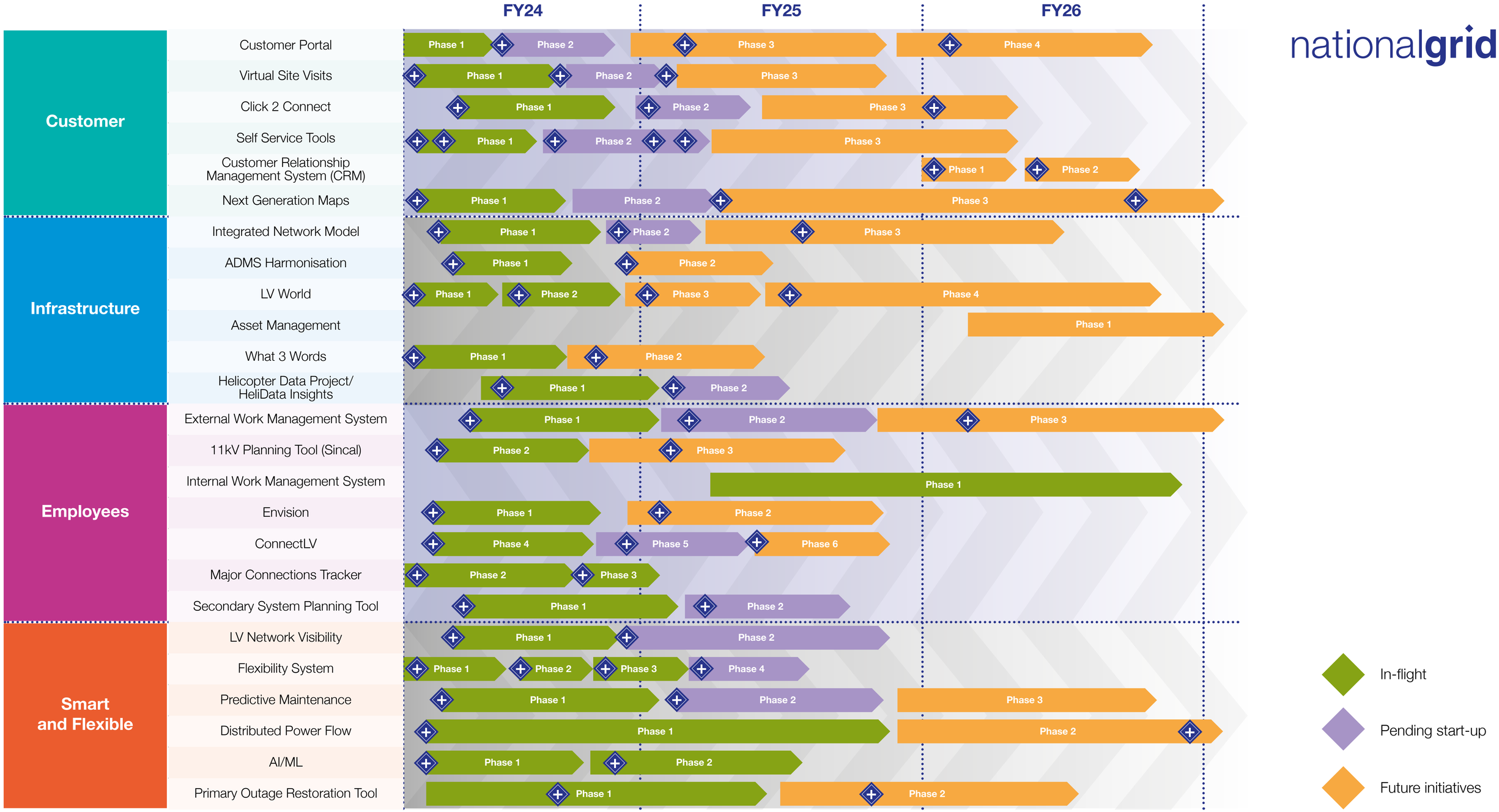
FY24
FY25
FY26
Customer
Customer Portal
Phase 1
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Envision
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ConnectLV
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Phase 6
Major Connections Tracker
Phase 2
Phase 3
Secondary System Planning Tool
Phase 1
Phase 2
Smart and Flexible
LV Network Visibility
Phase 1
Phase 2
Flexibility System
Phase 1
Phase 2
Phase 3
Phase 4
Predictive Maintenance
Phase 1
Phase 2
Phase 3
Distributed Power Flow
Phase 1
Phase 2
AI/ML
Phase 1
Phase 2
Primary Outage Restoration Tool
Phase 1
Phase 2
nationalgrid
In-flight
Pending start-up
Future initiatives

Customer Portal

Click to return to roadmap

Start date: 01/12/2022

End date: 31/03/2026

Category: Customers

Key contact: Mitch Golder

Contact role: Project Manager

Contact email: mgolder@nationalgrid.co.uk

Description

A customer portal will allow NGED to build on existing high levels of customer service by instantly providing customers with the support and access they need.

The portal will provide customers access to raise enquiries and track the progress of their connection application, interact and view their own enquiries by uploading connection details and accepting quotes, and viewing historic and future data relating to their connection.

Customers using the portal will be presented with information tailored to their needs in a clear and simple layout and given the option to speak directly to the responsible team or person.

Drivers

NGED customers have historically received industry leading levels of customer service through traditional communication methods. The addition of a customer portal will complement NGEDs approach to customer service by providing an alternative method for customers to access their data when they need it.

