

Digitalizing the Company

IT and Digital all-hands

October 28, 2021

national**grid**

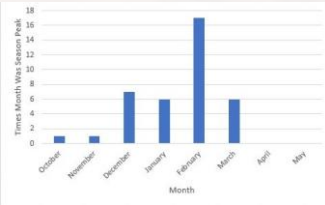


Safety moment: Flu Vaccines

Flu Facts – From CDC & NSC

- **When is the flu season?**

Flu season typically starts in the fall and peaks in the winter



- **Why should I get the flu vaccinated?**

- Protect vulnerable populations
- Reduce the spread
- Staying healthy and active

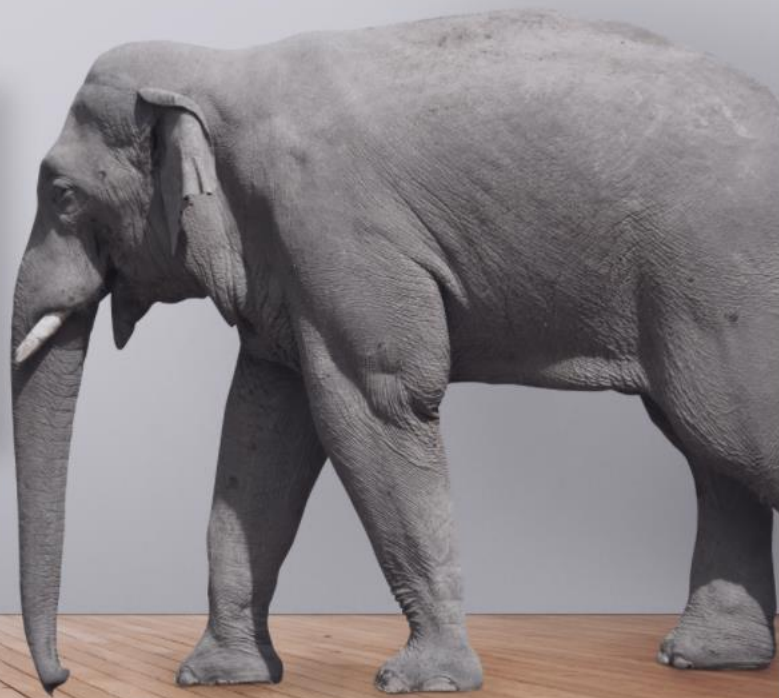
- **What else can I do to prevent the spread of the flu?**

- Cover your mouth and nose when you cough and sneeze
- Don't go out when you feel sick
- Dress appropriately for the weather

Links & Resources

- Free Flu Vouchers - <https://gridhome.nationalgrid.com/news/111277/last-chance-to-get-your-free-flu-vaccination>
- New England 2021 Flu Clinics - <https://gridhome.nationalgrid.com/documents/sppreview/030e85be-64d1-4ad6-8dbe-94bca911cb00>
- Upstate New York 2021 Flu Clinics - <https://gridhome.nationalgrid.com/documents/sppreview/18876c49-997b-4565-a5c1-1b29ca6c1fc4>
- Downstate New York 2021 Flu Clinics - <https://gridhome.nationalgrid.com/documents/sppreview/183dfec4-cdc5-4dc0-a1a4-88611e55faab>
- **No out-of-pocket cost to visit a local pharmacy for your shot**

ADDRESSING THE ELEPHANT IN THE ROOM



Our right to go Digital now

People & Capability	Technical Debt & Infrastructure	Cybersecurity, Compliance, & Controls	Financials & Delivery
<ul style="list-style-type: none"> • 100% new IT leadership team • Strengthened technical depth in-house • Created digital labs; US/UK • 70 digital resources hired • Changed vendor partners to Digital Savvy entrepreneurial companies • Added specialists in: Architecture, Commercial, Cloud, End User, Data, Product Engineering • Redefined role hierarchy towards product-oriented model • Introduced Agile methodologies • Invested in engineering training 	<ul style="list-style-type: none"> • Reduced tech debt – 80%-34% • Reduced volume of major incidents by 56% • Improved speed to deploy cloud environments from 76 hours to 30 min • Improved cNPS: 114% UK; 74% US • Modernized 17,000 endpoint devices to current standards • Transforming datacenter infrastructure to cloud and virtual environments • Reducing carbon footprint with datacenter consolidation • Established a Chief Technology Office with a focus on modular design and data (Gridstack) 	<ul style="list-style-type: none"> • Implemented defense-in-depth cyber controls across enterprise and CNI • NIST Cyber Framework established and improved maturity rating to 'Managed' • Email phishing 'click rates' reduced from 14% to 8% • Enterprise monitoring coverage improved: FY19=15% ; FY21= 100% • Eliminated audit weaknesses US/UK • 'Good' rated Audits improved by 60% year over year • Eliminated overdue audit management action plans 	<ul style="list-style-type: none"> • 54% increase in volume of projects delivered from FY18 to FY21 (\$227M to \$762M CapEx) • Tracking to reduce \$106M in IT run-the-business operating expense • Industry benchmarks show we're above peer median in US cost and continually improving in both regions • Continuously improving delivery: OpEx to CapEx ratio decreased from 111% to 45%

