



# Magnox Supply Chain Engagement Webinar

*'Help us shape the future of decommissioning'*

**4<sup>th</sup> 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
	<b>Break</b>	
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



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



# 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



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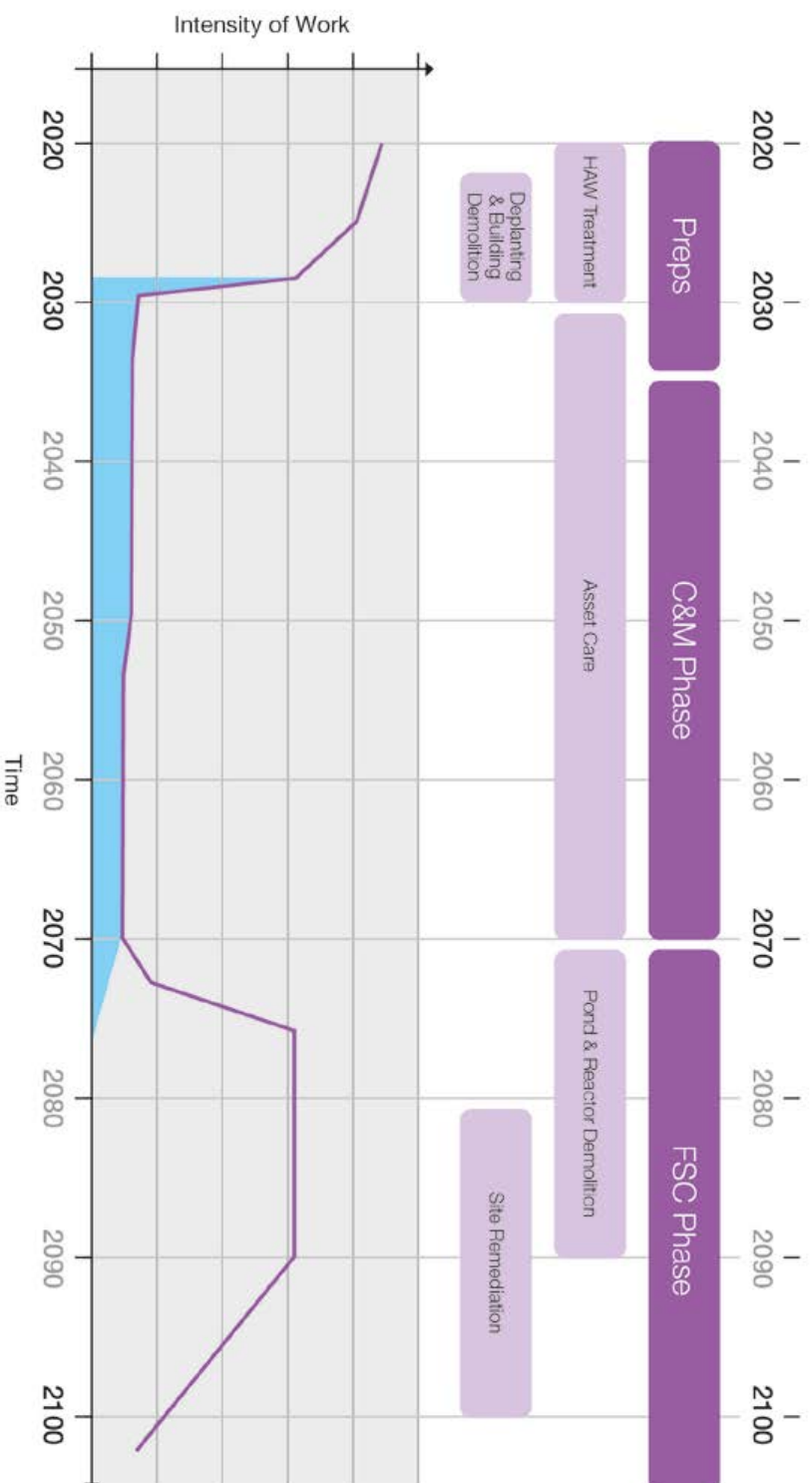
# A change in thinking



