roads, large sealed areas).





Advice on how to implement

- Gather material of previous surveys from authorities about protected areas and habitat networks.
- Use aerial photographs to digitise habitat types, other brownfield sites, or railroad verges.
- Analyse digitised habitats for identifying unique habitats or structural diversity as well as potential steppingstone habitats (e.g. in a radius of 2 km) and visually highlight them in the map.
- Dispersal barriers should, preferably, be mapped on site because they might not be visible on aerial photographs.

TIPS AND TRICKS

LEFT: The assessment of surrounding structure is important at a very early phase of the transformation planning when comparing the ecological value of the site against competing objectives. It might get increasingly important again in a later phase, when ecological goals are set for the transformation, e.g. for identifying dispersal or habitats for a particular species.

Needed resources and information

- Existing data on habitat occurrence (e.g. from local authorities or NGOs).
- Current aerial photograph of the region.
- Software for processing geodata (GIS).
- Spatial data about protected areas and other brownfield sites.

Required time and expertise

- A professional (landscape planner) who is experienced in analysing aerial photographs and vegetation mapping as well as collecting and analysing existing biodiversity data.

B Where are the biodiversity hotspots and rare or legally protected species within the site?

Industrial brownfield sites can be structurally diverse due to different kinds and intensities of disturbance. Different vegetation types, bare soil, temporary water bodies, sealed surfaces and buildings (in decay) are found within small areas. Some structures of brownfield sites resemble natural habitats that have been predominantly destroyed in surrounding landscape, e.g. ponds and temporary waterbodies can serve as habitats for species occurring in natural floodplains. As a result, brownfield sites can be inhabited by rare species that might be endangered and/or legally protected.

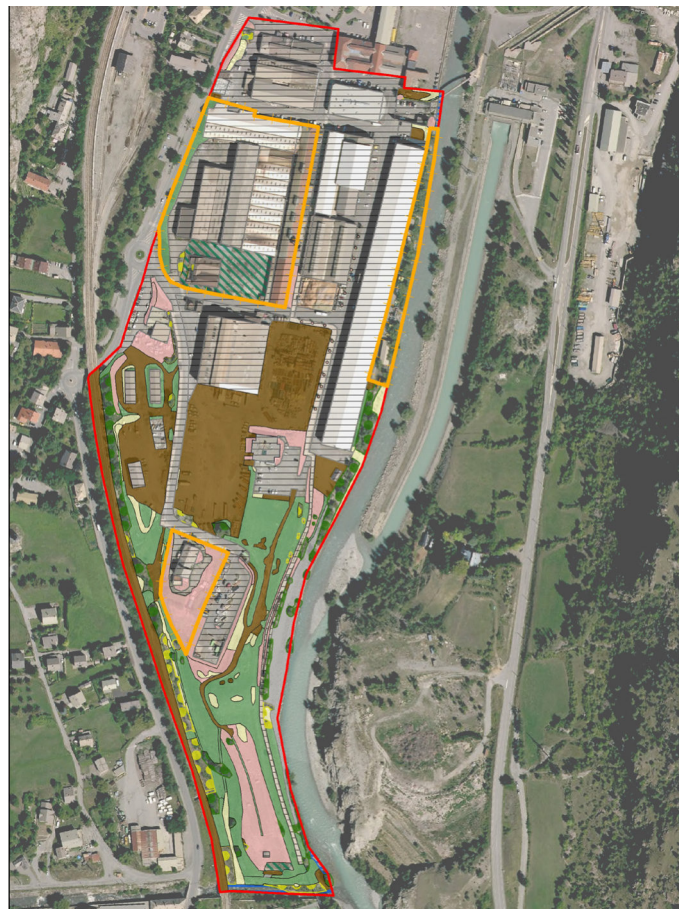
This assessment helps to identify the most valuable areas for biodiversity. It can serve as a tool for deciding which areas should be preserved during the transformation process and helps to identify suitable management and/or restoration measures. It also facilitates integrating legal restrictions into the planning process at an early stage.

