

High-efficiency high-temperature heat pumps with temperature glide

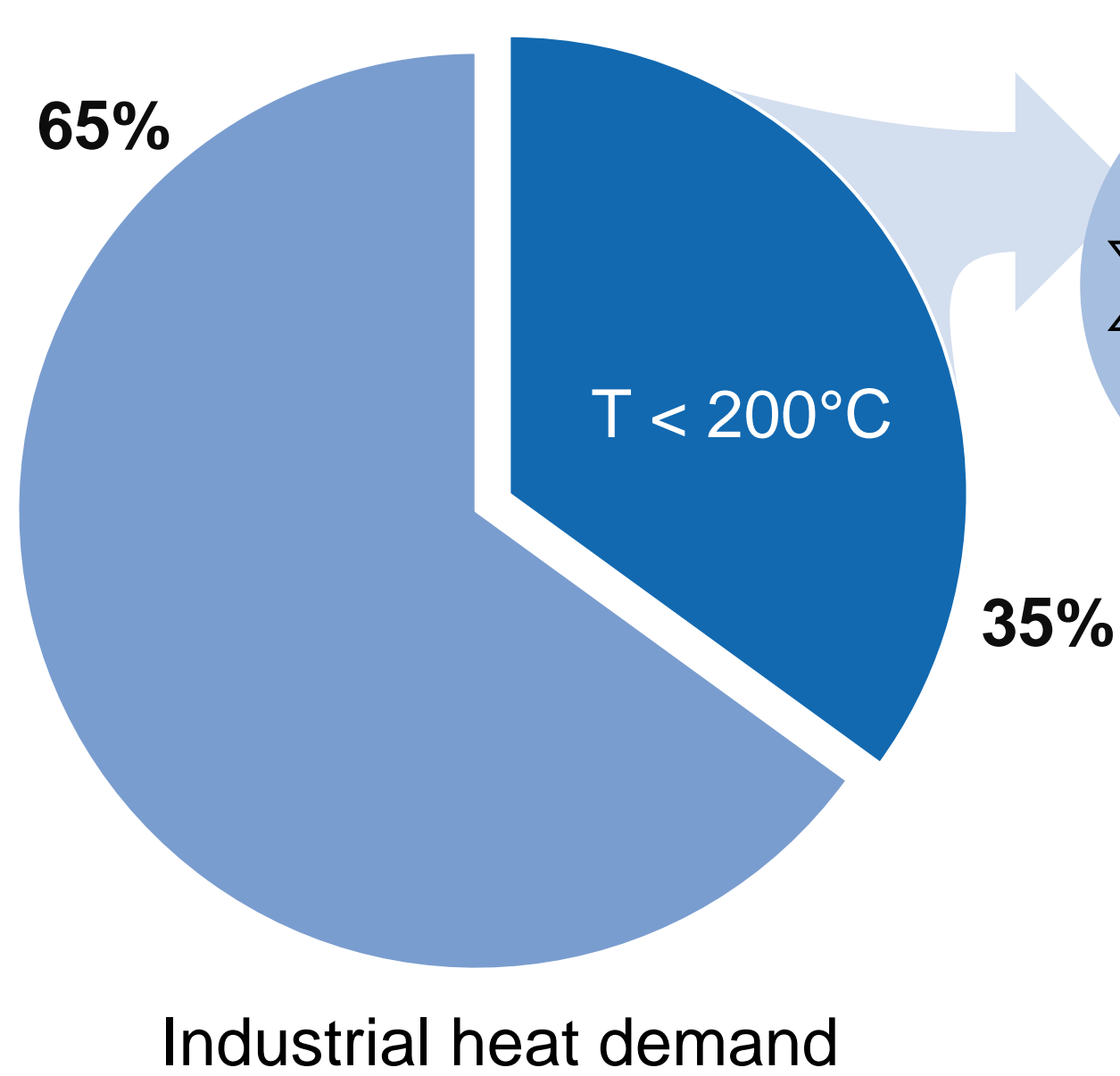
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Project Partners



