

# Welcome to the ESO RIIO-2 webinar

- Thank you for joining us! You will be joined in listen only mode.
- Please do not unmute yourself or turn your camera on
- You can ask questions via the chat function
- The WebEx details are:
  - [0800-376-8336](tel:08003768336) or [020-7108-6317](tel:02071086317)
  - Meeting number (access code): [593 800 274](tel:593800274)

**Please note** we will be recording this webinar

For more information on the ESO's approach to RIIO-2 please visit

<https://www.nationalgrideso.com/about-us/business-plans/future-planning-2021-onwards/>

# ESO RIIO-2 Webinar

21<sup>st</sup> May



# Agenda

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- 1 Introduction
  - 2 Summary of feedback on our RIIO-2 Ambition Consultation
  - 3 System Operations
  - 4 IT Strategy
  - 5 Innovation
  - 6 Next Steps
-

# How you can get involved today



Throughout the presentation please feel free to provide feedback or ask questions via the chat function and we will pause at points to respond

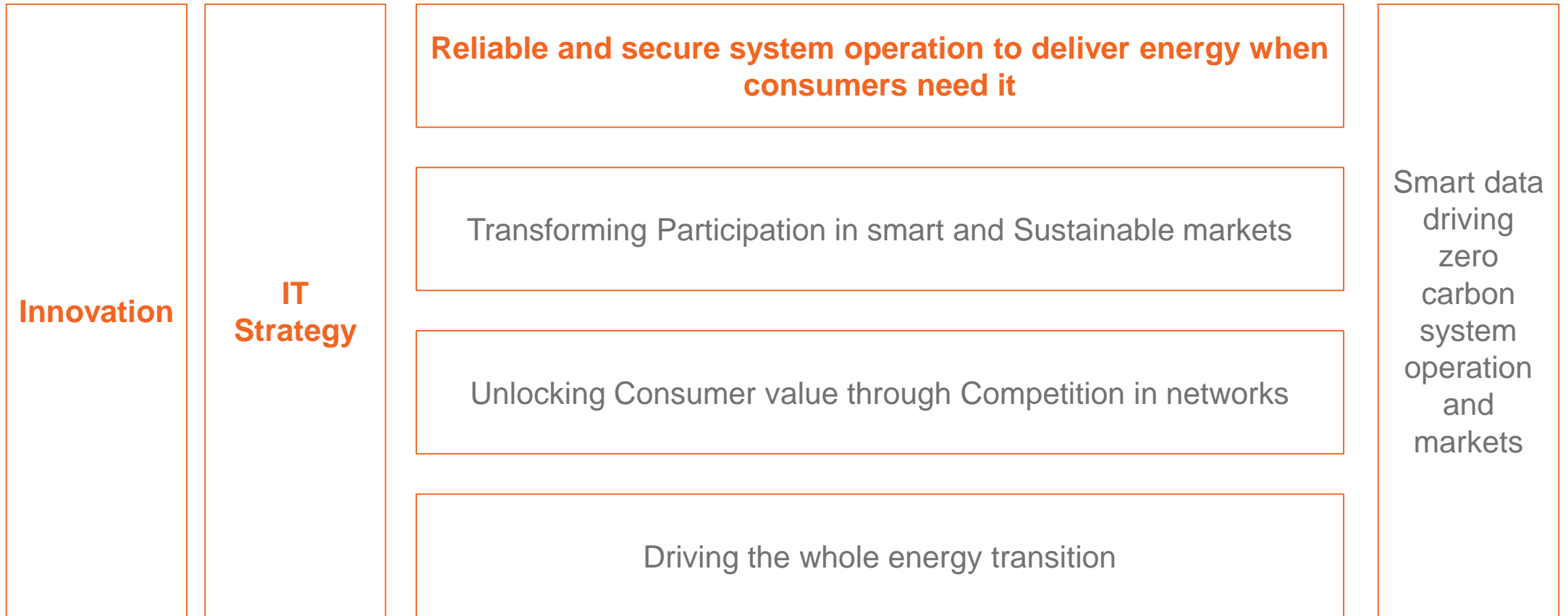


We hope to have a question and answer session at the end of the webinar. Please press the 'hand' icon next to your name and we will unmute your line.