How it is done

- Identify different habitat units on aerial photographs, e.g. wood, sealed area, grassland, and draft a first map; verify this remote mapping on the site.
- Ask local authorities for information on protected species on the site or nearby in protected areas.
- Identify target species based on habitats (e.g. old buildings: bats, birds; grasslands: butterflies, wild bees; waterbodies: dragonflies, amphibians; habitat mosaic: reptiles).
- In each habitat unit, identify vegetation types supported by plot-based records. For potentially occurring protected species, a detailed survey covering the entire area is necessary.
- Map and count selected target animal species, and map their habitats for reproduction, migration and feeding.

Advice on how to implement

- This assessment should be carefully planned because specific time periods for mapping have to be chosen for most species, and repeated surveys might also be necessary.
- Access to the entire site is crucial for mapping plants and animals, otherwise only a superficial analysis is possible.
- For potentially occurring protected species, a well-planned and detailed field

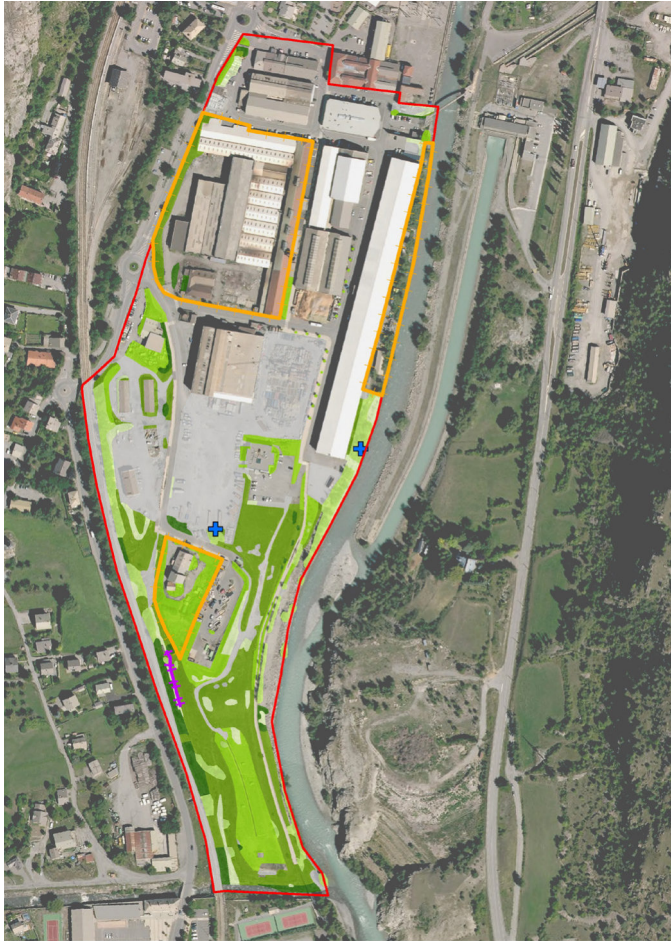


Environmental assessment
Habitat units on the pilot site
L'Argentière-la Bessée, FR

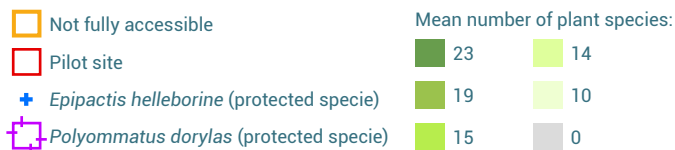
0 150 m



Pilot site	Late succession shrub
Not fully accessible	Late succession wood
Bare rock	Mosaic of different stages
Bare soil	Managed green space
Early succession	Permanent water body
Intermediate succession	Built-up/sealed



Environmental assessment
Species richness and rarity
Pilot site L'Argentière-la Bessée, FR



study should be carried out to either confirm or rule out their presence.

- On each habitat unit, at least five vegetation relevés (species identity and coverage) should be done. We advise the following plot sizes: pioneer vegetation 1x1 m², grasslands 2x2 m², woodlands 5x5 m².

TIPS AND TRICKS

ON PREVIOUS PAGE: We recommend a map with the aerial photograph as background, and the habitat unit layer in the foreground. For each species group, a map with specific symbols for the locations of individuals or groups of plants and animals needs to be produced. Unambiguous field criteria are necessary for delineating habitat units; this could be the coverage and height of bare soil, herbs, shrubs, and trees.