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1 DECARBONIZING INDUSTRIAL HEAT: HIGH TEMP. HEAT PUMPS

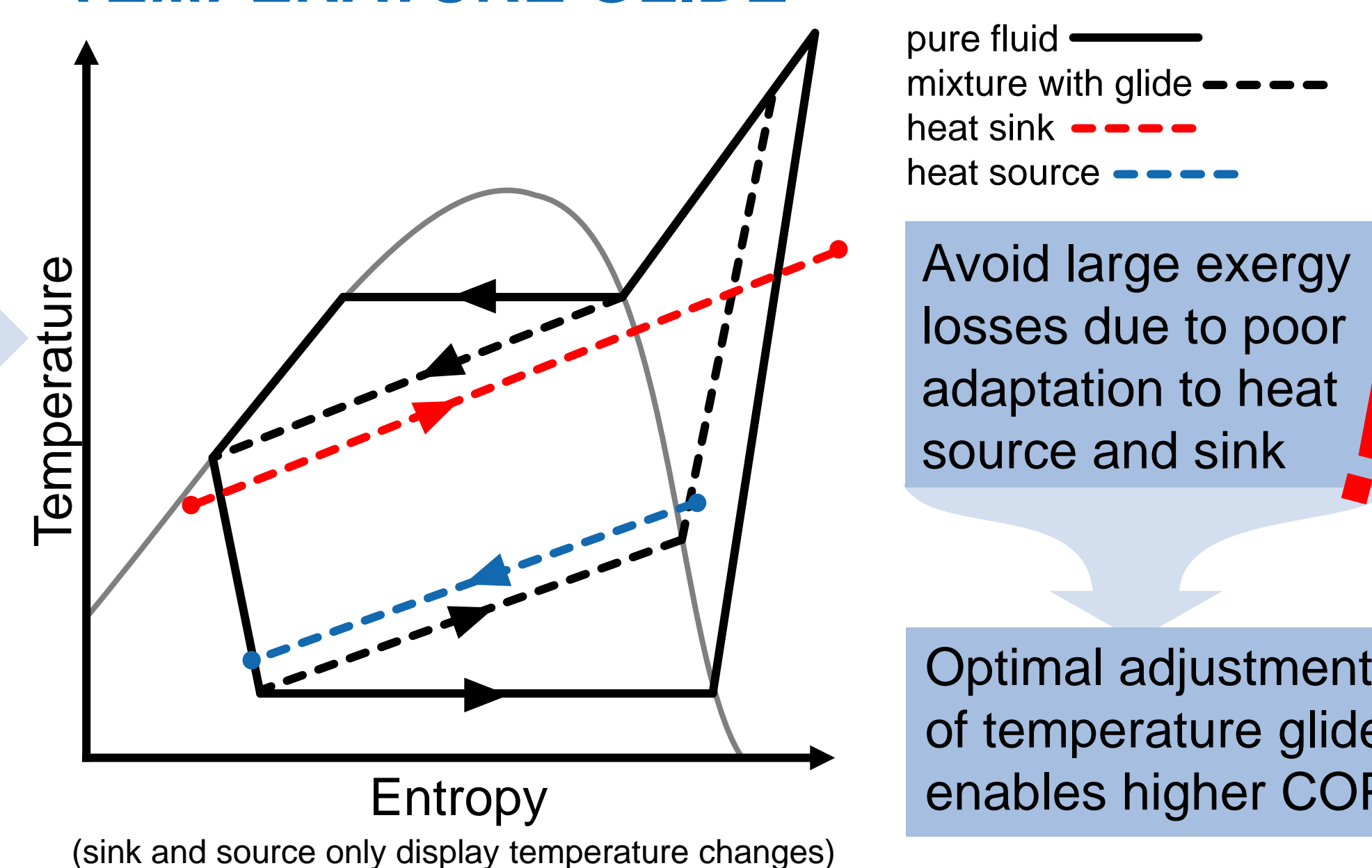


Current technology challenges of high temperature heat pumps (HTHPs):

- ⚡ moderate efficiencies
- ⚡ large temperature changes of source and sink
- ⚡ high investment costs due to specialized products

