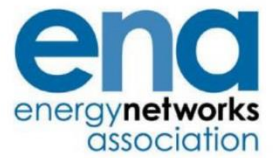


**The Voice of the Networks**



# **Energy Networks Association**

## **Open Networks**

**Least Regrets Analysis Update  
(Q1 2019)**

Restriction: Published

# Document Control

## Version Control

Version	Issue Date	Author	Comments
0	10 Jan 19	ENA	Early draft
1	15 Jan 19	ENA	Comments updated to publish

# 1 Introduction and Context

## 1.1 Background

In 2018, the Open Networks Project undertook an assessment of the five Future Worlds to identify areas of common functionality between the worlds that could present least regret opportunities for early development and implementation as part of the transition to a smart flexible energy system.

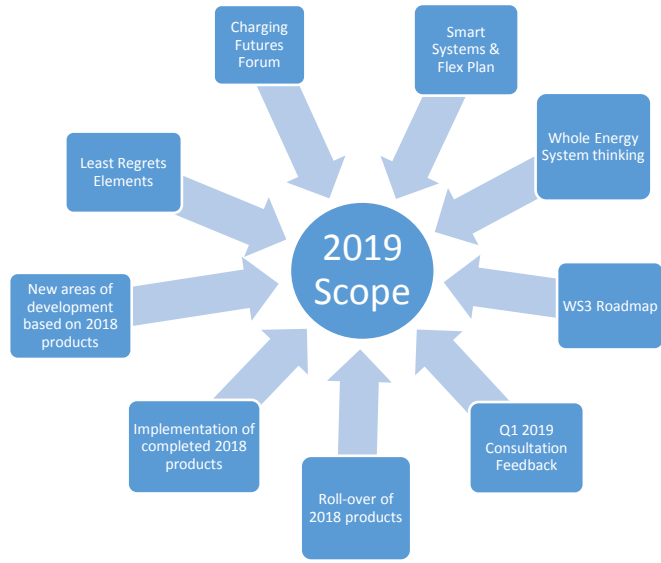
Through stakeholder workshops, the project assessed these least regret areas of work and undertook gap analysis to map out the areas of work that are being progressed by Open Networks and other industry initiatives and highlight those that have not been picked up to inform potential areas of development under the Open Networks project in the future. This mapping and analysis can be found [here](#).

This analysis was reviewed with the Open Networks Advisory Group on 26<sup>th</sup> September 2018 and the group was asked to identify areas that are higher priority for development and implementation. The group indicated that greater visibility of network constraints and potential reinforcements and consistency in how data is presented are key areas for them. This feedback can be found [here](#).

## 1.2 Purpose of this document & Context

The purpose of this document is to provide an update on the status of the potential areas of development that were identified through the least regrets analysis last year and in particular, highlight areas that have been scoped for development in 2019 and areas that have been de-prioritised or deferred for delivery this year.

In developing the scope for 2019, we have considered a number of areas of work including the least regrets analysis and feedback that we have received from stakeholders to date. It is important to note that given the scale of potential areas for development, we have had to go through a prioritisation process to ensure that the outcomes are aligned with stakeholder priorities and that the amount of work is achievable in 2019. The tables in this document reference the 2019 products that are progressing some of the least regrets elements and explains why some of the areas are not being progressed or deferred.



Function	Least regrets elements identified in 2018	Update	Related 2019 Products
<b>System Coordination</b>	Define guaranteed standards of performance between DSO and ESO for utilising flexibility on the distribution network	As part of the scope for the Flexibility Services workstream, we will undertake detailed development of processes for flexibility services. These processes will consider alignment of DSO and ESO services and processes in terms of procurement, timescales, service windows and contract terms as much as possible. In addition, we will be developing good practice for co-optimisation of services between ESO and DSO.	<p>WS1A P2 DSO Services- Procurement processes</p> <p>WS1A P3 DSO Services – Dispatch and Settlement Processes</p> <p>WS1A P4 DSO Services – Commercial Arrangements</p> <p>WS1A P5 DSO Services – Conflict Management &amp; Co-optimisation</p>
	Define the IDNO/IDSO role in the Smart Grid	<p>As part of our Smart Grid Architecture Modelling work for the development of Future Worlds in 2018, IDNOs were identified as an actor in the models recognising that their evolution to IDSOs may differ depending on network needs and business models employed as these may be different to those employed by DSOs.</p> <p>The Future Worlds Consultation paper recognised that IDNOs will continue to need to manage their own networks effectively, efficiently and safely and will face a choice of how they utilise flexibility resources either by becoming IDSOs or by remaining as network owners, possibly contracting SO capabilities. The consultation paper described what the</p>	<p>WS3 P1 Impact Assessment</p> <p>WS3 P6 Further Modelling</p>

