Synthesis Report on innovation barriers and funding synergies for industrial sites

11 SITES

Grant Agreement number: 101058457

Project acronym: RIS4Danu

Project title: Sustainable Smart Specialisation for the Re-opening of Industrial Sites in the Danube Region

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Submission Date: 30.9.2023

Funded by the European Union

Short description of the content of the Strategic Business Plan

Synthesis of the eleven Strategic Business Plans examines key findings, barriers, and challenges for the implementation of transformative activities identified in Entrepreneurial Discovery Workshops (EDWs) and further elaborated upon in Strategic Business Plans for selected industrial sites.

Version	*Date*	*Changes made*	*By*
1.0.	*29.9.2023*	*Initial Version*	*Mateja Dermastia* *Mateja Novak* *Laura Torres* *Lucia Seel*

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Acknowledgments

This report has been developed as part of the RIS4Danu initiative, a flagship of the EUSDR. Anteja ECG prepared the report, with contributions from Mateja Dermastia, Mateja Novak, Laura Torres, and Lucia Seel. We would like to extend our gratitude to our project partners for their invaluable contributions and unwavering support. Special thanks to Dr. Simon Baumgartinger-Seiringer from the University of Vienna for his support; and to Simone Hagenauer from ECO Plus for her ongoing assistance in facilitating policy debates and advisory board meetings. We are also grateful to Oliver Ziegler, the project lead at VDI/VDE-IT, for his guidance and continuous support. Additionally, we extend special thanks to our Advisory Board members for providing valuable feedback and future-oriented suggestions.

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Synthesis Report on innovation barriers and funding synergies for industrial sites. RIS4Danu report

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Editor: Maja Berden Zrimec

Electronic edition, English language
Published in 2023 by Anteja ECG, Ljubljana, Slovenia

Kataložni zapis o publikaciji (CIP) pripravili v Narodni in univerzitetni knjižnici v Ljubljani
COBISS.SI-ID **179034371**
ISBN 978-961-07-1908-3 (PDF)

1 INTRODUCTION

The Danube region has a centuries-old history of manufacturing and industrial production, but political upheaval, globalization, and technological advances have left many Danube regions facing the challenges of structural change, resulting in many industrial plants and sites closing. In many regions, the closure of plants and the associated displacement of workers has had a serious socio-economic impact on the workers, the local communities, and the regions.

In the analysis of the RIS4Danu regions that was conducted, it was found that significant industrial transformation challenges are being faced by each region. The transition to more environmentally sustainable practices has been recognized as essential. This recognition was driven by the imperative to address climate change and by the energy price and supply chain surges that were observed following the Russian attack on Ukraine. There is an imperative for all examined regions to navigate towards a green structural transition. This transition, while challenging, also unveils a spectrum of opportunities, especially when factoring in their rich industrial heritage.

RIS4Danu's fundamental goal is to prepare the groundwork for the development of transformative directions for the disused industrial sites in several regions in the Danube macro area, and to advance green structural change in a place-sensitive way. In doing so, the project is guided by important conceptual underpinnings which the idea for Smart Specialization is resting on. It seeks to contribute to the movement towards a new challenge-led approach of Research and Innovation Smart Specialization (RIS3) for Sustainability (RIS4). Informed by these conceptual considerations, a set of Entrepreneurial Discovery Workshops (EDW) in each of the participating regions were conducted that brought together current share- and stakeholders to develop transformative goals and ideas for the sites as a first step for a long-term journey to re-open the respective sites.

The results gained so far from the 11 conducted EDWs confirm that the re-opening of old industrial sites has the potential to build transformative resilience in less-favoured Danube regions. These sites could serve as innovation anchors, unleashing opportunities for the entire region to strengthen their capacity to develop innovative solutions to place-specific ecological, social, and economic challenges. Project activities include cross-regional peer exchange and a transfer of knowledge along the Danube River.
In a nutshell, the project has the following objectives:

- Further developing the existing RIS3 methodology towards Sustainable Smart Specialisation to facilitate "green structural change". Consortium partners will contribute to the emerging academic and policy debates on linking smart specialization with mission-oriented policies for sustainable development.
- Drafting strategic business development plans for the re-opening of more than 20 recently closed industrial sites in the Danube region. The focus is on both: the growth of the digital industries and the transformation of traditional industries; as well as the integration of sustainable and inclusive growth aspects in the development of transformative activities for structural change.
- Providing tangible policy recommendations. The focus will be on the identification of innovation barriers and on the creation of synergies with other European, national, and/or regional R&I funding programmes.

1.1 SYNTHESIS REPORT

This report aims to summarize the results of the eleven Strategic Business Plans for the revitalization of selected industrial sites in the Danube Region. Its main objective is to identify the lessons learned so far and to provide input to the Policy Forum that will be held in November 2023. This report examines key findings, barriers, and challenges for the implementation of transformative activities identified in Entrepreneurial Discovery Workshops (EDWs) and further elaborated upon in Strategic Business Plans for selected industrial sites. This report provides recommendations to attract green and digital investment, both private and public, in the Danube Region.

The various Strategic Business Plans cover a wide range of sectors, from urban development to agriculture, including: commodity production, infrastructure, and research and development. In addition, these plans contain various ideas that encompass a wide range of initiatives to build a more sustainable future for the region. While the Strategic Business Plans are each different, the goal of this report is to identify similar patterns and derive common findings and recommendations that are relevant for the further consideration of the reuse of other brownfield sites. Consequently, this report also aims to draw attention to the need for demand-driven, tailored approaches to initiating the successful reuse of such sites. It contains a systematic and synthesized review of the findings of the Entrepreneurial Discovery Workshops which were conducted at the eleven industrial sites to address the barriers that need to be considered in the implementation of the identified transformative activities. Finally, this report contains conclusions and recommendations that are relevant for the further development of the different RIS3/RIS4 concepts in the different Danube regions.

Information used in this report was based on a 11 available Strategic Business Plans with a cutoff date of August 31, 2023. This report also considers the feedback received during an Advisory Board meeting on September 27, 2023.

1.2 METHODOLOGICAL ASPECT

This Synthesis report draws from findings of EDWs held across eleven sites. These EDWs were instrumental in mobilizing knowledge and insights from diverse stakeholders. They served as the initial step towards revitalizing a site, primarily aiming to pinpoint areas of promise. For these workshops, stakeholders who span business, science, administration, and civil society were pre-identified and invited. The RIS4DANU project assembled an expert team to facilitate these sessions, ensuring a smooth flow. During the EDWs, several questions about rejuvenating their site were addressed, exploring industries with growth potential, available resources, requisite infrastructure, and sustainability measures. The collaborative nature of the EDWs ensured a holistic view which culminated in a consensus on priority sectors and practical steps for site revitalization. The EDW outcomes served as a cornerstone for each site's "RIS3 strategy" development. These strategies outline the priorities and initiatives to target in specific sectors to enhance regional competitiveness and innovation. This approach underscores a bottom-up methodology, leveraging a site's strengths for sustainable regional development.

Box 1: Snapshot of the EDW structure.

At the beginning of an EDW, an introduction to the motivation for the workshops and a presentation on the workshop agenda and objectives were given. After a presentation of the analysis results by the University of Vienna and a subsequent Q&A session, the first part of the workshop began, in which the transformation goals were defined. The participants worked in small groups to develop ideas for new fields of activity intended for the respective site. After a lunch break, there was a tour of the site to give the participants a better impression of the area. In the second part of the workshop, the participants worked in small groups to develop a roadmap for implementing the transformation goals. Concrete projects and activities as well as necessary political measures were discussed. The results of the group work were then presented in the plenum. At the end of the workshop, a summary and a wrap-up were presented, followed by feedback and a farewell to the participants.

Eleven EDWs were carried out between February and June 2023. Based on the finding of the EDWs for each site, a Strategic Business Plan was developed that further elaborated upon the ideas and plans discussed. The different sources and methods used for this synthesis report review of the Strategic Business Plans were, an assessment of European funding opportunities, and insight from an Advisory Board. It is relevant to note that the information used in this report was based on 11 available Strategic Business Plans with a cutoff date of August 31, 2023. Focus was given to describing the transformative goals and activities connected with the re-activations of the sites.

