



Open Networks Project Phase 2 2018 Project Initiation Document

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Energy Networks Association

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Document Control

Authorities

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1.0		ON Project Steering Group	Approved Version
2.6		ON Project Steering Group	Scope and timeline updated based on stakeholder feedback through the 2018 programme of work consultation.

Related Documents

Reference 1	ENA TSO DSO Project PID
Reference 2	ENA ON Project Phase 1 2017 Closure Report
Reference 3	ENA ON Project Opening Markets for Network Flexibility: 2017 Achievements and Future Direction
Reference 4	ENA Response to public consultation on 2018 programme of work

Change History

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2.6	N/A	Final approved version.

Distribution

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1 Introduction

1.1 About ENA and our members

Energy Networks Association (ENA) represents the “wires and pipes” transmission network operators in the UK and distribution network operators for gas and electricity in the UK and Ireland. Our members control and maintain the critical national infrastructure that delivers these vital services into customers’ homes and businesses.

1.2 Background

With increasing levels of Distributed Energy Resources (DER), network operators have been increasingly focussing on the interface between transmission and distribution. Challenges include:

- Increasing levels of distributed generation connection.
- Increasing capacity interactions between distribution and transmission.
- Increasing requirements to contract system (SO) services at distribution.
- Increasing use of capacity based services at distribution.
- New data requirements to manage the system efficiently and securely.
- The need to assess investment and operational decisions across the whole of system.
- Reducing system inertia and increasing whole system reliance on DER.
- The transition of DNOs to DSOs.

1.3 Business Leaders’ Commitment

The Business Leaders of the Network Operators, Transmission Operators and System Operator have reiterated their commitment to a long-term project to be led by ENA to progress the transition of DNOs to DSOs, provide clarity to the interface between DSOs & TSOs and improve the customer experience.

We highlighted to the Business Leaders that we need to be adaptable in our approach to the project as we learn, as there will be a number of challenges and changes that we can’t foresee now. Ofgem and BEIS have stressed the need for us to be adaptable in our project.

1.4 Long Term View

It is a long-term piece of work to deliver network improvements and transition them into our existing market arrangements which ENA will set out in a long-term programme.

Phase 1 of the project is being completed in 2017 and Phase 2 will run through 2018.

Following that, ENA will continue to support a collaborative development project along the journey to transition to DSO.

We expect that the project development work will evolve over time and we will adapt, but a broad timeline for development is set out below. Different initiatives will take different times to complete and there is the potential for staggered roll-out of some processes across different geographic areas, as Open Networks can’t deliver “one-size-fits all” solutions for many of the challenges which can be geographic.

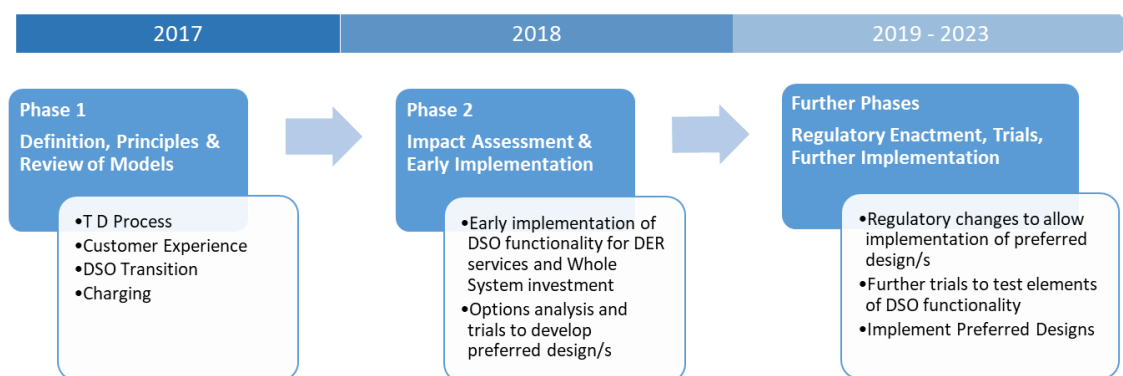


Figure 1 Short/Medium/Long-Term Open Networks Programme Phases

1.4.1 Overarching Programme Objectives

The objectives of the overall Open Networks Project remain to:

- put ENA members on the front-foot to drive change that aligns with their strategic objectives for DSO, rather than being driven by other initiatives.
- provide a consolidated and agreed position across all ENA members as to what DSO is and how it might operate with TSO.
- inform all ENA members on the potential impact of DSO and to propose potential actions to facilitate and make the most of this transition for ENA members.
- set out a strategy and plan for delivery of DSO and to take action to prepare for delivery.
- share non-sensitive information across ENA members to ensure that they are at the forefront of learning on the DSO transition and understand the key messaging of the project.
- inform the regulatory debate around funding (including ET2 & ED2).

1.4.2 BEIS/Ofgem Defined Next Steps for Assessing Roles & Responsibilities

In July, Ofgem & BEIS published their Smart Systems and Flexibility Plan and they placed an onus on the ENA Open Networks Project to “demonstrate how parties will deliver:

- opening up the delivery of network requirements to the market so new solutions such as storage or demand-side response can compete directly with more traditional network solutions, including as an alternative to reinforcement. These needs will also need to be signalled well in advance; and
- mechanisms for transmission and distribution coordination, which enable whole system network requirements to be identified and acted upon efficiently, in the best interests of consumers.”

Additionally, action 1.6 of the Smart Systems and Flexibility Plan called for network operators and industry to improve network connections for storage in particular.

There are general principles within the Smart Systems and Flexibility Plan that are consistent with the way that we have approached our work within the Open Networks Project.

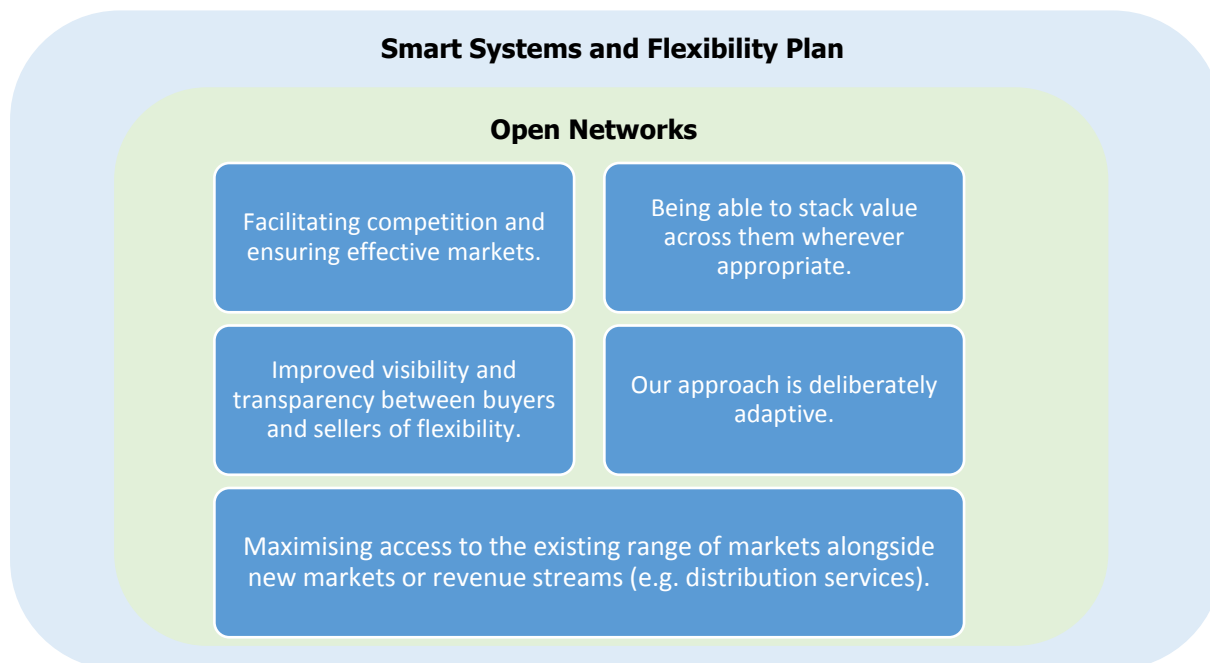


Figure 2 ON Interactions with Smart Systems & Flexibility Plan

We have analysed the actions from the Smart Systems and Flexibility Plan and put in place a workplan under the Open Networks Project to address these challenges. The Open Networks Project End of Year Report “Opening Markets for Network Flexibility” shows how project outputs will make a difference for customers.

Our approach has also been not to favour one type of flexibility over another, but to allow different forms of flexibility, including forms which will be developed in future, to compete against each other, and against more traditional solutions, within a market framework.

We are working with others to deliver change at a pace that achieves meaningful short-term improvements for customers and also agreement on how markets should operate in the longer term. Further details of this approach are provided in the “Opening Markets for Network Flexibility 2017 Achievements and Future Direction” report published in December 2017.

2 Project Objectives & Scope

2.1 This Project Initiation Document for Phase 2 in 2018

This document is a PID for the Open Networks Project Phase 2, which takes on the work completed under the Open Networks Project in 2017 and runs to the end of 2018.

This PID describes what the project will deliver, how it will be delivered and when. It is a best view at this point.

An initial version of the PID was published in Jan 2018 for public consultation. Based on feedback received from stakeholders, the scope, priorities and timeline has been revised to align with stakeholder expectations. A response to the consultation can be found [here](#). Key changes to this version of the PID are summarised in section 2.2.

It is unlikely that the project will run exactly as planned, so the plan itself will be a living document which is monitored and managed with any exceptions and issues managed through the project governance.

At the initiation of Phase 2, there are a number of assumptions that have to be made, particularly for later activities, and there are risks and issues to be mitigated and resolved. An early view of these is captured in this PID. As further details emerge as work is undertaken, any resulting changes in scope will be presented to the Steering Group for approval.

There are multiple work streams identified within this PID and dependencies between them are identified and defined clearly where possible. However, there is a significant level of interaction required between the workstreams to give a consistent picture and the dependencies are still under development in the project. Part of the role of the Steering Group is to provide the high-level steer for consistency, but there is an onus on individual workstreams to communicate with each other.

