

The Voice of the Networks

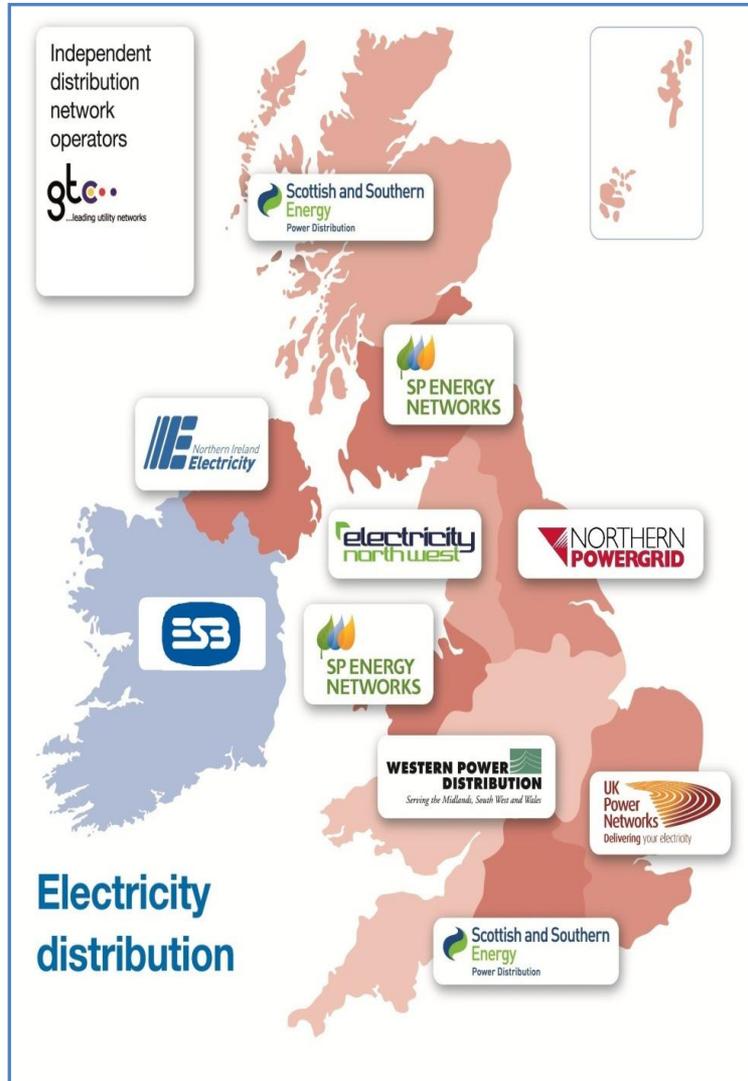
Energy Networks Association

Open Networks Project

Randolph Brazier
Head of Innovation
1st December 2017



ENA Electricity Members



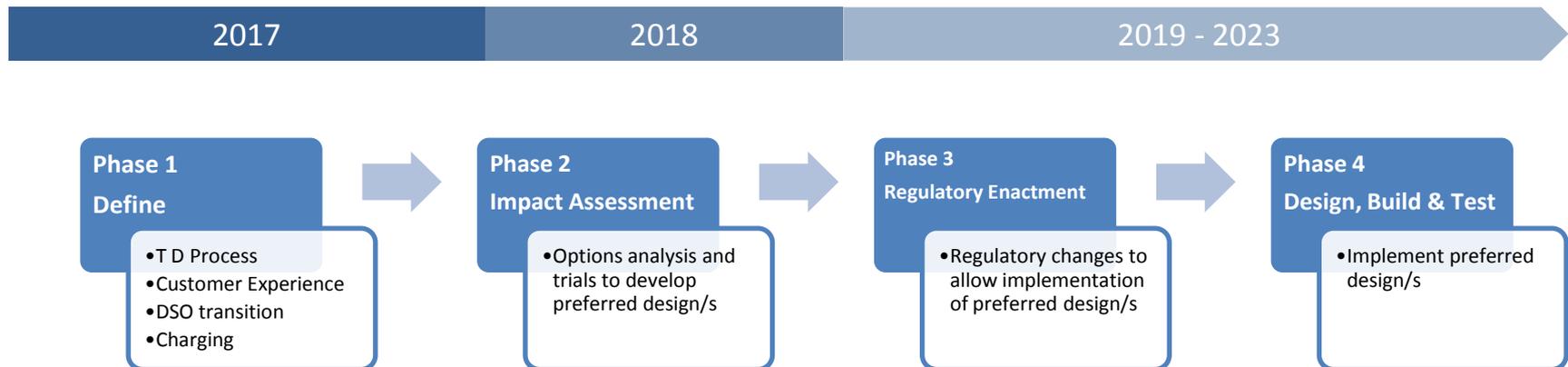
Introduction: ENA Open Networks Project

- Launched in January 2017, the project will lay the foundations of a smart, flexible energy grid in the UK
- It will enable the UK and Ireland's electricity networks to:
 - Address the challenges caused by the continued uptake of distributed generation, as well as the electrification of heat and transport
 - Move from their traditional role of simply delivering electricity, to one where they are a platform for new smart energy technologies - the 'DNO to DSO transition'
- Network operators must meet challenges whilst:
 - Continuing to deliver safe and secure operation of distribution networks
