The UK Nuclear Industry Experience

Chris Savage

Nuclear Industry Association

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NIA – UK Capability Report

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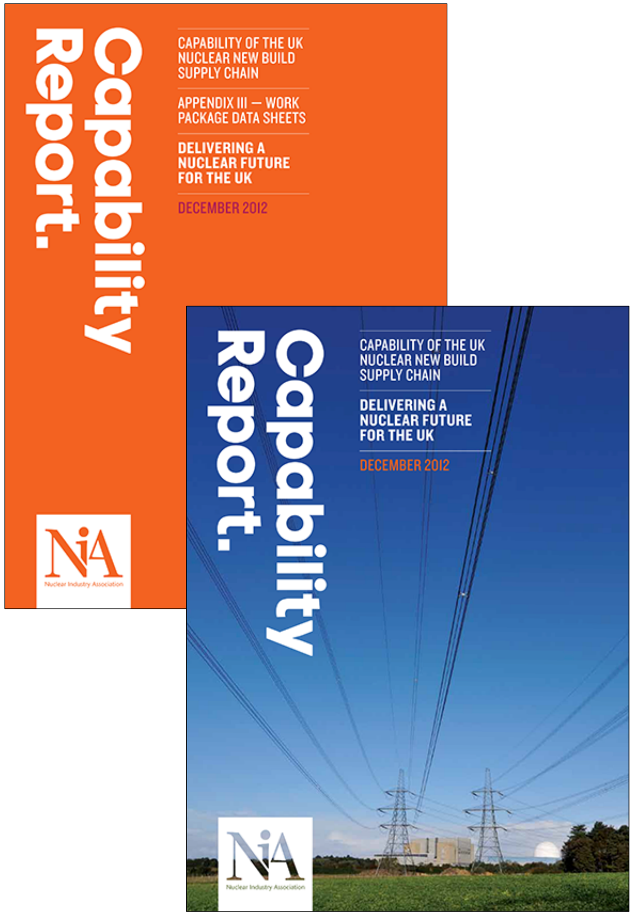

