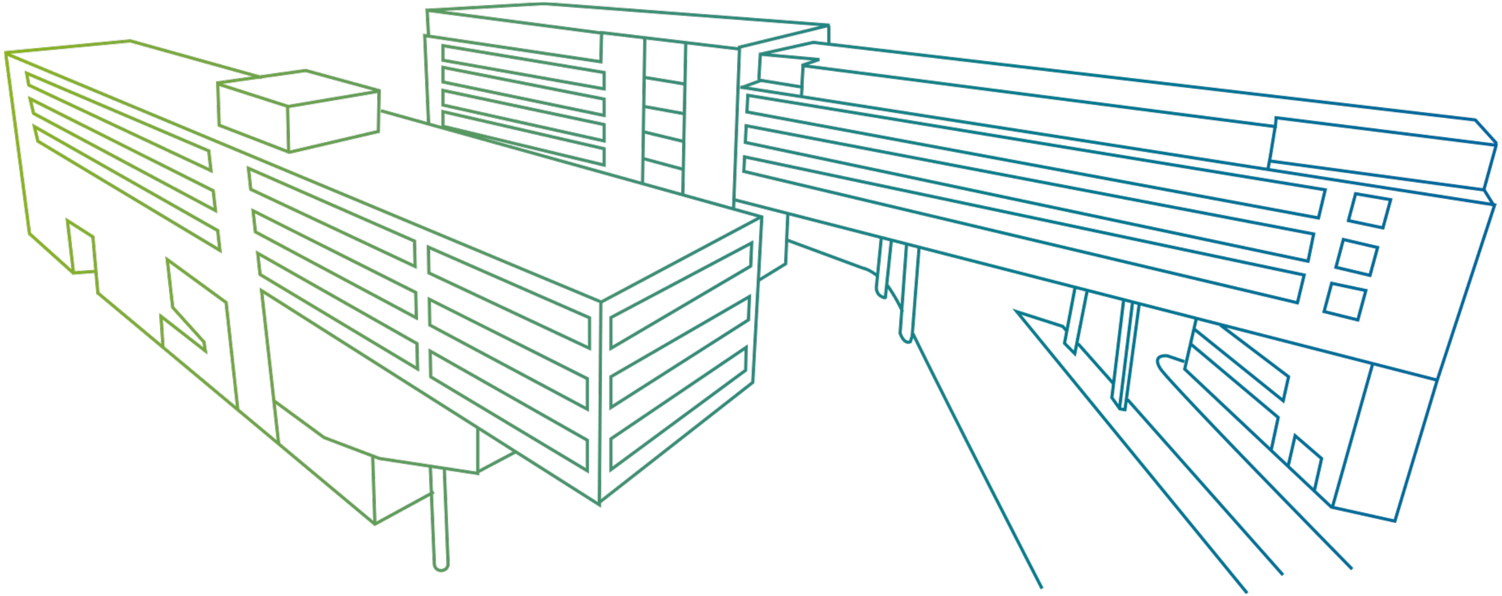

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Who, how and where? – Factors influencing the perception of small-scale wind energy in Austria

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The Project “Small Wind 4 Cities” and its goals:

- Simplification of planning and approval process of Small Wind Turbines (SWT)
    - Certificate of structural stability
    - Noise emission
    - Ice-throwing
- Creation of a simplified site-assessment method for urban areas
- Enhance public awareness for SWT
    - Survey for public acceptance of SWT in populated areas
    - Survey: reservations of people on SWT

Study setup

- What is the **general attitude** towards the use of wind energy among Austrian respondents?
  - Exposure to SWT, urban-rural gradient, political orientation, socio-demographic indicators

- Do Austrian respondents **discriminate** in their approval of **different approaches** to wind energy use?
  - Type of plant, localisation, shareholdership