 - Ensuring efficient and timely access to the network for customer
 - Providing value for money
- The Open Networks Project is taking a whole energy system approach, across all networks and vectors, which has the potential for strong benefits and cost savings

Objectives & Timeline

The objectives of the Open Networks Project for the first phase of work in 2017 are to:

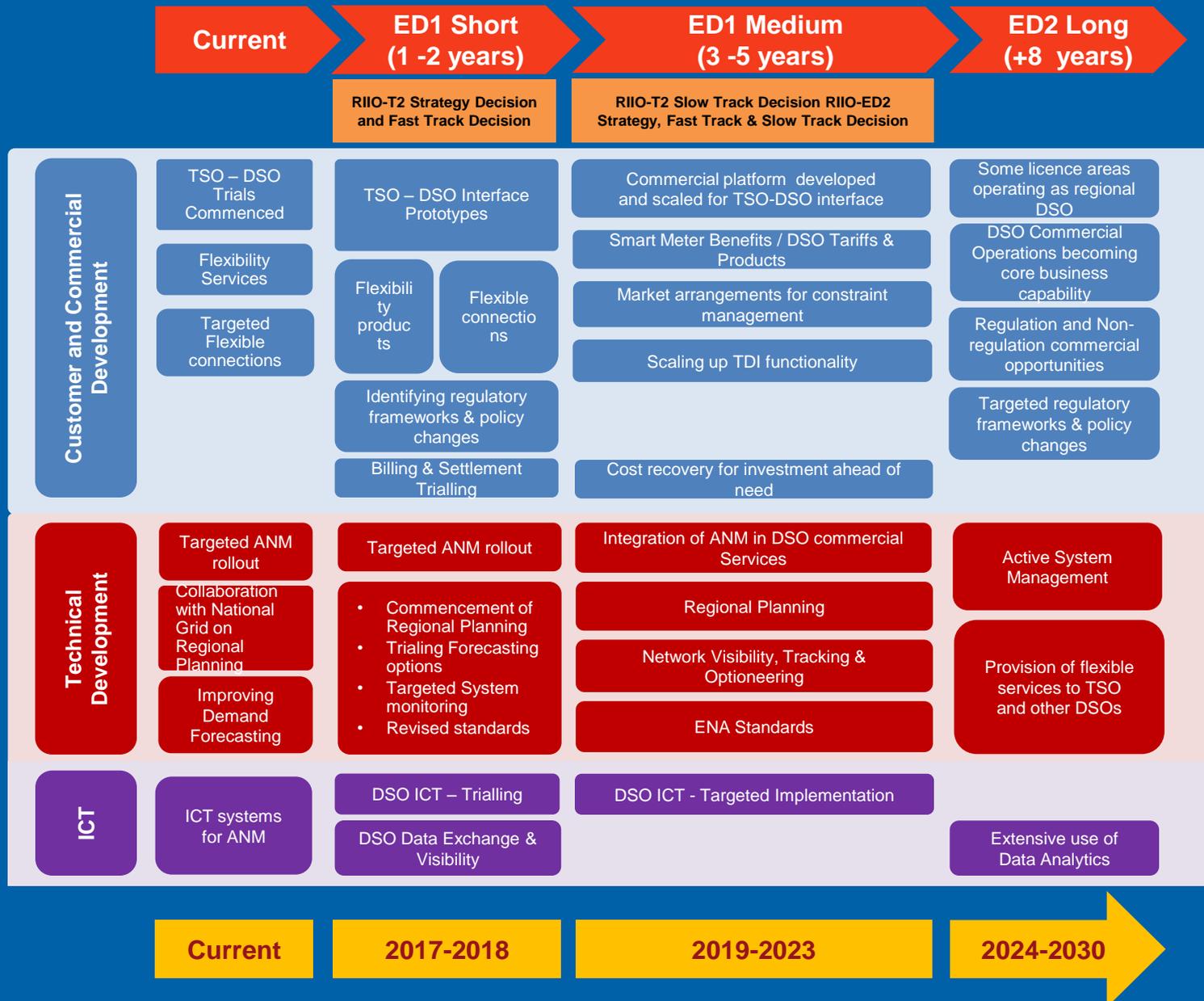
1. Develop improved **T-D processes** around connections, planning, shared TSO/DSO services and operation
2. Assess the gaps between the **experience our customers** currently receive and what they would like and identify any further changes to close the gaps
3. Develop a more detailed view of the required **transition from DNO to DSO** including the impacts on existing organisation capability
4. Consider the **charging** requirements of enduring transmission/distribution systems



