

## Appendix 3 – Investment Planning (March 2021)

### Structure of the Appendix

This Appendix provides an initial overview of the Function, including the snapshot of the roadmap of the Function and some key statistics.

We then go through each activity and the unique steps that sit under the activity. With the term “unique” we indicate all Common Steps aggregated at organisation level, where possible, as well as steps which aggregate Individual Steps (see section 2.7.2 of the main document for reference).<sup>1</sup>

We provide a summary table of each step which includes all the associated information as of the date of this publication. The fields of the table are explained below:

Step	Name of the step as included in the DSO Roadmap
<b>Step type:</b>	<i>Development / definition activity or network action or code change process or enabler/dependency.</i>
<b>Description:</b>	<i>Description of the step as included in the DSO Roadmap</i>
<b>ENA ONP Product:</b>	<i>Only relevant for steps which are associated to an ENA ONP Product.</i>
<b>Timeline:</b>	<i>Start date and completion date of the step. For aggregated steps, start date shows the earliest start date of the responses and completion date the latest completion date of the responses.</i>
<b>Organisation type:</b>	<i>Involved organisations who are responsible for delivering this step. If the step type is “Code change process”, then a delivery body which consists of a number of stakeholders (DNOs, Ofgem, TOs, ESO), is responsible for the code change process. In this case the step is allocated to the “Delivery body”.</i>
<b>Progress:</b>	<i>This field shows the number of organisations in each implementation level.</i>
<b>Additional information:</b>	<i>Additional information such as barriers, dependencies, good practices and links to public information is included in this field.</i>

**Table 1 – Step table template, definition of the fields**

### Function 3

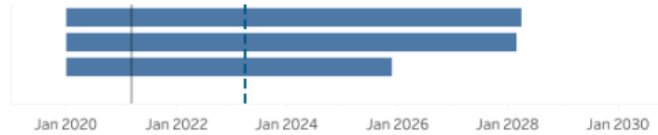
Function 3 – Investment Planning consists of 64 unique steps, some of which are common across DNOs, T.E.F. projects and TOs or duplicated across different activities of this function. We received in total 225 contributions by the involved stakeholders (i.e. 225 steps by all organisations, which were aggregated to 64 unique steps, where possible).

As of March 2021, Figure 1 shows that the roadmap of the “Investment Planning” Function will be completed by 2028. Please note that timescales are only relevant to steps that have been planned or being implemented by the involved organisations. There are no dates for steps that are at conceptual level, meaning that the organisations plan to implement the step, but they do not know the timescale of the implementation (please refer to section 2.7.3 of the main document for reference).

<sup>1</sup> If a step is relevant to the wider industry, it is called Common Step. A step which is required for individual organisation to implement DSO functionality is called Individual Step. Individual steps are aggregated into a single generic step combining all individual network actions and described only at a high-level, anonymised basis.

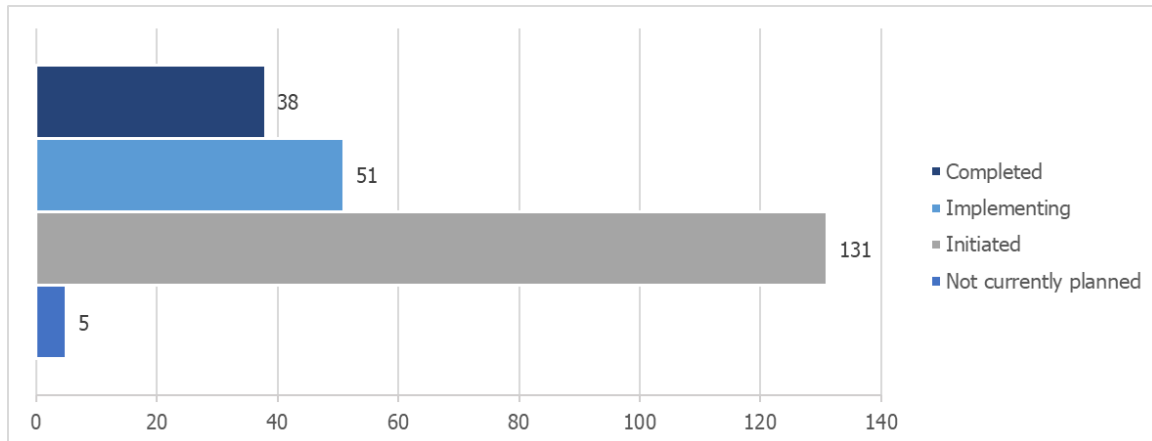
**Activity**

- A. Traditional investment planning
- B. Whole system planning
- C. Non-traditional investment planning
- D. Security of supply (D&G)



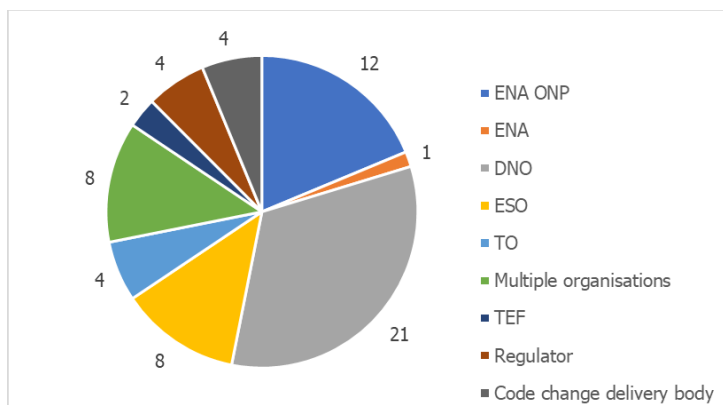
**Figure 1 Investment Planning Roadmap**

Figure 2 shows the total number of organisations' contributions to the unique steps. Most steps (~58%) of this function are in the organisations' pipeline to implement but have not started yet ("Initiated"). Around 17% (38) of steps have been completed and another 23% (51) is being implemented.



**Figure 2 Progress against implementation of "Investment Planning" Function (No. of steps-contributions of each organisation)**

Figure 3 shows the number of unique steps per involved organisation type in the "Investment Planning" Function. Most steps (2) are led by DNOs, with 8 steps being ESO-led only. Eight steps (9%) of the steps involve multiple organisations, whilst TOs are leading 4 steps in this Function. 4 steps are associated with code change processes. Details can be viewed in the Activities' sections below.



**Figure 3 Steps per organisation type in Function 3**

## Activity A: Traditional investment planning

Description: Offering connections and upgrades for new customers and for load growth based on the provision of network asset-based solutions.