2 THE SITES AND RELATED TRANSFORMATIVE GOALS AT A GLANCE

The short summery of sites and related transformative goals are presented in table below with detailed narratives following.

*Table 1: Summary of the 11 sites development ideas discussed during the EDWs**

Project name	Region	Project stage	Rediness level	Main sector it adresses	Relevant main subsectors	Main activities
Green mine	Ústi nad Labem, Czech Republic	Development	Between 5 and 6	Renewable energy and sustainability	Renewable energy supply	Hydrogen energy production
Refurb campus for large facilities and commerce 4.0 at Voith	St. Pölten, Austria	Definition	Between 1 and 2	Urban development and sustainability	Construction of research facilities	Innovation hub
Hemp Mill Komádi	Észak-Alföld, Hungary	Definition	Between 1 and 3	Agricultural and agribusiness	Agro - related activities	Hemp processing
Hammerstatt-Innovations-Quartier at Slaughterhouse Villingen-Schwenningen	Villingen-Schwenningen, Germany	Design	Between 4 and 5	Renewable energy and sustainability	Renewable energy supply	Hydrogen energy production
Ceramics recycling hub ("Ceramics Hub") at Laufen Areal	Laufen AG, Austria	Design	Between 2 and 3	Goods manufacturing and infrasctucture	Ecological and socio-cultural utilization of the area	Green spaces and recreation areas
Heuberg community campus at Hermle Areal	Schwarzwald-Baar-Heuberg, Germany	Design	Between 3 and 4	Urban development and sustainability	Construction of recreational facilities	Tinker Garden
Wood Crafting Campus at Priemyselny park	Banská Bystrica, Slovakia	Design	Between 4 and 5	Goods manufacturing and infrasctucture	Ecological and socio-cultural utilization of the area	Furniture Production/Design/Recycling
Kassai hall joint research and training lab (KHJRT)	Hajdú-Bihar County, Hungary	Design	Between 3 and 4	Research and development	On-site education	Vocational training
Green and Inclusive Ukraine Hub at GEMER Industrial Park	Banská Bystrica, Slovakia	Definition	Between 1 and 3	Urban development and sustainability	Industrial manufacture facility	Manufacturing of green components for infrastructure
Transformation Center at Ústi nad Labem	Ústi nad Labem, Czech Republic	Design	Between 4 and 5	Research and development	Technological platform	Smart Data and Information Services
Milk Powder Plant Berettyoujfalu	Észak-Alföld, Hungary	Definition	Between 4 and 5	Agricultural and agribusiness	Technological platform	Recycling; skills development

Source: RIS4Danue Strategic Business Cases, cutoff day 31.8.2023

2.1 Maturity

The maturity of the ideas discussed during the EDWs is diverse and can be categorized into three main development stages: definition, design, and development. Figure 1 provides location and development stage of the sites

- **The definition stage** is characterized by exploration and refinement of the project's initial concept. The primary aim is to define the main objectives of the execution of the project, the involvement of pertinent partners, and the level of support garnered from key stakeholders. Projects in this stage are distinguished by their identification of potential ideas and their efforts to craft a more precise and structured project formulation. The projects under this stage represent 30%.
- **In the design stage** the ideas represent well-defined concepts and objectives. The emphasis now shifts towards the detailed design of the undertaking. This phase encompasses activities such as market and demand analyses, technical evaluations, economic and financial assessments, as well as identification of functional and operational requirements and limitations. Notably, the majority of projects are situated in the design stage, comprising 60%.
- **The development stage represents** just 10% of the ideas. It is the phase where all necessary resources are arranged, partners and stakeholders are engaged, and all studies have been made already. It is followed by project implementation.

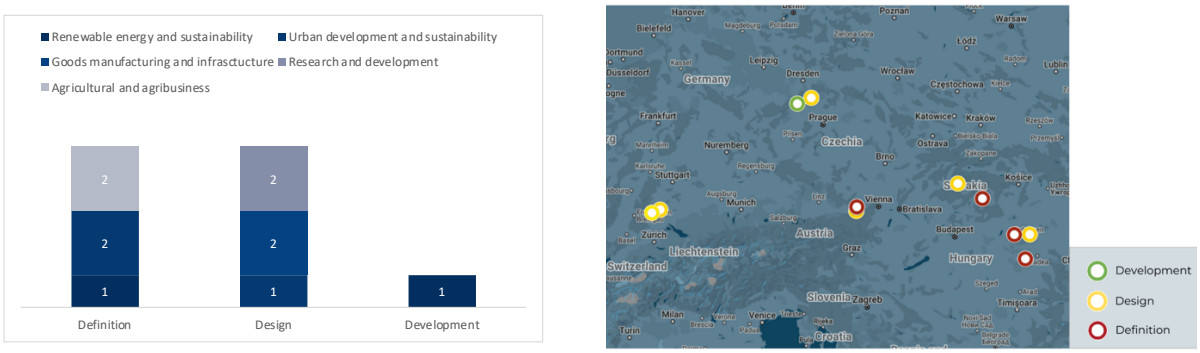


Figure 1: Sites location and distribution by developing stage, source: RIS4Danue Strategic Business Cases, own elaboration

2.2 Sectors

In addition, each sites focus can be categorized into five main sectors: Renewable Energy and Sustainability, Urban Development and Sustainability, Agriculture and Agribusiness, Manufacturing and Infrastructure, and Research and Development. . Figure 2 displays the distribution of the maturity of the ideas for re-opening the sites.

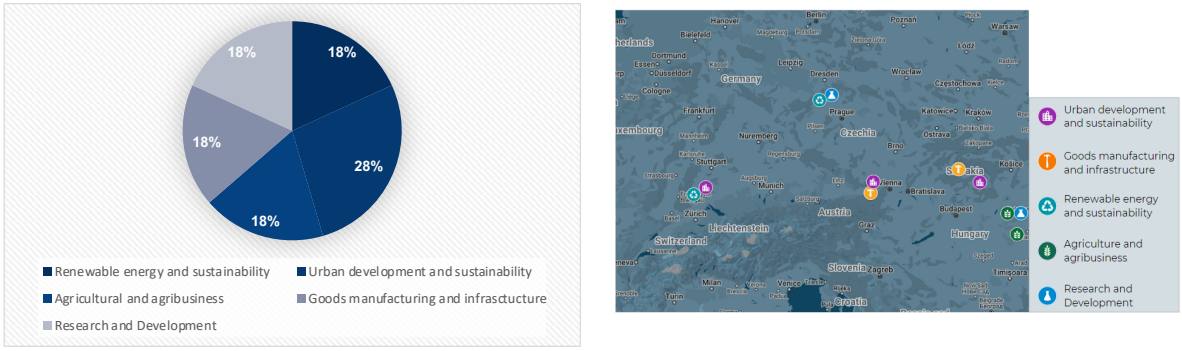


Figure 2: Main sectors of the sites and location in the Danube region, source: RIS4Danue Strategic Business Cases, own elaboration

- **Urban Development and Sustainability (40% of projects):** This sector drives the vision of future cities, emphasizing resilience and versatility. The portfolio features sustainable multifunctional spaces, business hubs, educational and training centres, co-working arenas, and diversified living and commercial quarters.
- **Research and Development (20% of projects):** Within this category, projects are geared towards state-of-the-art facilities, prominently featuring an electromobility lab and cutting-edge robotics research infrastructure.
- **Goods Manufacturing and Infrastructure (20% of projects):** This segment prioritizes integrative production ecosystems. With a spotlight on ceramics and wood, the goal is to facilitate synergies between companies, amplify sectoral prominence, fuel material research, and anchor specialized production arenas. The complementary "Agriculture and Agribusiness" project encompasses green hydrogen innovation, contemporary farming practices, sustainable energy exploration, and community immersion. The final piece, under "Renewable Energy and Sustainability," zeroes in on the sustainable processing of hemp (Refer to Figure 5).

