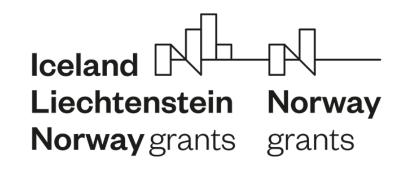




Cluster & the decarbonisation of industry: "The Upper Austian Way"

Christoph Reiss-Schmidt, Business Upper Austria – OÖ Wirtschaftsagentur GmbH





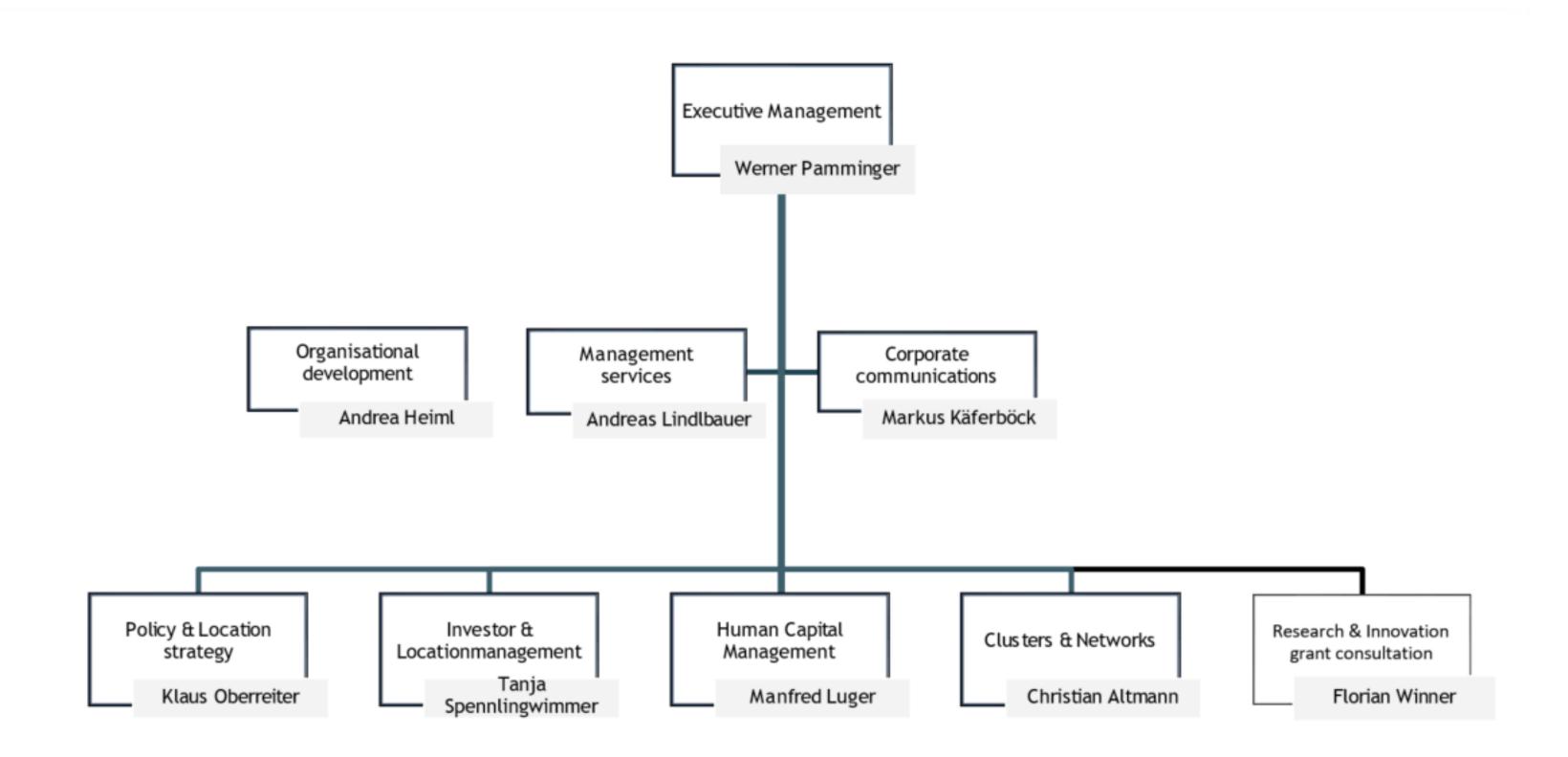
Business Upper Austria: Your One-Stop-Shop