Figure 4 illustrates the roadmap for activity A which consists of 15 unique steps:

### Activity: A. Traditional investment planning

Purpose of this activity:

Offering connections and upgrades for new customers and for load growth based on the provision of network asset based solutions.

Click on a bar for more information on the step. The "M" column identifies steps with additional progress information.

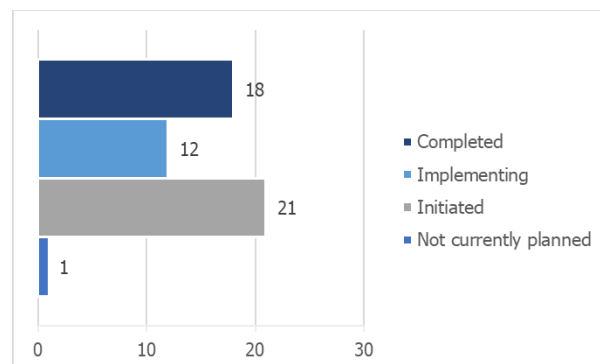
#### Step

1. Coordination of national and regional FES pha..
2. Coordination of national and regional FES pha..
3. Refine and standardise across T&D the devel..
4. Further Standardisation of Distribution FES A..
5. Produce and publish distribution FES
6. Enhance existing load models with DFES infor..
7. Further refine load models with data from alt..
8. Refine the methodology to forecast the costs ..
9. Ofgem Decision on Key Enablers and LTDS con..
10. LTDS Reform
11. Updated LTDS Implementation
12. Transmission Network planning information..
13. Enhance alignment and development of vari..
14. Enhance alignment and development of vari..
15. Support further alignment and development..



**Figure 4 Investment Planning – Activity A roadmap**

Figure 5 shows the total number of organisations' contributions to the unique steps. As of March 2021, c.a. 40% of the steps of this activity are in the organisations' pipeline to implement but have not started yet ("Initiated"). Over one third of the steps has already been completed and around one quarter of steps is under implementation.



**Figure 5 Progress against implementation of "Investment Planning" – Activity A (No. of steps-contributions of each organisation)**

The tables on the following pages provide detailed information for each step under Activity A.

### Step 1

Step	Coordination of national and regional FES phase 1
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	ENA ONP Workstream 1B Product 2 (2020) - phase 1 involves: (1) review and revise the "Building Blocks" (BB) once the information exchange process is completed for GB FES 2020; (2) Review and revise the T-D information exchange process.
<b>ENA ONP Product:</b>	2020 WS1B P2
<b>Timeline:</b>	January 2020 - October 2020
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Completed(1)
<b>Additional information:</b>	This is an ENA ONP-led step. This step will inform implementation of steps 2, 3 and 4. For more information, please see: <a href="#">ON20-WS1B-P2-Coordination of National and Regional FES-PUBLISHED.pdf (energynetworks.org)</a>

### Step 2

Step	Coordination of national and regional FES phase 2
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	ENA ONP Workstream 1B Product 2 (2020) - phase 2 involves: (1) review the need for licence and code changes to support data exchange and ongoing FES delivery; (2) assess and recommend options for further standardisation of Distribution FES and report on DNO implementation of Distribution FES.
<b>ENA ONP Product:</b>	2020 WS1B P2
<b>Timeline:</b>	June 2020 - October 2020
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Completed(1)
<b>Additional information:</b>	This is a continuation of step 1. See: <a href="#">ON20-WS1B-P2-Coordination of National and Regional FES-PUBLISHED.pdf (energynetworks.org)</a>

### Step 3

Step	Refine and standardise across T&D the development of future energy scenarios.
<b>Step type:</b>	Network actions
<b>Description:</b>	Implement further standardisation across T&D in order to facilitate information exchange between ESO and DNOs, and to establish a clearer link between national and regional FES. This step builds on work carried out in 2019 and continuing, into 2020 by WS1B, product 2 of ENA ONP. Network companies will agree on specific areas of standardisations which may include high-level assumptions, key building blocks, timelines and templates.
<b>ENA ONP Product:</b>	2020 WS1B P2
<b>Timeline:</b>	January 2020 - March 2023
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(2), Implementing(2), Completed(2)
<b>Additional information:</b>	This step is dependent on ENA ONP outcomes (steps 1 and 2). DNOs use different modelling and forecasting mythologies to implement the step, which may be different from ESO's approach. See: <a href="#">ON20-WS1B-P2-Coordination of National and Regional FES-PUBLISHED.pdf (energynetworks.org)</a>

#### Step 4

Step	Further Standardisation of Distribution FES Approach
<b>Step type:</b>	Network actions
<b>Description:</b>	Implement further standardisation of the agreed Distribution FES approach as per the outcome of ENA ONP Workstream 1B Product 2 (2020).
<b>ENA ONP Product:</b>	2020 WS1B P2
<b>Timeline:</b>	April 2020 - December 2020
<b>Organisation type:</b>	ESO(1)
<b>Progress:</b>	Completed(1)
<b>Additional information:</b>	This is a step for the ESO, linked to steps 1, 2, 3 and 4. For more information, please see: <a href="#">ON20-WS1B-P2-Coordination of National and Regional FES-PUBLISHED.pdf (energynetworks.org)</a>

#### Step 5

Step	Produce and publish distribution FES
<b>Step type:</b>	Network actions
<b>Description:</b>	All DNOs develop and publish their regional Future Energy Scenarios which provide a range of outlooks of generation and demand in their licensed according to technological, economic and political factors. The publication also provides an assessment of the resulting impact on the DNO's distribution network, highlighting areas that may need an intervention.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	January 2018 - March 2028
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Implementing(1), Completed(5)
<b>Additional information:</b>	This is a DNO-led step. DNOs produce and publish distribution FES, using internal processes and modelling.

#### Step 6

Step	Enhance existing load models with DFES information
<b>Step type:</b>	Network actions
<b>Description:</b>	Utilise scenarios and forecasts to create load projections and cascading down to low voltages of network.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	January 2018 - December 2021
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Implementing(1), Completed(5)
<b>Additional information:</b>	This is a DNO-led step, being delivered outside ENA ONP workstreams.

#### Step 7

Step	Further refine load models with data from alternative sources.
<b>Step type:</b>	Network actions
<b>Description:</b>	Supplement forecasting and scenario data with increased granularity from alternative sources e.g. smart metering data and LV monitoring data.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	January 2018 - December 2024
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(2), Implementing(3), Completed(1)
<b>Additional information:</b>	DNOs highlighted that smart-meter roll-out with high penetration rate is an enabler to this step. For some DNOs, this is an ongoing activity.