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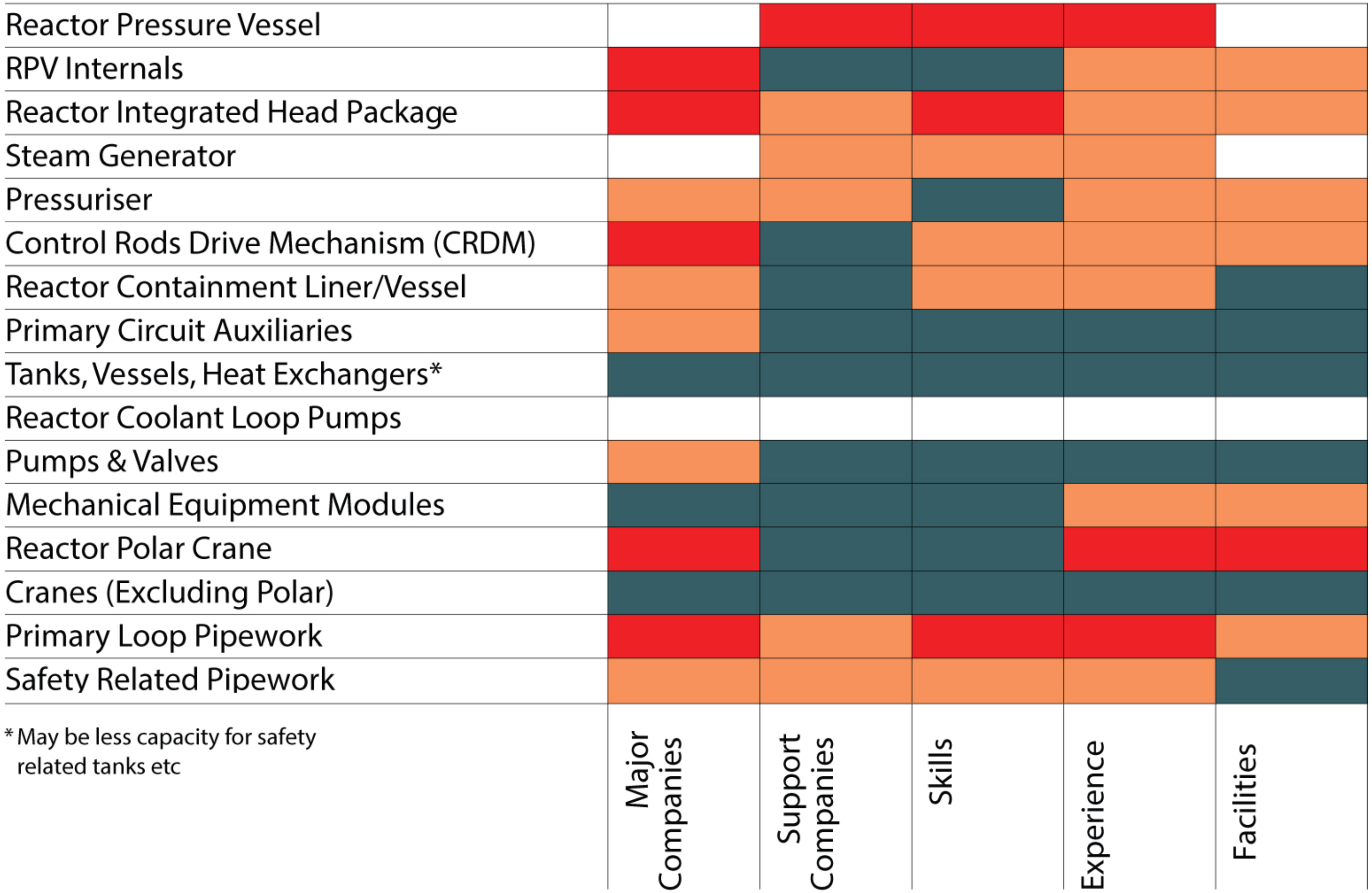
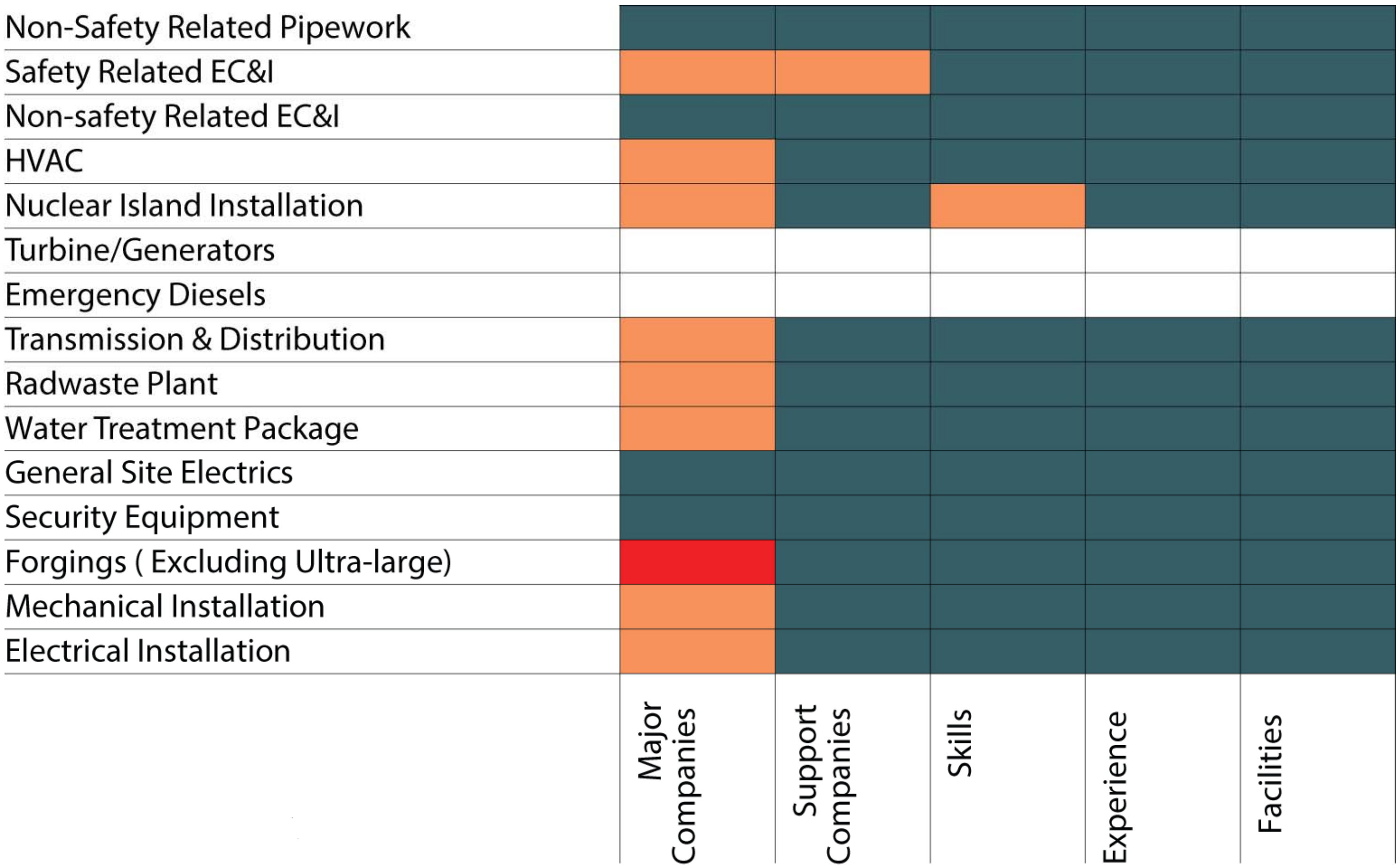
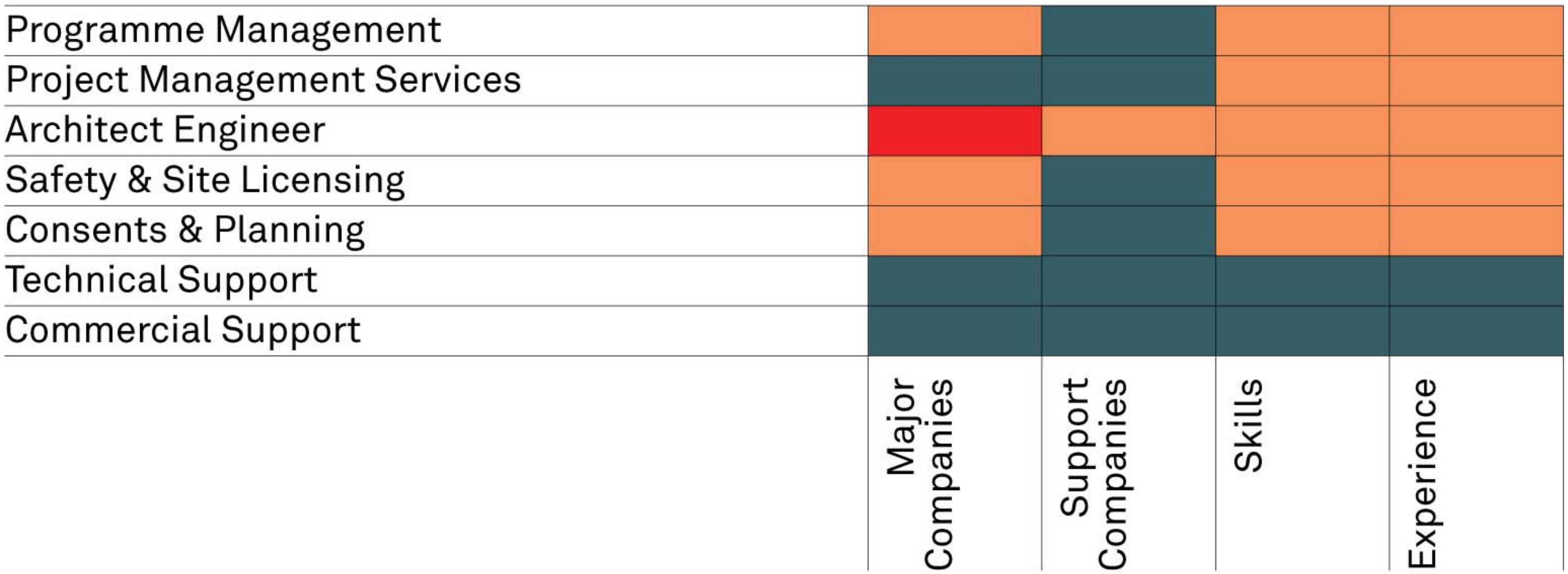
Industry Capabilities: Plant and Equipment Manufacture and Installation 1



