Linking renewable energy projects at municipal level with NECP planning and reporting

Workshop/Webinar 29 April 2024, Online

More information: https://transformat.at/

NECP: National Energy and Climate Plan
according to EU Governance Regulation

This project is funded by the Climate and Energy Fund and is being carried out as part of the "ACRP - 14th Call, 2022" programme. https://www.klimafonds.gv.at/

Brief project description

NECP at federal level: Content, challenges and solutions with regard to renewable energy

Challenge: Policies and Measures regarding spatial planning and renewable energy are not well defined because responsibility of provinces and municipalities

We provide a solution to facilitate the planning and implementation of renewable energy projects

Section A of NECP template

- Compilation of status quo of policies according to dimensions of the Energy Union: (1) Decarbonisation, (2) Energy Efficiency, (3) Energy Security, (4) Energy Market, (5) Research, Innovation and Competitiveness
- Compilation of targets 2030 with a longterm vision to 2050
- Compilation of policies and measures (PaMs) to achieve the targets

Challenge: Scenarios are top down and therefore targets might not be realistic

We enable scenarios based on bottom-up information and realistic targets

Section B of NECP template

- Providing the analytical basis: data review and data collection, scenario analysis, calculations
  - Scenario with existing PaMs
  - Scenario with additional/planned/new PaMs
- Impact assessment

Goal: to make a contribution towards climate neutrality - focus on renewable energy

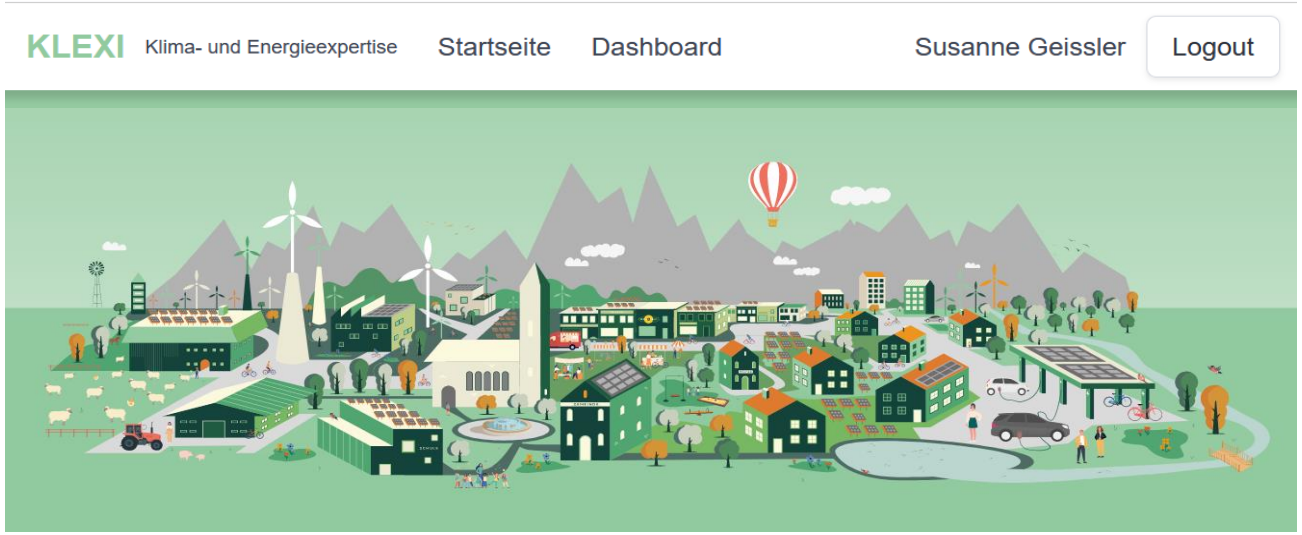
To this end, the transFORMAT-LINK project addresses the following NECP-relevant aspects:

- Facilitating project implementation at the municipal level by removing barriers due to insufficient transparency
- Developing an approach to support adaptation to climate change

→ by defining minimum requirements for **municipal development concepts**

A catalogue of minimum requirements and criteria has been drawn up that should be applied in the revisions of municipal development concept: LINK guideline

Implementation in the form of an online tool



Municipal development concept is the framework for zoning and land-use plan which impact on the exploitable renewable energy potential

Housing

Education

Services

Agriculture & Forestry

Industry

Recreation

Ecosystem services

Energy

Guideline for revision and development: **EXISTING**

Housing

Education

Services

Agriculture & Forestry

Industry

Recreation

Ecosystem services

Energy - District heating and cooling networks - Renewable energy

- Collection of information
- Information for the planning task
- Drawing tool with renewable energy potential
- Calculation of NECP related indicators
- Targets definition
- Making information accessible

Guideline and tool for revision and development:
NEW: transFORMAT-LINK Guideline including minimum criteria for harmonisation across the Austrian provinces

Minimum requirements for municipal development concepts to support renewable energy projects

Minimum requirements for the development of municipal development concepts/plans: Checklist which criteria to consider and why, to pave the way for renewable energy projects

- **EXAMPLE:**

Criterion	Qualitative sub-criterion	Reason why this is important
Urban development concept	The urban development concept aims to avoid the creation of heat islands.	Heat islands should be avoided. Heat islands have temperatures up to 5°C higher than the rest of the environment. Passive cooling strategies for buildings such as night ventilation are therefore impossible. The use of cooling appliances becomes more likely. This consumes electricity and heats up the environment even more.

