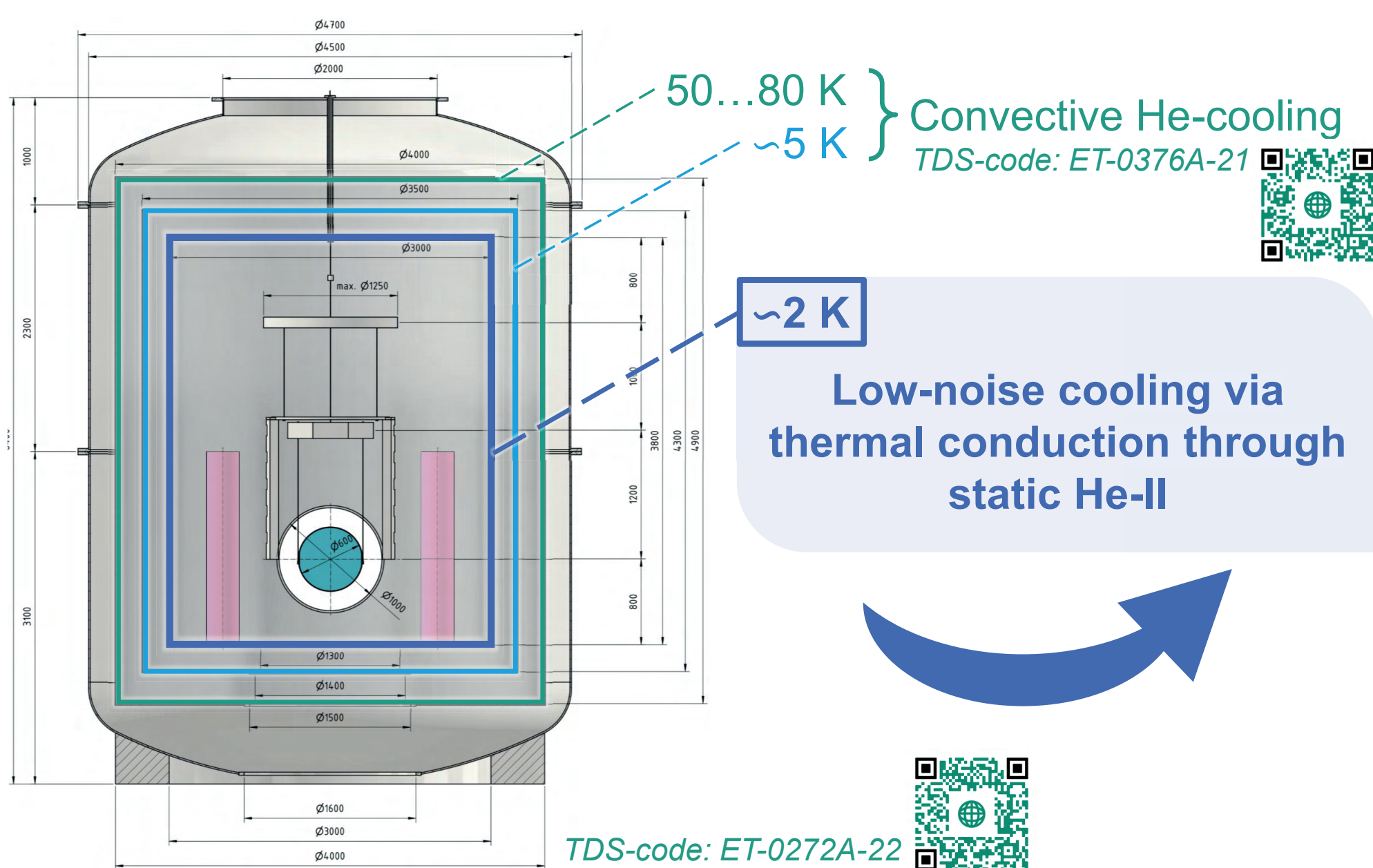


Development status of the inner thermal shielding for the ET-LF cryogenic payloads