2.3 Ownership

Most of the industrial sites (9 out of 11) are privately owned. In one case, the site is owned by the municipality (Heuberg Community Campus at Hermle Areal). In another case, the industrial site has a public and private shareholder (Wood Crafting Campus at Priemyselny Park).

In the following, the Strategic Business Cases are summarized according to their current state of development.

2.4 Summary of the strategic business cases

DEVELOPMENT STAGE

GREEN MINE
Region: Ústi nad Labem, Czech Republic
Sector: Renewable Energy and Sustainability
Ownership: Privately owned
Vision: To repurpose the ČSA surface mine into a sustainable and attractive region.
Main transformative goals:
The main transformative goal of this strategic business plan is to heal the former coal site for future generations by returning it to a better condition than when the mining took it over. This is essentially detailed in three specific transformative goals:

- Renewable energy supplies via floating, land-based, and other photovoltaic power plants; combined with pumped and other storage systems and hydrogen production.
- Site-based economic and social empowerment, including CO2-free residential buildings, specially profiled high-tech industrial structures, and other related activities.
- Ecological and socio-cultural utilization of the area, including landscaping activities.
- Green Mine has a vision to build what was originally a coal region into a modern, more diverse economic and living region, which will attract businesses and people.

DESIGN STAGE

HAMMERSTATT-INNOVATIONS-QUARTIER AT A FORMER SLAUGHTERHOUSE
Region: Villingen-Schwenningen, Germany
Sector: Renewable Energy Supply
Ownership: Privately owned
Vision: To recover the abandoned historic Slaughterhouse and create a Science Park specialized in green innovations.
Main transformative goals:
The transformative goal is to create a multifunctional innovation quarter that incorporates a flexible and modular mix of uses in a historic site that was nearly forgotten. This will include a dedicated space for experimentation and research in hydrogen energy. The construction of indoor and outdoor event areas that can host a variety of events. And the construction of a dedicated start-up center and coworking office that would provide a supportive environment for start-ups and freelancers from various industries, encouraging cross-sector collaboration and innovation. The establishment of the hydrogen (H_2) space, will provide a dedicated space for experimentation and research in renewable energy. These spaces will provide platforms for training, knowledge transfer, and start-up activities. They will ensure that the quarter becomes a hub for new ideas and inventions, encouraging both local and international business models.

CERAMICS RECYCLING HUB ("CERAMICS HUB") AT LAUFEN AREAL
Region: Laufen AG, Austria
Sector: Goods Manufacturing and Infrastructure
Ownership: Privately owned
Vision: To create a ceramics hub as a competency center for the processing of ceramics and the reuse of complex materials.
Main transformative goals:
Overall, the main transformative goal focuses on converting the site into a ceramics-recycling hub ("Circular Ceramics Hub"), whereby a research and training campus for complex materials

is operated entirely with renewable energies. The following list names the main transformative goals that came up in the EDW's discussion:

- **Ceramics Competence / Ceramics Hub:** The goal is to strengthen the regional ceramics industry by implementing a site with various application areas such as construction, design, and technology.
- **Circular economy ("challenging materials"):** To reuse and recycle ceramics and other challenging materials. The intention is to develop ideas for promoting a circular economy, sustainability, and resource efficiency.
- **Education campus (regional needs / materials management):** Establishment of an education campus that targets the regional needs in relation to materials management and ceramics.
- **Renewable energy self-sufficiency:** The use of renewable energy sources such as solar and hydroelectric energy in the ceramics industry.
- **Urban integration / traffic concept:** To integrate a sustainable urban ceramic production site and a ceramic hub. The vision includes multimodal transport solutions, intelligent logistics systems, and sustainable mobility concepts.

HEUBERG COMMUNITY CAMPUS AT HERMLE AREAL
Region: Schwarzwald-Baar-Heuberg, Germany
Sector: Urban Development and Sustainability
Ownership: Owned by Gosheim municipality
Vision: To develop an inclusive community campus with diverse areas and activities. Including the creation of a mixed-use neighbourhood for intergenerational living. The site also aims to establish an energy community for renewable power generation to ensure functionality and sustainability of the campus.
Main transformative goals:
During the discussions of the EDW various transformative ideas around the redevelopment of the former industrial site in Gosheim, were identified.

- **Firstly, there was a significant emphasis on "Gemeinschaftliches Wohnen,"** or communal living. This could include shared living spaces for company employees, intergenerational housing, or multicultural housing. This goal aligns with the broader need to address the scarcity of housing in Gosheim and to enhance the quality of life for its residents.
- **The second goal was the formation of an "Energiegemeinschaft," or energy community.** There was a clear consensus on the need for sustainable and eco-friendly practices in the redevelopment project. This could involve the use of renewable energy sources, energy-efficient buildings, or collective arrangements for energy generation and consumption.
- **Thirdly, the creation of "Co-Working Spaces / Shared-Service Center" on the site**. Given Gosheim's rich industrial heritage and the presence of major companies in the region, there is a need for spaces that promote collaboration, innovation, and entrepreneurship. This goal could involve the development of co-working spaces for commuters, a start-up center, or shared facilities for business services. Lastly, there was enthusiasm for creating a "Tüftler-Garten," or a tinker's garden. This goal reflects the desire for a space where people can come together to innovate, experiment, and learn. It could be a shared maker-space or an area for community workshops, tying into the themes of creativity, lifelong learning, and community engagement.

WOOD CRAFTING CAMPUS AT PRIEMYSELNY PARK
Region: Banská Bystrica, Slovakia
Sector: Goods Manufacturing and Infrastructure
Ownership: Approx 65% is owned by the Municipality of Hnúšťa. Another 35% is owned by a private company
Vision: To build a wood campus intended to serve as the main area within an industrial park, solely dedicated to activities related to wood processing and related industries.
Main transformative goals:

The transformative goals envisioned in the EDW conversations, were related to the creation of a thriving complex for all wood-related industries. The wood crafting hub will encompass a variety of sites and activities, including:

- **Furniture Production/Design/Recycling:** A space for the creation and design of eco-friendly furniture and the implementation of recycling practices.
- **Wood Eco-House Production:** A production line for the constructing of eco-friendly partial prefabrication wooden frame structures for prefabricated building using sustainable wood materials.
- **New Products:** An industrial manufacturing facility to produce wood applications for cars, especially fiber-based materials. Different fiber-based materials will be designed, promoting eco-friendly and lightweight solutions.
- **Wood-based energy production**: A wood pellet production facility.
- **R&D Labs for New Wood-based Materials (e.g., Fiber**): State-of-the-art research and development laboratories that will focus on discovering and refining new wood-based materials.
- (**Inclusive) Education Programmes for Wood Crafting:** The campus will offer educational programmes, fostering skill development and inclusivity.

KASSAI HALL JOINT RESEARCH AND TRAINING LAB (KHJRT)
Region: Hajdú-Bihar County, Hungary
Sector: Research and Development
Ownership: Privately owned
Vision: To reactivate the former Hungarian Rolling Bearing Works Industrial Hall by converting it into a support facility for electro mobility.
Main transformative goals:
The key talking points that came up in the EDW's discussion between the stake- and shareholders during the workshop are listed below:

- **Strong Service Center:** The Kassai Hall will serve as a platform for shared services by providing space for offices and workstations.
- **Electro Mobility Support Facility:** The Kassai Hall will provide offices and workstations for services around electro mobility and the development of electric vehicles in the Debrecen region. This includes, in particular, the areas of vocational and further training, qualification, and R&D.
- **Energy Storage and Management Hub**: The Kassai Hall will serve as a hub for the further development of energy storage solutions, from R&D through experimental set-ups to implementation and subsequent management.

TRANSFORMATION CENTER AT ÚSTI NAD LABEM
Region: Ústi nad Labem, Czech Republic
Sector: Research and Development
Ownership: Privately owned
Vision: Urban development through the renovation of a former high school building into a Transformation Research Center.
Main transformative goals:
The transformative goal of this strategic business plan is to create and support an innovative Entrepreneurship Center that includes a Robotics and Testing Laboratory. The Transformative Research Center will support start-ups and advanced enterprises, focusing on increasing their technological competence.

