Quench detection, protection and diagnostic methods for Nb_3Sn and HTS HFM

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RD4

WP4.5

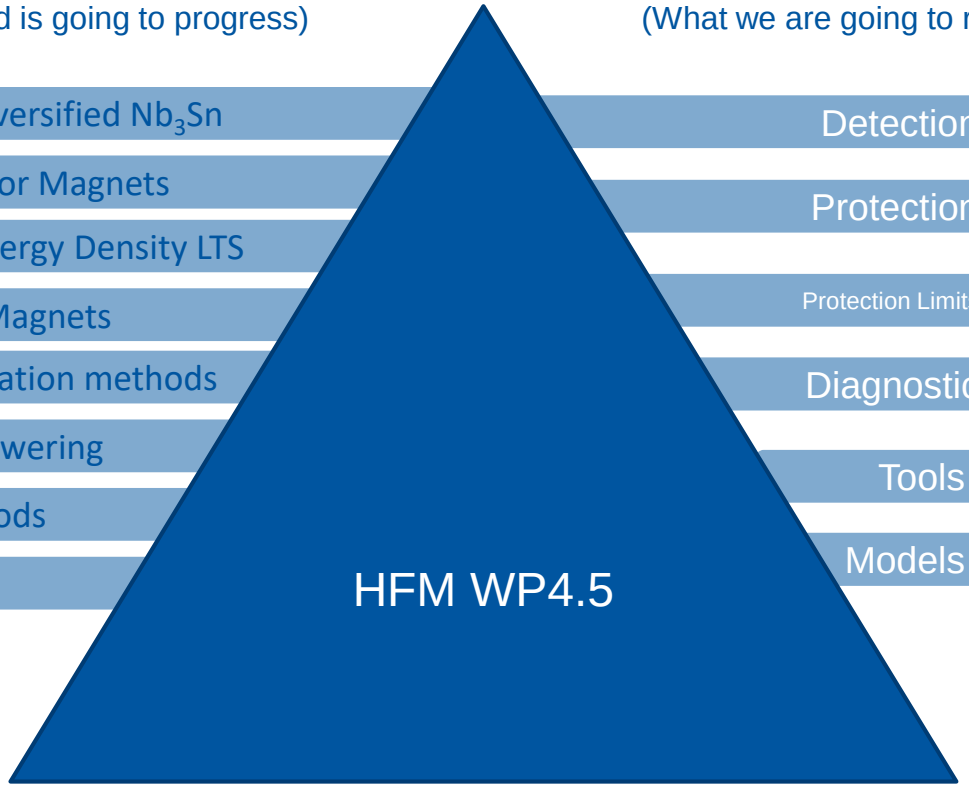
Key drivers, technologies and values

Opportunities & Trends
(Directions in which the field is going to progress)

- **Conductor:**
  - Advanced and Diversified Nb_3Sn
  - HTS for Accelerator Magnets
- **Magnet:**
  - High Field and Energy Density LTS
  - HTS and Hybrid Magnets
- **Novel or Advanced:**
  - Design and Simulation methods
  - Insulation and Powering
  - Production methods
  - Materials

Technologies and Solutions
(What we are going to research and develop)

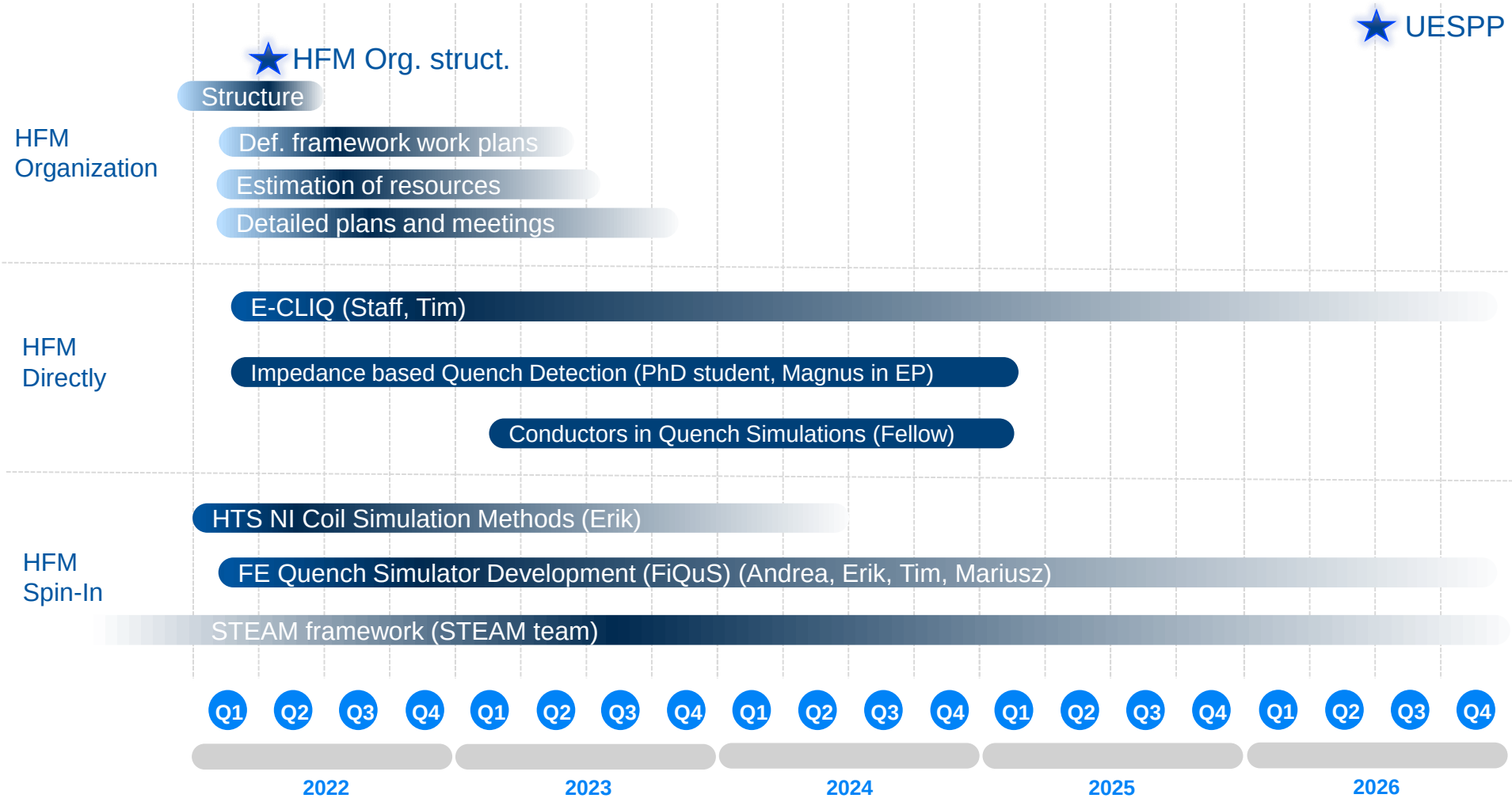
- Detection
- Protection
- → Integrated Design, Advanced Methods
- Protection Limits
- Diagnostic
- → Reliable Design, Improved Learning
- Tools
- Models
- → Specialized and Trusted Transient (Quench) Simulations