Study setup

Novelty

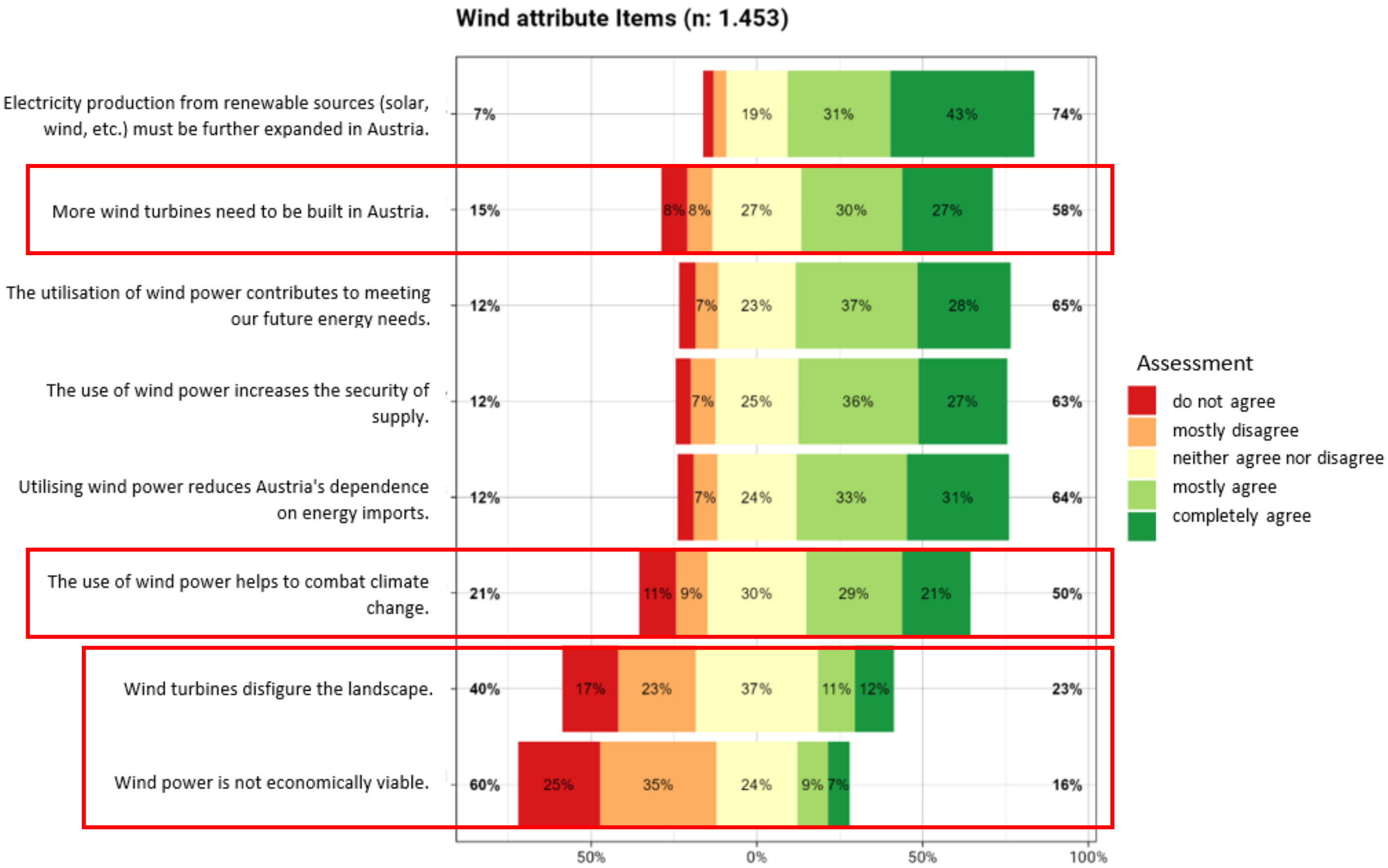
- distinction between **different kinds of Small Wind Turbines**
- focus specifically on **Small Wind Power**

Online survey:

- **Data:** newly collected quantitative survey data
- Sampling proportional to:
  - age, gender, education, population distribution between Austrian federal states
- Field phase: 04/24 to 05/24
- 1453 valid responses
  - Based on duration & uniform response behaviour