DEFINITION STAGE

REFURB CAMPUS FOR LARGE FACILITIES AND COMMERCE 4.0 AT VOITH
Region: St. Pölten, Austria
Sector: Urban Development and Sustainability

Ownership: Privately owned
Vision: To create an industrial site in a land that is currently a 'brownfield' and is not currently in use.
Main transformative goals:
The transformational goal for the area is to create a Refurb Campus for Large Facilities and Commerce 4.0. This site will provide access to education and on-site training. The vision is to open it up to local people, promoting new work and culture. A key goal is to achieve renewable energy self-sufficiency for part of the site.

MILK POWDER PLANT BERETTYÓÚJFALU
Region: Hajdú-Bihar County / Észak-Alföld region, Hungary
Sector: Agricultural and Agribusiness
Ownership: Privately owned
Vision: To create a packaging production facility and a living complex for the community
Main transformative goals:
The EDW resulted in two main transformational goals with a potentially positive impact on the region for the former milk powder factory. One is a “Sustainable packaging production site based on a circular economy”. Apart from its usage as a production site for sustainable materials, the owner favoured the creation of a “Social Innovation Hub for a liveable and sustainable city of Berretyóújfalu”, including a senior housing complex and a childcare facility to meet the growing demand in the city. The overall goal is to create a **multifunctional Social Innovation Hub** that incorporates a mix of uses. It would host a diverse mix of residential and social facilities as well as leisure spaces, attracting a wide range of stakeholders, including families in need of childcare, elderly people, students, and the local population.
To accommodate the elderly, accessible low-maintenance apartments with common spaces and services for them will be offered. This will help them remain in their home community by providing affordable housing. An easily accessible green space will surround the two social facilities, which will serve as a ground for research and development with the establishment of a Vertical Farming testbed, but also be accessible for the local population for various leisure activities. Since it is situated in a semi-urban area close to services and public transport it is in a favourable location for serving social purposes and providing a sense of community to the elderly residents.

HEMP MILL KOMÁDI
Region: Hajdú-Bihar County / Észak-Alföld region, Hungary
Sector: Agricultural and Agribusiness
Ownership: Privately owned
Vision: Production of hemp and derived products with modern technology and sustainable practices
Main transformative goals:
During the EDW several options were discussed. Finally, three main transformative goals for the site operations were commonly agreed on.

- **Hemp Production:** The former hemp mill in Komádi will go back to work and produce hemp and deriving products with modern technology.
- **Metal and Construction Products:** The former hemp mill in Komádi will facilitate the production of metal products and other construction related materials. These will derive from renewable resources as much as possible.
- **Deepening the agricultural value chain:** The former hemp mill in Komádi will specialize on certain products of the agricultural value chain. One or more of either fish farming, herbs for medical and cosmetic use, or bee products. Note: It is not about the production of the agricultural raw product, but about the production process on down the value chain (and, possibly, supplying the farmers with inputs).

GREEN AND INCLUSIVE UKRAINE HUB AT GEMER INDUSTRIAL PARK
Region: Banská Bystrica region, Slovakia

Sector: Urban Development and Sustainability
Ownership: Privately owned
Vision: To build a science park that encompasses a housing and a manufacturing facility, a training center along with a R&D center specialized in sustainable materials**.**
Main transformative goals:
During the EDW conversations, they proposed 5 main transformative goals with collective impact intentions, including: green manufacturing, skill development, research, refugee support, and community inclusivity. The project proposals include:

- **Manufacturing of (green) components for infrastructure and/or housing**: The site will have an eco-friendly manufacturing facility of components for infrastructure and housing. These components follow circular economy principles and energy-efficient designs, aiming to minimize environmental impact and promote sustainability. Using a modular approach, these components can be assembled efficiently on-site in Ukraine, supporting the country's reconstruction efforts.
- **Training Center for (basic) manufacturing**: The hub aims to establish a Training Center that provides basic manufacturing skills to the local workforce. The center will be bilingual, accommodating the diverse communities in the region, including Roma, Hungarian, and Ukrainian communities. This initiative aims to upskill the workforce and create opportunities for employment and personal growth.
- **R&D Center for green/waste-based materials/concrete**: To create a research and development (R&D) laboratory focused on sustainable materials for the construction industry.
- **Housing Programme for Ukrainian refugees**: An initiative that addresses the pressing need for safe and sustainable housing for those displaced by conflicts or other challenges in Ukraine. Achieving so by providing a stable and nurturing living environment, striving to offer homes where individuals and families can rebuild their lives with dignity and hope.

3 KEY FINDINGS

While the Strategic Business Plans from stakeholders across the 11 regions varied greatly, a common pattern or set of characteristics was observed in most cases. The findings are summarized below.

Finding 1: Digital and green transformation are key drivers and provide promising opportunities

Green and digital transformations consistently emerge as pivotal themes across the analyzed concepts. This trend underscores a shift in perspective, where sustainable industrial transformation are no longer perceived as mere obligations but as genuine opportunities. It is noteworthy, however, that the interpretations and roles of sustainability and industrial transformation differ across concepts.

Certain strategic plans holistically integrate the three pillars of sustainability: environmental, economic, and social. The Green and Inclusive Ukraine Hub at GEMER Industrial Park is an illustrative example. This comprehensive initiative seeks to champion both sustainable development and social inclusivity. The project includes several key components: production of environmentally friendly components for infrastructure and housing, a training center for basic manufacturing skills, a research and development center for sustainable materials, a housing programme for Ukrainian refugees, and inclusive community work and language programmes.

Similarly, strategic business plans aim to include aspects of industrial transformation as a key anchor point. The industrial site of Laufen AG used to be an important location for the production of ceramics with high energy and raw material consumption. The idea of a recycling center for ceramic products opens up completely new approaches based on increased

circularity and the recycling of raw materials, but also based on pre-existing competence (knowledge about how to deal with ceramic along the entire supply chain).

Finding 2: Most Strategic Business Cases are at an early stage

Analysis of the Strategic Business Cases revealed that the majority remain in the definition or design phase, as illustrated in Figure 1. A select few exhibit more progress, presenting well-articulated concepts and objectives. Nonetheless, none qualify as comprehensive business cases, and given their nascent stages, the technical feasibility of these concepts remains uncertain.

Furthermore, there is a variation in the specificity of these cases. Some delineate only 2-3 transformative goals and activities, while others enumerate more expansive objectives, often lacking a tangible focus. This raises concerns about the feasibility of fully addressing all goals during implementation. Nevertheless, irrespective of the number of stated goals and activities, a strong interdependence amongst them was observed, suggesting potential synergistic benefits in future activities.

Finding 3: Owners priorities new goals for the industrial sites, which bear little relation to how is used to work

The extent to which the Strategic Business Cases build on historically developed competencies and exploit this reorientation of industrial sites varies considerably. In most instances, the transformative goals of the Strategic Business Cases have relatively little to do with the former functionality of the industrial sites.

The strategic business case "Laufen AG" is one of the few exceptions to this observation. In the past, the industrial site was a centre for ceramics production. The corresponding Strategic Business Case now envisages converting the site to recycle ceramic products. In other cases, such as Hermle (Schwarzwald-Baar-Heuberg region), the owners prefer a completely new approach that has little or nothing to do with the industrial site's past functions.

Finding 4: Key drivers, core partnerships, and the tasks of key stakeholder groups remain unclear

The participation in the EDWs, while keen, highlights the need for a clearer understanding of the primary motivations behind such involvement. Central to the EDW approach's success is identifying a key driver who may not necessarily be the industrial site's owner. This role is indispensable, primarily due to their sustained commitment to steering the initiative and their capacity to mobilize all relevant stakeholders. Beyond identifying the key driver, the Strategic Business Cases fall short on highlighting the essential partnerships. The Cases focus on site owners, not policymakers. But both parties are needed for a strategic partnership. It is important to understand and manage the relationship between the site owners' visions and the broader local and regional economic development (or innovation) policy objectives. Both need to go hand-in-hand. These partnerships are also crucial to strategically advance the EDW's objectives.

