

Modernising the UK Generic Design Assessment (GDA) Process

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Office for Nuclear Regulation



Office for
Nuclear Regulation

Office for Nuclear Regulation (ONR)

- Independent UK nuclear regulator
- **Goal setting – (mostly) non-prescriptive**
- Takes an enabling approach to regulation



Nuclear safety

Nuclear site health and
safety (conventional health
and safety)

Nuclear security

Nuclear safeguards

Transport of radioactive
materials



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ONR's work on Advanced Nuclear Technologies (ANTs)

Background to ONR's work on ANTs



October 2017

Programme to Grow Regulators' Capability in Advanced Nuclear Technologies (ANTs)

Sponsored by the
Department for
Business, Energy and
Industrial Strategy
(BEIS)

Background to ONR's work on ANTs



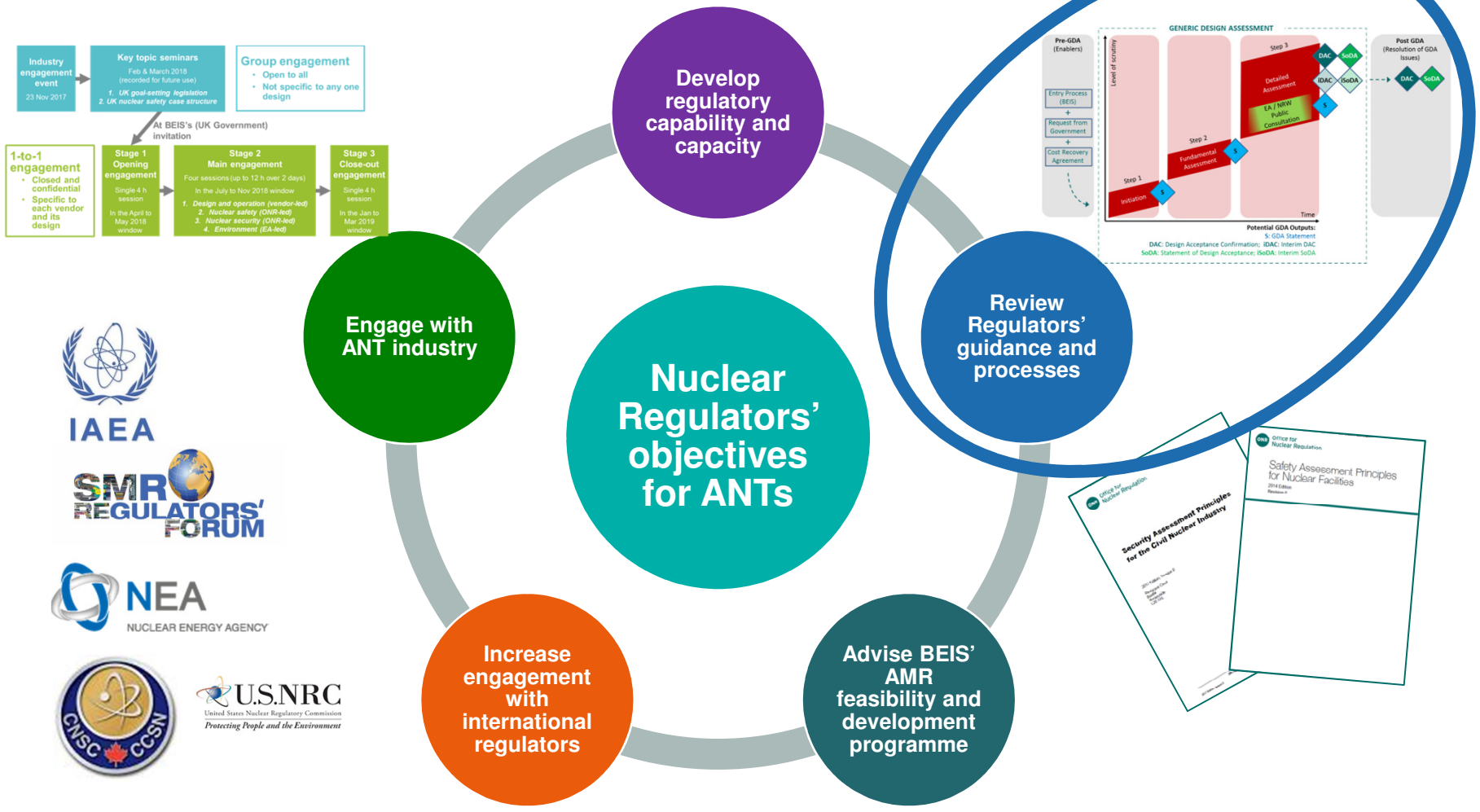
June 2018

.....The framework incorporates the Nuclear Regulators (ONR and Environment Agency (EA)) further improving their Generic Design Assessment (GDA) process.

This includes taking account of learning from previous assessments and by introducing greater flexibility in the process....