Benefits

Improved customer service

Instead of contacting NGED's customer support team, customers can track the latest information of their enquiries directly online.

Reduced workload for customer facing functions

The portal will reduce the number of enquiries from customers asking for the latest updates on their requests.

Reduced time in processing enquiries

Our planners can provide customers updates for enquiries promptly and get notified of new enquiries in Crown, as opposed to getting enquiries through emails.

Strategic theme

Increased network insight and operation.

EDTF recommendation

Digitalisation of the energy system, coordination of asset registration.

User types

Internal: Operation

External: Commercial, Consumer, Local authorities and regulators, energy section, third sector

Success criteria

Customers able to view and update their enquiries using a personalised portal, reduce volume of traditional communications, increased customer satisfaction.

Progress and output

The project is currently being scoped in collaboration with subject matter experts.

Next steps

The customer portal is now live for 0-69kva/small applications allowing customers to apply for a connections and see this through to acceptance online. We will be looking to increase the types of application the portal encompasses and then look to include work management within the tool when the functionality becomes available.

Virtual Site Visits

Click to return to roadmap

Start date: 01/02/2023

End date: 31/12/2024

Category: Customers

Key contact: Kate Shehean

Contact role: Project Manager

Contact email: kshehean@nationalgrid.co.uk

Description
Virtual Site Visits provides a digital way of contacting our customers (in a FaceTime like way) to allow customers to share issues across the network such as meter boxes or fallen cables.

Drivers
By implementing a virtual site visit tool, NGED will improve customer service through traditional communication methods. Through a virtual site visit tool will shall Improve customer service and network availability while reducing wasted visits and our carbon footprint.

Benefits
Better transparency
Adopting virtual audits/inspections as part of CiC inspection policy provides better transparency of the post acceptance inspections for ICP Audits.

Increased efficiency
Replacement of some site visits ensures the customer experience is faster, safer, easier and more efficient.

Improved customer experience
Reducing the need to send connections staff to sites allows for a greater focus on customer needs and requirements.

Strategic theme
Operational efficiency/improved network availability.

EDTF recommendation
Digitalisation of the energy system.

User types
Internal: Operation
External: Commercial, consumer, local authorities and regulators, energy section, third sector

Success criteria
Reduced site visits due to instant customer resolutions, while improving customer service.

Progress and output
Undertaking the tender exercise.

Next steps
Increase the use case for this tool to include site audits.

Click2Connect

Click to return to roadmap

Start date: 01/02/2023

End date: 01/03/2024

Category: Customers

Key contact: Kate Shehean

Contact role: Project Manager

Contact email: kshehean@nationalgrid.co.uk

Description
An innovative self-service firm quote tool where customers can directly view quotes at the best value, through the Customer Portal.

Click-to-Connect is able to use data to assess the capacity on the network and the ground conditions for a connection to provide customers with a firm quote.

Drivers
Providing an improved customer service and increasing efficiency for the connection journey by enabling our customers to self-serve firm connection quotes where possible.

Benefits
Improved time to quote for our customers
Our customers are able to obtain near real-time quotes at a time and place of their choosing.

Digitalisation of the connections experience
By enabling customers to directly make enquiries and receive quotes online.

Delivering net zero
Reduction in early site visits results in business efficiency savings supporting NGED's drive to net zero.

Reduced workload through increased customer self-service
Customers will be able to directly receive quotes via the Customer Portal, reducing the need for planners to provide quotes.

Strategic theme
Increased network insight and operation.

EDTF recommendation
Digitalisation of the energy system, maximising the value of data, visibility of data.

User types
External: Commercial, Consumer, Local authorities and regulators, energy section, third sector.

Success criteria
Allowing LV customers to obtain firm self service quotations.

Progress and output
Full scoping has been undertaken and the network modelling and tool are being progressed.

Next steps
C2C Phase 2 increasing functionality and widening the applications in which the C2C tool can be used.

Self Service Tools

Click to return to roadmap

Start date: 01/09/2022

End date: 31/03/2025

Category: Customers

Key contact: Mitch Golder

Contact role: Project Manager

Contact email: mgolder@nationalgrid.co.uk

Description
Our self service tools will be accessible online tools that enable our customers and installers to request or inform us of domestic LCT connections without needing to use the ENA form. The tools will provide the customer with an instant response with a formal NGED letter emailed to the customer or installer within 3 days.

Drivers
This tool will improve customer service and the speed of service as well as automating work instructions which may be created of the back of the information provided.

Benefits
Improved customer experience
This too will provide the customer with a fully self service solution which improves the speed of service and therefore the standard of service.

Reduces workload
Increased self-service reduces workload for planners as less time is spent on dealing with enquiries.

Improved efficiency
Customers receive a faster service and planners are able to allocate their time more efficiently.

Strategic theme
Operational efficiency/improved customer service.

EDTF recommendation
Digitalisation of the energy system, coordination of asset registration.

User types
Internal: Operation.
External: Commercial, Consumer, Local authorities and regulators, energy section, third sector.

Success criteria
Increased number of customers utilising our online self service tools and a reduced number of application being processed by a person.

Progress and output
We have produced the live tool for single EV charger applications and for bulk applications and we are currently are developing the tool for G98 and G99 applications and Heat pumps. Further connection types will shall follow the completion of these tasks.

Next steps
Increase the functionality of self serve tools available to customers on the NGED website.