Whether an industrial site is owned by the municipality or not, the policy makers and municipalities play an essential role in all cases. The policy makers provide the necessary soft and hard infrastructure and can often create a political and legal framework which makes the implementation of the Strategic Business Cases successful. For example, this can be useful in the context of the circular economy, when a municipality enacts local legislation that promotes “Reduce, Reuse, Recycle”.

The evaluation of the Strategic Business Cases showed that municipalities were often not aware of their future role and that regional policy makers were mostly absent. In cases where

the Strategic Business Cases are to be further implemented, it is important to quickly agree on a definition of roles and tasks for the municipalities and to coordinate them with all the stakeholders involved. The EDWs have also shown that most stakeholders still don't have enough knowledge on how to act together in the context of Public Private Dialogues (PPD), what the corresponding distribution of roles looks like, and what tasks or purposes the instrument of the PPD and also the EDW have. The Box 2 illustrate a role of Municipality in driving transition of industrial site.

Box 2: ROG Factory Revitalization, Municipality Ljubljana

The ROG Factory Revitalization in Ljubljana exemplifies how adaptive municipal leadership can drive urban transformation. The historic leather factory in Ljubljana, operational since 1900, faced significant financial and operational shifts. From its bicycle production days to its 1990s closure, its potential was part of the debate in the Ljubljana community. The Municipality of Ljubljana (ML) acquired it in 2002 with financial visions of a public-private partnership for a hotel and gallery. However, the 2008 economic downturn forced reconsideration. ML navigated financial challenges by self-funding the infrastructure and construction, smartly using EU funds only for content conceptualization. Their financial insight was evident in partnerships like the Second Chance and FabLabNet projects, adhering to UNESCO's industrial revitalization guidelines. They had been developing the content for two years by involving over 300 stakeholders who helped with the design. Based on the response of the stakeholders, they built a RogLab - a container where they continued getting feedback from stakeholders and tested their concept to see what worked and what did not. An additional 300 organisations were involved in the workshops held there, and over 7,000 users came to this RogLab over the years and clinching the 2018 Eurocities Network Innovation Award. Opening in 2023, Center Rog epitomizes fiscal prudence, innovation, and visionary municipal leadership, offering a multifunctional space rooted in creativity and history. The program will be designed so that 50% is developed in-house, and 50% is based on a public call for partners to participate in the program.

Finding 5: Challenges in financing strategic business cases despite a mature funding landscape

This report evaluates the funding needs delineated in the Strategic Business Cases against existing funding opportunities across local, national, and European contexts. The objective is to pinpoint discrepancies and potential funding gaps. A prominent observation is that most of these Cases necessitate a blend of private and public funds. Private funding because they involve commercial business ideas, and public funding because the essential elements of most cases involve added value for the region and citizens. However, the analyses of the Strategic Business Cases also made it clear that obtaining funding from local and national sources is very difficult. Local authorities do not have the means necessary. This is due to the fact that the current structural funds for the programme period 2021 - 2027 are already allocated for other measures (see Operational Programmes of the project partners). In addition, industrial sites are mainly privately owned, which makes public investment by local or national actors difficult.

Although there is a wide variety of funding programmes, there are few that focus on industrial sites or that can support the bulk of the necessary investments (See Chapter 5 and Annex 1). Most EU funding programmes could finance smaller aspects of the implementation of the Strategic Business Cases (e.g. R&D activities of a digitalization hub), but only after the main investments have already been covered by others. A notable EU fund dedicated to the transition towards a low-carbon economy is the Just Transition Mechanism (JTM). However, feedback from funding experts highlights the JTM's complexity, protracted nature, and its demanding requirement for national-level co-financing.

INVESTMENT GAPS AND SIKILLS SCARCITY

Even though most of the strategic business cases showed similar patterns and approaches, the implementation and financing have to be understood individually. An important take-away from the EDWs is the realization that not only business modelling, but also financing, is a challenge. Due to the very different nature of each case, different funding/financing approaches are required. An in-depth analysis of the existing financing instruments at the European level underlines the high level of complexity, which is also clearly overwhelming for most stakeholders. A lack of funding, and uncertain and lengthy regulatory processes deter municipalities from planning investments in green and digital transition.

European funding schemes primarily serve as supplementary tools, specifically targeting niche sectors (e.g., to develop a new concept for ceramic or battery recycling equipment with higher precision or efficiency than what is currently available on the market). However, many investments go beyond the coverage of these European funds, leaning heavily on private sector contributions. A salient challenge in this landscape is the evident skill gap in dual transition fields, because it demands expertise spanning environmental, technical, engineering, and sustainable business modeling, among others. Notably, eleven key industrial sites either lack these resources or have not harnessed them effectively. Such constraints underscore the significant funding gap, further strained by the often-limited resources of local actors.

4 FUNDING OPPORTUNITIES FOR SITE INVESTMENTS

While many of the Strategic Business Cases are in their nascent stages, a central concern is securing investment for these sites. Generally, there are two pivotal sources of funding: private investment and public funding, with a significant portion of the latter emanating from the European Commission. This is relevant since most regions in Europe depend on these funds and have hardly any additional funds. This is especially the case for most of the Danube countries, where the Cohesion Fund[1] is the most prevailing funding mechanism in the field of digitalization, transition, and innovation. Looking deeper, there are different types of funding provided by the European Commission. Details are provided in Annex 1.

4.1 Grants and financial instruments

Grants represent financial instruments that are partly funded from other sources and partly from the EU. Accessing a grant is possible by applying to a call for proposals. These calls can be about issues on local (e. g. sites), regional, national, and European level. The prevailing challenge by an applying region or individual is that the aim and objectives of these calls must comply with the funding needs of the applicants. Furthermore, most calls are only open temporarily, meaning there is only a limited window of opportunities for these grants to be available.

Financial instruments[2] such as equity and debt, loan guarantees, and venture capital, enable funding under shared management with Member States, in partnership with the European Investment Bank or though the NextGenerationEU temporary recovery instrument[3]. Besides loans to businesses of various types for investment, the European Commission can also provide guarantees to help beneficiaries to obtain loans more easily or at better conditions from banks and other lenders. Financial instruments are implemented in partnership with public

[1] https://ec.europa.eu/regional_policy/funding/cohesion-fund_en

[2] https://commission.europa.eu/funding-tenders/find-funding/financial-instruments-equity-guarantees-and-loans_en

[3] https://next-generation-eu.europa.eu/index_en

and private institutions such as banks, venture capitalists, or angel investors who determine the exact financing conditions. Financial instruments can also be combined with grants.

For further considerations to what extend EU funding—related to the green transformation of industrial sites—might be of interest, it is worth mentioning that there are two relevant types of EU fund management:

Direct management: Here the EU funding is managed directly by the European Commission. It is operationalized through calls for proposals4. A significant part of the funds from NextGenerationEU—the temporary recovery instrument—will also be implemented in direct management mode, notably the Recovery and Resilience Facility (RRF) – which will make €723.8 billion in loans and grants available to support reforms and investments undertaken by Member States. In August 2020, the European Commission established the Recovery and Resilience Task Force (RECOVER) within its Secretariat-General. Jointly with the Commission's Directorate-General for Economic and Financial Affairs, RECOVER is responsible for steering the implementation of the Recovery and Resilience Facility. RECOVER also coordinates the European Semester and reports to the Commission President. The European Semester is the framework for integrated surveillance and coordination of economic and employment policies across the European Union.

Shared management: the European Commission and national authorities in Member States jointly manage the funding with about 70% of EU programmes being run in this way.

4.2 The just transition mechanism

The Just Transition Mechanism (JTM) is a key tool to ensure that the transition towards a climate-neutral economy happens in a fair way, leaving no one behind. It provides targeted support to help mobilize around €55 billion over the period 2021-2027 in the most affected regions, to alleviate the socio-economic impact of the transition. It can be considered to be one of the most relevant funding schemes for regions interested in re-opening industrial sites promoting sustainability and transitions.