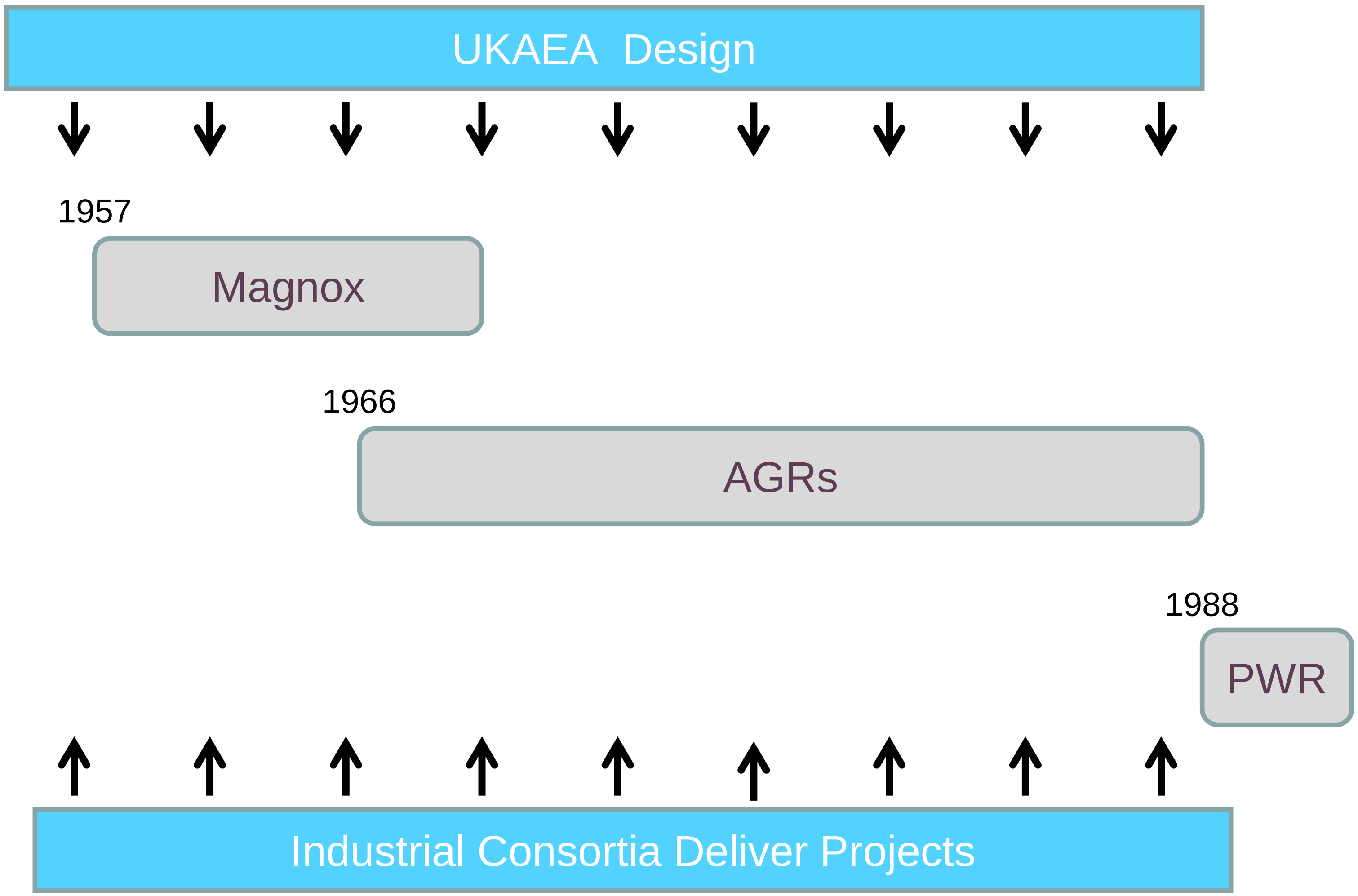
Industry Capabilities: Plant and Equipment Manufacture and Installation 2



