SMEs in the Nuclear Supply Chain in Cumbria

Professor Frank Peck

Presented to the Wales Labour Market Summit II:

Comparing policy interventions to challenge 'business as usual'

14th September 2016 - Bangor University

SMEs in the Nuclear Supply Chain: Structure of presentation

- Policy context (local versus national)
- Local impacts of changes in procurement
- SMEs in the supply chain: barriers and enablers to engagement in the supply chain
- SME competitiveness in nuclear supply chain

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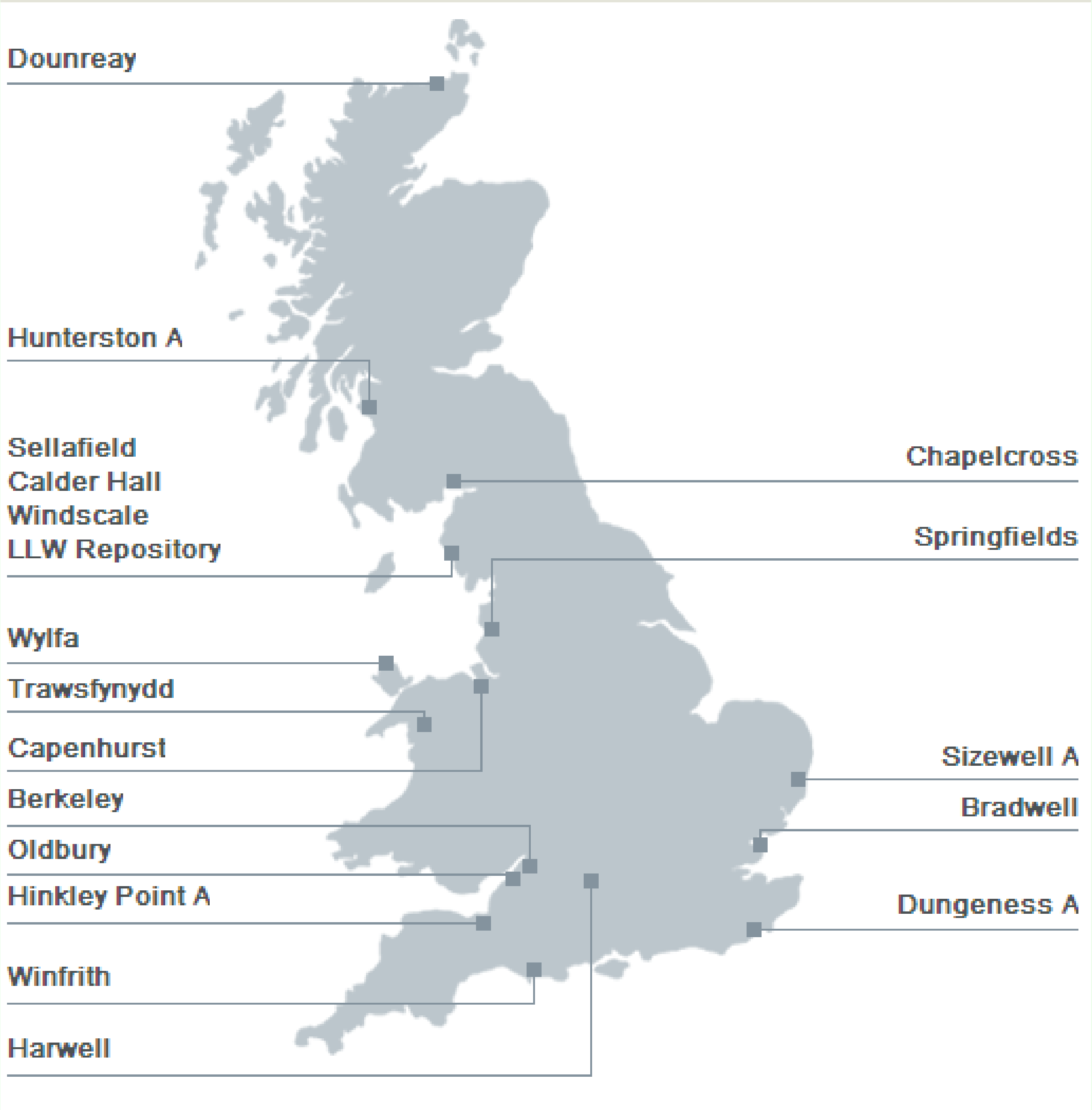
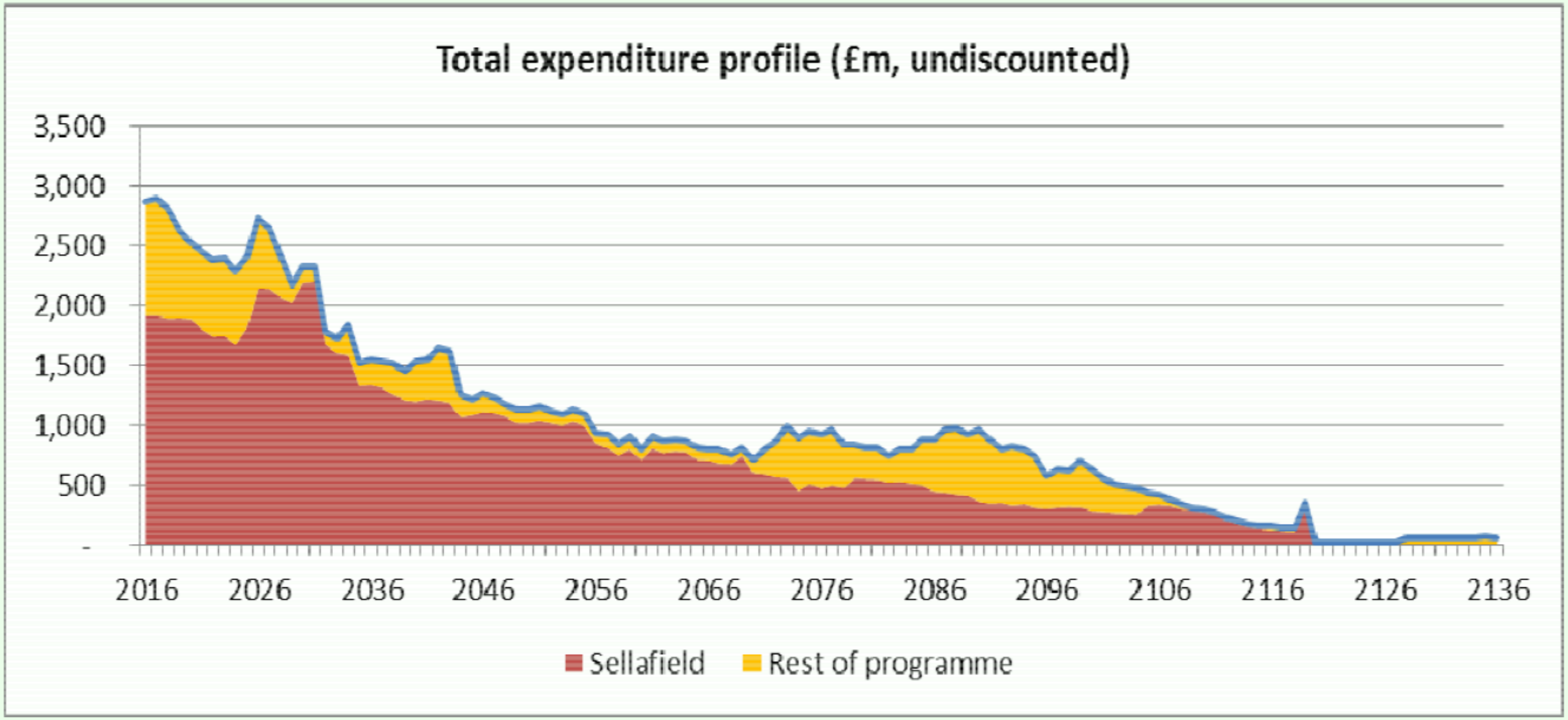
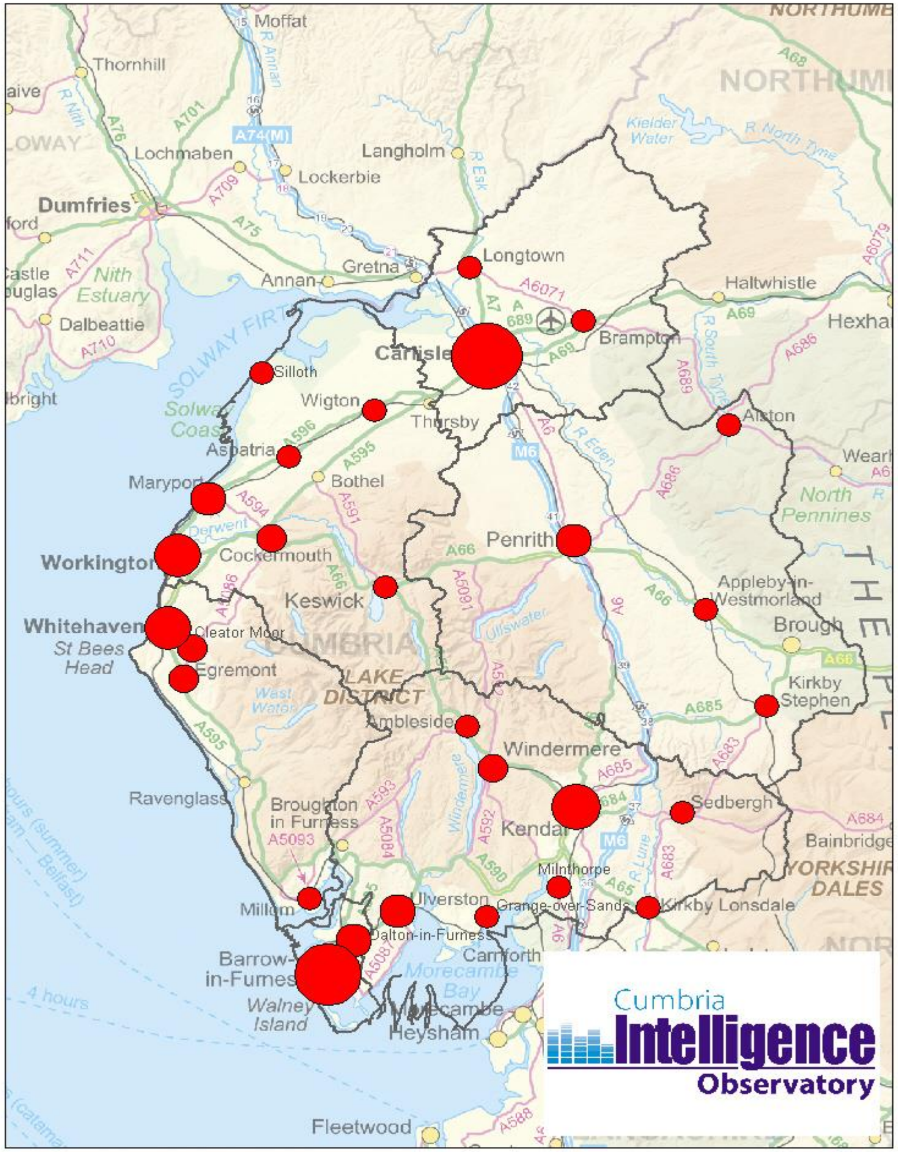

