# Digitalizing the Company

IT and Digital all-hands

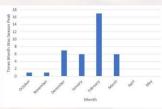
October 28, 2021



# 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 -<u>https://gridhome.nationalgrid.com/news/111277/last-chance-to-get-your-free-flu-vaccination</u>
- New England 2021 Flu Clinics - https://gridhome.nationalgrid.com/documents/sppreview/030 e85be-64d1-4ad6-8dbe-94bca911cb00
- Upstate New York 2021 Flu Clinics -https://gridhome.nationalgrid.com/documents/sppreview/188

   76c49-997b-4565-a5c1-1b29ca6c1fc4
- Downstate New York 2021 Flu Clinics - <a href="https://gridhome.nationalgrid.com/documents/sppreview/183">https://gridhome.nationalgrid.com/documents/sppreview/183</a> <u>dfec4-cdc5-4dc0-a1a4-88611e55faab</u>
- No out-of-pocket cost to visit a local pharmacy for your shot



# Our right to go Digital now

# **People & Capability**

Infrastructure

**Technical Debt &** 

# Cybersecurity, Compliance, & Controls

# **Financials & Delivery**

- 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

- 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)

- Implemented defense-indepth 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

- 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

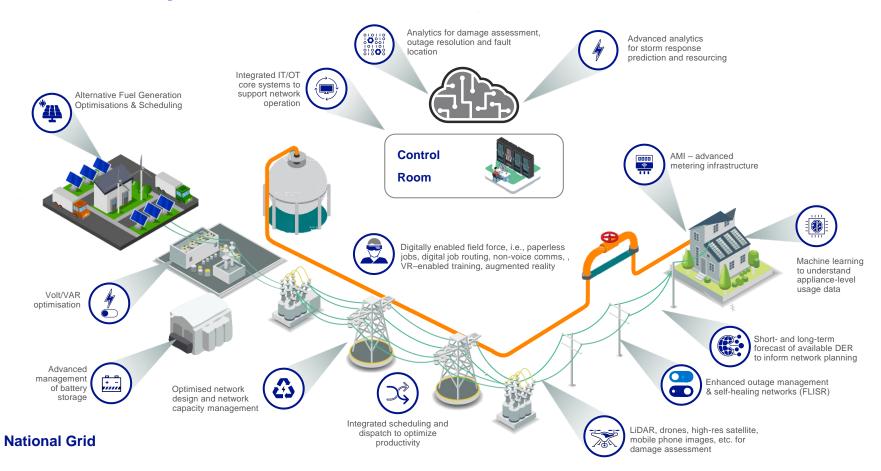


Higher ESG expectations require a focus on sustainability, net zero future and responsible business practices



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



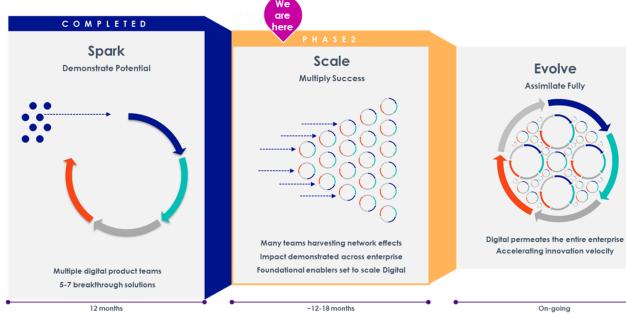








# **Scaling our Digital Capabilities**



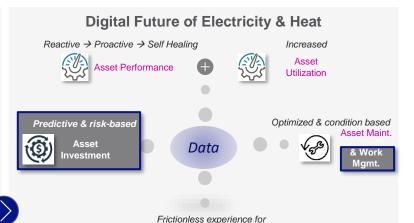
- Trained on agile methodology, product centricity through the creation of 10 'lighthouse' digital products
- Moved from 'Plan, Build, Run' to user-centric digital delivery to accelerate time to value
- Identified data barriers

- Moving from "large monolithic" programs to building a portfolio of products
- Lean + Agile + Digital applied to Gas Business Enablement (GBE), GridMod, AMI and others
- Unleashing data for consumption

