

ACRP 2017 -10th call
 Project duration
 1.5.2018 – 30.4.2020

Project team
 WIFO: Angela Köppl, Stefan Schleicher, Mark Sommer, Katharina Köberl
 University of Graz - Wegener Center: Gabriel Bachner, Jakob Mayer, Stefan Nabernegg, Karl Steininger
 IIASA: Matthias Jonas, Thomas Schinko, Ariane Weifner, Piotr Zebrowski

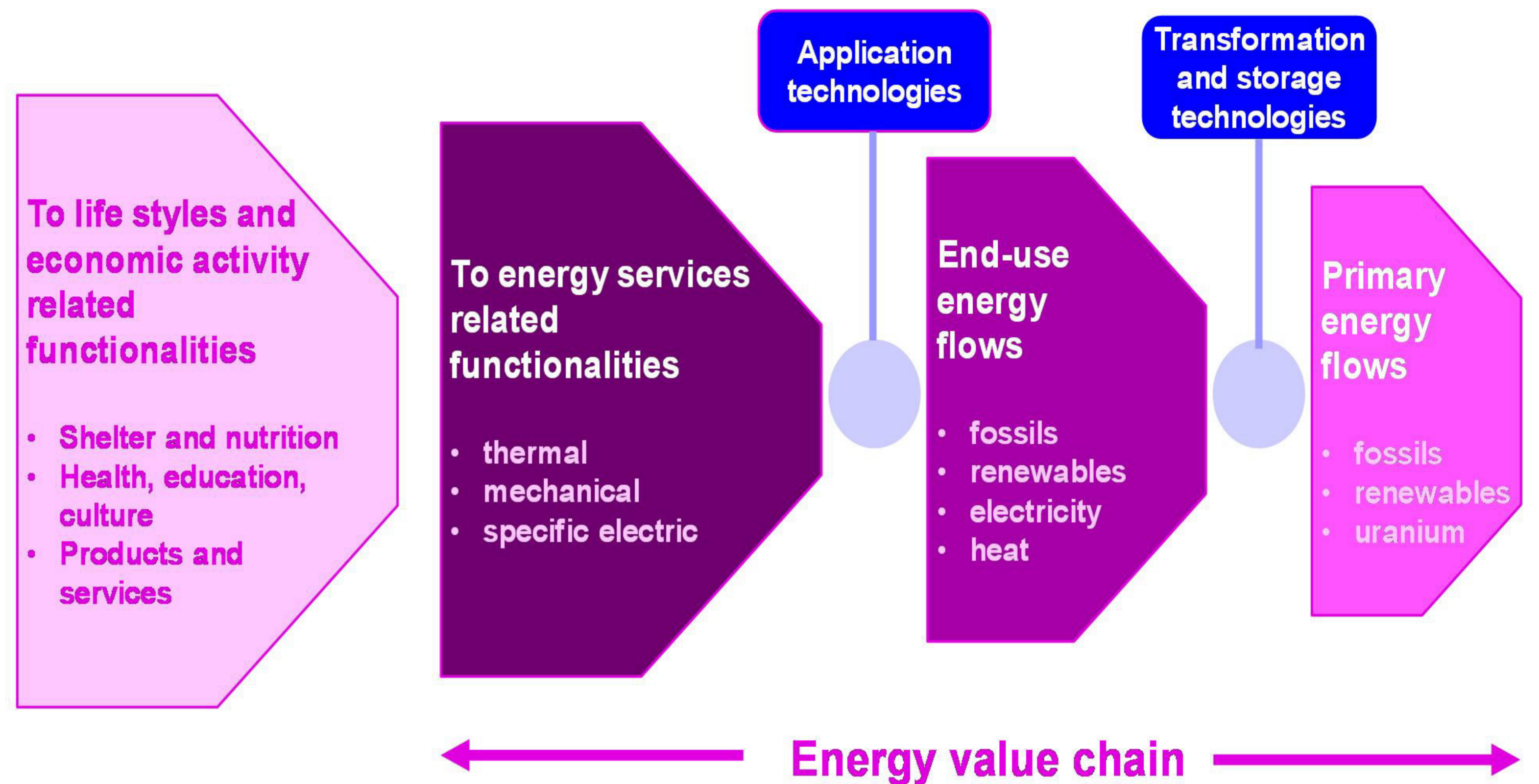
Project motivation & framework

Fundamental challenges societies face:

