

# Corporate strategy

Managing the legacy  
Making the most of the assets

# Foreword

This is our first strategy as a wholly-owned subsidiary of the Nuclear Decommissioning Authority (NDA). It sets our direction and intent as a business and is supported by a management framework that we use to balance Sellafield's portfolio.

Our three strategic themes are: Safe and Secure Site Stewardship, Demonstrable Progress and Return on Investment. This strategy is part of a suite of documents which together describe the short to medium term direction of travel for the business and the transformation that we need to undertake to be successful.

Government policy and NDA strategy define our mission, which we deliver within the framework of our site licence obligations.

We deliver the outcomes defined by NDA in the NDA Specification for Sellafield, through the effective and efficient deployment of our resources.

We are responsible for nuclear safety, security and protecting the environment, and this will always inform our decision-making.

Our mission is to remediate the Sellafield site to an agreed end state and other requirements as set out by Her Majesty's Government.

We have established the detail of how we will achieve our mission through our Corporate, Operating and Transformation Plans. In these plans, we establish a set of milestones and targets that enable us to measure how we deliver the mission, improve how we operate and manage transitions.

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# Introduction

Sellafield has led the development of the UK's nuclear industry, from the production of plutonium for the country's nuclear deterrent programme through to the development of nuclear power generation. Today we are faced with the challenge of cleaning up the legacy of the site's early operations, including some of the most hazardous nuclear facilities in Europe.

Covering six square kilometres, the site is home to more than 200 nuclear facilities and the largest inventory of untreated nuclear waste in the world. We employ approximately 11,000 people who, along with our supply chain partners, are tackling Sellafield's current diverse portfolio of decommissioning, reprocessing, spent fuel management, nuclear waste management and nuclear material management.

As a company we are also facing challenges; preparing for the end of reprocessing and delivering our mission

as efficiently as possible while providing value for money for the public funding we receive. This strategy document sets out the organisation that we need to become, our drivers for change and the potential for our supply chain to access a growing global nuclear decommissioning market by exporting the technology and solutions that they are developing for us at Sellafield.

It is supported by a framework of detailed technical strategies and a Transformation Plan.



## Vision

A world leader in solving complex nuclear challenges

## Mission

Safely and securely remediate the Sellafield site to benefit the industry, nation and region



# History of Sellafield

Sellafield has been nearly 80 years in the making. A pioneer for the UK's nuclear industry, it supported national defence, generated electricity for nearly half a century, and developed the ability to safely manage nuclear waste.

Each chapter of Sellafield's history delivered great benefit for the country while creating a complex nuclear clean-up challenge for which there are no blueprints.

Decommissioning the site will take us more than 100 years and there is much still that we don't know. Every day we are building greater certainty and we will be the generation that makes demonstrable progress in cleaning up Sellafield.

That will be our legacy.



1940s

## Munitions:

At Sellafield, TNT was made and munitions shells filled.

## Nuclear deterrent:

The remote nature of the site, along with its industrial workforce and experience in working for the Ministry of Supply, makes it the ideal location to produce plutonium for the country's atomic weapons programme.



1950s

1960s

## Reactor construction and operation:

The United Kingdom Atomic Energy Authority is formed. The world's first commercial nuclear power station, Calder Hall, and the Windscale Advanced Gas-cooled Reactor are developed – both are forerunners of a fleet of nuclear power stations across the country.



1970s

## Commercial reprocessing:

Plans are developed to commercialise reprocessing at Sellafield. The site also comes under the ownership of British Nuclear Fuels Ltd. The United Kingdom Atomic Energy Authority retains ownership of the Windscale site.

### Legacy:

Redundant munitions structures and facilities buried underneath the site.

### Legacy:

First generation reactors requiring decommissioning.

### Legacy:

High level nuclear waste requiring treatment, storage and, in the case of foreign owned waste, shipment back to the country of origin.



1980s

1990s

### Waste management:

Construction commences on a new facility called the Thermal Oxide Reprocessing Plant (Thorp). The site is now the only nuclear site in the country that can safely manage all three forms of radioactive waste: low, intermediate and high.