LEFT: It is advisable to produce a map in which rare or protected habitats and species are highlighted. This can serve as a basis for integrating their conservation or restoration needs in the transformation planning.

Needed resources and information

- Current aerial photograph of the site.
- Software for processing geodata (GIS).
- Regional, national and international lists of endangered species.

Required time and expertise

- A professional (landscape planner) who is experienced in analysing aerial photographs, vegetation and selected animal groups.



C **Where are any problematic species located?**

The EU regulation No 1143/2014 of the 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species states that there are at least 12.000 non-native species in the European Union and other European countries. Of these species, 10–15% are seen as invasive, which means that they spread widely and have negative effects on native species, ecological processes, human health, and/or land use. Due to the spontaneous vegetation development on industrial brownfield sites, invasive plants are quite common there. Therefore, transformation concepts should incorporate measures for the eradication of these species to minimize health risks for residents, workers, and visitors, and to protect surrounding near-natural ecosystems.

How it is done

- Compile a list of invasive species of the region (ask local authorities), the Alps (EAA 2010) and the European Union (Nehring et al. 2013) (EU List n.d.).
- From this list, all species that could potentially occur on the site should be selected.
- Map the location and frequency of selected species on the site.
- Create a map as for Question B to identify hotspots.
- Collect concrete information as to the negative effects of these species and treatments.
- Decide about necessary measures to be taken against problematic species.

Needed resources and information

- National, regional and/or European database/list of invasive species.
- Information on impact of invasive plants and treatment.

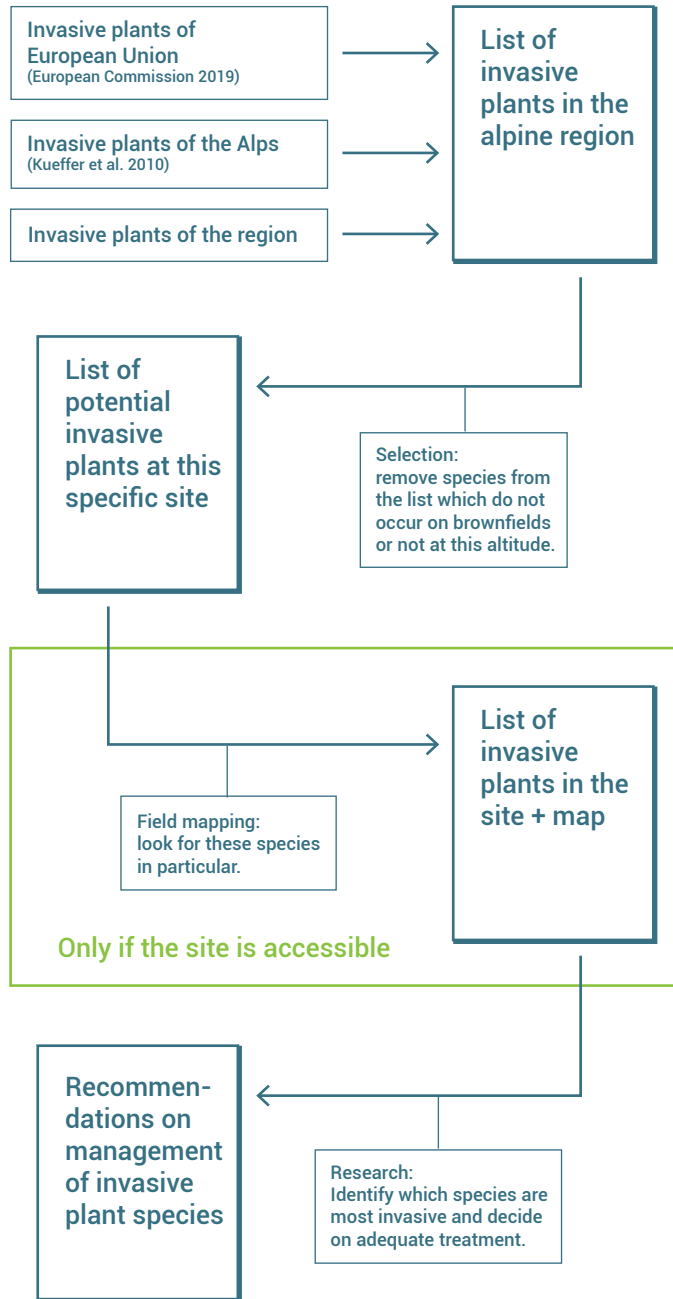
Required time and expertise

- A professional (landscape planner) experienced in plant identification.
- An expert on treatments of invasive plants (landscape planner or gardener).