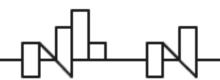
Customised services from the business idea to market

success

Organisational chart

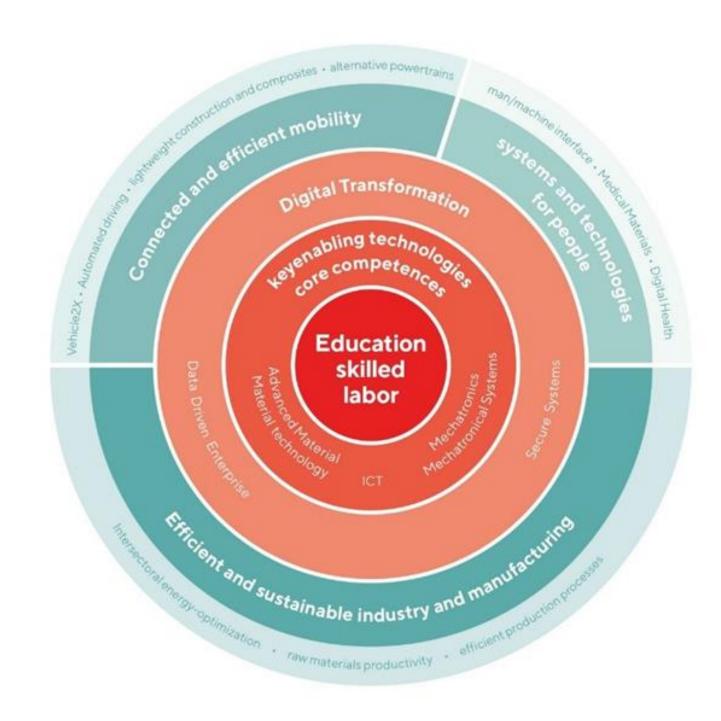






#upperVISION2030



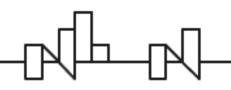


"Strengthen regional strengths, dare to try something new" - the strategic orientation focuses on existing regional strengths and competencies and attempts to develop them steadily.

Strengthening of existing and support for new exporting companies; increasing number of "start-ups", more research & technology-oriented companies.

Economic sustainability of the industrial and research location.

Creation and preservation of sustainable jobs through early recognition and identification of disruptive developments, customer needs and fields of application and the development of new business models



Facts - figures - data: Cluster and



Cooperations

2,205 partners - of whom 81% **SMEs**

813 Regional cluster cooperation projects 2,992 companies and € 170 million project volume*. More than **2,000** cooperative measures* and **20** third party fund projects.

*since the founding in 1998

contact in focus

2,256 company meetings on-site / year

Expert knowledge

338 events

500 speakers

11,000 participants

162 experts from industry, science and education on advisory boards, 33 board meetings per year for