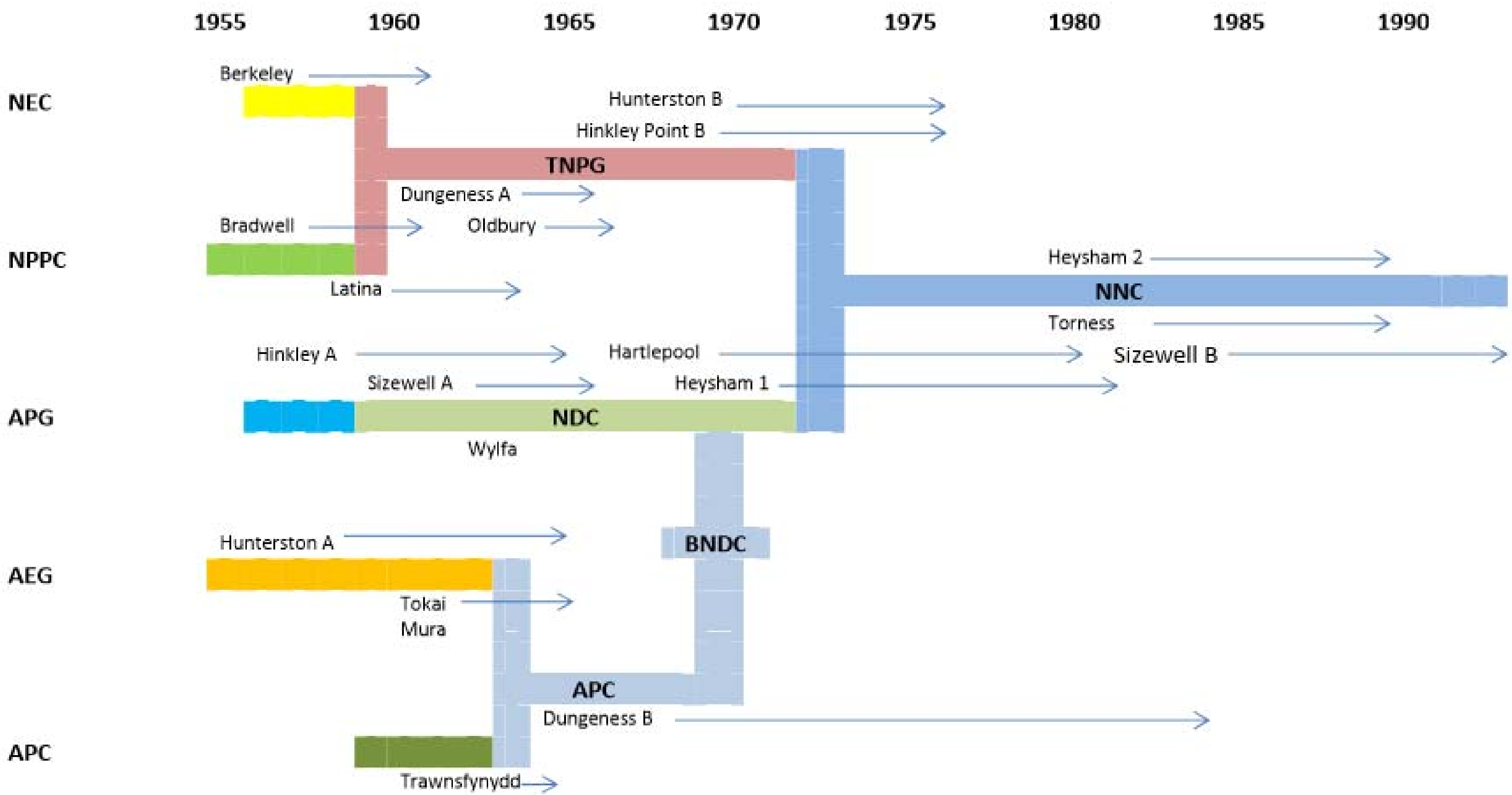
Industry Capabilities: Programme Management and Technical Support Services