2000s

### Multiple missions:

Thorp and Magnox are established as key international players in the fuel cycle, and reprocessing helps meet the requirements of domestic power generation and overseas customers. First generation reactor decommissioning gets underway, and preparation for wider decommissioning activities starts. Ownership of the site moves to the newly-created Nuclear Decommissioning Authority. Sellafield Ltd becomes the nuclear site licensee.



2010s

### Risk and hazard reduction:

Access to the waste and fuel stored in our sixty-year-old fuels storage ponds and waste silos starts, retrieving it and moving it to modern storage. In 2016 Sellafield Ltd becomes a subsidiary of the NDA.

#### Legacy:

Pilot plants, Thorp and Magnox reprocessing facilities requiring decommissioning.

#### Legacy:

Aged pond and silo facilities remain with no waste removal capability. Investment in the assets is required to enable decommissioning.

#### Legacy:

Pond and silo waste storage facilities with large inventories, which do not meet modern standards.



# Sellafield today

Supporting the UK's strategic defence and power generation requirements for the past seven decades has created a hazardous clean-up challenge for which there is no blueprint, and a site that is heavily congested. But, in meeting this challenge, our scientists, engineers, operators and suppliers are developing ground-breaking solutions and techniques, making Sellafield a test-bed of nuclear innovation.

The production of plutonium for the country's nuclear deterrent, harnessing the power of the atom in order to generate low carbon electricity, and recycling spent nuclear fuel in order to capture nuclear materials for reuse, are activities that were central to the UK's nuclear evolution with Sellafield at its heart.

The country benefited from the site's activities in terms of national defence and electricity generation, but today Sellafield is home to a hazardous nuclear legacy that needs to be addressed.

Cleaning up the site's legacy fuel storage ponds and nuclear waste silos relies on the effective reuse of existing buildings or the construction of new waste facilities. This work is turning Sellafield into one of the largest construction sites in the country, second only to the Crossrail project.

This construction is taking place cheek by jowl with decommissioning, demolition, nuclear waste management, nuclear material management and the wide-ranging services that keep the site running 24/7. All in a site that covers only 6 square kilometres. By comparison, the Hanford nuclear site in the US is home to fewer facilities and a smaller nuclear inventory, but covers a footprint 160 times larger than Sellafield.

Our new facilities will receive, treat and safely store various forms of nuclear waste until a permanent disposal facility is available. Getting the waste out of our legacy ponds

and silos – buildings that are as old as the UK's nuclear industry – is a challenge for which there is no blueprint. This uncertainty has created a culture of innovation as our teams and suppliers design, develop and implement new solutions and re-purpose innovations from beyond the nuclear industry in order to clean up Sellafield. Our suppliers are also exporting the technology that they have created or adapted for Sellafield to other UK and international nuclear clean-up sites.

The capabilities, experience and skills of our workforce and supply chain, along with the nuclear buildings at Sellafield that we operate on behalf of the NDA as site owners, are assets that we will bring to bear in order to deliver our mission and exceed the expectations of our customers.

OUR ASSETS:

**Our workforce**  
**Our knowledge, skills**  
**and experience**  
**Sellafield's nuclear**  
**facilities**

WE ARE  
MANAGING THE  
**highest**  
**hazard**  
**facility**  
IN EUROPE

**200**

WE OPERATE MORE THAN  
200 BUILDINGS WITH A  
SIGNIFICANT NUCLEAR  
INVENTORY



# Why do we need to change?

We are managing a period of unprecedented change and we will go through a number of transitions which will change our future shape and size. We need to be flexible, agile and responsive with an organisational culture that supports change.

We were established as a subsidiary of the NDA in April 2016 with the express intent to increase effectiveness and efficiency in line with Government expectations. This strategy sets out how we intend to realise these benefits.

We expect there to be continued pressures on public funding that require us to be agile and respond to in-year fluctuations. We must be organised to prioritise and flex accordingly.

2020 will see our completion of reprocessing operations and the shift of focus to high hazard retrievals, risk reduction and broader decommissioning activities. The end of reprocessing will result in surplus roles and will require a shift in core skills.

To optimise the response to mission change, performance gaps and economic and funding uncertainty, we need to change. A transformation programme has been established to drive high priority changes at Sellafield.

