



## Technical Safety & Risk

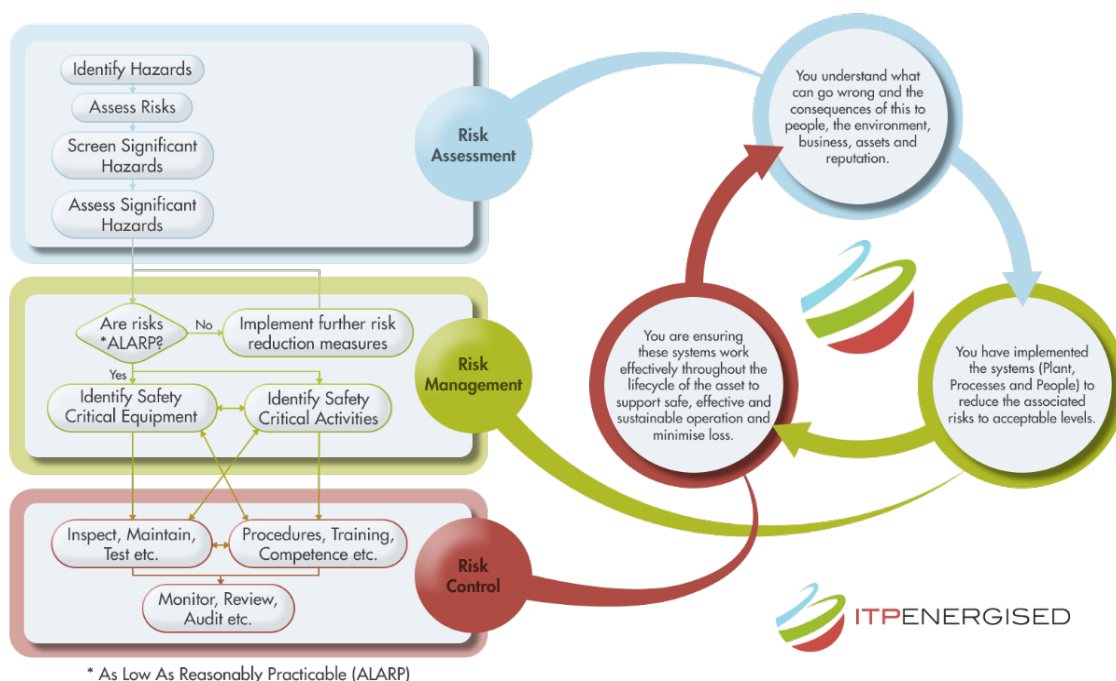
**ITPenergised** is a trusted advisor providing client-focused, reliable, commercially minded, environmental and energy consulting services.

We help you ensure and demonstrate that the safety, environmental and asset integrity risks associated with the complete lifecycle of your project, asset or facility are being managed effectively and reduced As Low As Reasonably Practicable (ALARP). This helps you demonstrate compliance with legislation and regulations but, more importantly, show that your activities and endeavours support your business objectives whilst being kind to people and the environment.

**Technical Safety & Risk** boils down to three fundamental requirements with the focus being on significant hazards and risks.

We work with you to implement a robust and proportionate risk management process to help you meet these requirements. This process comprises three key ingredients:

- Risk Assessment
- Risk Management
- Risk Control



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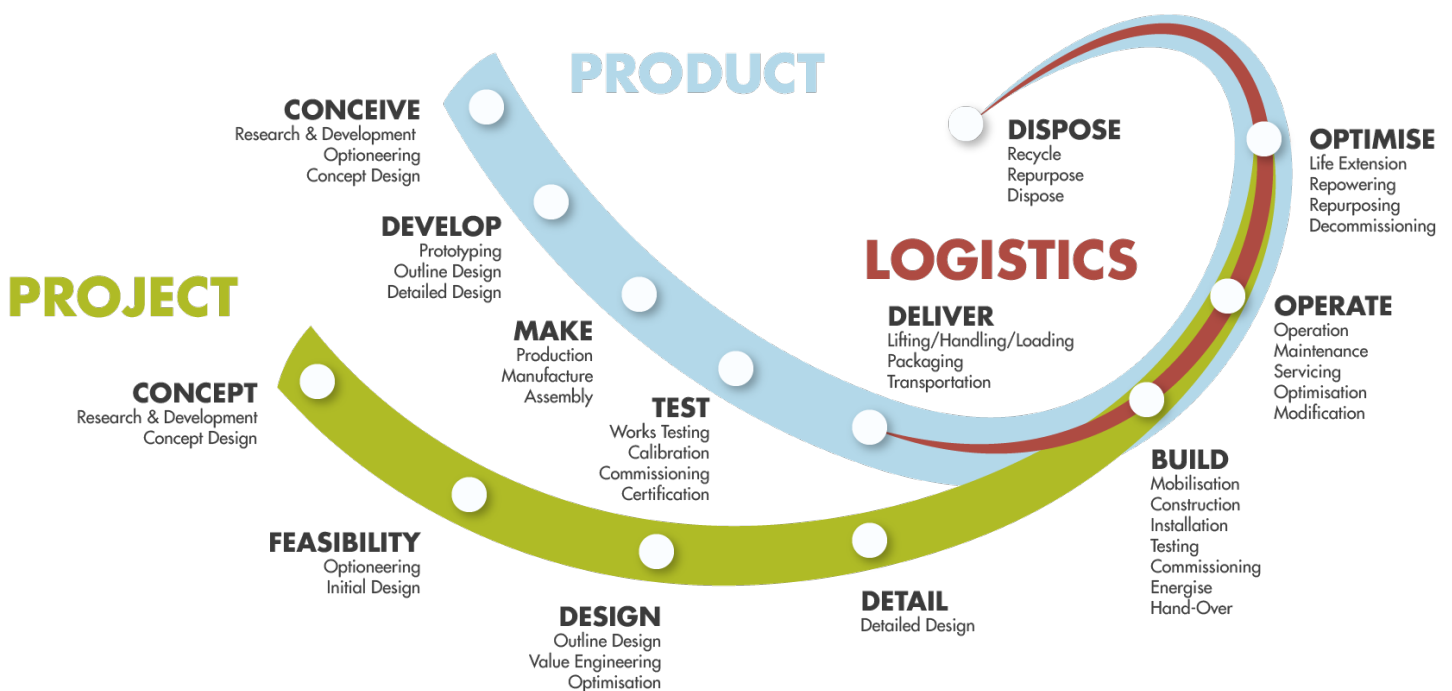
### RISK ASSESSMENT