# 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***

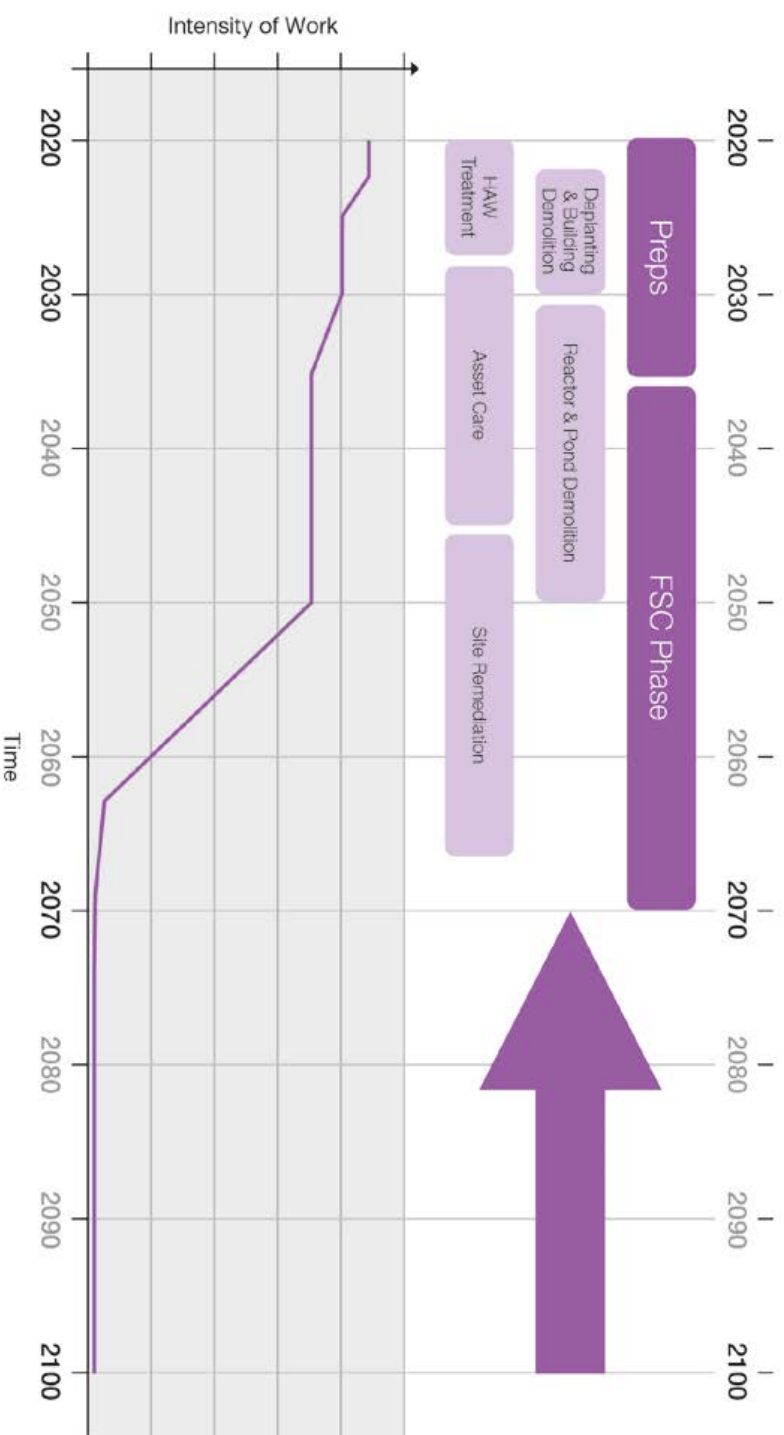
## ***reactors***

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



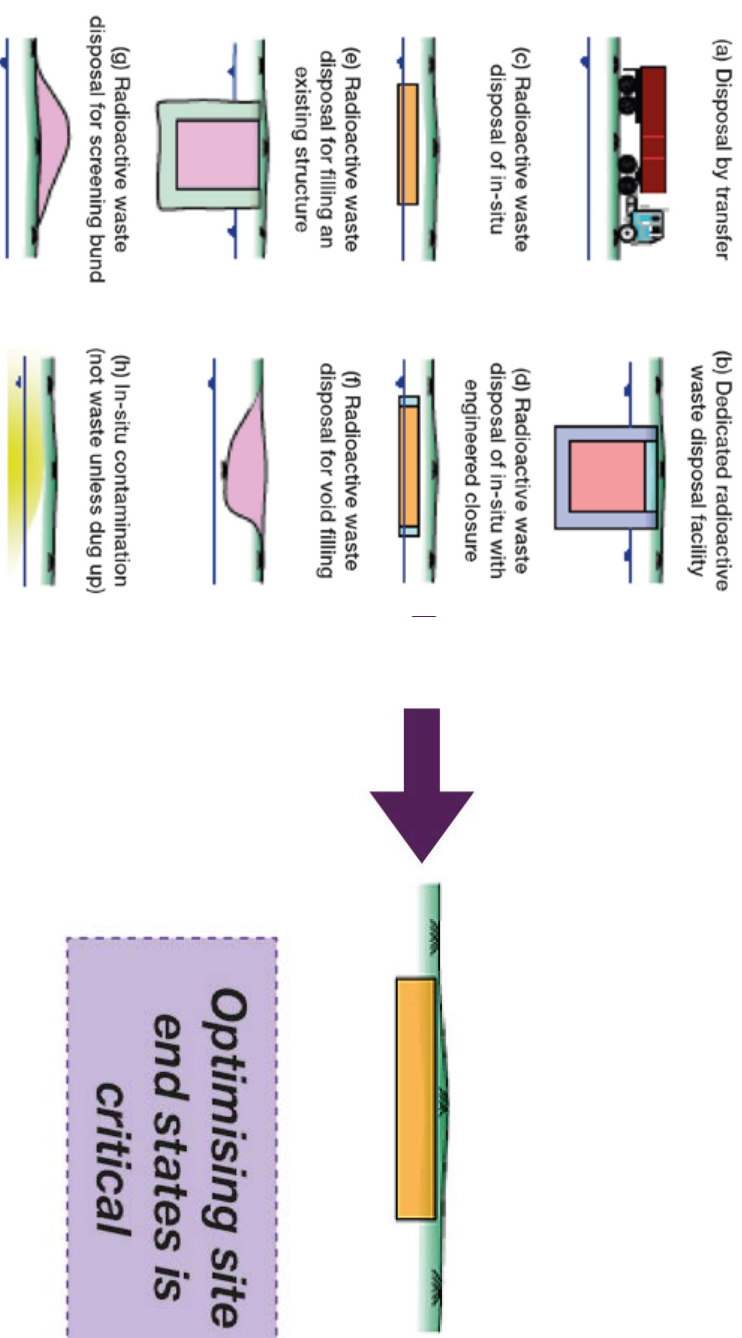
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# Bringing forward decommissioning