What is the DSO?

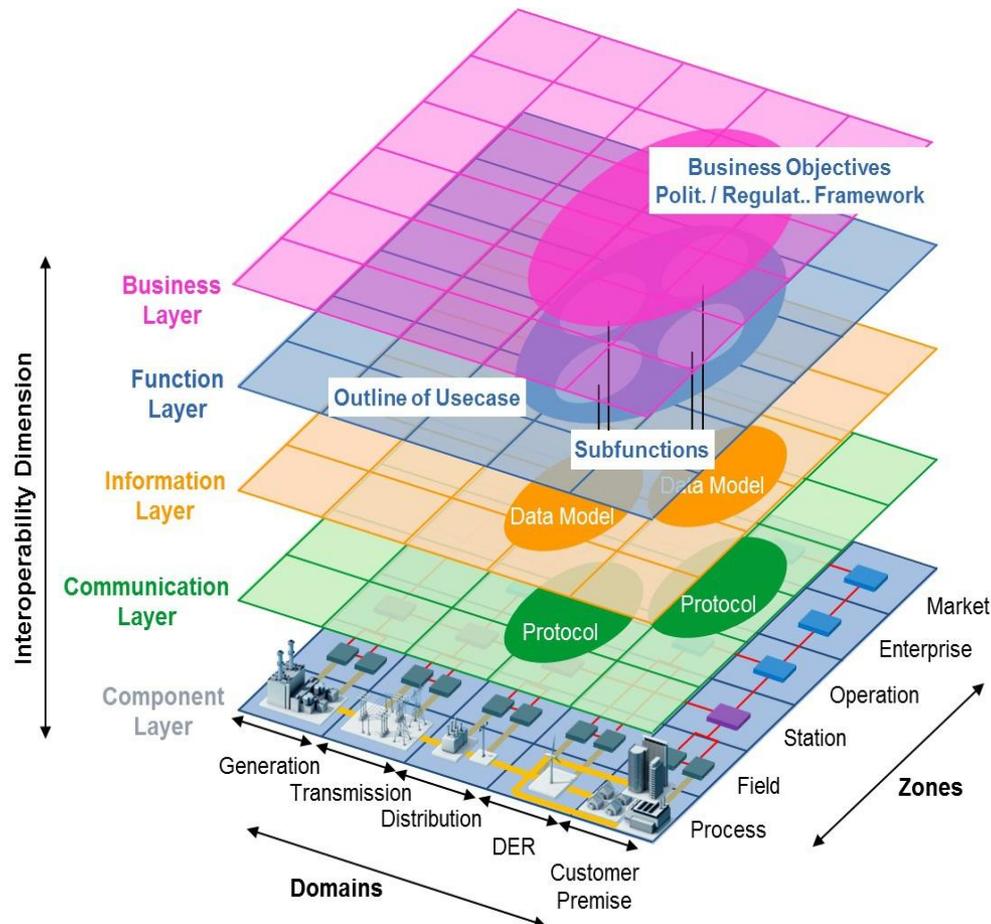
- The DSO will be a 'neutral market facilitator', i.e. it will enable a range of sources to participate in new markets and provide flexibility services:
 - This will open up a range of opportunities, including increased investment, new businesses and job creation
 - Increase connection of low carbon and innovative technologies, helping the UK meet its carbon targets
 - Deliver low cost energy to customers
 - Network Operators will assess the most cost effective options for investment; flexibility services from the market alongside traditional investment

