

FTI Kreislaufwirtschaft

Nachhaltige Nutzung von Aushubmaterialien des Tief- & Tunnelbaus (NNATT) Project
April 16th 2024

Robert Galler - Chair of Subsurface Engineering (SE)

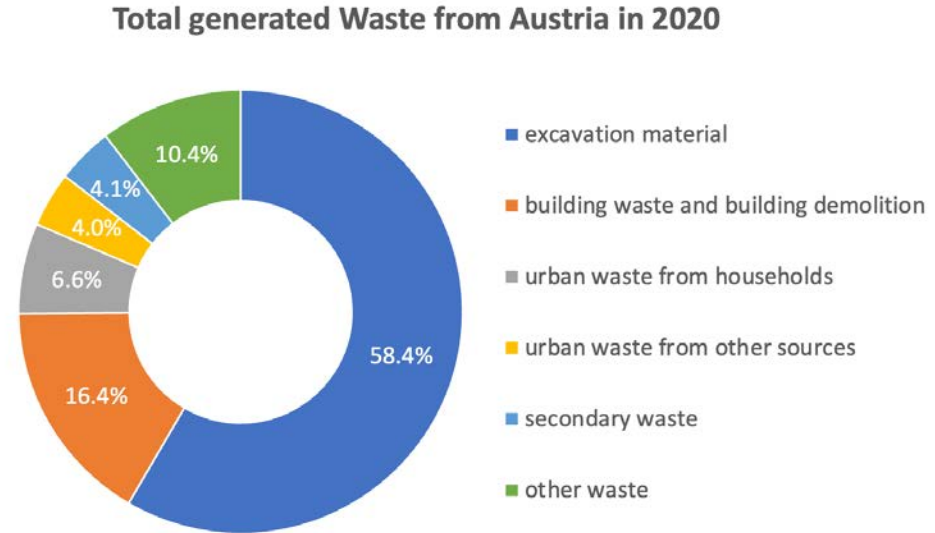
Elisabeth Hauzinger - Chair of Subsurface Engineering (SE)

Iye Szin Ang - Chair of Cyber Physical Systems (CPS)

Martin Findl - The Chair of Waste Processing Technology and
Waste Management (AVAW)

Why is recycling of excavation material essential?

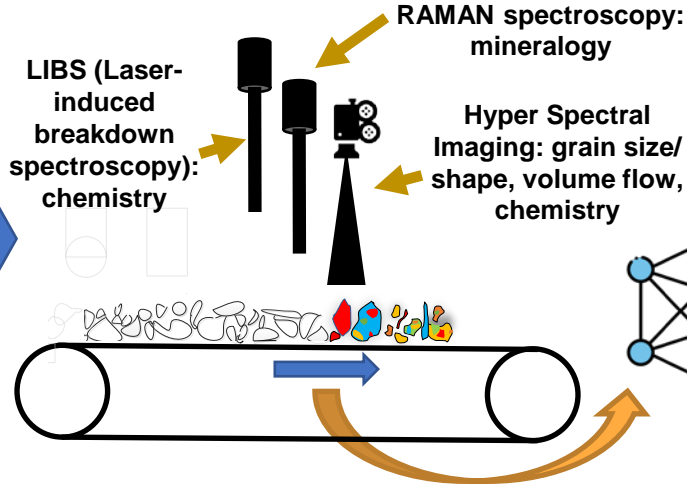
- Annually, 60 % of Austria's total waste comes from excavated materials - including tunnel excavation (7 million tons per year)
- most of the materials are landfilled or used for low-value purposes
- The goals of the NNATT project:
 1. save resources in Austria
 2. less dumping on landfills
 3. shorten the transportation routes
 4. reduce CO₂ emissions



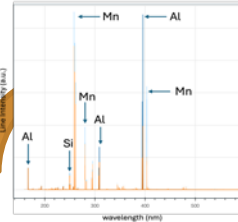
Reference: Bundes-Abfallwirtschaftsplan, 2022;
Umweltbundesamt (version July 2021)

The project's innovative nature

1. Material Identification



2. AI Support



3. Material Application



What basis data needs to be collected?

