

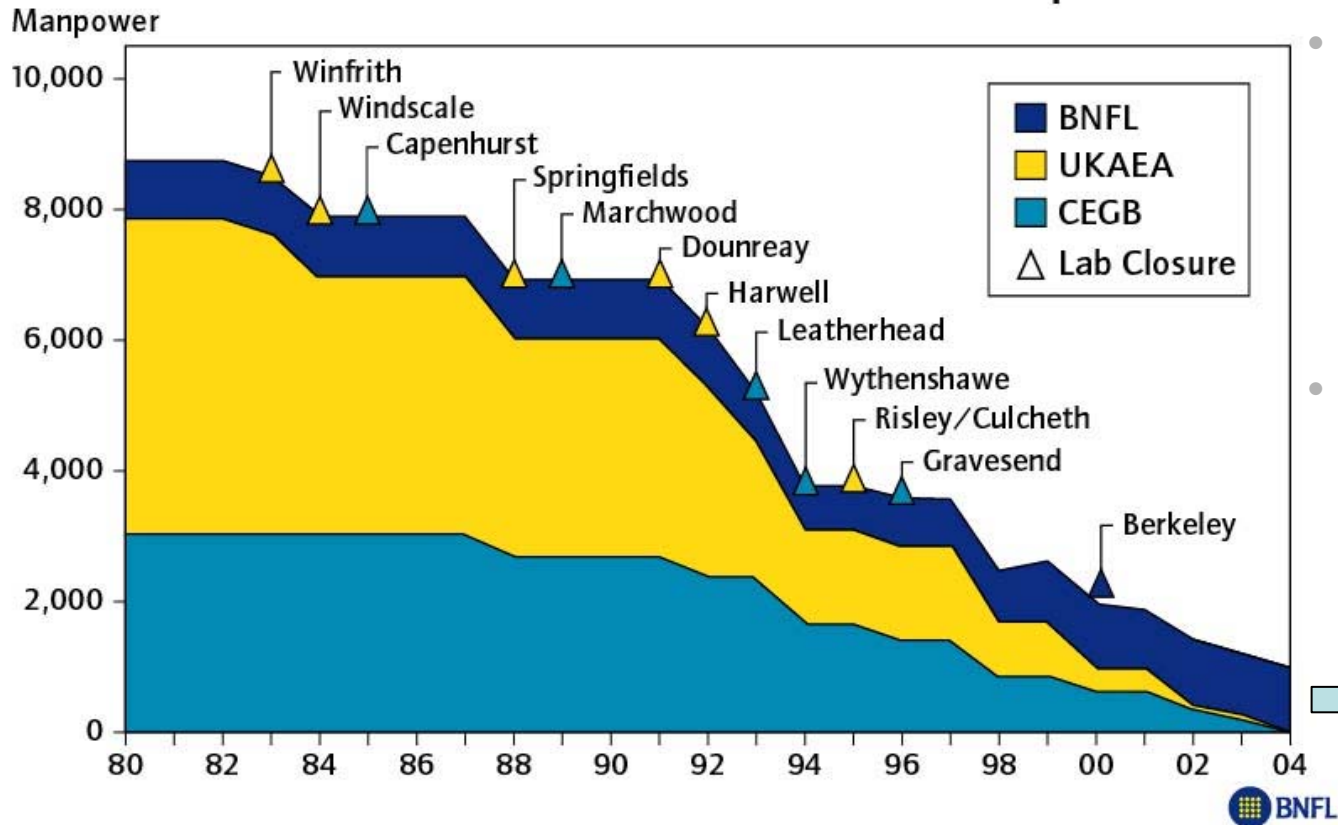
Technical Skills Requirements in the UK

*'An overview from within Nexia
Solutions'*

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UK Nuclear R&D Manpower