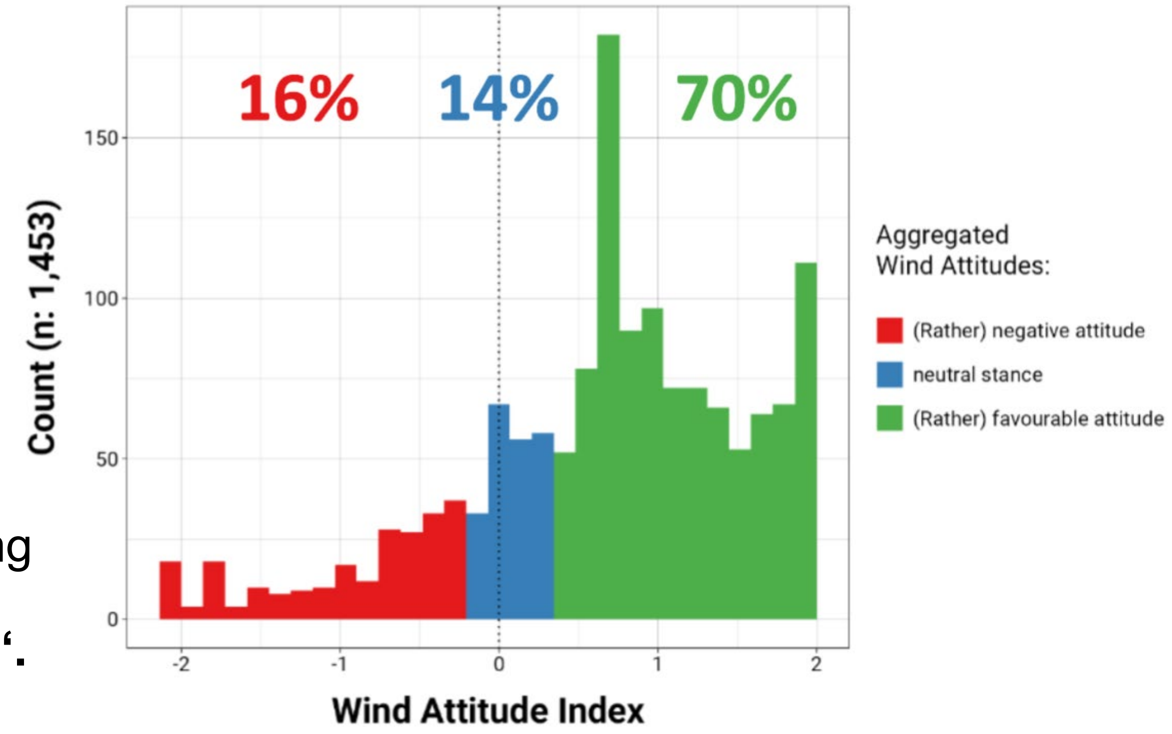
The general attitude towards wind energy

- two „negative“ response options show lowest approval
- peak value of 21 % for negation of wind power‘s help to combat climate change



The general attitude towards wind energy

- **Wind attitude index:**
  - eight statements to rate by 5-point Likert-scale,
  - aggregrated in three dimensions



Hampl et. al. 2021:
78 % approved of implementing a new wind power turbine **‚a little outside of the village‘.**

NIMBY - Not in my backyard

Table 1: Windattitude in general

Windattitude	Distribution of windattitude
(rather) negative	16 %
neutral	14 %
(rather) favourable	70 %

*aggregated data

Table 2: Windattitude in in respect of local expansion

Reaction to local expansion	Distribution of reactions
(rather) negative	18 %
indifference/toleration	23 %
(rather) positive	59 %

*aggregated data

- Neutral group grows
- Positive group decreases
- **Hypothesis:** Local implementation increases the withdrawal of unconditional approval.

Variables influencing general attitude of respondents towards wind power

Respondent's characteristics:

- Socio-economic characteristics
- Exposure to wind turbines
- The place of residence
- The political orientation
- Propensity for conspiracy theories

Correlations:

- **Positive attitude**
  - High level education
  - Residents of large cities
  - Residents of small villages or regional centres
  - Geographical East of Austria
- **Negative attitude**
  - Residents of small / medium sized centres
  - Geographical West of Austria
  - Tendency towards conspiracy narratives
  - Supporting political right

Do respondents discriminate in their approval?