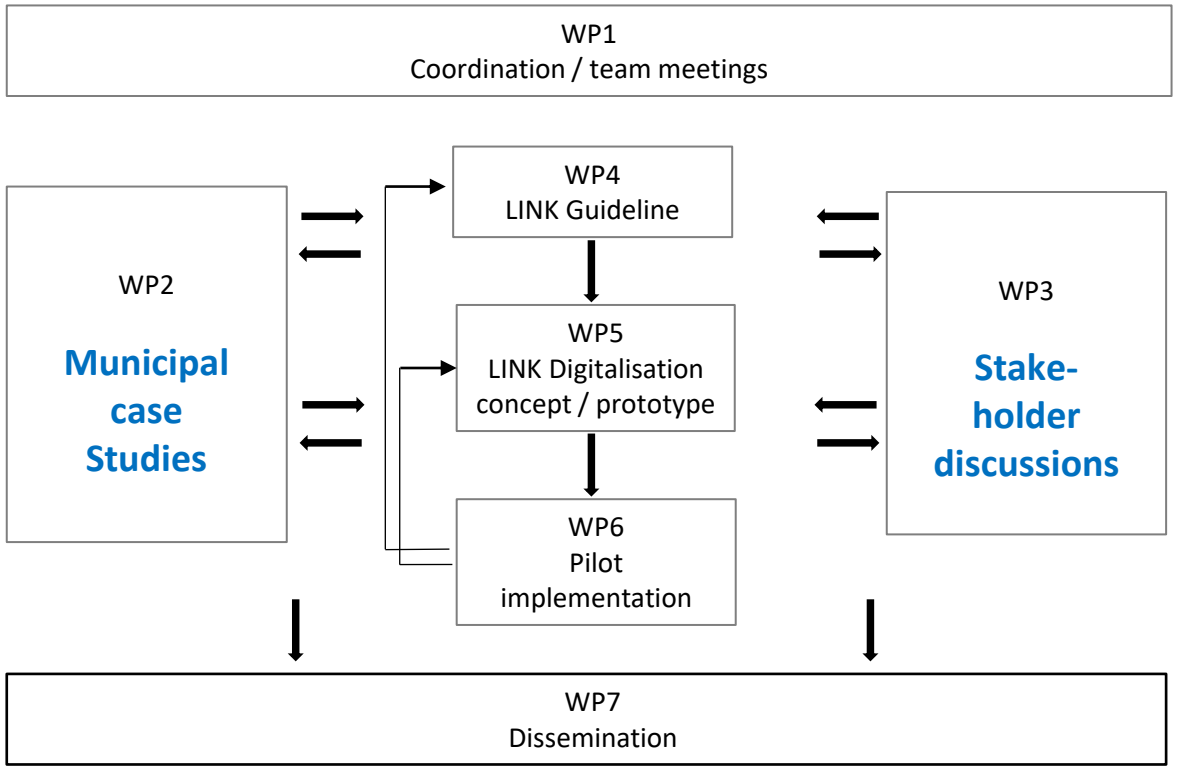
Minimum requirements for managing potential conflicts of interest: The checklist also serves the early identification of trade-offs, and disclosure of information creates transparency and supports acceptance

- **EXAMPLE** for the disclosure of information on renewable energy to the interested public: Presentation of the status quo of renewable energy generation and the possible future renewable energy generation; visualization of the area and type of planned renewable energy sources

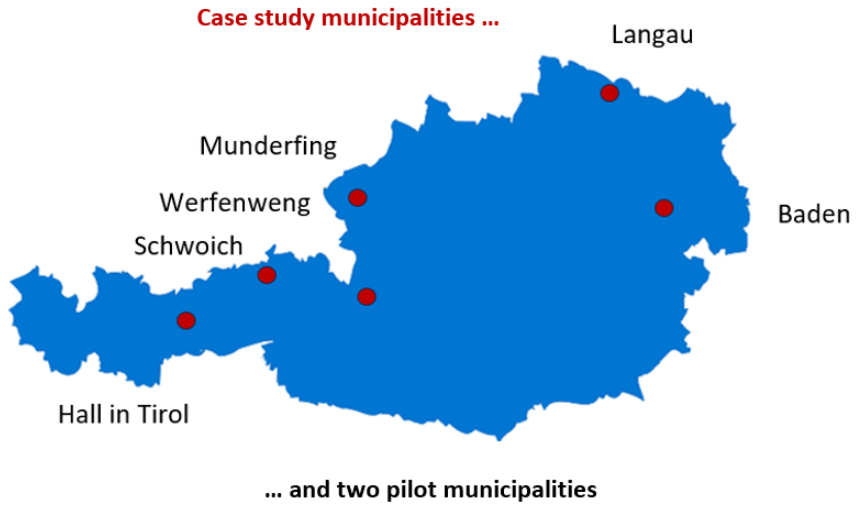
Minimum requirements to facilitate NECP planning and reporting: Municipalities to provide access to the data to provincial and federal institutions

- **EXAMPLE:** Access to the development concept in the form of texts and plans, including the measures to be realized over time. In addition, quantitative indicators can be provided as the information listed in the above chapter is structured to be compatible with the indicators of the NECP.

Work plan and methodological approach



Stakeholder discussions:
Interviews at federal, provincial, and municipal level. Proof of hypothesis and collection of information as basis for WP4 and WP5.