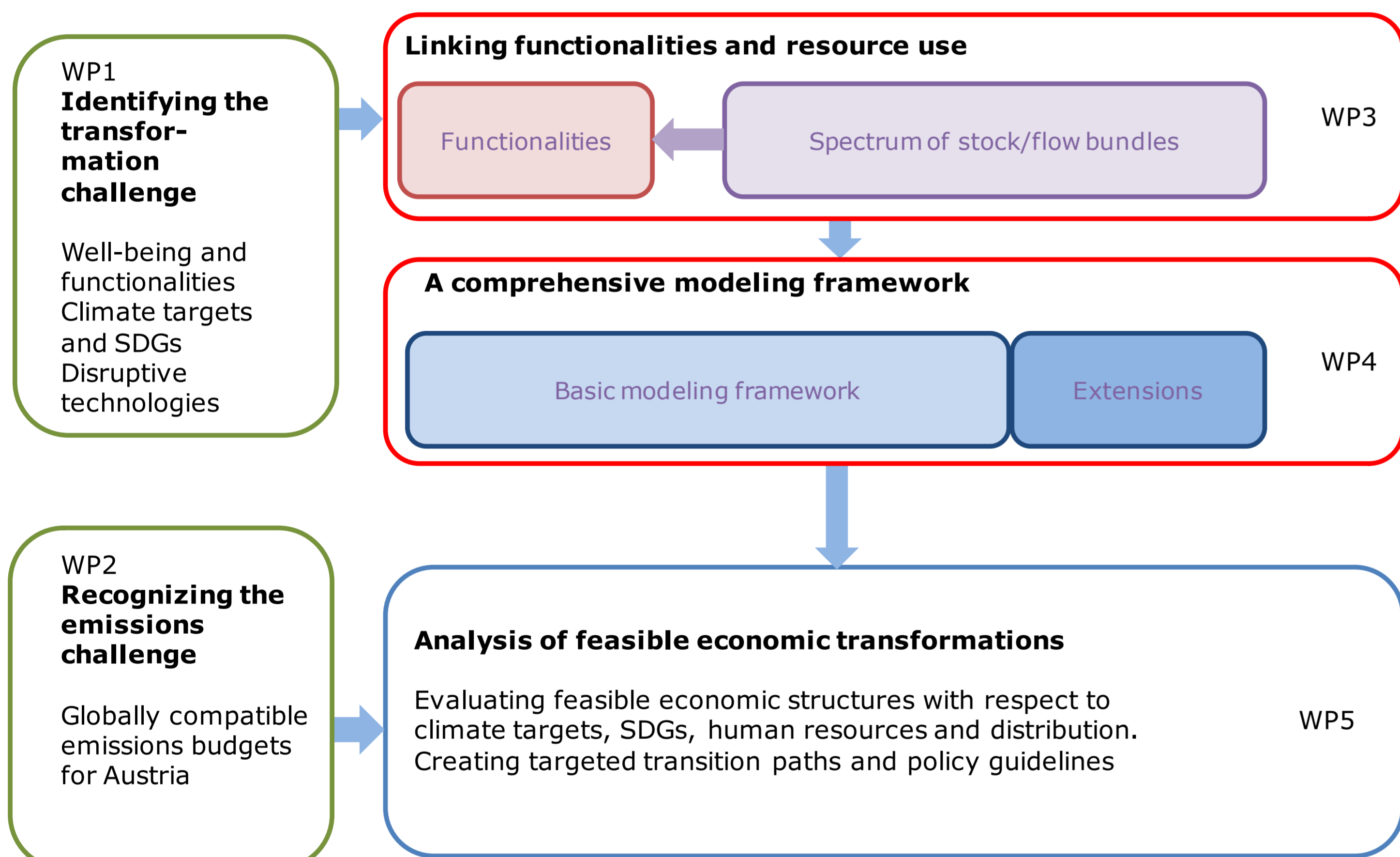
- Need for rapid reduction of GHG emissions
- Acknowledge SDG goals
- Disruptive technological change

Progressing economic modelling along the CimTrans2050 Research Plan:

- Functionalities and well-being as measure for economic performance
- Looking at the full (energy) value-chain for providing these functionalities
- Dealing with radical transformations