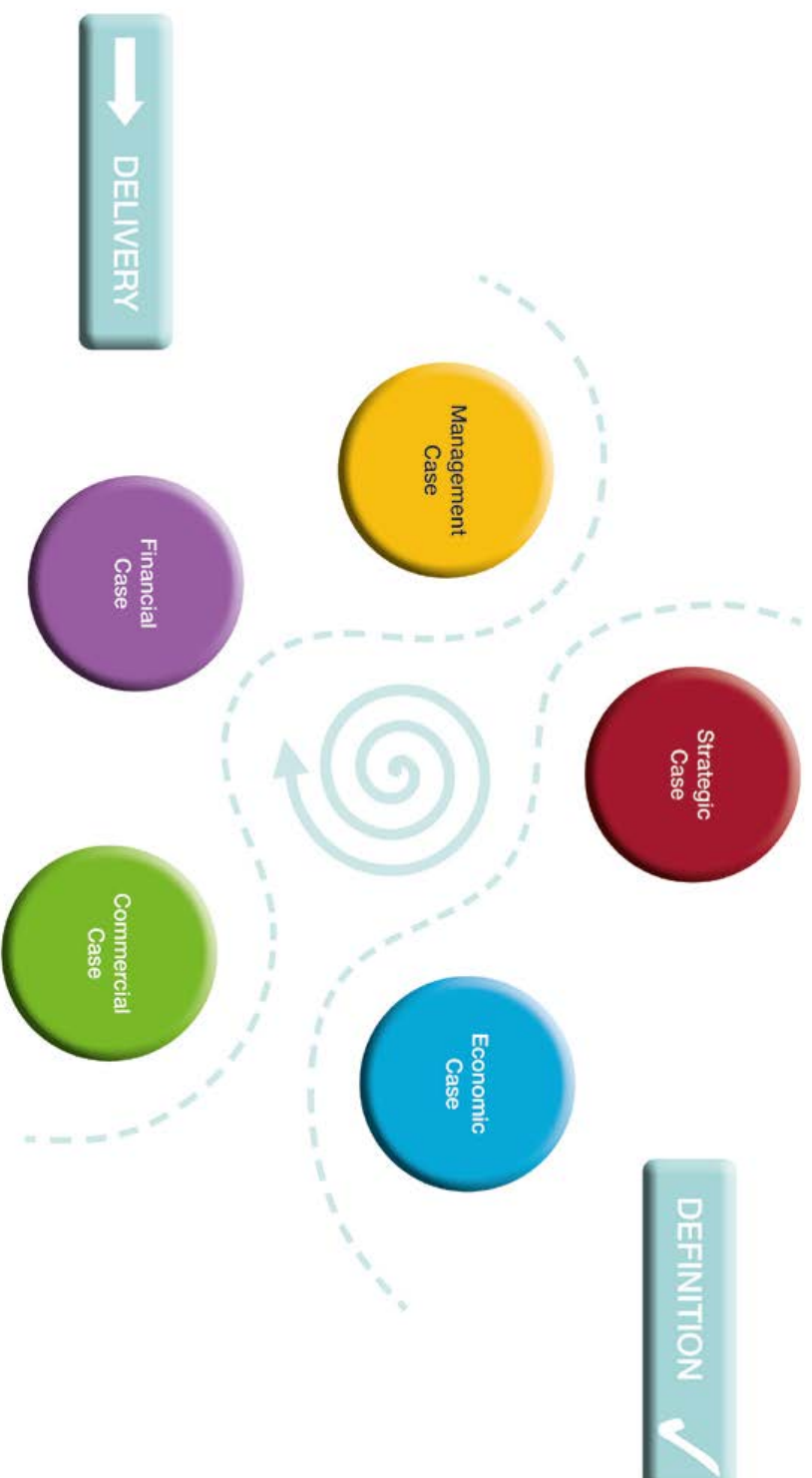


# Our thinking is waste led

## Waste Options



# 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***



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# Engineering industry - learning