Customer Relationship Management System (CRM)

Click to return to roadmap

Start date: 01/09/2022

End date: 31/03/2025

Category: Customers

Key contact: Mitch Golder

Contact role: Project Manager

Contact email: mgolder@nationalgrid.co.uk

Description
Customer Relationship Management system is a technology or system that supports customer service activities. A CRM is designed to capture and interpret customer data, both structured and unstructured, and to support the management of customer related operations by automating processes and workflows and helping to organise and interpret data to support the business in engaging with customers more effectively.

Drivers
Ensuring a seamless experience from initial contact to delivery of a new connection is key to meeting the needs of our customers and supporting the decarbonisation of the distribution network. The needs of new connections customers are changing rapidly and therefore the system required to support both customers and the business needs to be agile and adaptable.

Benefits
Data consolidation
Consolidation of customer data into a single system will improve communication and insight resulting in improvements to customer satisfaction.

Improved customer service
Customer enquiries will be dealt with more efficiently and progress made more transparent to customers.

Digitalisation
CRM will utilise digital tools including AI to improve customer service.

Improved visibility
Having an integrated and tracked record of all customer enquiries, requests and engagement in one place enables a 360 view of customers.

Strategic theme
Improved data management, increased network insight and operation.

EDTF recommendation
Digitalisation of the energy system, maximising the value of data, visibility of data.

User types
Internal: Operational, contact centre, data and digitalisation, web provider.
External: All Customers (indirectly).

Success criteria
New connections enquiries are raised and managed in a new CRM, implementation of automated workflows for appropriate enquiry categories, faster time to quote and connect, visibility of connection progress provided to customers.

Progress and output
Currently assessing requirements to meeting business and stakeholder requirements, improve business efficiency, respond future market requirements and provide improvements in customer experience.

Next steps
We have scoped out our initial requirements for a CRM and are now undertaking a gap analysis to ensure we have captured all of our requirements for the CRM. We shall then look to move out to tender with the final scope.

Next Generation Maps

Click to return to roadmap

Start date: 16/05/2022

End date: 31/03/2024

Category: Customers

Key contact: Sam Rossi Ashton

Contact role: Project Manager

Contact email: srossiashton@nationalgrid.co.uk

Description

The current network capacity map provides an indication of the networks capability to connect large-scale developments to major substations. Increasing the granularity to include distribution substations is imperative in enabling customers to make informed decisions.

Through a CIM compliant, eclectically accurate' mapping solution that is automatically updated as and when changes are made to source systems, end users will see one map with HV and LV network layers.

Drivers

Capacity maps allow customers to check the capacity and load of power generation connections in different geographical areas. These maps show the network of available hosting capacities and help customers find the installation location, saving time and money.

Benefits

Improved Capacity Visualisation

Next Gen maps provide the ability to see multiple network nodes/connection capacities simultaneously, in a user friendly visual tool which is up to date.

Improved data quality provided to the customer

Reduced time spent on customer enquiries (no disparity between customer views and post-enquiry quotation).

Decreased energy costs via optimised asset deployment

Commercial connection company can see where the cheapest location to connect is (without needing to update network) at one place. They could then reduce connections and cost.

Strategic theme

Increased network insight and operation.

EDTF recommendation

Digitalisation of the energy system, coordination of asset registration.

User types

Internal: Operation.

External: Commercial, Consumer, Local authorities and regulators, energy section, third sector.

Success criteria

Electrically accurate substation headroom for BSP's and Primary's displayed on an easily accessible map for all customers based of off data available from the CDP.

Progress and output

The initial product is currently at the end of testing and will be going live in June, following a full scoping and data exercise.

Next steps

Increase the quantity of information fed into the map data to improve the accuracy and functionality of the tool.

Integrated Network Model

Click to return to roadmap

Start date: 01/10/2023

End date: 30/09/2025

Category: Infrastructure

Key contact: Sam Rossi Ashton

Contact role: Project Manager

Contact email: srossiashton@nationalgrid.co.uk

Description
Our core data systems (NMS, GIS, EAM) contain duplicate data but are relatively disparate and as such data mismatches are difficult to address. Additionally, we have limited ways to generate CIM/CGMES 3.0 compliant data. Integrated Network Model (INM) a master data management solution which creates a reconciled version of our asset data and highlights data discrepancies .This solution will be made available to other applications.

Drivers
The need for a CIM Compliant single source of truth for NGED data that can benefit both customer and NGED platforms.

Benefits
A single source of truth of asset data
INM stores all asset data in one single place , enable us to meet the Ofgem requirement for CGMES 3.0 compliant data and promote interoperability between numerous internal systems.

CIM/CGMES model generation
The data could be understood by any programmes (e.g. connection companies can import and analyse the model easily).

Automate regulatory submissions
INM automate regulatory report generations.

Facilitate more efficient HV planning
INM automates the source modelling for Sincal so the data can be updated more regularly and no manual update needed.

Enable faster operations of Active Network Management (ANM)
For the control systems.

Strategic theme
Improved data management, Increased network insight and operation

EDTF recommendation
Maximising the value of data

User types
Internal and External customers

Success criteria
GCGMES 3.0 compliant model that is used by internal and external customers

Progress and output
Initial solution productionalised

Next steps
CGMES3.0 Upgrade

ADMS Harmonisation

Click to return to roadmap

Start date: 01/10/2023

End date: 31/07/2024

Category: Infrastructure

Key contact: Marnie Ellis

Contact role: Project Manager

Contact email: mellis@nationalgrid.co.uk

Description
Delivering four ADMS control systems which have harmonised technologies and business processes. This includes harmonising the way in which we update network data across the four DNO areas.