# RIIO-2 Timeline



# Our RIIO-2 Ambition covers everything we do



# Summary of feedback on our RIIO-2 Ambition Consultation

Joseph Donohoe



# How have we engaged during the consultation period?

11

- Consultation responses

60+

- Organisations engaged at dedicated ESO RIIO-2 workshops

100+

- Stakeholders engaged on ESO RIIO-2 at other forums



# What did we hear?

Strong support for ESO ambitions and activities but we were reminded not to forget the basics

Further detail and clarity on our proposals is required

We need to be clear about what we have committed to in the 2019-21 Forward Plan versus what is proposed in our RII0-2 ambition

People would like to see greater evidence of coordination with wider industry change activities including a joined up approach across Transmission and Distribution

Mixed views on some activities such as the wholesale and balancing market review

# Reliable and secure system operation

David Bowman

# Our ambitions for system operation

**In our RIIO-2 ambition document, we set out two ambitions for system operation:**

1. We will transform the operation of the electricity system so that, by 2025, we will be able to operate a carbon free system.
2. Our selection and utilisation of resources will be transparent and based on driving consumer value – optimising across generation, storage, demand and other technologies (be they large scale, distributed or embedded) on an equal basis.

**To achieve our ambition, we will focus on three areas:**

1. Control Centre Architecture and Systems
2. People and Data Capability
3. Restoration



# Control Centre Architecture and Systems

## Enhance our control room infrastructure

- New control system capabilities will be designed and built in an agile and modular fashion offline, separately from the current main control room with the support of industry under a cross-industry design group.

## Expanding our balancing capability

- Developing system capability to dispatch thousands of market players to ensure the lowest balancing costs for consumers

## Transforming our network control

- Developing tools to provide confidence and accuracy to support increased optimisation of actions across and increasing number of networks and parties

# People and Data Capability

## **New simulation and training capability**

- Introduce an academy to develop the skills and capabilities we need to operate the system of the future, including data science and power system engineering
- Develop new training simulators to mirror the live control environment and allow for lessons learnt and “what-if” scenario planning

## **Understand human factors**

- Adopting more flexible working contracts to ensure the wellbeing and resilience of staff as the complexities of system operation increase

# Restoration

## New restoration standards

- We will deliver against the new standard for system restoration, as set by government. We expect this to be implemented in 2021/22.

## Build on our innovation project

- Our Network Innovation Competition, Black Start from Distributed Energy Resources, will conclude in 2022.
- Following the NIC project we anticipate having to implement new tools and communications equipment to ensure we can test and, if necessary, implement our restoration procedures.

## Future restoration in a high-electric world

- We will set out new requirements to meet system restoration in a world with high electrification of heat and transport