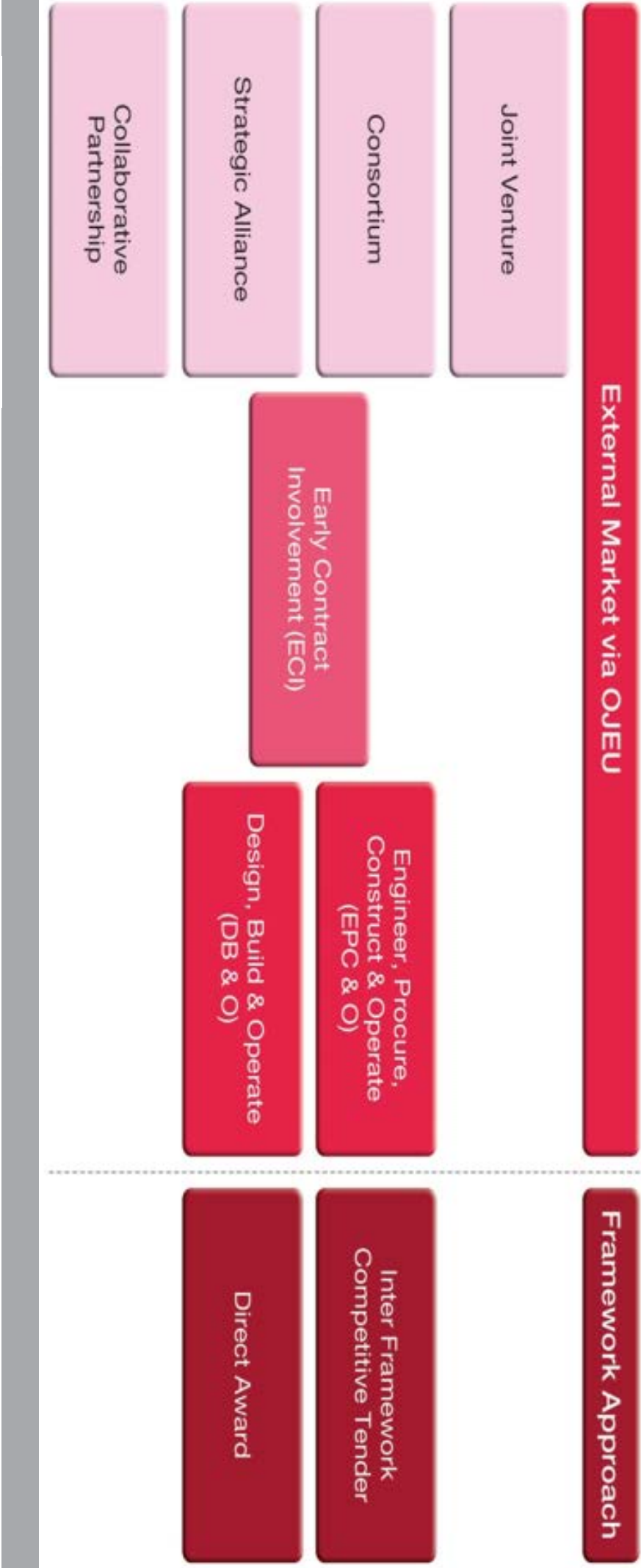


## Current focus

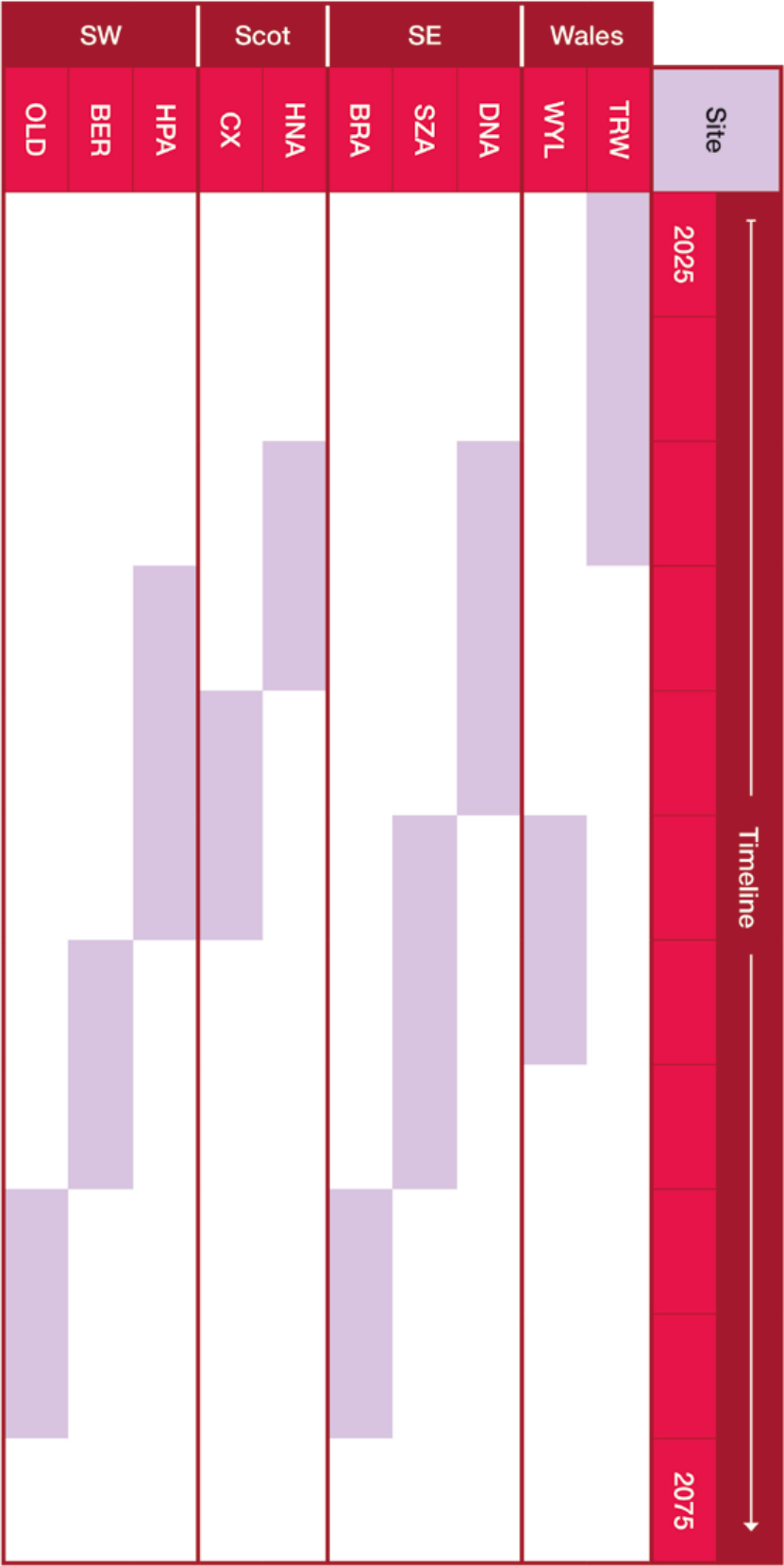
- Developed programme business case currently being prepared for the *site specific strategies*
  - **Target submission March/April 2021**
- Strategic outline case to be written for Trawsfynydd as the **lead and learn site**
  - **Target submission September/October 2021**