2.2 Key changes based on stakeholder feedback

Key changes
DER Connections SG included in governance structure for the project to reflect interaction for this year.
Timeline for the delivery of products and associated consultations has been updated to reflect a minimum consultation period of 6 weeks and 8 weeks for the major market model consultation from July 2018.
An additional consultation on the findings of the Impact Assessment of the DSO models has been included in the scope for 2019.
Increased stakeholder input to products will be sought. For example, on Workstream 2 Customer Experience, Subject Matter Experts from the wider industry may be engaged as per Terms of Reference to support product development. More generally, additional product webinars will be scheduled to get input.

2.3 Project Goals

The goals of this project are to work in collaboration with 10 of UK and Ireland's electricity network operators to take a whole system approach to define the transition required to enable a smart grid where households, businesses and communities can benefit from greater competition in markets and lower their energy cost.

2.4 Project Objectives

The objectives for Phase 2 of the Open Networks project are to:

1. Continue to develop potential models for DSO, gather evidence to support evaluation of models and trial options.
2. Develop potential whole system models for investment and operational planning.
3. Improve existing transmission-distribution processes to accommodate increased volumes of distribution connected customer resources.
4. Drive improvements to the treatment of flexibility services in the queue for applications and connections.
5. Improve information provision to customers through application, connection and post-connection processes.
6. Continue to support input to the Ofgem Charging Futures Forum and associated Task Forces.
7. Keep customer and consumers, including more vulnerable groups, at the forefront of our minds during development.
8. Demonstrate sufficient industry development progress to Ofgem & BEIS.
9. Complete project development work in 2018.

2.5 Scope

2.5.1 In Scope

ENA is responsible for leading Phase 2 of the Open Networks Project in collaboration with 10 of UK and Ireland's grid operators, respected academics, NGOs, government departments and the energy regulator.

Trials that are required under Phase 2 of this project will utilise NIC funded projects (including the recently agreed Fusion, Electricity Flexibility and Forecasting System and Transition projects) where feasible. These trials will provide substantive input to inform the work under this project and will be overseen by the Open Networks Project.

We have allocated the scope of work across 5 workstreams that are defined in more detail in the associated sections of this PID and workstream scoping documents. These define the outcomes and products for each workstream.

In brief:

- **Workstream 1 – T-D Processes** will continue to focus on transmission-distribution (T-D) investment and operational planning processes and put in place improved processes in the shorter term to support Open Network project objectives.
- **Workstream 2 – Customer Experience** will continue to focus on improving customer experience and ensuring that processes and information meet customer requirements.

- **Workstream 3 – DSO Transition** will continue to develop and implement DSO functionality to enable the development and use of DER solutions and to support whole system optimisation of investment and operation. This workstream has a longer term perspective in that it is seeking to agree DSO functionality and roles.
- **Workstream 4 – Charging** will be assessing network access and charging arrangements and supporting Ofgem’s ongoing reviews.
- **Workstream 5 – Communications** will lead on communications related to the Open Networks project to ensure co-ordinated and effective interactions with stakeholders.

2.5.2 Out of Scope

We have identified that individual DNO or SO initiatives may support this work and will inform this work, but may not fall within the scope of this project.

EV readiness is excluded from the scope of Phase 2 of the Open Networks project, however as it closely links to flexibility (being enabled in this project), collaboration will be required with the Low Carbon Technologies Working Group that has been setup under ENFG to work on it.

Behind the meter activities are generally not included in the scope of network processes and therefore Open Networks, although facilitating markets for services that may be driven from behind the meter activity (e.g. domestic generation for aggregation) is in scope.

2.6 External Constraints, Dependencies and Interfaces

2.6.1 Ofgem/BEIS Smart Systems and Flexibility Plan

The guiding principles set out in Ofgem and BEIS’s Smart System and Flexibility Plan will guide the scope and objectives of the Open Networks Project. The project will continue to support the Charging Futures Forum (CFF) and Targeted Charging Review (TCR) through Workstream 4 – Charging.

In line with action 1.1 and 3.4, Phase 2 of the project will provide continued input and support for Ofgem’s TCR & CFF. The work identified under the TCR and the broader CFF will inform the Workstream 4 Charging scope.

Phase 2 will continue to support action 1.6, in part through the flexibility queue management work under Workstream 1 - T-D Processes and the connections process improvements work under Workstream 2 – Customer Experience.

The project will monitor the work undertaken by the EV readiness taskforce set up under ENFG and will take input and provide support in overlapping areas to support actions 2.7 and 2.8.

2.6.2 Ofgem Charging Futures Forum and Charging Delivery Body

In Phase 2, Workstream 4 – Charging will work closely with Ofgem under their Charging Futures Forum (CFF) to help inform industry charging reviews and work led by Ofgem to collectively inform policy development on charging. As part of this, Workstream 4 will be involved in the taskforces to undertake detailed policy development.

ENA will act as the secretariat to the first two Task Forces under the CFF, Network Access and Forward-Looking Charges. We will liaise with National Grid as the overall secretariat for CFF.

Workstream 4 - Charging will support the Charging Delivery Body (CDB) in translating the results from the CFF into manageable actions and ensuring their delivery.

On behalf of the Open Networks project, Workstream 4 will also continue to provide input and support to Ofgem's Significant Code Review (SCR) for the TCR to inform CFF on reforms that are required for network residual charges.

The work that comes out of the CFF and CDB will directly inform the charging outputs for Phase 2 of the project.

2.6.3 FPSA

The Future Power Systems Architecture (FPSA) project focusses on the overall industry framework and is complementary to the Open Networks Project that is assessing the transformation required for networks. An overlap was identified in the DSO functions defined by both projects and agreement was reached to work collaboratively. To this end, the relevant FPSA functions will continue to be considered in the Open Networks SGAM modelling work under Workstream 3 DSO Transition. Additionally, the Open Networks Project will support the FPSA project as it scopes further phases of FPSA work.

The FPSA project team will continue input to the Open Networks project through the Advisory Group. Ongoing work will also be monitored to ensure that the projects are aligned and that the Open Networks project remains the clear focal point for network transformation. Any network related trials that may be scoped under the FPSA project will also be discussed and appropriate liaison put in place.

2.6.4 European Initiatives

There are a number of European initiatives that we need to consider in developing the Open Networks output. These include the TERRE project to implement wider European reserve markets and ongoing GB codes work to implement European Network Codes. ENA has representation on relevant European Working Groups and will continue to present ENA views into those groups as well as presenting European views back into the project.

3 Structure & Governance

3.1 Project Work Streams

The project has been split into five workstreams to reflect key consolidated areas with defined outcomes and collective development work required:

1. T-D Process
2. Customer Experience
3. DSO Transition
4. Charging
5. Communication

These workstreams are defined in sections 5 to 9 of this document. Updated workstream scoping documents have been developed to capture detail for products and will continue to be maintained.

3.2 Project Governance

The existing project governance structure is as below:

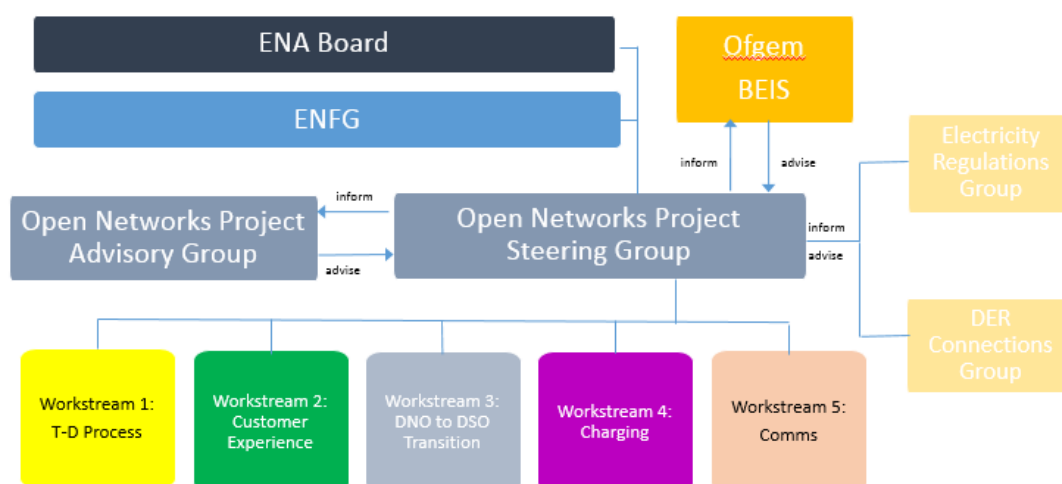


Figure 3 – ENA Open Networks Project Governance Structure

3.2.1 ENA Board

The ENA Board is engaged with progress and any issues from the Open Networks Project. Paul Fidler will report to the ENA Board from ENFG.

3.2.2 ENFG

ENFG will be the group that holds the funding for the Open Networks project, but will delegate authority for the spend of that budget and the management and delivery of the project to the Open Networks Steering Group. Paul Fidler will report to ENFG from ON Steering Group on any

of these items. The ENFG is convening monthly before the Steering Groups by teleconference to identify and address any more strategic issues that might apply to the project.

3.2.3 Open Networks Project Steering Group

The ON Project Steering Group is the key group with responsibility to direct the delivery of the project to time, cost and quality. Any deviations to the approved PID will be managed by the Steering Group and escalated to the ENFG if there is further budget likely to be required or a significant impact on time or quality.

We expect that key products or deliverables will come to the Steering Group for approval and sign-off, but a high proportion of products will be delivered and approved within workstreams.

The ON Project Steering Group will be chaired by an ENA Member representative (Nigel Turvey from WPD at this point of the project) and supported by the Project team as secretariat.

The ON Project Steering Group will be a small group with a single representative (with alternate) from each operator organisation including Ofgem and BEIS, ENA representation from the Operations Director, Project Director and the Head of Press and Public Affairs to provide a link to the ENA PAC.

The Steering Group meet monthly to formulate the programme and drive progress and this would allow the group to set the priorities and scope, whilst still maintaining transparency.

The ON Project Steering Group will assess:

- Priorities and scope through the PID and project plan with updates.
- Product/deliverable approval.
- Progress against plan.
- Escalated risks and issues.
- Costs against budget.
- Key decisions.
- Previous actions.

The ON steering group will represent the networks from a united programme perspective. Single operators may disagree with direction, but it was clear that the programme will represent the majority view. To ensure this, any communication of the outputs of the group will make it clear whether the view expressed is a unanimous or a majority view.

