Office for Nuclear Regulation

# Enabling Innovation through Outcome Focused Regulation

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**Professional Lead for Cyber Security**

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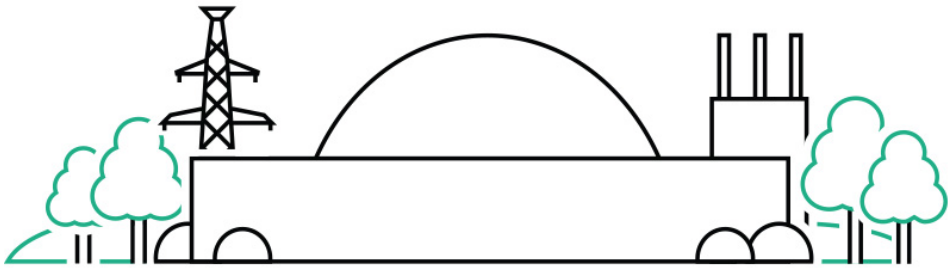
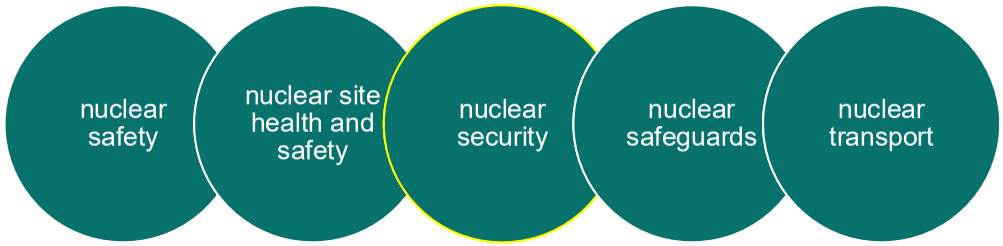


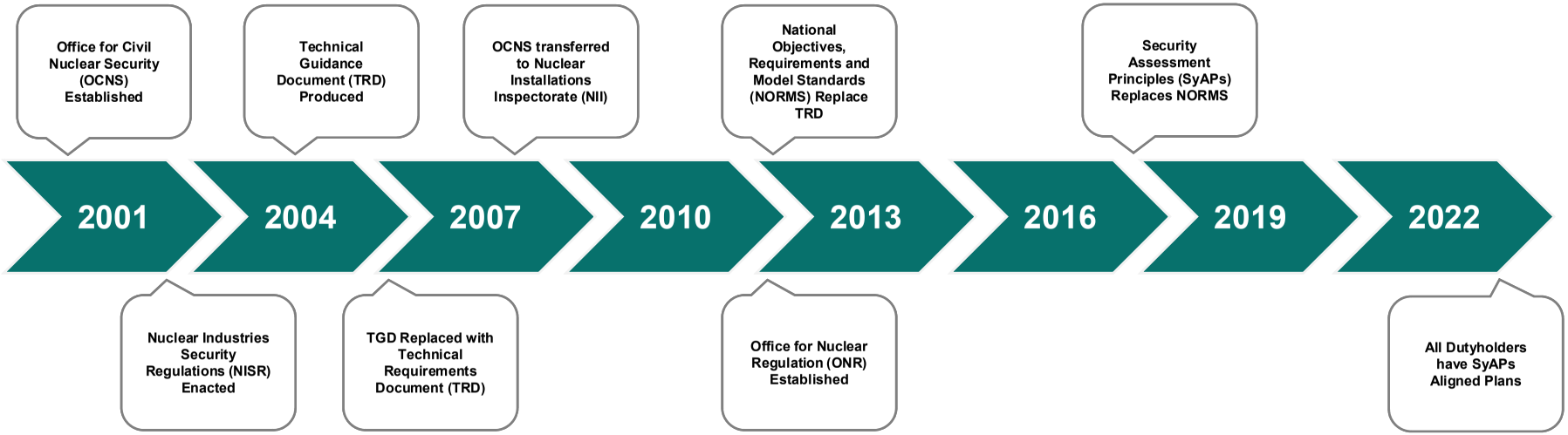
# ONR's Statutory Purposes

- ONR is the UK's independent nuclear regulator, with legal authority to regulate nuclear safety, security, safeguards, transport and site health and safety.
- This includes the UK's existing fleet of operating reactors, fuel cycle facilities, waste management and decommissioning sites, new nuclear facilities, the sector's diverse supply chain and the transport of materials by road, rail, air and sea.

# ONR's Regulatory Journey

- Our outcome focused regulatory approach aligns with our mature non-prescriptive nuclear safety regime.
- It provides clarity that responsibility for ownership and control of nuclear security rests with dutyholders.

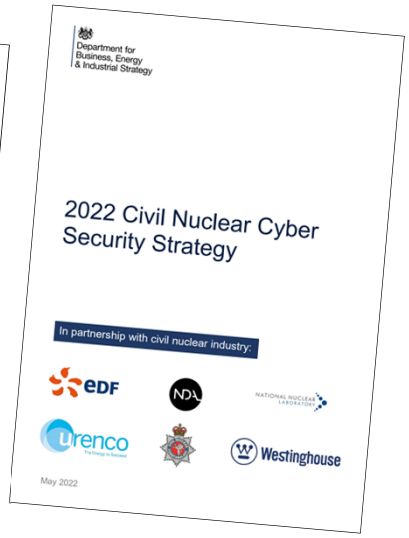


# ONR's Approach to Regulating Innovation

- Our outcome focused regulatory regime is technology neutral and therefore does not seek to prescribe individual design solutions.
- This enabling approach provides a constructive, open and safe environment for innovative solutions to thrive.
- As a regulator we are expected to minimise regulatory burden and be open to innovation, however that openness cannot come at any cost. Ultimately, we are here to protect society.
- We support industry to realise the benefits of new technologies and novel approaches by providing a stable, yet progressive, regulatory regime that enables cost-effective safety and security.
- This approach aligns to UK Government expectations to deliver a proportionate regulatory approach that removes unnecessary burdens and provides confidence to those we regulate.

