



Magnox Supply Chain Engagement Webinar

'Help us shape the future of decommissioning'

4th November

Safety share

Samaritans statistics for the UK

- In 2019 there were 5,691 suicides in England & Wales. 321 more than the previous year
- Men aged 45-49 still have the highest rate of suicides
- The rate for females under 25 has increased by 93.8% since 2012, to it's highest level in 2019



Safety share

At Magnox

- In our staff survey in 2019 we found a 31% improvement in how mental health can be openly discussed in Magnox
- We now have 100 Mental Health First Aiders across our business
- Magnox has committed to employee assistance provision for “in the moment” emotional support



Running order

Time		Who
10.00	Hello	Andrew
10.10	Opportunities	Linda
10.30	A change in thinking	Andrew
10.50	Different delivery	Sohail
	Break	
11.10	Grand challenges	John
11.30	Pitch us your best ideas	Linda
11.40	What else do you need to know? Q&A	Pip
12.00	See you soon	Andrew



Opportunities



Opportunities

- A year of change
- A *new* decommissioning strategy
- Requires an updated supply chain strategy
- Supply chain input **essential**



Opportunities

- An iterative process
- More than **£19bn** future spend
- Keen to engage with suppliers of all shapes and sizes
- Need to understand

CAPABILITY, capacity, innovation, commercial models



Opportunities

Programme management

£1.6bn

Site infrastructure

£2.4bn

**Project delivery: including
engineering, equipment
manufacture, construction**

£7.5bn

Decommissioning

£4.0bn

Waste management

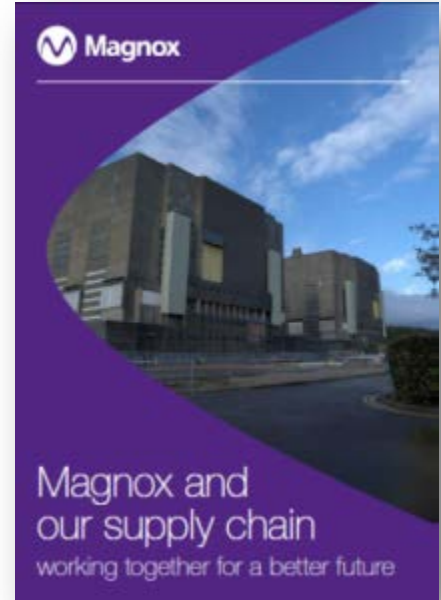
£3.5bn



Opportunities

- *How to work* with Magnox
- Short term requirements
expectations and *values*
- Ten year spend **~£5bn**

~60% spent in supply chain



Opportunities: ITTs > £1m to be issued in next 2 years

→ Decommissioning	<ul style="list-style-type: none">• Land reinstatement• Cooling pond divers• Reactor roof• Turbine hall backfill• Turbine hall demolition• Safestores - asbestos removal, demolition of blower houses• Deplant and demolition framework
→ Professional Services	<ul style="list-style-type: none">• Project controls• Health physics resources
→ Construction	<ul style="list-style-type: none">• Plant, equipment and crane hire
→ Waste	<ul style="list-style-type: none">• Design & build of waste transfer area• Gravel, amalgam and R2 post operational clean out• Procurement & manufacture of FED sorting equipment• ILW framework
→ Engineering	<ul style="list-style-type: none">• Installed and portable metrology
→ Asset Management	<ul style="list-style-type: none">• Site security systems• Asbestos analytical services



Opportunities

- How to find out more...
- Magnox **website** – procurement plan
<https://www.gov.uk/guidance/how-to-do-business-with-magnox-ltd>
- Complete Tender Management (CTM)
OJEU notices in TED – will be replaced by
Find a Tender