#### Step 8

Step	Refine the methodology to forecast the costs driven by new connections
<b>Step type:</b>	Network actions
<b>Description:</b>	The investment need driven by new connections (i.e. the cumulative shared cost part of a connection quote) will be significantly affected by new connection boundaries as defined by Access SCR (new rules will apply) and by the decarbonisation agenda (very likely driving volume levels higher than past run rate). As a result, our methodology to assess this specific investment needs adapting in time for ED2 plan submission.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	August 2019 - December 2023
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(5), Implementing(1)
<b>Additional information:</b>	This is a DNO-led step and is dependent on developments of SCR Network Access (see Function 8 for details).

#### Step 9

Step	Ofgem Decision on Key Enablers and LTDS consultation
<b>Step type:</b>	Enablers / Dependencies / Barriers
<b>Description:</b>	Ofgem has published a consultation on key enablers for the distribution system operation work programme, specifically including questions on the reform of the Long Term Development Statement (LTDS) in December 2019. This consultation is currently closed with Ofgem's decision on the next steps anticipated for summer 2020.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	February 2020 - October 2020
<b>Organisation type:</b>	Regulator(1)
<b>Progress:</b>	Completed(1)
<b>Additional information:</b>	Ofgem-led step which will inform steps 10 and 11. Information on LTDS Reform in the link below: <a href="https://www.ofgem.gov.uk/publications-and-updates/key-enablers-dso-programme-work-and-long-term-development-statement0">https://www.ofgem.gov.uk/publications-and-updates/key-enablers-dso-programme-work-and-long-term-development-statement0</a>

#### Step 10

Step	LTDS Reform
<b>Step type:</b>	Code change process
<b>Description:</b>	A working group and a delivery body will coordinate to provide the updated LTDS, which will involve a new form and content, as well as updated obligations for licencees.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	September 2020 - April 2023
<b>Organisation type:</b>	
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	This is a code change process which will be informed by Ofgem's decision on LTDS (see step 9). A delivery body with industry stakeholders will be responsible for delivering this step. The timeline indicates the expected delivery dates as per Ofgem.

#### Step 11

Step	Updated LTDS Implementation
<b>Step type:</b>	Network actions
<b>Description:</b>	Ofgem (through the relevant working group and delivery body) is scheduled to complete the reform of the LTDS by 2023. Implementation by DNOs is anticipated to take place during the RIIO-ED2 price control period.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	April 2021 - April 2028
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(6)
<b>Additional information:</b>	Implementation of this step depends on steps 9 and 10.

#### Step 12

Step	Transmission Network planning information exchange
<b>Step type:</b>	Network actions
<b>Description:</b>	Review and query distribution network planning data as well as long term investment plan for network infrastructure development. Identifying and defining options based on past and estimated future network planning and operating conditions for boundary capability assessment and infrastructure development. Including submitting and receiving (W17) and (W24) network planning data
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	November 2019 - March 2021
<b>Organisation type:</b>	TO(3)
<b>Progress:</b>	Initiated(1), Implementing(1), Completed(1)
<b>Additional information:</b>	This is a step common across the 3 TOs. Although processes are in place, as per TOs, re-assessment will be required for DSO transition.



### Step 13

Step	Enhance alignment and development of various Future Energy Scenarios
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	2021 WS1B P9 will build on work of 2020 to improve the publication of DNO DFES, to develop a Best View Forecast (aligned to DFES and suitable for LTDS, week 24/42 submissions and the new NDP process) and facilitate further alignment across various FES (e.g. DFES, GB FES) and standardisation of DFES publications by DNOs.
<b>ENA ONP Product:</b>	2021 WS1B P9
<b>Timeline:</b>	January 2021 - July 2021
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

### Step 14

Step	Enhance alignment and development of various Future Energy Scenarios
<b>Step type:</b>	Network actions
<b>Description:</b>	DNOs to implement improvements that will be identified by 2021 WS1B P2, update their processes and development of DFES , align approach on Best View Forecast with other publications (e.g. LTDS, NDP and week 24/42) and improve DFES quality and consistency.
<b>ENA ONP Product:</b>	2021 WS1B P2
<b>Timeline:</b>	January 2021 - April 2022
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Not currently planned(1), Initiated(4), Implementing(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

### Step 15

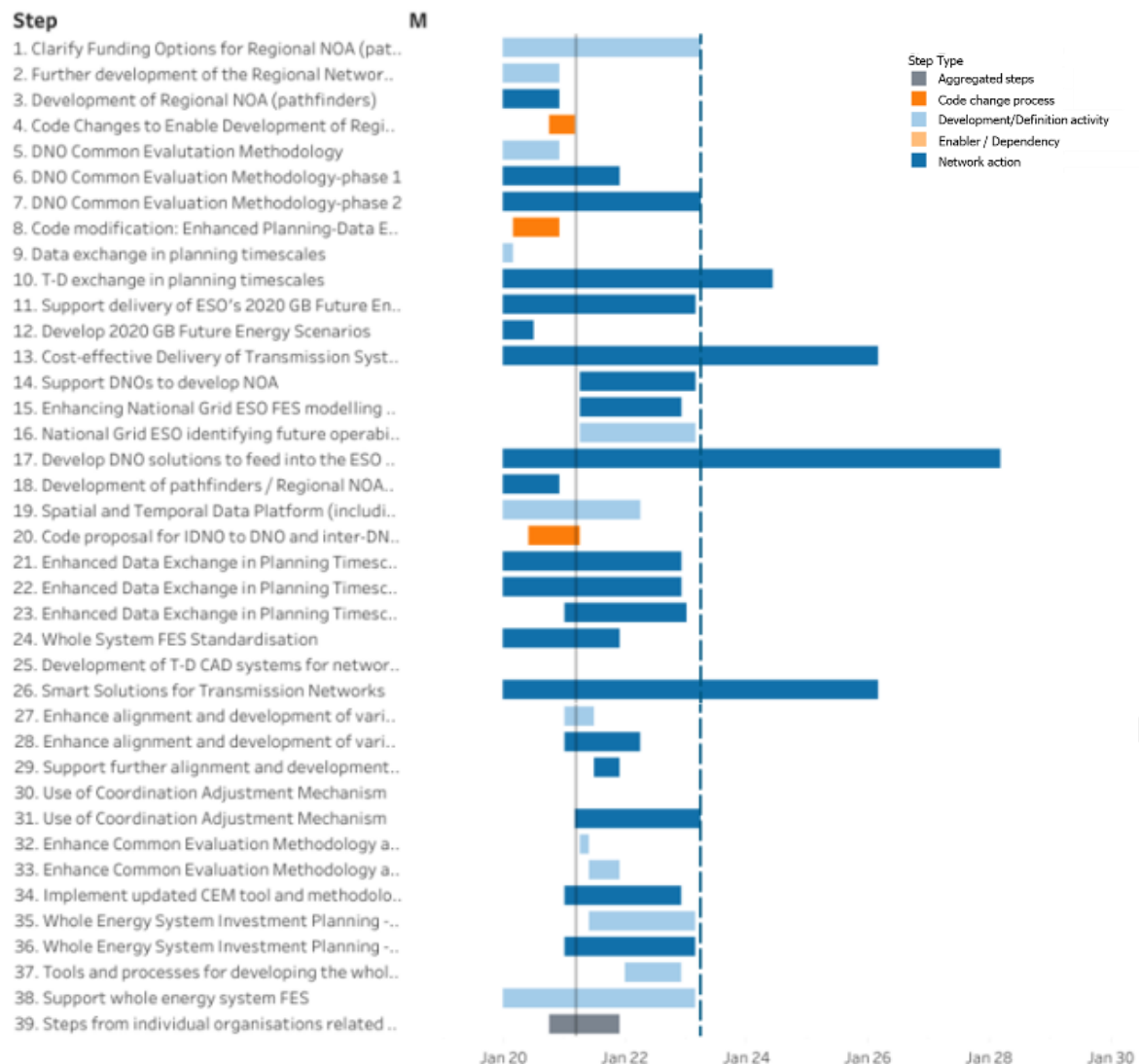
Step	Support further alignment and development of various Future Energy Scenarios
<b>Step type:</b>	Network actions
<b>Description:</b>	ESO to continue supporting development of DFES to enhance alignment and consistency across DFES and GB FES.
<b>ENA ONP Product:</b>	2021 WS1B P2
<b>Timeline:</b>	January 2021 - December 2021
<b>Organisation type:</b>	ESO(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>