# Information Technology

Gary White



# IT is fundamental to meeting our ambitions

## A more digitised ESO

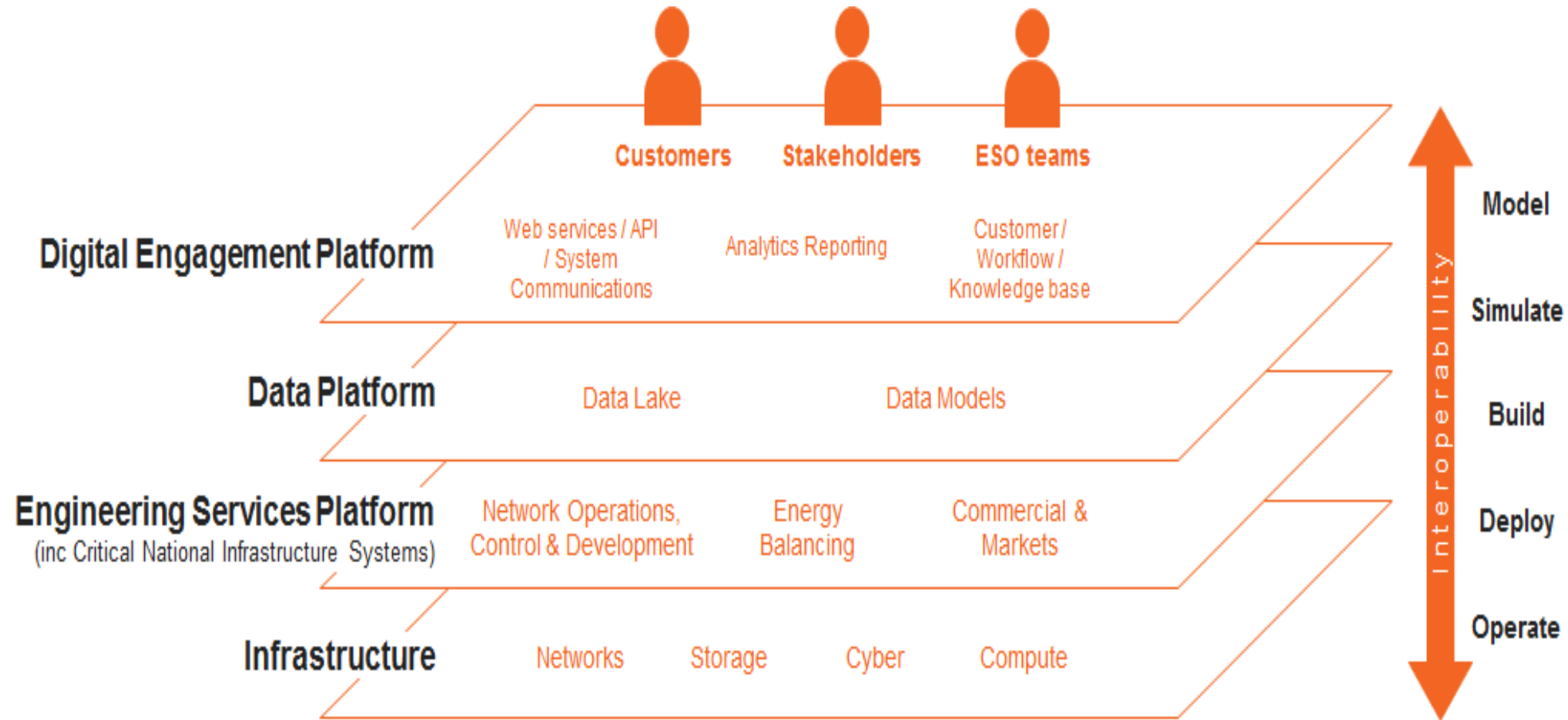
- As the industry becomes increasingly digitised we must invest in our IT infrastructure
- This will also enable us to:
  - Meet our ambitions; and
  - Better meet the needs of our stakeholders.

## Responding to stakeholder feedback

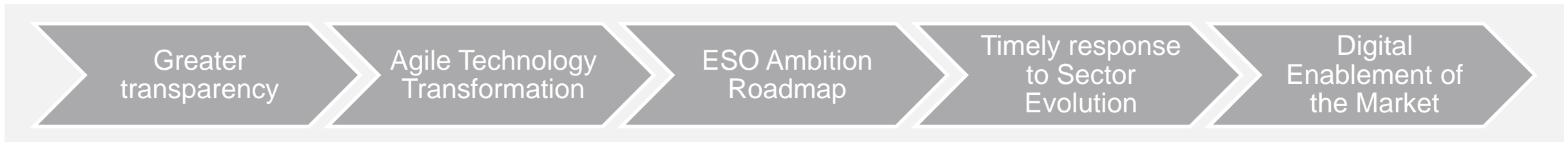
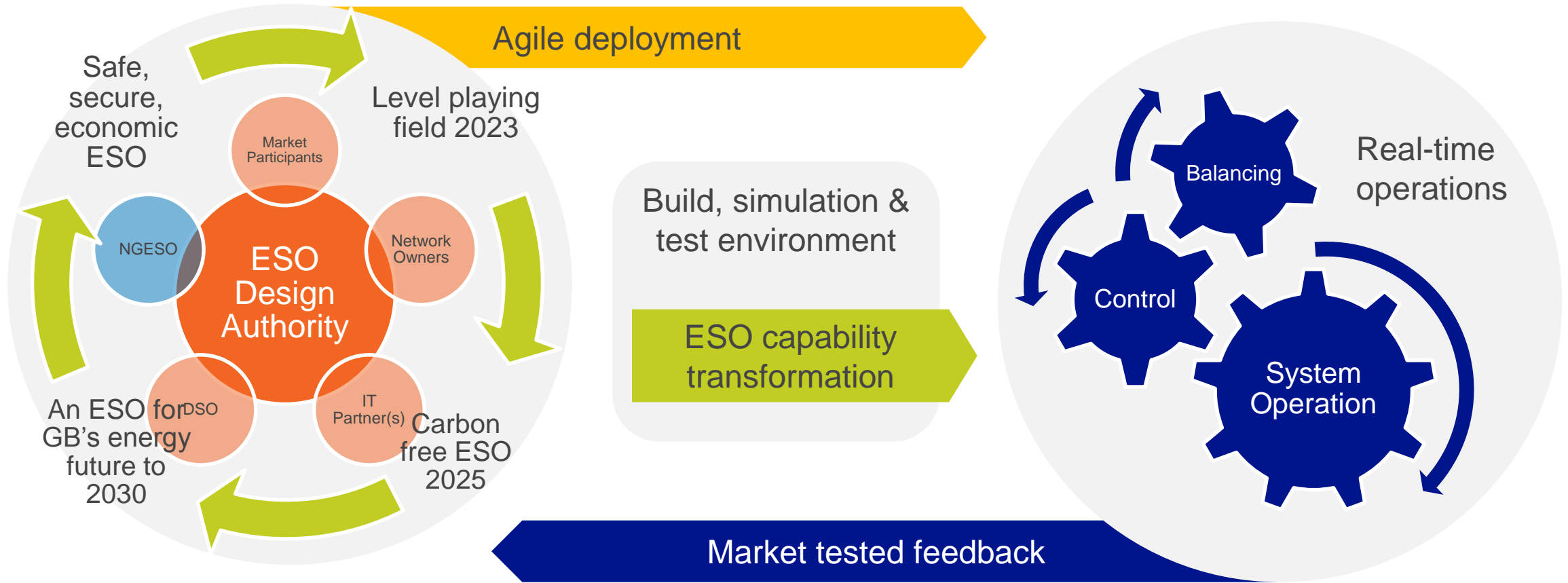
- Through our RIIO-2 engagement programme we have heard that you:
  - Want us to avoid 'big bang' IT projects
  - Want us to learn from the EBS project
  - Prefer a modular implementation approach e.g. PAS
  - Want transparency around delivery
  - Want to understand the decision making that sits behind a system



