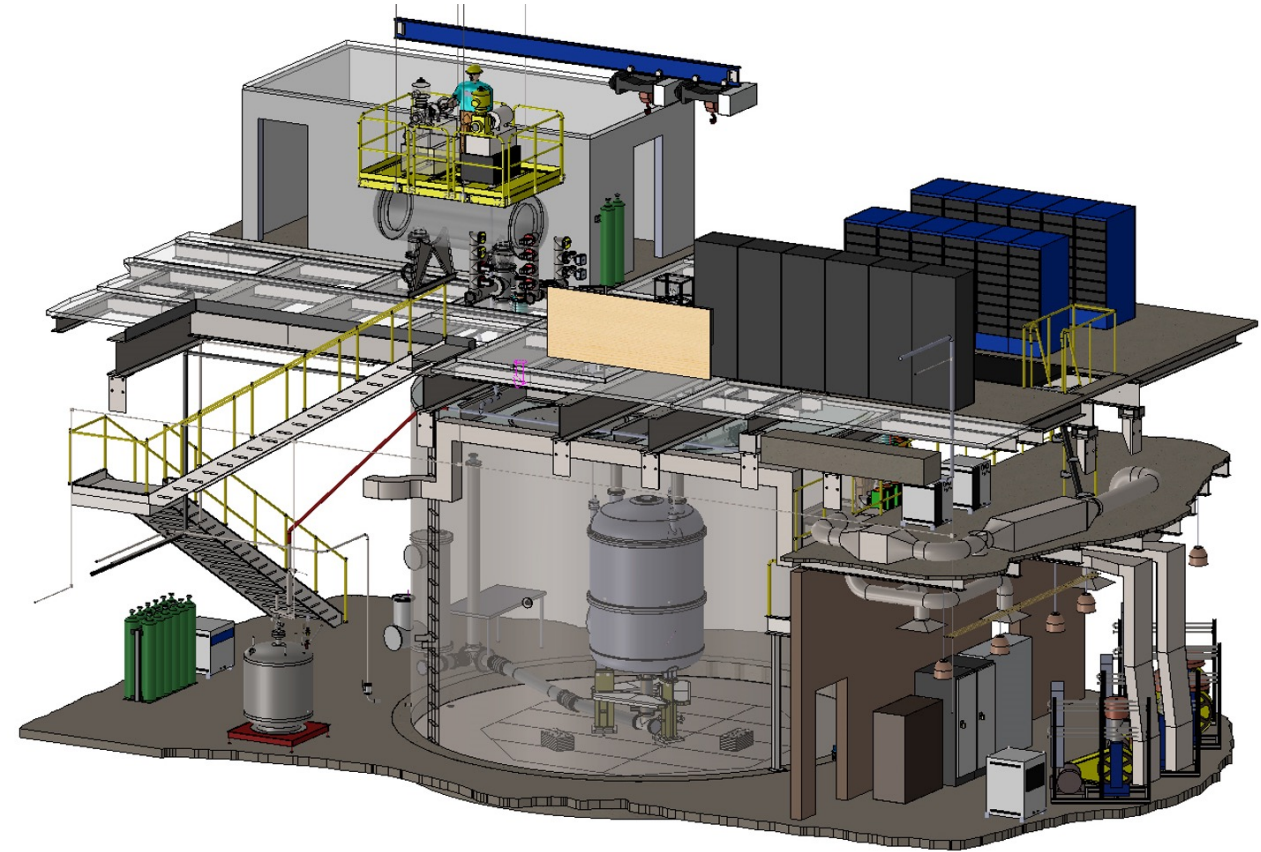


The image shows a large industrial facility, likely a research or manufacturing plant. On the left is a large, multi-story cylindrical tank with a white and copper-colored exterior. A sign on the tank reads "XENON enlightenir". To the right is a multi-story glass-walled structure with blue metal framing, containing various pieces of equipment and machinery. A staircase is visible on the right side of the structure. The overall scene is brightly lit, suggesting an indoor industrial environment.

WP7: Engineering and Skills

Engineering for XLZD@Boulby

- Very large fraction of UK scope in XLZD project based at Boulby likely to be engineering
- Includes design and construction of key detector components:
 - Outer Detector (WP2)
 - Cryostat (WPs 3 & 6)
 - (Elements of) Xenon Detector (WPs 4 & 6)
- But also covers major infrastructure items and ancillary equipment, including:
 - Cryogenic systems and cooling
 - Gas handling, purification and recovery
 - General lab infrastructure
 - Water tank
- Key argument for XLZD@Boulby is economic, industrial and skills impact in local region and UK
 - Requires strong partnerships with industry (e.g. for cryostat fabrication underground)
 - Requires training and provision of skilled local workforce



WP7: Engineering and Skills

- WP7 coordinates Centre for Engineering and Skills
 - Co-led by Lead Engineer plus Academic
 - Works closely with Boulby facility team and RAL-TD
- Oversees Design Office at RAL / Boulby
- Builds up and coordinates engineering and technical effort required to design, manufacture, install and operate XLZD@Boulby
- Coordinates integration of international contributions
- Coordinates industrial liaison:
 - Tenders and contracts
 - Technology development (e.g. welding)
 - Manufacture of key components underground by industry
- Oversees XLZD Skills Academy: delivery of bespoke training programmes in local region
 - Apprenticeships: Advanced (level-4), Higher (level-5) and Degree-Level (level-6), as required
 - Specialist skills (e.g. welding in ultra-clean environments)