## Activity B: Whole system planning

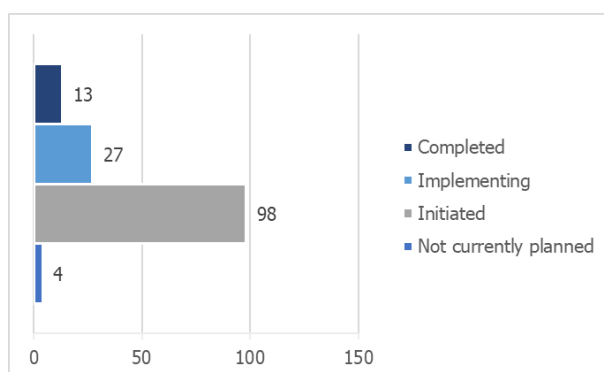
Description: Coordinate with the GB System Operator and Transmission Owners to determine the most efficient options for whole system optimisation.

Figure 6 illustrates the roadmap for activity B which consists of 39 unique steps:



**Figure 6 Investment Planning – Activity B roadmap**

Figure 7 shows the total number of organisations' contributions to the unique steps. As of March 2021, approximately 70% of the steps of this activity are in the organisations' pipeline to implement but have not started yet ("Initiated"). One fifth of the steps is being implemented and around 10% of steps have been completed. 4 steps are not currently planned for implementation by the relevant organisation. Details are included in the tables below.



**Figure 7 Progress against implementation of "Investment Planning"– Activity B (No. of steps-contributions of each organisation)**

The tables on the following pages provide detailed information for each step under Activity B.

#### Step 1

Step	Clarify Funding Options for Regional NOA
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	The ENA's Electricity Regulation Managers Group (ERG) to clarify funding options for development of regional network options assessment (NOA) methodology with Ofgem as part of Ofgem's RIIO-2 stakeholder engagement. Regional NOA methodology options have been previously developed in ENA ONP Workstream 1 Product 1 (2018).
<b>ENA ONP Product:</b>	2019 WS1B P1
<b>Timeline:</b>	January 2020 - April 2023
<b>Organisation type:</b>	Regulator(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	More information on this step and its link to 2019 WS1B P1 can be found below. This step is dependent on RIIO-2 framework and will be delivered outside ENA ONP. <a href="https://www.energynetworks.org/industry-hub/resource-library/open-networks-2018-ws1-p1-investment-planning-processes-and-approach.pdf">https://www.energynetworks.org/industry-hub/resource-library/open-networks-2018-ws1-p1-investment-planning-processes-and-approach.pdf</a>

#### Step 2

Step	Further development of the Regional Network Options Assessment (NOA) methodology
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	ENA ONP Workstream 1B Product 1 (2020) continued further development of the Regional Network Options Assessment (NOA) methodology. This will facilitate the assessment of a full range of build, non-build and flexibility solutions. The product will also consider the need for potential updates to the EREP Guideline to Whole System Investment planning (if required) and propose changes in governance (codes, licence, regulations).
<b>ENA ONP Product:</b>	2020 WS1B P1
<b>Timeline:</b>	January 2020 - December 2020
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Completed(1)
<b>Additional information:</b>	This step will inform network actions and is linked to steps 3, 4, 17 and 18 of this activity. See: <a href="#">ON20-WS1B-P1 EoY Update-PUBLISHED.23.12.20.pdf (energynetworks.org)</a>

### Step 3

Step	Development of Regional NOA
<b>Step type:</b>	Network actions
<b>Description:</b>	Monitor ongoing flexibility tenders (NGESO pathfinders), review learning and update CBA methodology accordingly and where necessary.
<b>ENA ONP Product:</b>	2020 WS1B P1
<b>Timeline:</b>	January 2020 - December 2020
<b>Organisation type:</b>	ESO(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	This is an ESO-led step which will inform step 3 and DNOs' actions (step 17 and 18 of this activity) <a href="#">ON20-WS1B-P1 FoY Update-PUBLISHED.23.12.20.pdf (energynetworks.org)</a>

### Step 4

Step	Code Changes to Enable Development of NOA
<b>Step type:</b>	Code change process
<b>Description:</b>	Support code change process for implementation of Regional NOA methodology if required.
<b>ENA ONP Product:</b>	2020 WS1B P1
<b>Timeline:</b>	October 2020 - March 2021
<b>Organisation type:</b>	
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	It is likely that a code change process will be required. This step is dependent on ENA ONP WS1B Product 1 – Investment Planning outcomes (see step 1 and 2). <a href="#">ON20-WS1B-P1 FoY Update-PUBLISHED.23.12.20.pdf (energynetworks.org)</a>

