

# MAKING ▶ CHANGE!



**Transformative science and peer-to-peer learning  
for empowering the youth amidst the climate crisis**

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# Background

- Living in the Anthropocene -> Global Grand Challenges (e.g., climate crisis) imposing existential threats to humanity
- Fundamental paradigm-shift is needed
- Young people represent a powerful source for this deep shift, willingness to act is very high (Schinko, 2020)
- Empowering young people to become “system changers” is challenging within current educational systems
  - Prioritize instrumental learning in an individualistic and competition-oriented environment over critical thinking, reasoning and reflection, and co-creation of creative actions

# Motivation

- *Transformative learning* is needed to change unsustainable values, attitudes, habits, and behaviors (Frisk & Larson, 2011)
  - Alternative forms of knowledge (i.e., procedural, effectiveness and social knowledge)
  - Novel spaces for critical thinking, reflexivity, and experimentation
- To contribute to sustainability transformations, science itself must become transformative (Anne et al., 2020)
  - Knowledge transfer is no longer enough, it is all about effectiveness in translating knowledge into real climate action
- Education and research institutions, together with practitioners NGOs and students, must collaborate in providing impetus for necessary social changes

# Objectives

- **The makingAchange peer-to-peer training** sets out to build up climate competences in schools and provide complementary (inter)personal and social skills for enhancing self- and response efficacy
- **Final product:** standardized open access peer-to-peer training concept
- **This study** empirically explores the role of transformative science in Austria in supporting effective sustainability education that enables real climate action through a peer-to-peer training

# Methodology – transdisciplinary peer-to-peer training

**University students:** trained to be *science buddies* for participating schools

- Lectures at Austrian universities – providing theoretical and methodological skills to students for acting as low-threshold science buddies for climate peers (in return for ECTS + cost reimbursement)

**School students:** trained as *climate peers* to be champions in schools for climate change and sustainability related issues

- 4x1 day workshops within a schoolyear; encompassing knowledge enhancement and soft skills
- Co-designed by researchers, practitioners, civil society organizations, teachers and students

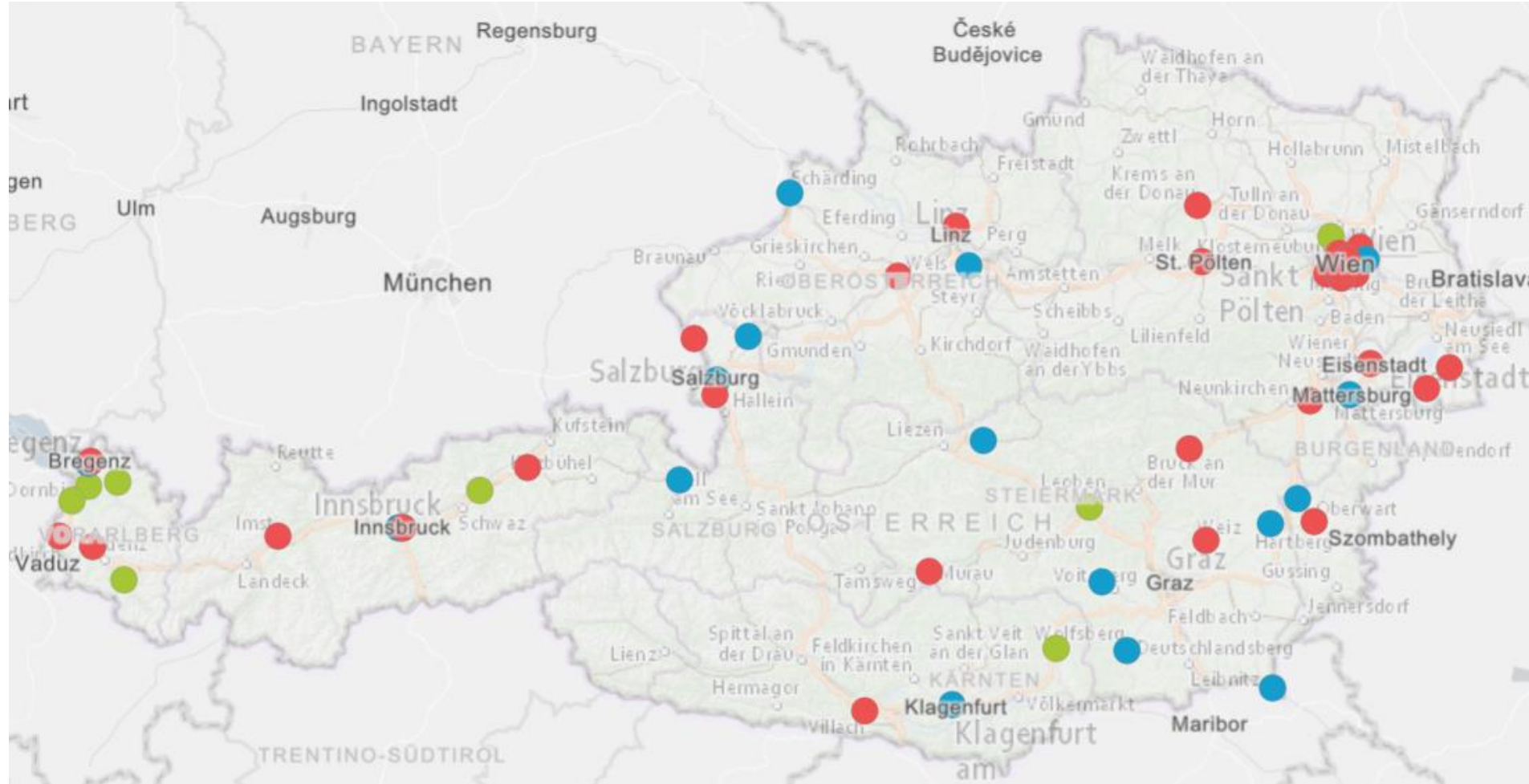
**Scientists:** mentors for participating schools and students

- Scientists act as dialogue partners for climate peers and as trainers for science buddies, providing their professional expertise and experience

**Practitioners:** implementation mentors for participating schools

- Practitioners in youth participation and environmental education guide and assist climate peers in implementing climate action at their schools over the whole school year

# Implementation I



# Implementation II

20/21: 58 Peers from 10 schools and 45 Buddies

21/22: 75 Peers from 17 schools and 27+ Buddies (number for summer term not yet known)

## Topics:

- Climate Change basics
- Climate justice
- Mobility
- Agriculture/diet
- Consumption & waste
- Health

## Tools:

- Science dialogues
- Soft skills training (e.g., art of hosting)
- Arts based science communication

# Preliminary findings

- Indication that transdisciplinary peer-to-peer training
  - support students' critical thinking and awareness of the climate crisis
  - enable peers to reflect about own stakes in context of sustainability transformations
  - provide them with new sense of agency, empowerment and skills for real transformative action (personal and societal level)
- **Scientific evaluation of effectiveness ongoing!**



# Conclusions

- Societal change needs more than communicating scientific facts and offering scientific projections of future change
- Truly inter- and transdisciplinary research is needed to support the complex transformation towards a sustainable society
- The makingAchange peer-to-peer approach constitutes a long-term science-society education format, with high potential to
  - Raise awareness for the complexity of the Grand Global Challenges of the 21. century
  - Enable young people to shape their own sustainable living space in collaboration with others
  - Stimulate transition of willingness to act into real transformative actions that make a difference

*Thank you!*  
Any Questions/comments/advices?