Advice on how to implement

To decide which species potentially occur at your site, information is needed on the habitat preferences of invasive species. For example, species that do not occur in the Alps or at industrial brownfield sites and similar habitats (such as railway embankments, gravel pits) can be excluded from the list. Helpful sources are for example the "Flora Helvetica" (Lauber et al. 2018, Fig. 8.2) and habitat lists from CAB International (CAB n.d.).



TIPS AND TRICKS

LEFT: Narrowing down the list of potentially occurring invasive plants saves time during the mapping of the site. If the site is very large, one can choose to sample only certain areas (e.g. areas with the development goal of nature conservation, areas planned for leisure uses). If the site is not accessible, one still can compile a list of potentially occurring invasive plants at the site by using regional lists and sampling the area around the site.

D *Is there a risk for pollution, erosion or flooding?*

Soil pollution and areas prone to erosion or flooding largely affect the transformation process and influence the success of restoration. The remediation of contaminated sites is necessary to maintain human health and safety. To save cost and time, it is helpful to identify the most endangered areas in advance.

Erosion can be prevented, for example, by planting, seeding or technical measures, and can also create more opportunities for future use. Especially in times of climate change, a special focus on flooding helps to minimize risks. Ecological restoration can help to (locally) attenuate flood risks, e.g. a reduction in sealed areas helps to reduce fast run-off. As industrial areas are in narrow valleys, construction could cause a bottleneck for river flow and it may be possible to give additional space to the river.

How it is done

Soil pollution:

- Check the register of the environmental liabilities of authorities.
- Gather information about former critical uses of different buildings/areas.
- Analyse soil samples of areas with critical former use.

Erosion risk:

- Make a map about areas of shallow vegetation cover and inclined surfaces.
- Check for adjacent areas that are exposed to erosion or have an increased risk of mudflow.

Flood risk:

- Gather data or maps pertinent to 100-year-flood or floods of other recurrent intervals
- Map the sealed area and bare soil.
- Check for blocking and free flooding areas upstream.
- Check if there is space which can be given to the river.

Advice on how to implement

- Professionals should take the soil samples and analyse them for pollutants.
- Check for bare soil mapped in Question B. Patches with bare soil are starting points for erosion.
- For flooding, focus on the areas which are statistically flooded every 100 years (ask the local authorities).
- Check if construction in the area causes a bottleneck for the river during periods of heavy run-off.

