Demo Maturity and TRL Gate Criteria

CONCEPT & VERIFICATION
TRL 0
- Concept formulated; Basic scientific/engineering principles observed, reported and peer reviewed.
- Paper study not involving physical models, but may include R&D experimentation; Verification through empirical data from existing technology.
- Funding

VALIDATION
TRL 1
- Technology and application concept formulated; Concept and functionality proven by analysis or reference to features common to existing technology.
- Experimental proof of concept using physical model tests, Materials testing and reliability testing is performed on key parts or components in a testing laboratory prior to prototype construction.
- Funding

PROTYPING
TRL 2
- Concept design or novel features of design is validated by a physical model, a system mock up or dummy and functionality tested in a laboratory environment.
- Item prototype is built and put through (generic) functional and performance tests in relevant laboratory testing environments; Tests are carried out without integration into a broader system.
- Funding

PROTOTYPE TESTED
TRL 3
- System function, performance and reliability tested; The extent to which application requirements are met are assessed and potential benefits and risks are demonstrated.
- TQ

UNPROVEN CONCEPT
- Hypothesis formulated. Reference case and Focal Point identified. Initial Freedom to Operate and IPR.

PROVEN CONCEPT
- Benefit confirmed and demo requirements established.

VALIDATED CONCEPT
- Commercial viability confirmed and implementation challenges described.

Funding

Sign off on final demo model by Focal Point. Finalize Freedom to Operate and IPR agreement.

Centre for Oil and Gas - DTU, Technical University of Denmark
Project guidelines