



Impact Assessments and Business Continuity Building Operational Resilience: Strengthening Critical National Infrastructure

BACKGROUND

Amid escalating cyber threats and geopolitical instability, a leading European energy provider needed to protect its nuclear operations. As the backbone of the country's energy infrastructure, business continuity is essential to economic stability, public safety and the organisation's viability. With billions in annual generation value at risk, the organisation required a clear understanding of the cascading impacts of a disruption. This would lay the foundations for a resilience programme to identify and mitigate vulnerabilities, and ensure continuity.

Enhanced regulatory scrutiny, evolving cyber threats and ageing infrastructure heightened risks across an already complex operational landscape. Limited corporate knowledge of how systems interact across operational boundaries exacerbated the issues and presented a significant vulnerability. To assess its ability to withstand disruptions and assess vulnerabilities, the organisation commissioned Business Impact Assessments (BIAs). With a proven track record in highly regulated, high-consequence environments, Berwicks was trusted to lead this complex, fleet-wide initiative.

The complexity of this task was driven by distinct challenges:

Scale and Integration

- Coverage of multiple nuclear sites and headquarters
- Analysis of over 1,000 critical systems spanning operations, safety and compliance
- Complex interdependencies requiring an understanding of cascading effects

Technical Diversity

- Multiple generations of technology operating in parallel
- Legacy systems approaching obsolescence
- Opaque IT/OT boundary, complicating risk management
- Highly complex nuclear engineering requiring redundancy and fail-safe mechanisms

Operational Variation

- Different reactor types with unique operational requirements
- Sites ranging from active generation to defueling stations
- Distinct strategic priorities and risk profiles across the fleet

Cultural Complexity

- Various organisational cultures across sites
- Different operational practices requiring alignment

ACTION

We prioritised stakeholder engagement from the outset, recognising that leadership buy-in would be crucial for a programme of this magnitude. With this foundation secured, the Berwicks team designed a framework aligned with industry best practices, drawing on our extensive experience across high-consequence environments and the ISO 22301 standard.

With over 20 site visits and hundreds of discussions, we engaged with over 300 personnel, including nuclear safety specialists, control & instrumentation engineers, system architects and operations teams. This collaboration allowed us to pinpoint critical system dependencies, uncovering cascading failure risks and resilience gaps.

All sites received a detailed BIA and a tailored report that offered recommendations to enhance resilience and reduce system vulnerability. Beyond site-specific recommendations, our analysis served as a foundation for a broader shift in the organisation's resilience strategy. By systematically identifying vulnerabilities and dependencies, we highlighted systemic risks that required enterprise-wide resilience measures.

OUTCOME

The BIAs have empowered the organisation to proactively manage continuity risks, protecting billions in annual generation value and ensuring national energy security. This investment in understanding system interactions has proven invaluable, transforming decision-making from reactive to evidence-based and preventing the costly consequences of failures. Teams can now effectively prioritise resources, with the BIAs being used in both exercises and actual incidents to understand impacts and their cascading effects, reducing downtime.

Building on our recommendations, the organisation has established new enterprise-wide resilience frameworks, transforming its approach to operational risk. This programme has set a new industry benchmark. Our ongoing partnership reaffirms Berwicks' role as a trusted leader in resilience, delivering results in highly regulated, high-consequence environments.

For organisations in other sectors, our nuclear experience proves our capability. The methodologies we've developed exceed the demands of most environments.

Our work in this complex sector demonstrates that we can navigate any operational challenge regardless of setting or regulatory frameworks.