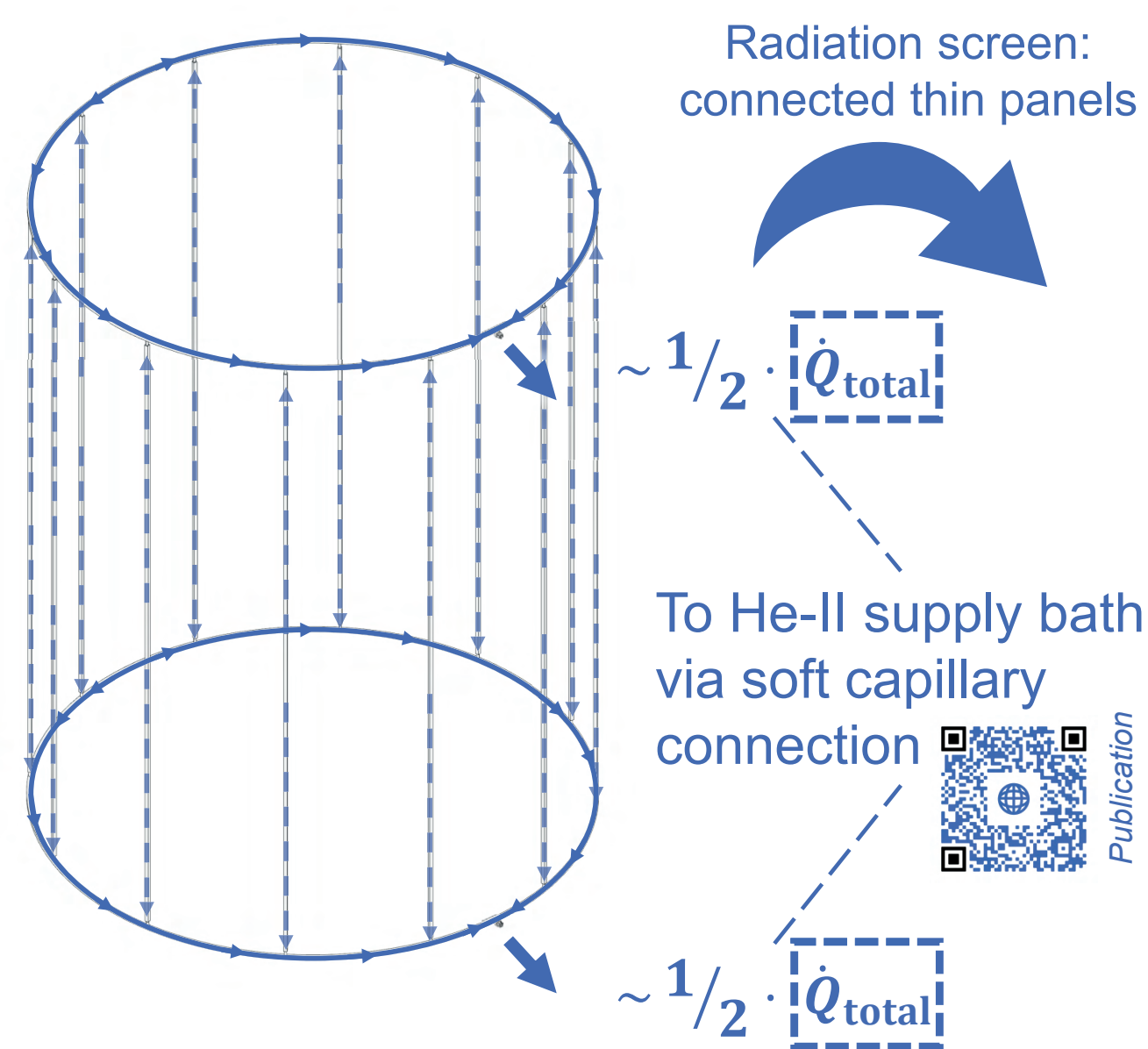
L. Busch*, P. Rosier, G. Iaquaniello and S. Grohmann