		<p>role of an IDSO might be in the future, how it may evolve in the future and how the different Future Worlds may affect them.</p> <p>In 2019, the project will take the outcomes of the Future Worlds forward and will consult on an independent impact assessment of these worlds undertaken by Baringa and will continue to take further input and direction from IDNOs to progress further deliverables including work on unintended consequences and any further modelling work in 2019.</p>	
	Create consistent Outage Plans across the networks	<p>Outage planning was considered in the scope for WS1B (Whole Electricity System Planning &amp; T-D Data Exchange) but was de-prioritised to accommodate other products (such as Investment Planning and Whole System FES) as these have been indicated as areas of high priority by stakeholders. Constraint information has been prioritised, however. In 2018, the project developed good practice for how DNOs assess curtailment and ANM system reliability (2018 WS1 P7 ANM Information) and how DNOs provide information on constraints to customers (2018 WS2 P7 Provision of Constraint Information).</p> <p>As part of the scope for this year, we will be monitoring deployment of these good practices and will be publishing progress updates as needed. Some DNOs may include some of these recommendations in their ICE plans to further demonstrate progress and improvements to customers.</p>	Monitoring Implementation of 2018 deliverables
	Design a consistent and effective feedback loop for those providing services – e.g. ratings/penalties?	This area has been progressed under WS1A P4 DSO Services - Commercial Arrangements as it is key to ensuring effective commercial arrangements for DSO flexibility Services.	WS1A P4 DSO Services Commercial Arrangements
<b>Investment Planning</b>	Design Contracts and Terms & Conditions for procuring ancillary services (DER)	As part of the scope for 2019 WS1A P4 (DSO Services Commercial Arrangements), one of the first planned activity is to undertake a review of current agreements that DNOs have with flexibility providers and develop good practice to bring an element of commonality in flexibility contracts across networks.	WS1A P4 DSO Services Commercial Arrangements

	<p>Create a visible measure of flexibility on the networks</p>	<p>As part of 2019 WS1A P2 (DSO Services – Procurement Processes), we will be looking to develop consistent approaches to flexibility reporting such as look forwards, performance reports etc.).</p> <p>In addition, the project will take forward work from 2018 that looked at the feasibility and potential formats for a central system wide resource register that provides information on DER resources under 2019 WS2 P1 (System Wide Resource Register). This product will implement short term improvements and will undertake detailed options development for further implementation.</p>	<p>WS1A P2 DSO Services Procurement Processes</p> <p>WS2 P1 (System Wide Resource Register)</p>
	<p>Present customer information of opportunities in a consistent way – heatmaps etc.</p>	<p>In 2018, the project developed a number of good practice guides for the various stages of the connections process. In particular, the products below in 2018 looked at good practice for heat maps:</p> <p>2018 WS2 P1 (Good Practice Ahead of Connections Applications)</p> <p>2018 WS2 P4 (Good Practice for information Provision on Flexibility Services)</p> <p>As part of the scope for this year, we will be monitoring deployment of these good practices and will be publishing progress updates as needed. The ENA expects DNOs to include these recommendations in their ICE plans to further demonstrate progress and improvements to customers.</p>	<p>Monitoring Implementation of 2018 deliverables</p>
	<p>Should there be a design standard for generation in the same way as there is for demand? (P2) (similar to SQSS)</p>	<p>This area is being addressed by the P2/7 and P2/8 Working Group of DCRP</p>	<p>DCRP Working Group reporting to ENFG</p>

