Sellafield Ltd

An Enterprise-Wide Perspective

When to Quantify
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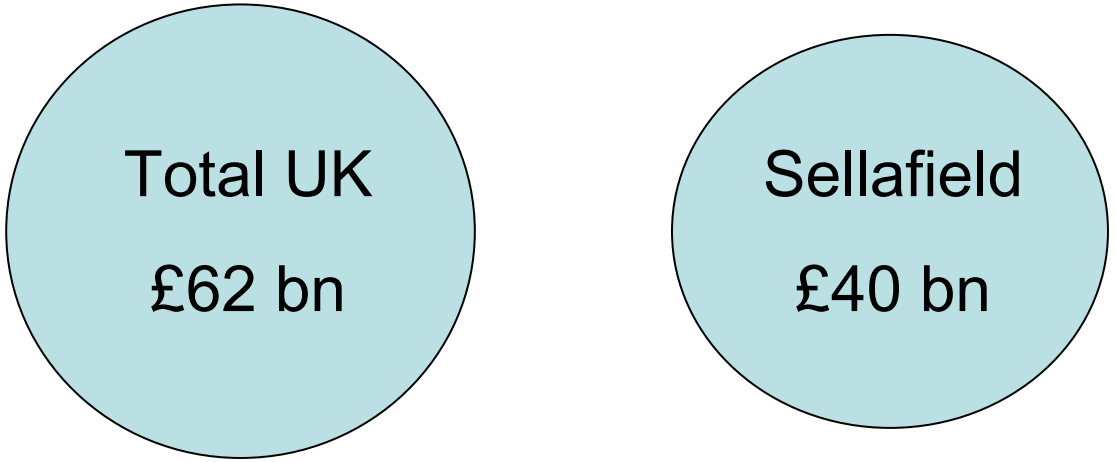
Sellafield Ltd

Background

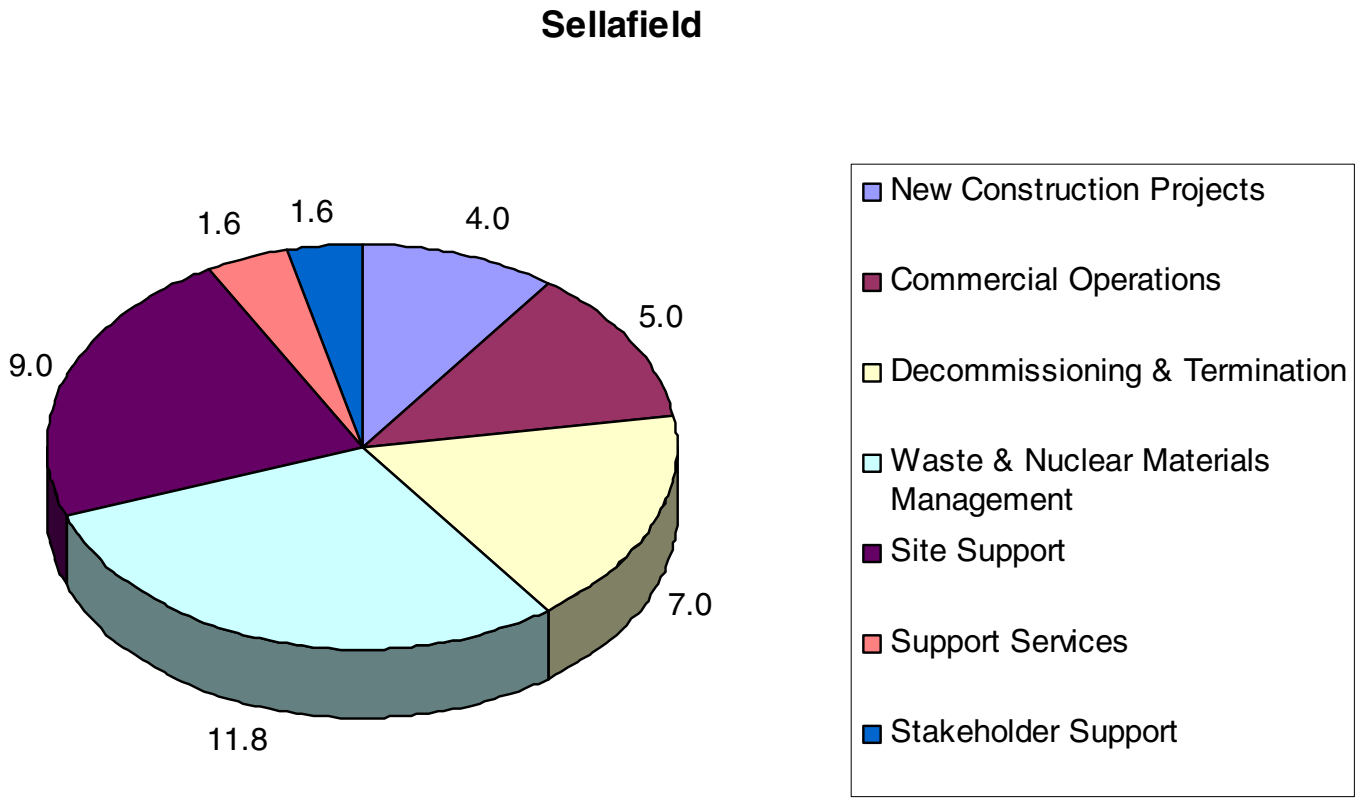
- Until 2004 British Nuclear was owner / operator of its sites in the UK.
- The Nuclear Decommissioning Authority was formed in 2004 and it took over ownership of the sites and BNGp was formed as the M&O contractor on the sites. BNGp is now split into different Site Licence Companies with NDA placing tenders for new Parent Body Organisations
- Main business areas – Nuclear Clean Up, Decommissioning, Reprocessing and Waste Management
- Sellafield is the largest and most complex nuclear site in the UK and accounts for approx 66% of total NDA's lifetime costs.