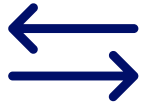
Market dynamics that are driving digital transformation



Seamless **consumer experiences** are influencing our customers' expectations of engagement and enablement



The **clean energy transition** is accelerating new business models and alternative fuels



A **generational shift** in our workforce demands modern tools, capabilities and frictionless experiences



Regulatory expectations mandate increased transparency, and better outcomes

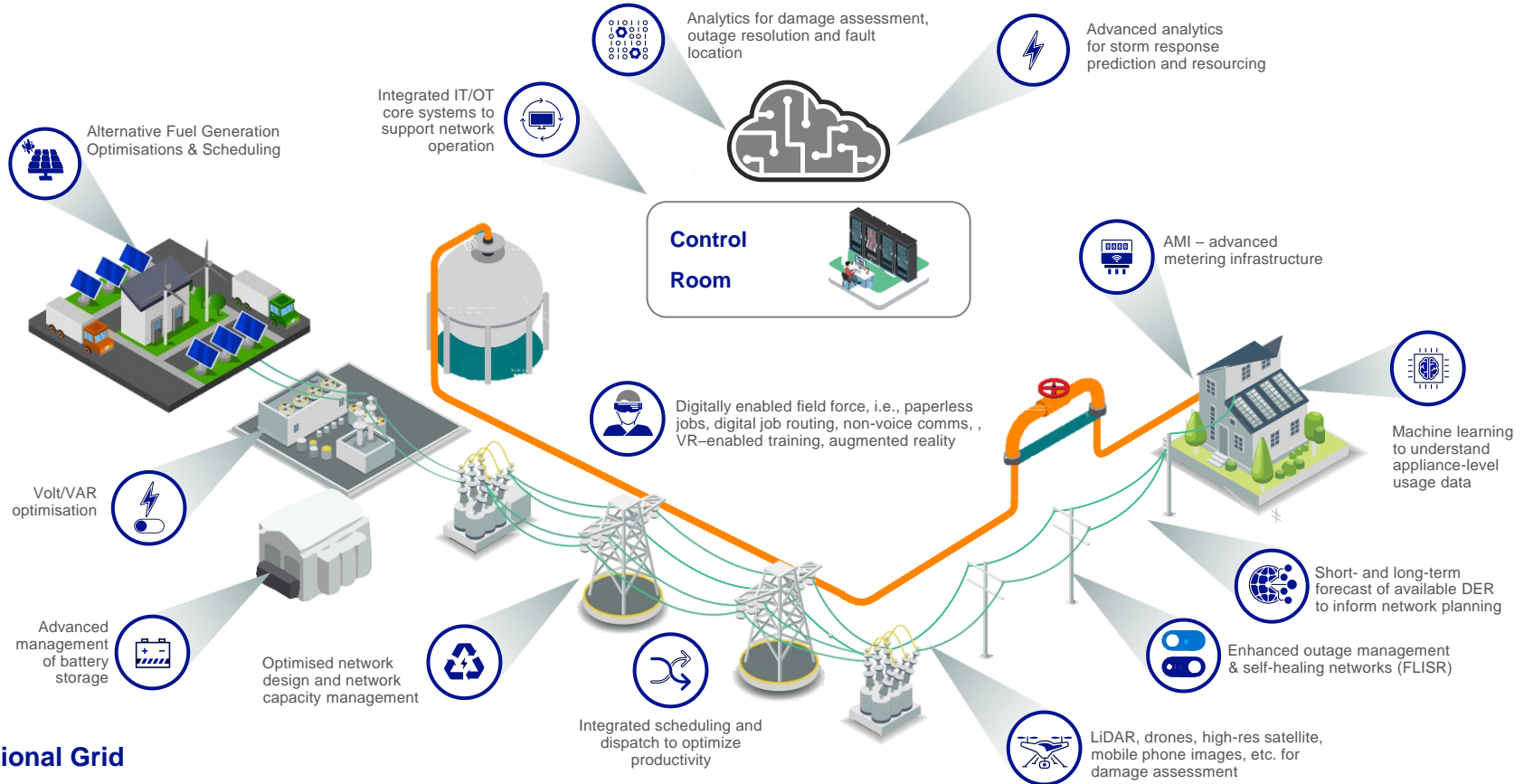


Higher ESG expectations require a focus on sustainability, net zero future and responsible business practices



Technology & Market innovations along with increased availability of data have paved the way for a '**Connected Utility**'

Response | An Intelligent 'Connected Utility'



The building blocks of our 'Connected Utility'

Assets – Planning, Design, Construction, Inspections, Reliability



Work – Planning, Scheduling, Execution



Customer – Personalization, Branding, Services

National Grid 'Connected Utility' Platform

Digital & Data Platform - "Gridstack"