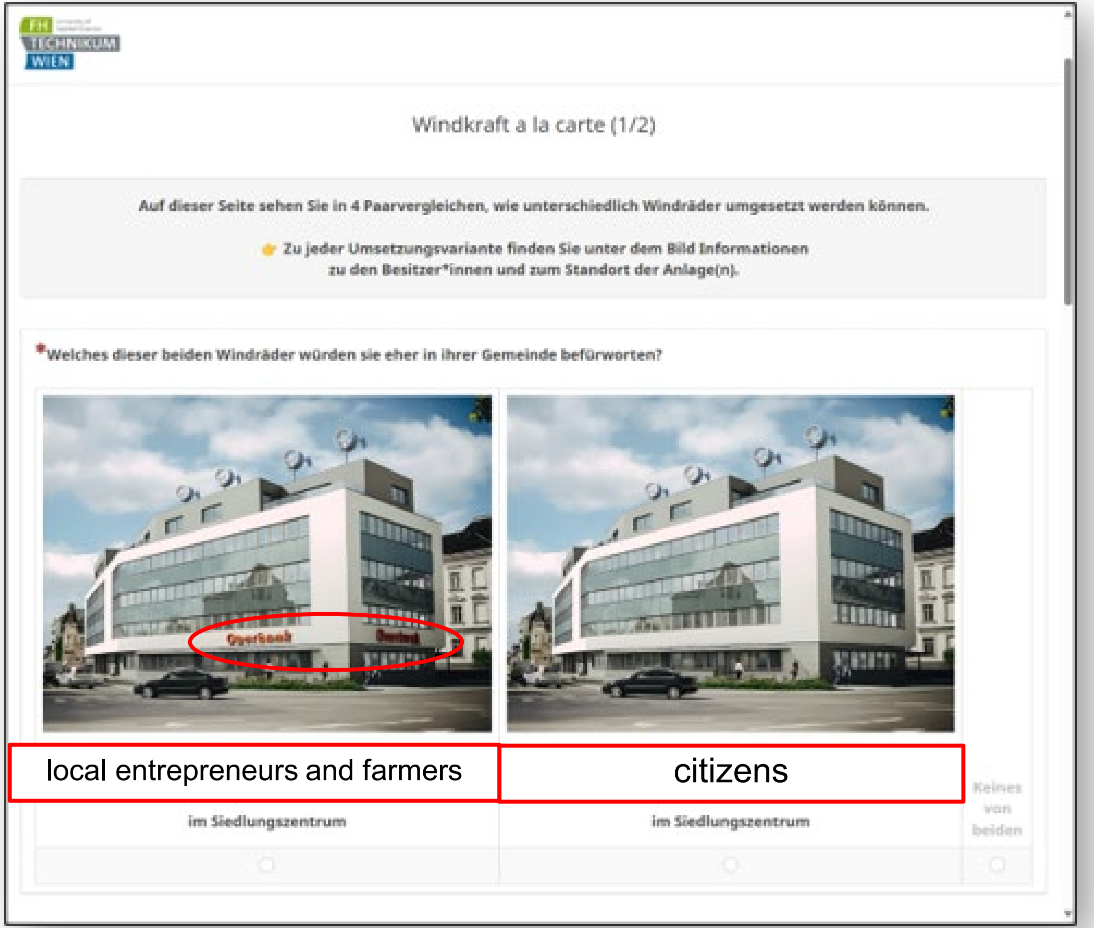
- **Conjoint-Experiment:**
  - Type of plant: 3 levels
  - Location: 3 levels
  - Shareholder: 4 levels

8 pair-wise comparisons per participant

Conjoint-Experiment:

- **Which of these two wind turbines would you prefer in your community?**
    - Incl. “none of them” option

Shareholdership



Do respondents discriminate in their approval?

Yes - The data suggests that they do.