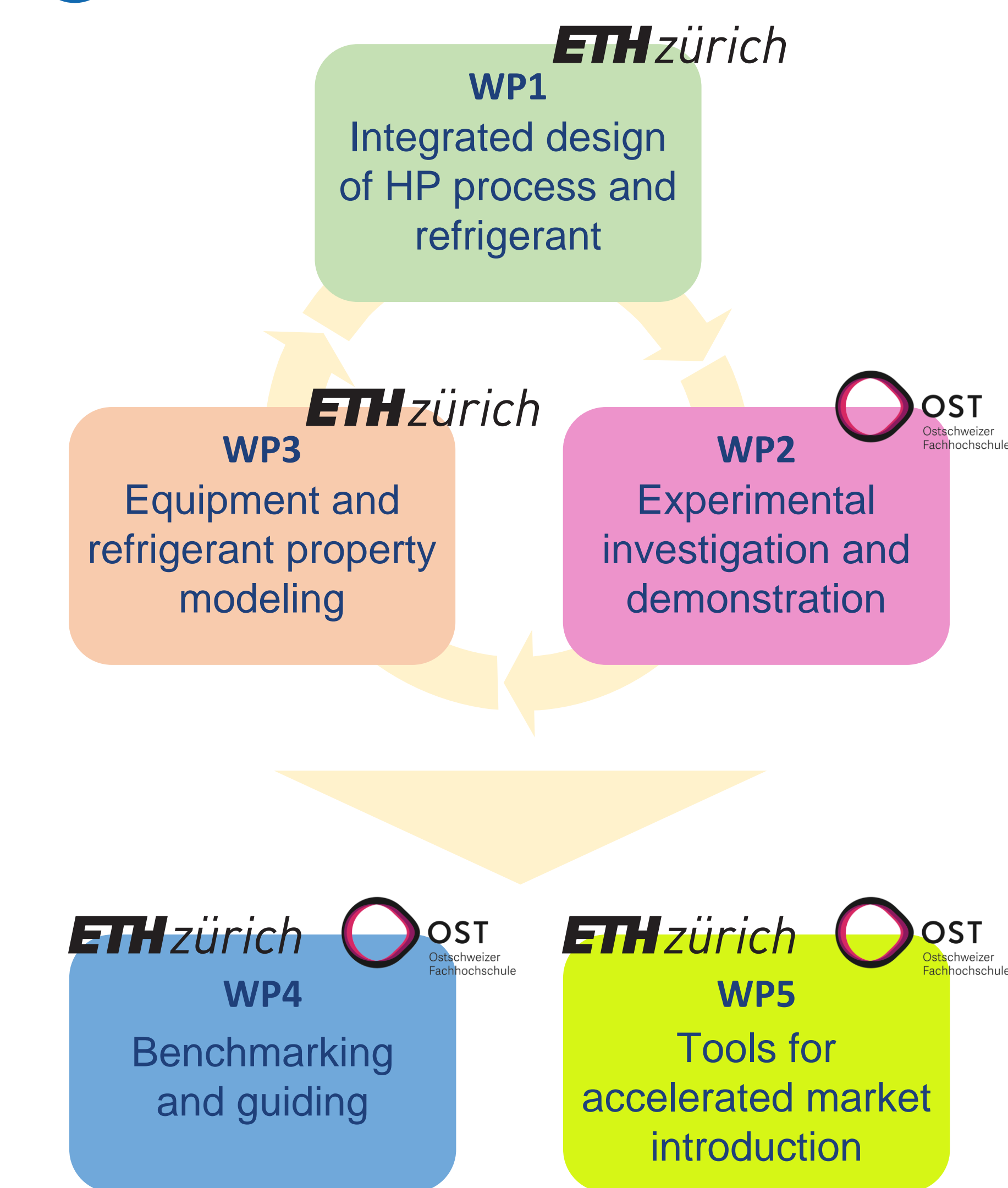
How can the HTHP potential be unlocked to contribute to a sustainable industry?