Virtual Power Plants



Energy Blockchain



Digital Twins



Digital Enabled Field-force



Smart Device Controls



Personalized Customer Offerings

Transmission Intelligence

Wholesale Market Optimizations

Generation Orchestration

Distribution Intelligence

Distributed Energy Resource Coordination

Intelligent Scenario Planning

Customer Intelligence

Frictionless Customer Service Interactions

Customized Energy Offerings

OT Data

IT & Enterprise Data



Asset Data



Geolocation Data



Weather Data



Satellite & Inspection Images



Design & Construction Data



Workforce Data



Fleet Data



Status Data



Meter Data

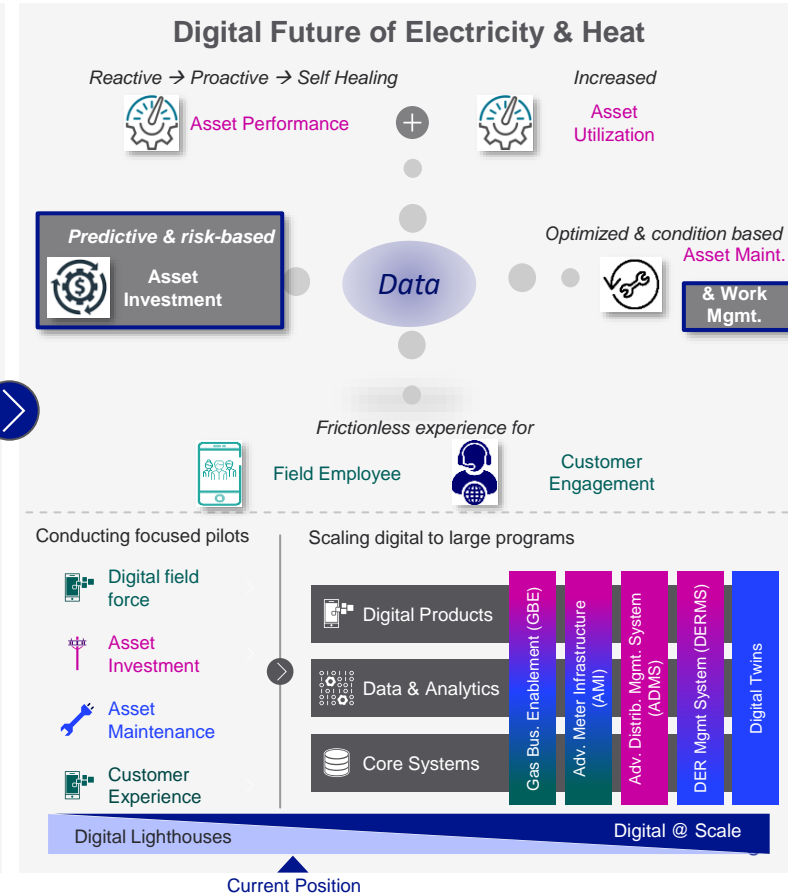
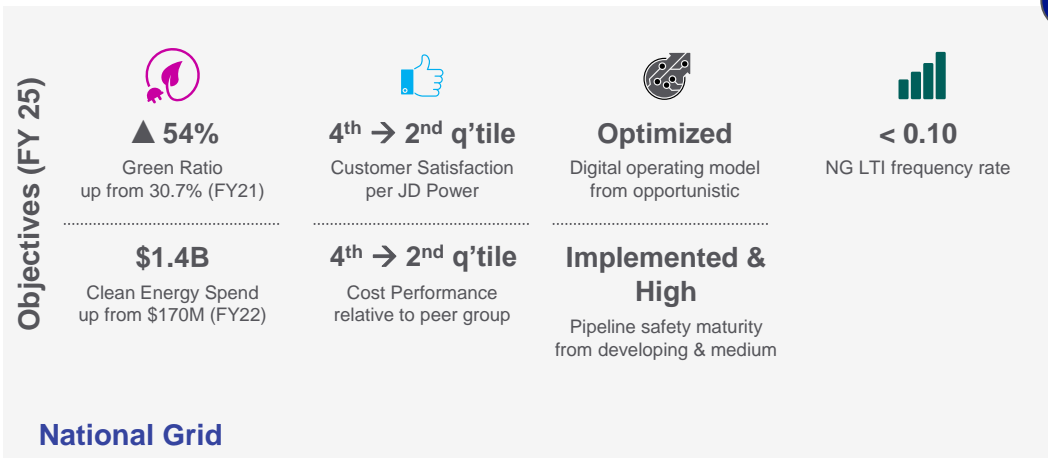


