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RIIO-GT3 NGT_A11

IT and Telecoms Strategy

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Contents

1   Executive summary

This document outlines our IT and Telecoms strategy for RIIO-GT3, detailing the necessary IT investments that support the execution of our Asset Management Plan (AMP) and ensure key outcomes for consumers and network users. It also sets out the key IT and Telecoms policies, business strategies and processes that will enable the efficient delivery of our investments, as well as deliverability and sustainability considerations. IT systems are critical to our business processes and those of many industry participants and customers. Systems hold the base data about our assets as well as their real-time status, enable our business processes, and through analytical tools provide insights for planning and decision support. Systems include telecoms, as these are inherently digital, whether for voice or data.

Our plan is designed around the four key outcomes which Ofgem has identified that consumers and network users expect companies to deliver. Each of the investments in our IT plan, represented by this strategy document and the supporting seven IT Investment Justification Papers, are aligned to one of these outcomes and the spend supporting each is in the table below.

Our IT plan is driven by the requirements of the business to achieve outcomes critical to our customers and stakeholders. We have engaged both internally and externally, including user experience surveys, workshops, briefings and 1:1 sessions. The result is an investment portfolio that delivers key outcomes and improves our information services to customers and stakeholders.

To deliver an ambitious plan to consumers and stakeholders and achieve the key outcomes, we anticipate a need for investment in our technology of **£498.14m** over RIIO-GT3 including £40.7m under Uncertainty Mechanism. This represents a real terms increase of £44.6m per year relative to RIIO-T2. The two key drivers of this increase are summarised below:

Digitalisation and smarter analytics, enhancing business capability. Our transmission infrastructure is a critical enabler of a sustainable, carbon free energy system that delivers security of supply. Digitalisation of processes will continue apace, with the focus areas recently published in our Digitalisation Strategy reflected in many of our IT investments. We will continue to see richer data sets being analysed by more advanced tools to reach better decisions. These improvements are critical to the efficient delivery of a larger Asset Management Plan (AMP), managing the network under increasing risk, and supporting whole energy system management. Investment in our IT systems will also deliver efficiencies and long term value to consumers through smarter ways of working enabled by IT. These enhanced capabilities represent a similar proportion of the IT plan relative to RIIO-T2, 20% vs. 17%, reflecting the continuing journey of digitalisation and business improvement.

IT systems asset health and compliance. This drives a similar proportion of IT investments in RIIO-GT3 relative to RIIO-T2 (80% vs 83%), as much of our IT plan is still driven by IT asset health requirements. Keeping our systems healthy, secure and compliant with evolving legislation and industry codes (e.g. the Uniform Network Code and Data Best Practice Guidelines), is paramount to a digitalised organisation such as ours.

We have segmented our portfolio in the table below, to demonstrate outcomes delivered (shown in the column headings) and reasons for change (shown in row headings). This shows how much investment is required to:

- Deliver compliance – keep our systems healthy, secure and compliant with regulation and legislation.
- Deliver outcomes – enable enhanced capability needs by business functions to deliver outcomes.
- Deliver innovation – enable transformational capability change through technology.

£m	Infrastructure fit for a low-cost transition to net zero	High quality of service from regulated firms	Secure and resilient supplies	System efficiency and long term value for money	Grand Total
Deliver compliance	0.00	105.19	232.99	57.71	395.89
Deliver outcomes	0.00	23.15	32.97	5.99	62.11
Deliver innovation	0.00	0.00	11.86	28.28	40.15
Grand Total	**0.00**	**128.34**	**277.82**	**91.98**	**498.14**

Since our separation from National Grid in January 2023, we have tailored our IT strategy to respond to the specific needs of gas consumers and stakeholders, free from the influence of a larger partner with whom we shared systems. During RIIO-T2, we have delivered against the business plan we set out in 2019 and are on target to complete the plan by the end of the T2 period.

This plan has been challenged through rigorous assurance processes on scope, volume, and on cost through benchmarking against global comparators. Deliverability has been assessed, considering the capacity of both IT delivery teams and business teams to support IT delivery projects. This assurance shows that our plan is both efficient and deliverable.

Our IT plan delivers value to consumers and stakeholders and will support innovation and decarbonisation. It will maintain systems to be secure and resilient and support smarter decisions to enable delivery of the AMP and manage NTS risk. It will also improve service through better data provision and interoperability, and progress digitalisation for the company and the industry.

2   Introduction

2.1   Purpose and scope of this document

This document sets out our IT and Telecoms strategy for RIIO-GT3. It summarises how our IT and Telecoms portfolio enables the delivery of our business plan and is supported by detailed Investment Justification Papers (IJPs) for IT and Telecoms investments.

The following sections describe how we have developed the portfolio and how it aligns with key outcomes for consumers and network users. We also explain why we have a high level of confidence in our ability to successfully deliver the plan.

It should be noted that all Telecoms services used within NGT are digital and, whether voice or data transmission, are covered within the IT portfolio. Within this document and the IJPs, the term Telecoms is not used as a separate topic but is captured within relevant IT items.

The IT investments set out in this strategy are enablers of business capability which in turn delivers value to customers and stakeholders. The portfolio creates both direct value through front office capabilities such as Asset Management and GSO, and indirect value through back-office capabilities such Finance and HR. There are seven value streams across our portfolio, reflected in the seven IJP titles. The value streams enable us to focus on each business capability and its target outcomes and are fundamental to our continuous business planning and delivery management. This is reflected in the figure below, which shows the seven value streams on the right, and how these deliver consumer and network user value via direct and indirect enablers.
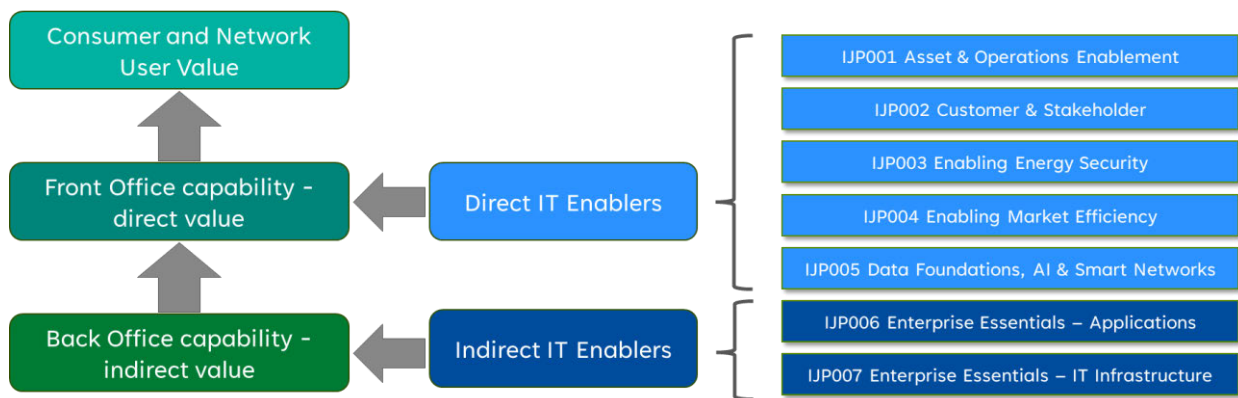

Figure 2.1. Value streams of IT investments

2.2   How you should read this document

We have presented our document in three main sections, leading you through how we have developed the plan, what is in the portfolio of planned IT investments, and finally how we will deliver the plan using best practices in managing technology-enabled change to ensure efficient spend.

- Section 3. Introduction to our RIIO-GT3 Plan
    - The story of our RIIO-T2 expenditure and delivery to date and the outlook for the rest of the period.
    - How separation from National Grid has now enabled focus on cost-effective systems for National Gas.
    - How we have built our plan, driven by the needs of consumers and stakeholders.

- Section 4. How our portfolio delivers against priorities
    - How our IT investments deliver continued, enhanced or new capabilities and drive value for consumers and network users.
    - The balance of our portfolio across key outcomes and commitments.
    - The list of investments in our portfolio for each business function and alignment with key outcomes.

- Section 5. How we deliver the plan
    - How our IT delivery model has matured through RIIO-T2 and will continue to be successful in RIIO-GT3.
    - The tools and methods that we have established within National Gas to deliver excellence in our IT capabilities, exploit new technologies and enable agility to respond to the high levels of uncertainty on the road to Net Zero.
    - Our governance framework, which ensures we continue to deliver on our plan.

This document is underpinned by detailed Investment Justification Papers (IJPs) for all investments in the portfolio. These cover scope, current issues and opportunities, options analysis and spend profile. All documents are driven by and reflect the golden thread to the four key outcomes that consumers and network users expect us to deliver. IJP references are provided in relevant places throughout this document to enable the reader to access more detail on the investments than is present within this strategy document.

Readers may note a disparity of £460k between the IT plan Totex here of £498.14m and that in the data tables, as an error was identified in investment IT 068, after the data tables were frozen. The number here is correct and is detailed in IJP007.

It should be noted that although the Security function is part of the IT organisation, its business plan is separate from this document. The Security function covers physical security, operational technology (sensors, telemetry, etc.) as well as cyber security. The extent to which cyber security is covered in this document is ensuring that our software is kept up to date with the latest security releases from the suppliers and compliant with security regulations.

3   Our RIIO-GT3 Plan

3.1   Our RIIO-T2 performance

Our RIIO-GT3 plan builds on the work done in RIIO-T2 as well as addressing new requirements and anticipating the level of change to which we will need to respond. Although only part way through the period at time of writing, the investment areas set out in our RIIO-T2 submission are being delivered as planned. These investment areas were described as follows:

GTO Focus	GSO Focus
• Investments in technology health upgrade to our core systems and supporting infrastructure service to maintain supportability of our systems, aligned to our IT Asset Health policy. • Expanded Geospatial applications, with new data types for improved safety. • Enhanced insights, analytics, asset performance and planning capabilities through wider and more diverse data, to improve asset performance, reliability and risk management in support of investment planning. • Use of emerging technologies such as AI and Machine Learning, to support core capabilities across asset health and network safety, business performance and customer experience. • Transition to industry leading asset management capability and delivery the next generation of work management, to manage our network efficiently and safely. • Better collaboration using digital workspaces and digital engineering. • Digitalised customer journey for seamless interaction and digital experience.	• Investments in technology health upgrades to our core Gas Control Suite systems and supporting infrastructure service to maintain supportability, aligned to our IT Asset Health policy. • Build on our investment in customer and CRM systems to extend the connections portal capability to cover non-standard connections and associated processes. • Make new investments to substantially enhance our data and insights, analytics and modelling capability to enable us to respond to changes in the energy mix and the need to handle large volumes of supply and demand scenarios more rapidly. Leverage cloud capabilities to achieve this and align to our investments in information provision. • Enhancing our information provision platform, aligned to our data and insights capability, to delivery much greater transparency, accessibility and usability of the industry data we hold aligned to our commitments to deliver on the EDTF recommendations.

The RIIO-T2 portfolio has been managed using a combination of agile and traditional waterfall methods where appropriate, using a hierarchy of delivery team and management reviews to keep us on track for successful delivery of the portfolio.

In T2 we have demonstrated our ability to deliver a growing volume of technical change. Figure 3.1 shows our IT capital spend profile in 23/24 price base and includes the costs associated with separation from National Grid (not under regulatory funding). This demonstrates our ability to scale the delivery capacity using the IT operational model described in section 5. Our capital spend is ▮▮▮▮▮▮▮ in year 4, giving confidence to our ability to scale delivery to the volumes required in the coming period.

Note that the regulatory plan spend in the final year of T2 is low due to the rejection of reopener investments that were planned for this year and the early completion of scope for T2. Two of the four submitted RIIO-T2 reopeners were rejected, citing risks

Figure 3.1. RIIO-T2 Investment Profile

associated with potential slippage of the DAMS project upon which both were dependent. The scope of these has been included in this plan, together with updated requirements, in investments IT 027 EAM New Capabilities, IT 029 Supply Chain Optimisation and IT 037 Predictive Asset Maintenance and 360° View of our Assets.