Best Estimate in Decline in UK R&D Manpower

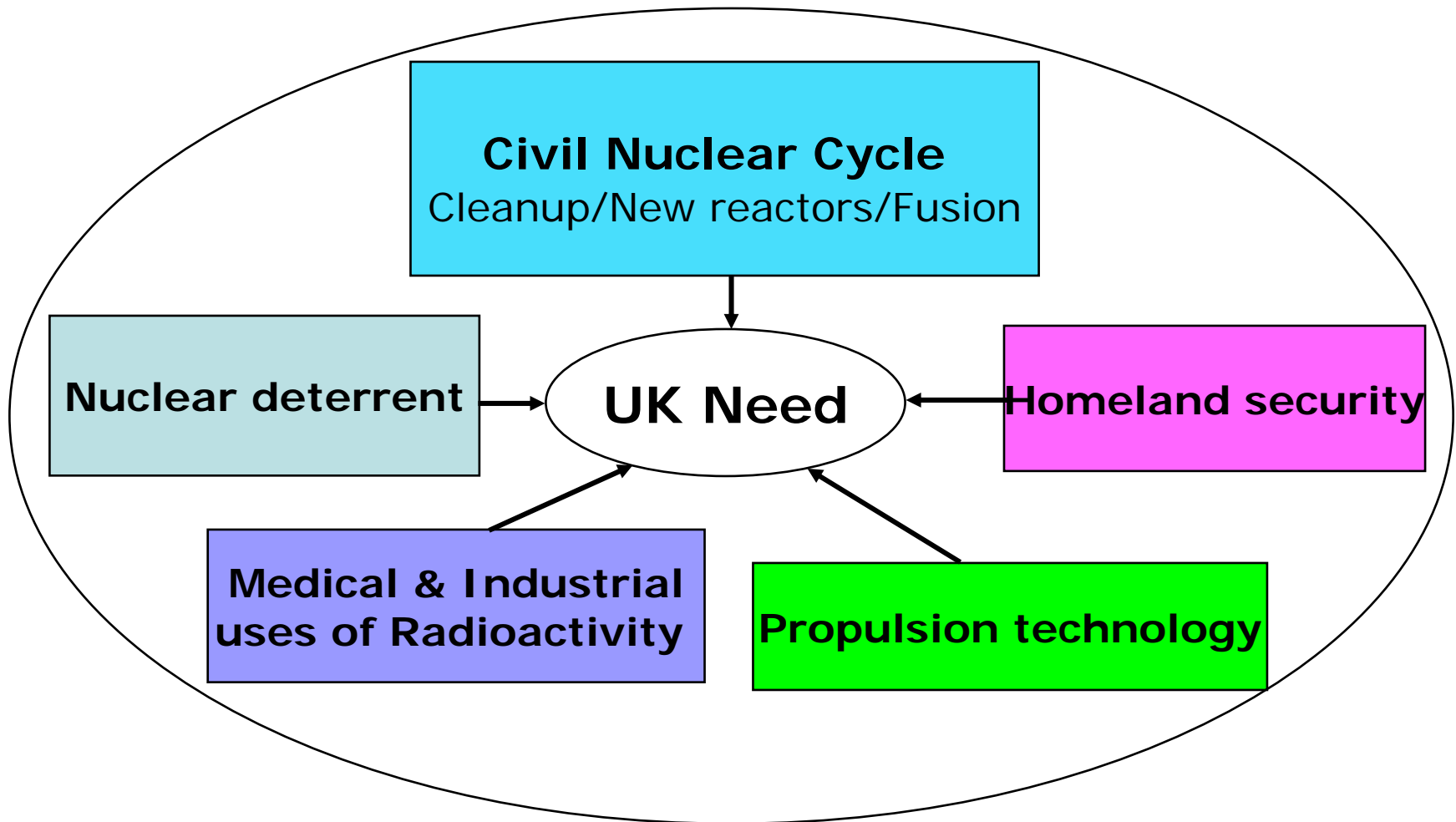


- As recently as 1990, ~7000 people were employed in nuclear R&D
- By 2004 ~1000 remained, mostly in Nexia Solutions