Preliminary results

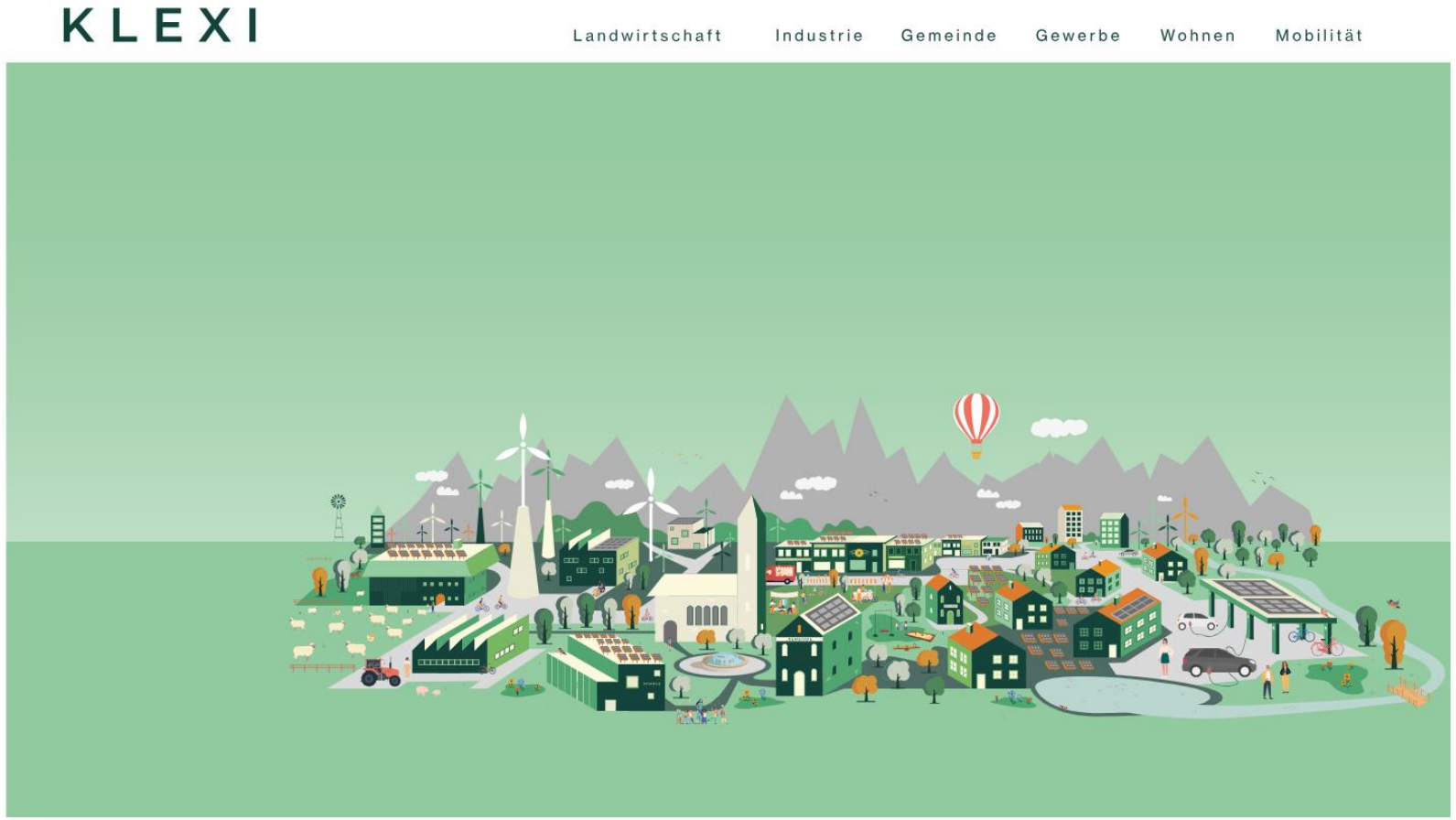
Overview of results

- **LINK-Guideline** to revise or develop municipal development concepts
- **Minimum requirements** for municipal development concepts to ensure the link with the NECP
- **The LINK-Tool (prototype)** assists in the application of the Guideline:
  - Guidelines for municipal development concepts, including criteria what to consider and why
  - Data for the planning task
  - Templates for collection of information
  - Making information accessible to the public and selected third parties

In addition, the following outcomes are envisaged:

- Input for harmonization of spatial planning legislation
- Input for a funding program to support municipalities with the implementation of measures

transFORMAT-LINK → LINK-Tool → KLEXI Klimaenergie Expertise, meaning Climate Energy Expert (work in progress)