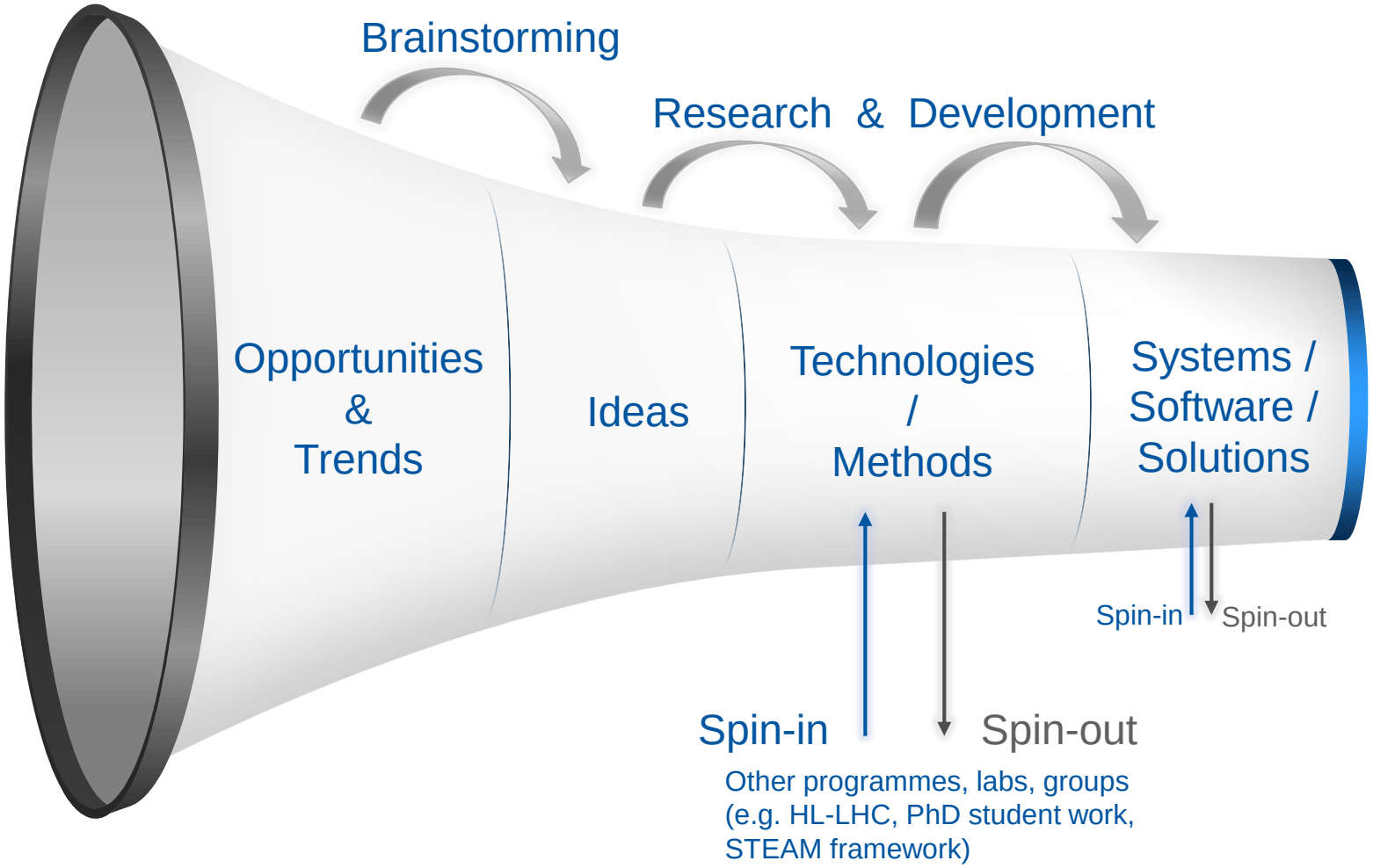
Reliability and Industrialization | Total cost of ownership | Maintenance and Repeatability

Values and Principles
(The is what is going to be driving choices of solutions)

HFM WP4.5 Activities Overview



Ideas funnel



Let’s write down and evaluate your ideas and plan R&D work on them!