3.2.4 Open Networks Project Advisory Group

The Open Networks Project Advisory Group is a critical group for stakeholder input to the project developments. This meets every 2 months. This has worked well to date with representatives published on the ENA website [here](#).

Input and feedback at Project Advisory Group meetings are recorded and all specific points are addressed. Input and feedback to date has been used to shape the Project workplan and outputs including this PID.

3.2.5 Open Networks Project Engagement with Ofgem & BEIS

The ON Project will work closely with Ofgem and BEIS and we expect that the project outputs will contribute to future Ofgem and Government considerations on future markets.

Ofgem and BEIS input to the Project Steering Group and to specific workstreams and product teams where this is of particular value. Ofgem and BEIS representatives also attend the Project Advisory Group.

3.2.6 Open Networks Project Director

The ON Project Director, Jason Brogden, reports to the ON Steering Group and is responsible for the day-to-day delivery of the project as set out in this PID. The Project Director will manage the resources on the project within the budget allocated to deliver the defined products to time, cost and quality.

The Project Director and the project team will have the autonomy to communicate directly with stakeholders, including Ofgem & BEIS, whilst making it clear whether any views expressed are a personal opinion or the view of the group (be it unanimous or majority).

Jason is supported by the ON Project Manager, Farina Farrier.

3.2.7 Workstream Working Groups

Working Groups will be formed to develop products in the different workstreams in the same way that they were for Phase 1. Allocated ENA member resources will develop products with review and guidance given from the workstream working groups and the Advisory Group, where relevant. There will be an element of ENA co-ordination for products to ensure consistency in content and format, but it will be a low level of ENA resource allocated for support. Given that there are likely to be greater linkages between workstream products in Phase 2, dependencies and linkages have been identified and increased interfacing is being put in place between the respective product working groups.

We anticipate that each workstream working group will continue to be chaired by a Steering Group member and supported by the Project team as secretariat. This will help guide development and provide a link to the Steering Group.

3.2.8 DER Connections Group

The ON project will closely liaise with the DER Connections Group and to provide regular updates and to take their input on key customer facing deliverables.

3.3 Approach to Resourcing

ENA members will continue to provide resources to Phase 2 to develop project products.

Relevant skills and experience of resources will be discussed with ENA members. We expect that DNO/SO resource will need to be allocated based on the skills required to complete the products defined.

The Project Director, Jason Brogden, will continue to be allocated at 10 days a month to manage the project and take ownership of delivery to the PID/plan with support from a full-time Project Manager. We expect that the Project Director will direct the resources deployed from members to work on the products in the workstreams.

External consultancy resource will be deployed where necessary, particularly for the SGAM modelling work and independent Impact Assessment work identified under Workstream 3.

3.4 Reporting

Progress Reports will be provided to the Steering Group at every meeting. The reports will include progress on products to time, cost, and associated risks and issues.

There will be written reports and decision papers to support any key decision points. All reports will be distributed and controlled by the project team.

3.5 Stakeholder Management

The project will continue to meet and discuss ON with key stakeholders through various forums including but not limited to the Advisory Group. The project will also engage with wider industry including MPs, regulatory, government departments, civil servants, press, gas networks, trade associations, think tanks, charities, generators, suppliers, technology suppliers, aggregators, community groups, local authorities, regional development agencies, manufacturers (e.g. cars, batteries), flexibility service providers, consumers.

It has been agreed with the Steering Group to plan for increased engagement in 2018. There are 2 elements to this stakeholder engagement:

- Input to and review of our key products and deliverables through the Advisory Group
- Ensuring that the wider stakeholder community are engaged with ON Project developments and have opportunities to engage.

For Workstream products requiring wider review and input, our approach includes:

- Continued collaborative development with Advisory Group
- Wider consultation on key products including webinars, (e.g. the Commercial Principles Paper in 2017).
- A more structured plan for public consultation is included in section 4 of this document.

In 2018, there will be greater emphasis on Wider Stakeholder Community engagement. Activity will include:

- Public newsletter (launched September 2017)
- Speaking opportunities at external events
- Breakfast briefing events
- Panel events
- Webinars

A calendar of all consultations and planned stakeholder events will be maintained on the ENA Open Networks Website and details will be shared with stakeholders as they become available.

Figure 4 – Categorisation of Stakeholders to support Engagement Activities



4 Workstream Product Definitions & Planning

4.1 Introduction & Approach

Our approach has been to plan for delivery of products within each workstream and then to ensure that the project team are confident of the plan to deliver those products. We are defining a further scoping document for each workstream that will define its associated products and we will then reflect the products and the activities needed to deliver those products in a Project Plan Gantt Chart and product tracker. We will then update and monitor achievement against that product tracker to report progress.

4.2 Project Plan

The dependencies and linkages between workstreams will be greater in Phase 2 than in Phase 1. These are being identified so that they can be built into the project plan. Additional interfacing between linked workstream products is being put in place.

4.3 Project Closure

The criteria for project closure will need to be agreed and handover completed to the next phase of the project and/or into operations/Business As Usual.

4.4 Change Control & Configuration Management

All products will be subject to configuration control. Once they have been approved they will be baselined and will also be subject to change control. Should a change to a configurable item be requested, the impact of the change will be assessed, and a decision whether to proceed with the change will be made. The Project Management function will decide which body is the most appropriate to assess the impact of the change – and the body approving the change will depend on the result of this impact assessment. Where there is negligible impact, the body originally approving the item will usually approve the change; where there is a more substantive impact the ON Steering Group will usually approve the change; and if there is any material cost or time impact the ENFG will approve the change.

4.5 Responsibility Assignment Matrix

We will use an RASCI method for allocating responsibilities to people or groups through the development and approval of all products. All products will require allocation of responsibilities for:

- Responsible – responsible for delivery and providing the product to quality to Accountable
- Accountable – the approver of the product and ultimately responsible
- Support – resources allocated to Responsible to support the development of products
- Consulted – reviewers of the product
- Informed – kept up to date on progress and informed of the final approved product.

4.6 Products Expected for Public Consultation

We have increased the focus on wider, public consultation and our current view on the products to go to consultation are below. Stakeholder input and consultation responses have been key to the direction of work so far (e.g. in shaping the work on DSO services procurement) and will continue to be key in 2018.

Based on stakeholder feedback, the timeline for the delivery of products and associated consultations has been updated to reflect a minimum consultation period of 6 weeks (8 weeks for the market model consultation from July 2018). An additional consultation on the findings of the Impact Assessment on the DSO models has been included in the scope of Open Networks, but this is planned for Q1 2019.

With the ramp up of ON Project work, it may be that we have to consider how some of this consultation is simplified or rationalised given the potential burden on stakeholders. We will seek feedback from stakeholders on the suitability of this consultation plan as part of the Future Work Plan consultation in January. This initial consultation will comprise a short consultation document and questions alongside this PID.

Product	Description	Launch Timing
Overall Project		
	Future Workplan & Prioritisation for 2018	Jan 18
WS1 – T-D Processes		
1	Investment Processes Whole system investment models and proposed extension to NOA framework to include DER solutions.	Dec 18
10	Current good practice document for flexibility connections. Potential formal consultation.	Apr 18
WS2 – Customer Experience		
2	Position paper for capacity recycling. A formal consultation is likely to be linked to Ofgem's review of Network Access and Forward Looking Charges.	Sep 18
5	Improve customer information and improve network operator processes including queue management. Potential formal consultation.	Nov 18
WS3 – DSO Transition		
5	Seek input on DSO roles and functions, modelling, leading DSO models and key criteria on which to base Impact Assessment.	Jul 18
4	Seek input on findings from the Impact Assessment of the DSO models.	Q1 2019

4.7 Products Expected for Advisory Group Review

The current workplan shows all products being shared for information or review with the Advisory Group, however, this is unlikely to be realistic given the planned frequency of Advisory

Group meetings (bimonthly). Further work will be undertaken to shortlist the products that will benefit most from the Advisory Group keeping in mind the timeframe and resources available. This shortlist will be further discussed with the Advisory Group to confirm that it aligns with their views on the products to be reviewed.

Alternatively, the frequency of the Advisory Group meetings can be increased to maintain a fully transparent approach. Further discussions are required to make a decision on this.

5 Workstream 1 – T-D Processes

5.1 Workstream Objectives

Workstream 1 is focussed in making improvements for customers and consumers through the development and implementation of whole system approaches. Objectives for Phase 2 include the following.

1) **Enable Greater DER Access to Networks and Services by –**

- Further developing DER service procurement models and processes during 2018 so that preferred models are implemented during 2018.
- Putting in place mechanisms to identify and publish DSO service requirements for priority areas.
- Publishing and taking forward action plans to enable the timely connection of flexible resources where these can avoid investment and unlock connection capacity.

2) **Introduce Whole System Investment Planning by –**

- Developing and consulting on Whole System Investment Planning models and including whole system option(s) in the 2018/19 Network Options Assessment process (NOA4).
- Developing DNO capability and establishing improved data and models to support whole system investment and operation. These would be in place by end-2018 for priority areas.
- Establishing the framework to produce distribution level future energy scenarios (FES) for priority DNO licence areas. These will be aligned to the GB FES produced by the GBSO.

3) **Provide Further Information to Customers by –**

- Collating and publishing information for DER customers to support connections and service provision. This would include service requirements, future scenarios as well as further information on connection costs, levels of curtailment and resource volumes.

4) **Ensure Continued Network Reliability -**

- Identifying and agreeing further transmission and distribution network and DER requirements to ensure network reliability remains high for consumers and customers.

Tangible customer benefits from the 2018 work will include new opportunities for DER to provide services to support transmission and distribution network operators and to participate in whole system investment solutions. A broader range of information will be made available to distribution customers and service providers through 2018. Network operators will also take forward actions to ensure that the wider benefits of DER are not undermined by unintended impacts on network reliability.

Where feasible, changes that benefit consumers and customers will be implemented within the existing energy systems industry framework.

Where necessary, the work carried out in Workstream 1 will consider impacts on more vulnerable customer and consumer groups.