In March 2024 we published a revised Digitalisation Strategy – our first since separation from National Grid. The ongoing delivery of this strategy is underpinned by our IT delivery plan and technology roadmap, which together drive initiatives to the end of RIIO-
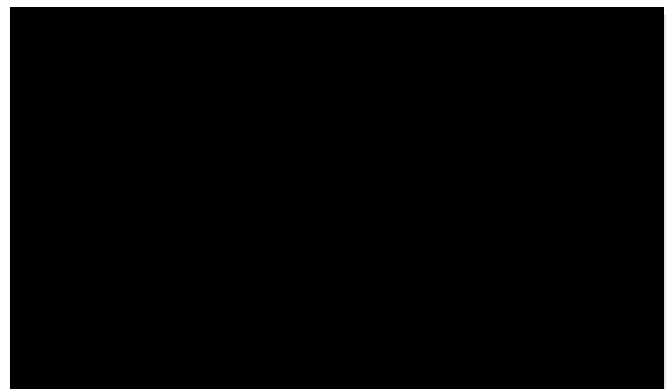
T2. The delivery plan shown in that document demonstrates the scale and complexity of work being successfully managed. This document is being updated in December 2024 to reflect the RIIO-GT3 business plan and IT investments.

3.2   IT Separation from National Grid

In January 2023, National Grid divested its gas functions and National Gas was formed, comprising National Gas Transmission and National Gas Metering. This document refers only to National Gas Transmission, being the regulated part of the business. National Gas Transmission encompasses both Gas Transmission Operations (GTO) and Gas System Operations (GSO).

With this separation from National Grid, all IT assets are now under sole control of National Gas and there will no longer be shared systems with National Grid once the IT Separation project has completed in 2025. This simplifies the estate, the IT funding structure and the scope of investments presented within this document and supporting IJPs.

The sale has brought independence of IT planning and both risks and opportunities for the IT function. There are risks from the loss of economies of scale for some IT contracts, but these are outweighed by the opportunities that come from not having to follow the priorities of a larger organisation where gas was a minority player. The following IT business plan focuses solely on the needs of National Gas customers and stakeholders, providing the right IT to enable the company to deliver on its mission and commitments.

Examples of particular benefits from separation are:

- **Right-sizing our systems** – our back office systems have been based on a large complex Enterprise Resource Planning (ERP) system, driven by the requirements of other group members. This will be replaced in RIIO-GT3 with a solution which reflects our needs, reducing cost and providing better business support and flexibility. Our Digital Asset Management project has already replaced an ageing complex system, protected by National Grid for over a decade, with a modern solution focused on our needs.
- **Reduction in Technical Debt** – separation of our systems from National Grid has allowed us to clean up technical debt (the cost of future reworking of constrained development) as part of the process of transfer.
- **Standards** – our technology standards have been redefined for greater agility and more cost-effective solutions. Examples include:
    - o Adoption of a "shift-left security" approach using Prisma Cloud to increase the effectiveness of code security through author tracking.
    - o Adoption of the Dublin Core metadata standard which will facilitate our industry interoperability work.
    - o Raising security standards by adopting "Secure by design" into our software development approach.
- **Strategic-sourcing decisions** – now that we have autonomy, we have changed the sourcing balance for both services and cloud / on-premise solutions. This rebalancing, which will continue to evolve, is delivering a more cost-effective service with greater agility. Cloud computing is also delivering environmental benefits.
- **Agility** – as well as continuing our successful use of agile delivery methods, based on the Scaled Agile Framework (SAFe), we have changed our delivery framework so that we have more flexibility and speed to value (or fast fail). An example of this is in network provision where for sites shared with National Grid our solution was ready to go even before separation discussions had concluded.

Whilst separation activities are not part of the funded RIIO-T2 activities, they are part of the success story for the period. We are not only successfully delivering our funded commitments but also the separation of our IT function and systems from the National Grid group, taking responsibility for many shared areas for the first time. This demonstrates the strength of our new organisation and capacity of IT delivery. This delivery capacity will be critical in the next period as the plan shows that investment levels are rising to meet the growing business plan and advancing digitalisation.

We anticipate some higher costs associated with dis-economies of scale with vendors previously contracted through National Grid as part of an Enterprise Agreement. Whilst we have not yet had to renegotiate contracts, the indication from software vendors is that volume discounts will reduce and so costs will rise. We have estimated the likely impact of this within our operational ("Run the Business") cost forecasts.

3.3   Outcomes driving our plan

3.3.1   Key outcomes

Our business plan is driven by the outcomes that consumers and network users expect us to deliver. We have carried out our own market engagement to confirm requirements (workshops, webinars, industry working groups, 1:1 meetings, etc.) and these

are consistent with the four outcomes below and set out in the Ofgem Framework Decision document. We reference these four outcomes throughout the IT business plan, ensuring each investment has clear links to value for consumers and network users.

- Infrastructure fit for a low-cost transition to next zero.
- High quality of service from regulated firms.
- Secure and resilient supplies.
- System efficiency and long-term value for money.

3.3.2   Outcomes link to IT enablers

The golden threads through the IT business plan (here and in IJPs), ensure that each investment has clear links to value for consumers and network users. Each thread has a simple structure and is applied to every investment justification in our IJPs. It drives how we plan, invest and monitor the success of all IT. The logic thread is illustrated below, and it is important to recognise:

- In most cases, IT does not itself deliver outcomes; it is the business capabilities using IT that deliver the outcomes.
- IT enables the business capabilities, as do other enablers such as people, processes, partners, etc.
- Data tools are part of the IT enablers and so, in this context, data is also an IT enabler of business capability.

The scope for IT enablers is built from requirements, defined by the business functions. Our business functions have identified what capability changes they need to deliver key outcomes and worked with IT specialists to determine how IT can help. Digitalisation of business processes, increasing amounts of data, and smarter analytical tools have led to IT enablers underpinning every part of the business and being increasingly pivotal to outcome delivery.

Another major driver of scope comes from within the IT function where IT assets need replacing at end of life. Security and resiliency outcomes apply to IT assets as much as pipes, and updating these assets in line with IT asset health policy is vital.

Figure 3.2. Enablers linked to Outcomes

3.3.3   Outcome triggers

As well as the four key outcomes covered in the previous section, we have defined triggers which give the next level of detail on the driver for change. To make the triggers easier to understand, we have grouped them into three categories which reflect the level of change: deliver compliance, outcomes or innovation. These triggers are further expanded below.

Deliver Compliance – *keeping our systems healthy, secure and compliant*

- IT Asset health – we need to keep the UK gas network running safely and securely. As part of this we will maintain the system health of our existing IT solutions by ensuring that they are kept up to date and supported, by applying version upgrades. Lifecycles of 3-5 years (depending on asset type) are typical across the IT industry and mean that many of our systems will reach end of life during the next funding period, and we will act in line with our IT Asset Health policy to update or replace these systems in the most cost-effective way.
- Cyber Security – the threat from malicious parties is constantly present and evolving in its nature. We need to ensure that our systems are protected by keeping abreast with latest security developments from vendors. All security update releases need to be applied, in a timely fashion.
- Compliance – new legislation and changes to EU and UK regulatory policies continually necessitate changes to our IT systems. These changes are likely to increase as the new industry model emerges and market rules are set.
- Safety – the safety of our people and our assets is critical to our obligations under the gas safety case and other Health, Safety and Environment (HSE) legislation. Investments can be triggered by issues relating to safety or opportunities to improve safety further.

Deliver Outcomes – *enabling enhanced capabilities which deliver key business outcomes*
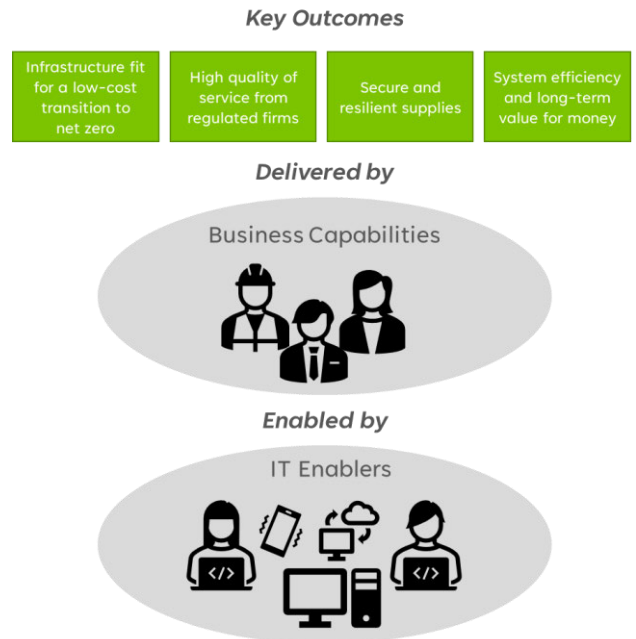
- Internally driven outcomes – the business commitments that we are making for RIIO-GT3 are challenging and require us to be smarter in how we plan and deliver our mission. Examples include:
    - Delivery of a larger Asset Management Plan (AMP) requires better analysis, definition and management of the AMP, using more data and better analytical tools.
    - More AMP work means more outages and these will need better network modelling and predictive maintenance to optimise NTS availability.
    - More AMP work also means greater supply chain throughput, enabled by smarter procurement management tools to shorten lead times and increase volume.
    - Reduced asset availability due to AMP outages and likely partition for Hydrogen and Carbon Capture will lead to greater NTS risk unless risk management capabilities are enhanced.
- Externally driven outcomes – our customers and network users have evolving needs and expectations to which we must respond. Requirements from NESO will develop well into RIIO-GT3 and interoperability with all energy participants requires new and expanded data sharing capabilities. We expect that focus on net zero will result in changing customer needs and expectations, especially as new entrants appear in the emerging energy industry model. In the coming period, agility in our architectures and systems will play a key part in our ability to deal with external change.
- Efficiencies – we continually review the efficiency of the IT function and will employ new tools to improve our performance. Similarly, we work with business functions to use IT to deliver cost savings through automation and better decision support. These efficiencies flow through to lower cost of service for the consumer.

Deliver Innovation – *transformation to deliver new capabilities and benefits*

- New capability – the drive towards net zero and a single energy system is triggering new requirements including:
    - Interoperability – for the new energy industry model to work, there is a need to create end-to-end connectivity between energy network participants, to enable sending, receiving, and sharing of data to a higher level than at present. This will drive us to make investments in data usability and accessibility, progressively increasing the value available to other parties.
    - Net zero – National Gas is playing a central role in supporting the Government net zero target to decarbonise by 2050. This is a critical driver of change but, following Ofgem guidance, we have limited investment to providing flexibility to adapt systems to manage a decarbonised network in the future, rather than including specific investments for hydrogen networks or carbon capture and storage (CCS).
- New technologies – building on the work being done by our Innovation group, we will be implementing new technologies such as wearable devices and image processing to drive data improvements and support our digitalisation strategy. Further, advancements in Artificial Intelligence (AI) and Machine Learning (ML) are establishing these technologies for industrial use.

It is clear that investments with some of these triggers have a simple justification. Asset Health, Cyber Security, Compliance and Safety are triggers that we cannot ignore without breaching our obligations. We have reflected this in the investment needs cases in IJPs, enabling us to be more succinct in our justifications for these areas.

Where the primary trigger is asset health and a system is being replaced, we will usually have opportunities also to enhance capabilities using new system functions and may even employ innovative technologies supplied with the new system. So, while the primary triggers are used here to classify investments, the scope may not be exclusive to this trigger.

3.3.4 Digitalisation as an outcome

The drive for digitalisation is pervasive across the industry as better technologies and more data become available, driving benefits from higher efficiency or smarter decisions. User expectations and understanding of technology are rising and this helps both the development of requirements and the adoption of IT enabled change. The demands of moving to whole energy systems management and interoperability between industry participants are driving digitalisation harder than ever.