strategic orientation of cluster

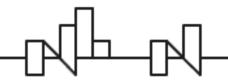
initiatives

Key topics



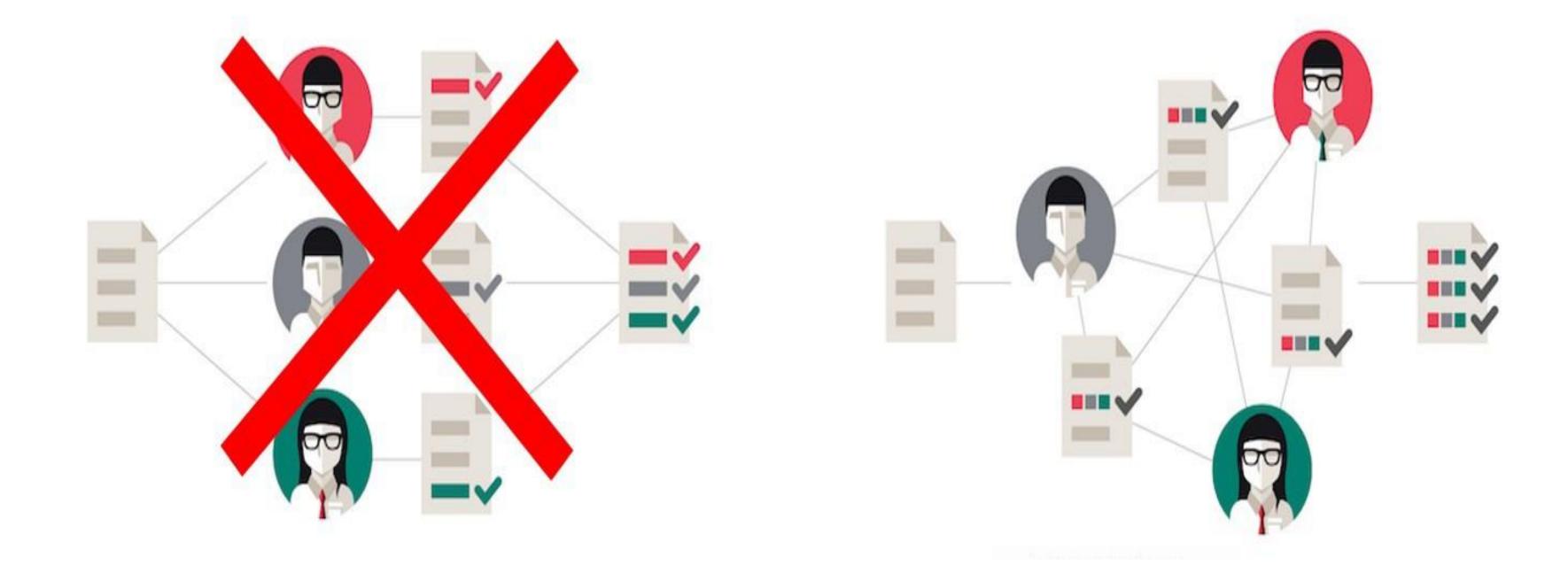
Internationalisation, lightweight construction,

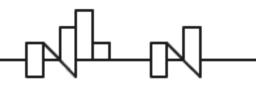




Cooperation vs. Collaboration





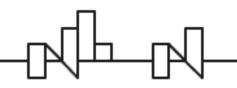


NEW ENERGY FOR INDUSTRY





The NEFI innovation network of science, technology providers and companies demonstrates a pathway towards the decarbonisation of industry.



FLAGSHIP REGION ENERGY



FTI initiative Flagship Region Energy:

The Climate and Energy Fund of the Austrian government will invest up to 120 million

Euros in 3 flagship regions. Focus areas of "Flagship Region Energy" are:

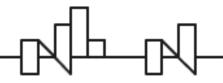
- Model solutions with up to 100% renewable energy
- Strengthening Austria as a leading market for innovative energy technologies
- Largest value for the population

Three Flagship Regions:

Green Energy Lab: Flexibilisation and digitalisation of electricity and heat networks NEFI