Lifetime cost



1. All costs per NDA strategy published in March 2006
2. Costs are undiscounted future gross costs (i.e. excluding commercial/affiliate income)
3. Costs are expressed at P80
4. In early years Annual Funding requirements for Sellafield equate to ~£1bn/yr

Sellafield



Values = £bn

Background

- As a contractor to NDA we have to prepare lifetime plans for each site inc. detailed near term work plans.
- NDA specify their requirements for the plans via their PCPs etc.
- Thus we have clear timescale & budget targets to deliver against
- To do this we need good quality business and project intelligence inc. risk & its potential impact.
- In the lead up to becoming a M&O contractor it was decided that we needed a consistent approach and thus implemented a consistent approach to Programme Management & Project Controls

Areas of Risk

- Face risks across abroad spectrum in a business environment that has a high regulator involvement:
  - Strategy
  - Financial (e.g. long-term provisions)
  - Commercial (contract strategy & procurement)
  - Safety / Environmental / Regulatory
  - Operations
  - Technical
  - Asset Management
  - Reputation
  - Programme / Project Controls (schedule & cost)

- What approach do we take in each area ?

  and

- How do we pull all this together at business / programme level to help inform management decisions and provide assurance?

Strategy & Financial

Strategy:

- Modelling as part of strategy optioneering and evaluation

Financial:

- Mainly pulling together the relevant outputs from areas such as Strategy and Programme / Project to produce information for financial provisions

Commercial

- Commercial Risk Management Process
- Specialist Contract Pricing & Analysis team
- Mainly qualitative approach. Outputs of risk assessment recorded on standard templates giving view of costs of contract failure against timescale

Safety / Environmental / Regulatory:

- Specialist team & approach for Safety Case and Environmental work
- Standard approaches used – HAZAN, HAZOP, BPEO etc.

Operations:

- Design stage – use TRAM (Throughput, Reliability, Availability Maintainability
- During Operational period use Programme risk process which requires simplistic modelling of risk plus –
- Risk included in ongoing modelling of plant throughputs & lifetimes during routine operating period