### Step 5

Step	DNO Common Methodology for ANM vs Reinforcement vs Flexibility Services
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	ENA ONP Workstream 1A Product 1 (2020) delivers a common methodology across DNOs for how they choose between Active Network Management (ANM) vs Reinforcement vs Flexibility Services to meet network needs, including a Cost Benefit Analysis of the different options. This includes the development a common flexibility valuation methodology as part of that decision-making methodology, ensuring consistency and transparency in approach.
<b>ENA ONP Product:</b>	2020 WS1A P1
<b>Timeline:</b>	January 2020 - December 2020
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Completed(1)
<b>Additional information:</b>	This step will provide inputs for implementation by DNOs (steps 6 and 7). For more information on this ENA ONP-led step please see: <a href="#">ENA Common Evaluation Methodology v1.0 (energynetworks.org)</a>

### Step 6

Step	DNO Common Methodology for ANM vs Reinforcement vs Flexibility Services - Implementation Phase 1
<b>Step type:</b>	Network actions
<b>Description:</b>	Implement ANM vs Flexibility vs reinforcement common methodology as per ENA ONP Workstream 1A Product 1 (2020). Phase 1 will be completed within ED1 with the adoption of the recommendations by the DNOs. Exact timing may vary between DNOs depending on when they are best placed to facilitate change without disrupting existing procurement cycles. This product will be an input to RIIO-ED2 business planning.
<b>ENA ONP Product:</b>	2020 WS1A P1
<b>Timeline:</b>	January 2020 - December 2021
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(6)
<b>Additional information:</b>	This step depends on ENA ONP development activity – step 5. As per DNOs, funding mechanisms by Ofgem will also be a key input on DNOs' processes to choose between Flexibility Reinforcement and ANM. For more information on this step please see: <a href="https://www.energynetworks.org">ENA Common Evaluation Methodology v1.0 (energynetworks.org)</a>

#### Step 7

Step:	DNO Common Methodology for ANM vs Reinforcement vs Flexibility Services - Implementation Phase 2
<b>Step type:</b>	Network actions
<b>Description:</b>	Implement ANM vs Flexibility vs reinforcement common methodology as per ENA ONP Workstream 1A Product 1 (2020). Phase 2 involves the implementation of the recommendation and the methodology within ED2. Exact timing may vary between DNOs depending on when they are best placed to facilitate change without disrupting existing procurement cycles. This product will be an input to RIIO-ED2 business planning.
<b>ENA ONP Product:</b>	2020 WS1A P1
<b>Timeline:</b>	January 2020 - April 2023
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(6)
<b>Additional information:</b>	This step is a continuation of step 6 and depends on outcomes of the ENA ONP development activity – step 5. As per DNOs, funding mechanisms by Ofgem will also be a key input on DNOs' processes to choose between Flexibility Reinforcement and ANM. Other key areas to be considered when DNOs implementing this step are changes to Ofgem CBA for ED2 and future methodological changes agreed with Ofgem (e.g. carbon assessment and option pricing). For more information on this step please see: <a href="https://www.energynetworks.org">ENA Common Evaluation Methodology v1.0 (energynetworks.org)</a>

#### Step 8

Step	Code modification: Enhanced Planning-Data Exchange to Facilitate Whole System Planning
<b>Step type:</b>	Code change process
<b>Description:</b>	This code modification (GC0139) is linked to ENA ONP Workstream 1B Product 4 (2020) and will allow codification to increase week 24/42 data exchange requirements between TOs, DNOs and the ESO. This will allow more comprehensive whole electricity system data studies and analysis.
<b>ENA ONP Product:</b>	2020 WS1B P4

<b>Timeline:</b>	March 2020 - December 2020
<b>Organisation type:</b>	
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	<p>This Code Modification has been identified by the ENA ONP WS1B P4. The GC0139 workgroup is now considering as part of the scope of the modification the introduction of CIM.</p> <p>More information on this modification can be found below:  <a href="https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0139-enhanced-planning-data-exchange">https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0139-enhanced-planning-data-exchange</a>  and  <a href="#">Open Networks Project Phase 2 2018 Project Initiation Document (energynetworks.org)</a></p>

#### Step 9

Step	Data exchange in planning timescales
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	ENA ONP Workstream 1B Product 4 (2020) seeks to complete network code proposals, support code working groups, and to deliver a scoping report for future data exchange methodologies including the Common Information Model (CIM).
<b>ENA ONP Product:</b>	2020 WS1B P4
<b>Timeline:</b>	January 2020 - March 2020
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Completed(1)
<b>Additional information:</b>	<p>This is a development activity that will inform implementation of step 10. For more information on this step please refer to 2020 PID:  <a href="#">Open Networks Project Phase 2 2018 Project Initiation Document (energynetworks.org)</a></p>

#### Step 10

Step	T-D exchange in planning timescales
<b>Step type:</b>	Network actions
<b>Description:</b>	Update Transmission-Distribution data exchange processes as per ENA ONP Workstream 1B Product 4 (2020) recommendations and proposed data transfer mechanisms (including CIM).
<b>ENA ONP Product:</b>	2020 WS1B P4
<b>Timeline:</b>	January 2019 - June 2024
<b>Organisation type:</b>	DNO(6), ESO(1), TO(3)
<b>Progress:</b>	Initiated(6), Implementing(4)
<b>Additional information:</b>	<p>This is a step which involves all network companies. The step is driven by ENA ONP developments, and particularly step 9 and is dependent on the GC0139 Code Modification (step 8). Network companies are also implementing internal processes to support this action (e.g. updating network modelling). For more information on this step please refer to 2020 PID:  <a href="#">Open Networks Project Phase 2 2018 Project Initiation Document (energynetworks.org)</a></p>

## Step 11

Step	Support delivery of ESO's 2020 GB Future Energy Scenarios
<b>Step type:</b>	Network actions
<b>Description:</b>	Support the ESO with the 2020 delivery of Whole Electricity System Future Energy Scenarios (GB FES) through standardised information exchange processes and templates. Informed by outcomes from ENA ONP Workstream 1B Product 2 (2019).
<b>ENA ONP Product:</b>	2019 WS1B P2
<b>Timeline:</b>	September 2019 - March 2023
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(1), Implementing(2), Completed(3)
<b>Additional information:</b>	This is a step originally linked to the ENA ONP 2019 WS1B P2. Although the description of the step refers to 2020 GB FES, it is expected that DNOs will continue to support ESO in the delivery of GB FES. For more information please see the document below: <a href="https://www.energynetworks.org/industry-hub/resource-library/open-networks-2019-ws1b-p2-whole-systems-fes-end-of-year-report.pdf">https://www.energynetworks.org/industry-hub/resource-library/open-networks-2019-ws1b-p2-whole-systems-fes-end-of-year-report.pdf</a>