Drivers
A single ADMS configuration means reduced resources to implement version control and testing and reduced IT Hardware. This will result in a single way of working across DNOs.

Benefits
Streamline business operations
By removing inefficiencies caused by running four unique systems.

Enable a data cleanse across the disparate systems.

Drive network performance, efficiency and security
Through the creation of a centralised dataset.

Support future aspirations to meet net zero.

Strategic theme
Improved data management, Increased network insight and operation.

EDTF recommendation
Maximising the value of data.

User types
Internal: Digital Grid.

Success criteria
Improved business operations through the harmonising of four unique systems.

Progress and output
Initial discovery phase completed and analysed.

Next steps
Introduction of quick win initiatives.

LV World

Click to return to roadmap

Start date: 01/07/2022

End date: 31/12/2027

Category: Infrastructure

Key contact: Marnie Ellis

Contact role: Project Manager

Contact email: mellis@nationalgrid.co.uk

Description

The project aims to:

1. Visualise LV monitoring devices connected to the network in ADMS and;
2. Create a model of the LV network within ADMS to better understand activities andpower flow in the LV network

Drivers

Visualisation of LV analogue data within the ADMS to be used for predicting faults before they occur, hence reducing response times.

Benefits

LV Feeder Fault identification

The voltage values between the feeder and busbar can be compared to determine a suspected fuse operation.

Improved visibility of LV network model

Enable us to run power flow analysis/studies.

Better understanding of our network

Predict when outage occur before customer calls in.

Strategic theme

Improved data management, Increased network insight and operation

EDTF recommendation

Maximising the value of data.

User types

Internal: Digital Grid.

Success criteria

Getting the LV network data into the ADMS in an available and usable format for all LV monitoring currently fitted.

Progress and output

Currently working with our ADMS Vendor to view the LV data into our ADMS system.

Next steps

Following completion of phase 1 we would look to visualise the LV model within the ADMS which would lead to a wider understanding of the capacity and strains on the network which would improve the understanding around pre-fault/prefix.

Asset Management

Click to return to roadmap

Start date: 01/06/2025

End date: 31/03/2028

Category: Infrastructure

Key contact: Chris Hogg

Contact role: Projects Delivery Manager

Contact email: chogg@nationalgrid.com

Description
Replacement of NGED system that is used to record assets of NGEDs electricity network.

Drivers
The legacy system is approaching end of life and through its replacement we can introduce a solution that better equips us for managing the assets that will support us in delivering Net Zero

Benefits
Better quality data

More effective management of electrical assets

Strategic theme
Improved data management, Increased network insight and operation

EDTF recommendation
Maximising the value of data, visibility of data, coordination of Asset Registration

User types
Internal: Digital Grid, DSO, Operations, Asset Management

Success criteria
Improved asset data quality.

Progress and output
Not started yet.

Next steps
Begin initiation.

What 3 Words

Click to return to roadmap

Start date: 01/07/2023

End date: 30/09/2024

Category: Infrastructure

Key contact: Simon Apps

Contact role: Project Manager

Contact email: sapps@nationalgrid.co.uk

Description
An external mapping software product which divides the world into 3 metre squares and assigns each square a unique combination of three words, allowing for more precise locational information where street addresses may be too vague.

Drivers
What3words aims to increase efficiency in incident reporting whilst improving safety for customers and employees.

NGED will integrate what3words into Electric Office and feed this data into ADMS (PowerOn) and asset management software in order to pinpoint customer locations, isolate circuits and coordinate fault response.

Benefits
Greater efficiency
NGED will maximise the efficiency potential for pinpointing customer locations, isolating circuits and coordinating fault response in order to minimise customer interruptions and customer minutes lost.

Improved visibility
NGED will have a clearer view of customer data, enabling NGED to more easily identify customer interruptions.

Strategic theme
Improved data management, Increased network insight and operation.

EDTF recommendation
Maximising the value of data, visibility of data, Coordination of Asset Registration

User types
Internal: Digital Grid.

Success criteria
We will assess the success of the project based on the following criteria:
- Additional layer into Electric Office to toggle w3w tiles;
- Assets can be assigned a w3w address based on the Electric Office layer, along with the w3w of potential abnormal access routes;
- Asset data relationship and process established to feed asset management software with w3w data;
- Reduction in wasted site visits;
- Minimal effort user adoption;
- Compliance with NGED policies;
- Additional button to access w3w window within CallTaker, and an enhanced search function within GeoView to leverage w3w offline functionality:
  - Improved customer experience;
  - % reduction in call duration for rural incidents;
  - % reduction in time taken for Control Engineers to identify damaged HV assets;
  - Improved coordination in LV fault response;
  - Reduction in Customer Interruptions due to more localised HV switching;
  - Reduction in Customer Minutes Lost due to improved fault response process

Progress and output
Solutionising and procurement exercise complete

Next steps
Install and configure on NGED Systems

Helicopter Data Project/HeliData Insights

Click to return to roadmap

Start date: 01/02/2024

End date: 31/01/2025

Category: Infrastructure

Key contact: Marnie Ellis

Contact role: Project Manager

Contact email: mellis@nationalgrid.co.uk

Description
The main aim of the project is to enable the organisation to realise the benefits of Fugro LiDAR data captured by our in-house Helicopter Unit for enhanced vegetation management processes; aiding the businesses shift from a reactive to predictive operating model and driving efficiency throughout ED2. It is intended that the project will develop proof of concept's (POCs) initiated by the D&D team to provide a visualisation of work tasks via a dashboard, and a visualisation of the current and future proximity of vegetation to the overheard network via a dedicated suite of maps.