nexasolutions
Nuclear expertise intelligently applied

UK need for nuclear skills



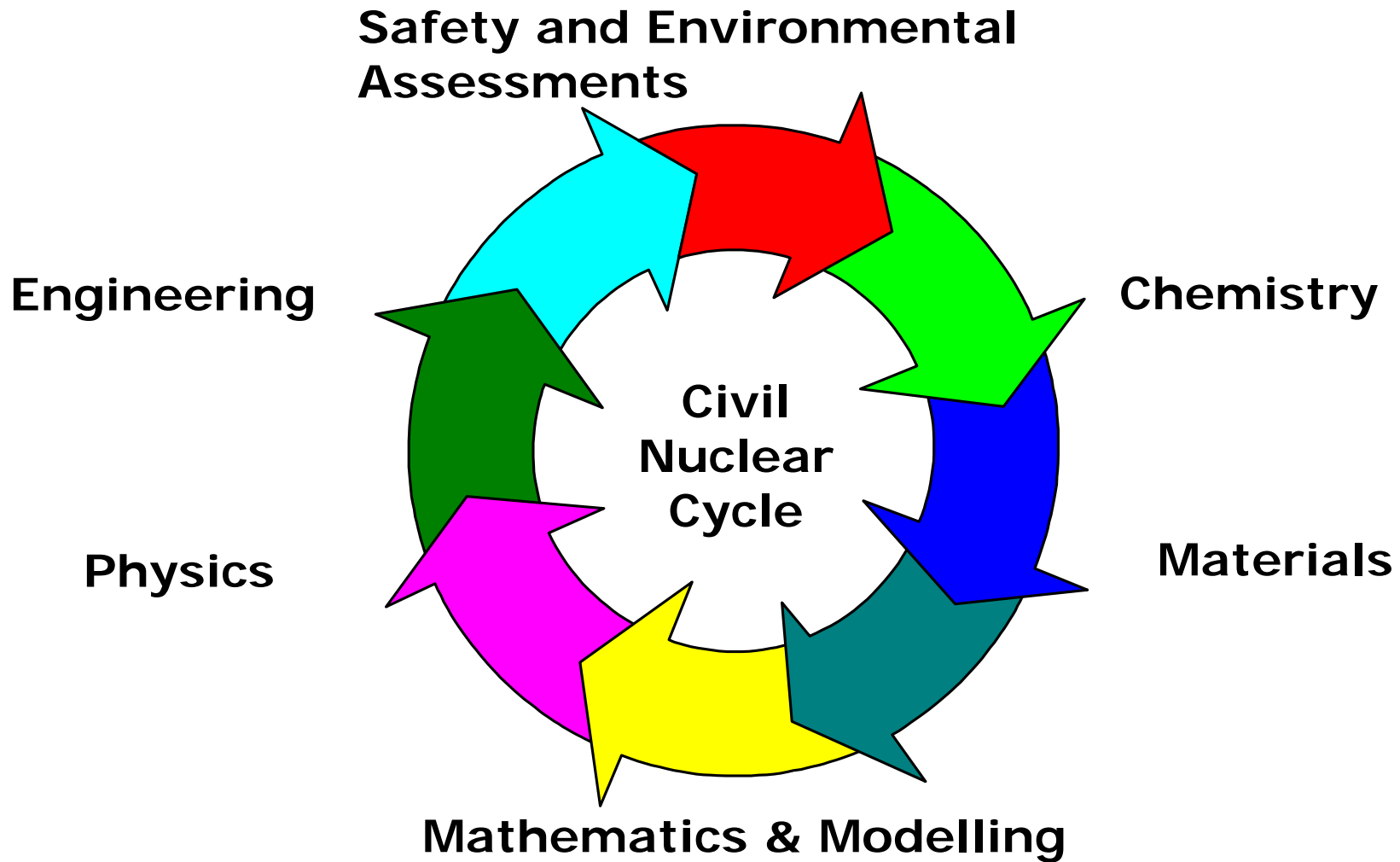
Perceived scope of National Nuclear Lab

- Existing nuclear power and fuel cycle systems
- Technology in order to exploit the use of power generation by nuclear fission in the future
- Support clean-up of the historic legacy and to develop long term solutions to the disposal (or disposition?) of radioactive waste.