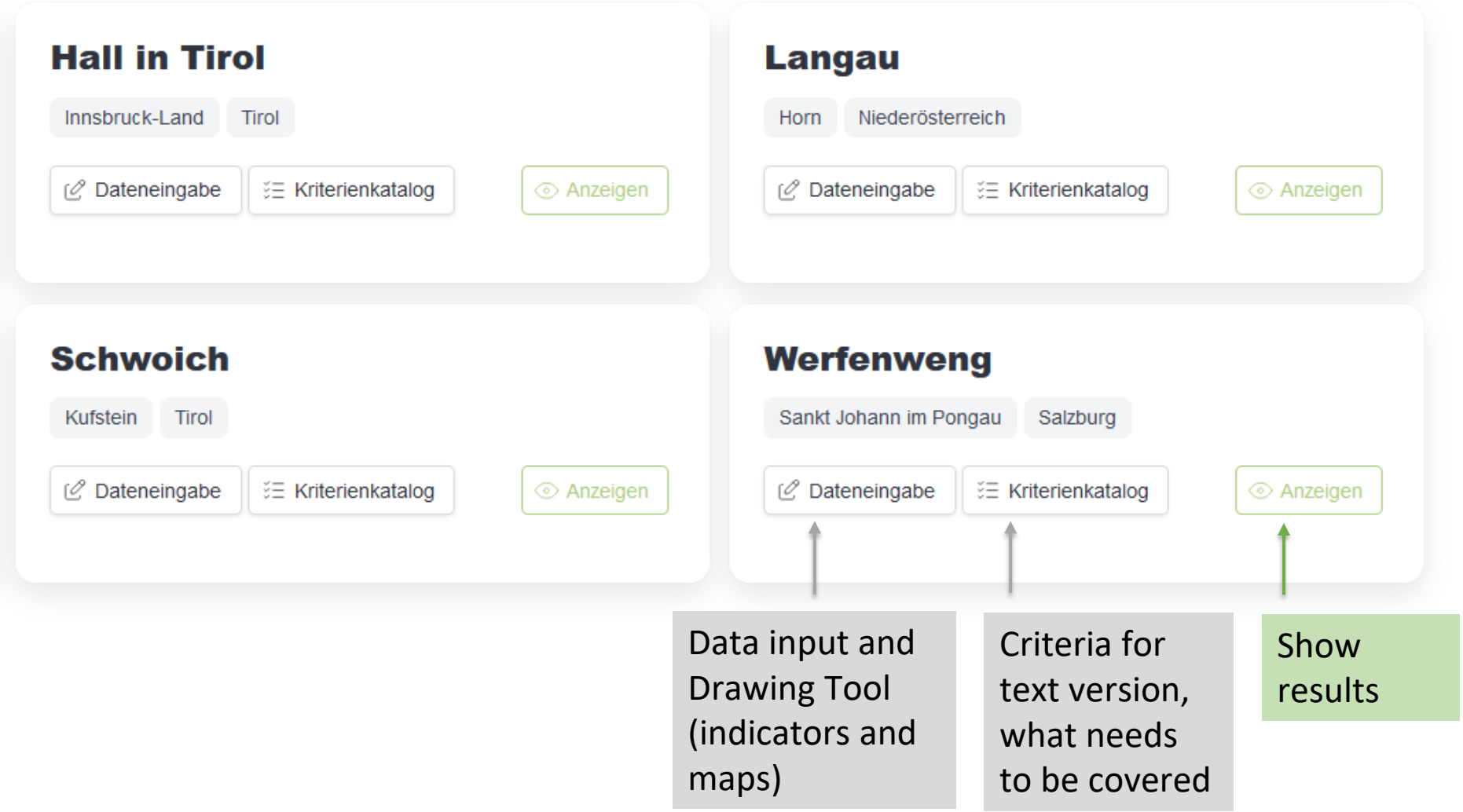


Login:

Different access levels depending on the role:

- **Role “Content provider/ Editor":** Municipal council, office management, experts: access with password.
- **Role "Interested public":** Citizens, associations: Access without password.
- **Role “Higher-level administration”**, e.g. "NECP reporting": access with password.

Consultant’s dashboard



Data input and Drawing Tool (indicators and maps)

Criteria for text version, what needs to be covered

Show results

Startseite / Salzburg / Bezirk: Sankt Johann im Pongau / Gemeinde: Werfenweng

Werfenweng

Zurück zum Dashboard

- Allgemeines
- Der Siedlungsraum
- Der Wirtschaftsraum
- Der Freiraum
- Der Sozialraum
- Der Versorgungsraum und die technische Infrastruktur
- Verkehr und Mobilität
- Verfahrensfragen
  - Zusammenarbeit
  - Umsetzung

Regionale Zusammenarbeit

Bei Projekten im Bereich erneuerbare Energie und Energieeffizienz wird die regionale Zusammenarbeit geprüft und gegebenenfalls angestrebt.

○ Thema wird bereits bearbeitet ◉ Thema wird noch nicht bearbeitet ⊖ Bearbeitung aktivieren

Eine regionale Zusammenarbeit eröffnet neue Möglichkeiten bei der Projektentwicklung hinsichtlich Ziele, Inhalt und Wirtschaftlichkeit.

← Zurück

Weiter →

Topic is being worked on

Topic is not yet being worked on

Enable editing

Werfenweng

Zurück zum Dashboard

Regionale Zusammenarbeit

Bei Projekten im Bereich erneuerbare Energie und Energieeffizienz wird die regionale Zusammenarbeit geprüft und gegebenenfalls angestrebt.

(•) Thema wird bereits bearbeitet ( ) Thema wird noch nicht bearbeitet [●] Bearbeitung aktivieren