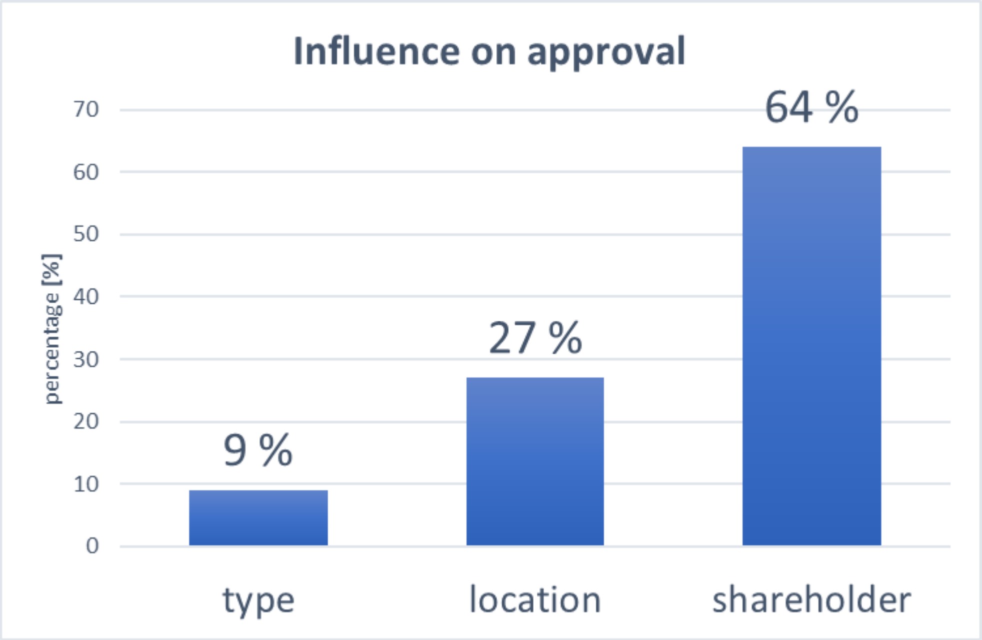
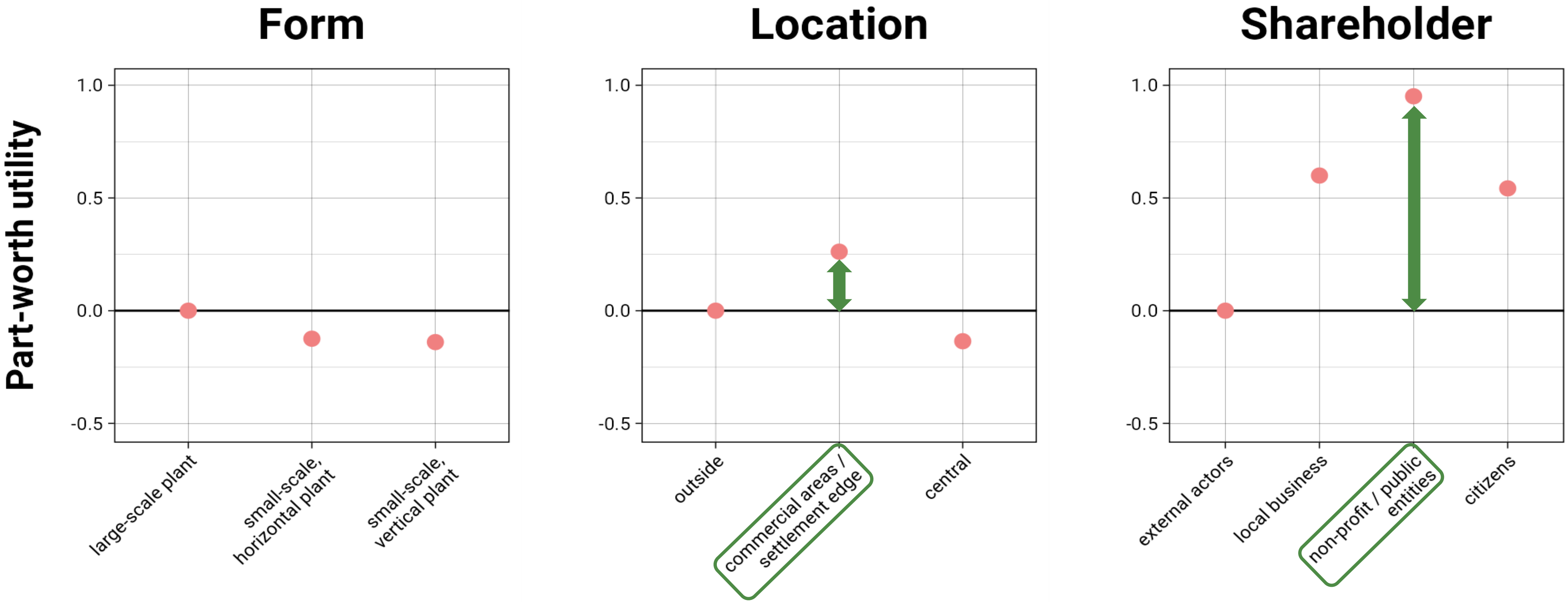


Fig. 1: Factors that influence respondent's approval of wind turbines

Do respondents discriminate in their approval?