Concept

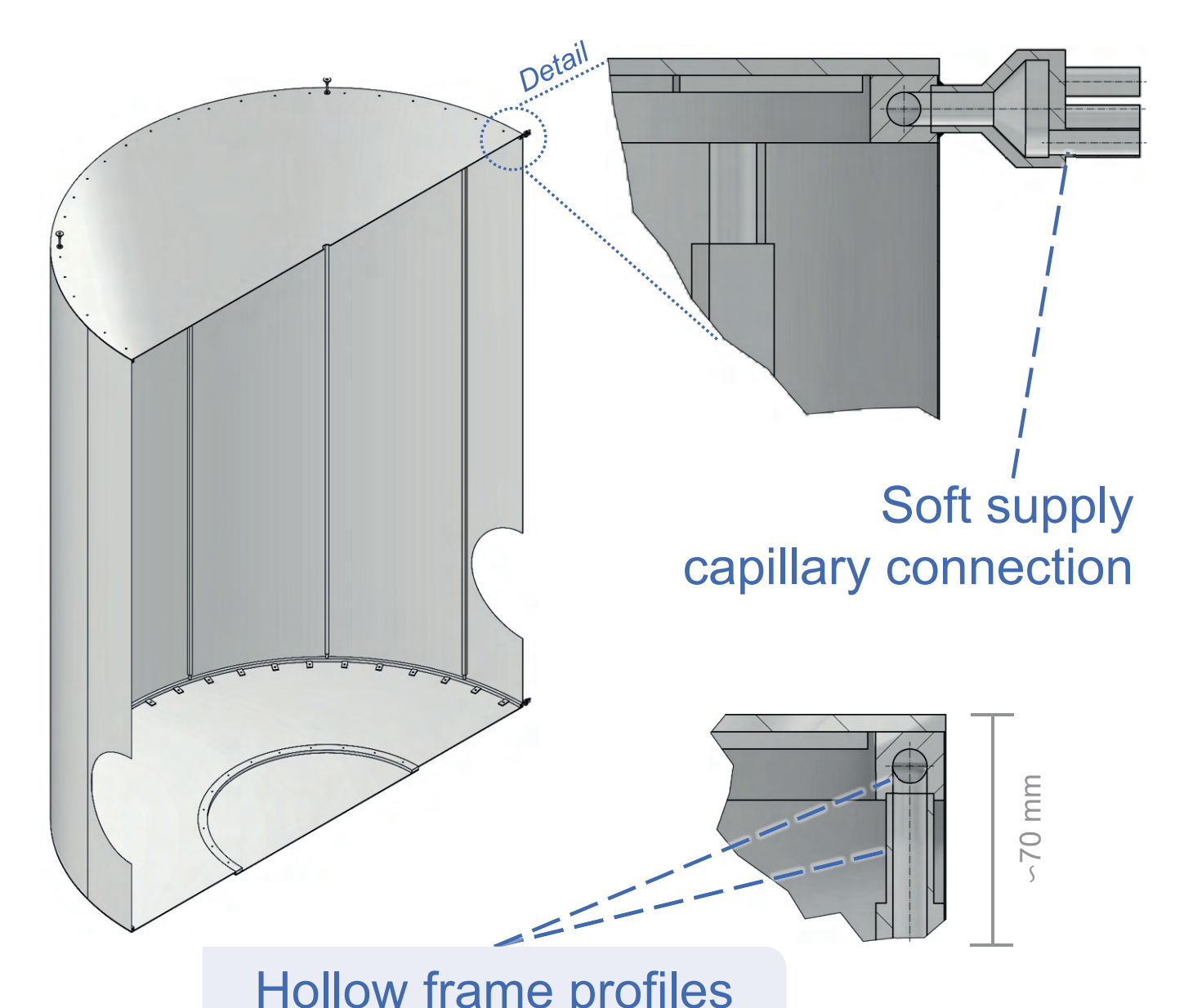
ET-LF cryostat draft



Heat extraction via He-II-filled frame

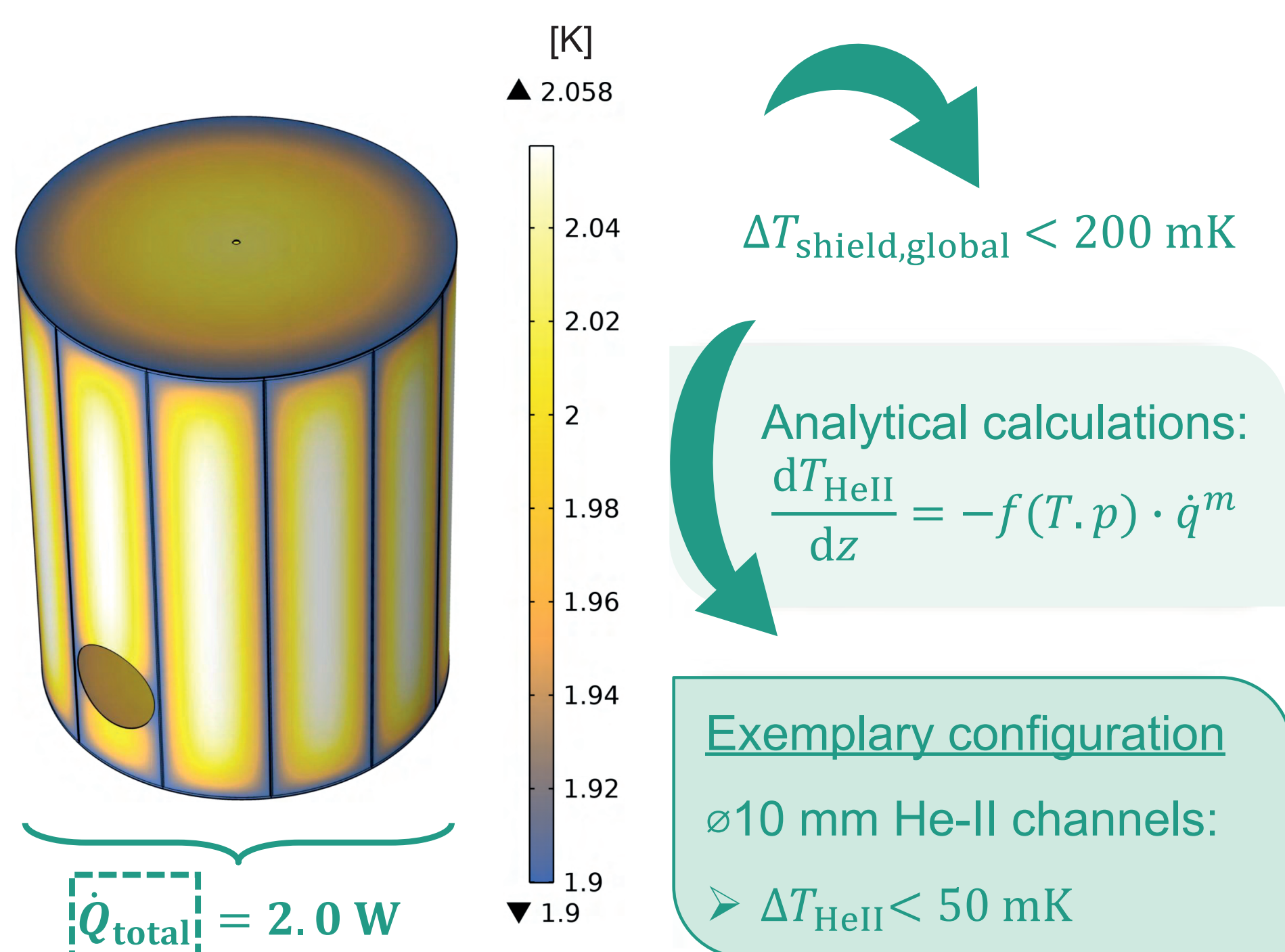