Duration & Breadth of Skill Needs

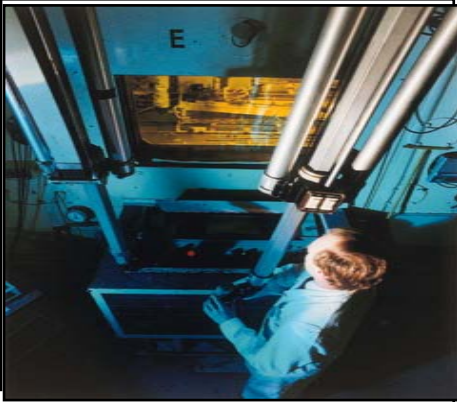
- Regardless of the details of future R&D programmes:
- There is a need to maintain national priorities in nuclear technology over many decades
- There is a need to renew the skill base over more than one generation of scientists and engineers
- There is a need to ensure co-ordination between the different parts of the scenario to gain maximum benefit from the technology.

Skills Required



Nexia Solutions - Active Facilities

B13 Windscale



Large flexible shielded facility for PIE and waste management R&D

Technology Centre Sellafield



High active cells, plutonium and MOX facilities, active/non active labs, full scale test facilities

B709 Springfields



Uranium Laboratories and Rig Halls

Benefits from overview & co-ordination

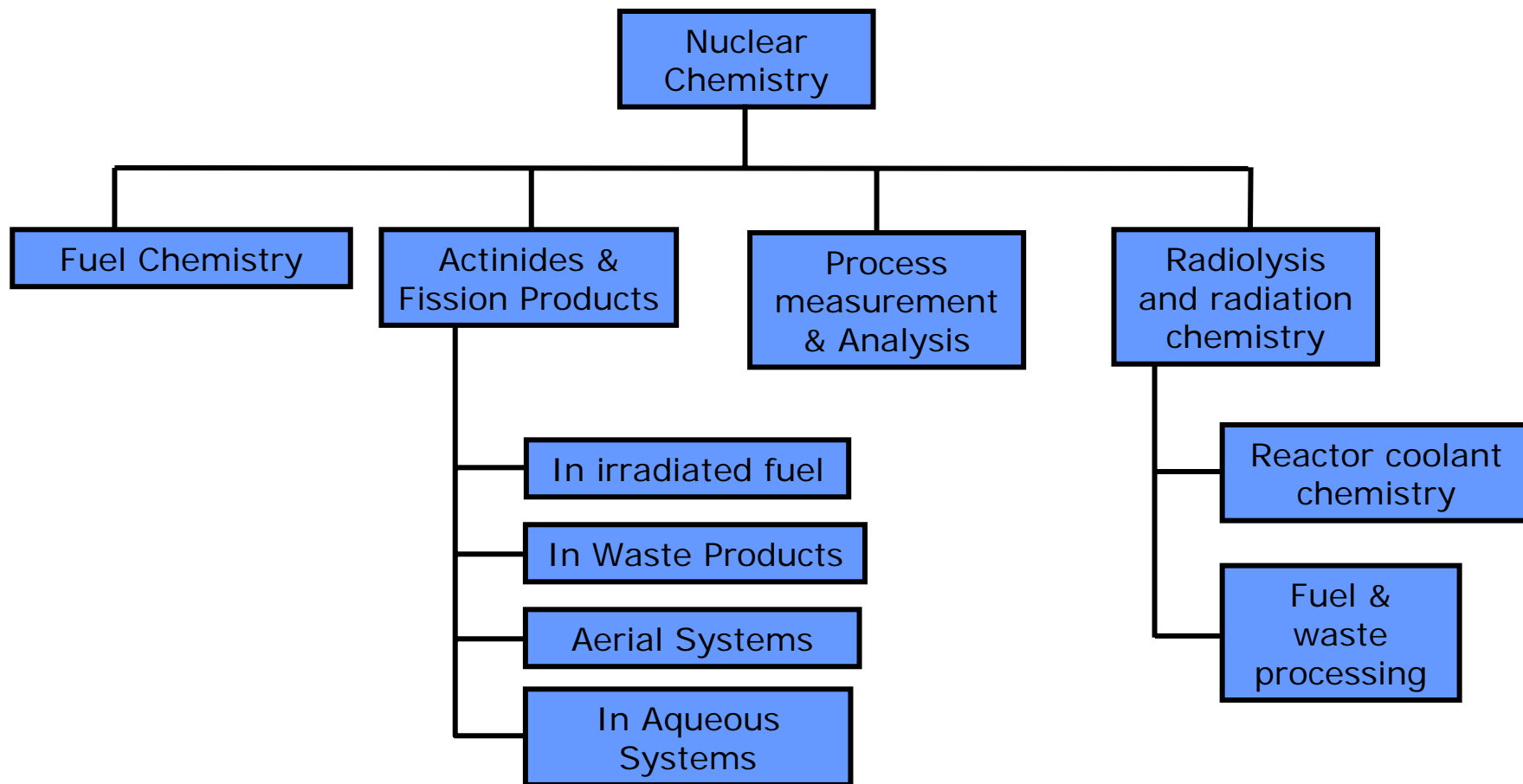
- An industry-wide overview and co-ordination of skills could yield benefits:
 - Monitor growth/decline in total skill-base rather than 1 supplier
 - Maximise synergies between skill holders & across skills
 - Assist with a common approach to training & renewal of skills
 - Concept of nuclear skills stewardship