Customer Data

Scaling our Digital Capabilities

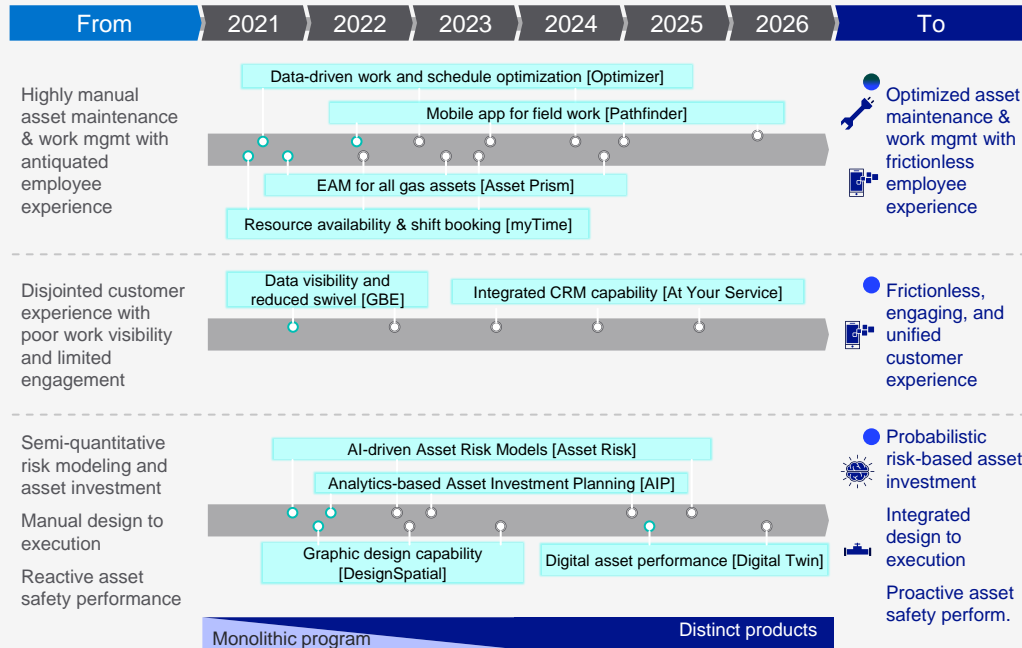


Jurisdictional Strategy for New York



Roadmap for US Gas

NY & MA – Gas Digital Roadmap¹



Clean Energy Transition



Deliver Efficiently



Organizational Capability



Empower People

○ Initial product release

○ Follow-up releases ("versions")

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NY Risks & Challenges



People, talent, and capabilities
Steep learning curve to adapt digital ways of working and transition to a product model



Infrastructure and systems
Large legacy tech footprint to manage



Legacy processes
Existing processes need to be updated and reimagined for the future; challenge to drive consistency/best practices across NiMO, KEDNY and KEDLI



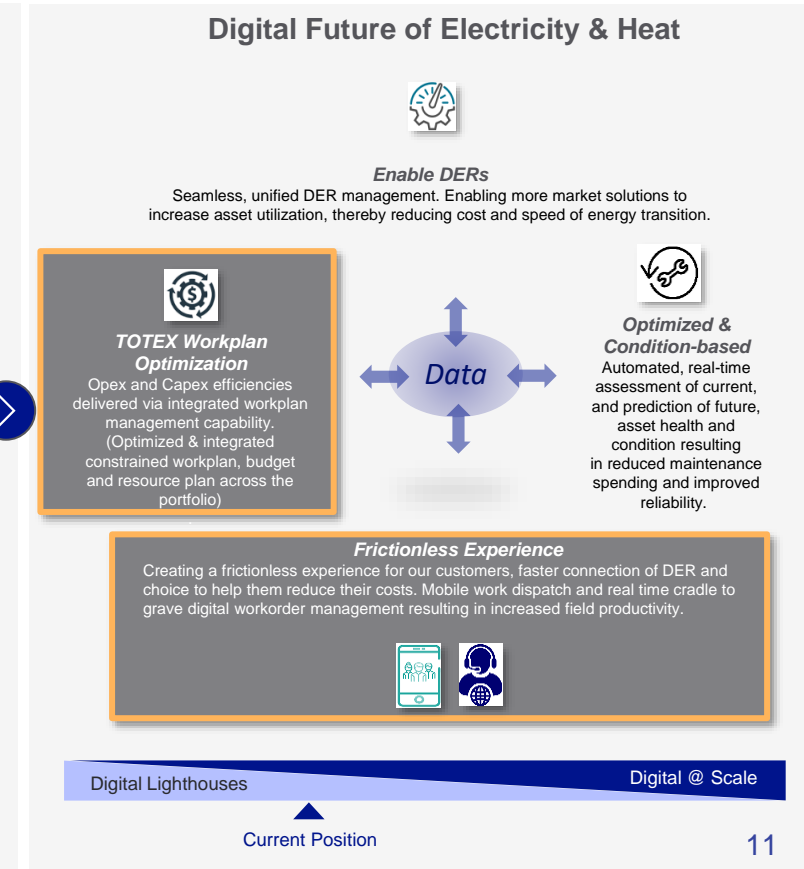
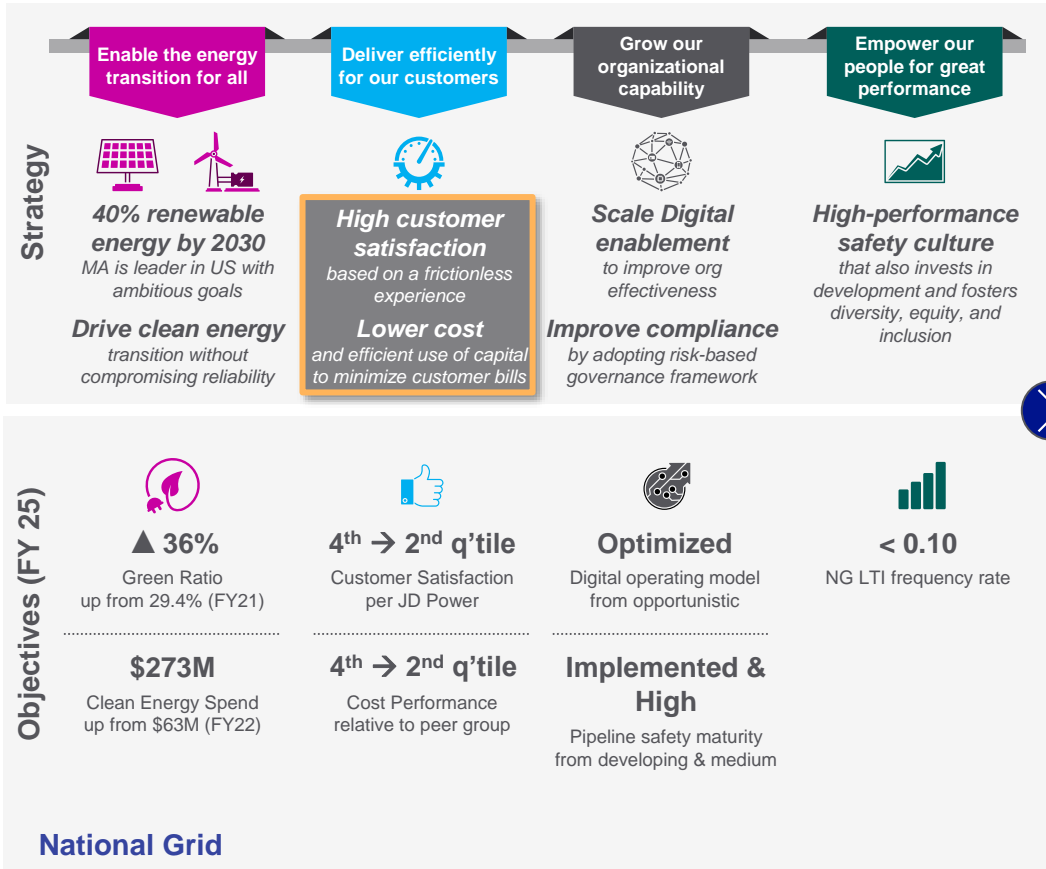
Cross functional alignment
Achieving ambitious goals requires close coordination with IT, Finance, Regulatory Strategy