Inhalt

Input content

Kommentar

Upload documents

Make accessible to the public and/or third parties

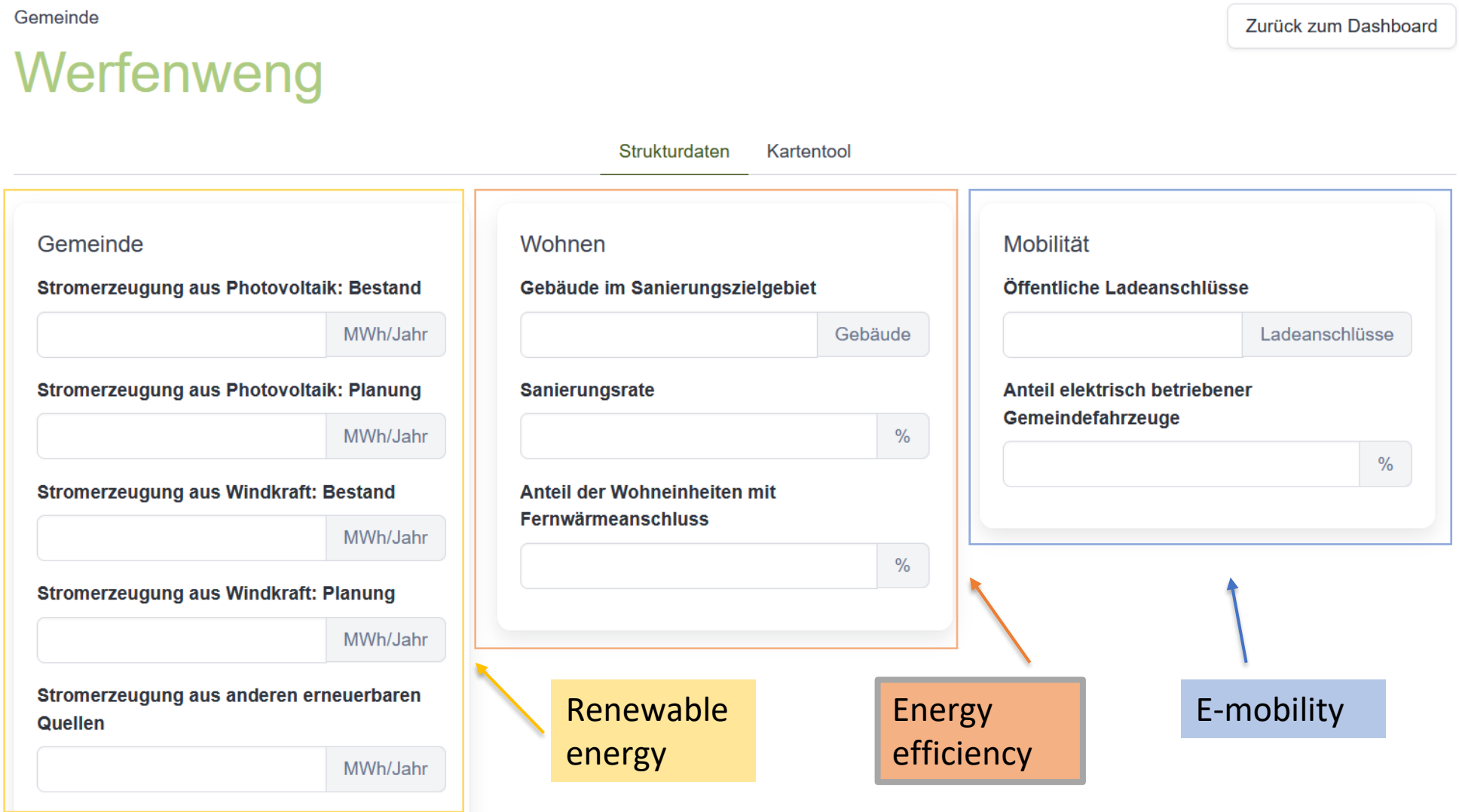
Eine regionale Zusammenarbeit eröffnet neue Möglichkeiten bei der Projektentwicklung hinsichtlich Ziele, Inhalt und Wirtschaftlichkeit.