5.2 Workstream Products, Dependencies & Schedule

Ref	Product	Timeline / Resources	Consult	SG Review	AG Review
WHOLE SYSTEM					
1	<p>Investment Processes - enable a whole system approach utilising a range of investment and operability options across T&D. Build on 2017 Product 3 to:</p> <ul style="list-style-type: none"> i. Scope work to develop and trial a Regional NOA process over 2018. Scope subsequent work to develop and compare longer term investment solutions. ii. Develop detailed processes and interfaces for Regional NOA. iii. Develop models & methodology to assess T&D network capability and to carry out CBAs for Regional NOA to assess local issues across the T D boundary. iv. Develop regional example(s) based on DNO network options to use in regional NOA process. v. Further evolve longer term whole system framework for investment planning including DER options for whole system investment. Consult on these. vi. Agree information requirements (costs, network info & resource visibility) for whole system investment planning & propose ongoing models. 	<p>Jan 18 - Feb 18 (Low Resources)</p> <p>Mar 18 - Dec 18 (High Resources)</p> <p>Apr 18 - Sep 18 (Med Resources)</p> <p>Apr 18 - Sep 18 (Med Resources)</p> <p>Sep 18 – Dec 18 (Med Resources)</p> <p>Jul 18 – Q1 2019 (Med Resources)</p>	<p>Consult in Q4 on further development of whole system investment processes.</p>	<p>Review & approve key proposals including development of NOA framework and wider consultation on whole system investment processes.</p>	<p>Ongoing input from AG</p>
<p>Further Description</p> <p>This product directly supports Workstream Objective 2. The work is intended to develop and put in place whole system investment processes beginning with a Regional Network Options Assessment (NOA) process. The work continues work started in 2017 Product 3. It would draw on learning from ongoing projects (e.g. RDPs) and operational data work carried out under 2017 Products 3 and 6.</p> <p>The early sub-products are based on developing whole system options for use in the NG System Operator led NOA process. Sub-product ii. aims to develop a process to involve distribution options in a Regional NOA process. Sub-products iii. and iv. would firm up the analysis methodology and develop example regional investment option(s) utilising DNO network investment. Sub-product v. would then consider extension of whole system planning beyond the Regional NOA based approach. This would include developing the processes for the inclusion of DER based solutions to provide network capacity. And sub-product vi. firms up ongoing requirements for information and models to enable a business as usual implementation of the whole system regional NOA approach.</p> <p>2018 resource requirements are estimated to be 44 man months. As well as the Product Lead, this would include technical expertise covering network investment, operation and economic assessment.</p>					

2	<p>DER Services Procurement – put in place the framework for providing contract visibility, conflict resolution and service optimisation across T&D networks. (Build on 2017 Product 4.) Consider the operational exchanges to schedule and despatch services.</p> <ul style="list-style-type: none"> i. Review key learnings from external & earlier ON activities including the 2017 consultation. ii. Establish the end-to-end process to roll-out of ancillary services in distribution networks. This should include communications and data transfers. iii. Establish mechanisms for the efficient shared procurement of services from DER providers. iv. Establish process to assess and resolve operational conflicts that might arise through flexible DER connections. v. Define DSO products to manage D issues and align with NETSO products where possible. <p><i>Note - This work needs to be closely aligned with Workstream 2 Product 4 work on Flexibility Services.</i></p>	<p>Jan 18 – Apr 18 (Low resources)</p> <p>Jun 18 – Dec 18 (High resources)</p> <p>Jul 18 – Aug 18 (Med resources)</p> <p>Jul 18 onwards (Med resources)</p> <p>Apr 18 – Aug 18 (Med resources)</p>	<p>Review widely on end-to-end process and procurement mechanisms with stakeholders</p>	<p>Review and approve products</p>	<p>Ongoing input from AG</p>
<p>Further Description</p> <p>This product directly supports Workstream Objective 1. The work continues the DER Services work started on 2017 Product 4 and is intended to further the commercial principles and methodology to enable efficient access of DER services at Transmission and Distribution. The work would draw on learning from relevant projects (e.g. RDPs) and from operational data work carried out under 2017 Products 3 and 6.</p> <p>The sub-products build on the work carried out in 2017 to put in place processes that can be used to roll-out new services at transmission or distribution. Sub-products iii, iv and v covering the end-to-end process design, shared procurement and operational liaison represent an extensive piece of work. Together these sub-products will enable DER to provide different services and they will also ensure efficient use of available services.</p> <p>Total resource requirements in 2018 are estimated to be 38 man months. As well as the Product Lead, this product would draw on a mix of technical and commercial expertise covering system operation and supporting services.</p>					
3	<p>Industry Framework Interactions - Ensure that ON outputs are reflected into code & framework development including European Network Code adoption and BSC modifications.</p> <ul style="list-style-type: none"> i. Inform the implementation of European Network Codes through G & D-Code changes. (Likely to include DCC 	<p>Jan 18 onwards (Med resources)</p>	<p>No public consultation.</p>	<p>Update SG</p>	<p>Update AG as needed</p>

	<p>requirements for demand side response and SOGL requirements for operational data exchanges & interfaces.)</p> <p>ii. Support the facilitation of DER participation in the Balancing Mechanism through representation on BSC groups.</p>	<p>Jan 18 onwards (Low resources)</p>			
<p>Further Description</p> <p>This product supports Workstream Objectives 1, 2 and 4 by ensuring that key learning from the Open Networks project is input to relevant ongoing areas of industry code development. At this stage, these include Grid and Distribution Code workgroups assessing European Network Code implementation and relevant Balancing and Settlement Code (BSC) changes.</p> <p>For the European Network Code work, the key areas to inform are likely to be implementation of the Demand Connection Code (DCC) and the System Operation Guideline (SOGL). The planned approach to these is to review the Open Networks Phase 2 scope against the potential areas of change arising from the DCC and SOGL, and then determine which areas of implementation Workstream 1 should be more directly involved with. (An example here is demand side response and how the developing arrangements for procuring and accessing DER services may affect DCC implementation of DCC.)</p> <p>Once areas of interaction have been drawn out, ongoing work under this product might involve direct attendance at the relevant Grid & Distribution Code workgroups or perhaps periodic meetings to update working group members on relevant product changes.</p> <p>Resource requirements are estimated to be 8 man months. As well as the Product Lead, this product would draw on technical and commercial expertise covering system operation.</p>					
<p>4</p>	<p>Reliability Standards & Emergency Requirements - Ensure that emerging Whole System investment & operational processes maintain security of supply across T&D and cover requirements under emergency conditions.</p> <p>i. Ensure SQSS/P2 reviews meet whole system planning req'ts</p> <p>ii. Review existing planning approaches to maximise existing infrastructure through increased use of flexibility, including planning aspects of Whole System Loss of Infeed.</p> <p>iii. Whole system operability. Including operational aspects of Whole System Loss of Infeed Criteria).</p>	<p>Jan 18 – May 18 (Low resources)</p> <p>Mar 18 – Sep 18 (Low resources)</p> <p>Jan 18 – Dec 18 (Low resources)</p>	<p>Possibly review elements of work via code panels.</p>	<p>SG to approve</p>	<p>Update AG as needed</p>
<p>Further Description</p> <p>This product directly supports Workstream Objective 4 by ensuring that network security is maintained at current levels as Whole System approaches to investment and operation are implemented.</p> <p>The 3 sub-products look to address some specific areas around reliability standards that have been identified as part of the gap analysis carried out under 2017 Product 2. Sub product iii would consider how reliability might be impacted through the increasing use of control schemes and what steps might be used to ensure that reliability is maintained.</p>					

	2018 resource requirements are estimated to be 12 man months. As well as the Product Lead, this product would draw on expertise covering network planning, design and operation.				
FORECASTING & INFORMATION FOR CUSTOMERS					
5	<p>Whole System FES - Establish a whole system approach to FES:</p> <ul style="list-style-type: none"> i. Review current forecasting and look for best practice including input from academic research. ii. Develop and agree guidelines/ common methodology to produce a distribution style FES on a priority basis - per GSP and by region/licence area. iii. Establish process for FES coordination across T&D <p><i>Note – closely aligned to Product 1.</i></p>	<p>Jan – Jun 18 (Low resources)</p> <p>Apr to Sep 18 (Med resources)</p> <p>Sep 18 onwards (Med resources)</p>	<p>Publish report on proposals</p>	<p>SG to approve</p>	<p>AG to review</p>
<p>Further Description</p> <p>This product supports Workstream Objectives 1, 2 and 3. The work is intended to ensure that the future scenarios used to support industry processes are produced consistently and are aligned across network operators. The work would support the production and publication of scenarios to be used by network operators and stakeholders. This work would be closely linked to Product 1 on Investment Processes.</p> <p>2018 resource requirements are estimated to be 14 man months. The Product Lead commitment would be 2-3 days per month. Other resources would include individuals who have worked on scenario production from the GBSO, from a Scottish Network Operator and from DNO(s) that have already produced scenario document. Some process development expertise would also help to support development of the methodology and co-ordination framework.</p>					
6	<p>Regional Service Requirements - Review the process by which DNOs determine their service requirements in planning and operational timescales.</p> <ul style="list-style-type: none"> i. Consider & identify development of distribution network analysis to inform whole system capability needs - compliment to National Grid SOF, SNAPS ii. Consider whether the process, or elements within the process, should be standardised and what information might be useful to provide to flexibility providers (E.g. investment plans and constraint maps.) <p><i>Note – closely aligned to Product 2. Much of these sub-products are likely to be handled within DNOs.</i></p> <p><i>Note - This work needs to be closely aligned with Workstream 2 Product</i></p>	<p>Jul 18 onwards (Med resources)</p> <p>Jul 18 onwards (Med resources)</p>	<p>Publish results widely to S/Hs</p>	<p>SG to approve</p>	<p>AG to review</p>