Drivers
NGED have committed to enhance the existing Tree Management Programme to ensure the safety, reliability and resilience of the network. By providing a holistic view of defects and risks, the HeliData Insights project will inform and aid work task planning, increase efficiencies, and ensure uninterrupted service for customers.

Benefits
Greater efficiency
Insights gained from helicopter LiDAR data will improve efficiency in identifying and evaluating safety and compliance issues.

Improved visibility
Helicopter data will enable NGED to forecast the future proximity of vegetation to the network, enabling the prioritisation of work tasks and better utilisation of resource.

Strategic theme
Improved data management, Increased network insight and operation.

EDTF recommendation
Maximising the value of data, visibility of data.

User types
Internal: Network Services, Tree Compliance Team, Helicopter Unit, Vegetation Management.

Success criteria
The project will be deemed a success if:
- the POC dashboard is developed and utilised by business and field teams as a visual representation of work tasks for vegetation management; and
- the POC suite of maps are developed and deployed, providing a holistic view of defects and risks to inform work task planning across the network.

Progress and output
An initial project PID has been drafted and reviewed by the Senior Data Scientist promoting the project idea.

Next steps
The project idea has been submitted through the internal PMO and is awaiting triage to determine the project requirements (and hence timelines and costs).

External Work Management System

Click to return to roadmap

Start date: 01/04/2021

End date: 31/12/2024

Category: Employees

Key contact: Daniel Hardman

Contact role: Project Manager

Contact email: dhardman@nationalgrid.co.uk

Description
A new work management system will be implemented to manage the full life cycle of work issued to contractors and other third party service providers. This new system will replace a legacy system and enable the issue, acceptance, variation, completion, invoicing and analysis of services provided contractually by third party organisations through the execution of contracts with a schedule of works. The existing legacy system relies on manual processing of invoices and lack granularity of completed work to support insight and data analysis.

Drivers
Granular data analysis of work orders issued to and completed by contractors and third party service providers will deliver insight and business efficiency. In addition, a new system will provide efficient real-time communication of work status, safety and street works information to support smart and flexible working.

Benefits
Better execution of contracts
It will ensure contracts are legally executed, work orders are efficiently issued and managed through to execution and completion of the work, milestones are updated in real-time from the field, variations to work are agreed, recorded and evidenced and manual processing of invoices is removed.

Greater accuracy
Tailors to users' needs, providing them with more control, accuracy and information.

Improved visibility
Users have improved visibility of external work orders, allowing for better work management and improved efficiency.

Strategic theme
Improved data management, increased network insight and operation.

EDTF recommendation
Maximising the value of data, visibility of data.

User types
Internal: Design and planning, Operation, Finance, Regulatory.
External: Local authorities and regulators.

Success criteria
Implementation of a new system for use by staff, contractors and service providers, management of work issued in a variety of contracts.

Progress and output
NGED have completed the infrastructure of the system and developed the core functionality within the EWMS system and have carried out a full internal UAT on the system, we have also commenced external stakeholder engagement to start assist/begin the transition into the new way of working.

Next steps
Further engagement with external users and planning the testing of the WMS from a contractor point of view, we shall also be implementing improvements and additional functionality to the tool as a result of our internal UAT.

11kV Planning Tool (Sincal)

Click to return to roadmap

Start date: 01/01/2023

End date: 31/10/2024

Category: Employees

Key contact: Neil Murdoch

Contact role: Project Manager

Contact email: nmurdoch@nationalgrid.co.uk

Description
Sincal (a Siemens solution) is an industry leading power system analysis software package for electric and water networks. Sincal models are build using the latest GIS and CROWN data.

Drivers
Planning the 11kV network is becoming more complex as the volume of connection applications increases and new technologies are connected. The project will provide HV planning engineers with a brand new power system analysis tool that provides greater visibility of the HV network to perform power system analysis more efficiently. Phase 2 of the project aims to complete end-user adoption of Sincal and decommission DINIS (the existing tool).

Benefits
Greater efficiency
The tool helps engineers to process customer connection applications faster and with higher accuracy. It automates data processing and minimises the time required by 11kV Planners, and others, to carry out specific modelling and design tasks, e.g., contingency and time series data analysis.

Improve the visibility and understanding of the HV network
Significantly improved functionality and performance of 11kV modelling to facilitate greater understanding and sharing of network information.

Strategic theme
Improved data management, increased network insight and operation.

EDTF recommendation
Maximising the value of data, visibility of data.

User types
Internal: Operational, Design and Planning, Distribution System Operator.

Success criteria
Improved connections accuracy and efficiency

Progress and output
Phase 1 delivered

Next steps
Phase 2

Internal Work Management System

Click to return to roadmap

Start date: 01/05/2023

End date: 30/06/2024

Category: Employees

Key contact: David Thorn

Contact role: Project Manager

Contact email: dthorn@nationalgrid.co.uk

Description
Delivery of the new internal work management system will provide us with a platform that can optimise the utilization of our staff to reduce operational expenditure, improve customer satisfaction and provide us with the information we need to plan our business.