As well as responding to operational change drivers, we believe we can transform performance and prospects for our organisation, partners, stakeholders and communities. Transforming Sellafield will require changes in culture and behaviours, enhancing collaboration, greater innovation and enterprise solutions. Our transformation agenda will deliver those changes and create the characteristics of a high-performing organisation.



# Our response to the challenge

We will commit to a transformation programme, that will focus on key activities to make us more effective and efficient. The outcomes we will focus on are:

- **Delivering a transformation that accelerates the high hazard mission.**

- Bulk retrievals from legacy ponds and silos will be completed (against the Baseline Plan) 25 per cent sooner, completing this hazard reduction phase earlier.

- **Developing a culture that is characterised by people who:**

- focus on delivering value
- empower others
- hold each other to account
- work collaboratively
- take ownership of and pride in their work.

- **Reducing costs by £1.4 billion (against the Baseline Plan) by 2020 and a further £1-1.4 billion by 2029.**

- **Creating an agile organisation able to make high-quality decisions and deploy resources, flexible enough to take advantage of opportunities and respond to threats.**

- Our organisation will be able to flex +/- £100 million in any financial year by 2020.

- **Facilitating a long-term positive impact on the UK and regional economies.**

- We will help ensure a resilient and engaged supply chain is in place to support our mission at Sellafield, delivering added value while lessening reliance on our organisation.

- **As a consequence of our changing mission at Sellafield, our increased effectiveness, efficiency and flexibility, it is expected that our organisation will be smaller.**

In delivering our mission and meeting the transformation outcomes, we will provide options for additional value creation from our assets: the capabilities, experience and skills of our workforce and supply chain, and the nuclear buildings at Sellafield that we operate on behalf of the NDA. We will be sustainable, balancing the needs of today's operations with those of tomorrow especially in terms of the environment. In reducing the hazards and risks from legacy operations, we will consider future requirements and ensure that we do not unconsciously close the door on potential opportunities.

As we transition as an organisation, we will retrain and reskill our workforce to enable redeployment on missions to progress environmental remediation, either on the Sellafield site or as part of the wider enterprise.

Our collaboration with the supply chain will deliver the mission and create opportunities in terms of innovation, technology advancement and, potentially, UK growth.

We will recognise Sellafield Ltd as an anchor organisation contributing to the industrial landscape of the UK.

## There are four key drivers for change:



### Mission change

In 2020, we will see a major shift in our work scope as reprocessing operations come to an end. This is a reduction in scope of approximately a quarter and therefore the organisation will reflect the change and be appropriately sized.



### Performance gap

We have implemented a new management model and will continue to strengthen stakeholder confidence by demonstrating improved value for money, consistent delivery and efficiency across our operations, projects, safety and security.



### Potential economic changes

We will be more agile and flexible, allowing us to respond to any future funding adjustments.



### Changing nuclear horizon

We will be proactive in responding to new opportunities such as those created by new nuclear build and those within the emerging Industrial Strategy.





REDUCING COSTS BY

**£1.4  
billion**

BY 2020



Our collaboration with the supply chain will deliver the mission and also create opportunities in terms of innovation, technology advancement and, potentially, UK growth.

# The company we wish to be

We have a clear picture of the organisation we will become. By the mid 2020s, we will have developed the characteristics of a high-performance culture and will be working as a single extended enterprise. This will give us an environment in which:

- Safety, security and value are delivered through an integrated approach to **performance**, productivity and prospects
- Fit-for-purpose **technology** enables informed, high-quality decision-making and safe, efficient, value-led delivery
- Organisational **structure** and processes support new ways of working and resourcing
- Organisational culture values **people** and recognises talent, collaboration, and high-performance behaviours and communications, driven by effective performance management.



## Performance

How we manage the business, make decisions, measure and govern work

- Value streams used to set and measure the performance of the business
- Decisions made on accurate and consistent data and understanding of what is important
- Clear view of personal contribution, how to get things done, and where to get help when needed and support for ideas
- A suite of measures to monitor performance consistently across the business and supply chain
- Clear financial information that supports decision-making
- Simplified and appropriate governance structures, processes and procedures
- Process and assurance that are fit for purpose, based on levels of risk



## Technology

Information and data, and how we will innovate

- Single source of management information that supports decision-making
- Fewer, more 'joined-up' IT systems that support improved performance across the business
- Ability to model and analyse business information to offer options in decision-making
- Continual search for innovative ways to accelerate the mission and reduce costs