Our Digitalisation Strategy, published in March 2024 and updated in December 2024, sets out our latest view of this journey and the

Data Foundation
Continue building a strong and trusted data foundation to access wider range of datasets, especially for RRP

Data sharing platform
Continue updating data sharing platforms

Digital Twin
Leverage IT and OT for select areas of asset management, operations and automated data capture

Enhanced decision making
Continue to utilise frontier tech. for building enhanced decision making capabilities

Efficient Enterprise Essentials:
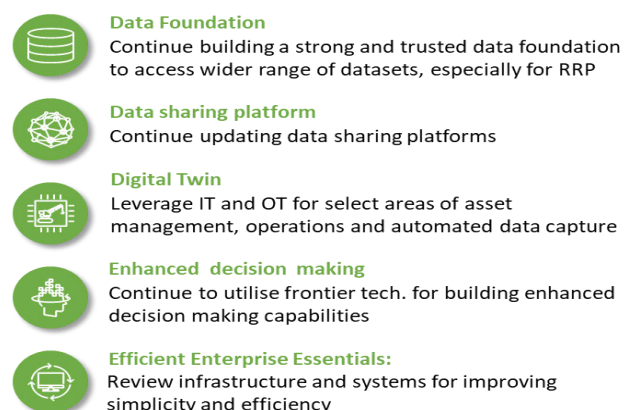Review infrastructure and systems for improving simplicity and efficiency

Figure 3.3. Focus areas in our Digitalisation Strategy

five focus areas for digitalisation (see figure 3.3). These focus areas are part of our RIIO-T2 delivery and continue into RIIO-GT3, for example:

Focus Area	Relevant IJP example
Data Foundation	IJP005. Data Foundation, AI & Smart Networks – putting in place the governance and tools necessary to make safe use of Artificial Intelligence (AI).
Data sharing platform	IJP002. Customer & Stakeholder – extending the breadth and ease of use of information provided externally through our New Information Provision investments.
Digital Twin	IJP005. Data Foundation, AI & Smart Networks – building on our Innovation work to scale up the Network Performance Twin against our operational assets, ensuring asset data capture during design & delivery phases of the asset lifecycle.
Enhanced decision making	IJP005. Data Foundation, AI & Smart Networks • enhancing our network modelling capabilities through the application of AI to network models, enabling more frequent and smarter operational forecasts. • More asset data and better analytical tools to enable predictive maintenance, to increase cost-effectiveness
Efficient enterprise essentials	IJP006. Enterprise Essentials (Applications) – increasing digitalisation of procurement processes to increase capacity to support the enlarged capital plan. IJP007. Enterprise Essentials (Infrastructure) – ensuring all our IT infrastructure and IT operational tools are secure and provide high levels of service.

It should be noted that much of the business is already digitalised, i.e. using processes based on digital information and tools. Our Digitalisation Strategy focuses on how this will progress even further. A significant portion (80%) of the IT Business Plan is not driven by further digitalisation but simply maintaining the health, security and compliance of our existing systems, sustaining the level of digitalisation already in place.

We have categorised our investments against the Data and Digitalisation Memo Table categories as shown in section 4.2.2 below and we provide investment level detail in the IJPs. As the categories are not exclusive (e.g. a field work investment improving process efficiency) our categorisation has a degree of subjectivity, recognised by Ofgem, but uses consistent rules in assessment.

3.3.5   Data Best Practice

The Journey of Compliance so far RIIO-T2.

Compliance with Ofgem's Data Best Practice Guidance (DBPG) has progressed since RIIO-T2 began in April 2021.

In 2021 National Gas managed data in siloes, with Data Best Practice compliance being driven mainly by the Asset Directorate and the Gas System Operator. As we progressed, and following feedback from Ofgem in the summer of 2022, we recognised the need for an enterprise-wide view of data to identify and manage data initiatives.

The Data Strategy and Governance Team has produced a Data Strategy that describes our areas of focus for RIIO-T2 and beyond. Implementation has included policy development and the building out of the taxonomies and documentation. This has led to new policies being approved, including our (Dublin Core) metadata policy and data quality policy, both of which are fundamental to increasing our level of compliance with the Data Best Practice Guidance.

In the area of Data Triage, National Gas was initially aligned to all other networks, in that all requests for data would come through the Energy Networks Association and be triaged internally. As the price control period has progressed, all internal and external customers and stakeholders can request data from us directly, and these are assessed through the data triage process.

We continue to roll out the Data Strategy, developing the frameworks that enable compliance to our data policies, and so to Ofgem's DBPG. These frameworks are made up of Standards, Guidelines, and Templates and are being rolled out with internal training and communications to ensure behaviours are embedded across the organisation.

Development of initiatives related to the Gas Data Portal and Insights and Analytics Platform will continue through RIIO-T2, to further enhance our capacity to comply with data discovery, sharing, and interoperability.

The Gas Data and Digitalisation Collaboration Group has been established to ensure that collaboration continues beyond 2024, when all Gas participants of ENA will decouple from the industry body. National Gas will engage with this group to work on areas such as interoperability, data cataloguing, and data sharing infrastructure as and when appropriate and practical to do so.

Progression in RIIO-GT3

In RIIO-GT3 we will invest further in technology and data, and we have ensured that each of the Data Best Practice principles are supported by multiple initiatives – see Figure 3.1 in IJP005 for progress across T2 and T3. Key areas of focus will be making data discoverable by data users, interoperable with data from other systems, and storing and archiving our data to ensure sustained benefits.

Our investments will also enhance Data Governance capabilities through data literacy and ownership initiatives, and make our data more easily understood through the continued roll out of Dublin Core Metadata Standard across the business and optimisation and documentation of business processes.

Collaborative development of the Data Sharing Infrastructure (DSI) will leverage key investments in our portfolio. As well as the New Information Provision investments described in IJP002 which directly provide data sharing, there are key data foundational investments detailed in IJP005 which underpin DSI capabilities. These investments are principally:

- IT 001 Domain centric data management (through scaled data workloads)
- IT 003 Accelerating innovation and decision support through data as a consumable product
- IT 036 Enterprise integration of embedded AI
- IT 061 Enhanced asset data Interoperability
- IT 039 Digital enablement for risk modelling and management
- IT 040 Enhanced data driven interoperability for an intelligent harmonised network.

3.3.6   Active innovation feeding investments

Our Innovation business function provides a critical role of capturing and testing ideas, bringing them to the point where they are ready to put into production. For instance, their work in exploring the application of AI/ML has increased confidence sufficiently for AI/ML investments to be included in the IT plan. The innovation plan below shows examples of such progress.

As well as the pipeline from Innovation, there are various IT topics which we feed into that team. These are areas where there is too much uncertainty to go straight into a business plan and confirmation of technical feasibility and/or value is needed. For the coming funding period, these are covered in the Innovation business plan rather than the IT plan.
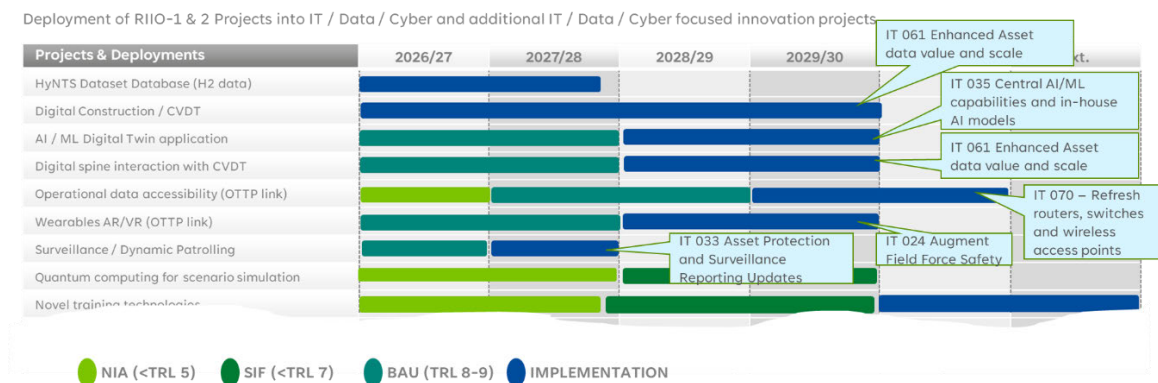

Figure 3.4. Examples of innovation progressing into implementation in RIIO-GT3

3.4   How we have challenged our plan

3.4.1   Scope based on business requirements

We have built our IT plan by engaging with all business functions across NGT and through those, with customers and stakeholders. The process has seen multiple iterations of gathering and understanding requirements, defining solution options, checking understanding and confirming benefits and priorities. We have also engaged with suppliers to understand product roadmaps and implications for our plan. These iterations have run in parallel with the development of our functional business plans which have, in turn, influenced adjustments to our overall plan as they evolved.

Our planned IT spend has been reduced by this process of challenge, from a peak of c. £550m to the current Totex of £498m. During this process, which has involved functional specialist and executive review, we have ensured that every IT investment has a clear line of sight to business outcomes valued by consumers and network users. The business benefits have been summarised against each investment in section 4.3 and justifications are set out in detail in the seven IT IJPs.

As the portfolio took shape, we also checked for overlaps and gaps, ensuring that all requirements were addressed and that we had not double counted any investment across different parts of the overall business plan.

We have followed our SVC standard (Cost, scope and volume data confidence standard – Non-AMP (IT)) in all scope discussions. All investments in our baseline scored high confidence on scope. Investments that did not meet the scope standard have been

descoped. This included initiatives such as external sharing of large datasets, integration of stakeholder management with customer management, social media marketing, and future energy scenario preparation.

3.4.2   Volumes

Volume for most of our investments is '1' – refreshing or enhancing a single system. Where volumes have been applied, these have come from either our HR database (for user volumes) or our IT configuration management database (CMDB) for asset volumes such as routers. Where the strategic workforce plan has forecasted a growth in relevant users, we have adjusted volumes accordingly. Hence, our volumes are largely based on factual data rather than estimates, giving us a high level of confidence in their accuracy. There are seven investments where volume confidence is medium due to uncertainty in user volumes due to ongoing business planning.

The final category of volumes, applicable to Cloud investments, is transactions and data volumes. These are estimated based on existing usage plus anticipated growth, using tools provided by the suppliers and checked through production monitoring.

3.4.3   Our investment costs and benchmarking

The costs for each of our investments have been developed using the best information sources available. Once the scope of each investment was well defined, detailed delivery cost analysis was carried out, covering hardware, software, services and resources. Estimates were created using the sources with the highest confidence across similar past project outturn costs, supplier budgetary estimates / quotations, and detailed project plans ("bottom-up analysis", often with the help of suppliers and consultants). All costs are normalised to 2023/24 prices and followed our SVC standard.

Each of the investment costs is aligned with our IT architecture and delivery approach. Both of these have been designed to provide the most cost-effective way of providing technology to the business, ensuring the best value for consumers.

We have assured these costs using benchmarks provided by the global benchmarking company, Gartner Inc. We engaged with Gartner early in our process and started dialogue with their experts in September 2023. They have understood the scope and delivery method of each of the investments, enabling them to develop a confident benchmark range for our costs.

Where initial analysis showed a mismatch, we assessed whether it stemmed from a scope misunderstanding or cost error and adjusted our estimate as necessary. We demonstrate cost effectiveness by being within the benchmark range or by providing a justification for why we are not, within the relevant IJP. The results of this benchmarking are provided separately in the Gartner IT Benchmark consultant's report. Only four investment costs fell outside the Gartner benchmark range, representing 1% of the total. One was lower and three were higher than the Gartner range. Each of these deviations has clear justification based on evidence such as supplier quotes or similar recent project cost profiles. These are scored Medium on our SVC cost assessment. All other investments scored High against this quality standard.

3.4.4   Risks to our RIIO-GT3 plan

This price review comes at a time when there is a high degree of change in the energy industry. Further, the rapid pace of change in the IT industry makes long-term forecasting, up to seven years ahead, highly challenging. Both factors drive risks in the plan. We have identified three principal risks in our plan and describe what we will do to mitigate them, as follows.