Drivers
The volume of work across our business is set to increase dramatically in RIIO-ED2 and beyond. A fundamental step change in the way we currently schedule and manage our work loads is required to ensure we deliver a high quality service for our customers.

Benefits
The new platform will provide a centralised, standard system to **optimise** operational work. This it will help reduce travel time, ensure more tasks are delivered on-time and allow us to respond to customer requests faster than before.

It provides our team support, engineers and managers with far **greater visibility** and insight into day to day operations allowing them to plan and execute work more effectively.

More efficient work order management and able to collect feedback to improve **business processes**.

Strategic theme
Operational efficiency/improved customer service.

EDTF recommendation
Maximising the value of data, visibility of data.

User types
Internal: Operational, Design and Planning
External: Customers

Success criteria
Implementation of a new system for use by staff that allows management of internal work instructions and workload.

Progress and output
Internal initial stakeholder sessions around requirements and project plan have been undertaken as well as planning next steps.

Next steps
Confirm requirements and commence work with external delivery partner following initial experience with the work management tool in EWMS project.

Envision

Click to return to roadmap

Start date: 05/06/2023

End date: 28/02/2025

Category: Employees

Key contact: Sam Rossi Ashton

Contact role: Project Manager

Contact email: srossiashton@nationalgrid.co.uk

Description
Envision is bespoke UI built into iHost (developed by Nortech). This tool facilitates automated data manipulation and time series data storage. It allows the business to access data visualisation features such as interactive trends and custom reports.

Drivers
Existing methods of time-series data processing are not uniform and are done on decentralised spreadsheets and tools, leading to an inconsistent approach throughout the business.

This project aims to develop a consistent approach in managing and processing time series data to enable the DSO team and planner to understand long term loading and asset loading behaviours.

Benefits
Single source of truth
It provides the business with centralised access to time series data and processing capabilities. It reduces the need for individual translation, maximising productivity in the business.

Reduce network load on the source database
It caches data from the Data Logger regularly.

Reduce processing time for load surveys
It reduces the actual loading time for planner (as load surveys will be processed in the system, not with planners' laptops).

Strategic theme
Improved data management, Increased network insight and operation.

EDTF recommendation
Visibility of data, Maximising the value of data.

User types
Internal: Design and Planning, Operation.

Success criteria
Centrally hosted and supported tool capable of producing interactive trends.

Progress and output
Contract has been signed/ kick off has been completed.

Next steps
Specification phase in June, with Development throughout June and July followed by testing to completed by the end of August with go live in September.

ConnectLV

Click to return to roadmap

Start date: 01/02/2023

End date: 28/02/2025

Category: Employees

Key contact: Mitch Golder

Contact role: Project Manager

Contact email: mgolder@nationalgrid.co.uk

Description
An LV Connection design and estimation tool with automated costing, up to date capacity margin indications, accurate network models using Greatly Improved Automatic Network Topology performance and user interface (these are enhancements being introduced in phase 4). Phase 1 to 3 focussed on introducing the tool and key features. This tool greatly improves the accuracy of the network model and its alignment with its known state.

Drivers
To support the future needs of LV planning activities, the project aims to develop an efficient connection design and estimation tool (replacing WinDebut) by the innovative use of digitalisation and data handling capabilities to help LV planners to gain greater visibility of the LV network, to deliver design and quotation to customers and offer superior user experience.

Benefits
Connect/LV automatically generated BoM with ‘New’ and ‘Replacement’ assets related costs identified on the BoM. Multiple transformer networks can be assessed. Network elements such as Split Phase transformers link boxes are interpreted accurately and network assessments can be carried out. Assessment of configurable networks using link boxes and optioneering capability. This will allow us to:

Increase estimates accuracy
LV Planners are able to get consistent designs and cost estimates quickly for the customers putting us in good stead to meet the future demand.

Reduce the time to do LV studies planners
The production of LV network model will be automated (time saved to create the model manually).

Replace WinDEBUT
An outdated tool which lacks the capability to assess the new LCT load types and is no longer supported.

Strategic theme
Increased network insight and operation.

EDTF recommendation
Maximising the value of data, visibility of infrastructure and assets.

User types
Internal: Design and Planning.
External: Commercial, Consumer, Local Authorities and Regulators, Energy Sector, Third Sector.

Success criteria
Implementation of Connect/LV phase 4; more efficient and accurate information supporting new connections; improved customer satisfaction.

Progress and output
- Project scope and timeline is now finalised and approved.
- Contract awarded for application development.
- Requirements workshops completed work has commenced and is in line with programme.

Next steps
ConnectLV Phase 5 - additional functionality improving the tool with the aim of improving customer experience.

Major Connections Tracker

Click to return to roadmap

Start date: 29/08/2023

End date: 31/03/2024

Category: Employees

Key contact: Daniel Clements

Contact role: Project Manager

Contact email: dclements@nationalgrid.co.uk

Description

Major Connection Tracker (MCT) Phase 2

The project is the next phase of the recently released MCT, the new improvements are designed to better facilitate business needs. The changes and additions within Phase 2 are being driven by business stakeholders which have engaged collaboratively with the Digital Project Delivery team to project manage these requirements. The changes will enable multiple teams within the business to use the MCT more extensively and improve business efficiency.