## Structure

How we set up the organisation structurally and physically

- Sellafeld Ltd and supply chain skills, experience and capability used to deliver the mission in the most effective way
- Appropriate structure for operating in value streams
- Prioritised, essential use of land within the site boundary
- A range of types of contract and suppliers in place as needed to support the mission
- Proactive reskilling and redeploying of our people to meet business needs
- Funding allocation and authority given to value streams



## People

What we will expect from our people

- Improved capability to get the best out of our relationships with the supply chain
- A culture centred on driving performance
- Leaders developing people, and holding them to account, to deliver stretching performance
- An embedded mindset in the business in which everyone seeks constantly to improve performance
- Size, shape and working practices developed to meet the future needs of the business



# Strategic themes

We focus on three strategic themes:



## Safe, Secure Site Stewardship

The safe and secure stewardship of the Sellafield site is our overriding priority. It covers everything from the safety of our employees and care for the environment through to the secure management of nuclear materials, and it underpins every decision we make.



## Demonstrable Progress

Sellafield is home to the oldest nuclear facilities in the UK and we are focusing our efforts on safely accelerating the clean-up of our legacy facilities. We will also demonstrate our progress through the timely completion of both the Magnox and the Thorp reprocessing programmes.



## Return on Investment

Presently the NDA invests more than £2 billion of its budget to fund work at Sellafield every year. We will ensure that we demonstrate value for money through the delivery of our mission and will best position the site and its people for the future.





# In pursuit of our mission

Our fundamental purpose is to keep Sellafield safe and secure, cleaning-up the site to a defined end state. In order to deliver this mission, and in preparation for the end of our reprocessing mission, we will become an agile organisation that can deploy our resources flexibly, allowing us to take advantage of opportunities and respond to challenges.

Our work at Sellafield is important both nationally and internationally. We will deliver our mission whilst being constantly aware of and responsive to the environment in which we operate.

In pursuit of our mission at Sellafield we will develop a high-performing decommissioning business that can adapt for the longer term and respond to changing requirements.

We will innovate, finding new ways of working and of applying technology to improve our performance and we will support our supply chain partners as they export their expertise to the nuclear industry and beyond.

Accelerating elements of our operating plan and exceeding the expectations of our customer will allow us to explore opportunities and choices for managing the nuclear liabilities and assets. We will achieve this by building a high-performing culture that uses the strengths of the Sellafield team; our employees and our suppliers.

Where acceptable, we will pursue additional activities if they complement the delivery of our core mission. These opportunities will be identified, discussed and agreed in collaboration with the NDA.

We will also continue to be an anchor organisation in our communities, providing employment, undertaking pioneering scientific research innovating, developing skills and encouraging investment. We do not just operate next to communities, we are part of them. Our employees are also school governors, magistrates and emergency response volunteers. Our communities have been home to the nuclear industry for generations.

As a publicly funded organisation that currently spends approximately £2 billion every year, we will continue





**£2 billion**

PER ANNUM PUBLICLY-FUNDED  
ORGANISATION

to play our part in promoting and leveraging social impact, economic resilience, growth and diversification.

As an organisation we are a cornerstone of the country's energy policy, providing:

- Confidence in the next generation of nuclear power generation that can support a low carbon economy. Nuclear power is not a credible long term solution without integrated waste management and final disposal solutions.
- Support to the existing UK civil reactor fleet.
- An exemplar for complex brownfield remediation.
- A more economic nuclear industry by reducing overall lifetime clean-up costs, including asset and materials management, design development and project delivery.
- A base load of nuclear skills and capability, including nuclear construction, which forms the basis for education and skills retention.
- A regional hub for an industry sector that can pull on hubs from other industries such as robotics and autonomous systems in hazardous environments.
- Supply chain development via varied and novel demand for services over many years.

We will build an agile organisation that enables decision-making and deployment of resources flexibly, to take advantage of opportunities and respond to challenges.

# What does the customer view as value?

To meet our current delivery commitments, and to optimise our performance, we will focus our activities on delivering customer value.

Our strategic requirements are specified by the NDA, and we meet them through a number of tasks, programmes and portfolios. In addition, we will configure our business to maximise value, which is defined by the NDA, regulators and key stakeholders.