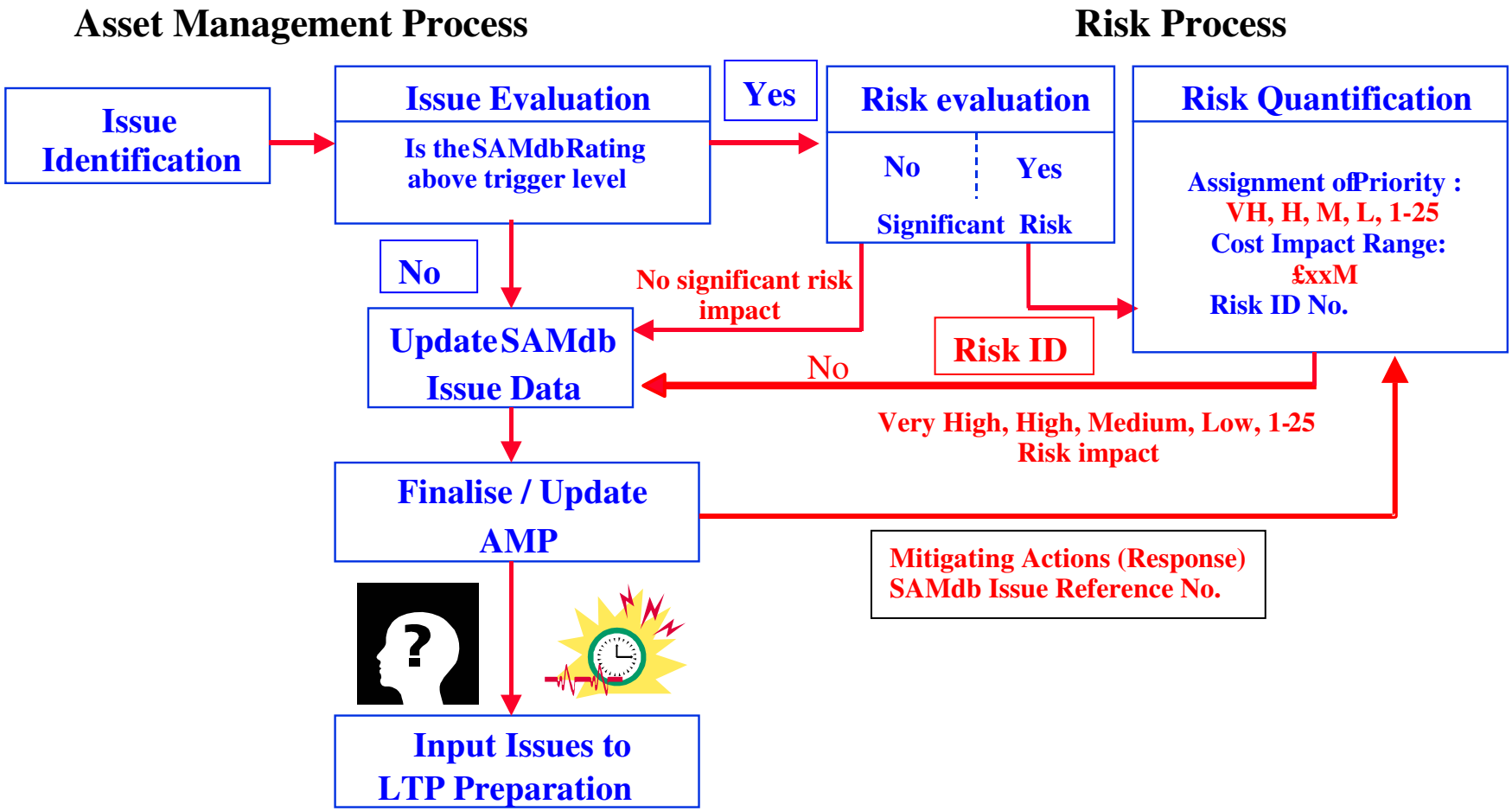
Asset Management

- Asset Management process supports the production of Asset Management Plans and identifies those issues that may prejudice the smooth running of the assets and threaten the company's objectives and targets. These include safety, mechanical, electrical and structural issues.

- Process uses qualitative & quantitative data on range of information which is then ranked via algorithms to give a score.

- Asset management issues above agreed trigger score are recorded as risks in risk register.

Asset Management / Risk



Programme / Project Control

- Single, consistent approach to risk assessment and analysis
- All projects, operational plants, support services and functions review and assess risks and record in single database.
- Risks assessed against multiple criteria
  - Cost — qualitative & quantitative
  - Schedule / Lost Production — qualitative & quantitative
  - Safety — qualitative
  - Reputation — qualitative
  - Regulatory — qualitative
  - Quality — qualitative

Programme / Project Control

- When do we model ?
  - Modelling of risk for cost contingency & schedule carried out at a level of detail appropriate to the complexity of the work scope – both during project/workscope definition stages and execution.
  - This basically translates as:
    - Detailed quantitative modelling for projects / project type work – typically within the areas of New Construction, Decommissioning & Termination and Waste & Nuclear Materials
    - Simplistic quantitative modelling for Operational plants & Support Services
  - A Complexity Flow chart is used to aid the decision of what level of modelling to apply and what software / system to use.

Programme / Project Control

- Risk exposure at all levels viewed using statistical model built into risk management database

- Actively looking at carrying out more detailed modelling of portfolio and integrated strategies
  - Sellafield is a very complex site with a multitude of interactions and inter-relationships making modelling at other than summary strategy level quite onerous

Pulling Together across the Business

- Use an ‘Enterprise-wide’ approach
- All risk registers relating to all workscope (business, programme, projects, functions etc.) is held in one database using standard assessment criteria and grid.
- Risks are assessed at project level then if & when required re-assessed at Portfolio / Programme / Business level
- Some analysis using statistical model within the database allows risk exposure to be calculated at required level of the business

Pulling Together across the Business

- Otherwise use modelling results generated for particular strategies, projects etc.
- Routine risk reviews by Executive team based on qualitative assessment of key risks with detailed quantitative analysis as and when necessary
- Actively looking at carrying out more modelling at Programme / Portfolio and integrated strategy levels
- Otherwise use modelling results generated for particular strategies, projects etc.

- Our role under the guidance of NDA is to operate and clean up nuclear sites safely and with care for the environment, but against firmly set timescales and funding.

- A clear focus on Risk Management and Analysis with appropriate level of application is helping us achieve this.