	<p><i>4 work on the provision of information on flexibility services.</i></p>				
<p>Further Description</p> <p>This product supports Workstream Objectives 1 and 3. Work would begin later in 2018 and is intended to support the production and publication of regional service requirements. The 2 sub-products cover how network operators identify potential service requirements.</p> <p>It is not intended to agree specific service requirements on a region by region basis as this would be done by individual network operators. But it is intended to support network operators and stakeholders through the sharing of good practice and through achieving a consistent approach.</p> <p>2018 resource requirements are estimated to be 12 man months. As well as the Product Lead, this product would draw on resources involved in planning, operation and in the procurement of services.</p>					
7	<p>ANM Information - Establish processes to capture ANM system status and performance for investment planning purposes.</p> <ul style="list-style-type: none"> i. Develop capability to evaluate volumes of energy curtailment ii. Provide a methodology to evaluate ANM system reliability <p><i>Note – This work needs to be aligned with other Workstream 1 products including Product 1 on Investment Processes and Product 6 on Regional Service Requirements. It will also be aligned with Workstream 2 products including Products 1 and 5 on Connections Good Practice and Product 4 on Flexibility Services Information.</i></p>	<p>May 18 – Dec 18 (Med resources) May 18 – Sep 18 (Low resources)</p>	<p>Publish results widely to S/Hs</p>	<p>SG to approve</p>	<p>AG to review</p>
<p>Further Description</p> <p>This product supports Workstream Objective 3 through the provision of information that stakeholders have identified as being important. The work would look to provide clear guidelines and methodology for assessing how stakeholders connection arrangements would be impacted by ANM arrangements. Industry guidelines would be published to stakeholders to ensure good practice and consistency in the production of ANM performance related information for stakeholders.</p> <p>The product and the capability to provide improved information on ANM system performance is closely linked to other Workstream 1 and 2 products as noted above.</p> <p>2018 resource requirements are estimated to be 8 man months. The Product Lead, commitment would be around 3 days per month. Further input to the product team would be provided by individuals designing and operating ANM schemes within each DNO.</p>					
8	<p>System Wide Resource Register – Review the feasibility of putting in place a system-wide resource register for GB generation, storage and flexible demand (T&D)</p> <ul style="list-style-type: none"> i. Review and report what is currently in place ii. Identify potential formats, requirements (e.g. thresholds) 	<p>Apr 18 – May 18 (Low resources) May 18 – Jul 18 (Low resources)</p>	<p>Unlikely to require wider consultation</p>	<p>SG to approve</p>	<p>AG to review</p>

	<p>and notifications for system-wide register</p> <p>iii. Establish approach for sharing contracted DER info considering confidentiality issues</p> <p>iv. Consider publication of GSP queues, reinforcements etc. (consider data protection req'ts)</p> <p>v. Report feasibility of system-wide register with a proposed plan to deliver.</p>	<p>May 18 – Jul 18 (Low resources)</p> <p>Jul 18 – Aug 18 (Low resources)</p> <p>Sep 18 – Oct 18 (Low resources)</p>			
<p>Further Description</p> <p>This product supports Workstream Objective 3 through the provision of information for both network operators and stakeholders. At the moment, information on DER resources is drawn from different national and regional databases and may be incomplete. This work would review this position and the information that is available and assess whether how this can be improved for network operators and stakeholders. The work would also consider notification requirements and if other information that may not be accessible at present can be shared.</p> <p>The product is not intending to produce a new resource database but rather it would determine and report on the feasibility of improving or adding to existing information.</p> <p>2018 resource requirements are estimated to be 10 man months. These would largely comprise technical and commercial resources working on network connections.</p>					
<p>FLEXIBLE RESOURCES & CONNECTIONS TO DISTRIBUTION NETWORKS</p>					
9	<p>TSO-DSO Transmission Impacts - Complete work to replace Statement of Works and embed process across GB:</p> <p>i. Support further work on agreements</p> <p>ii. Support CUSC modification</p>	<p>Mar 18 – Jul 18 (Low resources)</p> <p>Apr 18 – Jun 18 (Low resources)</p>	<p>Review if required via code panels</p>	<p>SG to approve</p>	<p>AG to review</p>
<p>Further Description</p> <p>This product supports Workstream Objective 1 through completion of the 2017 Product 7 work to replace the Statement of Works process and implement a new approach to assessing the transmission impacts of generation connected to distribution networks.</p> <p>The work will support work being carried out by Network Operators on a CUSC modification and on the implementation programme for grid supply points. (Detailed analysis will be carried out by National Grid and DNO's). 2018 resource requirements are estimated to be 4 man months.</p>					
10	<p>Facilitating Connections – Existing Practices for Flexible Resources - Review current DNO approaches to flexibility queue management and publish a document to stakeholders to clarify DNO practice at present on handling flexibility.</p>	<p>Jan 18 – May 18 (Med resources)</p>	<p>Publish existing practice document.</p> <p>Public consultation.</p>	<p>SG to approve</p>	<p>AG to review</p>

	<p><i>Note - This work needs to be closely aligned with Workstream 2 Product 5 work on the best practice following connection applications.</i></p>				
<p>Further Description</p> <p>This product supports Workstream Objective 1 through completion of the 2017 Product 8 work on assessing how flexible resources are currently handled in connection processes. This product focusses on reviewing network operator practice and documenting existing practice. A report capturing current practice would be published and consulted on. Stakeholder feedback would be used to inform a further action plan that would be developed and delivered through Product 11.</p> <p>Total resources to deliver Product 10 are estimated to be 6 man months including the network operator resources responding to a product questionnaire. The requirements during calendar year 2018 are estimated to be 3 man months.</p>					
<p>11</p>	<p>Facilitating Connections – Action Plan and Report - Develop Flexible Connections Guide and action plan for flexible resources in connection queues for medium to long term (including storage as per action 1.6 from the Smart Systems and Flexibility Plan) and publish to stakeholders.</p> <ul style="list-style-type: none"> I. Develop Flexible Resources Connections Guide to clarify processes and analyse feedback from call for evidence to consider medium to longer term approaches II. Develop report and roadmap to provide an overview of the findings and actions identified for medium to longer term approaches. Review and align roadmap against work delivered under WS2 P5 for interactivity process. III. Review and align roadmap against work delivered under WS2 P5 for interactivity process <p>Supports Objective 1</p> <p><i>Note - This work needs to be closely aligned with Workstream 2 Product 5 work on the best practice following connection applications.</i></p>	<p>Feb 18 – Jul 18 (Med resources)</p> <p>Jun 18 – Sep 18 (Med resources)</p> <p>Sep 18 – Dec 18 (Med resources)</p>	<p>Potential consultation (combined with WS2 P5)</p>	<p>SG to approve</p>	<p>AG to review</p>
<p>Further Description</p>					

	<p>This product supports Workstream Objective 1 by building on product 10 through the development and delivery of an action plan to improve how flexible resources are handled in connection queues. The action plan will be informed by Product 10 including the stakeholder feedback to the good practice document. The extent of the work carried out under this product will also depend on progress in other related workstream products that are shaping DSO functionality.</p> <p>2018 resource requirements are estimated to be 18 man months. These resources would largely comprise technical and commercial resources working on network connections.</p>				
DATA MANAGEMENT & CONTROL ARCHITECTURE TO ENABLE OTHER WORK					
12	<p>TSO/DSO & DER Data Requirements - In light of DSO-TSO changes (Statement of works), consider revisions to Week 24/42 processes. Also, update minimum/detailed data requirements to be provided from DER customers when they apply for a connection and after they agree a connection from the DNO.</p> <ul style="list-style-type: none"> i. Review learnings from key projects (e.g. RDPs, SoW) ii. Explore options to consolidate Week 24/42 processes iii. Review of ongoing enforcement of existing requirements iv. Identify new DER information requirements; including data on stability and resilience v. Agree assumptions for unavailable data <p>Supports Objectives 1, 2 & 4</p>	<p>Jan 18 – May18 (Low resources)</p> <p>Jul 18 – Dec 18 (Med resources)</p> <p>Jan – Jul 18 (Low resources)</p> <p>May - Nov 18 (Low resources)</p> <p>May – Nov 18 (Low resources)</p>	<p>Review if required via code panels</p>	<p>SG to approve</p>	<p>AG to review</p>
	<p>This product supports Workstream Objectives 1, 2 and 4. The work would agree more efficient data transfer processes in the light of other products. It would also identify any further DER data needed to ensure that ongoing network reliability is understood.</p> <p>2018 resource requirements are estimated to be 14 man months. As well as the Product Lead, these would include technical and commercial expertise involved in network planning and operation.</p>				
13	<p>Operational Data & Control Architectures – Further develop the architectures and mechanisms for operational data exchange. This will support other products.</p> <ul style="list-style-type: none"> i. Progress work/trials started under Phase 1 Products 5 & 6. Agree standards on operational data exchange. ii. Review learnings from key projects to date (e.g. RDPs, Innovation Projects) on data exchange & control architecture. iii. Establish whole system coordination of control schemes and emergency procedures. iv. Review and agree comms & control architectures for operational data/planning. 	<p>Jan 18 – Nov 18 (Low resources)</p> <p>Mar 18 – May 18 (Low resources)</p> <p>May – Dec 18 (Med resources)</p> <p>May – Dec 18 (Med resources)</p>	<p>Review if required via code panels</p>	<p>SG to approve</p>	<p>AG to review</p>

	<p>Consider control room links between DNOs/SO/TOs and agree what protocols and systems should be established for GBSO / DNOs / DERs.</p> <p>Supports Objectives 1, 2 & 4</p> <p><i>Note - This work is to be aligned with Product 3 where European Network Code requirements for operational interfaces and data exchange will be considered.</i></p>				
<p>This product supports Workstream Objectives 1, 2 and 4. Whilst operational planning processes have not been prioritised in Phase 2, operational data exchange has been recognised as a key enabler for Products. This work would review operational data exchange requirements, consider different architectures and recommend preferred approaches.</p> <p>2018 resource requirements are estimated to be 16 man months. As well as the Product Lead, these would include technical and commercial expertise involved in network planning and operation.</p>					

5.3 Workstream Resource Requirements

This section includes an initial network operator resource estimate to deliver Workstream 1 Products 1 to 13. This is based on a simple methodology with a “Low”, “Medium” or “High” resource requirement classification being applied to each of the sub-products identified for the 13 main products. Overall, the proposed Workstream 1 plan includes 20 “Low” resource sub-products, 22 “Medium” resource sub-products and 2 “High” resource sub-products.

5.4 Workstream Assumptions

The key assumptions for Workstream 1 are noted below.

Resources

- Sufficient resources will be deployed by each of the ENA member organisations to deliver the products in the timescales defined.
- Named resources will be identified by each of the ENA member organisations and these will be allocated in product working groups. This has been completed for the ongoing products.
- Additional resources from the ENA member organisations may be engaged from time to time to provide subject matter expertise on more specialised knowledge areas.

Scope

- The scope of Workstream 1’s activities through Phase 2 will align with the Product descriptions in section 5.2.
- Product 3 on Industry Frameworks Interactions requires further definition regarding the extent to which the Open Networks project and Workstream 1 will take a greater role in ensuring that the implementation of European Network Codes (ENC) takes account of the developing network and DER requirements in GB.