Opportunities

- Exciting times ahead

*Magnox cannot deliver without a **healthy** and
innovative supply chain*



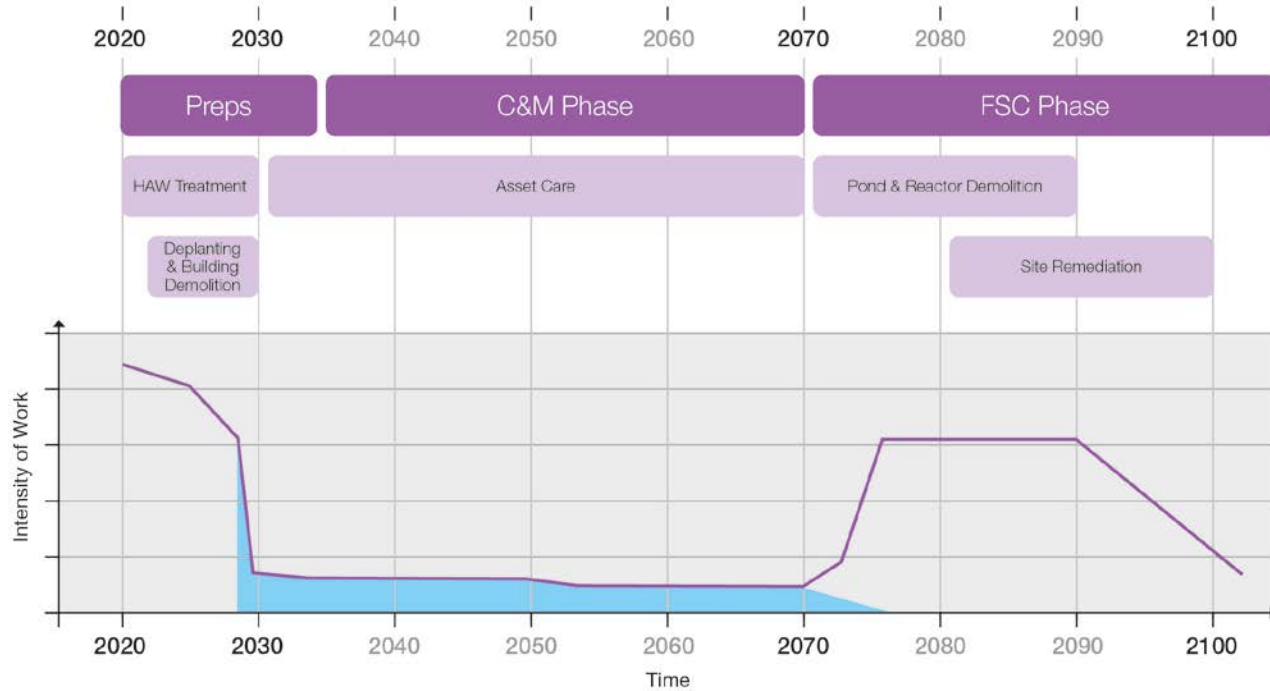
A change in thinking



Magnox mission progress



Existing care and maintenance (C&M)



A compelling case for change

- *Learning* from Bradwell
- Reduce uncertainty around lifetime decommissioning **costs**
- Global trend towards immediate **dismantling**
- *Progress* in remote dismantling technologies
- New LLW **routes** and HAW **storage options**