Summary – taking a long term view

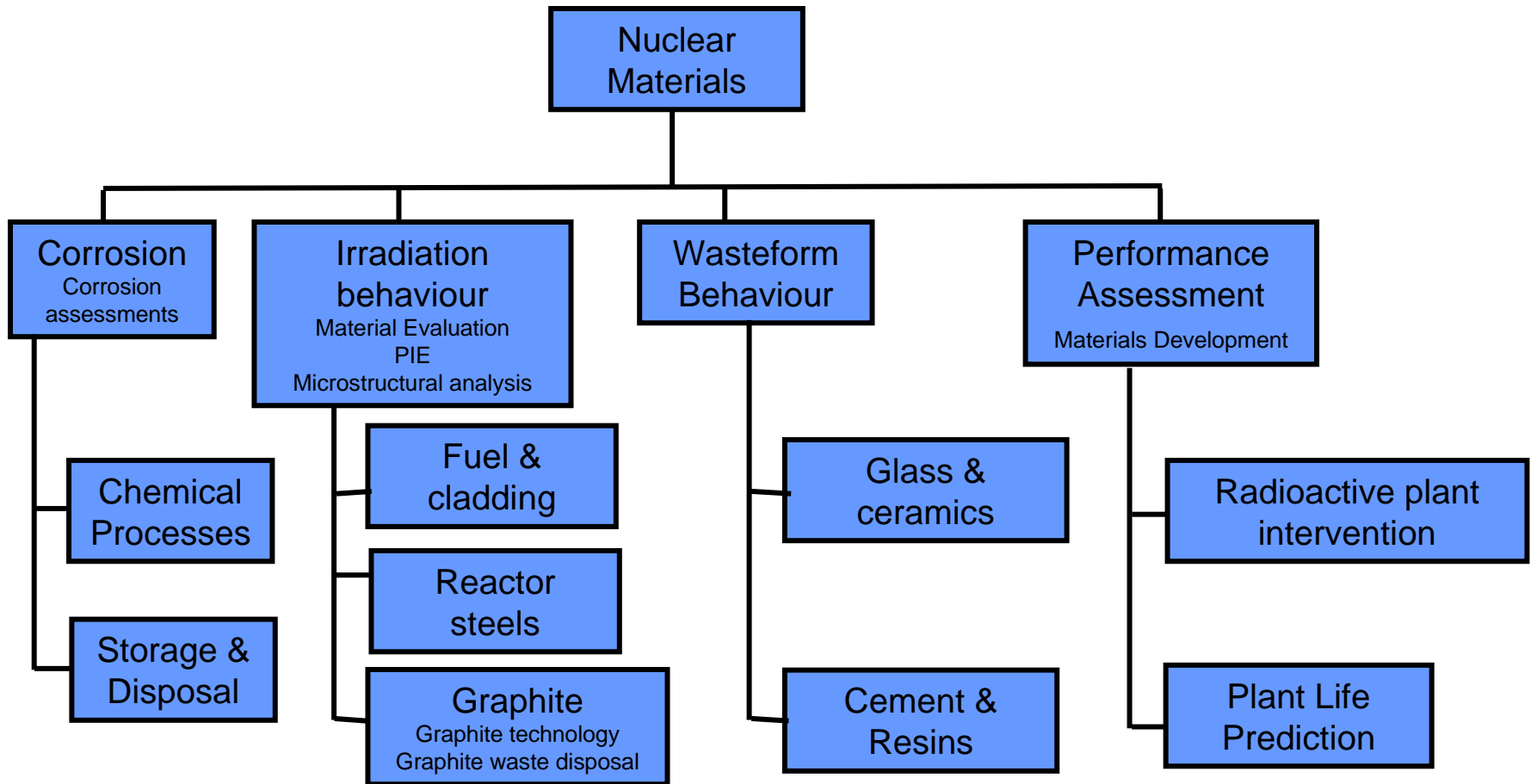
- The history of the nuclear industry has some salutary lessons on skills retention (or lack of it)
- For civil use of nuclear fission:
 - There is a long term need for a range of technical skills (decades)
 - Most skills are required by different needs/issues