- **Regulatory / industry model change**: Our investment plan is based on the current legislation and obligations[1] together with the pace of reform observed historically. However, the progressive emergence of the model for a single energy industry and the roadmap to net zero present a higher level of uncertainty than we have seen since privatisation of the gas industry. Our investment plan follows the Ofgem guidelines in relation to hydrogen, but we recognise that the picture will evolve and potentially impact our plan. We mitigate this risk through designing flexibility in our IT architecture and systems, and we will continue to engage with stakeholders to understand the emerging picture.
- **Technology change**: The exploration of "bleeding edge" technologies is done by our Innovation team whereas our planned investments are based on established technologies. However, the IT world moves at an ever-increasing pace, and it is difficult to forecast technology capabilities and markets through the next RIIO period. Pricing is based on the current market for technologies and resources but may change in the future. We mitigate this through partnerships with suppliers and will continue to re-assess relevant technologies through RIIO-GT3.
- **Collaborative uncertainty**: All versions of the new industry model will require greater collaboration between industry participants in order to optimise the single energy market. Interoperability requires collaboration, cooperation and

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[1] For example, the Uniform Network Code, Data Best Practice Guidelines and Gas Safety Case.

probably compromise across multiple parties and the implications on our data and systems are not fully within our control. We have mitigated this through agile architectures and ongoing collaborative engagement across the industry.

3.4.5   Deliverability

Our plan considers deliverability constraints, and we will mitigate these through advance preparation as the plan is confirmed. IT resources for the plan are scalable through our partnership approach (see section 5.3). The most challenging constraint is not within IT but within the business functions, in their ability to:

- **Contribute to the design and build process**. Business functions want new IT functionality but are often surprised by the level of Subject Matter Expert (SME) input required in the design and build process. We have worked with our internal business customers to size the effort required, through detailed bottom-up resource planning. Resource plans are being deployed in advance of the relevant period and we have tailored the plan to any unavoidable constraints.
- **Accommodate change**. IT change generally reflects new business requirements which involve changes to business processes, data or organisational structure. There is a limit to how much business change can be accommodated at once or even over a period. We have considered this in the structure and timing of the overall portfolio delivery.

3.4.6   Baseline and uncertainty mechanism

The IT portfolio contains 89 investments with Totex of £498.14m, of which 5 investments with a combined Totex of £40.74m are under UM. The baseline being 92% of the portfolio reflects the importance of the investments to the delivery of business outcomes and the confidence in the scope, volume and cost of the investments. The five investments under UM are:

- IT 044 Gemini Refresh (IJP004) due to the uncertainty around the rate of performance decline and cost increase due to ageing software technology and the need to carry out a comprehensive assessment of drivers for change.
- IT 023 Providing our Field Force with XR Capabilities and IT 024 Augment Field Force Safety (IJP001) due to uncertainties around the readiness of new technologies for augmented reality and wearable sensors.
- IT 054 Contact Management: Process Automations and Enhancements and IT 055 Contact Management: Omni-channel Support (IJP002) due to ongoing development of business requirements and business case.

These projects are independent of others and so the delivery implications of seeking later project approval are minimal.

4   How our portfolio delivers against priorities

4.1   The scale of IT investment has changed

Five years has seen a lot of change in circumstances. The changing external drivers for RIIO-GT3 have been discussed in Section 3 and here we summarise the main factors that have caused a rise in the cost of the IT investment plan compared to RIIO-T2. In real terms, the plan is £221m (81%) larger than the current period allowance (including reopeners) driven by 35 investments.

Asset health replacement leapfrogged T2 – (£50M)
The lifespan of IT hardware and software is typically 3-5 years, and this results in replacement activities in most 5-year periods. However, we replaced some systems late in T1 which will be next replaced early in T3 and so did not appear in the T2 plan. There are four investments in this group:

	Investment Line	Value Stream / IJP	New Totex (£m)*
IT 081	Finance Modernisation	Enterprise Essentials - Apps	■
IT 022	Refresh Field Force Field Service Platform and Applications	Asset & Ops Enablement	■
IT 009	EDSS Replacement	Enabling Energy Security	■
IT 051	Contact Management - refresh	Customer and Stakeholder	■

* Note that New Totex may be the whole investment cost or netted off against similar T2 scope.

New obligations – (£33M)
New regulation / legislation has created the need for new capability. The journey to net zero, whole system management, and data and digitalisation progression is driving a level of investment to remain compliant that is more than in T2. There are seven investments in this group:

	Investment Line	Value Stream / IJP	New Totex (£m)*
IT 045	Market driven Gemini system enhancements (Data Provision)	Enabling Market Efficiency	■
IT 040	Enhanced Data driven interoperability for an intelligent harmonized network	Enabling Energy Security	■
IT 059	Optimised digital experience platforms through information ergonomics and data continuity	Data, AI & Smart NW	■
IT 020	Future Pandemic Preparedness	Enabling Energy Security	■
IT 049	New Information Provision: Smart Apps	Customer & Stakeholder	■

	Investment Line	Value Stream / IJP	New Totex (£m)*
IT 003	Accelerating innovation and decision support through data as a consumable product	Data, AI & Smart NW	■
IT 100	Carbon Accounting	Enterprise Essentials - Apps	■

New technology opportunities – (£57M)

Technology advances present opportunities for beneficial capabilities or force action in response to changes. Examples include AI (built in-house or becoming part of vendor packages), analytics such as modelling, simulation and digital twins, and remote sensing and data capture technologies. There are ten investments in this group:

	Investment Line	Value Stream / IJP	New Totex (£m)*
IT 035	Central AI/ML capabilities and in-house AI models	Data, AI & Smart NW	■
IT 036	Enterprise integration of embedded AI	Data, AI & Smart NW	■
IT 037	Predictive Asset maintenance and 360* view of our assets	Data, AI & Smart NW	■
IT 068	Innovation and Modern Technology	Enterprise Essentials - Infra	■
IT 039	Digital enablement for risk modelling and management	Data, AI & Smart NW	■
IT 025	Remote Inspection Technologies	Asset & Ops Enablement	■
IT 059	Optimised digital experience platforms thro' information ergonomics and data continuity	Data, AI & Smart NW	■
IT 023	Providing our Field Force with XR Capabilities	Asset & Ops Enablement	■
IT 051	Contact Management – refresh	Customer & Stakeholder	■
IT 024	Augment Field Force Safety	Asset & Ops Enablement	■

Business Transformation – (£61M)

New capabilities required to deliver business outcomes are enabled by extending digitalisation. These are significant enhancements to capabilities, delivering transformation of business function. There are twenty investments in this group:

	Investment Line	Value Stream / IJP	New Totex (£m)*
IT 081	Finance Modernisation	Enterprise Essentials - Apps	■
IT 035	Central AI/ML capabilities and in-house AI models	Data, AI & Smart NW	■
IT 036	Enterprise integration of embedded AI	Data, AI & Smart NW	■
IT 061	Enhanced Asset Data Value and Scale	Data, AI & Smart NW	■
IT 037	Predictive Asset maintenance and 360* view of our assets	Data, AI & Smart NW	■
IT 041	Business plan performance automation and Totex optimisation	Data, AI & Smart NW	■
IT 029	Supply Chain Optimisation	Asset & Ops Enablement	■
IT 027	Enterprise Asset Management new capabilities	Asset & Ops Enablement	■
IT 052	Contact Management: Digital Support Centre (Streamlined Help Location)	Customer & Stakeholder	■
IT 054	Contact Management: Process Automations & Enhancements	Customer & Stakeholder	■
IT 060	Knowledge Retention, Continuity, Management for Workforce Enablement	Data, AI & Smart NW	■
IT 034	Safety and Risk System Capabilities	Asset & Ops Enablement	■
IT 085	S2C: New Digital Capability	Enterprise Essentials - Apps	■
IT 082	Process Automation	Enterprise Essentials - Apps	■
IT 031	AIP new capability	Asset & Ops Enablement	■
IT 062	Workforce data driven upskilling	Data, AI & Smart NW	■
IT 019	Enhance Control Room Telephony	Enabling Energy Security	■
IT 055	Contact Management: Omni-channel Support	Customer & Stakeholder	■
IT 026	Enterprise Asset Management tech health	Asset & Ops Enablement	■
IT 101	CNI Data Centre	Enterprise Essentials - Infra	■

Business budget realignment to IT – (£20M)

A single investment placing "business IT" within the IT budget for strategic management, bringing new scope into the IT plan.

	Investment Line	Value Stream / IJP	New Totex (£m)*
IT 043	Gemini maintain / enhance	Enabling Market Efficiency	■

4.2 The shape of the IT portfolio

4.2.1 A portfolio foundation protecting compliance

The pie chart in figure 4.1 shows the distribution of investments across the three trigger categories described in section 3.3.3 (compliance, outcomes and innovation) and shows across a total of £498.14m:

- A base of 80% of the portfolio is driven by compliance with legislation, asset health policy, regulation, security and safety. This is the bedrock of IT and is required just to "stay still".
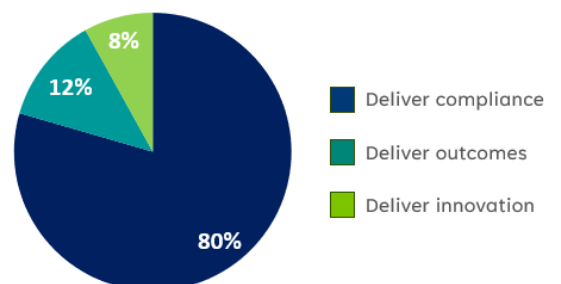

Figure 4.1. Trigger proportions in the portfolio

- The remaining 20% of the portfolio is critical to outcomes in our business plan of which 8% is based on new ways of working enabled by technology.

The detail of the value through compliance, outcomes and innovation is contained within the IT IJPs and summarised against each of the investments listed in section 4.3 below.

4.2.2   A portfolio driving digitalisation

The pie chart in figure 4.2 shows the profile of spend and count of investments against the 6 categories in the Digitalisation Memo Table and the balance that align only to IT. The latter (IT only) are the 28% of spend which sustain our capabilities through refreshing and maintaining our systems but do not further digitalise.

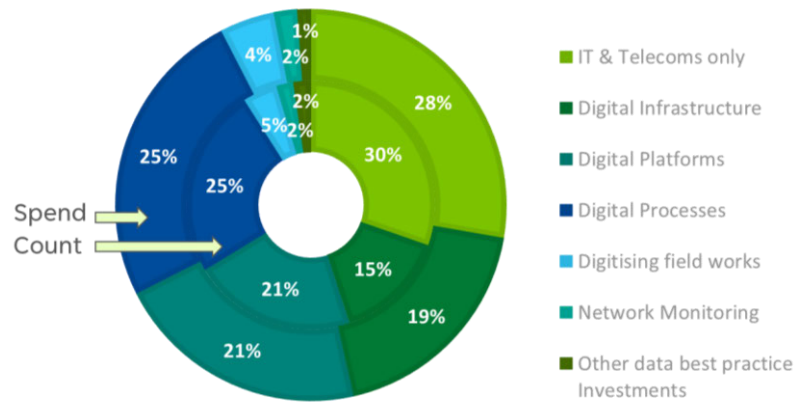The digitalisation categories account for 72% of our portfolio spend, reflecting the focus of our efforts to further digitalise. This progression benefits our own processes and drives value for others through greater data sharing and access to the gas network.

Figure 4.2. Digitalisation categories in the portfolio

4.2.3   A portfolio enabling business commitments

Our NGT main plan defines 12 commitments for RIIO-GT3 and our IT investments contribute significantly to the delivery of these. The table below shows the number of IT investments contributing to each commitment.