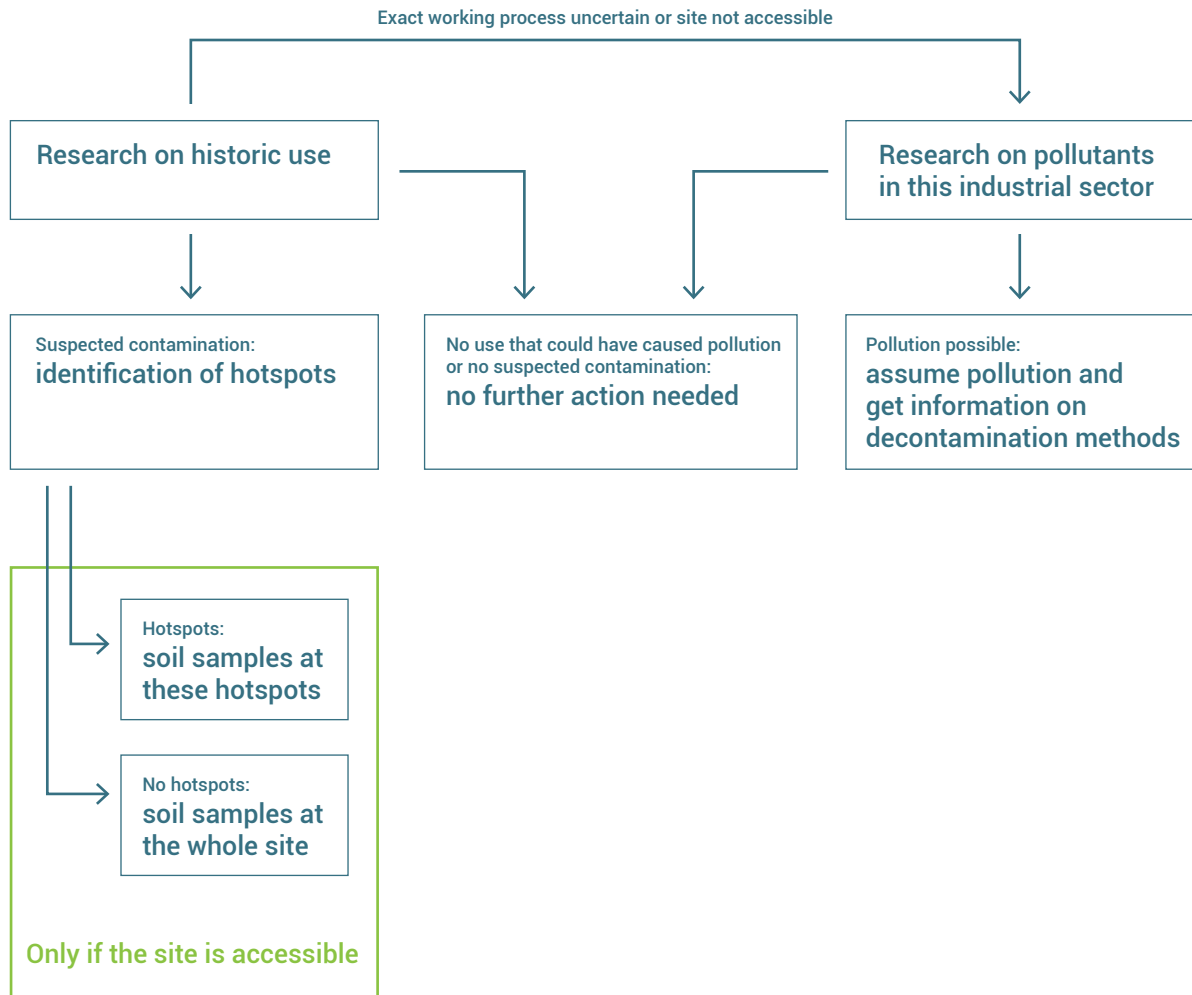
Needed resources and information

- Data on former use of different buildings and areas.
- Register of environmental liabilities.
- External lab for analysing soil samples.
- Digital elevation model and software for processing geodata (GIS).
- Information on vegetation cover (from aerial photographs or estimated in the field).
- Geodata on 100-year flood risks.

Required time and expertise

- Professionals for taking and analysing soil samples.
- Experts on pollution and depollution methods.
- An expert experienced in processing geodata.