## Step 12

Step	Develop 2020 GB Future Energy Scenarios
<b>Step type:</b>	Network actions
<b>Description:</b>	Liaise with the DNOs through standardised information exchange processes and templates, to inform the development of 2020 Whole Electricity System Future Energy Scenarios (GB FES). Informed by outcomes from ENA ONP Workstream 1B Product 2 (2019).
<b>ENA ONP Product:</b>	2019 WS1B P2
<b>Timeline:</b>	January 2020 - July 2020
<b>Organisation type:</b>	ESO(1)
<b>Progress:</b>	Completed(1)
<b>Additional information:</b>	This is part of ESO's Business-As-Usual (BAU) activities. This step mainly refers to GB FES enhancements, following information exchange between the ESO and DNOs. See: <a href="https://www.energynetworks.org/industry-hub/resource-library/open-networks-2019-ws1b-p2-whole-systems-fes-end-of-year-report.pdf">https://www.energynetworks.org/industry-hub/resource-library/open-networks-2019-ws1b-p2-whole-systems-fes-end-of-year-report.pdf</a>

## Step 13

Step	Cost-effective Delivery of Transmission System Needs.
<b>Step type:</b>	Network actions
<b>Description:</b>	Through the pathfinder projects, the ESO is working with TOs, DNOs and service providers to establish methods to identify the most cost-effective approach to addressing transmission system needs. As such the ESO is continuing work to consider whole electricity system options to meet transmission system voltage needs in the Mersey and Pennines regions, similarly progressing work through pathfinders for stability and thermal congestion needs.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	January 2019 - March 2026
<b>Organisation type:</b>	ESO(1), TO(3)
<b>Progress:</b>	Initiated(1), Implementing(3)
<b>Additional information:</b>	This is a step which involved the ESO and the 3 TOs. The Pathfinder projects are relevant for this step and are currently underway.

#### Step 14

Step	Support DNOs to develop NOA
<b>Step type:</b>	Network actions
<b>Description:</b>	Supporting decision-making for investment at a distribution level
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	April 2021 - March 2023
<b>Organisation type:</b>	ESO(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	ESO-led step. It is linked to steps 17 and 18 below.

#### Step 15

Step	Enhancing National Grid ESO FES modelling to better account for more granular information
<b>Step type:</b>	Network actions
<b>Description:</b>	Deepen relationships & co-ordination with DNOs and TOs as they embed their own regional future scenarios. Develop more granular models for future energy scenarios (FES) enabling publication of further data, analysis and insights. This will involve replacing ESO's current electricity demand model with a whole system modelling by early 2023.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	April 2021 - December 2022
<b>Organisation type:</b>	ESO(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	ESO-led step, included in the RIIO-2 business plan: <a href="https://www.nationalgrideso.com/document/158051/download">https://www.nationalgrideso.com/document/158051/download</a>

#### Step 16

Step	National Grid ESO identifying future operability needs for the transmission system
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	Develop future system operability needs across the whole energy system through new innovation projects
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	April 2021 - March 2023
<b>Organisation type:</b>	ESO(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	ESO-led step, included in the RIIO-2 business plan: <a href="https://www.nationalgrideso.com/document/158051/download">https://www.nationalgrideso.com/document/158051/download</a>



#### Step 17

Step	Develop DNO solutions to feed into the ESO NOA process.
<b>Step type:</b>	Network actions
<b>Description:</b>	DNOs to develop solutions to constraints on the transmission network as part of the ESO's NOA process e.g. solutions currently being trialled under the Pathfinder project.
<b>ENA ONP Product:</b>	2020 WS1B P1
<b>Timeline:</b>	January 2018 - March 2028
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(3), Implementing(2), Completed(1)
<b>Additional information:</b>	<p>This step will be informed by ESO'S Pathfinder project and is also linked to ENA ONP product 1, 2020 WS1B. Implementation of this step will continue within RIIO-ED2 period. A number of workstreams and activities are relevant to this step. As per DNOs, implementation of this step requires further clarification on how funding will be allocated where DNOs are providing services for transmission related constraints.</p> <p>For more information on the step, please see:  <a href="#">ON20-WS1B-P1 EoY Update-PUBLISHED.23.12.20.pdf</a>  <a href="#">(energynetworks.org)</a></p>

#### Step 18

Step	Development of Regional NOAs for distribution and transmission network needs.
<b>Step type:</b>	Network actions
<b>Description:</b>	Continued development of Regional NOAs to facilitate whole system options for resolving regional constraints on either the distribution or transmission networks.
<b>ENA ONP Product:</b>	2020 WS1B P1
<b>Timeline:</b>	January 2020 - December 2020
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Not currently planned(1), Initiated(5)
<b>Additional information:</b>	<p>This step will be informed by ESO'S Pathfinder project and is also linked to ENA ONP product 1, 2020 WS1B. Although existing timeline is extended to Dec. 2020, it is worth noticing that for most DNOs the implementation of this step is at primary stage and therefore implementation dates are unknown. One of the DNOs is not planning to implement this step yet as they consider that existing process are sufficient for the current needs.</p> <p>For more information on ENA ONP product related to this step, please see:  <a href="#">ON20-WS1B-P1 EoY Update-PUBLISHED.23.12.20.pdf</a>  <a href="#">(energynetworks.org)</a></p>

#### Step 19

Step	Spatial and Temporal Data Platform (including API)
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	T.E.F., specifically Project LEO via TRANSITION, will design and build a data platform for Oxfordshire. This will combine certain network datasets with local area planning, investment program, LV connected LCT and EV datasets to name but a few. The intention is to explore value and opportunities from such data, producing requirements for future wider adoption. Not DNO or ESO owned, but could be a notable input into true whole system planning. To be shared and discussed with ENA ONP Workstream 4 in due course.