Commitment	Count of IT Investments	Commitment	Count of IT Investments
1. Meeting our critical obligations every hour of every day	13	7. Leading the energy transition to clean power and net zero	8
2. Keeping our critical systems secure	15	8. Caring for our environment and communities	9
3. Ensuring world class safety levels of our workforce and the public	3	9. Investing in our people and our capability for the future	16
4. Delivering a resilient network fit for the future	49	10. Operating the system safely, reliably and flexibly	12
5. Ensuring our network is resilient to climate change	5	11. Innovating now and for future generations	1
6. Drive relentless performance and service	6	12. Transforming our activities through our IT and data	89

4.2.4   A portfolio driven by outcomes

Our portfolio content is driven by the need to enable outcomes. The bar chart below summarises the IT spending of the key functions of the business, and the focus of their spend across the key outcomes.
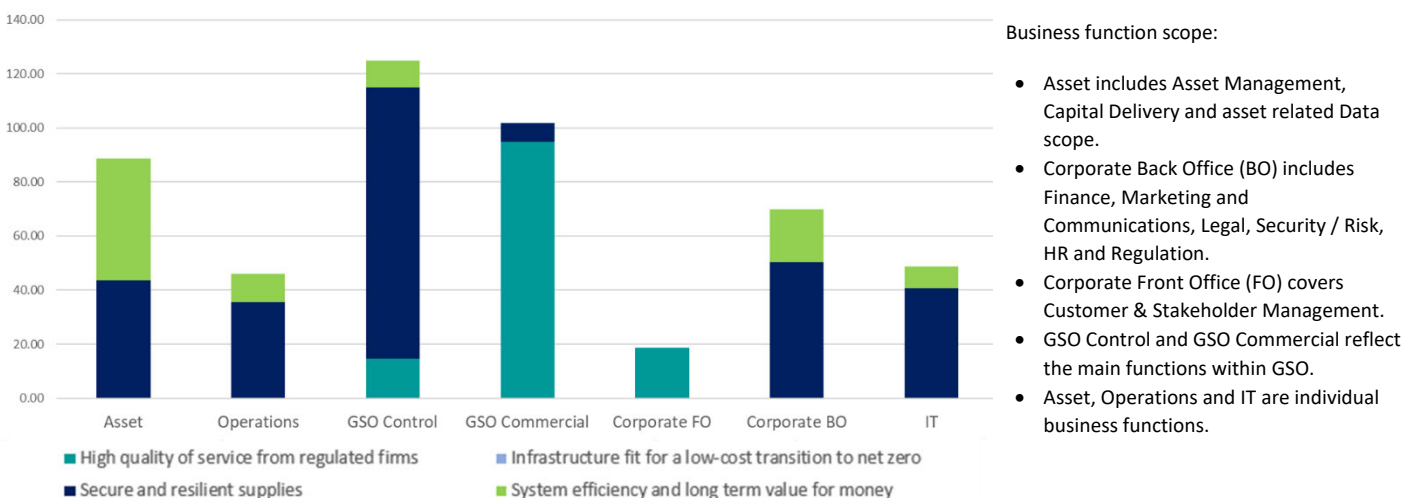

Business function scope:

- Asset includes Asset Management, Capital Delivery and asset related Data scope.
- Corporate Back Office (BO) includes Finance, Marketing and Communications, Legal, Security / Risk, HR and Regulation.
- Corporate Front Office (FO) covers Customer & Stakeholder Management.
- GSO Control and GSO Commercial reflect the main functions within GSO.
- Asset, Operations and IT are individual business functions.

Figure 4.3. IT spend by business function, aligned to key outcomes

We highlight below the focus of spend in each business function:

- Asset: Half of the spend focused on "Secure & Resilient" by protecting existing Asset related systems (AIP, EAM) with the other half on "Efficiency & Value" enhancing these systems to support better asset lifecycle management and planning and delivery of the AMP.
- Operations: Over half is system end-of-life replacement and safety ("Secure & Resilient") with the balance being enhancements to deliver efficiencies through new technologies ("Efficiency & Value") and support AMP delivery.
- GSO Control: Scope is focused on "Secure & Resilient" by replacing end-of-life components of the Gas Control Suite to maintain security and better enable management of outages (especially for AMP delivery), NTS risk and whole energy system interoperability.
- GSO Commercial: The majority of spend is on our ageing Gemini platform and ensuring compliance with evolving market rules and legislation ("Secure & Resilient") plus enhancements to information provision driven by regulatory requirements (Data Best Practice Guidelines) focused on "Quality of Service".
- Corporate Front Office: Some system end-of-life replacement plus enhancements to customer service, all supporting "Quality of Service".
- Corporate Back Office: Most of the spend focused on "Secure & Resilient", mainly directed at the replacement of the end-of-life Finance system, with "Efficiency & Value" being especially driven by Procurement in support of the large AMP supply chain challenge.
- IT & Security: Almost all focused on system end-of-life replacement ("Secure & Resilient") with some enhancements to drive value out of technology innovations ("Efficiency & Value").

It is notable that one outcome is missing from this profile – "Infrastructure fit for a low-cost transition to net zero". This is because the IT investments are not primarily driven by this outcome. For instance, while Asset Investment Planning (AIP) contributes to this outcome, it is primarily focused on NTS security and resilience.

The total for each key outcome is shown in the table below and further split by trigger (see section 3.3.3 for trigger definitions). The individual investments and associated benefits statements are listed by outcome in section 4.3.

	Infrastructure fit for a low-cost transition to net zero	High quality of service from regulated firms	Secure and resilient supplies	System efficiency and long term value for money	Total
Asset			**43.71**	**44.96**	**88.66**
Compliance			26.21	34.46	60.68
Outcomes			8.21		8.21
Innovation			9.29	10.49	19.78
Operations			**35.63**	**10.36**	**45.98**
Compliance			23.73		23.73
Outcomes			9.32		9.32
Innovation			2.58	10.36	12.94
GSO Control		**14.78**	**100.23**	**9.79**	**124.80**
Compliance		6.07	84.80	9.79	100.65
Outcomes		8.71	15.44		24.14
GSO Commercial		**94.83**	**7.09**		**101.91**
Compliance		91.21	7.09		98.29
Outcomes		3.62			3.62
Corporate FO		**18.74**			**18.74**
Compliance		7.91			7.91
Outcomes		10.82			10.82
Corporate BO			**50.40**	**19.44**	**69.84**
Compliance			50.40	13.46	63.85
Outcomes				5.99	5.99
IT			**40.77**	**7.43**	**48.20**
Compliance			40.77		40.77
Innovation				7.43	7.43
Grand Total		**128.34**	**277.82**	**91.98**	**498.14**

As well as the four industry key outcomes, there are practical deliverables that the NGT business plan will deliver in support of our mission of *Leading a clean energy future for everyone*. To transition to net zero while maintaining national energy capacity and risk, our key challenges are:

- Deliver the AMP; optimise outages; manage the Supply Chain.
- Manage the NTS under increasing risk.
- Support whole energy system management.

Each business unit has IT investments which play their part in enabling the business to address the challenges listed above. The enabling highlights for each business unit have been referenced in the summaries following figure 4.3 above.

4.3 Investments by key outcome and business function

This section provides a summary of all of the planned investments with their benefits and costs, and cross-references to Commitments and relevant IJP. Each table lists the investments for a key outcome, segmented by business function.

4.3.1 Investments enabling outcome: Secure and resilient supplies (£277.82m)

Inv. Ref.	Investment name	Enabled benefit	£m	Commitment	IJP Ref.	Digital Cat.[2]
Asset and asset data investments – Summary: enabling definition and ongoing management of the AMP; refining maintenance policy and capacity to facilitate NTS access in support of AMP delivery.						
IT 001	Domain centric data management (through scaled data workloads)	• The ability to combine trusted datasets, automate RRP and give one source of truth for reporting to all areas of the business, leading to better decisions and lower costs.	▉	2, 4, 12	IJP005	Infra
IT 002	Enhanced data governance, through improved data literacy and ownership	• Improve efficiency in automatically detecting data quality issues and surfacing them for review, leading to better quality of service to internal and external users. • Training and enablement will make field users more able to leverage the technology and understand when to flag concerns and issues requiring attention. • Ability to track and audit our data quality issues will provide objective risk assessments and clear data quality actions.	▉	2, 4, 12	IJP005	Infra
IT 003	Accelerating innovation and decision support through data as a consumable product	• Provide data to users through a seamless user experience to allow users to analyse and drill down into data to make evidence-based decisions. • Combine datasets so that users can extend their hypothesis and build more advanced models and embed into decision automation models for innovation in data capture and maintenance.	▉	1, 4, 12	IJP005	Plat
IT 004	Data & Insights platform refresh	• Security of software critical to continued asset data driven insights. • New features and automation will continue to be introduced as software versions are updated.	▉	12	IJP005	IT
IT 026	Enterprise Asset Management tech health	• Security of software critical to the integrity of asset data. • Improve the quality of asset data by aligning with modern standards (ISO14224) to facilitate internal process integration and external interoperability.	▉	4, 12	IJP001	IT
IT 027	Enterprise Asset Management new capabilities	• Process efficiency through consolidation of legacy processes into EAM to ensure continuity and native integration. • Process digitalisation to improve data quality, management reporting, efficiency of process delivery and asset management maturity in line with the AMP recommendations.	▉	1, 4, 12	IJP001	Infra
IT 030	AIP Tech Health	• Security of software critical to the safe delivery of projects.	▉	1, 2, 4, 12	IJP001	IT
IT 031	AIP New Capabilities	• Process efficiency. • All assets are correctly assessed and assigned interventions, preventing unnecessary re-work or assets not being included.	▉	1, 4, 12	IJP001	Proc
IT 037	Predictive Asset maintenance and 360* view of our assets	• Enhance our condition monitoring capabilities, using advanced data analytics to better enable predictive (data driven) maintenance scheduling. • Deliver advanced platforms that can capture real and near real time condition data from IoT enabled devices to read device condition. • Bring together data sources into a digital platform to enable business users to be able to view assets on the NTS at scale under differing parameters.	▉	4, 12	IJP005	Infra
IT 039	Digital enablement for risk modelling and management	• What-if analysis on NTS scenarios to enable advanced analytics for processes requiring simulation of different system configurations and operational states, to optimise decisions and reduce risk.	▉	4, 12	IJP005	Plat
Operations investments – Summary: further enhance safety and minimise constraints for AMP delivery outages.						
IT 021	Refresh Field Force Devices	• Continuation of service through asset health replacement. • Increased productivity and better user experience for our field force	▉	2, 12	IJP001	IT
IT 022	Refresh Field Force Field Service Platform and Applications	• Continuation of service through asset health replacement. • Better access to required documentation, drawings and asset data to support maintenance and Capex work delivery. • Improved data capture and enhanced on the job field force support.	▉	2, 12	IJP001	Proc
IT 024	Augment Field Force Safety **UNDER UNCERTAINTY MECHANISM**	• Move to near real time responses to safety incidents and improved data quality.	▉	1, 2, 9, 12	IJP001	Field
IT 029	Supply Chain Optimisation	• Optimised material resource planning, inventory management and procurement - ensuring jobs are planned and delivered more effectively, efficiently and on time resulting in lower costs.	▉	2, 12	IJP001	Infra
IT 032	GIS Refresh and Tech Health	• Continuation of service through asset health replacement. • Improve reliability and availability of asset data to Operations whilst offline.	▉	1, 2, 4, 12	IJP001	IT

[2] Cost sub-category: IT Only; Digital – Infrastructure, Processes, Platforms, Field Works, Network Monitoring, Other.