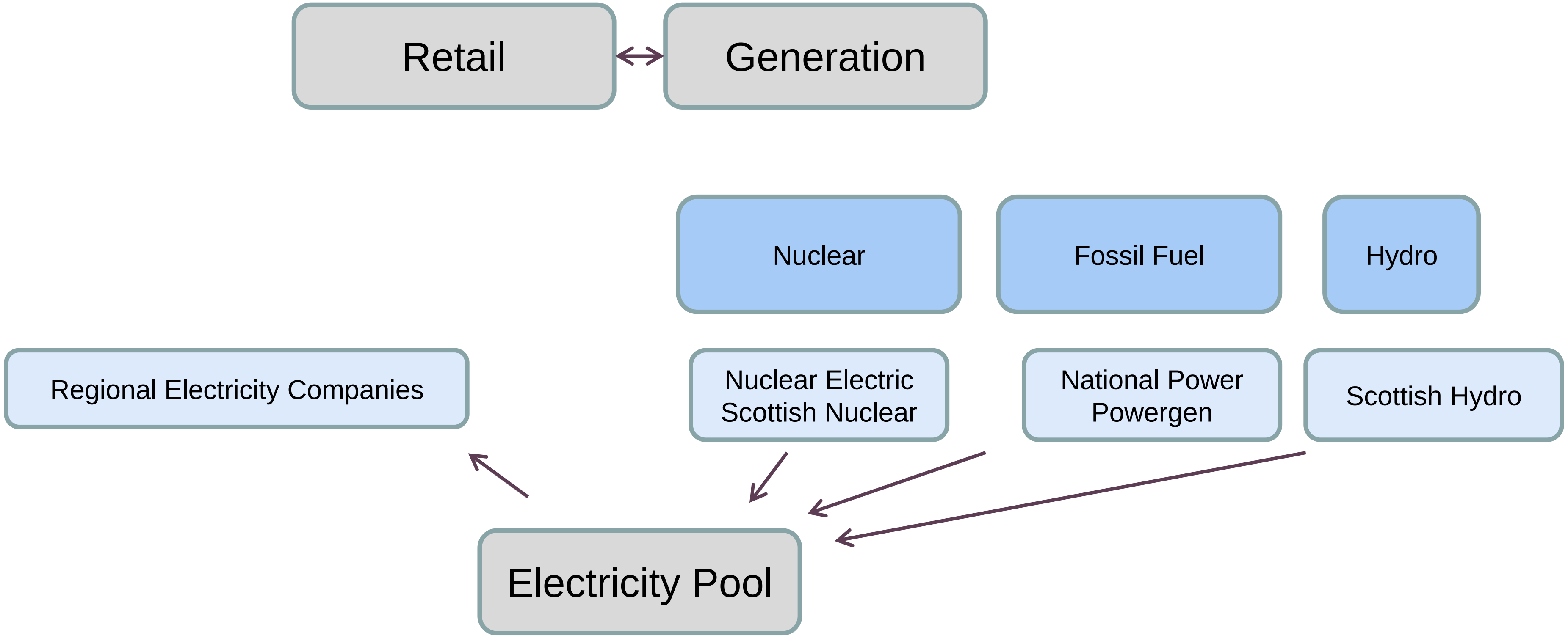
Development of UK Nuclear



Industrial Consortia and Projects



Privatisation of Electricity