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ONR's work on ANTs

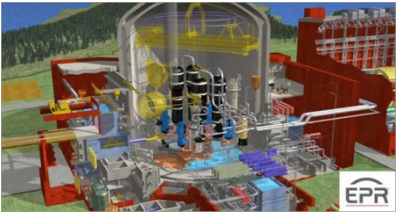



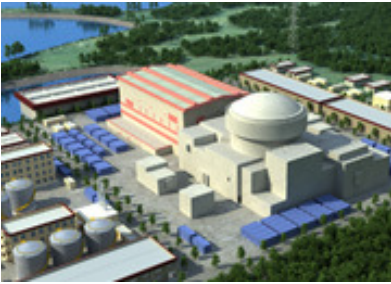






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The Generic Design Assessment (GDA)

Three Elements of New Nuclear Build in the UK

Generic Design Assessment (GDA)	Nuclear Site Licensing & Permitting	Construction	
<p>EDF/Areva – UK EPR™</p> 		<p>Hinkley Point C</p> 	<p>Sizewell C</p> 
<p>CGN/EDF/GNI – UK HPR1000</p> 		<p>Bradwell B</p> 	

Generic Design Assessment (GDA)

- GDA is an upfront, step-wise assessment of a generic reactor design undertaken jointly by the Regulators (ONR / Environment Agency / NRW)
- Developed in 2006 as a process for regulatory assessment of candidate new reactor designs on a **generic basis**
- Enables identification/resolution of key issues on safety, security and environment protection before build commences – **reducing cost and time risks to future builds**
- GDA is not a mandatory process but because of its **inherent benefits**, it is expected that it will usually be requested for new Nuclear Power Plants

EDF/Areva – UK EPR™



Westinghouse – AP1000®



Hitachi-GE – UK ABWR



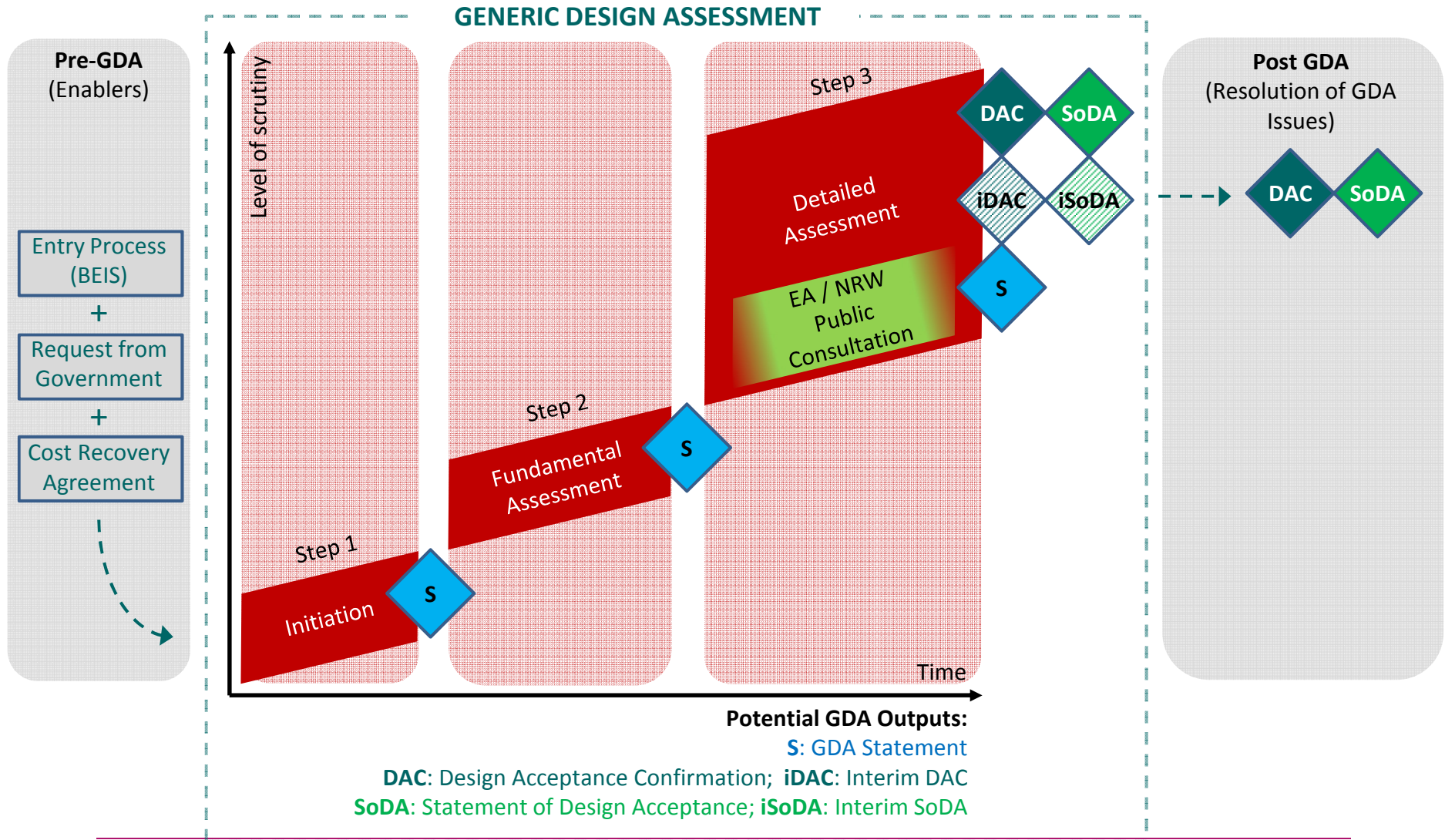
CGN/EDF/GN – UK HPR1000



- As part of continuous improvement in 2018 ONR conducted a lessons learned review of previous GDAs
- We identified elements of the GDA process that could be modernised to:
 - Improve flexibility and better adapt to the differing levels of maturity and development of SMR vendors and their technologies
 - Capture important lessons learnt from previous and ongoing GDAs
 - Remain consistent with previous GDAs



(Modernised) GDA Process





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Thank you!
Gracias!