Territorial just transition plans define the territories in which the Just Transition Fund (JTF) will be used. The identification of these territories is carried out through a dialogue with the Commission. These plans set out the challenges in each territory, as well as the development needs and objectives to be met by 2030. They identify the types of operations envisioned and specify governance mechanisms. The approval of the territorial just transition plans will open the doors to dedicated financing under the other two pillars of the Just Transition Mechanism. Support will be available to all Member States, focused on regions that are the most carbon-intensive or have the most people working in fossil fuels. Member States (not the regions directly) can get access by preparing territorial just transition plans that cover the period up to 2030, identifying the territories that should get the most support. The plans must also set out ways to best address social, economic, and environmental challenges.

The just itself can, in the end, cover various activities connected with the successful re-opening of a given industrial site. Eligibility examples for funding are supporting the transition to low-carbon technologies and economic diversification based on climate-resilient investments and jobs, creating attractive conditions for public and private investors, providing easier access to loans and financial support, investing in the creation of new firms, SMEs and start-ups, investing in research and innovation activities, supporting the transition to low-carbon and climate-resilient activities, investing in public and sustainable transport, providing technical assistance, investing in renewable energy sources, improving digital connectivity, providing affordable loans to local public authorities, improving energy infrastructure, district heating, and transportation networks.

[4] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home

Without doubt, this funding scheme might also be best suited for the Strategic Business Cases discussed. However, significant private co-investments are mandatory, whereas the JTM can only be considered as one of several financing options. Furthermore, this practice has proven to be long and time-consuming. It takes a while until funds can be used properly. There is also increasing criticism about the administrative procedures connected with the JTM. Furthermore, there is an increasing demand from the regions to embed the JTM into the EFRE scheme to avoid two-time consuming funding schemes being run in parallel.

Box 3: The Horna Nitra Region, Slovakia

Context: The Horna Nitra region has a history of coal production which is used for electricity generation and district heating. The Slovak Government decided to phase out of coal by 2023 and commissioned an Action Plan that would provide concrete steps and solutions for the economic transformation of the region. In 2020, the region of Horna Nitra, along with Banska Bystrica, and Kosice, in close cooperation with federal authorities, started to prepare Territorial Just Transition Plans to promote the transition to a low-carbon economy. Based on these plans the access funding from the JTM were granted.

Support delivered. In 2018, the European Commission started its support for the just transition by developing a strategy for the region of Upper Nitra to transition out of coal, including a wide consultation of stakeholders at local, regional, and national levels. Subsequently, the assistance provided continued in this area in 2020 to facilitate conversion and rehabilitation of land and assets (brownfields) in Upper Nitra. In 2021, the Commission supported the preparation of the territorial just transition plan in Slovakia, specifically for the regions of Horna Nitra, Banska Bystrica, and Kosice. Since 2022, the Commission is providing tailor-made technical support for the implementation of the Slovak territorial just transition plan.

Results achieved. The strategy for the region of Upper Nitra to transition out of coal, prepared and funded under the JTM, was adopted by the Slovak government in July 2019. In 2022, the Slovak authorities finalized their territorial just transition plan and submitted it under the Just Transition Mechanism. Since 2022, the support is continuing to help identify and prepare dedicated projects to be funded by the JTF and build the overall capacity of the Slovak administration to support the implementation of the Just Transition Mechanism.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

The synthesis of the 11 Strategic Business Cases to date has shown that there is no shortage of ideas on how to revitalize unused industrial sites and use them as a tool for digitization and transformation. The developed Strategic Business Cases contain several important and innovative transformational goals that need to be achieved through consistent implementation. Even though the ideas are very different, it has been shown that the patterns are quite comparable in terms of transformative goals and transformative actions. The key challenges are also comparable in most cases.

The RIS4Danu project itself and the methodology used is an important exercise in two respects. On the one hand, it demonstrates how to bring together local stakeholders and interested parties to discuss and identify transformative goals for the reopening of industrial areas. On the other hand, it shows how difficult it is to transform brown sites into green sites. The Strategic Business Cases have been a good tool for structuring the ideas and goals connected with the transformation of the industrial sites.

The project has also shown how complex the path is from an idea to the successful reopening of an industrial site. Only in a few cases is there a clear approach. Instead, most cases represent a series of sustainability-related ideas that need to be streamlined and turned into business cases.

None of the 11 Strategic Business Cases identified the key driver, potential investors, or at least a realistic framework for investments. This raise concerns that the Strategic Business Cases would remain wish lists and not be implemented.

Finally, three main challenges can be identified:

Refining the early-stage Strategic Business Cases. It remains a major challenge to develop Strategic Business Cases in such a way that they proved a clear and realistic framework for investment and can motivate concrete public and private investors to participate. While politicians often aim for multiple outcomes, this can dilute focus and make it more difficult to achieve the key objective. This requires a structured process of engagement with key stakeholders. Realistic investment opportunities need to be considered from the outset. For effective implementation management, it is important to emphasize the importance of maintaining discipline and simplicity in case objective

Role of municipalities. Eleven cases showcase the increasing role of municipalities in the green and digital transitions of industrial sites. To nurture sustainable practices across urban planning, energy efficiency, circular economy, and transportation, the level of expertise needs to be enhanced, which creates a significant need to also enhance the role of the municipality. As noted above, the role of the municipality was not recognized in the partnerships with the key drivers as they were defined in the Strategic Business Cases. However, both are necessary to drive the implementation process forward. If there isn't a key driver committed to the whole process, it will be difficult to form such partnerships. Such partnerships are usually based on successful collaboration between regional, local, and national actors but the possibility of these partnerships is challenged by the current approach which is emphasizing regions without including the role of the municipalities in the green and digital transformations.

Access to Green financing. The main challenge is and will remain securing adequate green financing for revitalizing industrial sites. Firstly, because the Strategic Business Cases are still at an early stage. Secondly, realistic financing options have not yet been considered. The Strategic Business Cases are more like a list of ideas that have not yet been tested for their financial viability. Thirdly, investments in industrial sites are inherently complex. This is particularly the case when the objectives of the owners of the sites are different from those of the local or regional policy makers. In other words, securing funding may be less complex if the revitalization of the sites is in line with the objectives of RIS3 and contributes to these objectives.

Compounding these difficulties is the limited scope of current public funding options, which fall short of addressing the multifaceted needs of these projects. Moreover, there is a gap in the capacity of participating regions to navigate the intricate funding landscape, particularly in understanding the roles and priorities of significant players like the European Investment Bank and national public development banks within the Green Deal framework[5]. These banks, because of Green Deal, must prioritize environmental and social dimensions in their lending decisions, underscoring the need for a strategic blend of funding sources.

Box 4: European Investment Bank as part of Green Deal

The European Investment Bank (EIB) is an integral part of the European Green Deal, with the role of funding agency and advisor, with programs structured around the key area of focus of the European Green Deal and with a Climate Action Plan implying the EIB will be making 50% of their lending to climate change-related activities by 2025. EIB like all public development banks maximize sustainable and inclusive development impacts (including economic, environmental and social impacts) while maintaining some financial profits or avoiding financial losses. EIB lending operation covers

[5] Such as SID – Slovenian Export and Development Bank, L-Bank (State Bank of Baden-Württemberg), Bayerische Landesbank (BayernLB)

innovation, sustainable cities and regions, sustainable energy and natural resources, SME and mid cap investments all suitable for industrial sites development. EIB has committed to align all its activities with the Paris Agreement, by the end of 2020, and to ensure that 50% of its activities will be in the green transformation by 2025, and to mobilize €1 trillion of investment by 2030 for this purpose.