First technical drawing



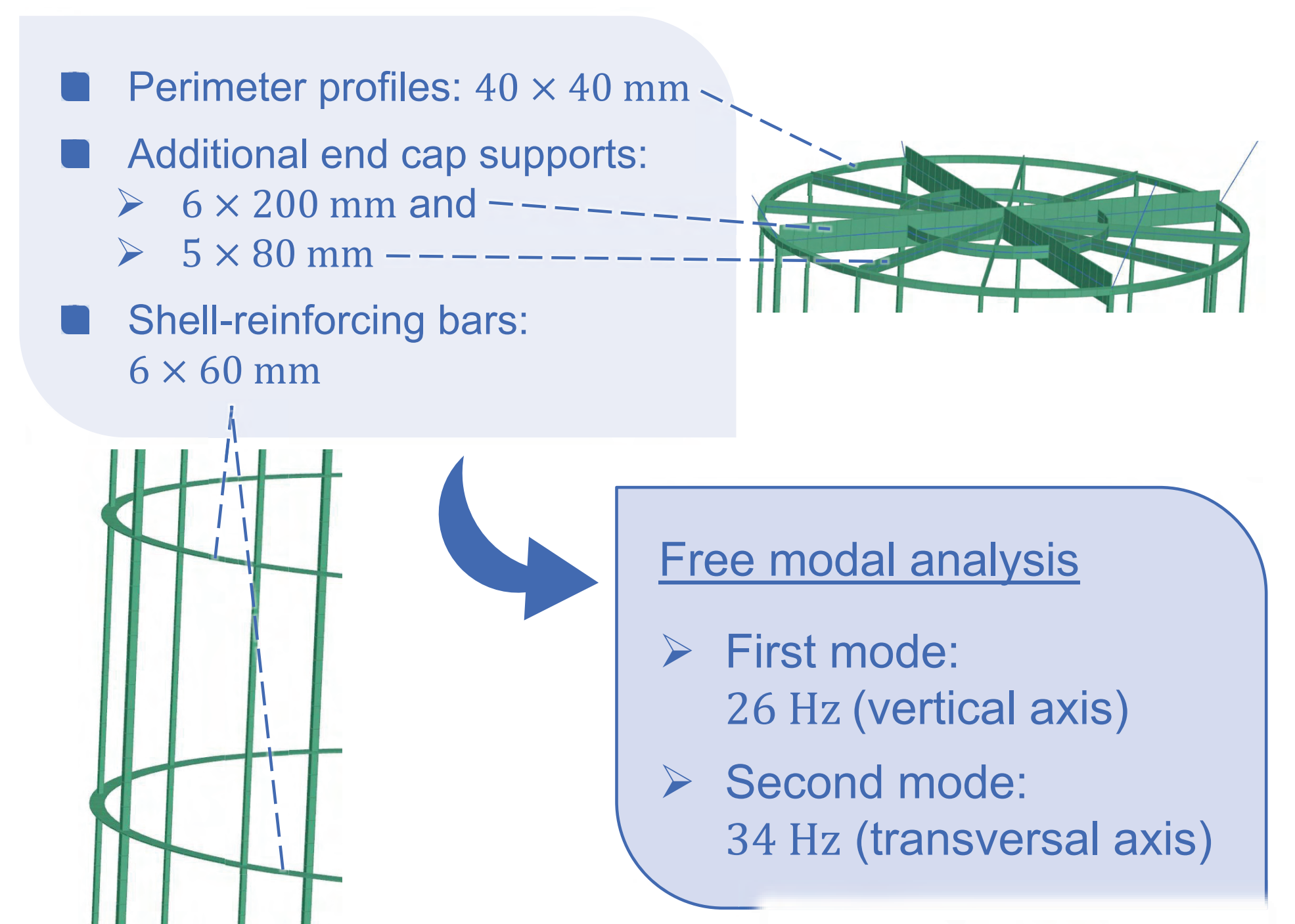
Design status

Preliminary steady-state thermal model



Parameter	Value / expression
Diameter	~3.0 m
Height	~3.8 m
Total weight	~500 kg
Material	Al (1xxx series)
# panels	12
Panel thickness	0.5 mm