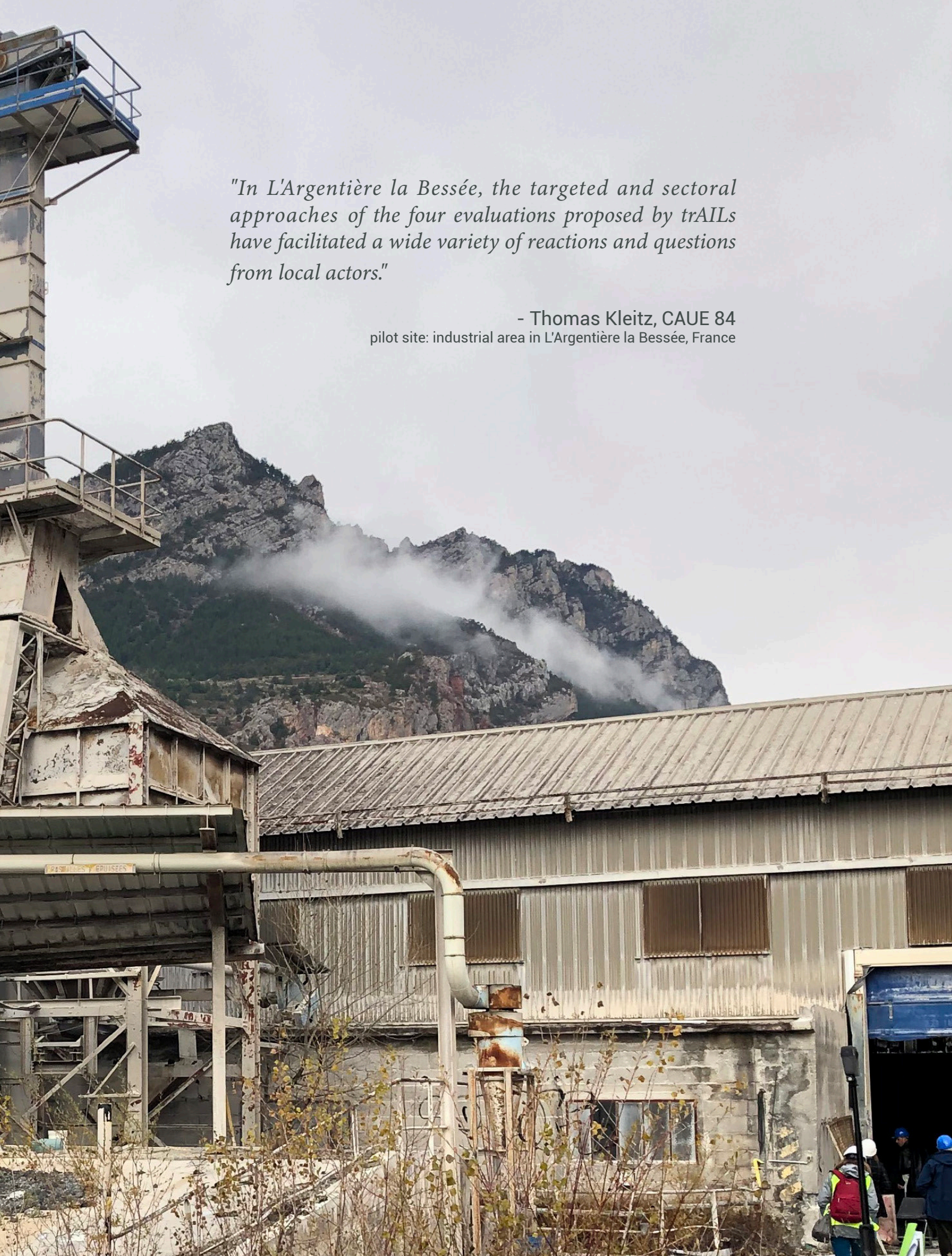
TIPS AND TRICKS

ABOVE: Reduce the cost of checking for soil pollution by identifying risk areas.

Literature

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The image shows an industrial site in L'Argentière la Bessée, France. In the foreground, there is a large, weathered industrial building with a corrugated metal roof and a concrete structure on the left. A large, rusted pipe runs across the middle ground. In the background, a large, rocky mountain rises, partially shrouded in mist. The sky is overcast. The text is overlaid on the upper part of the image.

"In L'Argentière la Bessée, the targeted and sectoral approaches of the four evaluations proposed by trAILS have facilitated a wide variety of reactions and questions from local actors."

- Thomas Kleitz, CAUE 84
pilot site: industrial area in L'Argentière la Bessée, France

Make an assessment book



SHARE!

*With stakeholders and
local community*

4. Understand

You have come to the last step of the assessment procedure. After Envisioning, Defining and Evaluating an industrial landscape it is time to bring all of the understanding and knowledge together to identify possible actions. Synthesis of inputs is usually the most difficult part of any assessment and requires practice. Synthesis is where data is turned into knowledge and understanding. In previous chapters, individual conclusions, partial insights, fragments of opportunities were glimpsed. It is now time to reflect and review all the assessments. Recap all the questions that were important and what the assessment results suggested about them in order to form conclusions.

The following three sections will help you synthesize and identify further actions. The workbook tasks progress from being less structured to more structured. The first task helps you to write a summary of all the assessments through a discussion. The second part structures these summaries into concrete achievable goals. In the third part, you can define action plans for the set goals.

Where do you go from here?
The next step is transformation!

Are you ready?