5.2 Recommendations

Recommendation 1: Obtaining a clear commitment from actors towards a strategic partnership. Irrespective of the final design of the Strategic Investment Cases and its financing, a clear and long-term commitment of key actors is needed from the outset. In doing so, it is important to take into account the different interests of the actors and to encourage them to act together. So far, this kind of commitment has not been made clear in any of the Strategic Investment Cases'. From this commitment, key drivers and partnerships can be formed to take ideas forward, formulate a clear industrial business case, and secure funding.

Recommendation 2: Focusing and streamlining the Strategic Business Cases to achieve the greatest possible transformative impact. Overall, most of the Strategic Business Cases are a collection of ideas for transformative goals and activities, but are still at an early stage. This is good since it was important to establish a trusting process at the beginning. But now, these Strategic Business Cases need to be further developed and streamlined. The latter is important in order to achieve the greatest possible transformative impact for the industrial site with the limited resources available. In this context, a limited number of transformative goals with high interaction should be considered.

Recommendation 3. Defining the role of and business model for the municipalities. Municipalities will play a pivotal role in fostering sustainable measures across sectors such as urban planning, energy efficiency, circular economy, and transport. They can play different role conduct different tasks. The latter will depend on the business model envisioned for the municipality.

The municipality as the main investor. In this case, the municipality is the main actor. As the owner of the industrial site, it has every opportunity to implement the concept as it sees fit. At the same time, the municipality acts as the primary investor. This can be particularly useful if the business model of the industrial site is not solely based on commercial benefits, but has a focus on promoting public welfare.

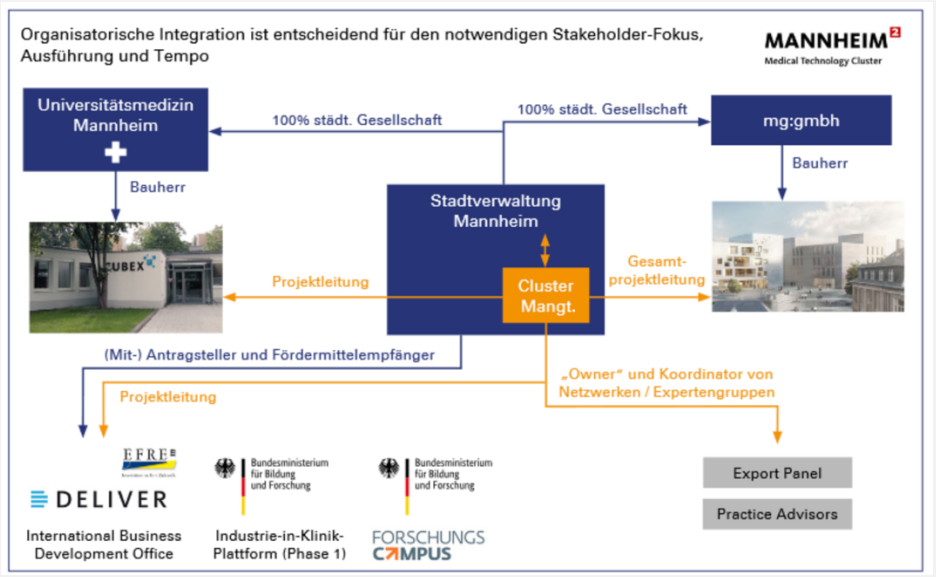
The municipality as part of a public-private partnership. Some strategic business cases suggest that both private and public interests are considered. The case of the Berettyóújfalu milk powder factory is a good example. It contains a more commercially oriented strategic line (sustainable packaging production site based on circular economy) and a more socially oriented strategic line (Social Innovation Hub for a livable and sustainable city of Berretyóújfalu including a senior housing complex and a childcare facility to meet the growing demand in the city). Here it is clear that this hub does not have a purely commercial objective, but can make an important contribution to the common good. This is undoubtedly a challenge for the public sector, and certainly for the municipality as one of several investors. A public-private partnership is the obvious solution to ensure joint action despite differing interests. Within the framework of an ongoing public-private dialogue, it could be ensured that all relevant actors (i.e., not only the investors) regularly exchange information and make and implement joint decisions for the entire operation of the industrial site for everyone's mutual benefit.

The municipality as developer and initiator, but not as investor. A third option is for a municipality to act as an instigator and project developer, but not as an investor. This is often a relevant role for a municipality. Many industrial parks are based on this division of roles. Even if the municipality does not act as a direct investor, it must have a high degree of entrepreneurial thinking.

Box 5 provide an example show how this could work, but it also shows the high level of complexity and the need for all stakeholders to work together.

Box 5: Transformation of the city of Mannheim

The Mannheim case demonstrate the role of strategic partnerships and effective funding strategies. In 2009/2010, the Mannheim City Council identified four focal areas for its economic policy strategy, with medical technology being a prominent one. Recognizing the need for infrastructure investments to bolster this strength, the responsibility was entrusted to the Mannheim Economic Development Corporation. Tasked with a politically-legitimized mandate, this corporation set forth to craft and implement a concrete economic strategy for the municipality. Despite its pivotal role as a developer and initiator in this strategy's conceptualization, the city of Mannheim acknowledged its financial limitations, refraining from acting as the primary investor. The strategic concept developed by the city of Mannheim incorporated a detailed investment plan, delineating both the targeted areas for investment and the sources of the requisite funds. As the initiator, Mannheim successfully secured funding from various tiers: the Baden-Württemberg government, exemplified by initiatives like RegioWIN, the national government, and the European level. This initial success in fundraising paved the way for attracting additional private investments. Such financial injections facilitated endeavors like the establishment of an accelerator for start-ups and the transformation of the local hospital into a research hub specializing in clinical studies and advanced surgical technologies.



Recommendation 5: Involving local and regional policy makers. Although there was a high level of interest in the EDW, local or regional politicians were only present in a few cases. Experience has shown that regional policy-makers can make a significant contribution to the process of implementing Strategic Business Cases on industrial sites level. This applies not only to political lobbying, but also to public co-financing. Particularly at the level of RIS3 strategies (regional or national), it is important to actively involve relevant representatives and give them the opportunity to shape Strategic Business Cases accordingly. Ideally, the implementation of Strategic Business Cases can be an instrument for a strategic approach to the transformation of an entire region (Strategic Business Cases as a tool for local economic development). By doing so, key constraints and barriers for the successful implementation of a given Strategic Business Case can be addressed at the proper policy level.

Recommendation 6: Assure coherence between site transformation and local / regional development strategies. Experience shows that revitalizing industrial sites can be facilitated when there is a high degree of coherence between transforming the site and local/regional transformation. This is particularly the case when site regeneration can be used as an important element in the implementation of local/regional transformation processes. Therefore, when developing strategic business cases, care should be taken to ensure that the transformative objectives are aligned with local/regional innovation/transformation strategies. This not only facilitates bringing together stakeholders from all levels (site, local and national)

with a common goal, but also ensures the necessary financing mix of public and private investment.

Recommendation 7: Bridge gaps for green and digital transitions. Address the investment considerations early and involve essential financial partners. While many Strategic Business Cases currently lack specific investment details, it's crucial to address these considerations early on. Delaying such discussions until later phases could hinder project progression. The synthesis emphasizes a shortage of expertise among stakeholders regarding investment opportunities provided by public development banks. Local partners are advised to address investment aspects immediately, integrating essential financial partners like development banks. This facilitates mutual dialogues on public-private investment interests. An interdisciplinary approach is vital to devise a comprehensive investment plan, especially one that balances environmental, social, and economic factors. This proactive local collaboration is a stepping stone to financing the green digital transformation of sites. Development banks need to shift from passive roles, merely responding to demands (project takers), to become a development partner of brownfield industrial site projects.

Recommendation 8: Explore other financial options outside of EU funding schemes. The Strategic Business Cases primarily considered EU funding schemes as options to co-finance the mandatory investments. However, there are many more options, especially ones which come from private sources. It is recommended to further explore options like social or environmental impact bonds or other new financial tools connected with the green transformation. Several banks have already issued green bonds like NLB. The current EU Green Taxonomy has increased the interest of private investors due to the role that the taxonomy regulation plays in green transformation. Integrating financial partners in the strategic partnership also ensures proper competences in this regard.