		• Maintain stability and security of GIS offline and main GIS capability. • Add additional features to expand digitalisation (load additional data types) and improve accuracy of Geospatial data at point of capture.				
IT 033	Asset Protection and Surveillance Reporting Updates	• Improve environmental performance and reduce emissions. • Continuous data will lead to improved asset health data and proactive decision making, lowering asset Totex.	▬▬	1, 4, 12	IJP001	Net
IT 034	Safety and Risk System Capabilities	• Improved visibility of the competencies of our workforce to support their safety. • Improved strategic workforce planning and training requirements, leading to greater capacity to deliver capital programmes (AMP)	▬▬	2, 4, 12	IJP001	Field
IT 094	Safety incident management and SHE related systems	• Continued compliance of our Safety Incident Management and SHE related IT systems with UK Legislation and the changing internal and external regulatory environment, through maintenance and enhancement of IMS, OHIO, DRMS, DSE and by delivering better user experience.	▬▬	12	IJP006	Proc
GSO Control investments – Summary: support AMP delivery through advanced analytics to maximise outage availability; manage service risk under reducing asset availability						
IT 005	GSO Network Capability	• Continuation of service through asset health replacement. • Enhancements and innovation in modelling technologies to improve productivity, simulation accuracy and manage an increasingly complex operational environment.	▬▬	4, 10, 12	IJP003	Plat
IT 006	Enhance SCADA	• Continuation of service through asset health replacement and enhancement of core critical Control Room (CNI) system that is used to safely operate, run and provide real-time monitoring of the NTS.	▬▬	4, 12	IJP003	Plat
IT 007	Enhance Commercial Apps (Liferay)	• Enhancement of core critical Control Room (CNI) system that is used to safely operate the NTS, supporting digitalisation.	▬▬	4, 12	IJP003	Plat
IT 008	Video Wall replacement	• Continuation of service through asset health replacement of primary control room video wall and displays for maintaining optimal operational safety of the NTS.	▬▬	4, 12	IJP003	IT
IT 009	EDSS Replacement	• Continuation of service through asset health replacement, giving increased resilience through the use of APIs / process automation, replacing the current service which is subject to email failures	▬▬	4, 12	IJP003	Plat
IT 010	Operational Process Improvements	• Improvements across GSO via process efficiency and automations, leading to increased sustainability, user experience transformation, increased resource productivity and higher efficiency operations.	▬▬	4, 12	IJP003	Proc
IT 011	Future Telemetry Network	• Improved security of service through asset health replacement, improving resiliency to the telemetry network for all sites. ▬▬▬▬▬▬▬ ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬.	▬▬	4, 7, 10, 12	IJP003	IT
IT 013	Operational system assurance	• Ensuring compliance with evolving cyber requirements during investment projects by identifying and mitigating cyber risks and applying standards and good practices throughout the whole line of defence, integrating people, processes, and technology.	▬▬	2, 4, 12	IJP003	Other
IT 014	ECR Enhancements	• Further alignment of the National Control Centre (NCC) and Emergency Control Room (ECR) functions, improving emergency response capability.	▬▬	4, 12	IJP003	Proc
IT 015	Resiliency and Security of Supply	• Increase resilience of communications between NGT and other network participants to improve performance in emergencies e.g. National Power Outage	▬▬	4, 12	IJP003	IT
IT 017	Whole System Energy Response	• Complying with Data Best Practice Guidelines by moving to a more resilient way of sharing data with external parties in near real-time on a shared platform / portal, supporting security of supply and of the infrastructure of the NTS.	▬▬	4, 10, 12	IJP003	Plat
IT 018	Operational Safety & Compliance	• Enhance the integration of processes and documentation, increasing workforce safety whilst maintaining system capability and ensuring safe and reliable operation of the NTS.	▬▬	4, 12	IJP003	Field
IT 019	Enhance Control Room Telephony	• Build on T2 actions to sustain telephony, further digitalise ways of working, with integrated telephony capability across the control room function and field operations for better collaboration.	▬▬	4, 12	IJP003	Proc
IT 020	Future Pandemic Preparedness	• Improved readiness and resilience to business disruption / operational failures caused by pandemic or other events which restrict office access.	▬▬	4, 12	IJP003	Proc
GSO Commercial investments – Summary: enable whole energy system management, NESO interoperability and de-risk the Gemini core platform through replacement						
IT 012	Energy Trading, Reporting and Notifications Replacement	• Continuation of service through asset health replacement. • Delivery of a Gas focussed trading platform (previously shared and biased towards electricity) providing greater capability and efficiency for the trading gas system operational function.	▬▬	4, 10, 12	IJP003	Plat
IT 090	Nationalgas.com	• Credibility and professionalism, improving stakeholders' relationship with National Gas as a new brand. • Accessibility and usability by making information about National Gas more easily available, improving communication with stakeholders.	▬▬	12	IJP006	Plat
Corporate Back Office investments – Summary: Maximise procurement capacity to support AMP delivery; optimise back office efficiency						
IT 081	Finance Modernisation	• Continuation of service through asset health replacement, delivering simplified and best practice finance processes giving the best possible basis for decision making.	▬▬	12	IJP006	Proc
IT 083	Treasury Management System	• Continuation of service through asset health replacement.	▬▬	12	IJP006	Proc

Inv. Ref.	Investment name	Enabled benefit	£m	Commitment	IJP Ref.	Digital Cat.[3]
		• Increased efficiency through automating data flows and reporting, using enriched master data. • Improved cost management through accuracy of the cashflow forecast.				
IT 086	Procurement Policy IT Compliance	• Reduce risk of non-compliance by increasing agility to respond to new laws or regulation which affect our procurement processes, without having impact on procurement performance	▇	12	IJP006	Other
IT 089	Internal channels	• Improve internal efficiency and alignment through better organisational announcements, leadership messages, crisis communications, etc. with strong measurement capabilities.	▇	12	IJP006	Plat
IT 092	Legal support systems	• Improve efficiency by simplifying the way our legal team works. • Improve visibility of legal risks and make better business decisions. • Improve collaboration and knowledge sharing among internal and external team members.	▇	12	IJP006	Proc
IT 093	Governance Risk and Controls	• Best practice approaches and greater collaboration and consistency across the business in our Risk, Assurance and Internal Audit teams to integrate risks and controls with compliance, and give transparent data sharing to inform insight and decision making.	▇	12	IJP006	Proc
IT 100	Carbon Accounting	• Improved Carbon management through streamlining our approach to business carbon footprint accounting and facilitating expansion of scope three reporting in line with stakeholder and regulatory requirements.	▇	8, 12	IJP006	Proc
IT investments – Summary: maintain IT systems supportability and security; improve environmental performance						
IT 064	Device refresh	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 065	Operating System updates	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 066	Renewal of Digital Workplace Services Contract	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 067	Video conferencing refresh	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 069	Replacement of GSTIG	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 070	Refresh Routers, Switches & Wireless Access point	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 071	SDWAN Upgrade	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 072	Enterprise Network Procurement Event	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 073	Digital Operations	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	Proc
IT 077	Service Management	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 078	Integration	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 079	Software Development Tooling - Value Stream Mgt.	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 080	Cloud Fabric	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT
IT 101	CNI DC Feasibility and Analysis	• Continuation of service through replacement under IT Asset Health Policy	▇	12	IJP007	IT

4.3.2   Investments enabling outcome: System efficiency and long term value for money (£91.98m)

Inv. Ref.	Investment name	Enabled benefit	£m	Commitment	IJP Ref.	Digital Cat.[3]
Asset and asset data investments – Summary: enabling definition and ongoing management of the AMP; refining maintenance policy to facilitate NTS access in support of AMP delivery.						
IT 035	Central AI/ML capabilities and in-house AI models	• Provide a platform to operate predictive models for autonomous decisions whilst mitigating risk via the use of an auditable and controlled platform, with in-built features to monitor data and model drift.	▇	2, 4, 12	IJP005	Infra
IT 036	Enterprise integration of embedded AI	• Move from proof of concepts to productionised models, to drive value from innovative and experimental models whilst having the backing of a mature support structure. • Within SO extend the current foundational capability for composite forecasting (probabilistic, weather data, etc.). • Foundational capability for the gas transmission to develop advanced analytics, business data models and algorithms to enable advanced asset management, capex plan delivery optimisation and maintenance strategy.	▇	4, 12	IJP005	Infra
IT 041	Business plan performance automation and Totex optimisation	• Totex analysis and adaptive planning with alternate maintenance scenarios, enabling better Totex optimisation decisions.	▇	4, 12	IJP005	Infra
IT 057	Data Driven Optimisations of Processes	• Identifying wastage in the network development process to cut time and cost of development, procurement and delivery. • Data confidence to enable effective planning and reduce end to end project duration and so cost. • For SO, this Investment delivers the capability for which targeted SO specific automation and process optimisation use cases can be delivered.	▇	1, 4, 12	IJP005	Proc
IT 061	Enhanced Asset Data Interoperability	• Digital twins of assets and sites enable reduction of development costs, delays and compensation events through use of virtual designs.	▇	1, 4, 12	IJP005	Infra

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[3] Cost sub-category: IT Only; Digital – Infrastructure, Processes, Platforms, Field Works, Network Monitoring, Other.

Inv. Ref.	Investment name	Enabled benefit	£m	Commitment	IJP Ref.	Digital Cat.
		• Use historical reports, surveys and studies to enable better estimating and forecasting. Through sharing with suppliers, more accurate tender pricing and reduction in compensation events.				
IT 062	Workforce data driven upskilling	• Process efficiencies and cost savings. • Integration of our staff and suppliers through use of common systems and data, enabling faster design, facilitate constructability and mitigate risk. • Enable Operations efficiency by reducing unproductive time searching for information and eliminating abortive site visits.	▉	1, 4, 9, 12	IJP005	Infra
Operations investments – Summary: further enhance safety and minimise constraints for AMP delivery outages.						
IT 023	Providing our Field Force with XR Capabilities **UNDER UNCERTAINTY MECHANISM**	• Accelerated training and permit provision to our field force to retain competencies and increase productivity, facilitating maintenance and AMP delivery.	▉	2, 9, 12	IJP001	Field
IT 025	Remote Inspection Technologies	• Increased workforce safety and reduction in time spent on low value add tasks, enabling higher productivity and more high value jobs done by the field force.	▉	2, 9, 12	IJP001	Net
GSO Control investments – Summary: support AMP delivery through advanced analytics to maximise outage availability; manage service risk under reducing asset availability						
IT 059	Optimised digital experience platforms through information ergonomics and data continuity	• Enhanced metadata, master data and standards which improve data accessibility, ease of use and quality, to deliver richer insights and optimised data to internal and external users. This is an enabler for automation and process efficiency improvements.	▉	1, 4, 12	IJP005	Plat
IT 060	Knowledge Retention, Continuity, Management for Workforce Enablement	• Capture key business operating information in one central repository, as a mitigation to business risk of losing knowledge due to an ageing workforce and competitive recruitment environment.	▉	1, 4, 9, 12	IJP005	Plat
Corporate Back Office investments – Summary: Maximise procurement capacity to support AMP delivery; optimise back office efficiency						
IT 082	Process Automation	• Increase efficiency and remove workarounds, improve process controls with stability, quality, and accuracy and provide process compliance, enhanced security, and traceability.	▉	12	IJP006	Proc
IT 084	S2P: Existing System Efficiencies	• S2P improvements allowing our supply partners to engage with us in an efficient, effective and easy way. Ensuring streamlined processes from sourcing through to payment will ensure, safe and reliable continuity of service and capacity to deliver the larger AMP.	▉	12	IJP006	Proc
IT 085	S2C: New Digital Capability	• Improve supplier relationships. • Enable procurement to have a forward view of key events which will facilitate improved demand planning and risk management via links with Enterprise Asset Management output, aiding deliver of the AMP. • Mitigate critical risks and threats through more detailed Supply Chain mapping and management capability.	▉	12	IJP006	Proc
IT 087	Expense Management	• Optimise reporting and analytics to drive process and workload efficiencies across Finance, ultimately driving better strategic decision making.	▉	12	IJP006	Proc
IT 088	Intranet	• High quality collaboration, information sharing and easy access to key employee tools and applications across all areas of the NGT business, improving efficiency and service levels.	▉	12	IJP006	Plat
IT 095	People Systems including People Systems AI & HR Policy Compliance	• Continued execution of employment essentials for our people to enable them to undertake their roles effectively and efficiently. • Removing friction in our processes and continuing to develop our People Data & Analytics capabilities to ensure that our people decisions are data-driven.	▉	9, 12	IJP006	Proc
IT 098	Digital Learning & Competence	• With the need to continuously innovate as we transition to net zero and our reliance on strong leadership to drive performance, the ability to learn and develop will be pivotal to the organisation's success. • The ability to grow and develop is a critical success factor for employees when selecting and choosing to stay within a particular organisation and is one of the main drivers of employee engagement.	▉	9, 12	IJP006	Proc
IT investments – Summary: maintain IT systems supportability and security; improve environmental performance						
IT 068	Innovation and Modern Technology*	• Replacement of IT assets as new technologies emerge and offer opportunities for better service or cost saving in IT operations.	▉	11, 12	IJP007	Infra

4.3.3 Investments enabling outcome: High quality of service from regulated firms (£128.34m)

Inv. Ref.	Investment name	Enabled benefit	£m	Comm itment	IJP Ref.	Digital Cat.[4]
GSO Control investments – Summary: support AMP delivery through advanced analytics to maximise outage availability; manage service risk under reducing asset availability						
IT 016	Predictive Forecasting and Network Simulation	• Advanced predictive forecasting and network simulation capability to provide a visual representation of both historical and real-time data for better decisions and future automated decision making.	▉	4, 10, 12	IJP003	Proc
IT 040	Enhanced Data driven interoperability for an intelligent harmonized network	• Further extend the platform and processes for asset and other data to be openly shared across the UK energy system participants such as NESO and other interested parties.	▉	4, 10, 12	IJP005	Plat

[4] Cost sub-category: IT Only; Digital – Infrastructure, Processes, Platforms, Field Works, Network Monitoring, Other.