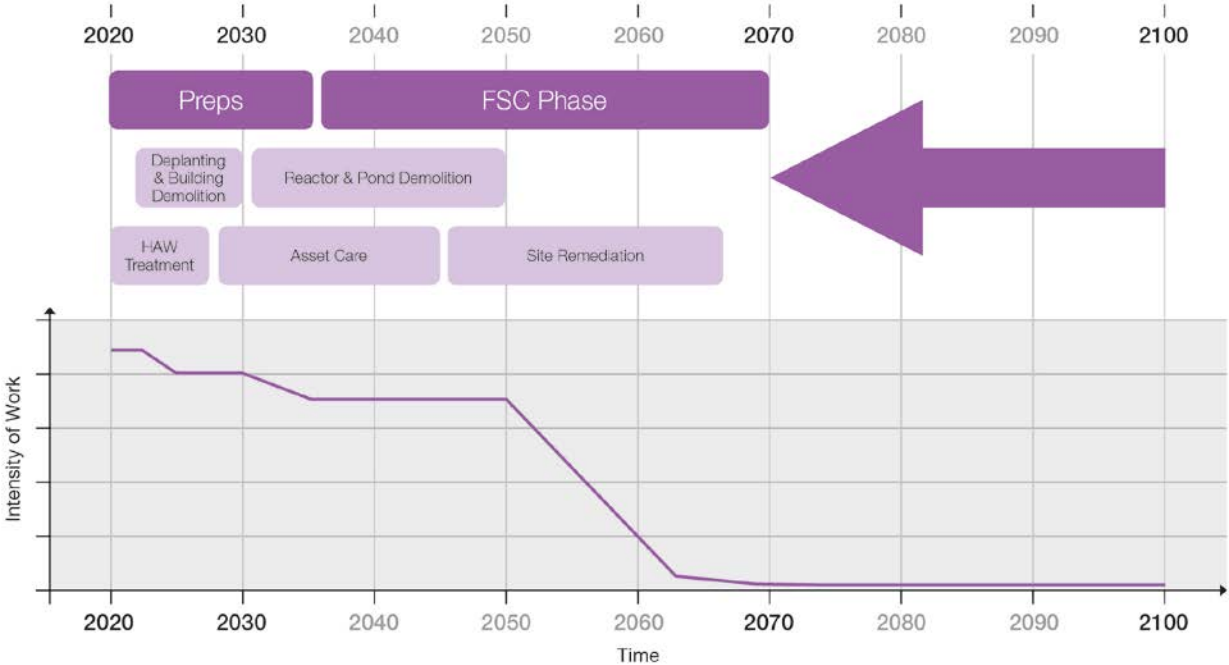
A compelling case for change

- Emerging ***opportunities*** to re-purpose some sites
- Developing a UK capability to decommission ***commercial reactors***

Reduce the **impact** of skill and knowledge loss



Bringing forward decommissioning



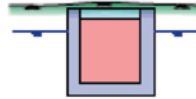
Our thinking is waste led

Waste Options

(a) Disposal by transfer



(b) Dedicated radioactive waste disposal facility



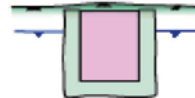
(c) Radioactive waste disposal of in-situ