Slide Park

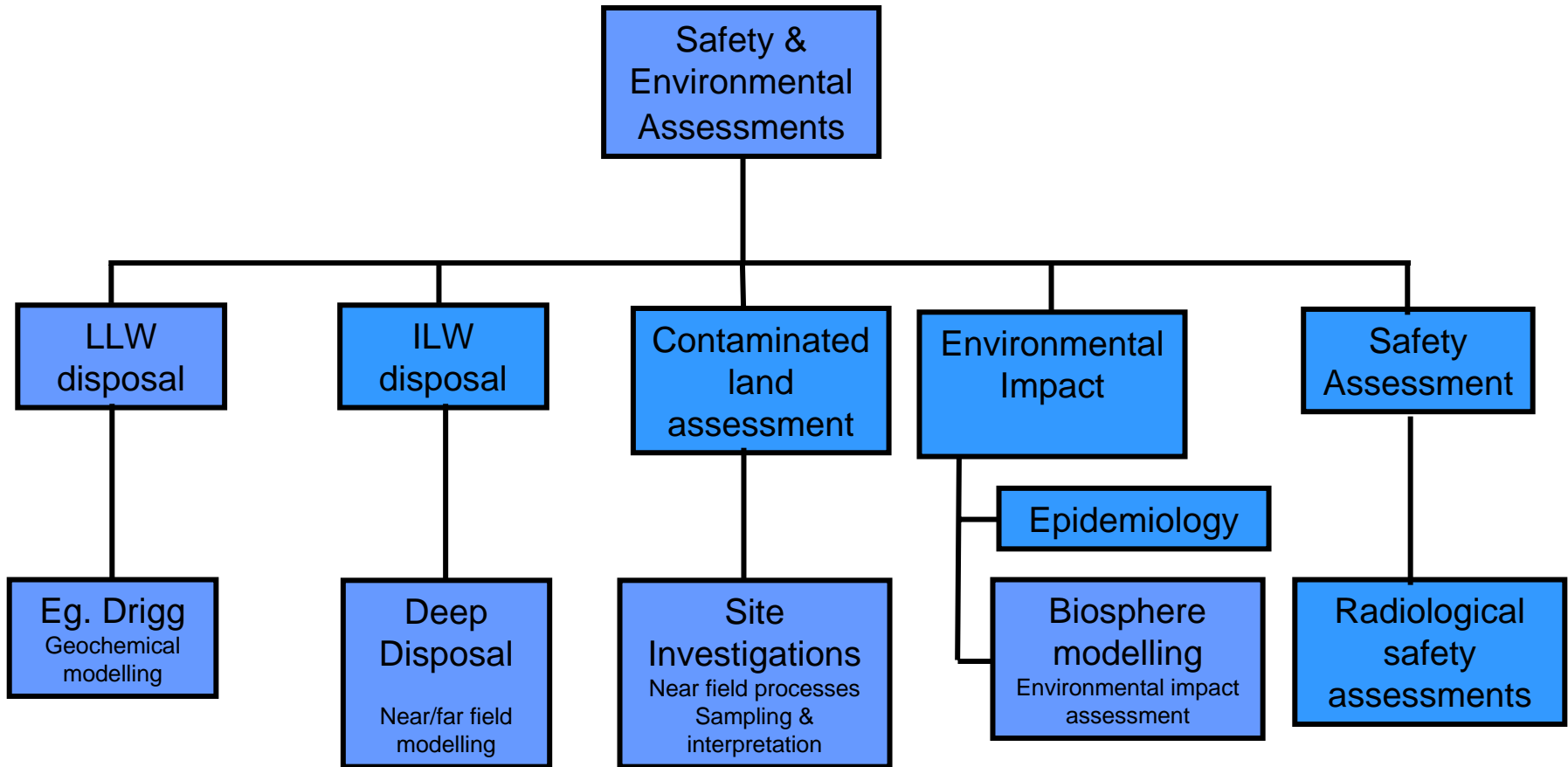
Nuclear Chemistry