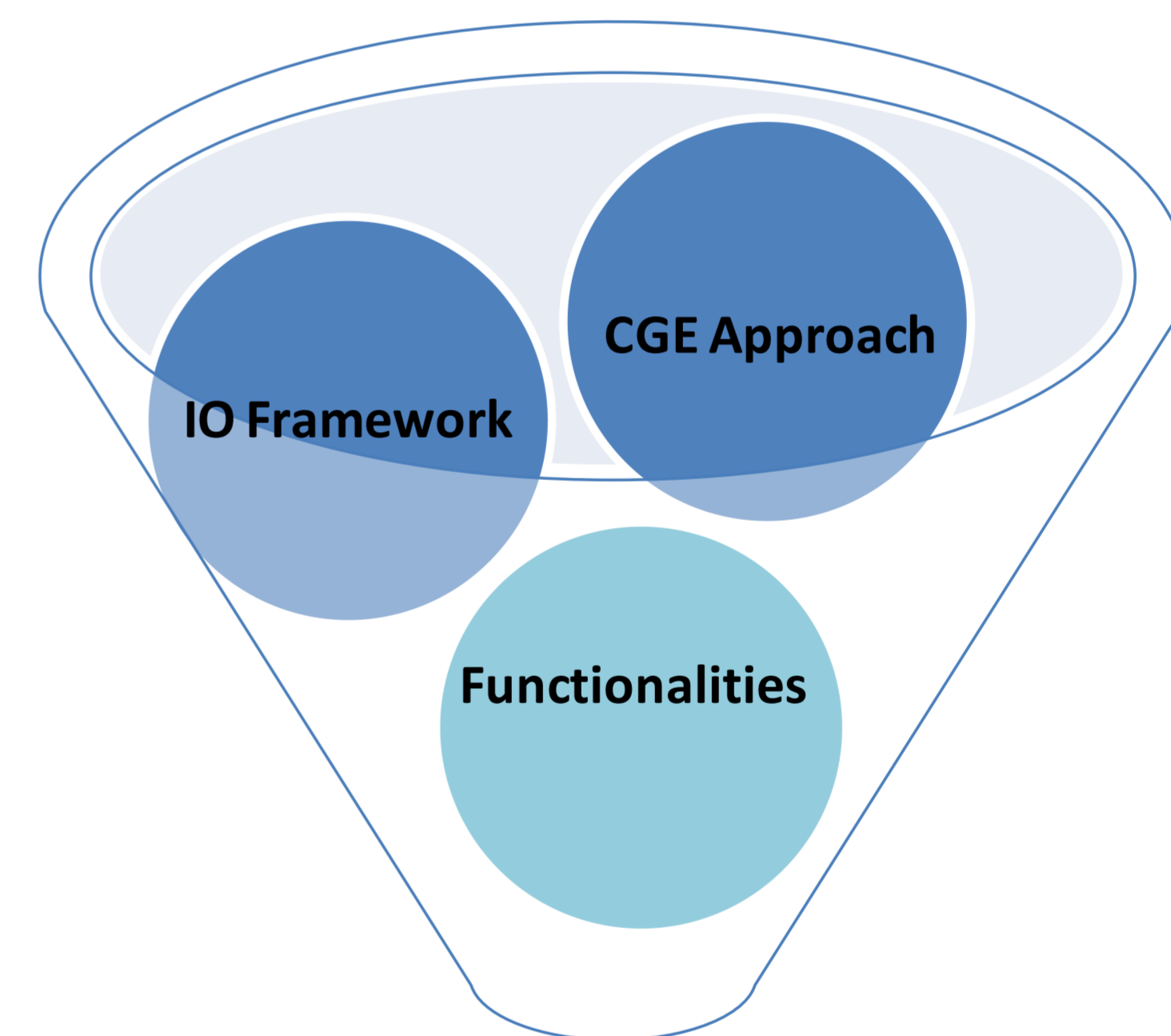
Project outline



Project targets

A comprehensive operational modelling framework with:

- An extended list of resources and stock-flow bundles
- A deepened understanding of targeted transformations in a globally consistent emissions context



First results

- **WP1:**
 - Draft Working paper: "Energy services, breakthrough technologies and human need satisfaction"
- **WP2:**
 - First results on global pathways – basis for breakdown on national level
 - Correspondence between UNFCCC emissions and energy balances
- **WP3 & WP4:**
 - First implementation steps for core model
 - Data screening and compilation (e.g. Life cycle data, mobility data)
 - Integration of energy balances in EXIOBASE - global input-output tables with extended environmental resource list
 - Link from I-O structure to emission accounting

Dissemination activities

- "What Will Make Energy Systems Sustainable?", Sustainability 2018, 10, 2537; doi:10.3390/su10072537
Angela Köppl and Stefan Schleicher
- Stakeholder interaction: ÖBB, WKÖ, WU/TU Vienna
- Ariane Weifner, Presentation at Klimatag 2019

Next steps & challenges

- Calculation of national emission paths compatible with global emission budgets
- Model specifications
- Data challenges – can be overcome by stretching the limits of official data sources
- Stretching the limits of current economic modelling