Top Gas Programs By Size of Investment

1. GBE: across US Gas Business

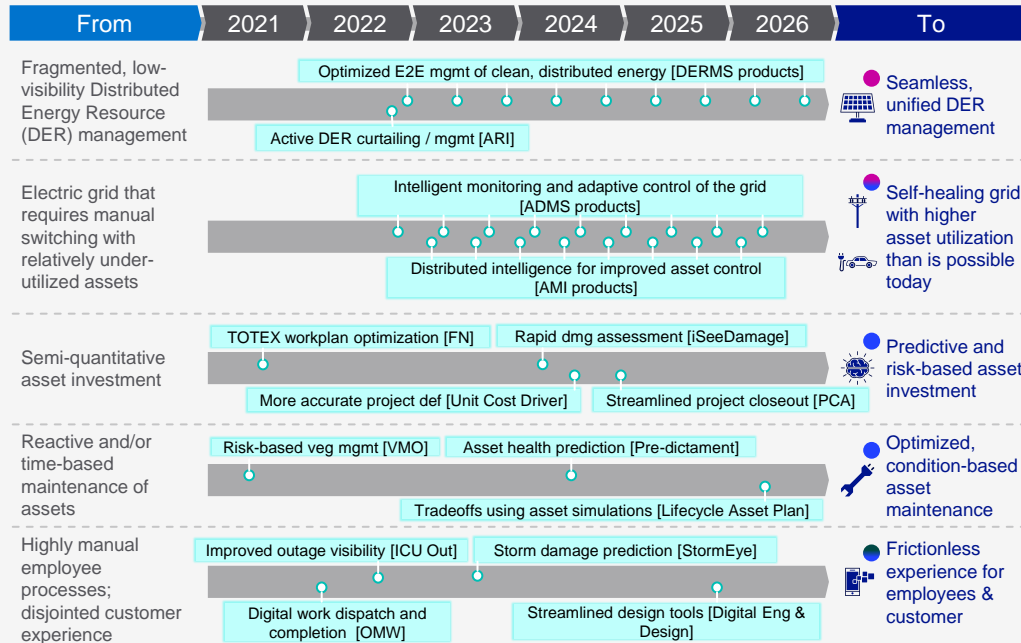
¹Currently the same for both MA and NY – will evolve over time to account for differences in priorities and regulatory requirements

Jurisdictional Strategy for Massachusetts



Roadmap for US Electric

NY & MA – Electric Digital Roadmap¹



Clean Energy Transition



Deliver Efficiently



Organizational Capability



Empower People

National Grid

Note: each digital product will have multiple releases, but for simplicity they are not shown here

MA Risks & Challenges

Organizational capacity for change



RI sale is taking a significant level of organizational capacity for change. Major MA GBE releases in 2022 will have to be managed while transitioning to new post-sale Op Model



Impact of RI sale

The RI sale places additional cost pressures on the MA business.



DG interconnection

We are seeing increasing pressure to increase the speed and reduce the cost of DG interconnection.