2 REFRIGERANT MIXTURES WITH TEMPERATURE GLIDE

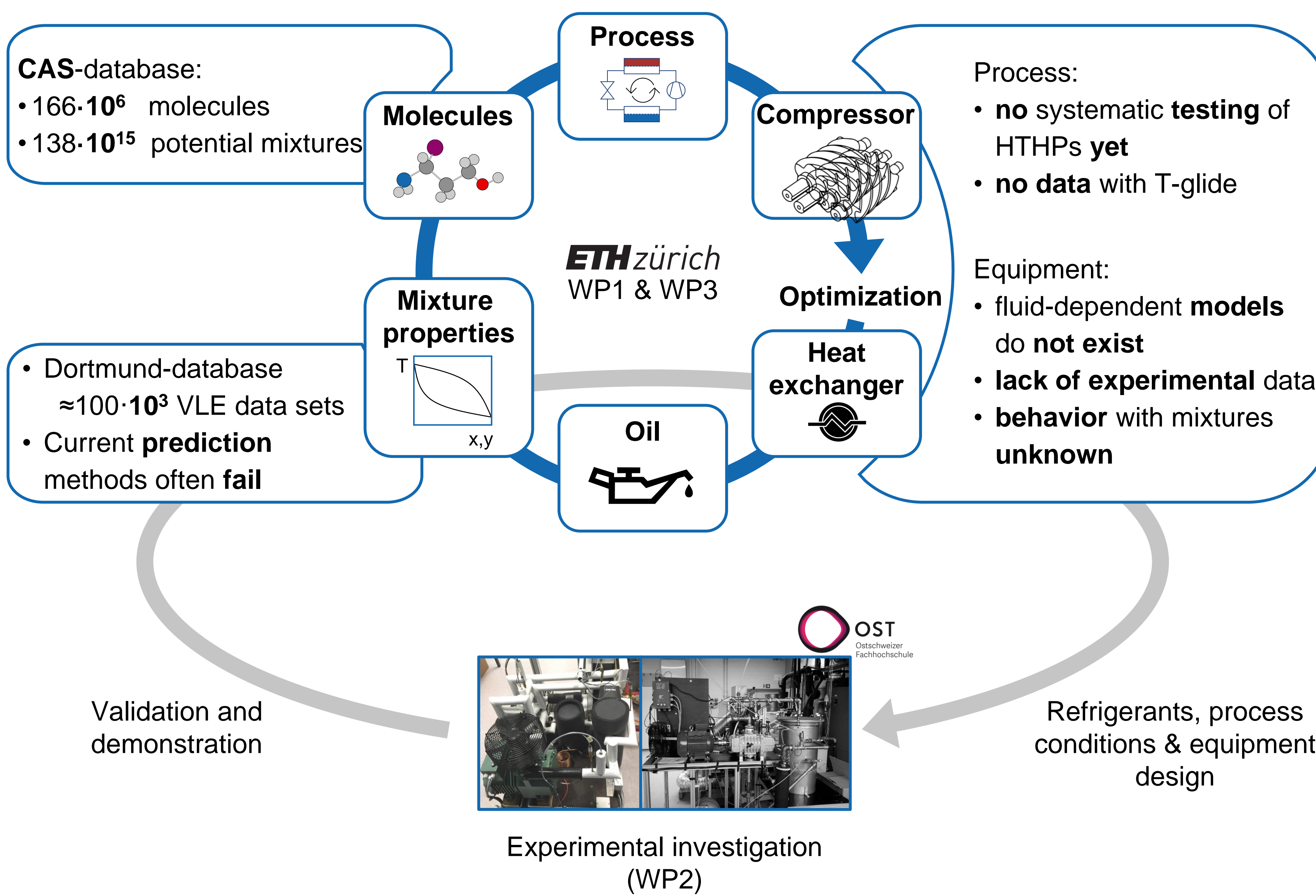


3 OBJECTIVES AND WORK PLAN

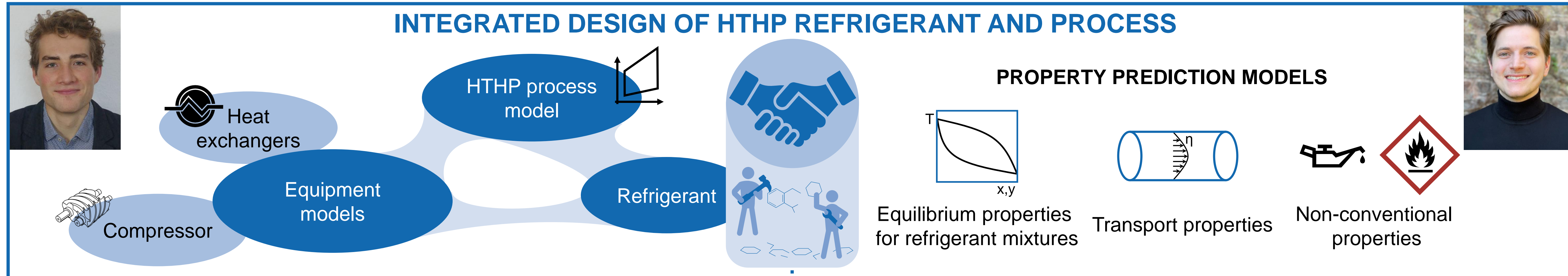
- 🎯 Demonstrate the functionality and potential of refrigerant mixtures for HTHPs
- 🎯 Identify refrigerant mixtures suitable for specific applications
- 🎯 Build practical expertise



4 HOLISTIC FRAMEWORK CONNECTING MODELS WITH EXPERIMENTS



INTEGRATED DESIGN OF HTHP REFRIGERANT AND PROCESS



Scan the QR-Code or visit our research project page <https://epse.ethz.ch/research/projects.html> for further information on this project.

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