- Product 6 (Regional Services Requirements) and Products 10 and 11 (Facilitating Connections) require further review with Workstream 2 product leads to firm up scoping.

Network Operator Roles

- In developing Workstream 1 products, the work starts from the position that functionality is developed through existing DNO organisations. However, it is recognised that different DSO structures are possible, for example, new parties may deliver aspects of DSO functionality.
- No assumptions have been made about IDNOs in terms of role development.

Existing Statutory and Regulatory Policy

- It is recognised that existing energy systems policy is developing and, over the next few years, this may change in areas that impact the scope of the Open Networks project. Workstream 1 will seek to make progress against the existing energy framework. Where longer term solutions are being considered, work will not be constrained by existing policy as it is assumed that this may evolve.

6 Workstream 2 – Customer Experience

6.1 Workstream Objectives

Specific Workstream 2 objectives for Phase 2 include:

1. Improve the information available to customers to support network connection and service provision by agreeing and publishing network operator good practice during 2018. (To include information on connection costs, levels of curtailment and service opportunities).
2. Review and recommend ways to better manage ongoing network connections so that network capacity is better utilised, investment in network capacity is targeted effectively, and so that networks maintain current levels of reliability.
3. Provide greater clarity on the use of industry terminology so that connection arrangements to Transmission & Distribution are better understood.

Tangible customer benefits from the 2018 work should include enhanced information to support network connections and service provisions. Approaches in different distribution networks should also be more consistent. The 2018 work could also provide opportunities to better use existing network capacity. In delivering the above objectives, Workstream 2 will consider impacts on more vulnerable customer and consumer groups.

6.2 Workstream Products, Dependencies & Schedule

At present, WS2's scope and products are clearer for the first half of 2018. Much of this early work is focussed on agreeing and promoting existing good practice across network operators. In doing this, WS2 product teams will work closely with WS1 and WS3 product teams where scope is closely related. Later in 2018, as T-D processes are updated through WS1 and as DSO functionality is agreed through WS3, it is likely that WS2 products will be further developed.

Ref	Product	Timeline	Consult	SG Review	AG Review
1	<p>Good Practice ahead of Connection Applications - Review network operator approaches for handling prospective connection applications and publish good practice for supporting customers pre-application.</p> <p>To include:</p> <ul style="list-style-type: none"> - Review and identify examples of good practice. - Identify what kind of expertise prospective connectees value having access to. - What forums or other methods are used to provide information and access (e.g. surgeries)? - The information that is available to support customers and how consistent this is across DNOs (e.g. heat maps). 	Jan 18–Aug 18 (Medium resources)	Extensive consultation with Stakeholder Advisory Group and with customers and trade groups.	SG to review and approve.	Ongoing input from AG.

	<ul style="list-style-type: none"> - How customers are supported in optioneering (e.g. sites, capacity) to narrow down applications. <p>This work will take account of the customer requirements and gaps identified through 2017 work. A good practice guide(s) will be published.</p> <p>Supports Objective 1</p>				
2	<p>Management of Capacity – Identify and review options for managing and planning capacity that may be contracted for but may not be being used by customers. Options and principles would be laid out in a position paper and recommendations would be provided to Ofgem & BEIS.</p> <p>To include:</p> <ul style="list-style-type: none"> - Should investment & operational planning assumptions be revised to access further capacity? - Should market arrangements be introduced to free up capacity? - Should DNO powers be extended to allow recovery of capacity? - Do current provisions and practices suffice? - Under what circumstances and how might DNOs 're-use' unutilised capacity. <p>Supports Objective 2</p>	Jan 18–Oct 18 (Medium resources)	<p>Extensive consultation with AG and directly with DER customers and trade groups.</p> <p>Proposed formal consultation - likely to be linked to Ofgem's review of Network Access and Forward Looking Charges</p>	SG to review and approve.	Ongoing input from AG.
3	<p>Explanation of 'Terms' & 'Definitions' - Produce a document that explains commonly used terms such as 'firm' and 'unfirm'. This would be published and used by network operators going forward to provide greater clarity for customers.</p> <p>Supports Objective 3</p> <p><i>Note - this product needs to be aligned with Workstream 1 Products 10 and 11 on Facilitating Connections.</i></p>	Jan 18–Jul 18 (Medium resources)	<p>No public consultation.</p> <p>Consult with Stakeholder AG before publishing document.</p>	SG to review.	AG to input and review.
4	<p>Information on Flexibility Services – Review how information should be provided to customers on potential DNO requirements for flexibility services. Agree good practice.</p> <p>To Include:</p> <ul style="list-style-type: none"> - Review and agree good practice for how DNOs signal flexibility requirements to developers and suppliers. - Consider information channels (including the production of heat maps) for flexibility services. 	Apr 18–Dec 18 (Medium resources)	<p>Extensive consultation with Stakeholder AG and with customers & trade groups.</p>	SG to review and approve.	AG to input and review.

	<ul style="list-style-type: none"> - Explain how GBSO and DNO requirements are aligned (or how they differ) in the procurement of flexibility services. <p>This work should address stakeholder observations that network operators are silent as to where on networks there may be value in siting storage or other flexibility services.</p> <p>Supports Objective 1</p> <p><i>Note - this product needs to be aligned with Workstream 1 Product 6 on Regional Service Requirements.</i></p>				
5	<p>Good Practice Following Connection Applications – Review approaches for handling customer connections in the post-application phase and agree good practice.</p> <p>To include:</p> <ul style="list-style-type: none"> - Review how interactive applications are handled and publish good practice. - Review approaches to queue management where connection capacity is limited and publish good practice. - Improve the general queue management and interactivity process information made available to customers. <p>This work will take account of the customer requirements and gaps identified through the 2017 work. A good practice guide(s) will be produced and published.</p> <p>Supports Objectives 1 & 2</p> <p><i>Note – This work needs to be closely aligned with Workstream 1 Products 10 and 11 on Queue Management and Flexible Resources.</i></p>	Jan 18–Dec 18 (Medium resources)	<p>Consultation with Stakeholder AG, directly with DER customers and with trade groups.</p> <p>Formal consultation for stakeholders and public.</p>	SG to review.	AG to input and review.
6	<p>Guidance on Post Connection Changes - Provide guidance to customers on the impacts of changes to DER operational regimes. Agree when and how changes should be notified to DNOs.</p> <p>To include:</p> <ul style="list-style-type: none"> - Produce material to share with customers on the impacts of post connection changes. - Agree with customers what criteria should be used to determine when changes are communicated to DNOs and 	Jan 18–Sep 18 (Medium resources)	Extensive consultation with Advisory Group and with customers and trade groups.	SG to review.	AG to review

	<p>when changes to connection agreements may be required.</p> <ul style="list-style-type: none"> - Publish criteria and good practice for network operators and customers. <p>This work will take account of the customer requirements and gaps identified through 2017 Product 5.</p> <p>Supports Objective 2</p>				
7	<p>Provision of Constraint Information</p> <ul style="list-style-type: none"> - Review what information on constraints and curtailment would be useful to customers, what can be provided and establish good practice for network operators. <p>To include:</p> <ul style="list-style-type: none"> - Further discussion with DER customers. - Consider a document that sets out what information should be provided to customers on say actively managed connections so that they have better understanding of what the constraint regime 'looks like', including uncertainties, historical 'likelihood' of events etc. - Establish good practice on when and what information is provided by network operators. <p>Supports Objective 1</p> <p><i>Note – This work needs to be aligned with other Workstream 2 products including Products 1 and 5 on Connections Good Practice and Product 4 on Flexibility Services Information. It will also be aligned with Workstream 1 products including Product 1 on Investment Processes, Product 6 on Regional Service Requirements and Product 7 on ANM Information.</i></p>	Apr 18–Dec 18 (Medium resources)	Extensive consultation with Stakeholder AG and with customers and trade groups.	SG to review and approve.	AG to review
8	<p>2017 Product Updates – Review the changes to connection arrangements agreed through Workstream 1’s 2017 Product 6 and update Workstream 2 2017 products (including journey maps) if required.</p>	Jan 18 – May 18 (Low resources)	Consultation with Stakeholder AG and DER customers.	SG to review.	AG to review

6.3 Workstream Resource Requirements

This section includes an initial network operator resource estimate to deliver Products 1 to 8. This is based on the same “Low”, “Medium”, “High” methodology described in section 5.3.

Overall, the proposed Workstream 2 plan includes 1 “Low” resource and 7 “Medium” resource sub-products.

6.4 Workstream Assumptions

The key assumptions for Workstream 2 are noted below.

Resources

- Sufficient resources will be deployed by each of the ENA member organisations to deliver the products in the timescales defined.
- Named resources will be identified by each of the ENA member organisations and these will be allocated in product working groups.
- Additional resources from the ENA member organisations may be engaged from time to time to provide subject matter expertise on more specialised knowledge areas.
- Subject Matter Experts from the wider industry may be engaged as per Terms of Reference to support product development.

Scope

- The scope of Workstream 2's activities through Phase 2 will align with the Product descriptions in section 6.2.
- Detailed scoping will be carried out by the nominated product leads.
- Product 4 (Improved Information on Flexibility Services) and Product 5 (Best Practice Following Connection Applications) require further review with Workstream 1 leads to firm up scoping. Product 2 (Re-use of Contracted Capacity) will be aligned to Ofgem's work on Reform of Electricity Network Access and Forward Looking Charges.

Network Operator Roles

- In developing Workstream 2 products, the work starts from the position that functionality is developed through existing DNO organisations. However, it is recognised that different DSO structures are possible, for example, new parties may deliver aspects of DSO functionality.
- No assumptions have been made about IDNOs in terms of role development.

Existing Statutory and Regulatory Policy

- It is recognised that existing energy systems policy is developing and, over the next few years, this may change in areas that impact the scope of the Open Networks project. Workstream 2 will seek to make progress against the existing energy systems policy and framework. Where longer term solutions are being considered, work will not be constrained by existing policy as it is assumed that this may evolve.
- Workstream 2 Product 2 on the Re-use of Contracted Capacity would consider a broad range of options and will not be constrained by existing policy and practice. The output from Product 2 would include recommendations for policy change if this would result in better overall outcomes for consumers and customers.