← Zurück

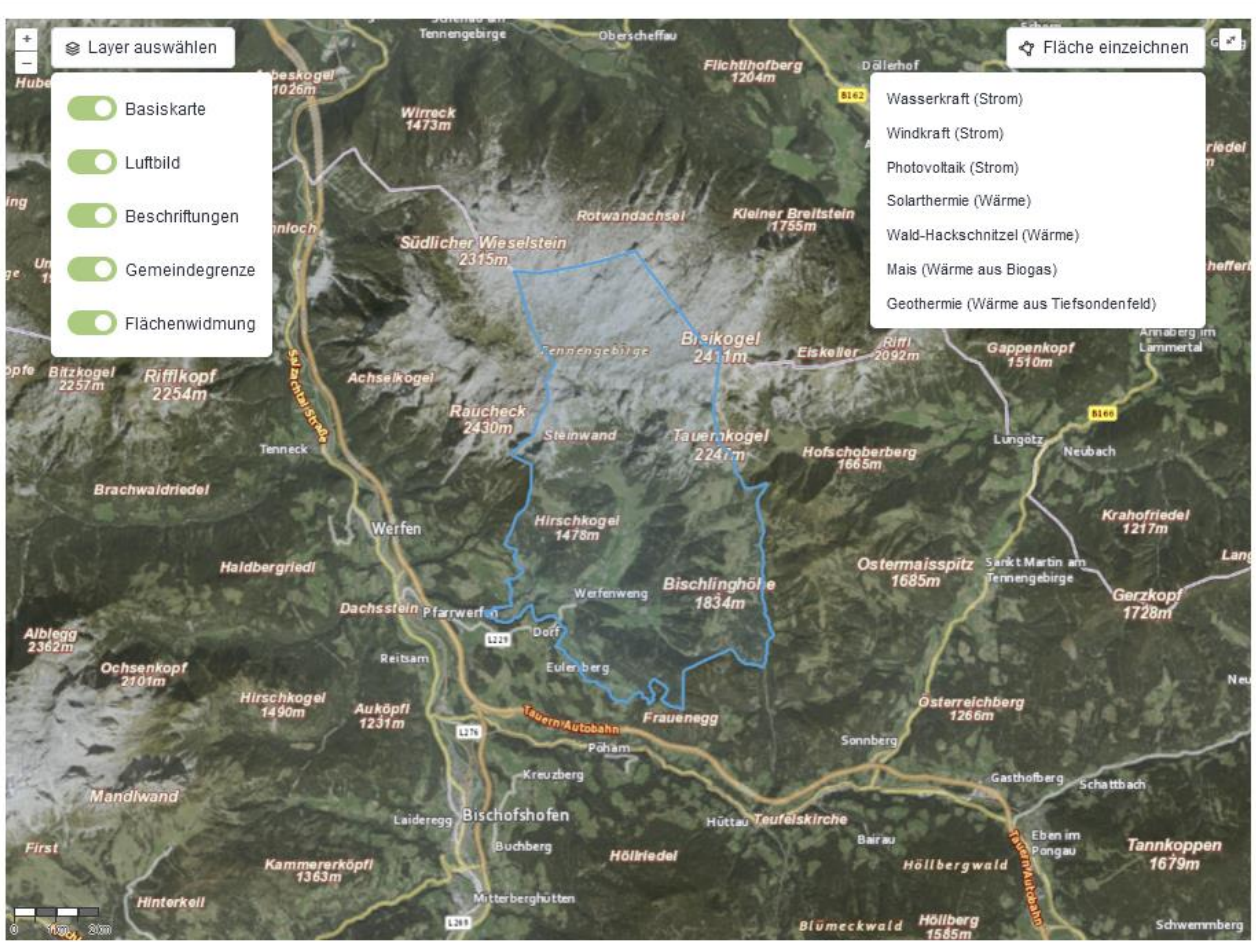
Weiter →

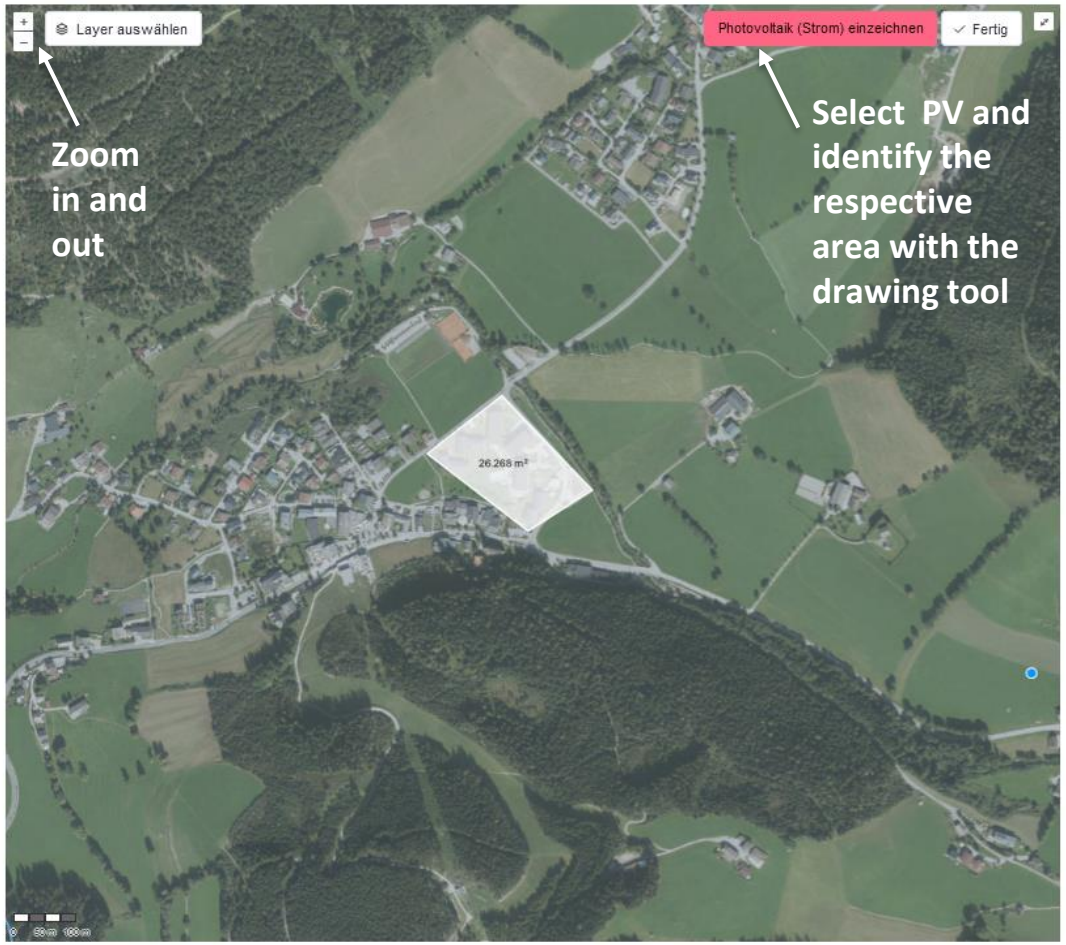
Data input and Drawing Tool – indicators and maps