<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	August 2019 - April 2022
<b>Organisation type:</b>	TEF(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	This is a TRANSITION-led development activity. More information on projects TRANSITION and LEO below: <a href="https://ssen-transition.com/">https://ssen-transition.com/</a> <a href="https://ssen-transition.com/dso/leo/">https://ssen-transition.com/dso/leo/</a>

#### Step 20

Step	Code proposal for IDNO to DNO and inter-DNO data exchange
<b>Step type:</b>	Code change process
<b>Description:</b>	This code modification proposal (DCRP/MP/20/04 ) is linked to ENA ONP Workstream 1B Product 4 (2020) and will ensure IDNO to DNO and inter-DNO data exchange ensuring a full data set. This will facilitate both improved distribution network and transmission system planning.
<b>ENA ONP Product:</b>	2020 WS1B P4
<b>Timeline:</b>	June 2020 - April 2021
<b>Organisation type:</b>	
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	This code modification has not started yet and is linked to the specified ENA ONP product. For more information on the product please see link below to the 2020 PID: <a href="https://www.energynetworks.org/industry-hub/resource-library/open-networks-2020-prj-phase-4-pid-post-consultation.pdf">https://www.energynetworks.org/industry-hub/resource-library/open-networks-2020-prj-phase-4-pid-post-consultation.pdf</a>

#### Step 21

Step	Enhanced Data Exchange in Planning Timescales - CIM Phase 1
<b>Step type:</b>	Network actions
<b>Description:</b>	Implementation of steps as per ENA ONP Workstream 1B Product 4 (2019) for Use of the IEC CIM standard for data exchange. Covers the implementation of the January 2020 ENA ONP Proposals for Implementation of Electronic Exchange of Network Planning Data. Step 1: Quantify data exchanges requirements. Step 2: Create the base profile using the ENTSOe CIM model.
<b>ENA ONP Product:</b>	2019 WS1B P4
<b>Timeline:</b>	January 2019 - December 2022
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(3), Implementing(3)
<b>Additional information:</b>	This is a step identified by the specified ENA ONP product. This step is also dependent on outcomes from the ENA Data Working Group and Code Modification (GC0139), which is now considering the introduction of CIM (see step 8). The following document provides more information on the DNO steps as recommended by ENA ONP 2019 WS1B P4. <a href="https://www.energynetworks.org/industry-hub/resource-library/open-networks-2020-prj-phase-4-pid-post-consultation.pdf">ENA Open Networks Template (energynetworks.org)</a>

#### Step 22

Step	Enhanced Data Exchange in Planning Timescales - CIM Phase 2
<b>Step type:</b>	Network actions
<b>Description:</b>	Implementation of steps as per ENA ONP Workstream 1B Product 4 (2019) for use of the IEC Common Information Model (CIM) standard for data exchange. Covers the implementation of the January 2020 ENA ONP Proposals for Implementation of Electronic Exchange of Network Planning Data. Step 3A: Each network company to assess their data and the implications of CIM adoption, Step 3B: Agree triggers for data exchange method.
<b>ENA ONP Product:</b>	2019 WS1B P4
<b>Timeline:</b>	January 2020 - December 2022
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(6)
<b>Additional information:</b>	This is a step identified by the specified ENA ONP product. This step is also dependent on outcomes from the ENA Data Working Group and Code Modification (GC0139), which is now considering the introduction of CIM (see step 8). It is a continuation of step 21. See also: <a href="https://energynetworks.org/ena-open-networks-template">ENA Open Networks Template (energynetworks.org)</a>

#### Step 23

Step	Enhanced Data Exchange in Planning Timescales - CIM Phase 3
<b>Step type:</b>	Network actions
<b>Description:</b>	Implementation of steps as per ENA ONP Workstream 1B Product 4 (2019) for use of the IEC Common Information Model (CIM) standard for data exchange. Covers the implementation of the January 2020 ENA ONP Proposals for Implementation of Electronic Exchange of Network Planning Data. Step 4: Build and Test IT Solution.
<b>ENA ONP Product:</b>	2020 WS1B P4
<b>Timeline:</b>	January 2021 - January 2023
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(6)
<b>Additional information:</b>	This is a step identified by the specified ENA ONP . This step is also dependent on outcomes from the ENA Data Working Group and Code Modification (GC0139), which is now considering the introduction of CIM (see step 8). It is a continuation of steps 21 and 22. See also: <a href="https://energynetworks.org/ena-open-networks-template">ENA Open Networks Template (energynetworks.org)</a>

#### Step 24

Step	Whole System FES Standardisation
<b>Step type:</b>	Network actions
<b>Description:</b>	Identify and define future transmission network capability requirements.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	March 2019 - December 2021
<b>Organisation type:</b>	TO(3)
<b>Progress:</b>	Not currently planned(1), Implementing(1), Completed(1)
<b>Additional information:</b>	This is a common step across the 3 TOs. Particularly, SSEN-T will publish North of Scotland FES annually, which considers Whole System Planning.

#### Step 25

Step	Development of T-D CAD systems for network planning.
<b>Step type:</b>	Network actions
<b>Description:</b>	Development CAD systems for network modelling to enable visibility of both distribution and transmission networks to efficiently manage new generation connection sites and the capacity of power TOs can deliver to distribution networks.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	N/A
<b>Organisation type:</b>	TO(3)
<b>Progress:</b>	Not currently planned(1), Initiated(2)
<b>Additional information:</b>	This is a common step across the 3 TOs. SSEN-T project (EMS PSCAD system) will further inform this step. Implementation of this TO action will benefit the wider network, as it will result in more efficient processes related to the capacity of power that will be delivered to the distribution network.

#### Step 26

Step	Smart Solutions for Transmission Networks
<b>Step type:</b>	Network actions
<b>Description:</b>	TOs to consider smart solutions to the T-network whilst identifying and defining network scenarios based on past and estimated future network planning and operating conditions. Identify and define network scenarios based on past and estimated future network planning and operating conditions as well as T-network infrastructure development and capability requirements.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	November 2018 - March 2026
<b>Organisation type:</b>	TO(3)
<b>Progress:</b>	Completed(3)
<b>Additional information:</b>	This step has been completed by all 3 TOs. The future implementation date (March 2026) reflects the ongoing use of this smart grid solutions.