GSO Commercial investments – Summary: enable whole energy system management, NESO interoperability and de-risk the Gemini core platform through replacement						
IT 042	Regulatory Driven Gemini System Enhancements	• Continued compliance with the Uniform Network Code (UNC) and any approved UNC modifications.	■	4, 12	IJP004	Infra
IT 043	Gemini Sustain/Enhance	• Maintenance of the Gemini System during the RIIO-GT3 period to reflect changes to trading arrangements.	■	4, 12	IJP004	IT
IT 045	Market driven Gemini system enhancements (Data Provision)	• Ensure that the market has the requisite data available to improve commercial decision making for the System Operator, industry participants and stakeholders, enabling a more efficient and effective energy market. • Improved security and availability of data and Customer / Stakeholder satisfaction.	■	4, 10, 12	IJP004	Plat
IT 046	New Information Provision: Open data publications	• Improved service in the information we provide to customers, responding to evolving customer requirements and Ofgem Data Best Practice Guidelines for open data.	■	10, 12	IJP002	Plat
IT 047	New Information Provision: Continued Development of New Information Provisions APIs	• Enhancements to our operational data enquiry service and improvements to interoperability aligned to Ofgem Data Best Practice Guidelines.	■	4, 10, 12	IJP002	Plat
IT 049	New Information Provision: Smart Apps	• Improved service in the information we provide to customers, responding to evolving stakeholder requirements and Ofgem Data Best Practice Guidelines. • Improved operational data communication to specific stakeholders (including government) to inform and support the debate on the future of energy.	■	4, 10, 12	IJP002	Plat
IT 050	New Information Provision: Tech Health	• Continuation of service through asset health replacement. • Annual maintenance of our MIPI platform to improve availability, timeliness of data publication and data triage requests.	■	4, 10, 12	IJP002	IT
IT 102	New Information Provision - Refresh	• Continuation of service through asset health replacement.	■	4, 12	IJP002	IT
IT 044	Gemini Replacement **UNDER UNCERTAINTY MECHANISM**	• Continuation of service through asset health replacement for Commercial Operations and delivery of commercial capacity and balancing functions.	■	4, 10, 12	IJP004	IT
Corporate Front Office investments – Summary: enhance customer / stakeholder data to enable better service provision and responsiveness						
IT 051	Contact Management: Refresh	• Continuation of service through asset health replacement, identifying and deploying the most suitable system for the Customer & Stakeholder team	■	12	IJP002	IT
IT 052	Contact Management: Digital Support Centre (Streamlined Help Location)	• More user friendly and efficient mechanisms for our customers and stakeholders to find the information and support they need to carry out their essential tasks.	■	12	IJP002	Plat
IT 054	Contact Management: Process Automations & Enhancements **UNDER UNCERTAINTY MECHANISM**	• Increased efficiency of Customer & Stakeholder team, resulting in faster resolution of queries for customers and greater customer satisfaction • Standardisation and centralisation of customer information providing opportunities for analysis and collection of customer insights to support better servicing. • Fulfil procurement regulatory requirements. • Increase efficiency through reducing time spent on repetitive tasks	■	12	IJP002	Proc
IT 055	Contact Management: Omni-channel Support **UNDER UNCERTAINTY MECHANISM**	• Improved access and routing of communications by customers and stakeholders for query resolution • Prioritisation of queries to drive efficiencies. • Improved record keeping for greater insight and better service.	■	12	IJP002	Infra
IT 056	Contact Management: Tech Health	• Continuation of service through asset health replacement, maintaining existing systems, and ensuring licensing continues, enabling BAU without disruption	■	12	IJP002	IT

4.4 Dependencies between investments

Most of our planned investments are independent of one another. However, some investments lay the groundwork for others, creating dependencies that impact portfolio completeness and sequencing. Foundational investments (shown below) have benefit multipliers, as they enable more than their own benefits.

IJP Ref.	Inv. Ref.	Trigger	Investment name	Dependency score*	Number of High + Med. dependent projects
IJP007	IT 078	Compliance	Integration	88	14
IJP007	IT 080	Compliance	Cloud Fabric	40	9
IJP005	IT 001	Outcomes	Domain centric data management	119	13
IJP005	IT 002	Outcomes	Enhanced data governance, through improved data literacy and ownership	96	10
IJP005	IT 003	Outcomes	Accelerating innovation and decision support (data as a consumable product)	50	11
IJP005	IT 004	Compliance	Data & Insights platform sustain the value	45	5
IJP005	IT 035	Outcomes	Central AI/ML capabilities and in-house AI models	114	15
IJP005	IT 036	Innovation	Enterprise integration of embedded AI	72	12
IJP005	IT 057	Outcomes	Data Driven Optimisations of Processes	45	7
IJP005	IT 061	Outcomes	Enhanced asset data interoperability	72	11
IJP002	IT 051	Compliance	Contact Management: Refresh	40	4

*Dependency score is based on a weighted score against High, Medium and Low dependencies where High is "Cannot proceed without the dependency", Medium is "Can proceed but moderate functional impact" and Low is "Can proceed with minor functional impact".

The dependencies fall into three groups:

- Infrastructure foundations: Cloud Fabric and Integration investments (IT 078, IT 080) provide the hardware upon which systems run and the integration for them to exchange data with each other in order to be fully functional.
- Contact management refresh: IT 051 opens the opportunity for other contact and relationship management investments to bring enhanced capabilities.
- Data foundations: The remaining eight investments provide varying foundational capabilities upon which other systems depend. They deliver enhanced data management tools, integration of data domains, core AI governance and compute resources, and process optimisation tools which are used across the enterprise and enable many other systems.

5   How we will deliver our RIIO-GT3 plan

5.1   Delivery planning continues

This business plan forms the first stage in planning the RIIO-GT3 IT portfolio, informed by new business requirements as well as next phases of current delivery projects, innovation projects and IT Asset Health Policy. Planning will continue from now through to the end of RIIO-GT3 as preparations are made, delivery is further specified and investments progress through their lifecycle.

The detailed scope, volume and cost analysis carried for this business plan forms the foundation for investment definition and will be refined where necessary through planning and review cycles.

5.2   Our IT delivery model and architecture

We have reviewed our capability to deliver the increased scale of investment in this plan over RIIO-T2, examining both the approach and the size of our delivery organisation. The successful delivery of the RIIO-T2 portfolio and separation of systems from National Grid (see section 3.2) has confirmed that the delivery strategy is working well and we will continue to mature and evolve along the same path.

Separation from National Grid has enabled us to move to a technical architecture that fits our business needs and responds to an increasing need for business agility and security. Our strategy of moving from on-premise infrastructure to the cloud (with the exception of the CNI data centre) underpins this. RIIO-GT3 will provide opportunities to exploit new technology offerings faster and at lower risk, with the added benefit of lower environmental impact.

As part of IT separation, we have been able to accelerate our move to cloud-based offerings faster than would otherwise have happened. For RIIO-GT3, Cloud is the starting platform for much of the estate because of this opportunity. The "Cloud-first" strategy is reflected across the investments in our portfolio, and we have not included on-premise options in our analysis, based on this strategy.

5.3   Our IT organisation

On separation from National Grid, NGT established its own IT function bringing in-house all the required skills that previously were distributed across Group IT functions and dedicated Gas IT resources. The IT function comprises in-house resources and those of partners focused on Application Development and Application Maintenance (ADAM) as shown in the diagram below.
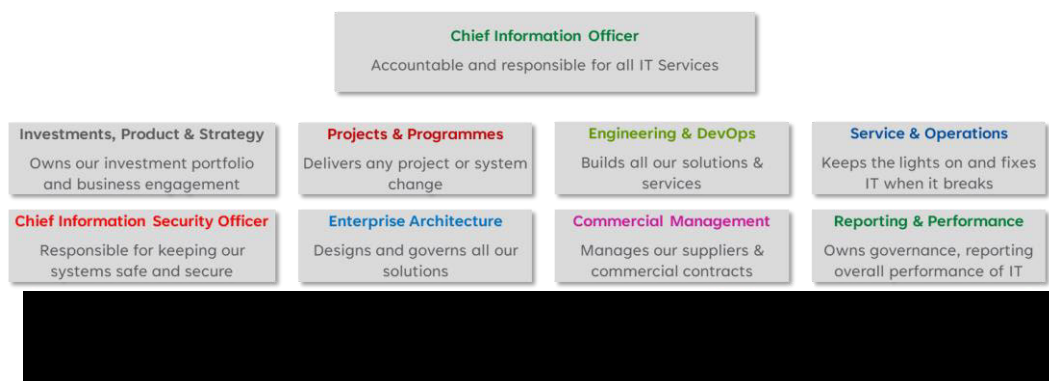

Figure 5.1. The NGT IT Organisation

The IT operating model uses the same principle of scalability through partners that has been successfully deployed for some years, now simplified through being able to focus only on the gas business and through a strategy of reducing complexity of our IT estate.

It is a demonstration of the success of this operating model that the creation of the new organisation plus the additional load from separation of the IT estate has not impacted the IT service or the delivery of the RIIO-T2 portfolio of projects.

This IT organisation operates under a set of principles that have been created to guide everything that we do, shown below. These deliver greater value for money and agility than was previously possible as part of National Grid.
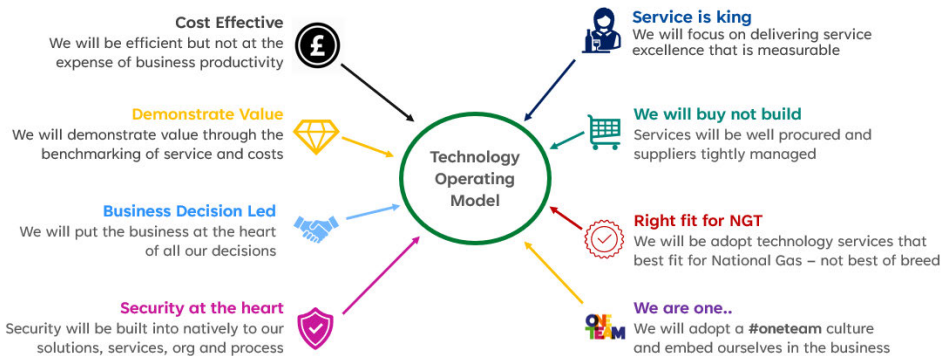

Figure 5.2. IT Operating Model Guiding Principles

5.4   Rigour in governance and portfolio management

5.4.1   Governance processes

The governance process of guiding and overseeing the delivery of IT investments has three relevant components, each providing a complementary focus.

- The Gas Transmission Governance Code – financial control.
- The Gas Network Development Process (ND500) – coordinated technical and financial control.
- The Gas Information Delivery Framework (GIDF) – technical controls specific to IT.

Together, these provide the necessary controls to ensure rigorous governance of the lifecycle of an IT project covering approval of funding, scope / justification, delivery resourcing and handover. The three processes are complementary and interdependent in progressing IT investments through their lifecycle.

The Gas Transmission Governance Code defines how we inform, direct, manage and monitor our investments. The code provides the rules and processes associated with investment governance (sanction and release of funds) and details levels of approval. It covers all investments within the Gas Transmission regulated business and manages financial aspects covering sanction, re-sanction, milestone change request and closure. It is audited on a quarterly basis as part of the corporate controls audits and compliance is mandatory.

The Gas Network Development Process (ND500) includes both technical and financial stage gates and so builds on the Governance Code by adding the technical dimension. This ensures that we have defined the right solution strategy for the job, evaluated options and developed enough detail to progress into delivery with confidence. Stage gates ensure process elements have been completed, thus clarifying and minimising risk. The process is not just one-way – in changing circumstances it may be required to return to an earlier stage gate, to respond to new requirements or gather additional information.