<b>Network Operation</b>	Unified approach to LV system monitoring and visibility of data	A decision was made to de-prioritise work related to system monitoring under the 2019 scope for Open Networks as this area is being developed under the ENA data working group and there are a number of innovation projects that are progressing this. LV monitoring in particular would be dependent on the smart meter rollout and availability of data.	e.g. WPDs Open LV and SSENs Low-cost LV Substation Monitoring
	Unified approach to Voltage Level monitoring	A decision was made to de-prioritise work related to system monitoring under the 2019 scope for Open Networks as this area is being developed under the ENA data working group and there are a number of innovation projects that are progressing this.	e.g. WPDs Open LV and SSENs Low-cost LV Substation Monitoring
	Consistent methodology/approach for the management of constraints	In 2018, the project developed good practice for how DNOs assess curtailment and ANM system reliability (2018 WS1 P7 ANM Information) and how DNOs provide information on constraints to customers (2018 WS2 P7 Provision of Constraint Information). As part of the scope for this year, we will be monitoring deployment of these good practices and will be publishing progress updates as needed. Some DNOs may include some of these recommendations in their ICE plans to further demonstrate progress and improvements to customers.	Monitoring Implementation of 2018 deliverables
	Consistent approach on the use of Dynamic Stability Mechanisms (to manage power quality) utilising ancillary services	In 2019, the focus for WS1A Flexibility Services will be on developing processes for the active power services that were defined in 2018 under 2018 WS1 P2 (DSO Services) and will how DNOs can enable other markets in addition to DSO services such as peer to peer trading, capacity management etc.	WS1A Flexibility Services
	Publishing timely and consistent outage data	Outage planning was considered in the scope for WS1B (Whole Electricity System Planning & T-D Data Exchange) but was de-prioritised to accommodate other products (such as Investment Planning and Whole System FES) as these have been indicated as areas of high priority by stakeholders. Constraint information has been prioritised. In 2018, the project developed good practice for how DNOS assess curtailment and ANM system	Monitoring Implementation of 2018 deliverables



		reliability (2018 WS1 P7 ANM Information) and how DNOs provide information on constraints to customers (2018 WS2 P7 Provision of Constraint Information). As part of the scope for this year, we will be monitoring deployment of these good practices and will be publishing progress updates as needed. Some DNOs may include some of these recommendations in their ICE plans to further demonstrate progress and improvements to customers.	
	What level of data should be visible at an operational level?	Recognising that data exchange between Transmission and Distribution is a key enabler for a number of process areas, we have scoped the following two products in 2019 to progress developments for data exchange in different operational timescales:  WS1B P3 Real time data exchange & Priority of Actions  WS1B P4 Data exchange in planning timescales	WS1B P3 Real time data exchange & Priority of Actions  WS1B P4 Data exchange in planning timescales
<b>System Defence and Restoration</b>	Protocols for short-term contingency planning between DSO & ESO utilising ancillary services	Work on this area has already been started under the Regional Development Plans that are in place between the ESO and some DNOs. There are plans to extend this. The South West Operational Tripping Scheme is an example of this short-term contingency planning between DNOs and the ESO.	Regional Development Plans  South West Operational Tripping Scheme
	Designing last-resort mechanisms (shift from market-led to control-led). What constitutes market failure?	Modelling the thresholds between control-led or market-led interventions will be addressed by WS1 P1 as part of its consultation on Flexibility Market Principles.	WS1A P1 Flexibility Market Principles

	Designing Whole System Network Resilience and Defence Mechanisms with ancillary services	Work on whole system network resilience and defence mechanisms has been de-prioritised as there are a number of initiatives in the industry such as National Grid’s NIA Black Start project that are progressing work in this area. The project will review the work delivered by other initiatives later in the year and make a decision on whether or not any further work needs to be commissioned to progress work on system resilience in 2019.	ESO Black Start Project (NIA)
	‘Islanding’ Mechanisms/‘Islanded’ Networks	As above.	As above
<b>Services and Market Facilitation</b>	Develop consistent best practice for end to end process of procurement, activation, dispatch and settlement of D-network connected flexibility	As part of the scope for the Flexibility Services workstream the following two products have been scoped to address these elements:  WS1A P2 DSO Services – Procurement Processes  WS1A P3 DSO Services – Dispatch and Settlement Processes	WS1A P2 DSO Services – Procurement Processes  WS1A P3 DSO Services – Dispatch and Settlement Processes
	Consistency in exchanging real-time T & D network operational data across networks	WS1B P3 (Real Time data exchange & Priority of Actions) has been scoped for 2019 to look at the development of real time data exchange processes between T and D through learnings from the Regional Development Programmes (RDPs). This product will support the rollout of control/comms systems architectures.	WS1B P3 Real time data exchange & Priority of Actions
	Universal contract for flexibility providers	As part of the scope for 2019 under WS1A P4 (DSO Services Commercial Arrangements), the project will be undertaking a review of current contracts to develop good practice and bring an element of commonality across networks. However, in 2019, it is unlikely that the project will be in a position to produce a universal contract given the amount of work that is required for this.	WS1A P4 DSO Services Commercial Arrangements