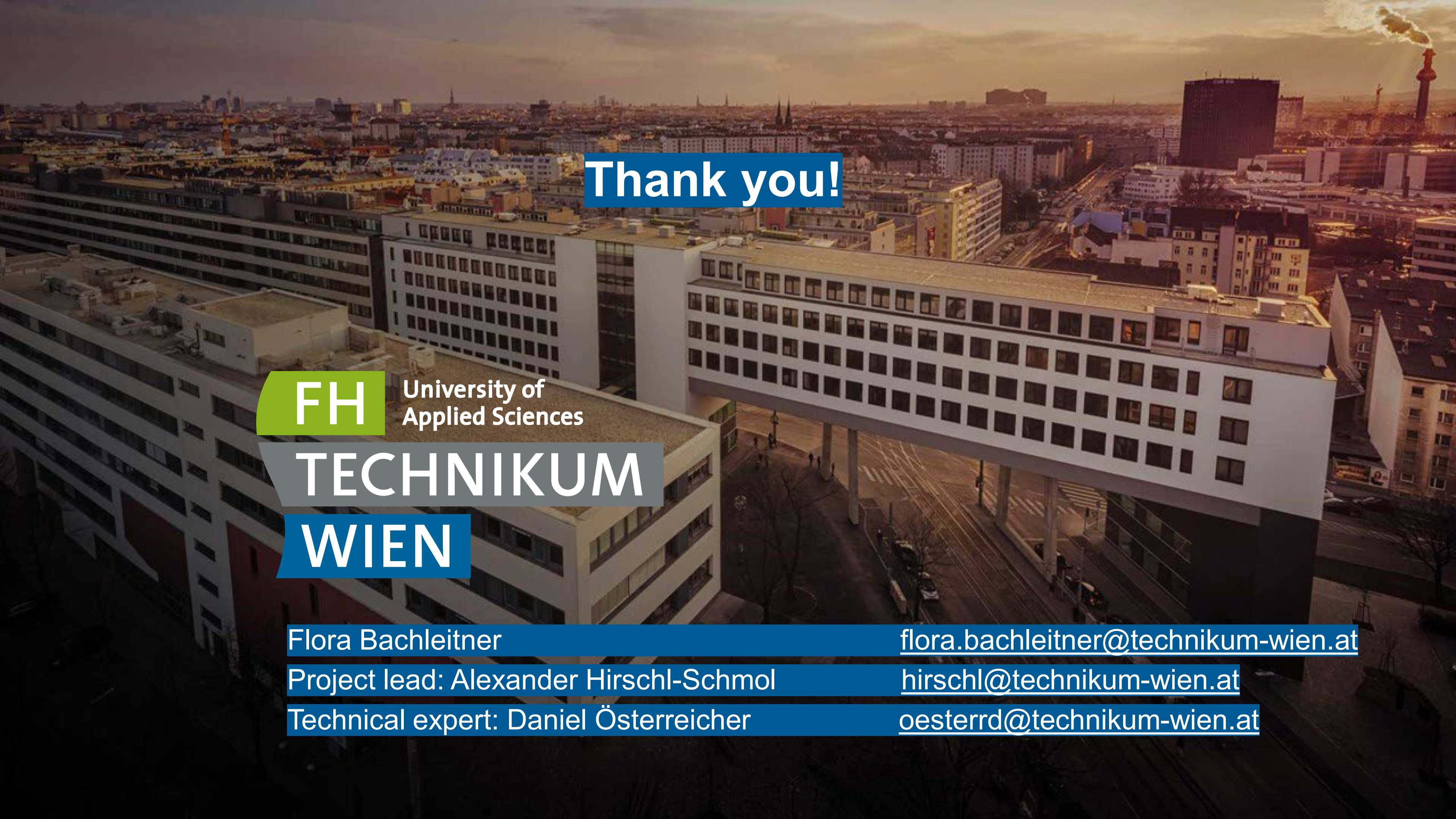


Conclusions

- ~ 85 % of respondents show **neutral & positive wind attitude**

- Enhancing characteristics for positive wind attitude:
  - High education,
  - Residency in East of Austria,
  - Residency in cities, small villages, regional centres.

- Most accepted characteristics in SWT-Projects:
  - **Shareholdership:** strong preference for **public & non-commercial entities**
    - 👉 proxy for locally synced gains & burdens
  - **Location:** Preference for SWT in **commercial areas & edge of settlements**
    - 👉 Spaces that do not create local or regional identity
  - **Type** of power plant: **less relevant**



Thank you!

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