# Regulatory Focus for Cyber Security

- Our dutyholders acknowledge the need to invest further to protect against the ever-evolving threat landscape, in line with commitments made under the 2022 Civil Nuclear Cyber Security Strategy.
- Our thematic priorities in this area contribute to the cross-cutting theme on cyber security within the 2023 CNI's Annual Report.


# Thematic Regulatory Priorities

**1. Governance arrangements**, including the **leadership** of cyber security and resultant **culture** across dutyholder organisations.

- Completion of a targeted campaign of face-to-face board level briefings on effective cyber security leadership and strategies.
- Increased scrutiny of leadership, governance and culture delivered through a thematic programme of interventions across dutyholders.

**2. Risk management and cyber protection capabilities,** at our highest category sites and where interfaces exist between operational and information technology.

- Delivery of the cyber benchmarking exercise to enhance regulatory intelligence, enable cross sector analysis and trend identification.
- Targeted methodologies to provide further assurance that a cyber-attack could not result in an unacceptable radiological release.

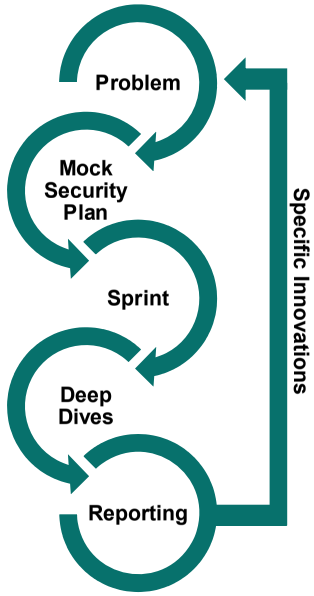
**3. Independent intelligence-led assurance** activities as part of a holistic approach to evidencing the adequacy of arrangements within approved security plans.

- Clarifying expectations for dutyholders to conduct appropriate and proportionate assurance activities against their approved plans.
- Increased scrutiny of assurance activities delivered through assessments and inspections as part of regulatory engagements.

# What Might the Future Hold?

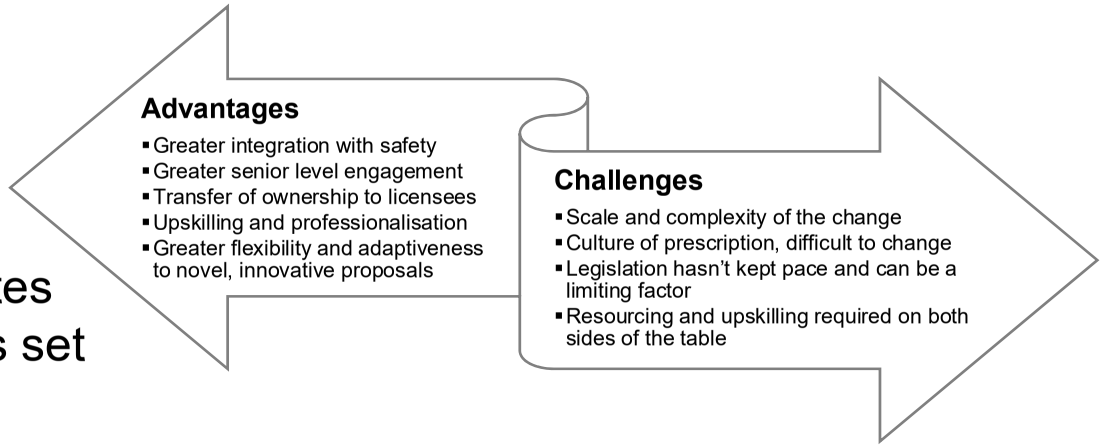
# Regulatory Sandboxing

- Although our outcome focused approach is inherently flexible to accommodate innovation, dutyholders must adequately demonstrate that safety, security and environmental requirements have been met.
- This can be challenging for particularly novel innovations where there is little relevant good practice and experience of deployment to draw on.
- Sandboxing gives regulators, academia and industry the opportunity to work together to explore potential deployments and provides important input for the development of regulatory frameworks.
- It is now a key element in ONR's approach to enabling innovation where it is in the interest of society and consistent with regulatory expectations.
- ONR, US NRC and CNSC are developing a principles paper on the regulation of AI as a result of learning from regulatory sandboxing.



# What Have We Learned?

- Our outcome focused approach was a radical departure with some dutyholders embracing it from the outset while others struggled.
- The approach enables and promotes innovation in line with expectations set out by UK Government.




- Regulators must be **open** to innovation, encourage a **diverse range of views** and **facilitate discussion**, however, to have a beneficial outcome there must be a **clear problem statement** and **specific applications** rather than abstract concepts.
- Both ONR and dutyholders must consider what actions they need to focus on and prioritise now in order to ready themselves for the future.

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# Any Questions?