# Proposed IT architecture



# Engagement in the delivery process



# Stakeholder engagement approach



## RIIO stakeholder workshop

- All stakeholder groups
- Targeted round table discussion on all of our RIIO-2 proposals



## Benchmarking & delivery partners

- Consulting our delivery partners and industry benchmark organisations
- .Gartner; IT Partners (IBM; Cap Gemini)
- External Organisations – Transport For London



## Electricity operational forum

- Suppliers, generators, service providers and networks with a focus on system operation and balancing



## Bilateral meetings

- Network companies / companies with interfacing systems
- Discuss approaches to IT implementation and interfacing systems to optimise end user experience



## IS change forum

- Round table discussions with stakeholders who work closely with and are impacted by ESO IT systems

Are we taking the right approach to benchmarking? Who else should we talk to?

# Innovation Process

Joshua Visser



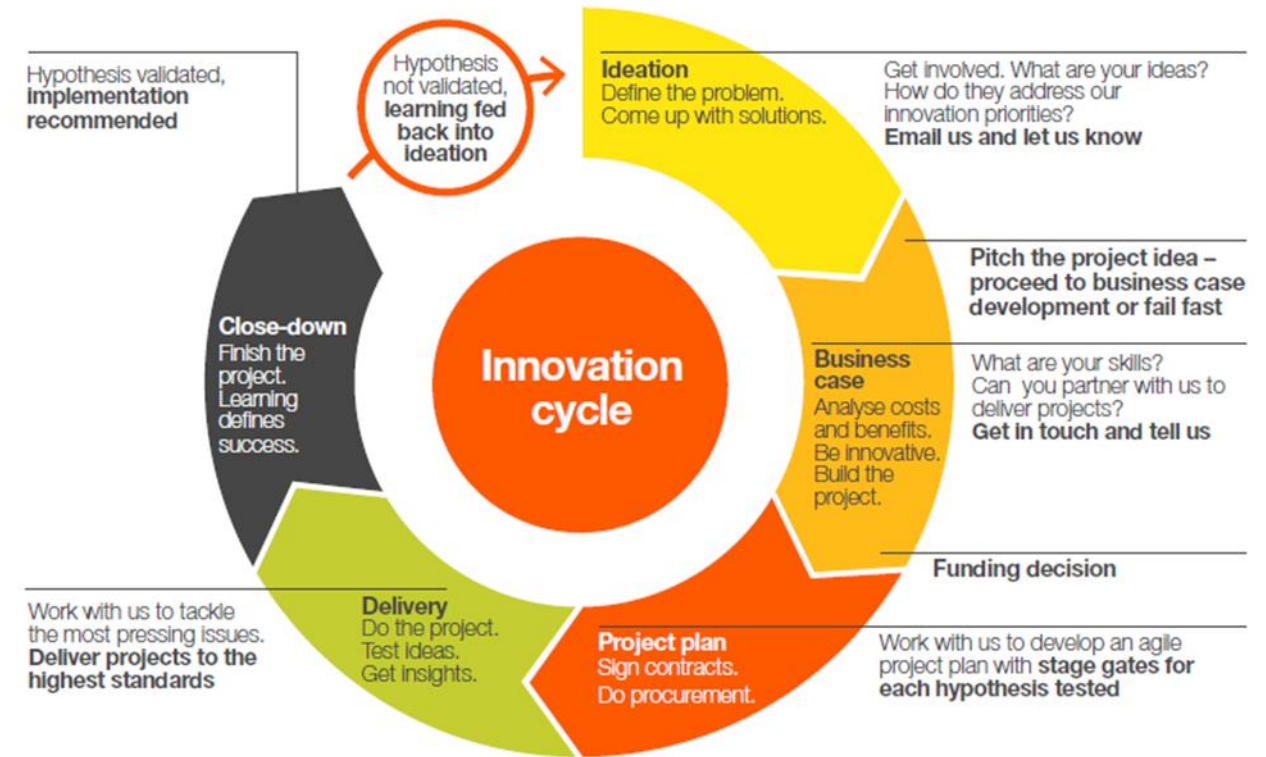
# What are we talking about?