DSO Roadmap to 2030 (Tier 1)

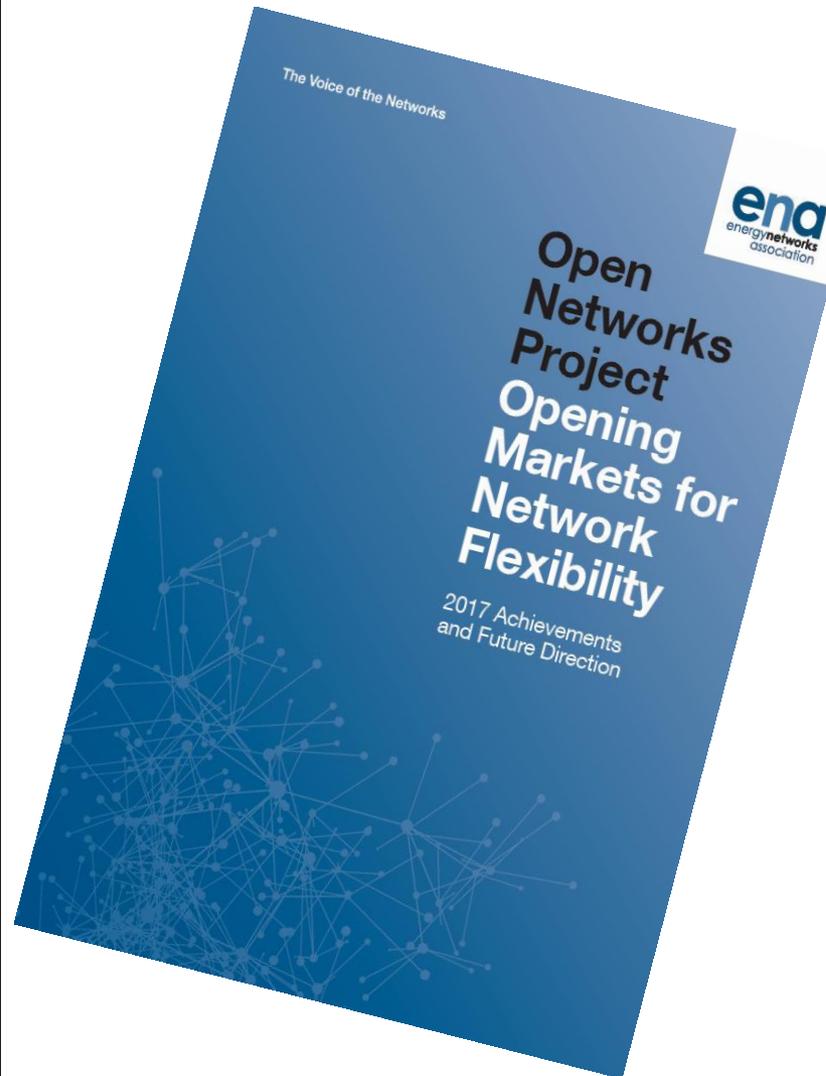


What does the DSO look like?

- We are capturing these through using the **Smart Grid Architecture Model (SGAM)**



- Ofgem & BEIS Smart System and Flexibility Plan
 - Open Networks will be the platform for addressing network challenges
 - Report for end 2017 from ENA Open Networks Project
- FPSA: We are working closely with the team and have analysed the overlap with the FPSA functions
- Trials: we will be working with industry to run a range of DSO trials – Ofgem, Energy Systems Catapult, Innovate UK, Industrial Strategy Challenge Fund, etc
- Electricity Network Innovation Strategy
 - Consultation out now



End of Year Report “Opening Markets for Network Flexibility” to be released on 6th December at the LCNI Conference:

- Includes summary of 2017 achievements
- Highlights next stages of the project

Phase 2 Scope out for public consultation in January 2018:

- Complete SGAMs for DSO Worlds
- Define and implement change for short-term improvements
- Undertake impact assessment on Phase 1 options identified in Phase 1
- Undertake trials to test models