Mechanical reinforcement proposal

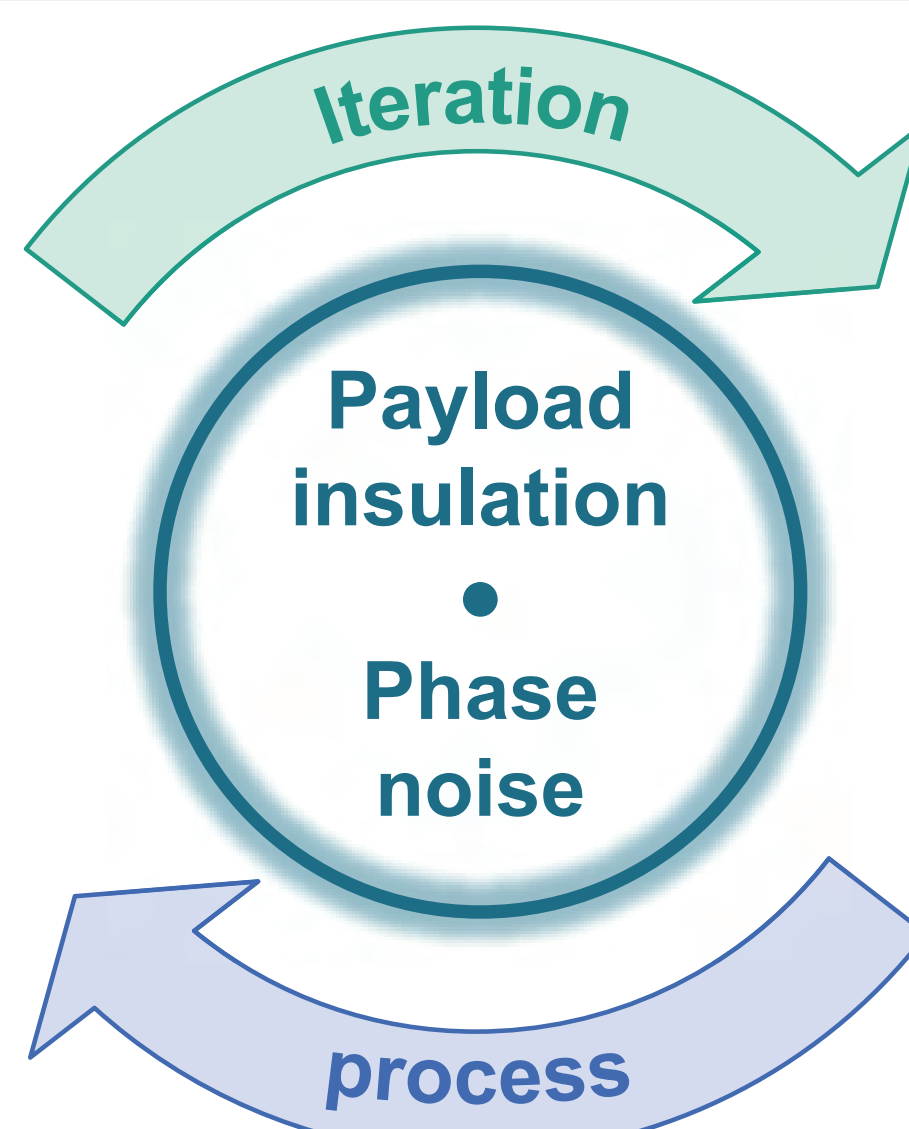


Prospects



Thermal

- Cool-down behavior
- Required positioning of pressure relief devices
- He-II condensation into frame profiles



Mechanical

- Seismic and system-induced vibration attenuation
- Resonant frequency and vibration amplitude consideration in design
- Wide-angle-baffle implementation (?)

* lennard.busch@kit.edu

