

# GAME CHANGERS .technology

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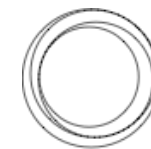
# What is Game Changers?

- Sellafield Ltd faces substantial costs in maintaining facilities during its decommissioning programme.
- Existing routes to market available, do not always deliver innovation.
- Sellafield Ltd is leading on programmes to attract and implement innovative technologies.
- Game Changers is an important commitment made by Sellafield to bring in technology and innovation from both within and outside of the nuclear sector.
- Sellafield works in partnership with NNL and FIS360 as its innovation brokers, this is both a financial investment as well as being an active partner in making the programme work.
- Key to this approach is well articulated problem statements from Sellafield Ltd's site based team working closely with NNL's specialists and working with FIS360 who have a track record in developing commercial viable technologies.

**GAME  
CHANGERS**  
technology



NATIONAL NUCLEAR  
LABORATORY



**FIS360**  
innovation to revenue

# Game Changers Process

A simple five stage process with support, guidance and feedback available throughout



## STAGE 1

Game Changers work with Sellafield to identify, articulate and publish specific decommissioning challenges.

Events held to support challenges and invite interest from across industry sectors.



## STAGE 2

Applications and poster presentations submitted.

Each appraised by review panel comprising Sellafield, NNL and FIS360 personnel.



## STAGE 3

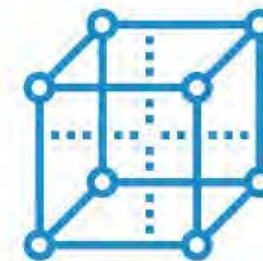
Applications of tangible interest invited to present business case and project plan (and possible technology demonstrations) to Sellafield.

Up to £10k awarded to projects with Sellafield support.



## STAGE 4

Projects reviewed by leadership team with successful applications awarded Proof of Concept funding.

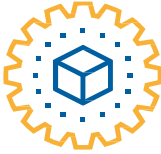


## STAGE 5

Delivery and completion of the Proof of Concept project, with demonstrations and appraisal by Sellafield.

# The story so far...

10



Challenge statements published and promoted

260+



Companies registered for briefing events

400+



Cross-sector delegates attended events



196

Applications Assessed

80

Applications Awarded Feasibility Grant

13

Proof of Concept Grants Awarded



## All Proof of Concept projects:

- Have strong Sellafield buy-in
- Demonstrate clear value / 'use case'
- Aligned to the Sellafield challenges
- Receive mentoring / business support / commercialisation support

- Value to Sellafield already has the capability of saving £100s millions
- Different way of working which accelerates technology development
- Commercialisation support to translate into nuclear
- Collaboration between companies (SMEs, Tier 2s)
- Leverage significant funding - InnovateUK over £1m to-date

# Case Study – No. 1

- **Raw Water – Crack Sealing Technology**
- Innovative crack dealing technology used in off-shore and on-shore oil and gas installations, bismuth metal alloy plugs.
- Molten metal manipulation technology has a wide variety of applications for large openings or small micron sized cracks.
- A number of applications have been identified for nuclear which can stabilize a structure and provide radioactive shielding.
- The technology is being assessed by a private sector decommissioning company to take forward into active deployment.