A hazard unknown is a risk unmanaged. Risk Assessment is the foundation of any Safety Assurance process. We help you understand what can go wrong with your project, asset or facility and the consequences of this to people, the environment, business, assets and reputation so that these risks can be effectively managed and controlled.

We use tried and tested Risk Assessment tools and techniques where appropriate, but evolve and adapt these to suit the specific engineering and

technological challenges that the pursuit of net zero presents. We use our extensive knowledge and experience of engineering, operations, management systems and human behaviour to deliver a complete understanding of your risks in a highly efficient and cost-effective way, providing a sound foundation for subsequent Safety Assurance activities.

We work across the full lifecycle of any asset covering the Project, Product and Logistics elements typical of many energy transition projects.





## Technical Safety & Risk

### Key services include:

- Hazard Identification (HAZID, HAZOP)
- Failure Modes and Effects Analysis (FMEA)
- Physical Effects Consequence Modelling
- Qualitative/Deterministic Risk Assessment
- Quantitative/Probabilistic Risk Assessment
- Environmental Risk Assessment

We support all associated stakeholders from equipment and logistics providers to project developers, asset owners and operators and investors and regulators. We tailor our services to meet your specific needs and challenges but always with the overall objective of enabling the effective integration of these different elements to support the safe and cost-effective delivery of net zero projects.

We provide Risk Assessment support across Product, Logistics and Project elements, as previously illustrated, ideally starting in the concept design phase. The earlier hazards are identified, the greater the opportunities to eliminate or mitigate these through design, avoiding costly rework and ensuring an optimised overall solution.

### RISK MANAGEMENT

With a detailed understanding of your risks, we work with you to implement the systems (plant, processes or people) necessary to reduce these to acceptable levels. Risk Management is the heartbeat of any Safety Assurance process and we support you to manage your risks in the most appropriate and cost-effective way.

We balance the need to learn lessons from more mature industries and benefit from their tried, tested and accepted risk management approaches with the requirement to evolve and adapt these to support the safe and effective development of the new, innovative technologies required to deliver the transition to net zero. At all times we take a pragmatic and proportionate approach based on our strong view that Safety Assurance is a key enabler of the energy transition.

### Key services include :

- Risk Reduction and ALARP Assessment
- Bowtie Risk Management
- Process Safety Management
- Functional Safety
- Reliability, Availability and Maintainability (ARM) Assessment
- HSSE/Safety Cases
- HSSE Management Systems



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We provide Risk Management support across Product, Logistics and Project elements, as previously illustrated, most typically within the design stages given that they present the greatest opportunity to reduce risk. However, we are pragmatic realists and understand that these opportunities are not always available and work with you to help manage your risks within real-life constraints.

### RISK CONTROL

We work with you as your trusted advisor to help ensure that the systems implemented to manage risks work effectively throughout the lifecycle of your asset or facility. Risk Control is the critical final step of any Safety Assurance process; allowing you to ensure and demonstrate safe and effective operations on an ongoing basis.

We use our knowledge and experience of engineering, operations, management systems and human behaviour to help you monitor the effectiveness of your risk management arrangements. We help you take all reasonably practicable steps to optimise and continuously improve your systems on an ongoing basis, drawing on operational feedback, lessons learned and technological advances. By doing this we help you demonstrate effective risk control and prove your status as a safe and responsible developer, supplier, owner, operator or investor.

### Key services include:

- Asset Integrity Management
- Independent Review and Verification
- Competence Management
- Culture and Behavioural Safety

We provide Risk Control support across Product, Logistics and Project elements, as previously illustrated, but given the nature of this final stage of the Safety Assurance process, it is generally focused on operational phases where things are being done and hence risks are present and must be controlled.