Functional alignment

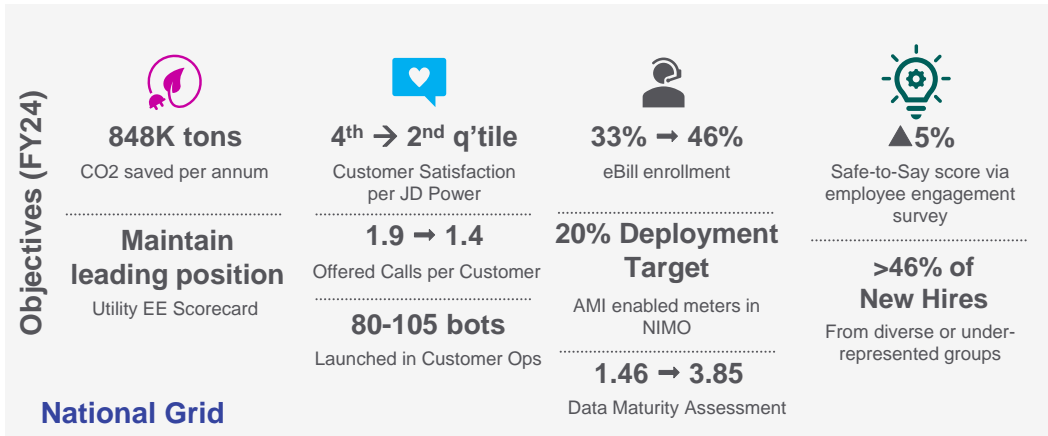
Achieving ambitious goals and the need to focus on a smaller MA business requires successful transition from Commodity to BU-focused Transformation.

Top Electric programs By Size of Investment (US) (FY22 to FY25)

1. Grid Modernization
2. Digital products
3. ADMS

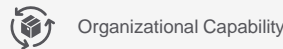
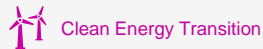
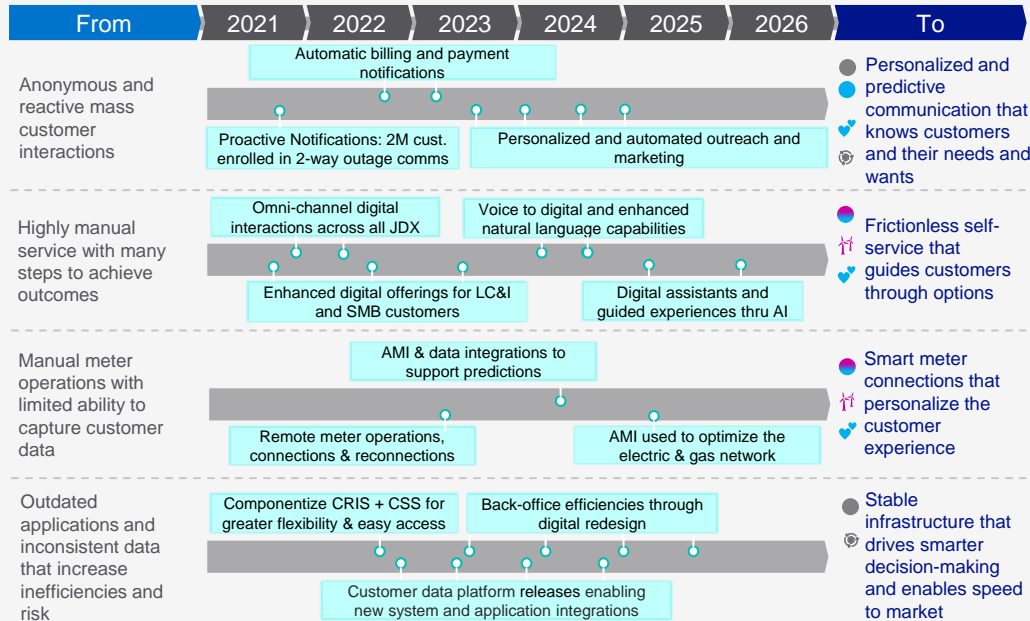
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Strategy for US Customer



Roadmap for Customer

Customer Roadmap



Risks & Challenges



Digital talent

Finding the right talent is a current industry-wide challenge



Legacy infrastructure

Modernizing our systems and future-proofing our core systems for the more flexible and agile digital products being developed at scale