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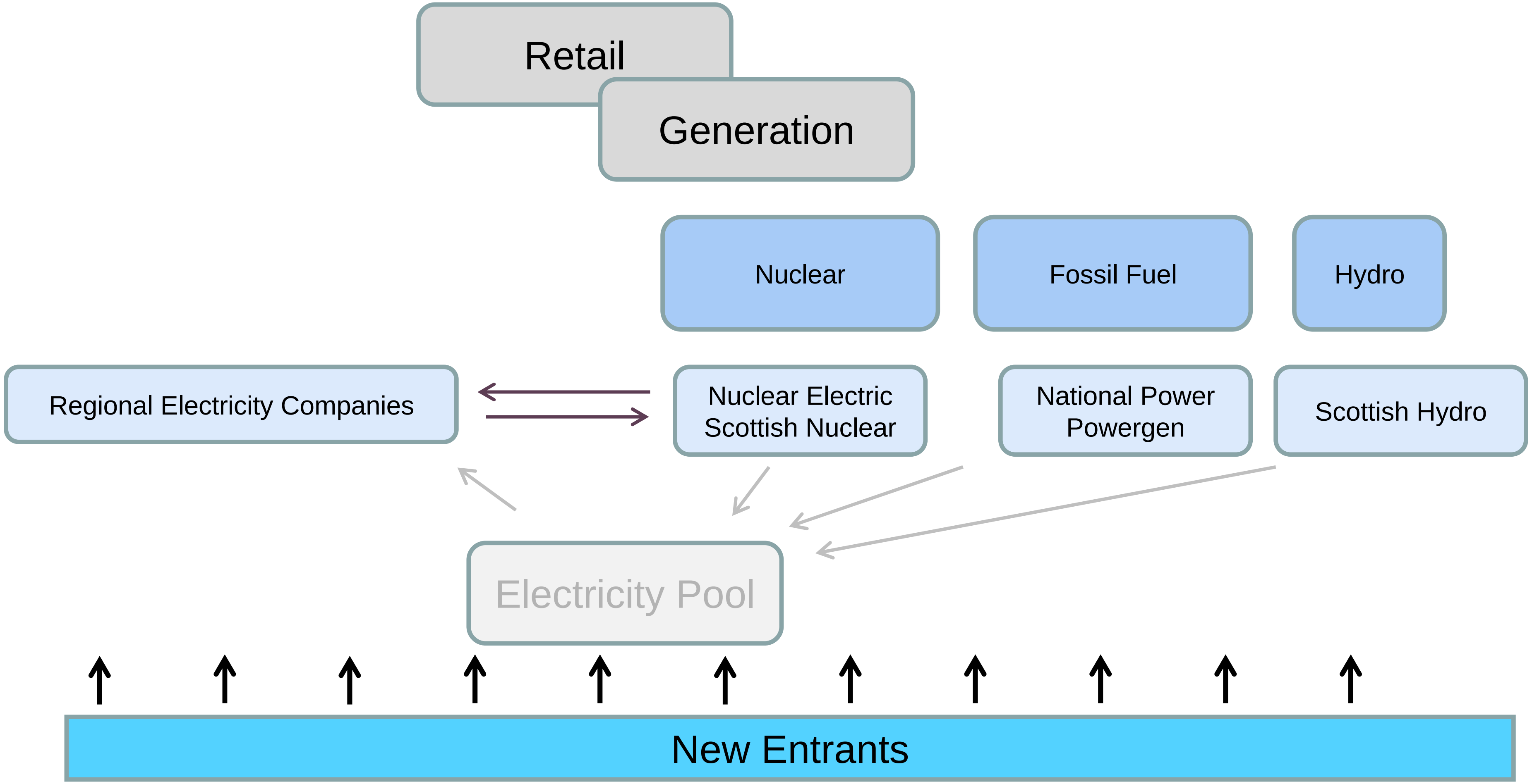
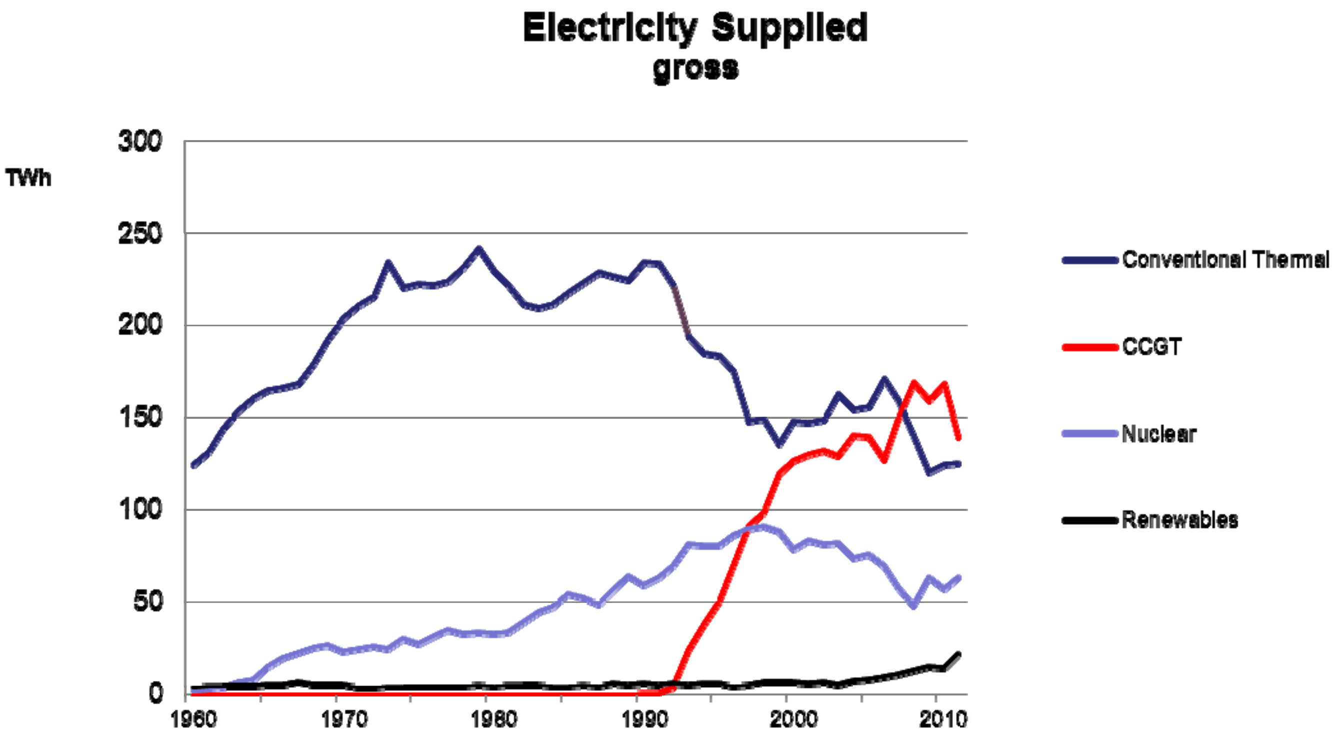
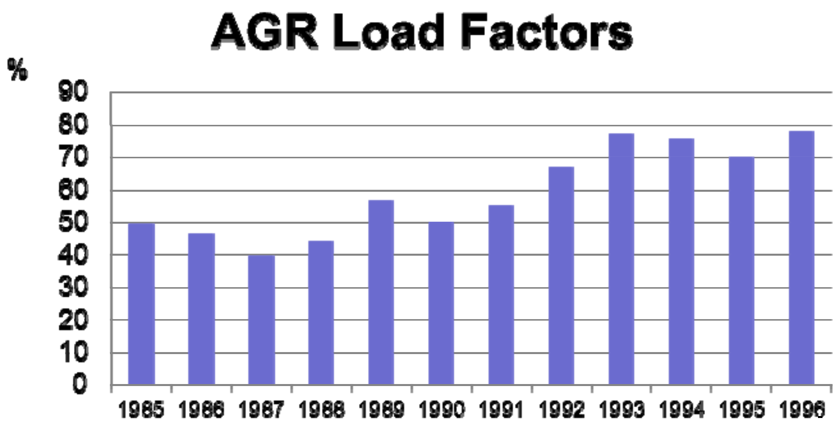


