

Energy Networks Association

GEODE Spring Seminar 2018:

Introduction to the Open Networks Project

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Brussels
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Introduction to ENA

- 29 million electricity customers
- 21.5 million gas customers

Electricity Distribution



Electricity Transmission



Gas Distribution



Gas Transmission



- 180,000 miles of gas network
- 519,304 miles of electricity network

Introduction – Delivering a Smart Grid



ENA's Open Networks Project is a major energy industry initiative that will transform the way that both local Distribution Networks and national Transmission Networks will operate and work for customers.



The Open Networks Project will help customers connect and realise value; as well as reducing cost for consumers through more cost effective planning

ofgem

Making a positive difference
for energy consumers



HM Government

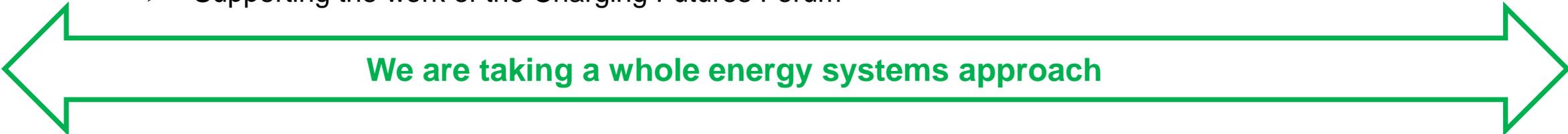
The Open Networks Project is a key initiative to deliver Government policy set out in the Ofgem and BEIS Smart Systems and Flexibility Plan, the Government's Industrial Strategy and the Clean Growth Plan.

Short Animation that can be found at: <https://www.youtube.com/watch?v=8GxeWspmmBI>

Project Scope & Evolution

The objectives of the Open Networks Project 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 within the context of 'level playing field' and common T & D approach
 - Including strong interaction with the Advisory Group
3. Develop a more detailed view of the required **transition from DNO to DSO** including the impacts on existing organisation capability
 - Including looking at 5 different market models
4. Consider the **charging** requirements of enduring electricity transmission/distribution systems
 - Supporting the work of the Charging Futures Forum



We are taking a whole energy systems approach

Definition of a DSO

“

A Distribution Operator (DSO) securely operates and develops an active distribution system comprising networks, demand, generation and other flexible distributed energy resources (DER).

As a neutral facilitator of an open and accessible market, it will enable competitive access to markets and the optimal use of DER on distribution networks to deliver security, sustainability and affordability in the support of whole system optimisation.