Classifications “planned” and “implemented” allows for progress reporting

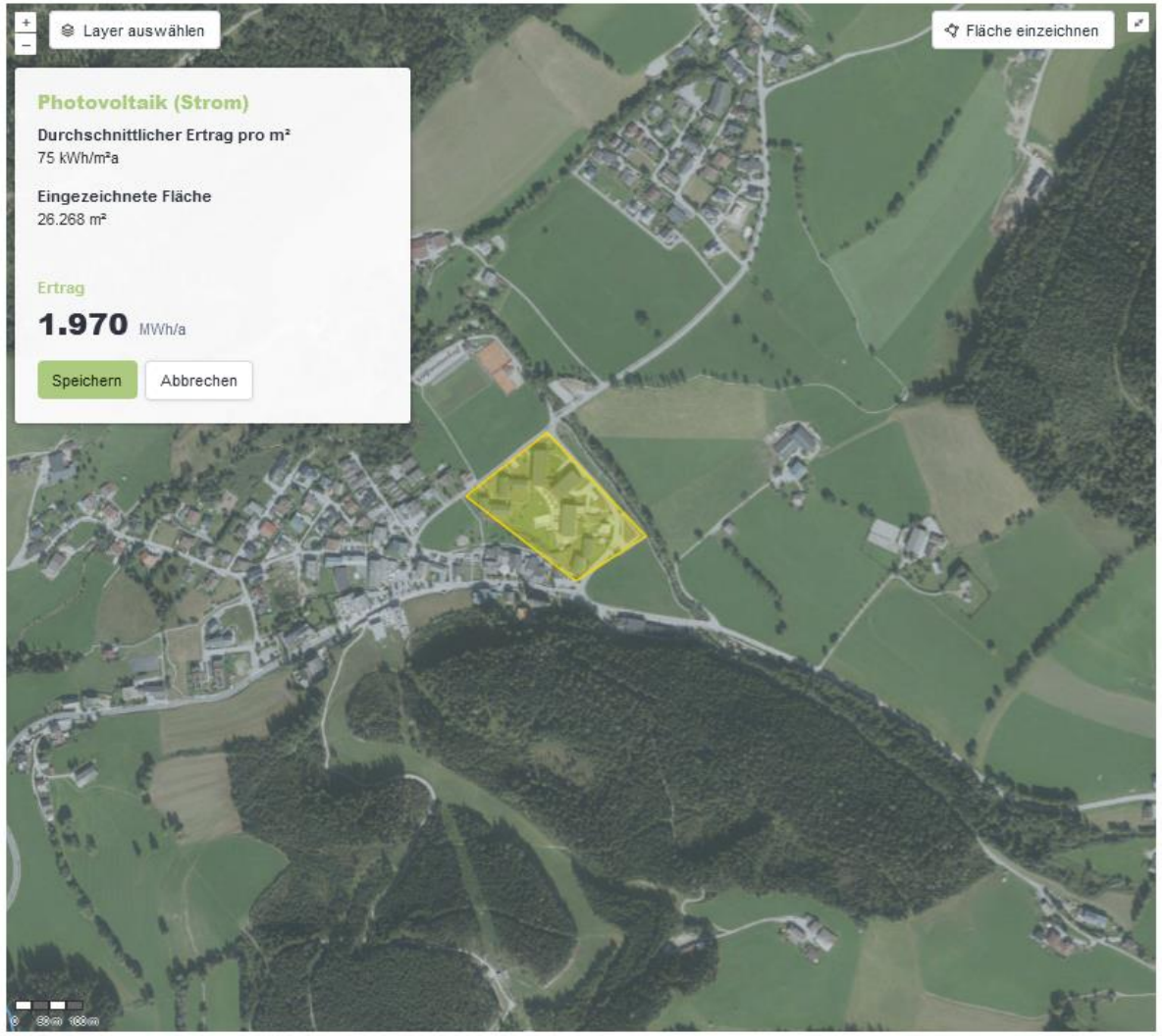


Drawing Tool for quick and easy estimations





Drawing Tool – future perspective



The Online-Tool contains a flexible drawing function with renewable energy generation indicators. Estimation of renewable electricity production from PV is done automatically and can be used to discuss different options with stakeholders.

Building energy performance was not part of the project. The drawing tool can be used to identify priority areas where redevelopment / deep renovations should be initiated. However, on what basis?

Gemeinde

Name

Results – indicators (work in progress)

Landwirtschaft und Forstwirtschaft | Industrie und Gewerbe | **Gemeinde** | Dienstleistungen | Wohnen | Mobilität | MyNEKP

1.029
Bevölkerung
Energiemosaik

45,04 km²
Fläche
Statistik Austria

2,91 km²
Siedlungsraum
Statistik Austria

353,61 EW/km²
Bevölkerungsdichte bezogen auf den Siedlungsraum
Energiemosaik, Statistik Austria

0 (todo)
Bevölkerungsdichte im DSR
Statistik Austria?

0 (todo)
Urban-Rural-Typologie
Statistik Austria

0 MWh/Jahr
Stromerzeugung aus Photovoltaik: Bestand
manuelle Eingabe

0 MWh/Jahr
Stromerzeugung aus Photovoltaik: Planung
manuelle Eingabe

0 MWh/Jahr
Stromerzeugung aus Photovoltaik: Potenzial
Geodatensätze der Länder

0 MWh/Jahr
Stromerzeugung aus Windkraft: Bestand
manuelle Eingabe

0 MWh/Jahr
Stromerzeugung aus Windkraft: Planung
manuelle Eingabe

0 MWh/Jahr
Stromerzeugung aus anderen erneuerbaren Quellen
manuelle Eingabe

Gemeinde

Name

Results – indicators (work in progress)

Landwirtschaft und Forstwirtschaft | **Industrie und Gewerbe** | Gemeinde | Dienstleistungen | Wohnen | Mobilität | MyNEKP