Statement of Works – expected delivery March 2024

Building Statement of Works Team processes into the MCT to digitise the end-to-end statement of works journey, improve data visibility between departments and create a robust, auditable, semi-automated platform to capture, maintain and report on statement of works data.

Additional phase

Application refinements to build on feedback and improve MCT for PND, Network Services and SoW Team.

Drivers

Regulatory reporting.

Benefits

Current system not suitable for business needs and requirements. Development will enable the business to successfully record PND data in format that can easily be reported on.

Strategic theme

Data and digitisation strategy/Primary System Design requirements/OFGEM reporting.

EDTF recommendation

- Better Quality Data
- More effective management of electrical assets

User types

Connections team (reporting) Primary Network Design team.

Success criteria

- Several releases agreed with business that hit criteria set out in the specification.
- User acceptance criteria completed.

Progress and output

Release 1: Complete UAT - complete
Release 2: In development
Release 3: Still be specified

Next steps

Business users involved in design architecture and specification.

Secondary System Planning Tool

Click to return to roadmap

Start date: 06/12/2023

End date: 31/12/2024

Category: Employees

Key contact: Daniel Clements

Contact role: Project Manager

Contact email: dclements@nationalgrid.co.uk

Description
The project is designed to quantify the current and future utilisation of the LV network and to increase the visibility of future and ongoing reinforcement schemes between DSO and DNO. Improved documentation will enable reporting for ED2 core commitment 1.

Through the ELITE phase it will improve baselining capabilities of DSO System Planning, it will improve understanding of maximum demand across the network.

Drivers
Business requirements for core commitment 1, DSO incentive reporting and regulatory reporting.

Benefits
Greater efficiency

Single source of truth
Data will be collated in a single system as opposed to multiple tools.

Interdepartmental collaboration
All teams using the same software, increasing accuracy.

Improvement of data accuracy
Improved data sharing process to network services.

Strategic theme
Data and digitalisation strategy/DSO.

EDTF recommendation
Maximising the value of data, visibility of data

User types
Secondary System planning Team and Secondary Network Design Team.

Success criteria
MVP delivered by May next year for teams reporting deadlines to be met.

Progress and output
Not yet started, I.T architecture design and agreed inline with business specifications.

Next steps
Business users involved in design architecture.

LV Network Visibility

Click to return to roadmap

Start date: 01/04/2023

End date: 30/12/2024

Category: Smart and flexible

Key contact: Yasmin Durgut

Contact role: Project Manager

Contact email: ydurgut@nationalgrid.co.uk

Description
Provide visibility of the LV network to allow NGED to gain better customer supply visibility and insights.

Drivers
Gaining increased visibility of the LV network will ensure that we can better serve our customers today and in the future.

Benefits
Better visibility of the LV Network will help earlier identification of LV faults, assist with LV voltage monitoring and assist with planning decisions and vulnerable customer engagement.

Strategic theme
Improved data management, Increased network insight and operation.

EDTF recommendation
Maximising the value of data, visibility of data.

User types
Internal: Operations, Contact Centre, Dispatch, Stakeholder Engagement Office, DSO.
External: 3rd Party Developers.

Success criteria
1. Reliable and effective system to cluster Smart Metering no-supply alerts to understand a potential Feeder or LV network fault
2. Ability to gain an immediate response from a smart meter to understand an individual or set of individual customers' supply status
3. Automating the historic voltage profiles of individual customers and clustered customers
4. Understanding of demand and energy profiles for key customer and technology archetypes to inform network planning and build tailored customer energy plans
5. Data architecture to enable effective end-user access to smart metering and LV monitoring data to inform network planning and customer engagement
6. Collecting and storing smart metering data as available (in accordance data privacy aggregation requirements) for current and future use
7. Enabling LV network data to be made available to external users, such as Community Energy groups.

Progress and output
We have baselined products for all use cases working with various business sponsors to ensure we deliver most value as quickly as possible while iteratively rolling out additional functionality.

Next steps
Complete readiness activities to launch products and in parallel develop communications and learning materials to support roll out.

Flexibility System

Click to return to roadmap

Start date: 01/11/2022

End date: 29/09/2024

Category: Smart and flexible

Key contact: Sam Rossi Ashton

Contact role: Project Manager

Contact email: srossiashton@nationalgrid.co.uk

Description

An enterprise grade Information Technology (IT) managed flexibility service solution. There are two faces of products:

1. External UI the website where third parties register their assets and participate in trading and;
2. Internal UI a site that allows the flexibility commercial officers to check eligibility for flex trading and compliant to internal processes.

Drivers

Flexibility service solutions currently exist on an ad-hoc and functional basis and it is being managed manually. However, manual processes are no longer suitable as volumes increase. The project aims to change the technical/architectural process of flexibility trading process that meet the ED2 commitment.

Benefits

Lower barrier to entry to flexibility markets

Third party asset owners can participate in flexibility market easily with simplified processes.

Increased flexibility service resource efficiency

NGED can manage flexibility service with a centralised solution, instead of multiple spreadsheets.

Enhanced data security

Financial information is processed securely with the new solutions.

Strategic theme

Improved Data Management.

EDTF recommendation

Digitalisation of Energy system.

User types

Internal: DSO Flexibility.
External: Flexibility providers

Success criteria

Enterprise grade digital flexibility management system that shall process commercial details of flexibility suppliers, process the asset compliance/validation and provide a digital platform for a trading/auction functionality.

Progress and output

Specification for all phases (3) complete and phase 1 build currently ongoing due to end in June.