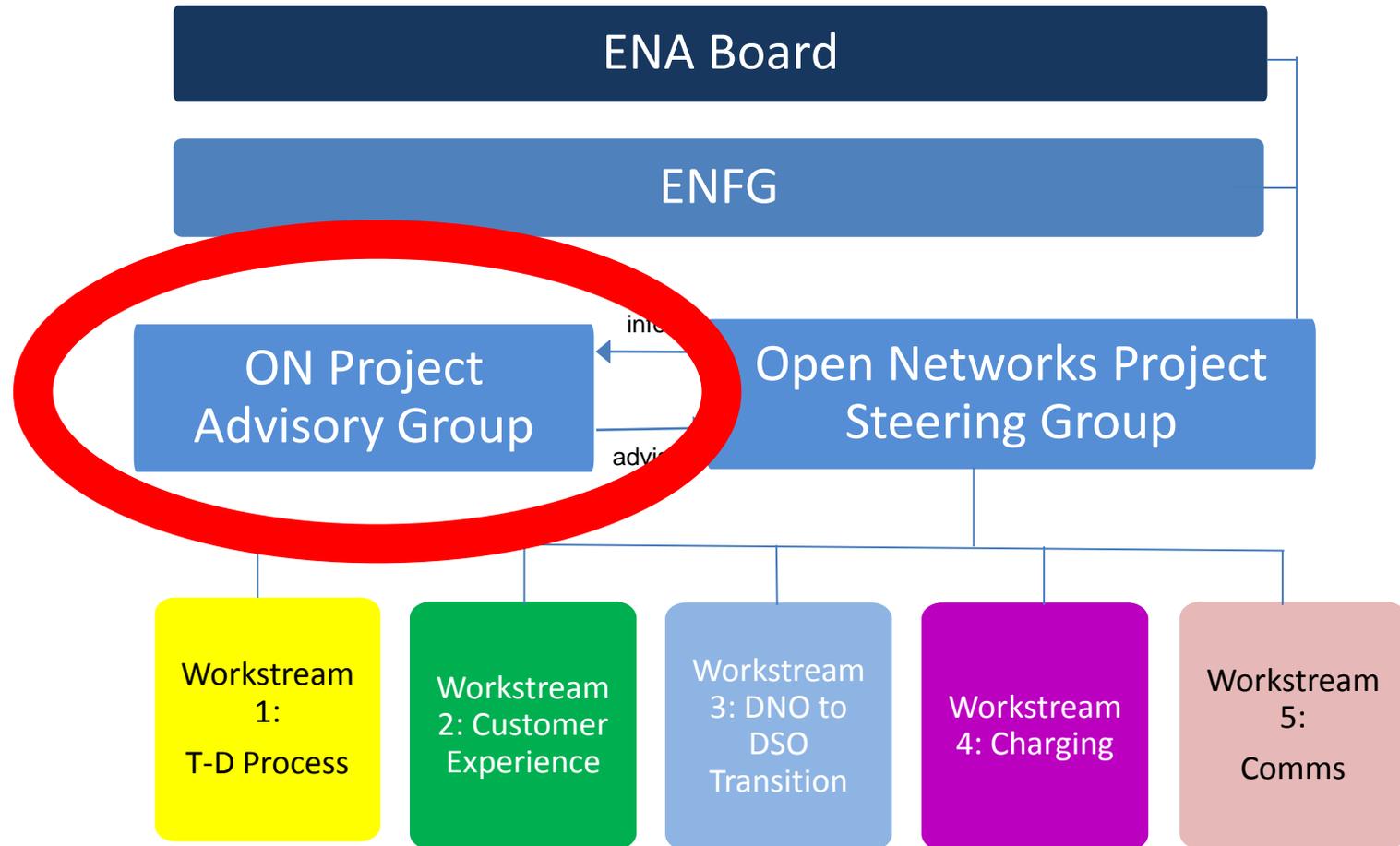
We want your input!



How to get involved?

- Join our mailing list!
 - opennetworks@energynetworks.org
- All outputs posted online
- We welcome feedback and your input

How to get involved?



- There are some challenges ahead if we want to meet our carbon targets while providing a safe and secure energy grid at an affordable price
- However by enabling flexible networks we can address these and open up new markets for low carbon and innovative technologies
- Our Members are working together and dedicated to making this work
- We are 'open' and cannot do this without the rest of the industry; we want your help!

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