- Digital as a way of life
- Leveraging Frontier Technologies
  - Reimagining operations and processes
  - Agile and outcome focused culture
  - Data analytics and insights, AI/ML

# **Jurisdictional Strategy for New York**









**▲** 54%

Green Ratio up from 30.7% (FY21)

\$1.4B

Clean Energy Spend up from \$170M (FY22)



4<sup>th</sup> → 2<sup>nd</sup> q'tile

Customer Satisfaction per JD Power

4<sup>th</sup> → 2<sup>nd</sup> q'tile

Cost Performance relative to peer group



# **Optimized**

Digital operating model from opportunistic

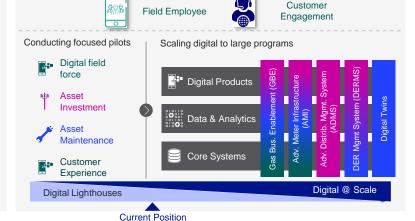
Implemented & High

Pipeline safety maturity from developing & medium



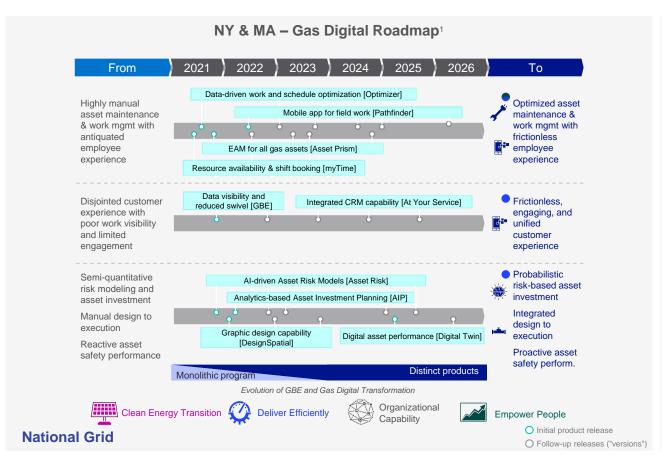
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NG LTI frequency rate



**National Grid** 

# Roadmap for US Gas



## 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

# **Jurisdictional Strategy for Massachusetts**



energy by 2030 MA is leader in US with ambitious goals experience

Drive clean energy transition without compromising reliability

High customer satisfaction based on a frictionless

Lower cost and efficient use of capital to minimize customer bills

enablement

to improve org effectiveness

Improve compliance by adopting risk-based governance framework

**Empower our** people for great performance



High-performance safety culture

that also invests in development and fosters diversity, equity, and inclusion

delivered via integrated workplan management capability. (Optimized & integrated constrained workplan, budget portfolio)

TOTEX Workplan

Optimization

Opex and Capex efficiencies





**Digital Future of Electricity & Heat** 

### Enable DERs

Seamless, unified DER management, Enabling more market solutions to increase asset utilization, thereby reducing cost and speed of energy transition.



Condition-based Automated real-time assessment of current, and prediction of future. asset health and condition resulting in reduced maintenance spending and improved reliability.

**A** 36%

Green Ratio up from 29.4% (FY21)

### \$273M

Clean Energy Spend up from \$63M (FY22)



## 4<sup>th</sup> → 2<sup>nd</sup> q'tile

**Customer Satisfaction** per JD Power

4<sup>th</sup> → 2<sup>nd</sup> q'tile

Cost Performance relative to peer group



# Optimized

Digital operating model from opportunistic

# Implemented & High

Pipeline safety maturity from developing & medium



< 0.10

NG LTI frequency rate

### Frictionless Experience

Creating a frictionless experience for our customers, faster connection of DER and choice to help them reduce their costs. Mobile work dispatch and real time cradle to grave digital workorder management resulting in increased field productivity.