(d) Radioactive waste disposal of in-situ with engineered closure



(e) Radioactive waste disposal for filling an existing structure



(f) Radioactive waste disposal for void filling



(g) Radioactive waste disposal for screening bund

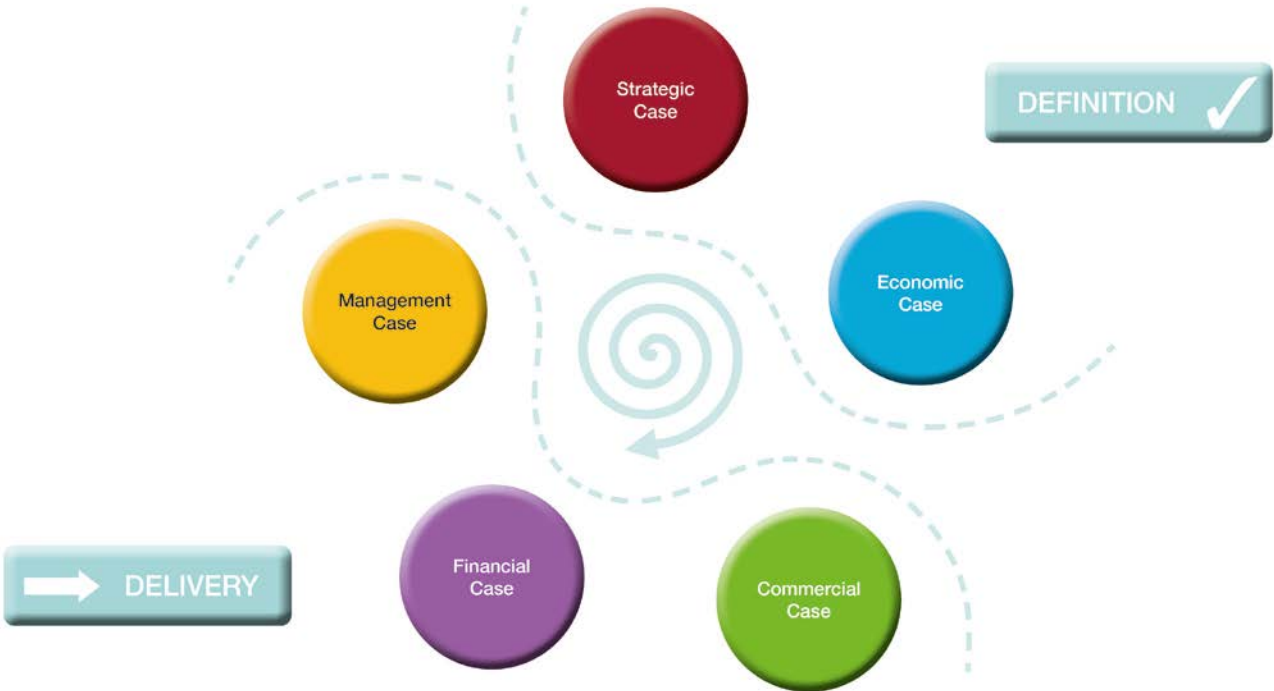


(h) In-situ contamination (not waste unless dug up)



Optimising site end states is critical

Implementing the change



Different delivery



Different delivery

- Studies for *reactor dismantling* underway
- Plan developed for short term work
- Simultaneous delivery across multiple sites
- Innovations in: ENGINEERING, project delivery, **waste management** and **bulk demolition**