	Develop good practice and consistency for post-event evaluation – review service provision	As part of the scope for WS1A P4 (DSO Services – Commercial Arrangements), the project will be looking at mechanisms for reviewing service provision.	WS1A P4 DSO Services – Commercial Arrangements
<b>Service Optimisation</b>	End to End Process for Contracts	As part of the scope for 2019 under WS1A P4 (DSO Services Commercial Arrangements), the project will be undertaking a review of current contracts to develop good practice and bring an element of commonality across networks.	WS1A P4 DSO Services – Commercial Arrangements
	Activation, dispatch and settlement	The project will develop good practice for activation, dispatch and settlement processes under WS1A P3 (DSO Services – Dispatch and Settlement Processes).	WS1A P3 DSO Services – Dispatch and Settlement Processes
	Review and rate flexibility service provider	As part of the scope for WS1A P4 (DSO Services – Commercial Arrangements), the project will be looking at mechanisms for reviewing service provision. A rating system may be one potential mechanism for the review process alongside others.	WS1A P4 DSO Services – Commercial Arrangements
	Scope out mechanics for activation of last resort provision under market failure – notification, dispatch and reporting.	Work on control-led mechanisms and priority of actions in a market failure situation was de-prioritised from the scope for delivery in 2019 as the project does not see any imminent risks to system operation and there would be more value is looking at this once there is more clarity on the direction of the work on Future Worlds. Modelling the thresholds between control-led or market-led interventions will be addressed by WS1 P1 as part of its consultation on Flexibility Market Principles.	Not a priority for 2019 workplan
	Development and activation of emergency assistance services under market failure.	As above.	As above

<b>Connections and Connection Rights</b>	Design a common Connection Agreement & Flexibility Agreement	<p>The project has scoped WS2 P4 (Connections Agreement Review) to undertake a short review of what is included in connection agreements alongside work delivered under WS1A to look at whether there is value in developing further consistency across networks.</p> <p>The project will also be monitoring WPD's trial on extending the use of their "Flexible Power" product to allow flexibility options to be assessed as part of the new connections process. The aim of this monitoring exercise would be to determine the feasibility of combining flexibility and connections agreements, as identified above.</p>	WS2 P4 Connections Agreement Review
	Assess impact of distribution network ancillary services on agreements DSO has with ESO at boundary	This will be addressed by WS1 P5 which looks at resolving conflict across the DSO ESO boundary	WS1 P5
	Do contracts for Transmission-connected services need to be reviewed?	As part of the scope for 2019 under WS1A P4 (DSO Services Commercial Arrangements), the project will be undertaking a review of current contracts to develop good practice and bring an element of commonality across networks.	WS1A P4 DSO Services – Commercial Arrangements
	Defining firmness of connection for commercial customers as part of the connection agreement	As part of the scope for 2019 under WS1A P4 (DSO Services Commercial Arrangements), the project will be undertaking a review of current contracts to develop good practice and bring an element of commonality across networks.	WS1A P4 DSO Services – Commercial Arrangements
	Should we trial secondary markets for capacity etc.?	As part of WS1A P6 (Facilitation of new markets) the project will consider how DNOs can facilitate or enable other markets (such as peer to peer trading, capacity management etc.) and what data need to be exchanged. This product will look to consider trail scenarios that can help to develop and understand these markets better.	WS1A P6 Facilitation of new markets

	Should we trial a combined platform?	A number of demonstrator projects will trial a variety of platform arrangements in 2019, including the FUSION NIC project. Open Networks has resource allocated to the proactive monitoring and input/output from/to trials.	Trials liaison, e.g. FUSION
<b>Charging</b>	Should a review of BSUOS (e.g. to include more forward-looking signals) be included in the current charging review?	In light of Ofgem’s SCR launch statement and decision on wider review, the Open Networks project will continue to provide input to the SCR and the wider review, however, the project will not be leading this work. The SCR will be led by Ofgem and the wider review will be led by ENA and the Open Networks project will continue to liaise closely with both initiatives. BSUoS review will continue under the related ESO task force.	Outside the scope of Open Networks
	How do you achieve increased visibility and consistency, including network impact, as part of the charging review?		
	Ensuring POC Analysis and Cost Calculations are consistent.		