Digital Lighthouses



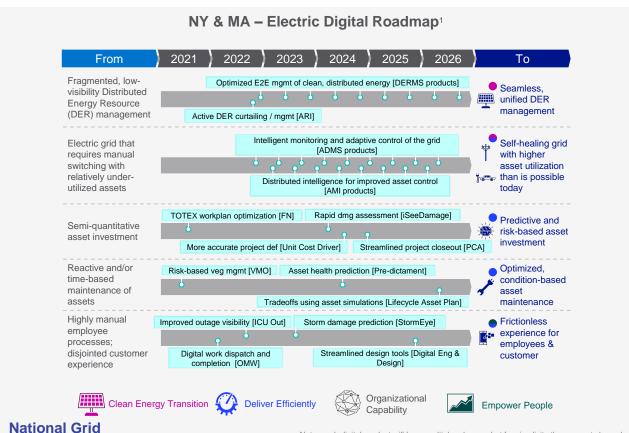


**Current Position** 

**National Grid** 

Objectives (FY 25)

# Roadmap for US Electric



# 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**



energy

choices for our customers

Deliver programs that offer fair and easy access to all

Deliver efficiently for our customers



Customer-first mentality

across our entire org

**COVID** relief as customers recover

Operational excellence

that drives lower bills

Grow our organizational capability



Value-added solutions

unlocked by emerging and frontier tech

**Transform Customer Data** 

to enable smarter. more effective work

**Empower our** people for great performance



Safe-to say culture

fostering innovation & productivity allowing us to realize benefits of **Diversity** through inclusion and belonging

848K tons

(FY24)

Objectives

CO2 saved per annum

Maintain

leading position Utility EE Scorecard

4th → 2nd g'tile

**Customer Satisfaction** per JD Power

 $1.9 \to 1.4$ 

Offered Calls per Customer

80-105 bots

Launched in Customer Ops



33% → 46%

eBill enrollment

20% Deployment **Target** 

AMI enabled meters in NIMO

 $1.46 \rightarrow 3.85$ 

**Data Maturity Assessment** 



Safe-to-Say score via employee engagement survey

> >46% of **New Hires**

From diverse or underrepresented groups



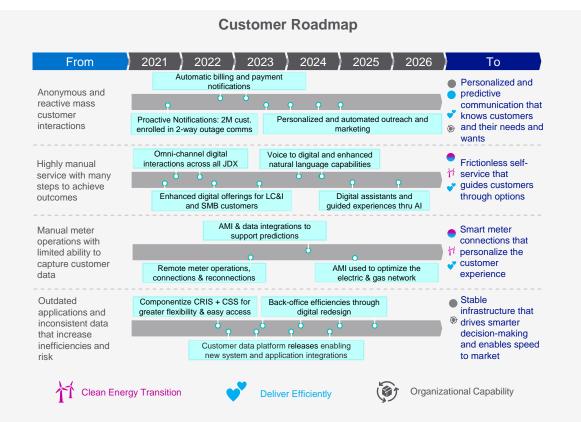
Digital @ Scale



Digital Lighthouses

**National Grid** 

# **Roadmap for Customer**



## **Risks & Challenges**



### Digital talent

Finding the right talent is a current industrywide challenge



### Legacy infrastructure

Modernizing our systems and futureproofing 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

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



### Electricity Transmission

### TO BE AT THE HEART OF A CLEAN, FAIR AND AFFORDABLE ENERGY FUTURE

WHY

There's a huge amount to do to turn **net zero** into reality

2

We have more customers with different needs and expectations



We're operating in a new more stretching regulatory framework



Society expects us to be a responsible business

it's core to what we are and our values



ET needs to be a great place to work that is digital-enabled

# Enable the energy transition for all

- Be the experts on power systems and delivering practical solutions
- Deliver the connections and wider infrastructure needed to make net zero a reality
- Deliver work sustainably and cut our own emissions

Our network will form the backbone of net zero. We're turning the UK's net zero ambitions into reality by building the infrastructure needed to deliver green power across the country, in a fair and affordable way. And we're leading by example by cutting our own emissions.

# Deliver efficiently for our customers

- · Keep everyone safe
- · Maintain reliability
- Deliver our commitments below our allowances: show operational excellence and financial discipline
- Be recognised for our contribution to communities

We can only deliver on our vision for clean energy in the long-term if we get the fundamentals right. We must all be absolutely clear what we've committed to doing, and then find ways to deliver it safely and within our allowances.

# Grow our organisational capability

- Become a digital-enabled business
- Innovate and collaborate, across our teams and with our stakeholders, suppliers and partners
- Build the capability we need for the future

If we're going to thrive, we need to transform – and keep transforming – to keep pace with a changing world. We will innovate & adapt in faster and smarter ways, setting the pace at the cutting edge of engineering and asset management.