7 Workstream 3 – DSO Transition

7.1 Workstream Objectives & Customer Benefits

Workstream 3 is determining the functionality that DSO will require going forward. Specific Workstream 3 objectives for Phase 2 include:

1. Complete ongoing SGAM modelling to fully describe and scope the models for DER services as developed and consolidated through the Open Networks Workstream 1.
2. Validate the SGAM models and extend these to cover other areas of developing DSO functionality such as whole system planning of electricity system investment.
3. Provide a clear and detailed cost benefit analysis to compare the costs and benefits of the different potential DSO models.
4. Identify gaps in ongoing industry work to firm up technological requirements for DSOs and the wider industry. Adapt existing trials or put in place further trials as required.
5. Agree those elements of consolidated DSO models that can be prioritised for action (e.g. to facilitate DER access to services).
6. By the end of 2018, update the Open Network Project's DSO roadmap and propose a potential implementation plan to take forward those elements of DSO where functionality has been agreed by network operators and stakeholders.

The tangible customer benefits from the 2018 programme include a clear articulation of DSO functionality, an articulation of DSO value, and a proposed plan for implementing elements of DSO functionality to address key areas for customers and consumers relating to DER services procurement and whole system investment. This will draw heavily from the work being carried out in Workstream 1 under Products 1 and 2. The work will also consider impacts on more vulnerable customer and consumer groups.

Whilst Workstream 3 is focussed on agreeing enduring DSO arrangements, the Phase 2 work plan is designed to enable early delivery of DSO functionality through progressing 'no regrets' actions to enable DSO, by surfacing key regulatory enablers and by utilising ongoing industry work as far as practicable. For example, if elements of DSO functionality are common to different models, these "market agnostic" elements could be taken forward ahead of wider industry agreement on a preferred market model.

7.2 Workstream Products, Dependencies & Schedule

Ref	Product	Timeline	Consult	SG Review	AG Review
1	<p>SGAM Modelling of DSOs and DER Procurement - Future DSO Model SGAM Frameworks & Analysis (Continued from Phase 1).</p> <ul style="list-style-type: none"> - Complete analysis of initial 3 market models for DER Services started in Phase 1. - Dissemination of SGAM modelling and report. 	<p>Jan 18 – Mar 18 (Med Resource)</p> <p>Feb 18 – May 18 (Low Resource)</p>	<p>Work would be presented and published widely.</p>	<p>SG Review & Approve Outputs</p>	<p>Ongoing input from AG</p>

	<p>Supports Objective 1</p> <p><i>Note - this product will draw on Workstream 1 Product 2 work on DER Service Procurement. The work should also take account of the T-D Gap Analysis carried out as part of Workstream 1 2017 Product 2. Further market models for DER Services are covered in Product 2.</i></p>				
2	<p>Further SGAM Modelling of DSO Functionality – Further modelling to address stakeholder feedback on Commercial Principles and to cover further areas of DSO functionality.</p> <ul style="list-style-type: none"> - Knowledge transfer from EATL to members (as required) to enable further SGAM modelling. - Analysis of additional market models for DER services including TSO Led & Hub. - Further SGAM modelling of developing DSO functionality. (e.g. Whole system investment planning models for an extended NOA process.) <p>Supports Objectives 1 & 2</p> <p><i>Note - this product will draw on Workstream 1 Product 1 and 2 work on Investment Processes and DER Services Procurement.</i></p>	<p>Mar 18 – Jun 18 (Low Resource)</p> <p>Apr 18 – May 18 (Med Resource)</p> <p>Jul 18 – Dec 18 (Med Resource)</p>	<p>Work would be presented and published widely.</p>	<p>SG Review & Approve Outputs</p>	<p>Ongoing input from AG</p>
3	<p>Market Agnostic DSO Elements - Complete Assessment of “Market Agnostic” DSO elements of DSO functionality such that no regrets DSO implementation actions can be identified and brought forward.</p> <ul style="list-style-type: none"> - Identify “market agnostic” elements of DSO functionality and agree plan to progress “no regrets” DSO actions. - Follow through ‘no regrets’ action plan <p>Supports Objective 5</p> <p><i>Note – this work should take account of the T-D Process Gap Analysis carried out as part of Workstream 1 2017 Product 2.</i></p>	<p>May 18 – Aug 18 (Med Resource)</p> <p>Aug 18 – Dec 18 (Med Resource)</p>	<p>Extensive discussion with stakeholders and Ofgem.</p> <p>May include ‘no regrets’ actions in wider public consultation covered in Product 5.</p>	<p>SG Review & Approve Outputs</p>	<p>Ongoing input from AG</p>
4	<p>Independent Impact Assessment of Models – Commission and support an independent assessment of the transition to different DSO models. As</p>				

	<p>well as cost benefit analysis (CBA), this should include dimensions such as UK/EU regulatory compliance, sustainability, customer satisfaction, complexity, Smart Network indicators and impacts on vulnerable consumers. The assessment is intended to compare models and underpin regulatory impact assessments.</p> <ul style="list-style-type: none"> - Develop draft Impact Assessment & decision criteria including elements to be included in P5 consultation. - Tender for and select consultant to undertake Impact Assessment. - Establish scope & methodology for Impact Assessment. Consider if this is better based on key enabling elements for DSO or on full DSO models. - Carry out assessment for relevant DSO models. - Consultation on Impact Assessment findings <p>Supports Objective 3</p>	<p>May 18 – Jun 18 (Low Resources)</p> <p>Jul 18 – Sep 18 (Low Resources)</p> <p>Jun 18 – Sep 18 (Low Resources)</p> <p>Sep 18 – Dec 18 (Med Resource) Q1 2019</p>	<p>Publish results widely to S/Hs</p> <p>Public consultation once Impact Assessment complete (Q1 2019)</p>	<p>SG Review & Approval</p>	<p>Present Approach & Results to AG</p>
5	<p>DSO Model Validation & Review Including Public Consultation – Detailed review of SGAM outputs to ensure these provide a sound basis for DSO direction setting and implementation. Consultation on market models, proposed Impact Assessment approach and next steps.</p> <ul style="list-style-type: none"> - Review SGAM analysis and draft consultation seeking views on results for market models, DSO functionality and inputs to Impact Assessment. - Carry out consultation, analyse and publish results. <p>Supports Objectives 2 & 3</p>	<p>May 18 – Jul 18 (Med Resource)</p> <p>Jul 18 – Oct 18 (Med Resource)</p>	<p>Public consultation.</p>	<p>SG Review & Approval</p>	<p>Present Approach & Results to AG</p>
6	<p>Key Enablers for DSO - Identify and document key enablers to implement DSO functionality (e.g. IT systems, comms infrastructure, organisational changes, contract requirements, regulatory changes, funding). These would support DSO comparisons and feed into the implementation plan. An initial view of enablers would be produced for the consultation (Product 5) and relevant elements would be included in the Impact Assessment (Product 4). Work and timescales to address</p>		<p>Work would be published and presented widely.</p> <p>Would support and be shaped by wider public consultation</p>	<p>SG Review & Approval</p>	<p>Present results to, and review with AG</p>

	<p>key enablers would be assessed to support the implementation plan (Product 8).</p> <ul style="list-style-type: none"> - Identify key DSO enablers to support consultation. - Develop DSO enablers based on consultation and include relevant elements in Impact Assessment. - Publish Key Enablers document for DSO model. <p>Supports Objectives 5 & 6</p>	<p>Apr 18 – Jun 18 (Low Resource) Sep 18 – Oct 18 (Low Resource) Oct 18 – Dec 18 (Med Resource)</p>	<p>covered in Product 5.</p>		
7	<p>Further Trials to Address Gaps in DSO Functionality - Identify and initiate further trials to address any gaps. This will look to utilise ongoing projects including those approved as part of the 2017 NIC competition that will be aligned through the ON project - Fusion, Electricity Flexibility and Forecasting System and Transition. If necessary, further projects would also be considered.</p> <ul style="list-style-type: none"> - Further proposals if required including initial NIC submissions. - Additions to ongoing projects and preparation of further project proposals. - Take forward industry trials (possibly NIC funded). - Identify and scope further trials following Impact Assessment results. <p>Supports Objectives 4 & 6</p>	<p>Mar 18 – Apr 18 (Low Resources) May 18 – Dec 18 (High Resources) Nov 18 onwards (Med Resources) Nov 18 – Dec 18 (Low Resources)</p>	<p>Consult widely with S/Hs.</p>	<p>SG Review & Approval</p>	<p>Review with AG</p>
8	<p>Preferred DSO Models & Proposed Implementation Plan – Draw on earlier work to determine elements of DSO Models that have been agreed by NO’s & Stakeholders and develop and propose a potential Implementation Plan.</p> <ul style="list-style-type: none"> - Reach decision on agreed DSO functionality to be progressed. - Update DSO Roadmap and propose a potential implementation plan for agreed DSO functionality. <p>Supports Objective 6</p> <p><i>Note – the implementation plan is likely to cover DSO functionality for DER services. Any input to policy makers for regulatory change or Implementation would be part of Phase 3.</i></p>	<p>Nov 18 – Dec 18 (Low Resources) Nov 18 – Dec 18 (Low Resources)</p>	<p>Publish plan and support Ofgem in ongoing decision making.</p>	<p>SG Review & Approval</p>	<p>Present Plan(s) to AG</p>

7.3 Workstream Resource Requirements

This section includes initial network operator resource estimates to deliver Products 1 to 8. This is based on the same “Low”, “Medium”, “High” methodology described in section 5.3.

Overall, the proposed Workstream 3 plan includes 11 “Low” resource, 10 “Medium” resource and 1 “High” resource sub-product.

7.4 Workstream Assumptions

The key assumptions for Workstream 3 are noted below.

Resources

- Sufficient resources will be deployed by each of the ENA member organisations to deliver the products in the timescales defined.
- Named resources will be identified by each of the ENA member organisations and these will be allocated in product working groups. This has been completed for Product 1.
- Additional resources from the ENA member organisations may be engaged from time to time to provide subject matter expertise on more specialised knowledge areas. The extent to which members build in-house SGAM capability will bear upon ENA member resource requirements.
- Consultancy support is likely to be re-engaged to deliver the additional models referenced under Product 2.
- An external consultancy will be engaged to provide support the Impact Assessment (Product 4).

Scope

- The scope of Workstream 3’s activities through Phase 2 will align with the Product descriptions in section 7.2.
- Product 1 (SGAM Modelling of DSOs and DER Procurement) and Product 2 (Further DSO Modelling) require further review with Workstream 1 leads to draw on the detailed process work that has been carried out.
- Areas of scope that are less well defined at this stage are Product 6 (extent of Key Enablers for DSO) and Product 7 (Further Trials to Address Gaps in DSO Functionality).