Dounreay
Hunterston A
Sellafield
Calder Hall
Windscale
LLW Repository
Wylfa
Trawsfynydd
Capenhurst
Berkeley
Oldbury
Hinkley Point A
Winfrith
Harwell
Chapelcross
Springfields
Sizewell A
Bradwell
Dungeness A

NDA Estate

Nuclear Decommissioning Authority
Annual Report and Accounts 2015/2016





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Sellafield Ltd

- Sellafield activities
  - Reprocessing of nuclear fuels (THORP, MOX plant (closed in 2011)
  - Nuclear waste treatment (facilities for encapsulation, vitrification)
  - Waste management – long term storage
  - Decommissioning of nuclear facilities
- Sellafield site
  - Civil nuclear industry since 1950s - nuclear legacy
  - 1,300 buildings within 6 sq km
  - Circa 10,000 workers employed directly

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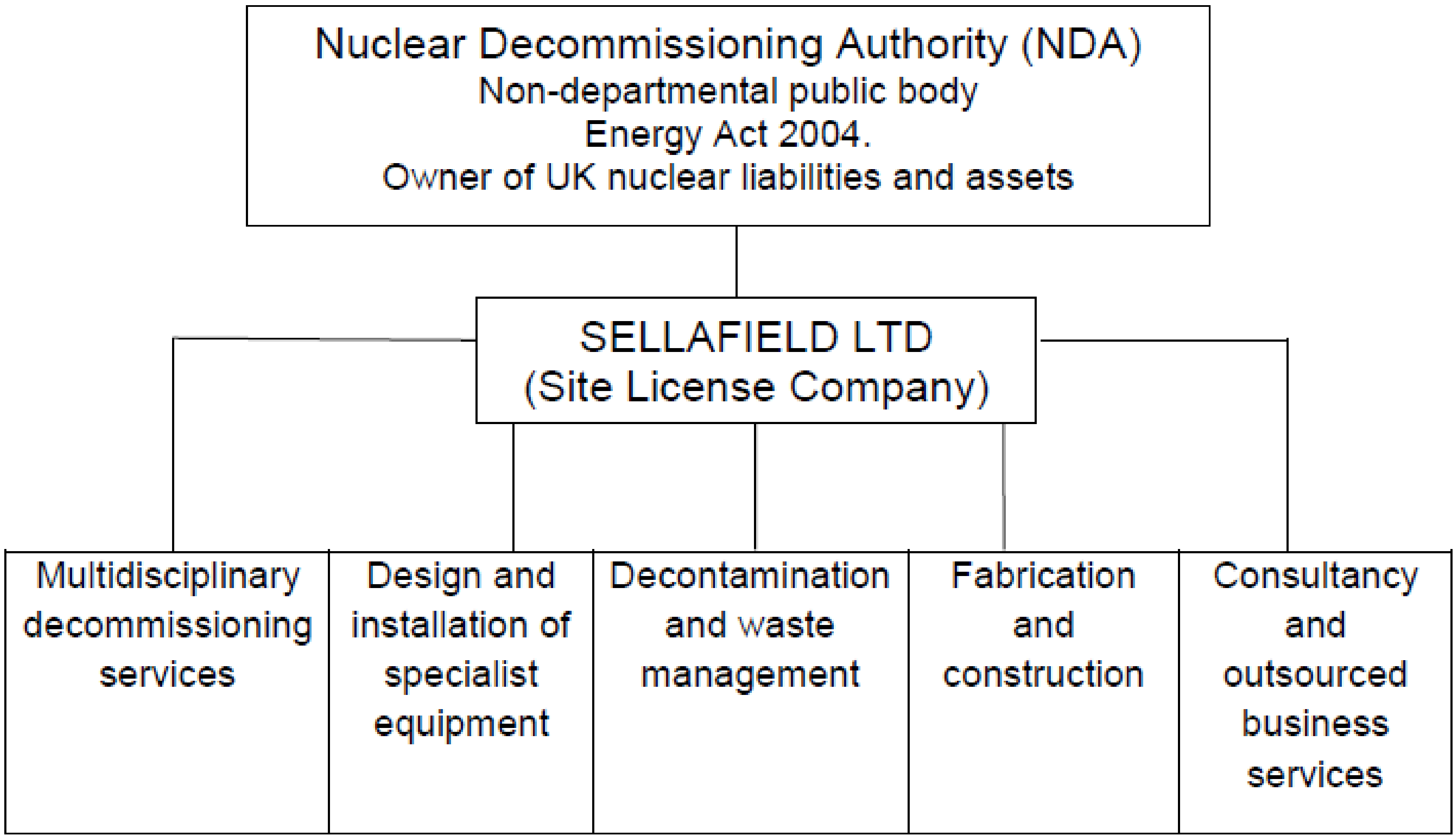
Nuclear Decommissioning Authority (NDA)
Non-departmental public body
Energy Act 2004.
Owner of UK nuclear liabilities and assets
SELLAFIELD LTD
(Site License Company)
Multidisciplinary decommissioning services
Design and installation of specialist equipment
Decontamination and waste management
Fabrication and construction
Consultancy and outsourced business services