- New Energy for Industry: Decarbonisation of the Austrian Industry

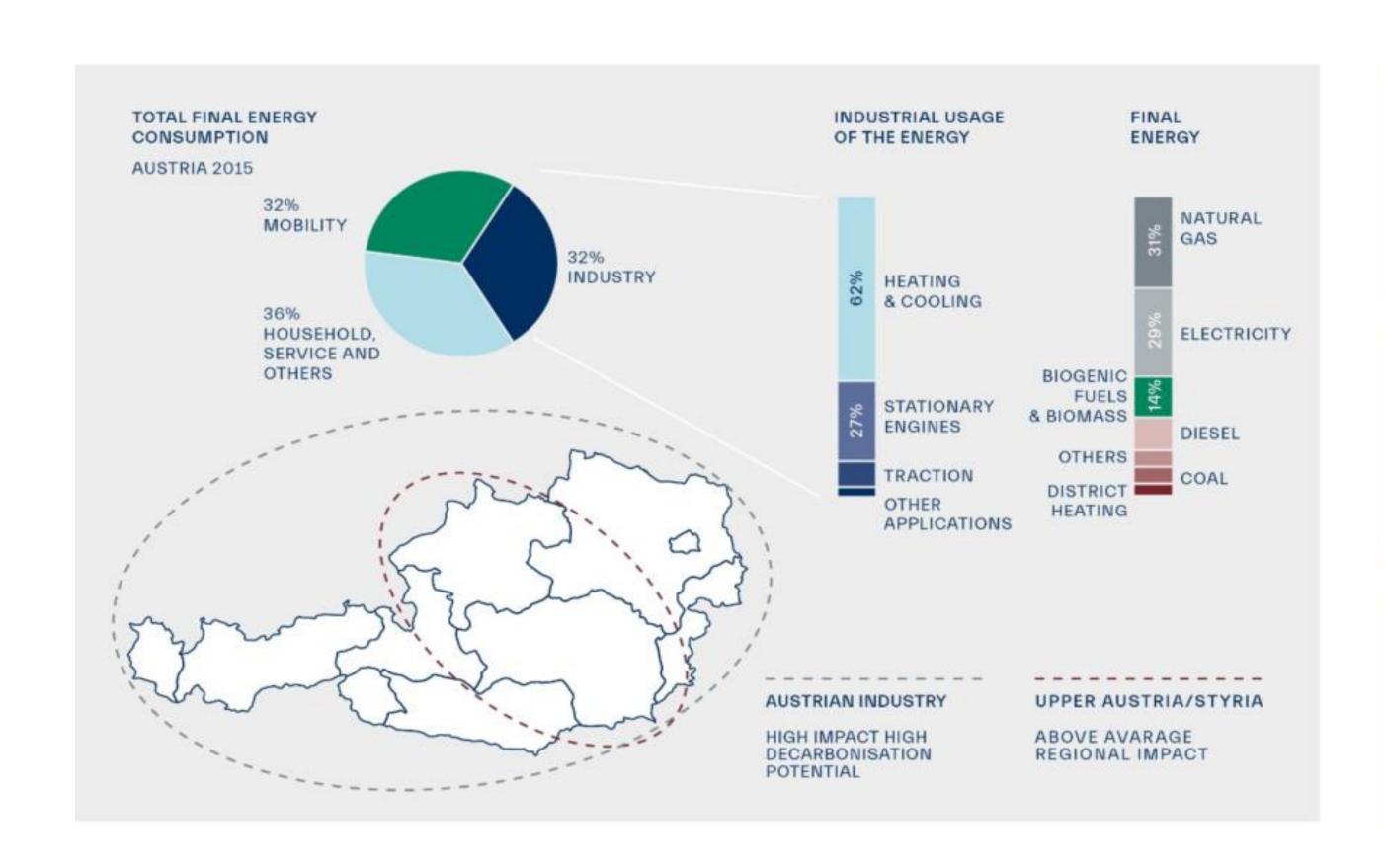
WIVA P&G: Green Hydrogen for energy supply, industry & mobility



NEFI – BACKGROUND & GOALS



Industry accounts for 32% of Austria's final energy demand



Decarbonisation of industrial energy systems

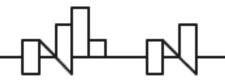
100 % renewable energy supply at selected locations

Added value "Made in Austria"

through export and technology development

Securing the industry location

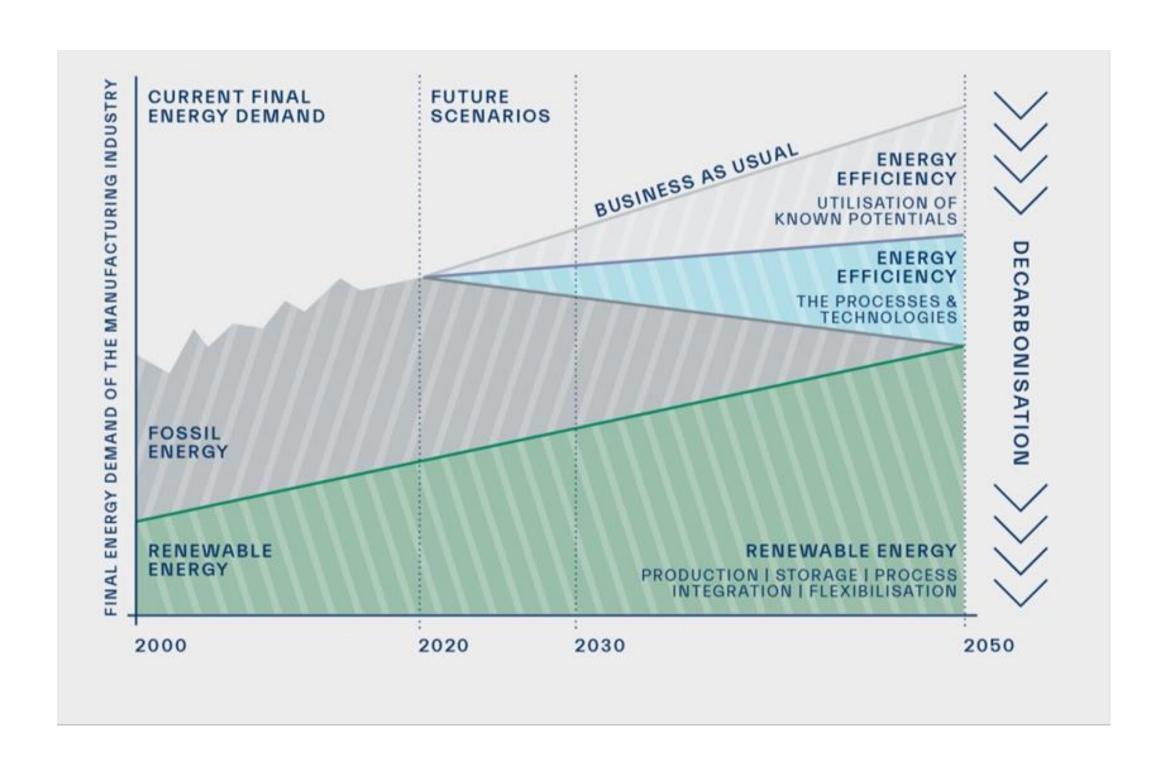
contribution to the economic location Austria by user involvement