Organizational capacity for change

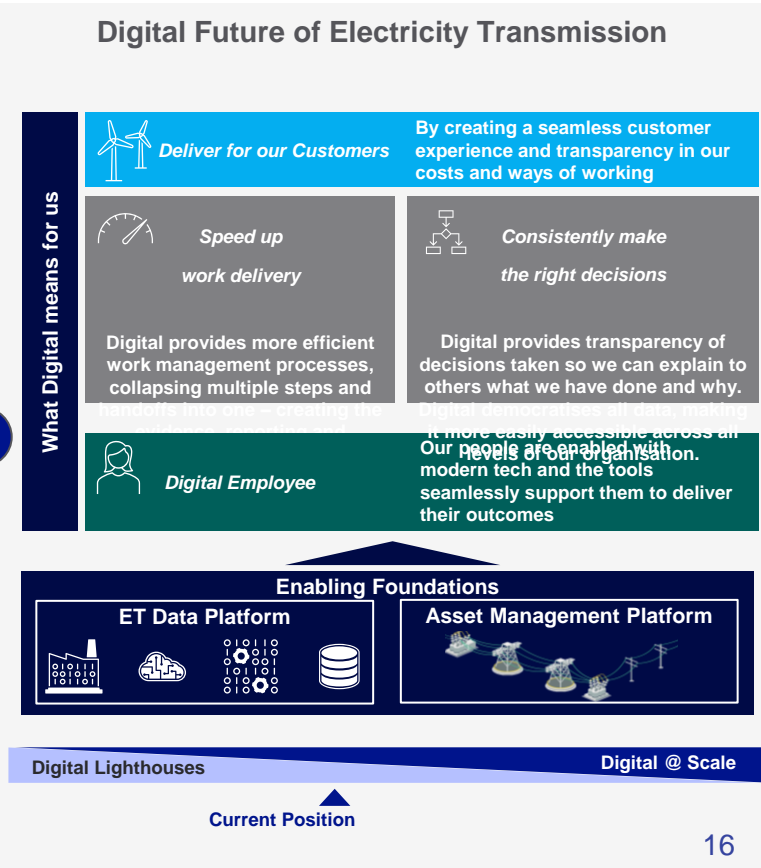
Digital ways of working and digital adoption pace will be dictated by how much change our people, processes, and systems can absorb at any one time

Top Programs By Size of Investment

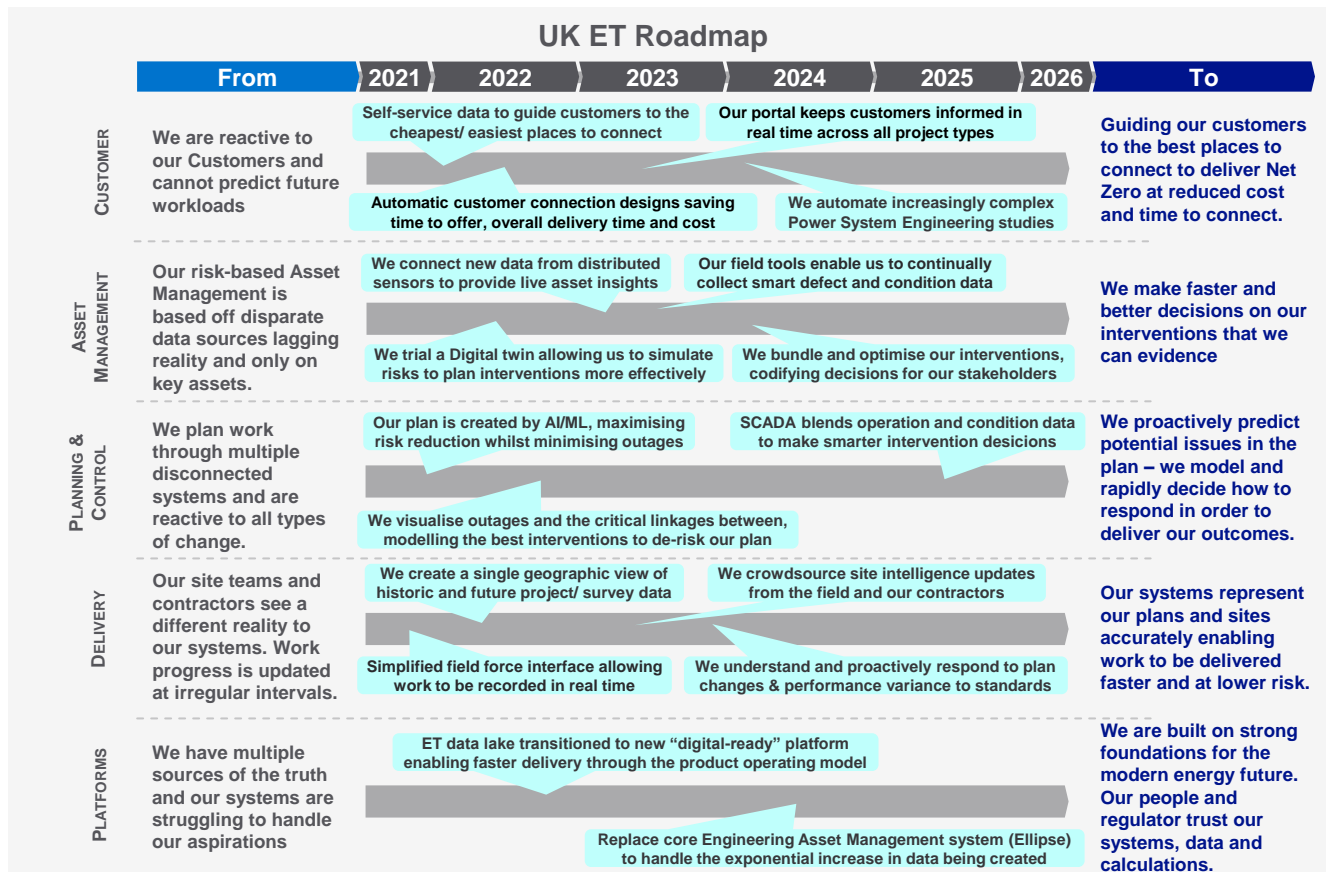
1. Advanced Metering Infrastructure (AMI)
2. Zero Based Redesign (ZBR)
3. Ecosystem Stabilization