Next steps

Phase 2 build due to follow phase 1 with phase 3 following on. Phase 4 is currently being scoped this phase will focus on improvements and enhancements to the system.

Predictive Maintenance

Click to return to roadmap

Start date: 01/07/2023

End date: 31/07/2025

Category: Smart and flexible

Key contact: Simon Apps

Contact role: Project Manager

Contact email: sapps@nationalgrid.co.uk

Description
A predictive model built with python to predict when a tap changer needs to be maintained based on tap readings. Products are (1) new predicted maintenance date being fed into CROWN and (2) a dashboard visualising tap changer performance and statistics.

Drivers
This project aims to develop data models to move from a fixed time to a predicative approach for maintaining tap changers. It aims to ensure the tap changer is maintained at optimal intervals balancing risk, cost and performance. It also allows quick identification of any issues with the tap changer. A predictive maintenance schedule is unique to each asset and based on how many ‘taps’ a tap changer has done and how long it has been since the last maintenance.

Benefits
Cost savings
Potential saving as we can push out maintenance for tap changers that don’t need be maintained that early.

Greater visibility of assets
Use tap changers to identify missing or broken assets

Ongoing collaboration across NGED and NGET
Sharing asset information and learnings across NG group

Strategic theme
Improved data management, Increased network insight and operation

EDTF recommendation
Maximising the value of data

User types
Internal: Operations

Success criteria
Improved viability of when assets should be maintained

Progress and output
132kv Tapchangers ready for launch

Next steps
Replicate process for 33kv/66kv Tapchangers

Distributed Power Flow

Click to return to roadmap

Start date: 01/08/2023

End date: 11/06/2025

Category: Smart and flexible

Key contact: Marnie Ellis

Contact role: Project Manager

Contact email: mellis@nationalgrid.co.uk

Description
Implementation of DPF functionality within trial areas across NGEDs four license areas to enable Power Analysis within our ADMS. (This is a precursor for ANM, Voltage Optimisation and state estimation in ADMS).

Drivers
To enable other projects to progress (ANM, SVO, State Estimation, Pre-Fix).

Benefits
By delivering the DPF Implementation project, NGED will be supporting the ambition to maintain a **safe and resilient network** by enabling the establishment of power analysis and the accompanying processes within the NGED network. There will be benefits to the wider organisation as a result of DPF. For example, NGED will also be able to progress and/or enhance additional solutions such as **SVO, ANM and Pre Fix** amongst others.

Strategic theme
Improved data management, Increased network insight and operation.

EDTF recommendation
Maximising the value of data.

User types
Internal: Digital Grid.

Success criteria
Having a DPF system configured and verified within each licence area to allow a wider use of DPF and therefor enabling other projects.

Progress and output
The Discovery Phase for the project has been completed, and the Implementation Phase has been live since August 2023. Import tools for cables/lines, transformers and load profiles have been created, which will enable NGED to import and make use of accurate data as it becomes available.

Next steps
Continue works under contract, including completing initial data imports using tools, verification of improvements from the discovery phase and configuring DPF across trial sites. In addition, a Change Request is anticipated to include ‘Generation Profiles’ as part of the project scope. Once received, reviewed and approved, the project timeline and KOMs list will be updated.

AI/ML

Click to return to roadmap

Start date: 01/10/2023

End date: 30/09/2024

Category: Smart and flexible

Key contact: Mitch Golder

Contact role: Project Manager

Contact email: mgolder@nationalgrid.co.uk

Description
An image classification model on Google Cloud platform to identify cut-out suitability for a LCT installation based on the picture customers provide.

Drivers
The project aims to use an image classification model to automate the process of determining if a customer cut out is ready for a LCT installation or if a review of the proposal is needed.

Benefits
Faster processing time for LCT applications
It could greatly reduce the current manual effort to validate cut out details, as the model could process a large amount of pictures quickly.

Improved customer journey
It shortens customers waiting time (currently it takes a few days to process) for LCT applications.

Support decarbonisation
The model is able to process a greater amount of LCT applications a day.

Strategic theme
Improved data management, Increased network insight and operation.

EDTF recommendation
Maximising the value of data, visibility of data, Digitalisation of the energy system, coordination of asset registration.

User types
Internal and External Customers.

Success criteria
- Improved customer experience.
- More efficient connections process.

Progress and output
- GEN AI Chatbot ready to productionalise.
- 300+ images processed through Looped Cut out POC.

Next steps
- Launch AI chatbot for fault customers.
- Further Integration into connections process.

Primary Outage Restoration Tool

Click to return to roadmap

Start date: 01/01/2024

End date: 31/12/2025

Category: Smart and flexible

Key contact: Marnie Ellis

Contact role: Project Manager

Contact email: mellis@nationalgrid.co.uk

Description
Implementing PORT functionality which autonomously reconnects supplies faster via healthy circuits during EHV faults where this adds value.

Drivers
Reduce the manual requirement around the maintenance of sequence schemes and to allow a dynamic approach to restoration of primary outages.

Benefits
More dynamic and quicker restorations to the network and removing the need for manual input.

Strategic theme
Improved data management, Increased network insight and operation.

EDTF recommendation
Maximising the value of data.

User types
Internal: Digital Grid.

Success criteria
Full implementation of the PORT tool across all primary substations.

Progress and output
Currently contracted.

Next steps
Enhance ADMS system to cope with more scenarios.