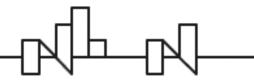
NEFI VISION



Decarbonisation of industry by technology "Made in Austria"

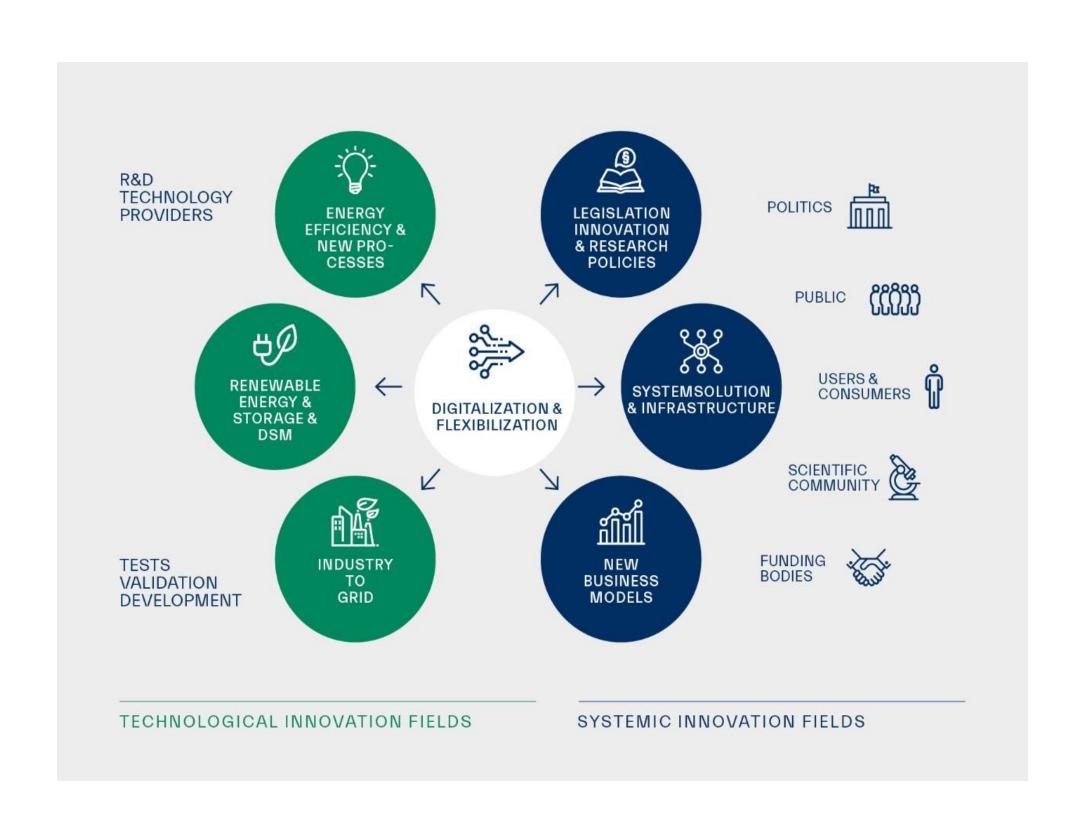


NEFI key technologies "Made in Austria" enable the decarbonisation of industrial energy systems and help to secure Austria's position as an industrial location.