The Dash for Gas

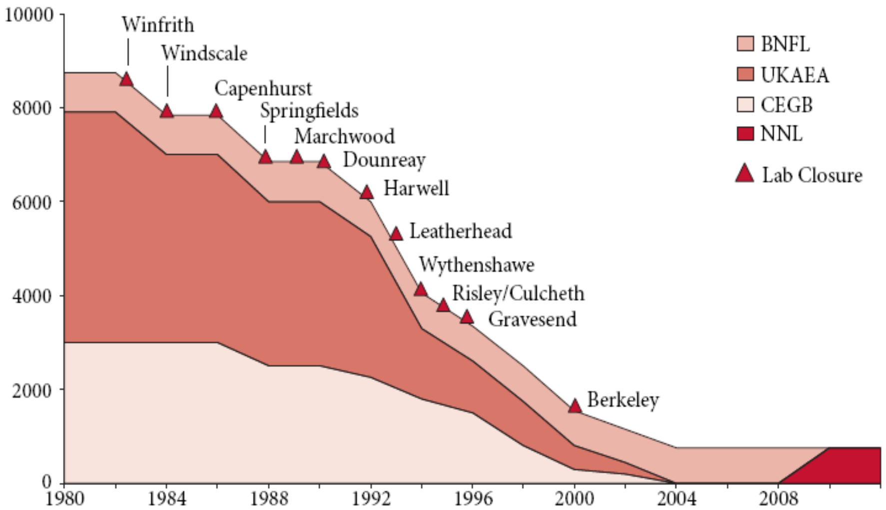


The Road to Privatisation of Nuclear

Productivity in the run up to Privatisation					
	1992	1993	1994	1995	1996
Operating costs, p/KWh	3.3	2.8	2.5	2.4	2.5
Output per employee, GWh	5.0	6.3	7.3	8.0	9.4
Source: British Energy Prospectus 1996					



Abandonment of PWR Programme



British Energy in the Private Sector

- Diversification
  - *Retail supply*
  - *Coal fired generation*
  - *Overseas*

- Financial crisis and rescue

British Energy performance					
	1999/2000	2000/1	2001/2	2002/3	2003/4
Operating profit/loss	£430m	£230m	-£281m	-£3,899m	£340m
Electricity price (pence per kWh)	2.6p	2.3p	2.0p	1.8p	1.7p

- Acquired by EdF 2009

Growth & Restructuring of BNFL

- Fuel reprocessing & manufacture
- Generation
- Decommissioning
- 2003 review
  - *Decommissioning transferred to NDA 2005*
  - *Westinghouse sold to Toshiba 2006*
  - *Transfer of shares in Urenco 2008*

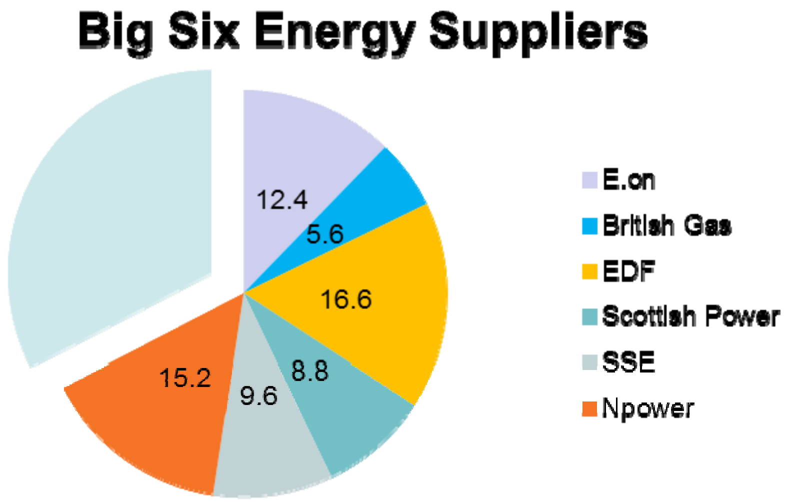
Electricity Market Structure Today

Merchant generators

coal

gas

renewables



Nuclear

Decommissioning – A Success Story

- Liabilities Management Fund 2001
- Nuclear Decommissioning Authority 2005
    - *Magnox sites*
    - *UKAEA sites*
    - *BNFL fuel facilities*
- Sites managed by contractors through Site Licence Companies