Policy context - local scale

- Long-standing association between nuclear industry and West Cumbria in particular;
  - Decades of commitment to policies designed to foster the socio-economic future of communities
  - Investment in urban redevelopment (Whitehaven)
  - Investment in economic diversification – Westlakes Science and Technology Park
  - Investment in community facilities and social life
  - Still very significant economic, social and political influence on operations at Sellafield

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The Importance of Socio Economic Contribution

- Sellafield Ltd and its tier 2 contractors responsibility
- Creation of a thriving local economy
- Attractive environment to live and work
- Self sustaining growth
- Responsive capable pool of skills, suppliers and people retention

A Nuclear Management Partners company operated under contract to the NDA

Sellafield Ltd

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Slides taken from "Sellafield Ltd and its Supply Chain Socio-Economic Contribution" Keith Case, Commercial Director, Sellafield Ltd.

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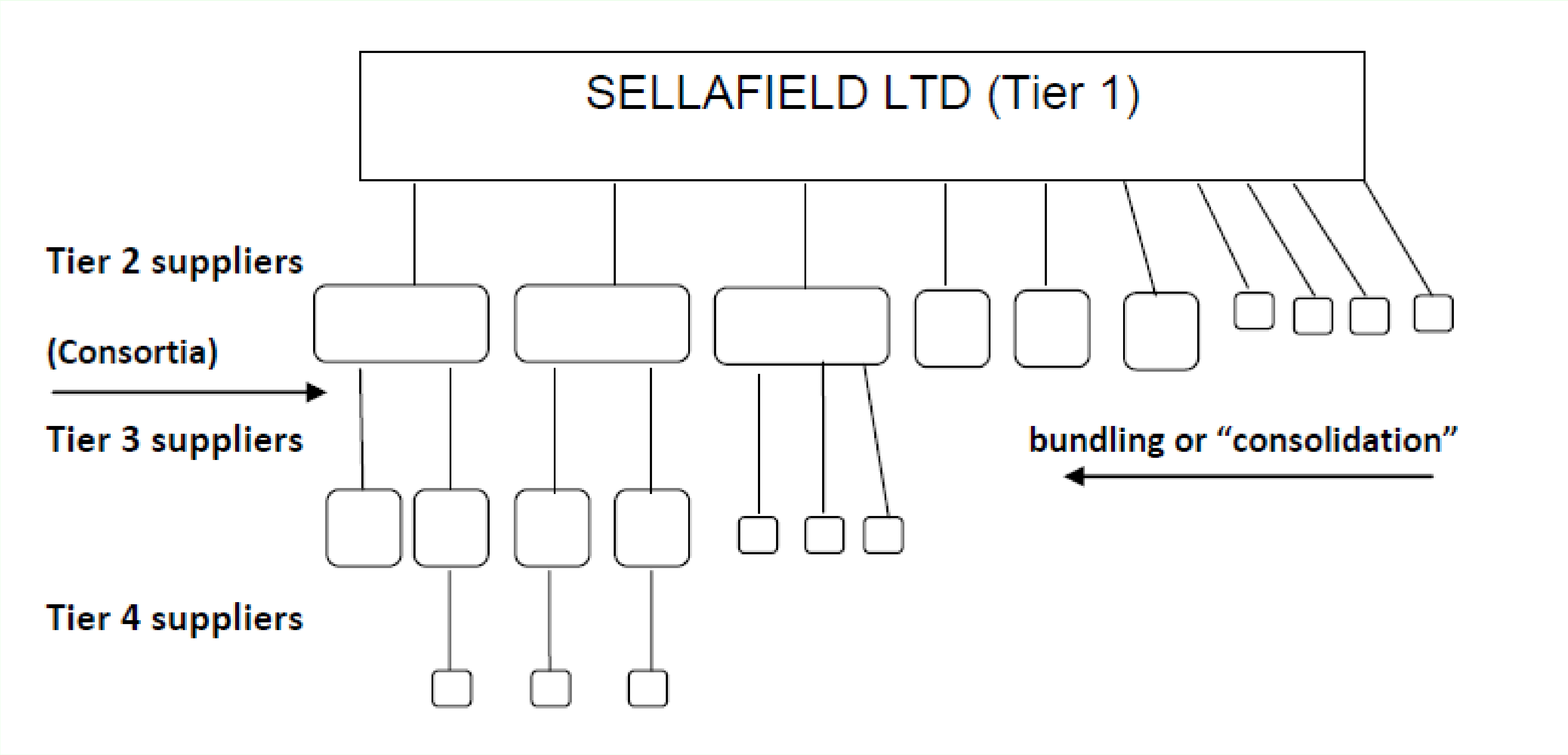
Our Driving Force to Support Socio Economics