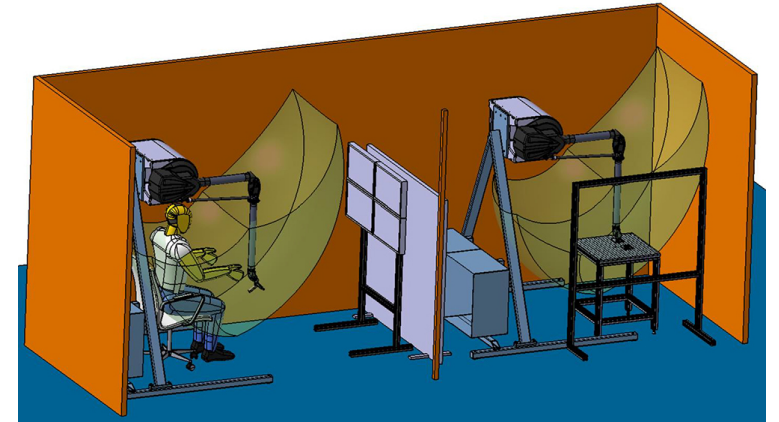


**rawwater**



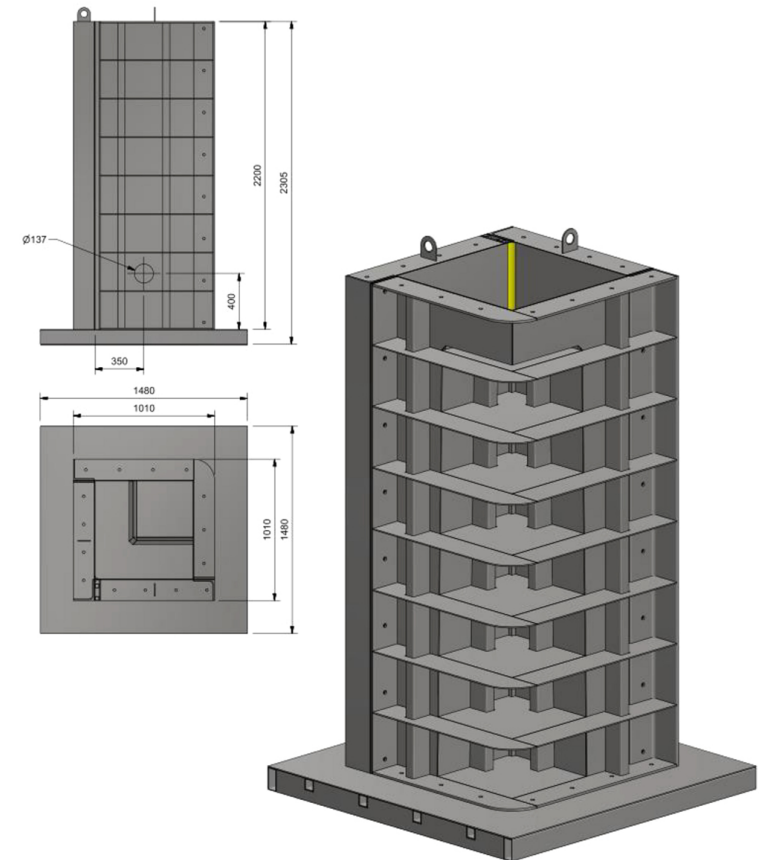
# Case Study – No. 2

- **Oxford Technologies (Veolia)**
- Dextrous Remote Handling Cell for High Active Operations
- Technology proven in operation in Fusion reactor maintenance.
- The technology and approach aims to remove a human from hazardous environments.
- Operators could be located up to 8km away from high active requirements.
- Potential next steps include in-active trials working in partnership with NNL.



# Case Study – No. 3

- **Advanced cementitious and high density concrete products.**
- Partnership between two technology development companies: Amber Precast Group and LKAB.
- Consortium to produce a new range of lightweight and robust ultra-high performance concrete containers.
- These designs eliminate the high costs of steel fabrications and environmental impacts.
- Entrepreneurial organisations with an innovative solution to an existing problem, next steps include commercial scale ups and operation.



# Summary

- Game Changers is a carefully planned programme bringing together nuclear site problem holders at Sellafield with commercial innovators.
- The commitment of the site licence company is key to ensure that problems are well understood by the market.
- The bridge between Sellafield Ltd and innovators is carefully managed by NNL and FIS360 to ensure that the best ideas are found to a well defined requirement and that commercial opportunities can be made possible.
- This programme can bring regional benefits as many of these game changing innovations can lead to locally delivered solutions, such as case study no. 3 which could lead to a manufacturing facility close to the Sellafield site.