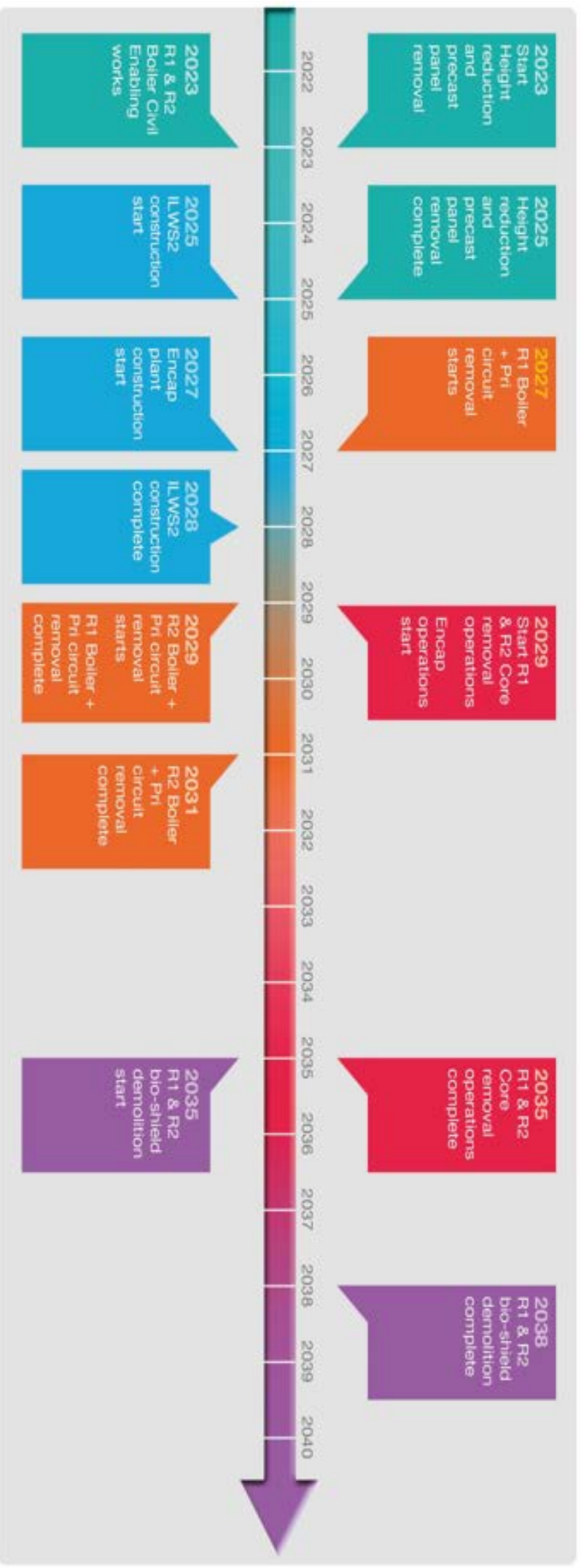
# Delivering decommissioning excellence



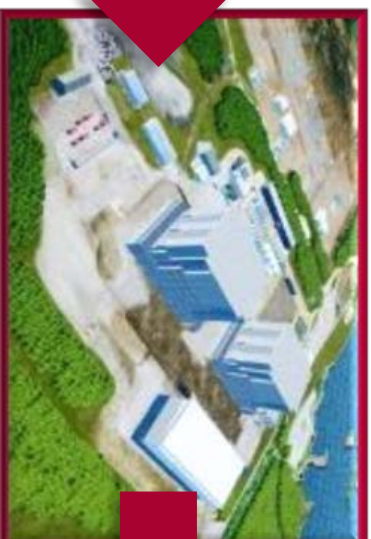
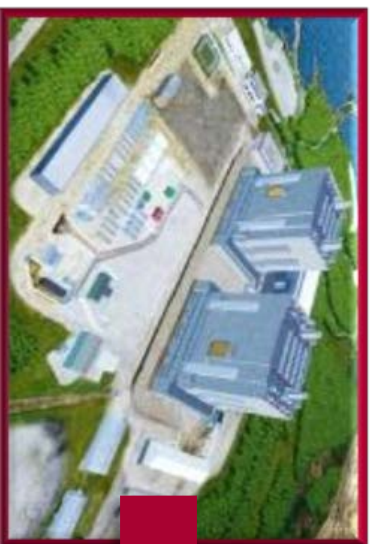
# Potential scenario – illustrative



# 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





