Nuclear Island

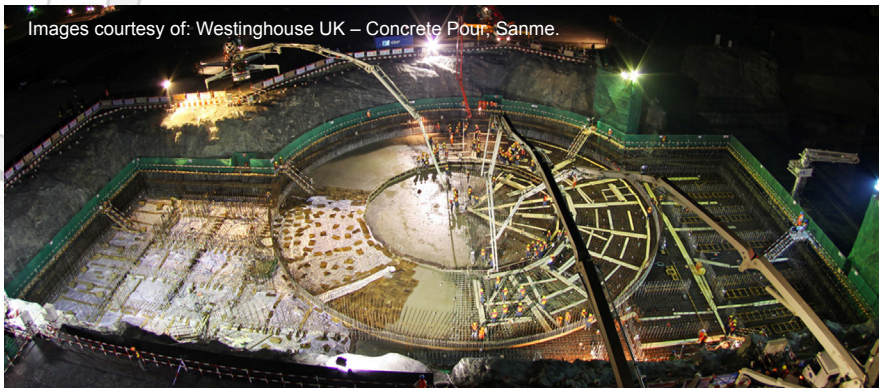
The Nuclear Island is a unique experience in which engineering students develop and apply their skills to construct a scaled down New Build construction project. The vision is a partnership between employers, Higher and Further Education Institutes to tackle the critical future workforce needs of nuclear new build.

Background

The prospect of replacing the current fleet of nuclear power stations represents a multibillion pound private sector investment but one which is dependent on a highly skilled workforce. Cogent's report Power People shows that the industry will require a thousand new recruits every year to ensure that power generation meets projected demand to 2025 and beyond.

More about the Nuclear Island

The Nuclear Island is a nationally available New Build university module for students in science and engineering, engaging a wide range of partners across the UK. It is underpinned by a collaboration of a university, a contractor and a consultant delivering a new learning experience. For the first time, nuclear safety culture will be an essential part of science and engineering courses, embedding critical safety behaviors from day one. It builds upon established good working practice in the civil engineering sector where scaled down models of large builds are performed by students: www.constructionarium.co.uk



Images courtesy of: Westinghouse UK – Concrete Pour, Sanme.

The Nuclear Island is funded by the National HE STEM Programme and the Royal Academy of Engineering.

Project Partners

- Cogent
- Constructionarium Ltd
- Construction Skills
- ECITB
- Imperial College London
- National Skills Academy Nuclear
- Royal Academy of Engineering
- ThinkUp

Higher Education partners

- Bridgwater College, Somerset
- Glyndŵr University
- University of Birmingham
- University of Leeds
- University of Manchester, Dalton Nuclear Institute

Employer Support

- AMEC
- Areva UK
- Balfour Beatty
- Civil Engineering Contractors Association (CECA)
- Expedition Engineering
- John Doyle Construction
- Laing O'Rourke
- Magnox
- Nuclear Industry Association (NIA)
- Springfields Fuels Ltd
- Westinghouse

If you want to find out more about any of Cogent's programmes contact us on: 01925 515 200

www.cogent-ssc.com

Cogent SSC, Unit 5, Mandarin Court, Centre Park, Warrington WA1 1GG

The strategic skills alliance for the Nuclear Industry

Learning outcomes

Transformative learning outcomes

- Understand the need for energy and why nuclear could be a solution
- Inspire students to take up the technical challenge of building
- Provide students with the arguments that they can use to make their own decision about nuclear

Technical learning outcomes

The technical learning outcomes are drawn from the Royal Academy of Engineering 'Nuclear Lessons Learned' document:

- Nuclear behaviours and introduction to the Triple Bar
- Event and near-miss reporting
- Importance of safe behaviour and safety culture
- Techniques for prevention of error
- Workplace observation and why it is carried out

Construction – general

- Contract management must instil a disciplined approach
- Relentless attention to meeting deadlines
- Interfaces require active management with a rigorous quality assurance program

Design planning and procurement

- Using civil modules saves time and allows off-site testing
- Follow-on replica stations are cheaper and take less time to construct

> *"AREVA UK Ltd is supporting Cogent and Imperial College in their bid to the Royal Academy of Engineering to build a nuclear island model. It is important that engineering skills are nurtured and developed at all levels in order to feed the needs of the industry."*
>
> **Jean-Jacques Gautrot Chairman & CEO, AREVA UK**

For more information, please visit:
www.cogent-ssc.com/Higher_level_skills/ni_index.php

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National HE STEM Programme

cogent

Constructionarium

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ECITB Engineering Construction Industry Training Board

The National Skills Academy NUCLEAR

Imperial College London

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