1. Introduction to the ESO Innovation Function
2. Response to Stakeholder Feedback
3. Proposal for Innovation Function in RII02
  - Combined Funding
  - Larger Team Structure

# Introduction to the Innovation Function

## Current Model

- **Central Innovation Team**
  - 7 FTE: 1 Head, 4 Managers, 2 Analysts
  - Innovation Strategy, Funding, Governance
  - Dual Fuel Responsibilities (Elect. SO & Gas SO)
- **Sources of Funding**
  - NIA: Approx. £3.2m each year to the ESO
  - NIC: £70m Competitive Pot (awarded by Ofgem)
  - Other funding (e.g. Innovate UK, NERC)



# Response to Stakeholder Feedback

What have we heard	How we have responded
<b>You would like for us to be more visible</b>	Increasing external communications through multiple channels (e.g. twitter, website, animations), more engagement as a part of our strategy refresh process <a href="https://www.nationalgrideso.com/innovation">https://www.nationalgrideso.com/innovation</a>
<b>You want us to continually improve through BAU, as well as look for the big 'I' innovations</b>	Combination funding model proposed for RII02; through an Innovation Stimulus (i.e. NIA) and with more BAU Innovation built into the Business Plan
<b>You believe we should be helping to lead collaboration across industry</b>	Events planned to co-generate proposals with industry SMEs. Our strategy now includes <i>Whole System</i> priorities; ensuring focus between distribution and transmission interfaces and across vectors
<b>Innovation stimulus (NIA) should be retained for the ESO but unsure how this should be funded</b>	More discussion needed with Ofgem to understand design of a new stimulus and a best way to fund this (e.g. calculated as a % of BSUoS)

# Proposals for Innovation Function in RII02

## Key Points from Ofgem Consultation

- More Innovation to be done within business as usual (BAU)
- Need justification for retaining an Innovation Stimulus (i.e. NIA)
- Recognise the unique nature of ESO Innovation (compared with other network licensees)
- Must ensure maximum consumer benefits are being delivered from any Innovation stimulus

### Proposal

#### Combined Funding Model

- Lower-risk innovation, closer to implementation, done as BAU
- Higher-risk, more disruptive innovation better suited to NIA-style stimulus

### Proposal

#### Larger Team Structure

- Retain a small central team to coordinate Innovation Strategy and governance
- Additional 'Innovation Leads' embedded within each ESO business area



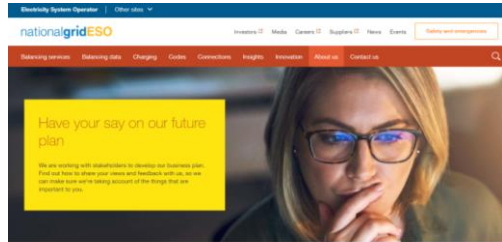
# Next Steps



# Q & A

Any questions?

# How to get involved



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