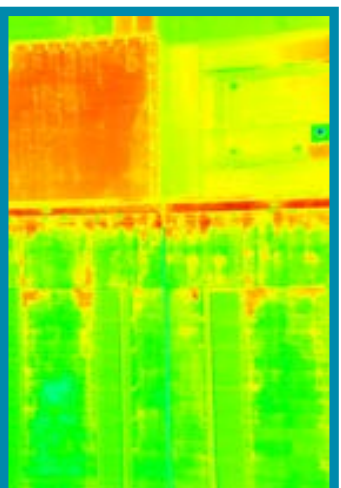
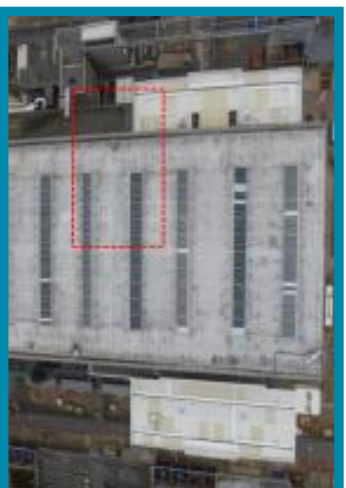
# Grand challenges – reactor complexity





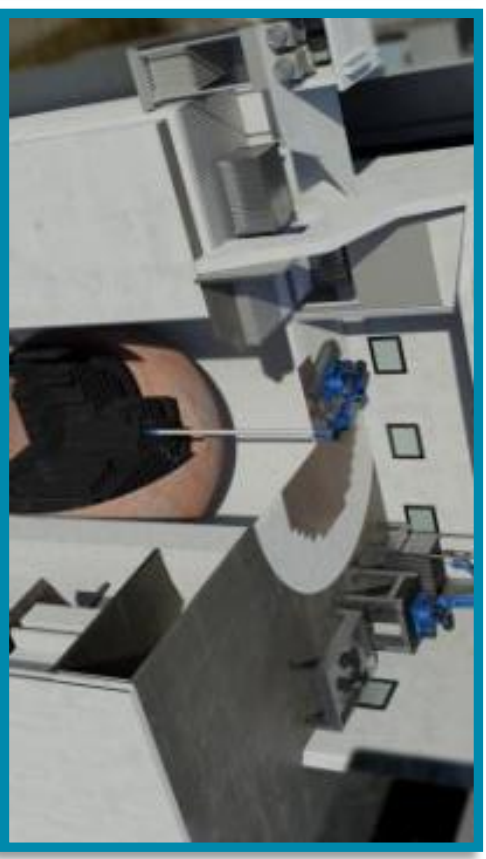
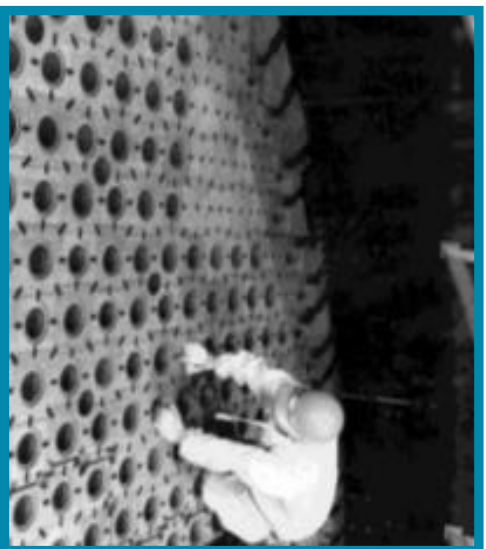
# Grand challenges