Ideas and learning needed



Engineering industry - learning

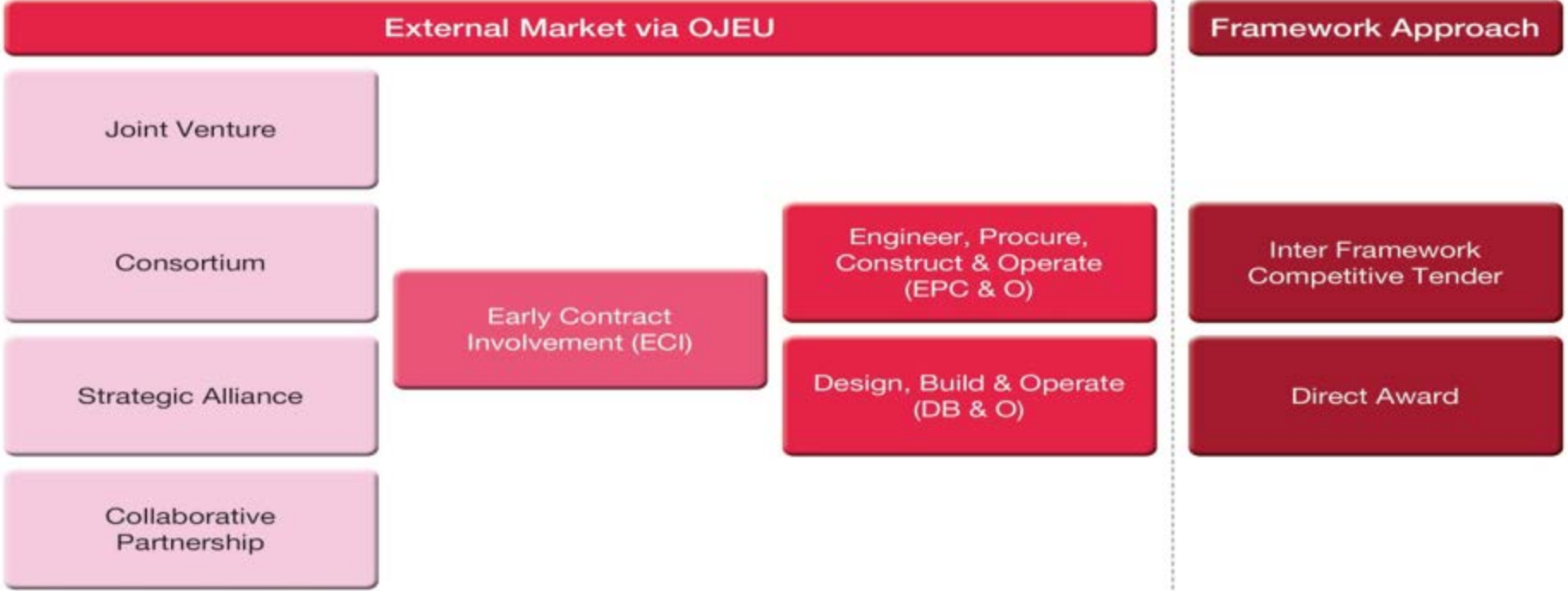


Current focus

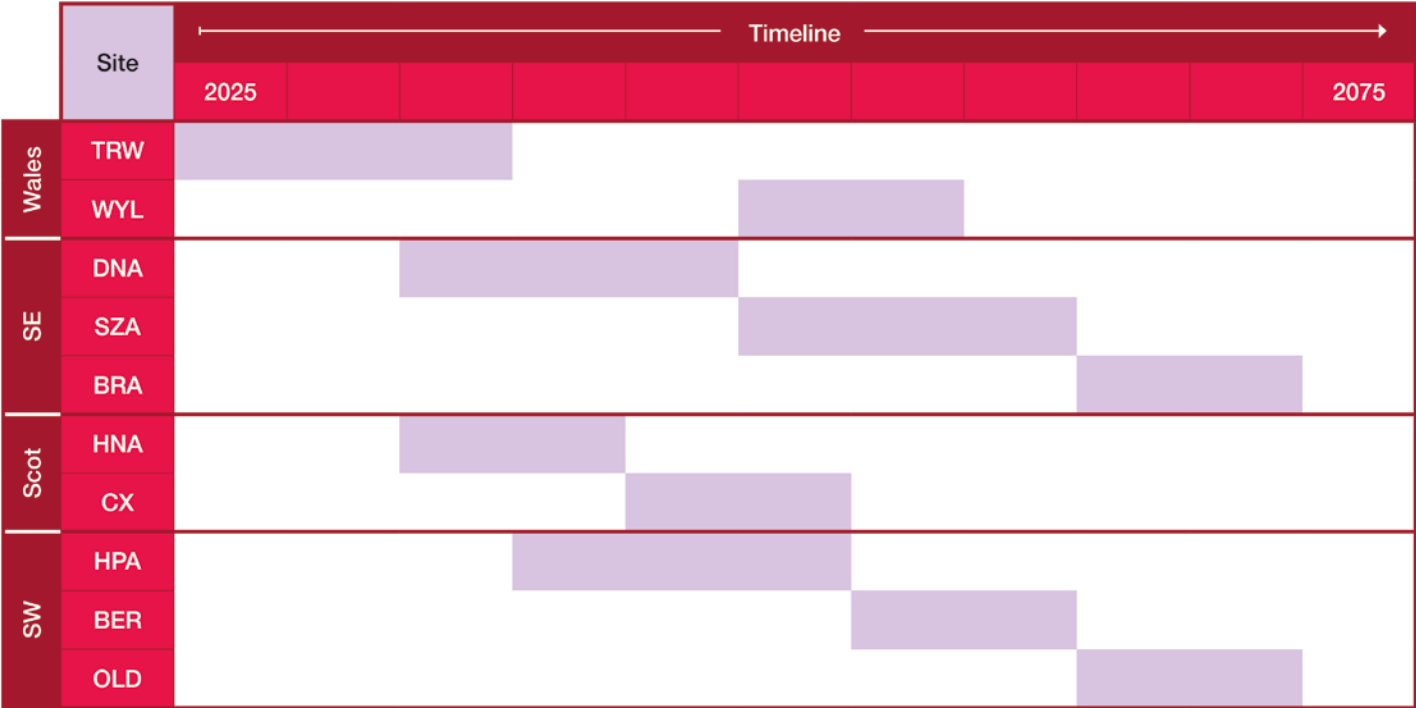
- Developed programme business case currently being prepared for the *site specific strategies*
 - **Target submission March/April 2021**
- Strategic outline case to be written for Trawsfynydd as the **lead and learn site**
 - **Target submission September/October 2021**