Value is about cost efficiency and / or schedule effectiveness though the drivers differ across our activities. For example, in some areas we create value by finding the most cost-

effective solutions. In other areas, value is schedule-driven and we will accept higher costs in the short-term in order to reduce hazards sooner.

We will move from being a process-led organisation to one with an unwavering focus on value. To do this we will work in a number of value streams.

These value streams have been identified to align to the current business context. As the business changes, so too will we consider how we define value, and the value streams may change.

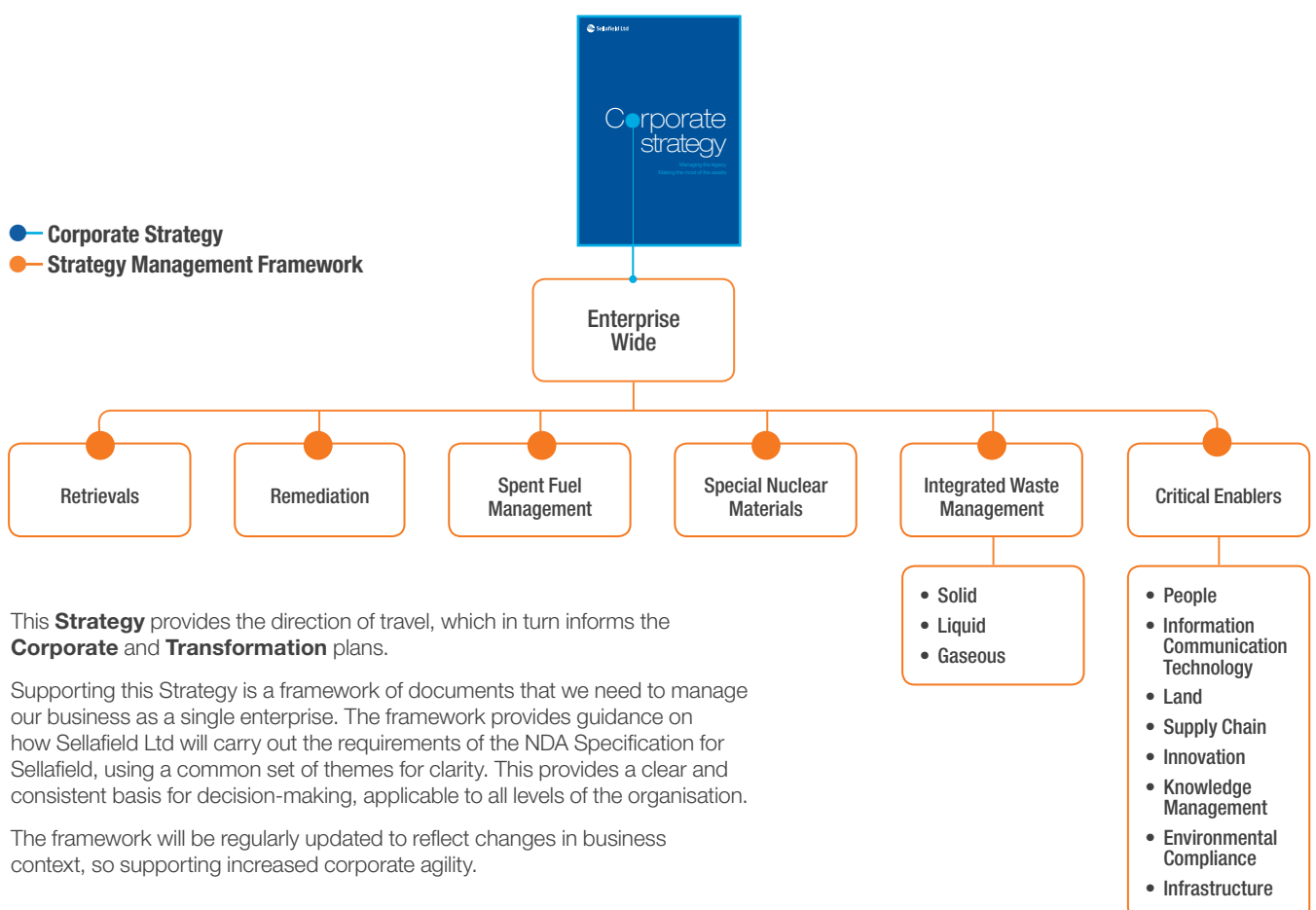
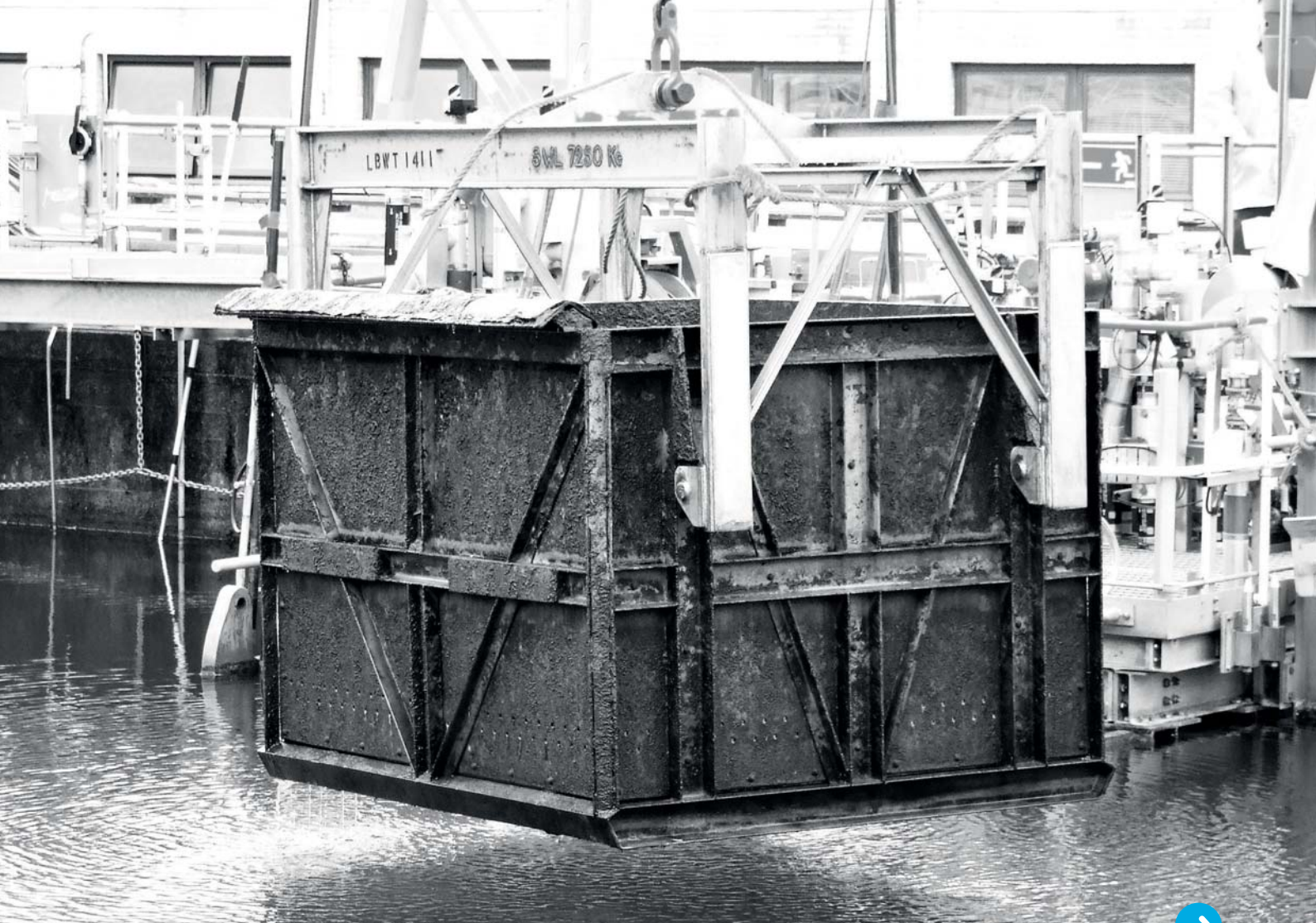
The current value streams are described below.

We will move from being a process-led organisation to one with an unwavering focus on value.