Network Operator Roles

- Network Operators will recommend preferred DSO model elements and propose an implementation plan based on the work carried out through the Open Networks project.
- In developing Workstream 3 products, the work starts from the position that functionality is developed through existing DNO organisations. However, it is recognised that different DSO structures are possible, for example, new parties may deliver aspects of DSO functionality and this decision will ultimately be made by Ofgem and or government
- No assumptions have been made about IDNOs in terms of role development.

Existing Statutory and Regulatory Policy

- It is recognised that existing energy systems policy is developing and, over the next few years, this may change in areas that impact the scope of the Open Networks project. Workstream 3 will seek to make progress against the existing energy systems policy and framework. Where longer term solutions are being considered, work will not be constrained by existing policy as it is assumed that this may evolve.
- It is assumed that BEIS and Ofgem will engage to address relevant statutory and regulatory gaps that are demonstrated to be key to DSO implementation.

8 Workstream 4 – Charging

8.1 Workstream Objectives

The Phase 2 objectives are to:

- Support Ofgem’s CFF and taskforces to help steer existing and future industry charging reviews and work led by Ofgem
- Support Ofgem’s CDB in translating the results from the CFF into manageable actions and ensuring their delivery
- Provide continued input and support to SCR TCR to inform CFF on reforms required for network residual charges
- Provide support on charging to the wider Open Networks project
- Develop recommendations to remove inefficient signals in charging and remuneration of TSO/DSO services such that customers and flexibility providers are presented with a level playing field whilst ensuring whole system cost reflectivity (rather than focusing on individual licensed parties) to deliver the best value for customers.

8.2 Workstream Products, Dependencies & Schedule

Visibility of the scope of work and timing is not yet available and is dependent on the outcomes from the CFF, CDB and SCR TCR.

ENA are to act as secretariat for the first two Task Forces under CFF and this will be supported with secretariat support, as well as project management to drive a focus on delivery of products. There is an ENA commitment to resource to support this work.

The workstream products will be defined as outputs become available from these reviews.

8.3 Workstream Assumptions

Resources

- Resources will be deployed to deliver the products in the timescales defined.
- For resource planning, it has been assumed that the requirements will be greater in the period up to the end of May 2018 as per the timetable given in Ofgem’s working paper “Reform of electricity network access and forward-looking charges”. Up to April, 6 full-time equivalent resources are assumed across the network operators. After May, this is reduced to 3 full-time equivalent resources.

9 Workstream 5 – Communications

9.1 Workstream Objectives

To use a combination of public affairs, press, social media and direct engagement to raise stakeholder awareness of:

- The DSO transition and its importance through Open Networks Project
- The opportunities for stakeholders to engage with the Project
- The role network operators are playing in laying the foundations for the UK's smart electricity grid.

9.2 Workstream Products, Dependencies & Schedule

Ref	Product	Timeline/ frequency	Target audience
1	ENA organised breakfast briefing events, to be held at ENA 's offices	Quarterly – up to 4 a year	Energy sector, think-tanks, policymakers, trade & national media
2	ENA sponsored Westminster panel events, to be held at external venues and in partnership with appropriate external organisations	Quarterly – up to 4 a year	Energy sector, think-tanks, policymakers, Government, MPs & researchers, trade & national media
3	Webinars to provide opportunities for the wider stakeholder community to feed into appropriate Open Networks consultations and products.	In line with Workstream consultations and product timelines	Energy sector, policymakers
4	Content for PR/PA work (e.g. think-tank research, polling) to help create media stories on Open Networks related issues	3 per year	Energy industry, think-tanks, policymakers, Government, MPs & researchers, trade & national media
5	Online media-buying (advertising) to promote Open Networks events, webinars & consultations on key websites (e.g. trade press)	Co-ordinated around key announcements	Energy industry, think-tanks, policymakers, Government, MPs & researchers, trade & national media
6	Human resource for Workstream 5 delivery – either an individual employed on a part-time fixed-term contract or through an appropriate level of agency support	Up to 3 days a week, 6-12 month contract	Energy sector, think-tanks, policymakers, Government, MPs & researchers, trade & national media
7	'Drop-in' stand/exhibition at industry	Up to 5 a year	Energy industry, think-tanks, policymakers
8	Social media collateral (animations, infographics) to promote Open Networks	Quarterly – up to 4 14 day campaigns a year. Material repurpose and reused in addition to that	Energy industry, think-tanks, policymakers, Government, MPs & researchers, trade & national media
9	Communications and engagement strategy development	Annual	ENA, ENA members, ON Steering Group

9.3 Workstream Assumptions

Planning

Planning will be based around Project milestones once they have been agreed by the Steering Group. This will determine the exact time, nature and frequency of the deployment of resources. Those resources included here would lead to a significant increase in activity under Workstream 5, compared to 2017.

ENA members

ENA will work with individual member companies to use their own communications activity to promote Open Networks as set out.

ENA Press & Public Affairs Strategy

Open Networks is one of three Strategic Projects as part of ENA's Press & Public Affairs Strategy, as agreed by ENA's Public Affairs Committee. It therefore forms a key part of ENA's wider communications activity.

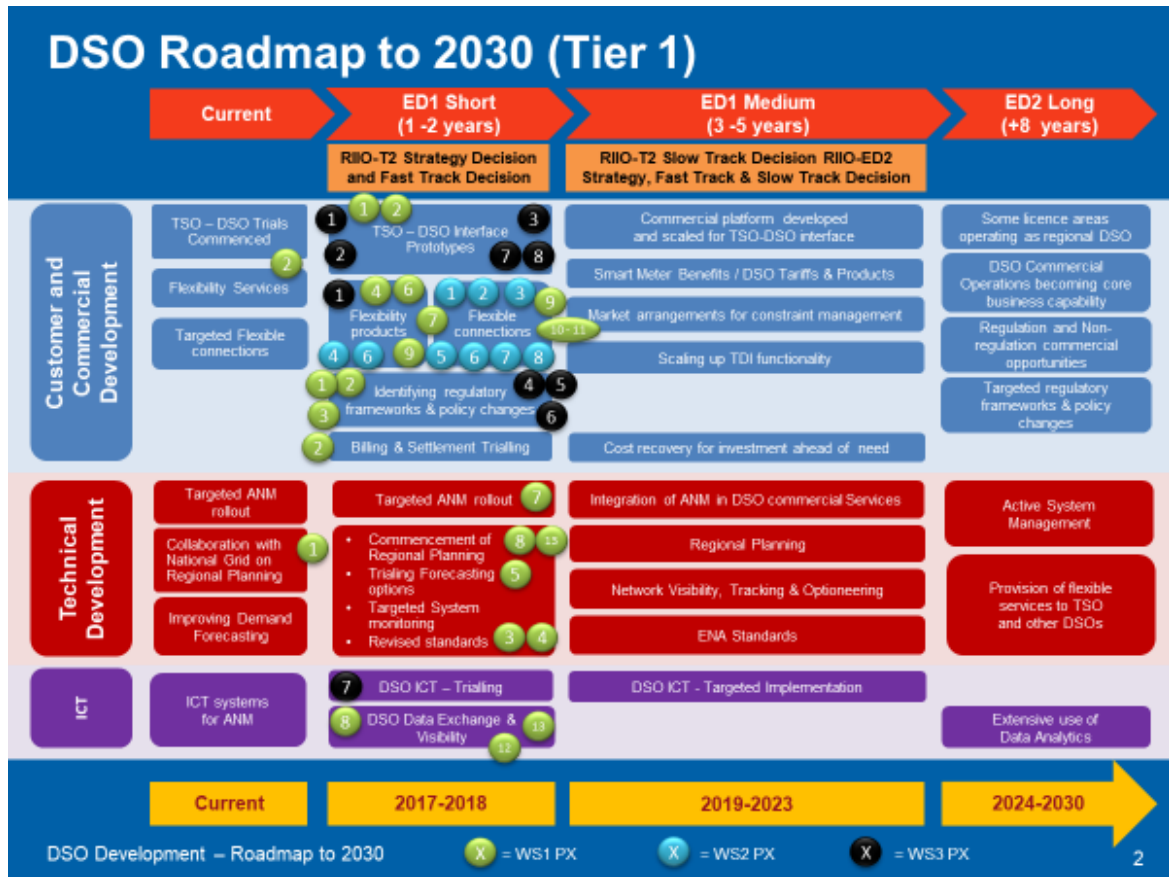
Oversight

Workstream 5 will continue to be overseen by a sub-committee of ENA's Public Affairs Committee. The Chair of Workstream 5 and ENA's Head of Press & Public Affairs will continue to report on the progress of Workstream 5 to the Open Networks steering group on a monthly basis.

10 Alignment with DSO Roadmap

A mapping exercise was undertaken to see where the products identified above fit within the DSO Road map that was completed in 2017 by Workstream 3 DSO Transition.

Overall, a good coverage across the ED1 Short term activities was observed. Below is a graphical representation of the mapping:



We recognise that this is a snapshot as now – the Roadmap will develop over time.

11 Costs and Resources

11.1 ENA Member Resource

As explained in Section 3, the groups within the project will predominantly be made up of ENA Member resource to work on the project products. We are assuming that there is no recharge for any resource from ENA Members working on the project.

12 Risks, Assumptions, Issues & Dependencies

12.1 Introduction

Risks, Assumptions, Issues & Dependencies (RAID) will be defined and become a living log to be regularly updated and reviewed.

12.2 Assumptions

Key assumptions for each workstream are highlighted in sections 5-9 of this document.

- Phase 2 will require increased resources (approximately double as set out above) compared to Phase 1.
- Phase 2 will require increased interaction between workstreams and product teams to ensure that work is delivered efficiently. Additional workstream to workstream interfacing is being built into the work plan.
- Our Public Consultation will include a clear description of each workstream and how the workstreams fit together to deliver overall objectives

12.3 Issues

Key issues are managed with the Steering Group.

12.4 Dependencies

Key dependencies as identified at the point of drafting the PID are:

- FPSA.
- European initiatives.
- Ofgem/BEIS Smart Systems and Flexibility Plan
- Ofgem CFF, CDB & TCR SCR

These are covered in more detail in section 2 of this document.

12.5 Risks

Risks will be updated and actively managed in a risk register as for Phase 1.