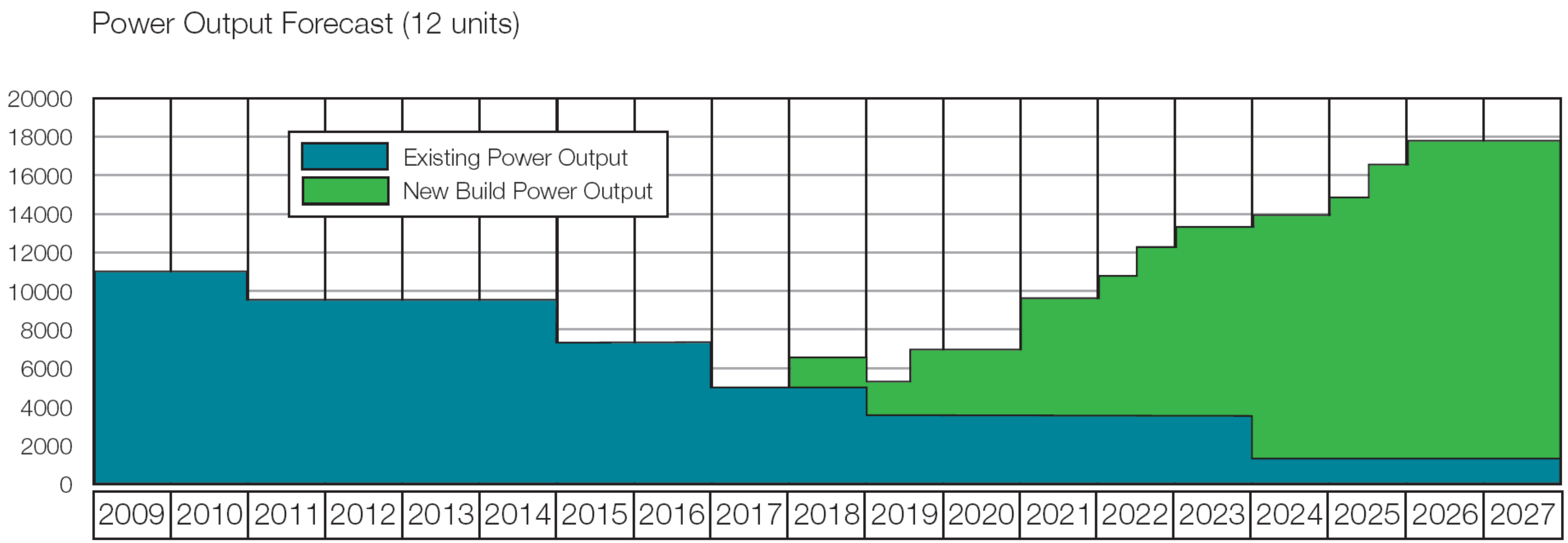
Nuclear New Build Programme

EDF Energy UK
2 x 1600 MW EPRs for Hinkley
2 x 1600 MW EPRs for Sizewell
4 operating by 2025

Horizon Nuclear Power Ltd
Hitachi owned
6000 MW operating by 2025
at Wylfa and Oldbury
ABWR technology

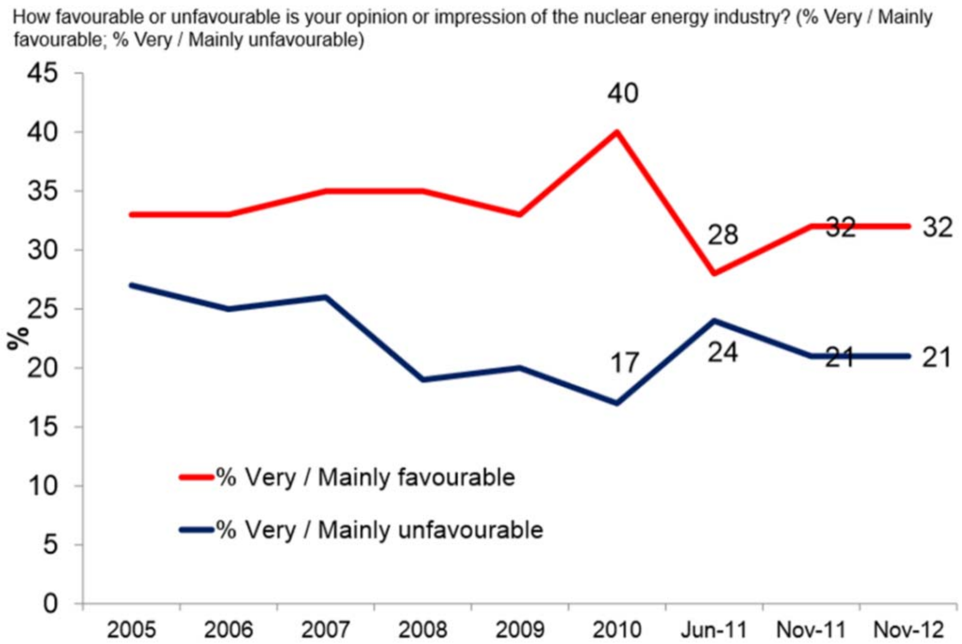
NuGeneration Ltd
(Iberdrola/GDF Suez Joint Venture)
Up to 3600MW operating by 2023 at Moorside
Technology to be decided

Nuclear Generation Capacity Profile



Political Support for Nuclear

- Cross-party political support
- Support from Business and Unions



Conclusions

- The abandonment of the UK PWR programme was the consequence of privatisation and market conditions at that time.
- It is important to maintain cross-party and stakeholder support for nuclear power.
- The UK has built up a successful decommissioning programme and an experienced supply chain to deliver it.
- In the UK new build market UK companies are open to partnership opportunities with Japanese companies.

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