# Empower our people for great performance

- Clearer accountability in our structures
- Provide great experiences and careers while growing our diversity, equity and inclusivity
- Focus our culture on our results and our purpose
- Support and improve the health and wellbeing of our colleagues

ET is at the heart of the energy future and our beople are at the heart of ET. We will be a place where people want to work; where we can attract, develop and retain the talent we need for today and the future.

HOW

### Do the right thing

Act safely, inclusively and with integrity Support and care for each other Speak up, challenge and act

### Find a better way

Work as one team to find solutions Embrace learning and new ideas Simplify to what really matters

### Make it happen

Be bold and act with passion and purpose
Take ownership to deliver for customers
Focus on progress over perfection

# **Strategy for UK Electricity Transmission**





### **Digital Future of Electricity Transmission** By creating a seamless customer Deliver for our Customers experience and transparency in our costs and ways of working What Digital means for us Speed up Consistently make the right decisions work delivery Digital provides more efficient Digital provides transparency of decisions taken so we can explain to work management processes. collapsing multiple steps and others what we have done and why. Our people around the tools Digital Employee seamlessly support them to deliver their outcomes

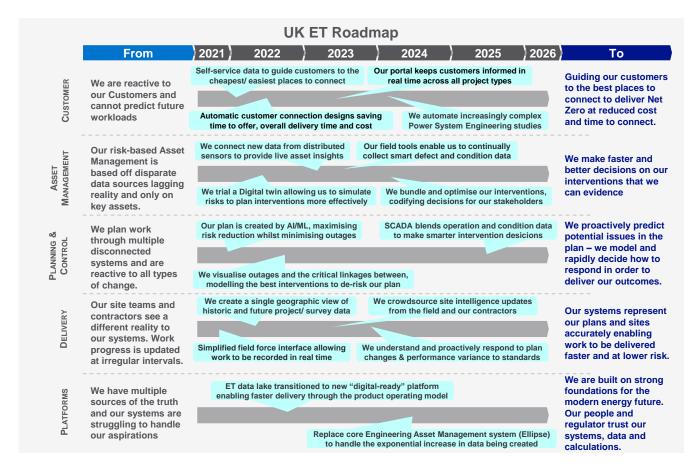




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Digital @ Scale

# 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

Objectives (FY24)

### **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

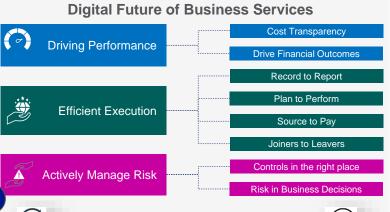
Delivering 'right first time' results



## **Driving Performance**

Providing accurate, timely insights that enable business decision making

Ensuring effective management of long-term risks



**Digital Data** 

& Reporting

Automate and

integrate across the enterprise

χX

**Digital Apps** 

Bespoke

development for

differentiating

processes

Digital @ Scale

### 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



services extend

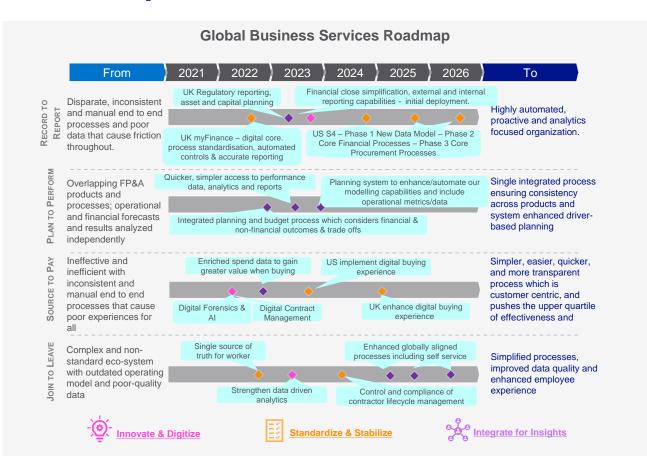
ERP

**Current Position** 

Digital Lighthouses

### **National Grid**

# Roadmap for Global Business Services



# 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

- 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