This process is designed primarily for operational assets and large construction projects, but also supports 'non-standard investments' such as IT, fleet and property.
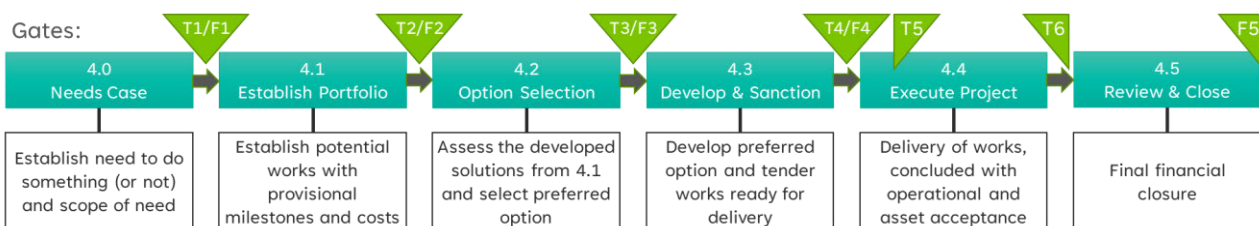

Figure 5.3. The ND500 investment management process, showing T (Technical) and F (Financial) stage gates

The Gas Information Delivery Framework (GIDF) provides a tailored approach to ND500 that includes specifics for IT. This guides those involved in IT investments through the detailed process and necessary products (documentation) at each stage of the investment lifecycle. As well as a guide for investment managers, this provides a checklist for administration and assurance of the process.

5.4.2   Portfolio management process

Our approach to developing and managing the IT investment portfolio is driven by the objective to deliver optimised cost-benefits, to ensure that beneficiaries receive maximum value at reasonable cost in the shortest possible time. Our adopted agile method (SAFe – see section 5.5.1 below) has this principle at its heart. Definition of Minimum Viable Product (MVP) and prioritisation using 'weighted shortest job first' ensure maximum economic benefit.

Key to a successful IT investment portfolio is effective engagement between IT and the rest of the business. Our Product Management team have internal client responsibility which builds relationships through which we gather and understand business requirements, not at arms-length but with a full understanding of business strategy and outcomes. This ensures that our IT solutions have full line-of-sight through enabled business capabilities to customer and stakeholder benefits.

Product Managers are responsible for managing investments within their segment of the IT portfolio from inception to closure. This continuity increases joint ownership between the business functions and IT, to address the inevitable challenges of delivering complex projects.

5.5   Our approach to programme delivery

5.5.1   Programme delivery methods

Our approach to programme delivery in RIIO-GT3 is a continuation of the same strategy that is successfully delivering the RIIO-T2 portfolio. We have matured the approach through many projects and agile delivery cycles, applying the experience gained to evolve the process and the knowledge of the people implementing it.

We will continue to use a bimodal approach, using traditional delivery methods where there are high levels of predictability in scope and outcomes, and where planning and control are critical to success, and agile methods where there are higher levels of scope uncertainty or where creativity and innovation are required.

During RIIO-T2 we have delivered many of our investments using agile methods based on the Scaled Agile Framework™ (SAFe) that was part of our business plan for RIIO-T2. The method aims to enable a continuous flow of value through cyclic planning and delivery of change. Work packages are delivered into technology releases incrementally and concepts such as Minimum Viable Product (MVP) have instrumental in achieving early value delivery.

Our understanding and use of the SAFe method has matured and we drive value from agile methods to a greater scale than previously. At the time of writing we have delivered 16 Programme Increment cycles, each of 10 weeks duration, by which our teams have coordinated, planned, refined and re-energised their delivery. We are now a mature Scaled Agile Framework IT organisation, running an effective monthly Project Delivery Group process fed by weekly RTE (Release Train Engineer) Sync meetings and in turn individual RTE Scrum-of-Scrums and team scrum meetings.

The SAFe methods of planning and review are applied to all projects (whether agile or waterfall), enabling us to coordinate our portfolio plans, risks and dependencies in a more effective way. Planning and review events happen at either end of ten week Programme Increments. This cadence is long enough to have made material progress worth sharing across the wider portfolio delivery teams but short enough for planning to be practical and reduce uncertainty. The frequency also enables any strategic issues and questions of direction (in response to changing drivers) to be addressed before they cause irreversible damage.

With increasing amounts of uncertainty in the industry as we navigate towards net zero, these agile methods will enable us to react to external events with more flexibility and in a more timely way than would have previously been possible.

5.5.2   Delivery Governance and Reporting

Our governance structure ensures transparent reporting throughout the three layers in our governance model shown in figure 5.5 below (IT Function > Technology > Corporate).

The reporting from our IT Functions feed into our Technology boards, with updates in turn going to the corporate level board. This method ensures that we have a single source of truth in our reporting up to board level. This allows the corporate boards to

have oversight on agreed outcomes/deliverables and challenge on the delivery, effectiveness, and ROI. It also gives sight to risks within the business functions, the mitigation in place and the consequences of a risk materialising.

Similarly, our structure allows vision, strategic direction, and core principles to filter down from the corporate boards back down to the workstreams.
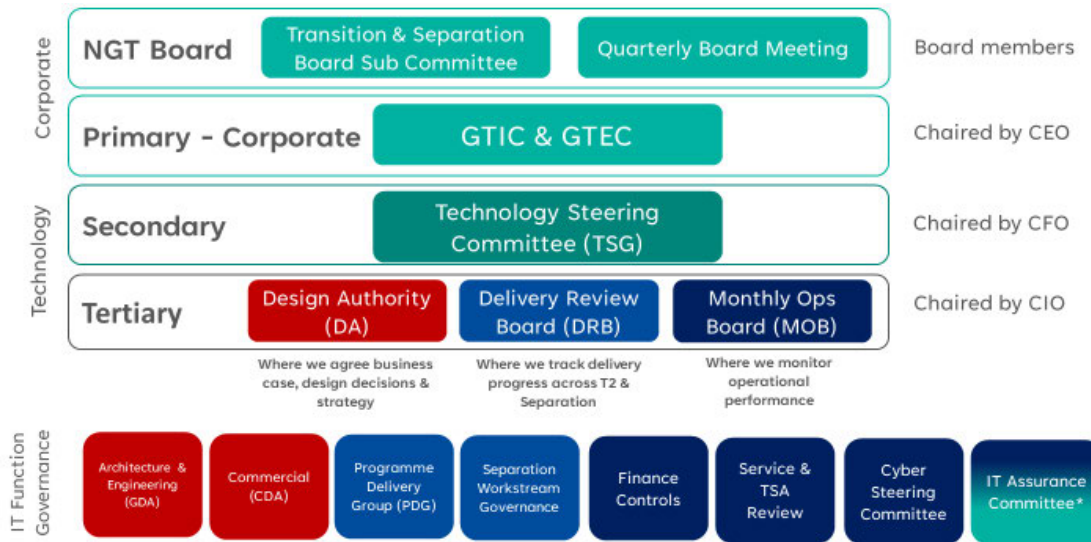

Figure 5.4 Technology governance model

5.5.3   Dealing with uncertainty

Uncertainty is managed by meticulously navigating the journey from our allowances to project sanction and completion, through our governance structure and utilising our investment/project planning tools. This begins with securing approvals via our sanctioning committee, ensuring alignment with regulatory compliance and company standards. We carefully plan and prioritise projects, accounting for potential risks and uncertainties. Throughout the process, we maintain close collaboration between our regulatory, financial, and operational teams to adapt to any changing circumstances. Regular monitoring and flexible decision making enable us to address changes effectively, ensuring projects are delivered on time, within budget and to the highest standards of safety and quality.

5.5.4   Our Change Delivery Framework

In all technology projects, we apply the ADKAR model to our change activities. ADKAR is a well know change management model and stands for Awareness, Desire, Knowledge, Ability, Reinforcement. The figure below illustrates change management activities as we prepared to move our applications, devices, and data as part of the Separation programme.
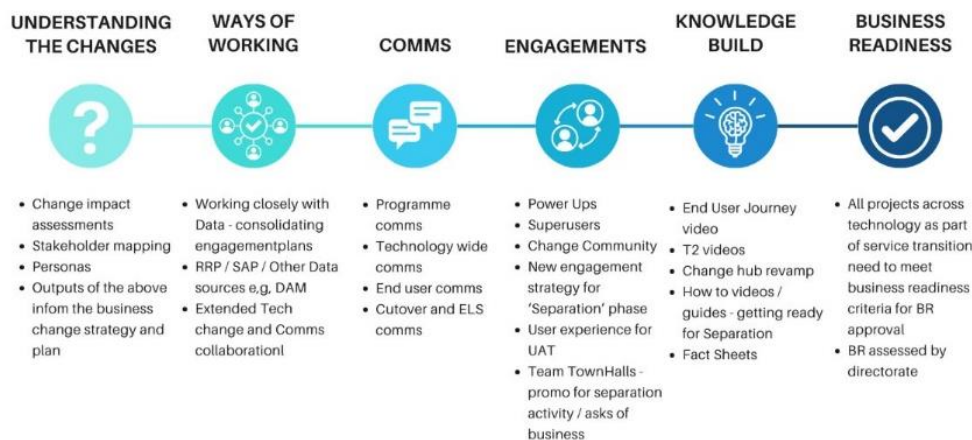

Figure 5.5. Our business change approach

For IT projects, we have a professional change lead who manages a team of project change managers and extended team of change agents from within the affected groups. These professionals understand the impact of technology change and how to mitigate the inevitable challenges as the project progresses through design to delivery and into operation and support.

6 Outcomes, priorities, commitments and price control deliverables

6.1 Ofgem outcomes

✓Secure and resilient supplies
✓High quality of service from regulated firms
✓System efficiency and long-term value for money
☐Infrastructure fit for a low-cost transition to net zero

How will the programme/scheme support the regulatory priority/priorities? Section 4.2.4 sets out how we are investing in IT enablers to support each of the regulatory priorities, with investment descriptions in section 4.3 providing a summary of each enabled benefit. The seven IT IJPs provide full detail on the scope of each investment and the alignment with Ofgem outcomes. Our planned investments focus on:

- Secure and resilient supplies – by keeping our systems secure and reliable to sustain the digitalised organisation.
- High quality of services – by supplying the data and tools needed by network users and consumers, responding to their growing need for information and enabling whole system interoperability.
- Efficiency and long term value – by furthering digitalisation and investing in systems that deliver the capacity improvements to enable our challenging asset capital investment plan and continuous improvement.

6.2 Our business priorities

✓ Drive positive environmental and community impact
☐ Shape the energy markets of the future
✓ Operate safely, reliably and flexibly
✓ Invest in our people, grow our capability, and value everyone's contribution
✓ Deliver sustainable value for customers and stakeholders

How will the programme/scheme support our business priority/priorities? Each investment is aligned to specific business priorities, as detailed in the IJPs. Beyond keeping our systems evergreen (secure and reliable) all investments are driven by business requirements and business outcomes. The shape of our portfolio reflects the business priorities through the enabled benefits listed against each investment in section 4.3.

6.3 Price control deliverables

Not applicable.

6.4 Commitments

The principal commitment relating to planned IT investments is number **12: Transforming our activities through our IT and data**.

IT investments also support many other commitments through enabling business capabilities. These are listed against each investment in section 4.3 and summarised in section 4.2.3.

7 Conclusion

The IT strategy for RIIO-GT3 builds on the success of delivering RIIO-T2 together with the significant additional volume of work from separating our IT systems from National Grid. Separation has brought benefits through focusing our IT strategy only on the needs of NGT and our customers and stakeholders.

The planned portfolio represents the best balance of protecting our current systems, adding new capabilities to respond to business needs for more data and smarter tools, and using technology in innovative ways to deliver benefits. The total of £498.14m has been assured against global benchmarks and has high confidence, being based on detailed delivery profiles for each of the 84 investments in the baseline plan and the 5 investments proposed under the Uncertainty Mechanism.