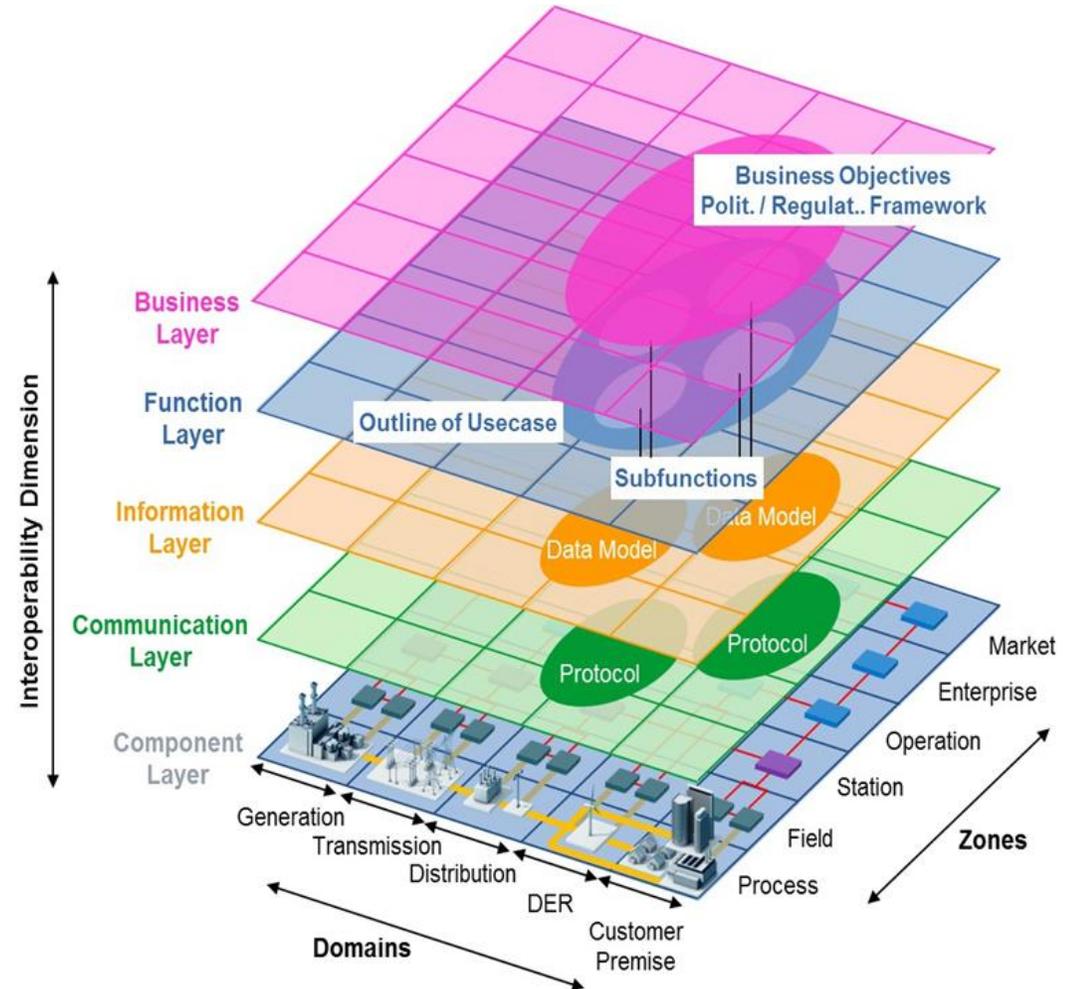
A DSO enable customers to be both producers and consumers; enabling customer access, customer choice and great customer service.