- Over 10,000 direct jobs
- Several thousands of indirect jobs
- 30% of our supply chain spend is retained in Cumbria
- Skilled pool of local labour
- Our commitment to enhanced support to socio economics

- Long Term Frameworks create stabilisation and long term planning
- Engagement process to align our contractors with key stakeholders to deliver approved socio economic plans with accountable KPIs

We all have a role to play in delivering joint values aligned to Britain's Energy Coast

Change in the supply chain



CRED Research on supply chain

- 2011-12 study - 23 in-depth interviews with senior managers of selected national and international firms (9) and SMEs (14).
- Conducted May-July 2011 mostly at premises in West Cumbria - themes covered:
  - Company structure and specialisms
  - Nature of contracts with Sellafield
  - Knowledge assets and competitive advantage
  - Organisation and method of delivery
  - Supply networks and suppler relations
  - Non-Sellafield contracts and diversification
- Follow-up study 2014 – In-depth interviews with12 SMEs very experienced in nuclear industry – design engineering, decommissioning, specialist equipment

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2011-12 Survey firms by type of business

	MNCs and subsidiaries	UK National firms	Local suppliers	Total
Tier 2 firms	6	1	5	**12**
Tier 2/3 suppliers	0	0	3	**3**
Tier 3/4 suppliers	1	1	6	**8**
	7	**2**	**14**	**23**

Table 4: Survey firms by product/service

	Tier 2 firms	Tier 2/3 suppliers	Tier 3/4 suppliers	Total
Multidisciplinary decommissioning	6	1	0	**7**
Design and installation of specialist equipment	4	0	2	**6**
Decontamination and waste management	2	0	0	**2**
Fabrication and construction	0	1	5	**6**
Consultancy	0	1	1	**2**
	12	**3**	**8**	**23**

Experience of SMEs 2011-14

- Impacts of recent changes in Sellafield supply chain
  - Varied experience – some still winning nuclear work
  - Increased challenge in getting contracts at Sellafield
  - Procurement systems “overwhelming” for SMEs
  - Contracts not packaged for SMEs – large/complex
  - Collaboration? Belief that this negates a key competitive advantage of SMEs – flexibility and innovation

