Methodology & Research Questions

Drilling process chain – WP4
- Which technology is best suited for given subsurface conditions?
- Consider possible surface limitations (buildings, neighborhood etc)

Tool Response: cutter wear & drilling system – WP1.1 & WP2.1 + WP3
- Link between material (process, behaviour & properties) and tool performance
- Model & control to maximize the ROP (minimize specific energy) and maximize tool life

Rock Removal – WP1.3 & WP2.3
- Criterion to compare different removal processes: (Mechanical) Specific Energy
- Role of drilling fluid in the removal process

Rock Breaking – WP1.2 & WP2.2
- Transfer of (mechanical/non-mechanical) energy to the rock
- Link in-situ mechanical behaviour & properties of rock / drilling conditions / rock breaking process