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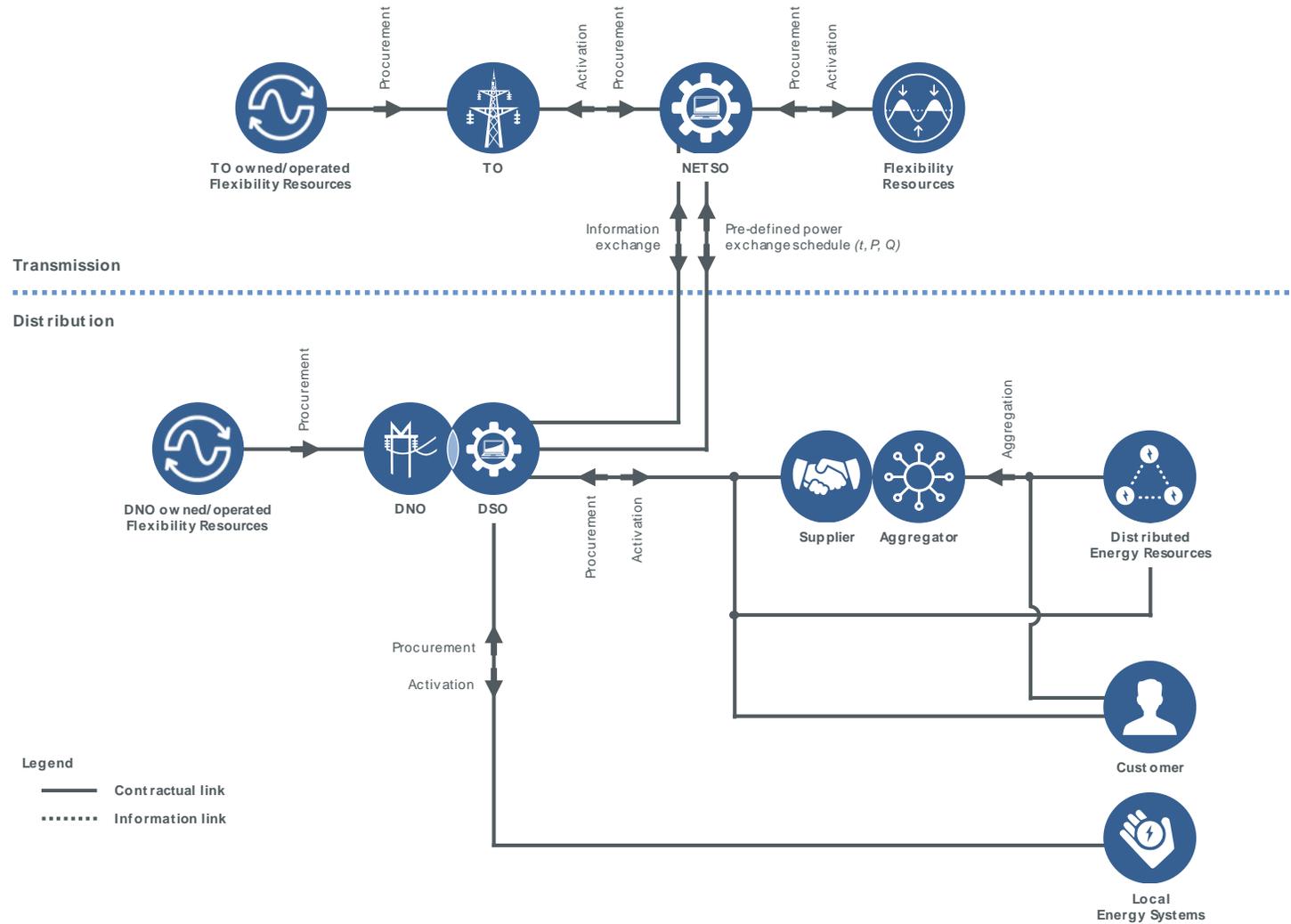
- It is not an exhaustive, or closed definition, but will evolve over time as the knowledge of the networks increases and the industry develops.

What does the DSO look like?