Experience of SMEs 2011-14

- Relationships with T2 Suppliers
  - Some firms engaged in Consortia – unique products or specialist knowledge that cannot be found elsewhere in a timely fashion
  - Others experience difficulty – closed off
  - Belief that T2s prefer to internalise work or share it with other large firms – assumption that capability is related to size
  - Perception that high value-added work leaks to other regions while local spend is mainly low value

Experience of SMEs 2011-14

- Diversification: nuclear and non-nuclear
  - Nuclear markets – examples of effective diversification to other NDA estate, France, Japan and optimism about India and China
  - Some SMEs have not pursued diversification – “enough work at Sellafield”…. “Sellafield knowledge too specific to West Cumbria”
  - Non-nuclear diversification now a higher priority than before – oil and gas, renewables, chemicals

Impacts of Change in Procurement for SMEs: Summary

- Geographical - T2 clients may have local base but not necessarily local decision-makers.
- Social - networks disrupted with consequence for levels of trust; also job-rotation in MNCs.
- Organisational – Complex negotiations to form consortia. Some SMEs feel excluded; technical / commercial / capacity reasons.
- Institutional - norms, customs, behaviours differ - attitudes to risk, project management, understanding of innovation, entrepreneurship
- Cognitive - increased segmentation of knowledge and understanding between firms in the supply chain.

Recent National Policy Context and SME Growth

- Concerns over "value to taxpayer" and efficiency of procurement – process of consolidation of procurement implemented since circa 2000-2005.
- More recently, UK Coalition SME Growth Agenda to increase spend channeled through SMEs to 25% (Cabinet Office 2011).
- Direct spend only – DECC very low (1.9% in 2012-13).
- So, interest in indirect SME spend – estimated at 11.1%
- Target for 2015 set at 19%

Table 9: Local SMEs Knowledge assets and competitive position (a)

Knowledge Asset	Significance for competitive position	Sources and strategies to acquire
Scientific	Type A SMEs with technical specialism (electrical equipment design/supply power engineering) Type B either not relevant or considered useful; to know but not essential	Type A SMEs – in house expertise graduate recruitment
Technical	Vital for most SMEs. Skilled trained and certificated workers (available and on-site)	Major efforts to hoard key workers to retain skilled and certificated people Apprentice schemes and significant ongoing investment in technical training and industry standards
Commercial	Major area of change: Shift from informal to formal Move away from trust-based to system-based tendering Move towards larger and longer contracts	Can no longer rely simply on track record and past relationships Acquire skills by engaging consultant, recruiting new specialists and internal reorganisation and training

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Table 9: Local SMEs Knowledge assets and competitive position (b)

Knowledge Asset	Significance for competitive position	Sources and strategies to acquire
Networking	Vital but subject to reconfiguration Formerly, relationships with Site Licensee (Sellafield Ltd) and local business partners/suppliers Latterly, engagement with existing and new T2 MNCs	Meet new challenge by networking with new T2 MNCs Pressure to improve approaches to marketing directed at T2 MNCs.
Site	Vital but needs to be embedded in key workers and certificated work-force on site	Labour hoarding on-site at Sellafield and in key areas of the firm
Community	Important due to special nature of relationships in the industry. A useful though not critical determinant of competitiveness	Recognised as a useful lever in securing subcontracts from T2 MNCs Built into some tendering processes
Legal	Industry specific (nuclear sites) necessary but not sufficient; Sellafield-specific requirements a vital source of advantage	Important part of skill base that needs to be retained by investment in training and induction and for some, maintenance of in-house health and safety managers

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Widening the discussion

- Interactions between local SMEs and global companies in large scale infrastructure projects (energy, transport, utilities).
- Overcome information gaps / marketing deficits – directories, one-off events.
- Organisational barriers – appropriate procurement for SMEs; regulation of consortia.
- Institutional gaps – short term compliance with socio-economic requirements; longer term behavioural change in both SMEs and MNCs.

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