## Current value stream drivers

Value stream	Driver
<b>RETRIEVALS</b>	<b>Effectiveness</b> Because of the hazards associated with these projects, we need to work effectively so that we conclude retrievals as quickly as possible. Therefore the primary driver here is schedule, though we will do this while working as cost-efficiently as possible.
<b>REMEDIATION</b>	<b>Effectiveness and Efficiency</b> We deliver value in this area by reducing the time it takes to progress remediation and support retrievals through waste treatment plant operation, as well as by reducing lifetime costs.
<b>SPENT FUEL MANAGEMENT</b>	<b>Efficiency</b> We will deliver this programme of work as cost-efficiently as possible.
<b>SPECIAL NUCLEAR MATERIALS</b>	<b>Effectiveness and Efficiency</b> In the short-term we must make sure that appropriate options are available to support effectiveness. Once these options are available and established, we will focus on delivering the programme as cost-efficiently as possible.







## How we lead change

By becoming a high-performing organisation and creating the conditions for success, and through adapting and building on previous successes, we will close out existing missions while providing value for money and adopting fit-for-purpose approaches.

We will work innovatively to deliver best value. We will deliver the requirements of Government policy as quickly and cost-effectively as possible.

We will strive for effectiveness and efficiency in everything we do to give our stakeholders confidence that we are prioritising appropriately and reducing the hazards on the site as soon as possible. We will accelerate progress and reduce our cost base.

We will be receptive to change and adapt accordingly. Retraining and reskilling our workforce and reinvesting them to deliver in other areas will be essential to managing transitions and creating organisational agility. Responding to change will be our business as usual; repurposing redundant facilities and reskilling our workforce will be part of what we do.

We will build an agile organisation that enables decision-making and deployment of resources flexibly, to take advantage of opportunities and respond to challenges. We will work as an 'extended enterprise' (including our supply chain) with a culture that develops innovation and customisation – a sum greater than its parts.

Our processes and systems will act as enablers to delivering value-adding

work. We will be able to anticipate, plan and respond to external influences, be more flexible and agile and be comfortable accepting change and uncertainty as the norm. We will always look for better ways of working to accelerate our programmes to reduce the hazards and risks resulting from legacy operations.

We will make informed choices supported by an accurate and consistent single data source – 'one source of reality'. We will value our core business and skills and trust the people with those skills to make the appropriate empowered decisions. We will make procurement decisions accordingly. We will adopt a fit-for-purpose approach that will permeate our procurement of goods and services, our use of technology and our processes and systems.



We will strive for effectiveness and efficiency in everything we do to give our stakeholders confidence that we are prioritising appropriately and reducing the hazards on the site as soon as possible. We will accelerate progress and reduce our cost base.



We will work with our supply chain partners to encourage and harness innovation, the development of new technology and the customisation of existing technology. We will create a mutually-beneficial operating environment.

In pursuit of effectiveness and efficiency, we will encourage innovation, not only in relation to technology but also relating to how we conduct many of our activities.

As the mission changes, the organisational context will also change and we will ensure that the drivers remain current and reflect the changing context.

We will adopt a portfolio approach to managing our business which will support risk-based decision-making and resource-allocation (people, facilities, land etc.).

# Future options

Within the next 10 years, we will have overcome the most significant hazards in three of the four high hazard facilities at Sellafield and will be well advanced in removing the hazard from the remaining facility.

The extent of the decommissioning challenge is still significant but once the highest hazard and risk reduction activities are completed then there will be more choice and a greater degree of freedom in how and when we progress specific activities. The Government will then be able to make decisions about investment in a different context, and potential funding choices will be wide-ranging. We want to make it easy to choose the future that will maintain good

levels of employment, investment in skills, and opportunities for future generations.

As always our first priority is safety, and our focus on mission delivery is unrelenting. Beyond these, Sellafield will become a showcase for pioneering nuclear solutions. The legacy of historic activities on the site has created an unprecedented challenge that will be resolved through world-class solutions. There is a huge international market where this hard-won expertise can be used, creating opportunities for our supply chain. This will help make our communities more resilient, and secure the longer-term future of our nuclear capability. It will support a positive and sustainable impact on the UK and regional economies by attracting inward investment and stimulating growth.





Managing the legacy  
Making the most of the assets



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