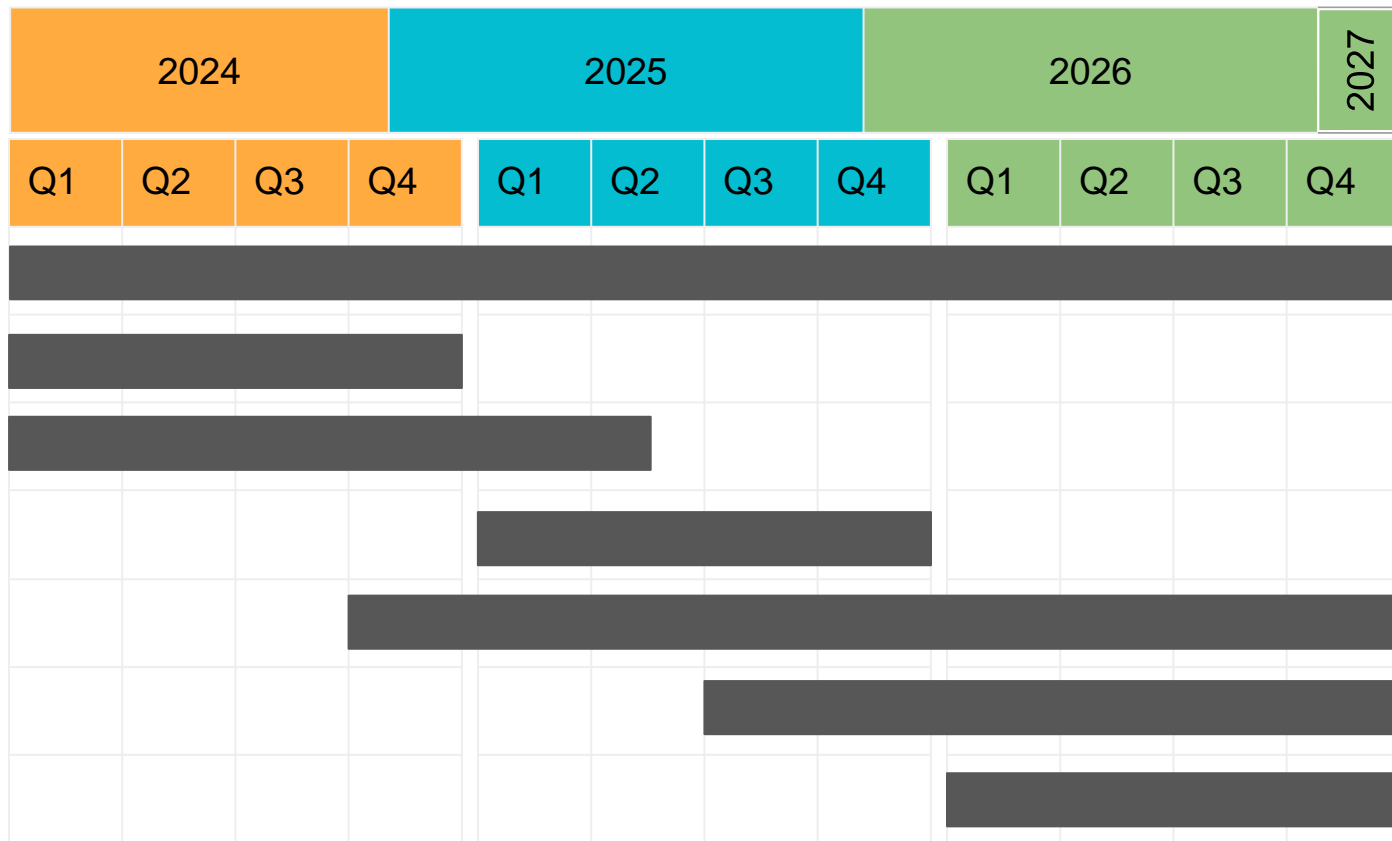
internal and external parameters

deep learning
real-time database
precision and
computational power

recycling options
sustainability

Working Plan of Project NNATT

- Q1 (March-May)
- Q2 (June-August)
- Q3 (September-November)
- Q4 (December-February)





Thank you