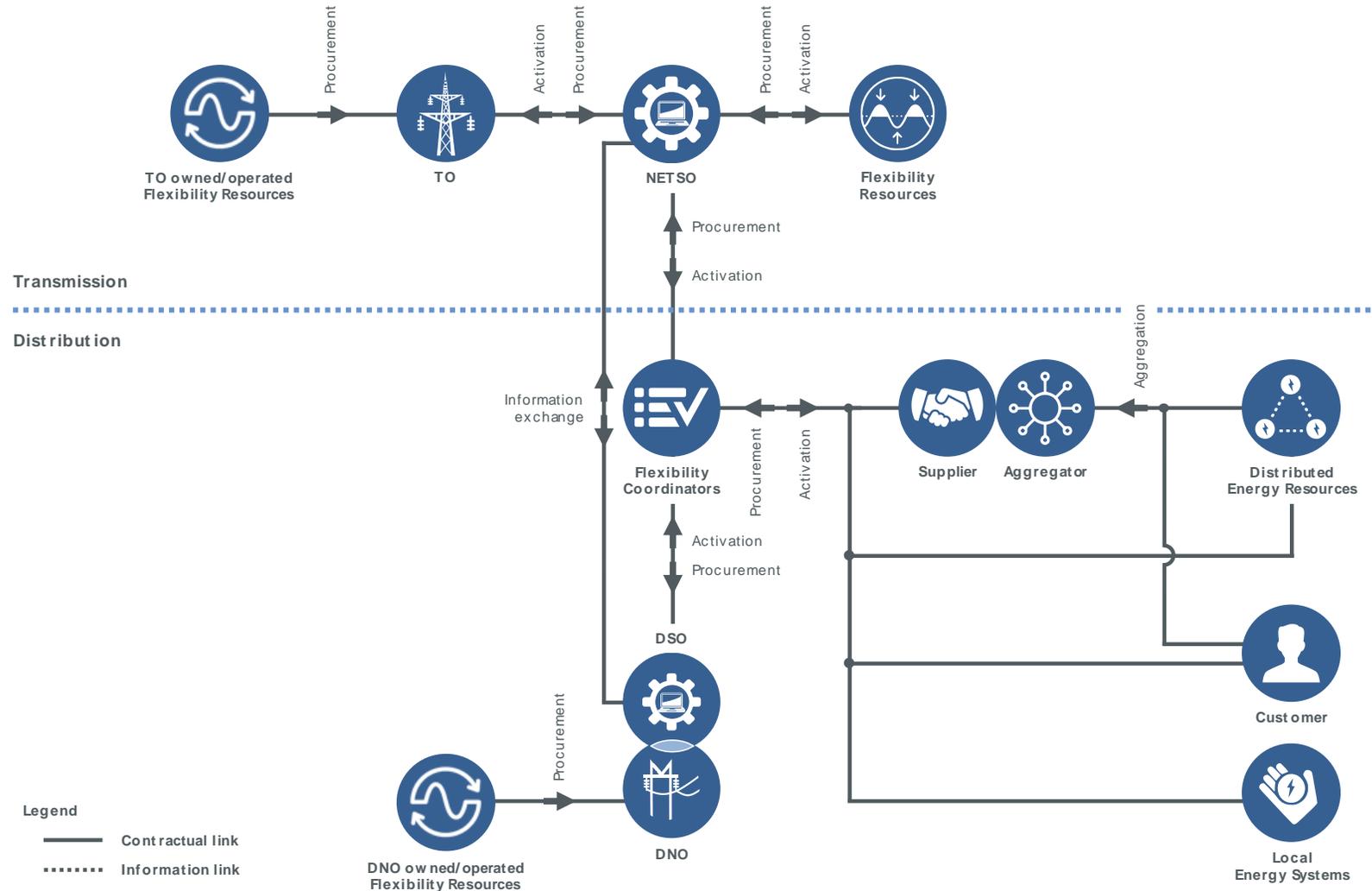
- We are capturing these through using the **Smart Grid Architecture Model (SGAM)**
- Modelling 5 variants or 'worlds'
- Not saying these are the answer
- Gives us some potential models to understand better and trial



DSO World A: 'DSO Co-ordinates'



DSO World E: 'Flexibility Co-ordinators'



Modelling DSO Market Model Options

1. Finish modelling 5 potential DSO Worlds:
 - *DSO Co-ordinates*
 - *Joint Procurement*
 - *Price Signal driven*
 - *NETSO Co-ordinated*
 - *Flexibility Co-ordinators*
2. *Dissemination sessions and full public consultation (July)*
3. Comprehensive independent 'Impact Analysis' on 5 models looking at; cost, customer satisfaction, complexity, sustainability, regulatory compliance, network performance, etc (Q3-Q4)
 - This will provide an evidence base to Ofgem and BEIS for policy and direction going forward
4. Implementation plan for 'low hanging fruit' i.e. common aspects across models (Q3)

Stakeholder Input is Critical

- We have an Advisory Group with over 45 Industry Experts
- In 2018, there is a greater emphasis on Wider Stakeholder Community engagement
- Join our mailing list!
 - opennetworks@energynetworks.org
- All outputs and consultations posted online:
 - www.energynetworks.org/electricity/futures/open-networks-project/open-networks-project-overview/
- 2017 End of Year Report can be found here:
 - <http://www.energynetworks.org/electricity/futures/open-networks-project/eoy-report-2017.html>
- We welcome your feedback and input



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Thank you!

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