400 MWh/Jahr
Energiebedarf Industrie und Gewerbe gesamt
Energiemosaik

200 MWh/Jahr
davon Strombedarf
Energiemosaik

0 MWh/Jahr
davon Raumwärmebedarf
Energiemosaik

0 MWh/Jahr
davon Prozesswärme
Energiemosaik

100 MWh/Jahr
davon Energiebedarf für Transport (Mobilität)
Energiemosaik

1,69 %
Anteil am Gesamtenergiebedarf
Energiemosaik

25 %
Anteil Erneuerbare am Energiebedarf
Energiemosaik

110 t CO2-Äquivalent/Jahr
Treibhausgasemissionen
Energiemosaik

Gemeinde

Name

Results – indicators (work in progress)

Landwirtschaft und Forstwirtschaft | Industrie und Gewerbe | Gemeinde | Dienstleistungen | Wohnen | Mobilität | MyNEKP

Accessible documents

Display of progress report

23.600 MWh/Jahr
Energiebedarf gesamt
Energiemosaik

2.900 MWh/Jahr
Strombedarf gesamt (exkl. Mobilität)
Energiemosaik

11.900 MWh/Jahr
Wärmebedarf gesamt (exkl. Mobilität)
Energiemosaik

200 MWh/Jahr
Prozesswärme gesamt (exkl. Mobilität)
Energiemosaik

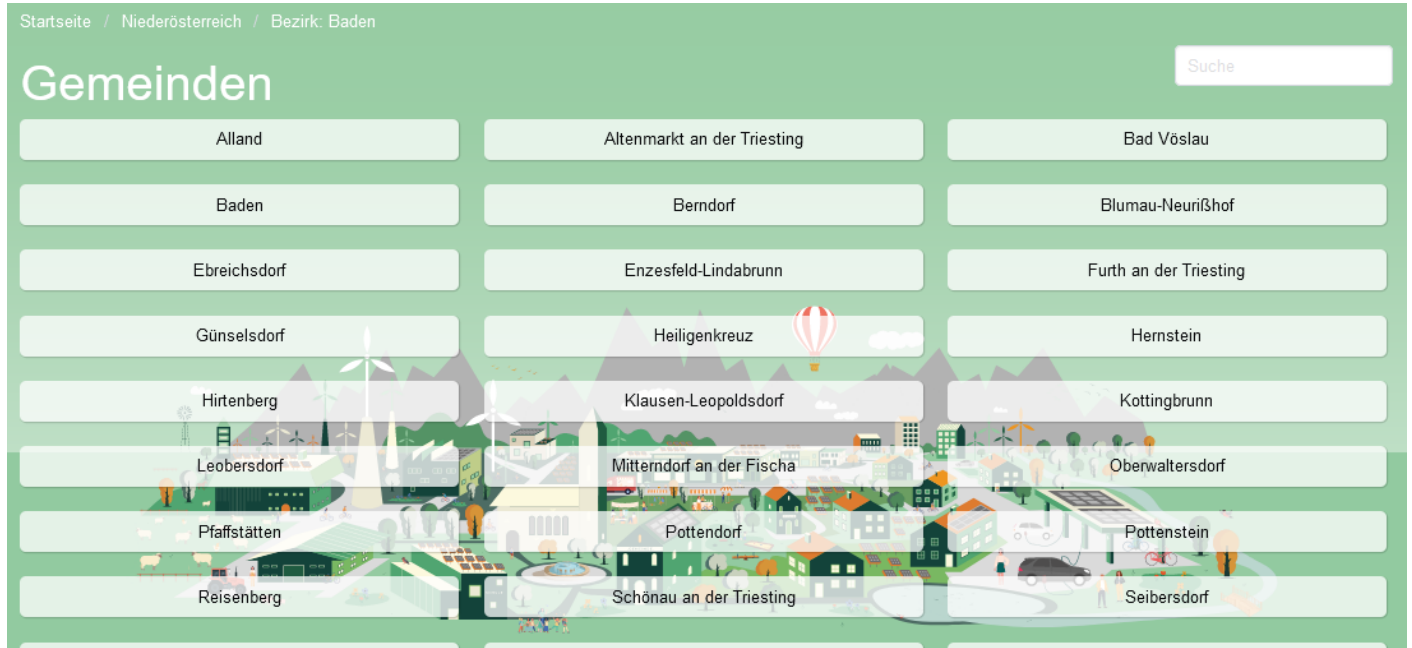
7.500 MWh/Jahr
Energiebedarf Mobilität
Energiemosaik

38,14 %
Anteil Erneuerbare am Gesamtenergiebedarf
Energiemosaik

5.820 t CO2-Äquivalent/Jahr
Treibhausgasemissionen
Energiemosaik

0 %
Fortschritt bei der Umsetzung der NEKP-Ziele

Prototyped online Tool für revising the municipal development concept and aligning it with the NECP



- All Austrian municipalities covered
- Login per municipality and/or their consultants
- Working space of each municipality prefilled with statistical data and energy related default data
- Default data can be replaced by specific data
- Checklists and default text for description of municipal development concept
- Upload function to collect all relevant documents for the municipality
- Drawing tool for preparing maps
- Municipalities can give access to third parties → higher level administration to extract relevant NECP indicators

Core team of the project:

https://sera.global: Susanne Geissler, Peter Wallisch, Abraham Arevalo-Arizaga

https://www.tuwien.at/en/ar/region: Daniel Youssef, Hartmut Dumke, Elias Grinzinger, Sibylla Zech

https://www.klebothdollnig.com: Andreas Kleboth, Stefan Milenkovic, Gerhard Dollnig, Barbara Ranetbauer

We are happy to answer your questions, contact e-mails can be found on the respective websites.

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