NEFI — FIELDS OF INNOVATION

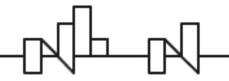




- Approx. 100 partners from industry, RTOs and public institutions
- 17 NEFI sub-projects
- Funding: 24.6 Mill. EUR

KEY TECHNOLOGIES:

- Storage technologies
- Increased oxygen usage in the iron & steel sector
- Micro-grids
- Cross-company energy communities
- Load management in power networks
- Heat pump technologies
- Industrial waste heat solutions

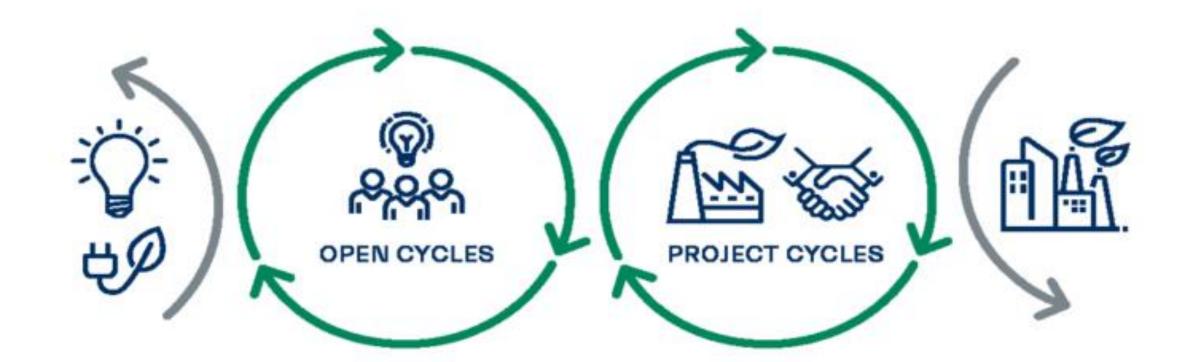


INNOVATION PROCESS

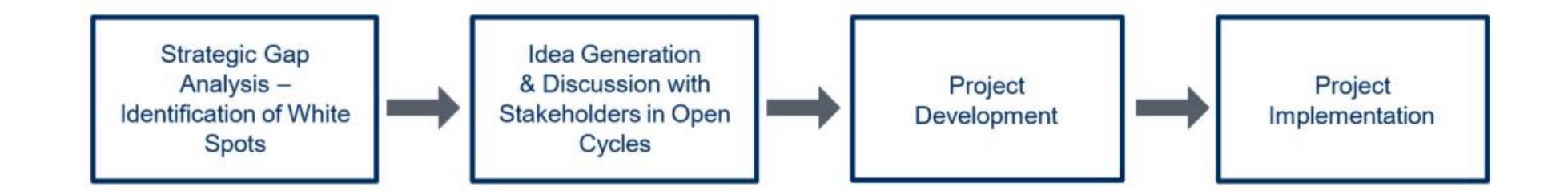


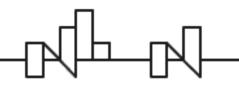
THE INNOVATION PROCESS – AN INTEGRATED CONCEPT FOR INDUSTRY TRANSFORMATION

- Sub-projects results & suggestions
- Strategic gap analysis
- New stakeholder ideas



- Sub-projects
- Scale-up and roll-out
- Market deployment & exploitation





CE4T – CLEAN ENERGY FOR TOURISM



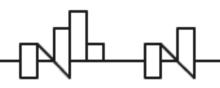
MAIN GOALS

- Decarbonisation of the winter tourism industry using digitalisation technology and new
- optimization algorithms
- Development of optimization algorithms
- Demonstration and exploitation of the required
- flexibilities at all levels
- Energy monitoring to increase energy efficiency
- Integration of renewable energy production units in the overall system

KEY FACTS

Duration: 10/18 – 03/22

Project Volume: € 4,022,000



EDCSPROOF



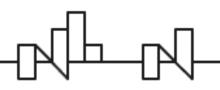
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GMUNDEN HIGH TEMPERATURE HEAT LINK R&D



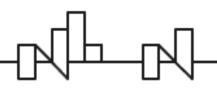
MAIN GOALS

- Ceramic gas filtration of cement gas
- Implementation of finned
- tube heat recuperation with novel fluids
- Cost efficient bulk thermal energy storage
- High temperature heat transport over 1.5 km of public land

KEY FACTS

Duration: 09/18 – 07/21

Project Volume: € 1,257,366







Thank you for attention

Christoph Reiss-Schmidt, Business Upper Austria – OÖ Wirtschaftsagentur GmbH