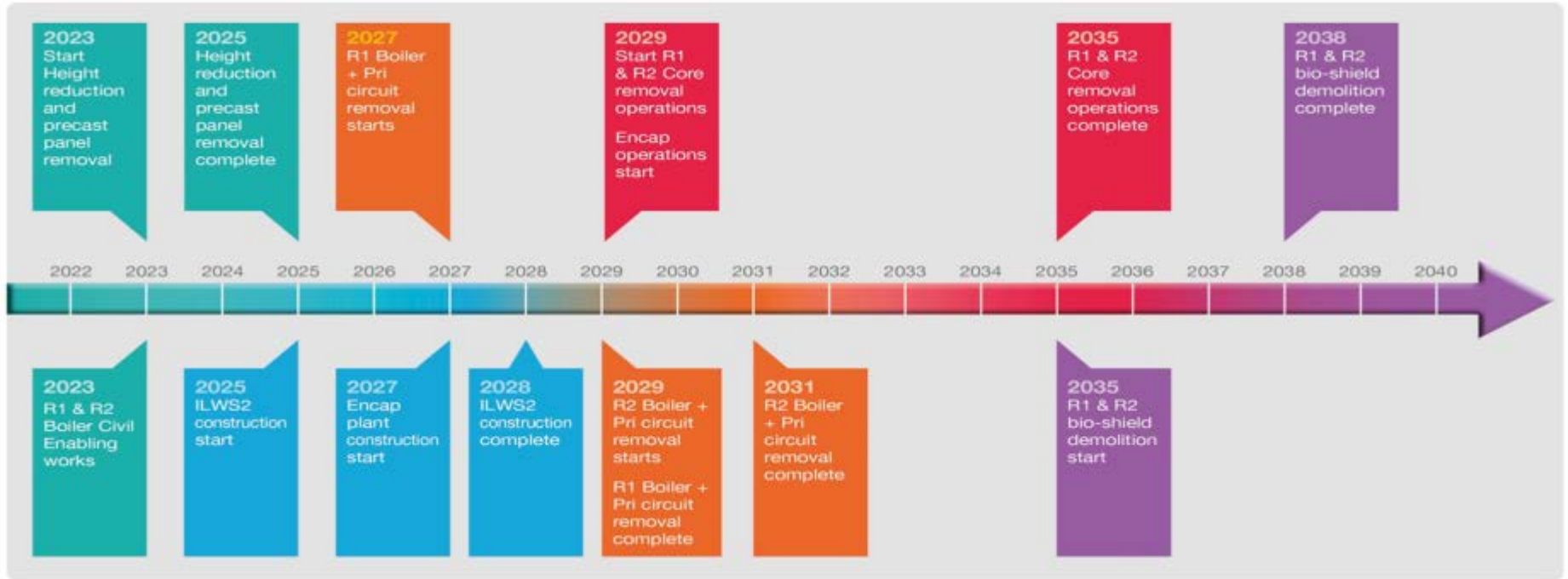
Delivering decommissioning excellence



Potential scenario – illustrative



Trawsfynydd – current view



We're going all the way



Deliver together

- Decommissioning needs you.....

Delivering decommissioning excellence



Grand challenges



Grand challenges

- Magnox graphite cored reactors are all **different** by design
- Safely open up the bio-shield to gain access to the core
- **Retrieving**, **SORTING** and *segregating* the waste into appropriate packages
- On-site disposals and **site restoration** for future use