Strategy for UK Electricity Transmission



Roadmap for UK Electricity Transmission



Risks & Challenges



Digital Capabilities across IT and ET



Legacy Infrastructure and cost of integration



Transition plan and sustainability of Product Operating Model

Top Programs

By Size of Investment

1. SCADA
2. APM
(Asset Performance Management)
3. Data Lake

Strategy for Global Business Services

Strategy



Frictionless Process

Transforming end-to-end processes to be free of waste, duplication and complexity

Reducing risk and cost to deliver

Strengthening controls



Quality Outcomes

Improving Service Delivery to the business and other users

Delivering 'right first time' results



Driving Performance

Providing accurate, timely insights that enable business decision making

Ensuring effective management of long-term risks

Objectives (FY24)

Transactional activities are **automated**, eliminating manual intervention and maximising efficiency

~1/3 reduction in CFO functional cost vs FY20 baseline

Processes are streamlined and **digitised** wherever possible to enhance the user experience

At least **2nd quartile** outcomes vs FTE and cost benchmarks (BCG / Hackett) for all End to End processes

Systems are fully **integrated with accurate data** to deliver one version of the truth and transparent business insights

The business self-serves for **advanced analytics** and insight

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Digital Future of Business Services



Driving Performance

Cost Transparency

Drive Financial Outcomes



Efficient Execution

Record to Report

Plan to Perform

Source to Pay

Joiners to Leavers



Actively Manage Risk

Controls in the right place

Risk in Business Decisions



Digital Core

Standardize for efficiency



Best of Breed

Applications and services extend ERP



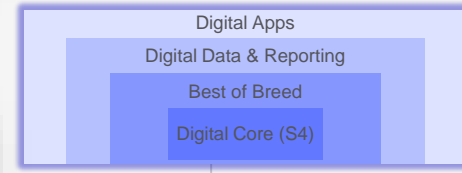
Digital Data & Reporting

Automate and integrate across the enterprise



Digital Apps

Bespoke development for differentiating processes



Frictionless user experience

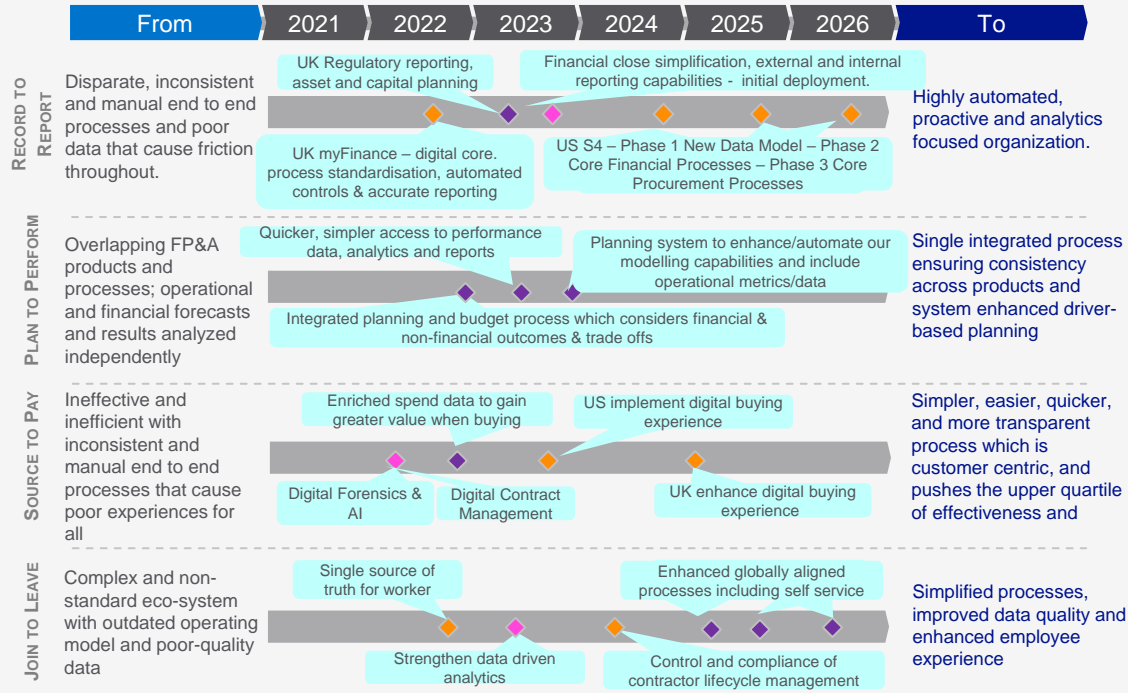
Digital Lighthouses

Digital @ Scale

Current Position

Roadmap for Global Business Services

Global Business Services Roadmap



Innovate & Digitize



Standardize & Stabilize



Integrate for Insights

Risks & Challenges



Systems separation for Transactions may restrict ability for change on core platforms



Risk of running unsupported systems if legacy platforms not upgraded (US SAP sunset 2027)

Top Programs By Size of Investment

1. US S4 Phase I
2. UK MyFinance R3
3. CFO Transformation projects
4. RI & Gas Systems Separation

Digitalizing the Company

Q&A and conversation

Please raise your hand
or use the Chat feature