Recommendation 9: Adapt existing funding schemes to support local development. Regions and their actors transform in many ways. Industrial sites can play an important role as enabler for industrial transformation since it can also impact an entire region. While there are many funding programmes for innovation and R&D on the regional, national, and European levels, this is still an exception when it comes to investments linked to industrial site-based transformation. Existing funding mechanisms need to be adapted in order to facilitate future investments in the course of the regional innovation processes. The RegioWIN Competition (s. Box 4) can serve as an input, since it allowed a very flexible interpretation of the “size of a region”. Thus, the RegionWIN Competition could have been used to support dedicated industrial sites.

Box 6: RegioWIN Competition

The RegioWIN competition is a support programme for strategic development concepts and investments. Using the ERDF funding opportunities, the Baden-Württemberg government has successfully stimulated regional transformation processes with many new actors in different regions. The territorial design was not limited to administrative units, the regions had to define themselves as functional areas in a collaborative process and on the basis of evidence, and find a key driver to represent them. Thus, focusing on industrial sites level was possible.

The applicants had to submit SWOT-based strategic development concepts (comparable with the Strategic Business Cases) in line with the EU 2020 goals and the Baden-Württemberg RIS3 to enhance the transformation capacity of their territory. The transformative goals defined had to address major societal and transformative challenges. The competition framework called for the structured participation of all relevant stakeholders in a given region. This included local stakeholders deciding on priorities and transformative goals.

Three federal-state level ministries joined forces to launch and manage the RegioWIN competition. An interdisciplinary jury selected the proposals eligible for funding. The winning concepts were allowed to use the funding for investing and innovation purposes. The focus was on investments which are necessary for the facilitation of regional transformation processes.

A total budget of approximately € 95 million was available for the RegioWIN programme. This was made up of an ERDF budget of around € 68 million and additional state funds of around € 27 million.

An additional € 30 million needed to be added by the winning regions/municipalities own contribution. Including private investments, more than € 150 million was mobilized to invest in regions/municipalities which were ready to transform.

The Baden-Württemberg experience with support programmes that puts smaller territories in the focus of support suggests that such competitions are a successful instrument in industrial development to promote transformation to any type of territory and to activate new stakeholders in a regional context for various innovation issues. They can also help to establish strategic processes in territories with little or scattered strategic awareness or a limited collaborative spirit.

6 ANNEX 1: ANALYSIS OF EUROPEAN FUNDING PROGRAMMES SUITABLE FOR THE RE-OPENING OF INDUSTRIAL SITES IN THE DANUBE REGION

SUMMARY AND OBSERVATIONS

Author: Lucia Seel

In order to identify opportunities to access funds managed directly by the European Commission or in shared management with the Members States, it is recommended to interested stakeholders to further check the following sources of information (useful links):

- For the EU funding managed directly managed by the European Commission in form of calls for proposals, these can be found on the Funding and Tenders Portal (SEDIA).
- For the Recovery and Resilience Facility (RRF) the recommended links are to the country pages for relevant information in the countries involved in the RIS4Danu project, the European Semester in each country where country reports, national programs on reforms and their assessment and draft budgetary plans can be reviewed and based on such a research opportunities for funding can be identified; and the map of projects supported by RRF for inspiration.
- Where the European Commission and national authorities in Member States jointly manage the funding (about 70% of EU programmes being run in this way), it is recommended to check the links of the **national single portals** and of the **managing authorities** of the European Regional Development Fund (ERDF) in each country.

Further observations

Horizon Europe is a flagship programme, facilitating collaboration and strengthening the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges. with calls and tenders published here (both upcoming and past ones, that can serve as inspiration). While the funding scheme is appealing with EU funding between 70-100%, there are the following aspects that are useful to be considered:

- Usually, a project implies involvement of several organisations from several countries, and this implies a higher degree of complexity and availability of skills for the site developer. Finding partners, including from the research area, who have similar/complementary goals that fit into the purpose of the planned transformation is a challenge.
- Application is possible only if the issues encountered in the industrial site transformation correspond to the issue to be addressed in the call for proposal.
- Timing is difficult – there should be a call for proposal open that is aligned with the needs of the industrial site developer.

These aspects may be barriers in accessing this programme.

We highly recommend site owners and interested stakeholders is look at the **InvestEU Fund. At least 30%** of the InvestEU Programme, in line with the European Green Deal objectives, shall support financing for investments that contribute to EU's climate objectives. The InvestEU Fund finances sustainable infrastructure in various areas[6] that include also **building renovation projects focused on energy savings and the integration of buildings into a connected energy source**. The guarantee available under the InvestEU Fund is implemented in partnership with selected financial partners, or '**implementing partners**' – see the current list here. For the regions covered by the RIS4DANU project, the most relevant implementing partners are the European Investment Bank (EIB), the European Investment Fund (EIF), the

Council of Europe Development Bank (CEB) – with a specific focus on projects coming from Central, Eastern and South-Eastern Europe and the European Bank for Reconstruction and Development (EBRD) – with a geographical focus of the projects in Bulgaria, **Croatia**, **Czech Republic**, Estonia, Greece, **Hungary**, Latvia, Lithuania, Poland, **Romania**, **Slovak Republic** and **Slovenia**, thus including a majority of the countries covered by the project. It is also useful to read more about the **InvestEU Advisory Hub**, the **InvestEU Portal** and the **European Investment Project Portal**.

The Just Transition Mechanism (JTM) provides targeted support to help mobilise around €55 billion over the period 2021-2027 in the most affected regions, to alleviate the socio-economic impact of the transition. It addresses the social and economic effects of the transition, focusing on the regions, industries and workers who will face the greatest challenges, through three pillars:

- A **new Just Transition Fund**. Territorial just transition plans define the territories in which the Just Transition Fund will be used. The **Just Transition Platform** provides comprehensive technical and advisory support.
- **InvestEU "Just Transition" Scheme** - will provide a budgetary guarantee under the InvestEU programme and the InvestEU Advisory Hub. It is expected to mobilise €10-15 billion in mostly private sector investments.
- A new **Public Sector Loan Facility (PSLF)** will combine €1.5 billion of grants financed from the EU budget with €10 billion of loans from the European Investment Bank, to mobilise €18.5 billion of public investment.

It can support investments in a wide range of sectors, including (among others) environmental infrastructure for smart waste and water management **//** sustainable energy, energy efficiency and integration measures, including **renovations and conversions of buildings // urban renewal and regeneration //** the transition to a circular economy. Investments in other sectors may also be supported if they are consistent with the approved Territorial Just Transition Plans.

There are currently the following open calls with the next deadline for 20 September 2023: (multiple cut-off dates: 17 Jan 2024, 17:00 hrs / 17 Apr 2024, 17:00 hrs / 19 Sep 2024, 17:00 hrs / 16 Jan 2025, 17:00 hrs / 15 Apr 2025, 17:00 hrs / 11 Sep 2025, 17:00 hrs)

- **Open calls for PSLF Projects – cut off dates until 2025**
- **Open calls for PSLF Schemes - cut off dates until 2025**

Other remarks

Although the study captures a selection of European funding schemes that can possibly be used to fund the green transformation of industrial sites, one recommendation confirms the approach of using public funding that was shared by the RIS4DANU stakeholder from the region Usti in the Czech Republic during the second policy forum organised within the project: "The Usti region in the Czech Republic works with the Just Transition Fund (JTF). It is very important to understand that just a fund alone does not work out; it is a must to combine different resources and involve in the funding mix the private money as well. The ultimate goal is to leverage public-private funding – in the regional example brought forward, for 1€ public investment, there were 5€ from private investment raised. The funding of huge projects like brownfield re-development is a too difficult challenge to be addressed with only one fund, as there is too much investment needed that usually is hard to be covered by one single source." Therefore, the strongest recommendation is to check not only the feasibility of using one fund, but also to look at the funding mechanisms in an intertwined way and targeting a funding mix to create synergies, similarly to the synergies created by the European Commission among its funds. And of course, attracting also private funding remains a key element of the funding mix.