Summary of the results

Gather all your assessment results. Form a round table discussion with your colleagues and jointly discuss the assessment results moving from one assessment question to the next. Note the most common conclusions and the most striking ones. Note the topics with most consensus and most disagreement. After discussion, provide a short summary. Start with a summary of each individual assessment question within each assessment section. At the end fill in the main summary part. Form the main conclusions either by assessment segments or by utilising crosscutting topics that are present in different assessments.

Policy Assessment conclusions

A _____

B _____

C _____

D _____

Socio-Economic Assessment conclusions

A _____

B _____

C _____



Spatial Assessment conclusions

<input type="checkbox"/> A	_____
<input type="checkbox"/> B	_____
<input type="checkbox"/> C	_____
<input type="checkbox"/> D	_____
<input type="checkbox"/> E	_____

Environmental Assessment conclusions

<input type="checkbox"/> A	_____
<input type="checkbox"/> B	_____
<input type="checkbox"/> C	_____
<input type="checkbox"/> D	_____



Identified actions

Based on the summary, structure the conclusions a little better to form concrete goals.

1. Write down the more important conclusions from the previous exercise. We advise writing the answers in a bullet-point format to keep them short and concise. 2. For each conclusion discuss strengths and weaknesses with reference to the development of the industrial landscape in question and write them down. An identified strength can generate a weakness and vice versa. 3. From strengths and weaknesses identify possible actions that need to be taken either to exploit a strength or to remedy a weakness.

Conclusions

1.	2.	3.
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Strengths and Weaknesses

S:		W:
_____	↔	_____
_____	↔	_____
_____	↔	_____
_____	↔	_____
_____	↔	_____
_____	↔	_____
_____	↔	_____
_____	↔	_____
_____	↔	_____
_____	↔	_____
_____	↔	_____

Actions

1.	_____

2.	_____

3.	_____



Action plans

For each action that you identified, write a short, concise plan. 1. Describe in a simple bullet point form what tasks need to be done. 2. Identify needed resources & expertise on one side and stakeholders & experts on the other to complete the identified tasks. 3. Define the main milestones and timing or dates for each of the tasks.

<i>Tasks (what needs to be done?)</i>	<i>Milestones</i>	<i>Time</i>
1. _____ _____	_____	_____
2. _____ _____	_____	_____
3. _____ _____	_____	_____
4. _____ _____	_____	_____
5. _____ _____	_____	_____
6. _____ _____	_____	_____

<i>Resources and Expertise</i>	<i>Stakeholders and Experts</i>
1. _____ _____	_____
2. _____ _____	_____
3. _____ _____	_____
4. _____ _____	_____
5. _____ _____	_____
6. _____ _____	_____

INFORMATION AND CONTACTS PAGE

This publication is part of trAILS project financed by the Interreg, Alpine Space programme. It is the final output (Output O.T2.1) of the Work Package 2 (WPT2) that was tasked with the assessment of the pilot sites. The knowledge and experiences gained were synthesized into this booklet. The maps and texts shown in this publication are a condensed version of the professional assessments undertaken by the research partners in the following deliverables of WPT2:

- D.T2.2.1 **Site visits and on-site surveys,**
- D.T2.2.2 **Existing policies on local/regional level assessment report,**
- D.T2.2.3 **Spatial and landscape assessment report,**
- D.T2.2.4 **Social-demographic context assessment report,**
- D.T2.2.5 **Economic context assessment report,**
- D.T2.2.6 **Environmental assessment report.**

More information on the trAILS project as well as complete assessment reports and this tool can be found and downloaded at: www.alpine-space.eu/projects/trails

Enquiries about individual assessments or pilot areas can be made through the following contacts.

trAILS project lead

Chair of Landscape Architecture and Industrial Landscape,
Department of Architecture, Technical University of Munich: www.lai.ar.tum.de

Prof. Dr. Udo **WEILACHER**: weilacher@lai.ar.tum.de
Marcello **MODICA**, researcher: marcello.modica@tum.de

Work Package 2 lead and Policy assessment

Department of Landscape Architecture, Biotechnical faculty,
University of Ljubljana: www.bf.uni-lj.si/sl/organiziranost/krajinska-arhitektura

Dr. Tomaž **PIPAN**, senior researcher: tomaz.pipan@bf.uni-lj.si
Dr. Naja **MAROT**, associate professor: naja.marot@bf.uni-lj.si
Manca **KROŠELJ**, researcher: manca.kroselj@bf.uni-lj.si