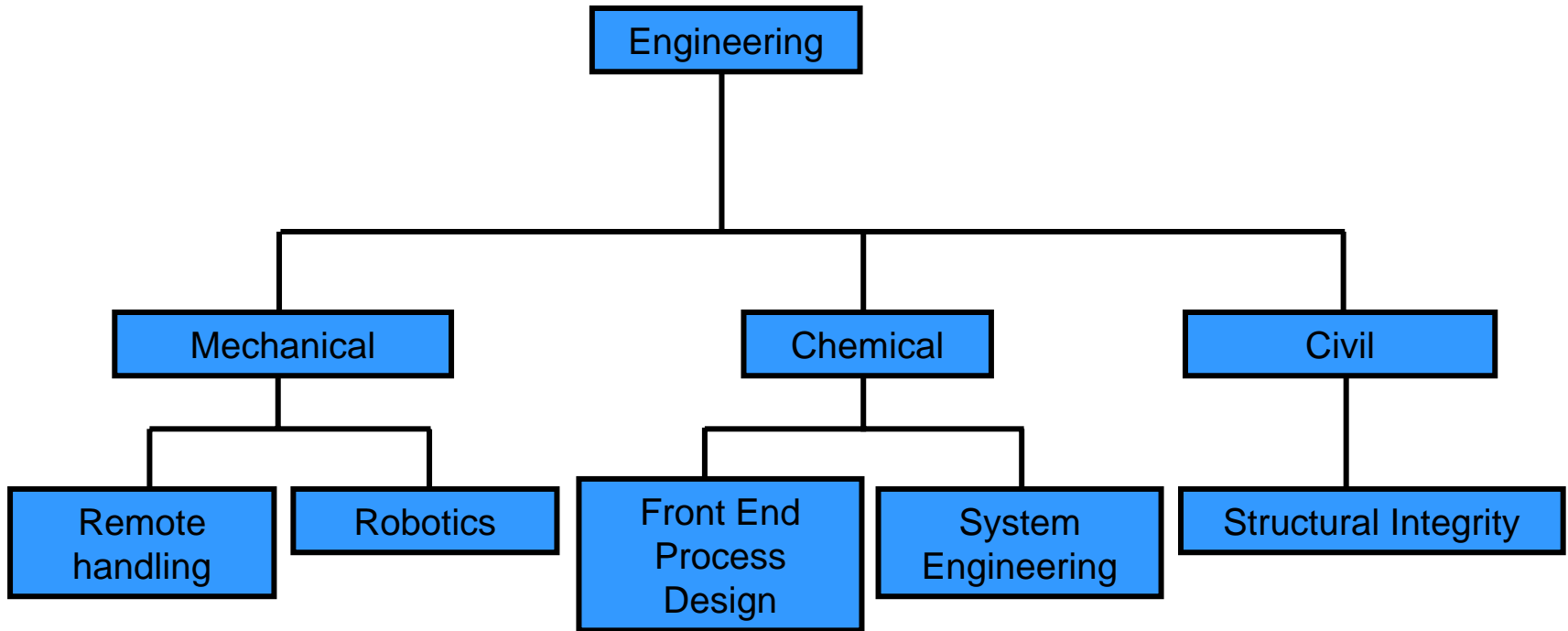
Materials



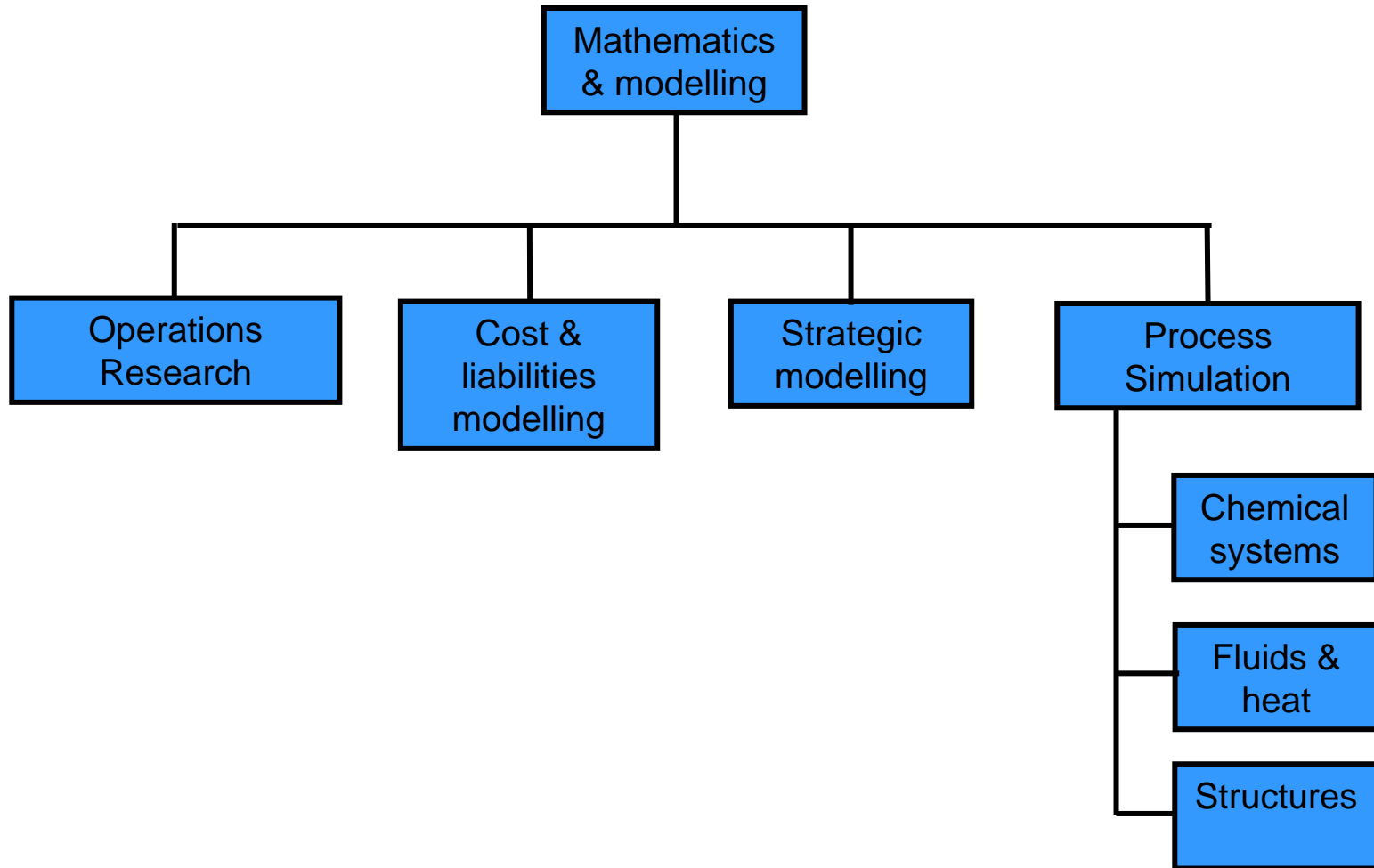
Safety & Environmental assessments



Engineering



Mathematics & modelling



Physics