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



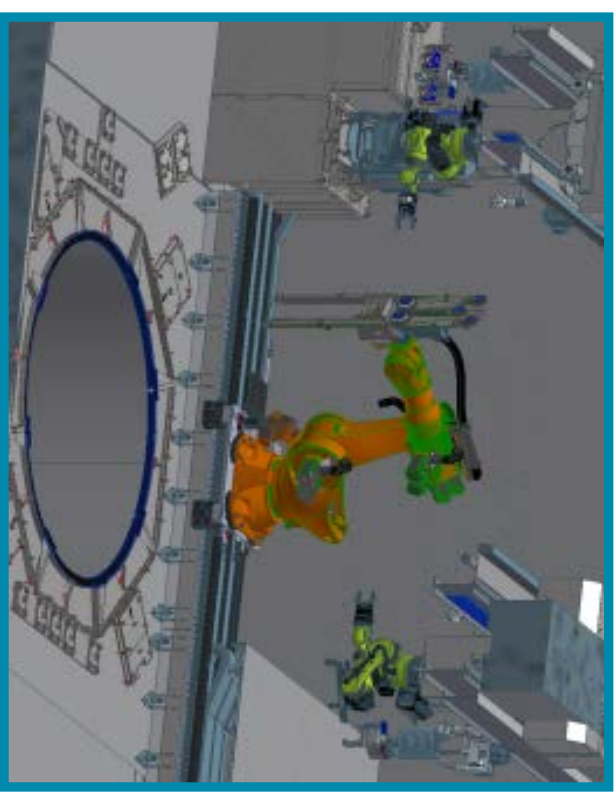
# Grand challenges

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



# Grand challenges

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

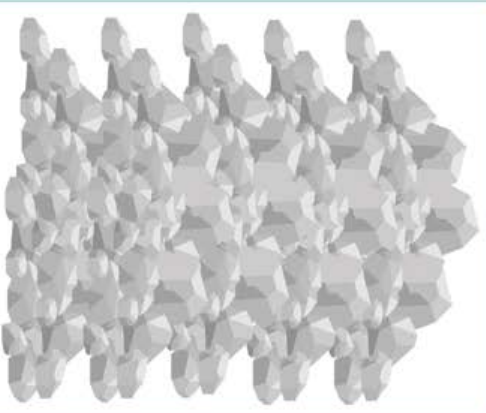

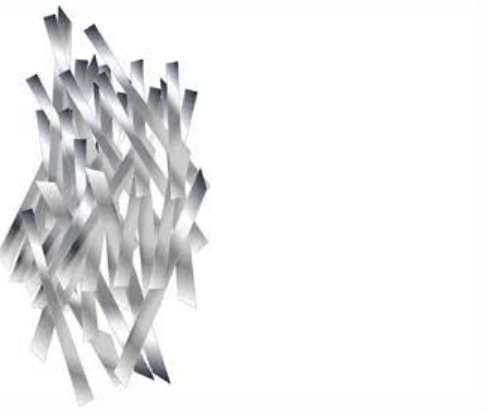
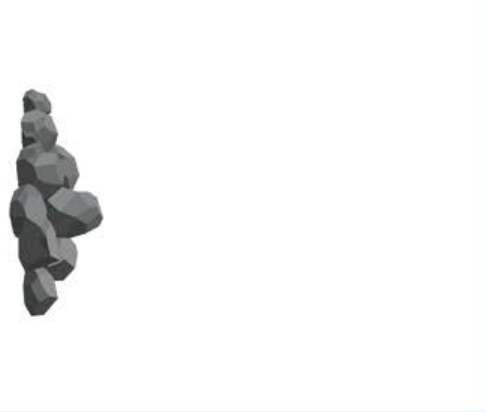


# Grand challenges

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



# Grand challenges (continued)

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

**(£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](http://www.ideas2input.co.uk)
- Cross-section by industry and company size

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



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# 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



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# 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!