Socio-economic assessment

Department of Human Sciences, University of Verona: www.dsu.univr.it

Prof. Dr. Lorenzo **MIGLIORATI**, associate professor: lorenzo.migliorati@univr.it
Dr. Gianluca **LANFRANCHI**, researcher: gianluca.lanfranchi92@gmail.com
Dr. Liria **VERONESI**, senior researcher (former member): liria.veronesi@univr.it

Department of Economics, University of Verona: www.dsu.univr.it

Dr. Veronica **POLIN**, assistant professor: veronica.polin@univr.it
Dr. Vincenzo **PRETE**, senior researcher (former member): vincenzo.prete@univr.it

Spatial assessment

Department of Spatial Planning, Centre for Local Planning, Vienna University of Technology: ar.tuwien.ac.at/en/Faculty/Institutes/Institute-of-Spatial-Planning

Dr. Andreas **VOIGT**, associate professor: voigt@ifoer.tuwien.ac.at
Dr. Julia **FORSTER**, senior researcher: julia.forster@tuwien.ac.at
Stefan **BINDREITER**, researcher: stefan.bindreiter@tuwien.ac.at
Julia **PECHHACKER**, researcher (former member)
Michael **RINNERHALER**, researcher (former member)

Department of Architecture and Urban Studies,
Polytechnic University of Milan: www.dastu.polimi.it

Prof. Dr. Piergiorgio **VITILLO**, associate professor: piergiorgio.vitillo@polimi.it
Prof. Dr. Paolo **GALUZZI**, professor (former member): paolo.galuzzi@polimi.it
Dr. Elena **SOLERO**, senior researcher: elena.solero@polimi.it
Prof. Dr. Gabriele **PASQUI**, professor: gabriele.pasqui@polimi.it

Environmental assessment

Chair of Restoration Ecology, Department Life Science Systems,
Technical University of Munich: www.roek.wzw.tum.de

Prof. Dr. Johannes **KOLLMANN**: jkollmann@wzw.tum.de
Dr. Katharina **STROBL**, senior researcher: katharina.strobl@tum.de
Kerstin **BÄR**, researcher: kerstin.baer@tum.de
Markus **BAUER**, researcher: markus1.bauer@tum.de

Pilot site Eisenerz

Styrian Iron Route, Styria, Austria: www.eisenstrasse.co.at

Gerfried **TIFFNER**: eu@eisenstrasse.co.at
Kornelia **LEMMER**: eu@eisenstrasse.co.at

Pilot site Borgo San Dalmazzo

LAMORO Development Agency, Piemonte, Italy: www.lamoro.it

Umberto **FAVA**: umberto@lamoro.it
Sonia **ABLUTON**: sonia@lamoro.it

Pilot site L'Argentière la Bessée

CAUE 84: Architecture, Urbanism and Environment Council of Vaucluse department,
Rhône, France: www.caue84.fr

Thomas **KLEITZ**: thomaskleitz@caue84.fr

Pilot site Tržič

BSC, Business support centre Kranj: www.bsc-kranj.si/

Helena **CVENKEL**: helena.cvenkel@bsc-kranj.si
Selma **TERČON**: selma.tercon@bsc-kranj.si
Uroš **BRANKOVIČ** (former member)

Communication

EZVD: E-institute, institute for comprehensive development solutions: www.ezavod.si

Zlatka **ZASTAVNIKOVIČ**: zlatka@ezavod.si

“Assessment is not just an analysis phase but an intensive communication process. That is why the assessment tool is an excellent instrument to support a transparent communication culture and also offers orientation in complex project structures. The saying goes that if your only tool is a hammer, you tend to treat every problem as if it was a nail. The assessment tool is very helpful in reacting in a more differentiated ways to the complex requirements of transformation projects.”

- Udo Weilacher, project lead
Technical University of Munich

Information on the trAILS project and complete reports on the assessments can be found at:

www.alpine-space.eu/projects/trails



The tool is an incentive to start an expert-supported transformation process of an alpine industrial landscape. It is set up as a "cook book" and gives an insight into how to approach a complex assessment of such landscapes through guided questions, thick boxes, diagrams, graphs, pictures and step-by-step procedures.