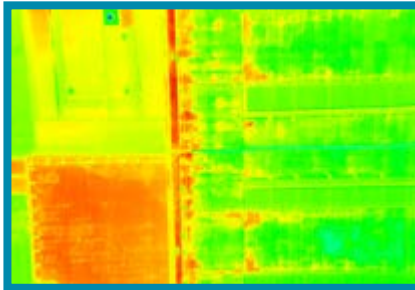


Grand challenges – reactor complexity



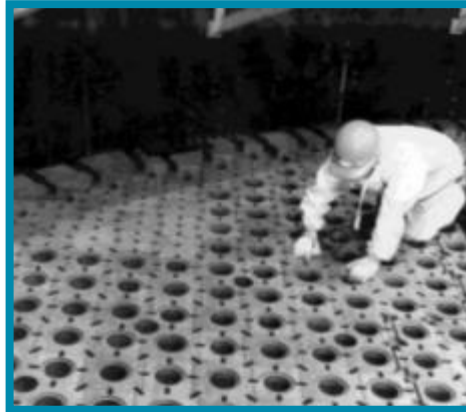
Grand challenges

- Asset care = *key* consideration for potential safe state



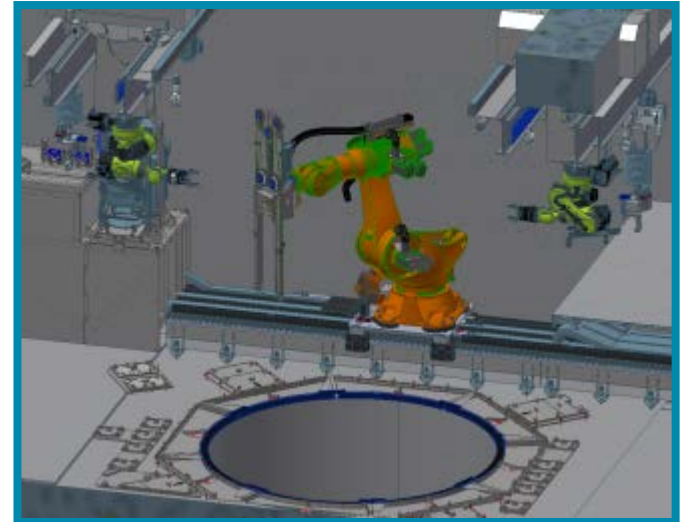
Grand challenges

- Reactor inventory **characterisation** to inform waste disposal



Grand challenges

- Developing technologies to provide an environment for **DESIGN**, testing and *training* of tooling/methodologies

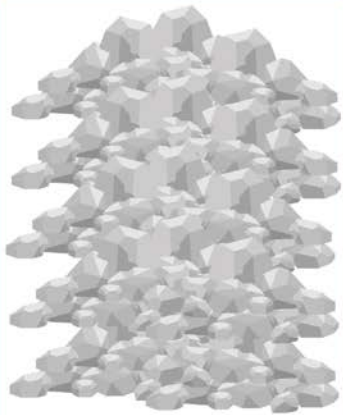




Grand challenges

- Research/development and **innovation** required to underpin the technical baseline



Grand challenges (continued)

Concrete / rubble	Asbestos / soft waste	Metal	Graphite
			
~ 41,000m ³	8,000m ³	~ 10,300m ³	~ 4,600m ³

(£200m)

~ (£200m)

~ (£1-1.5bn)

(Decay storage options?)



Grand challenges

- Initiating the **reactor decommissioning** programme at
Trawsfynydd
- Working with the Supply Chain to develop
the most *appropriate* solution
- Investment and collaboration with **NEW TECHNOLOGY**



Pitch your best ideas!



Pitch your best ideas!

- Register for an i2i session, your *ideas to input*
www.ideas2input.co.uk
- Cross-section by industry and company size

Focus on: major programme and project delivery,
waste management,
DEMOLITION and dismantling



Pitch your best ideas!

- *ideas to input*
- **50 minutes** by **Zoom** with standard agenda



We are interested in your *experience* and **ideas** –
technical innovation/ commercial models/ EFFICIENCIES



What happens next?

- No guarantees
- May use you as a *sounding board* for ideas as our strategy develops

We aim to keep the supply chain abreast of **developments**

- *bulletins*
- *virtual engagement*
- *website and social media*



What else do you need to know?



See you soon!