#### Step 27

Step	Enhance alignment and development of various Future Energy Scenarios
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	2021 WS1B P9 will build on work of 2020 to improve the publication of DNO DFES, to develop a Best View Forecast (aligned to DFES and suitable for LTDS, week 24/42 submissions and the new NDP process) and facilitate further alignment across various FES (e.g. DFES, GB FES) and standardisation of DFES publications by DNOs.
<b>ENA ONP Product:</b>	2021 WS1B P9
<b>Timeline:</b>	January 2021 - July 2021
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 28

Step	Enhance alignment and development of various Future Energy Scenarios
<b>Step type:</b>	Network actions
<b>Description:</b>	DNOs to implement improvements that will be identified by 2021 WS1B P2, update their processes and development of DFES, align approach on Best View Forecast with other publications (e.g. LTDS, NDP and week 24/42) and improve DFES quality and consistency.
<b>ENA ONP Product:</b>	2021 WS1B P2
<b>Timeline:</b>	January 2021 - April 2022
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(5), Implementing(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 29

Step	Support further alignment and development of various Future Energy Scenarios
<b>Step type:</b>	Network actions
<b>Description:</b>	ESO to continue supporting development of DFES to enhance alignment and consistency across DFES and GB FES.
<b>ENA ONP Product:</b>	2021 WS1B P2
<b>Timeline:</b>	July 2021 - December 2021
<b>Organisation type:</b>	ESO(1)
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 30

Step	Use of Coordination Adjustment Mechanism
<b>Step type:</b>	Enablers / Dependencies / Barriers
<b>Description:</b>	Following the publication of the ED2 business plan guidance and the recent Sector Specific Methodology Consultation Ofgem have confirmed the use of a Coordination Adjustment Mechanism (CAM) for this regulatory period as well as ED2. This is currently being written into the licence for Gas Distribution & Transmission companies, with a plan to replicate this for Electricity Distribution.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	N/A
<b>Organisation type:</b>	Regulator(1)
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	

#### Step 31

Step	Use of Coordination Adjustment Mechanism
<b>Step type:</b>	Network actions
<b>Description:</b>	Network companies to update process and implement mechanisms to use the Coordinated Adjustment Mechanism.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	March 2021 - April 2023
<b>Organisation type:</b>	DNO(6), TO(3)
<b>Progress:</b>	Initiated(9)
<b>Additional information:</b>	

#### Step 32

Step	Enhance Common Evaluation Methodology and Tool Phase 1
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	The aim of 2021 WS1A P1 is to review and consider methodological enhancements to the Common Evaluation Methodology and Tool in the areas of optionality and carbon assessment. Phase 1 of 2021 will set up open governance arrangements by creating a CEM forum under open governance arrangements. This forum will be made up of the product team and include interested industry reps.
<b>ENA ONP Product:</b>	2021 WS1A P1
<b>Timeline:</b>	April 2021 - June 2021
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 33

Step	Enhance Common Evaluation Methodology and Tool Phase 2
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	The aim of 2021 WS1A P1 is to review and consider methodological enhancements to the Common Evaluation Methodology and Tool in the areas of optionality and carbon assessment. Phase 2 will review existing approaches to option value and carbon assessment. The CEM forum will review current approaches, generate new approaches, analyse options, recommend and implement changes
<b>ENA ONP Product:</b>	2021 WS1A P1
<b>Timeline:</b>	June 2021 - December 2021
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 34

Step	Implement updated CEM tool and methodology.
<b>Step type:</b>	Network actions
<b>Description:</b>	The implementation date of the tool and methodology which were published in December 2020 is April 2021 (see step related to 2020 WS1A P1). This step refers to the implementation of the next version of the tool and methodology which will be within 2022.
<b>ENA ONP Product:</b>	2021 WS1A P1
<b>Timeline:</b>	January 2021 - December 2022
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(6)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 35

Step	Whole Energy System Investment Planning - implementation
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	ENA ONP to monitor progress and implementation of whole energy system investment planning approach, subject to company and Steering Groups approval
<b>ENA ONP Product:</b>	2021 WS4 P4
<b>Timeline:</b>	June 2021 - March 2023
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 36

Step	Whole Energy System Investment Planning - implementation
<b>Step type:</b>	Network actions
<b>Description:</b>	ENA ONP Workstream 4 Product 4 is seeking to identify and realise consumer benefits by applying a whole system approach within the investment planning processes. Some DNOs (e.g. UKPN, WPD) have been involved in trials to identify whole system solutions that meet Local Authorities' ambitions and objectives. DNOs to continue supporting these trials until completion.
<b>ENA ONP Product:</b>	2021 WS4 P4
<b>Timeline:</b>	January 2021 - March 2023
<b>Organisation type:</b>	DNO(6), ESO(1), TO(3)
<b>Progress:</b>	Not currently planned(1), Initiated(9)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 37



Step	Tools and processes for developing the whole energy system Cost Benefit Analysis.
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	ENA ONP Workstream 4 Product 1 has published a user guide, methodology and tools to be used by network companies for carrying out a whole system Cost Benefit Analysis. Network companies to develop associated tools and processes to support whole energy system CBA.
<b>ENA ONP Product:</b>	2020 WS4 P1
<b>Timeline:</b>	January 2022 - December 2022
<b>Organisation type:</b>	ESO(1), DNO(6), TO(3)
<b>Progress:</b>	Initiated(10)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON20-WS4-P1%20Methodology-PUBLISHED.23.12.20.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON20-WS4-P1%20Methodology-PUBLISHED.23.12.20.pdf</a>

#### Step 38

Step	Support whole energy system FES
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	ENA ONP Workstream 4 Product 3 (2020) has provided recommendations for further improvement the quality and consistency of network company FES at whole system level. Network companies to continue supporting this activity and liaise with gas network companies.
<b>ENA ONP Product:</b>	2020 WS4 P3
<b>Timeline:</b>	January 2020 - March 2023
<b>Organisation type:</b>	TO(3), DNO(6), ESO(1)
<b>Progress:</b>	Initiated(7), Implementing(2), Completed(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/ON20-WS4-P3%20Phase%20%20report%20-%20linked.pdf">https://www.energynetworks.org/assets/images/ON20-WS4-P3%20Phase%20%20report%20-%20linked.pdf</a>

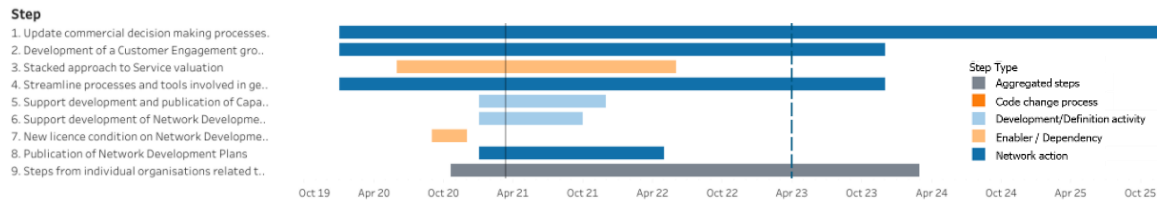
#### Step 39

Step	Steps from individual organisations related to this activity
<b>Step type:</b>	Aggregated steps
<b>Description:</b>	This step aggregates steps required for individual DNOs or TOs to implement DSO functionality, but which have no wider industry relevance.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	October 2020 - December 2021
<b>Organisation type:</b>	DNO(1)
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	1 step has been added by a DNO, related to Distribution NOA processes.

## Activity C: Non-traditional investment planning

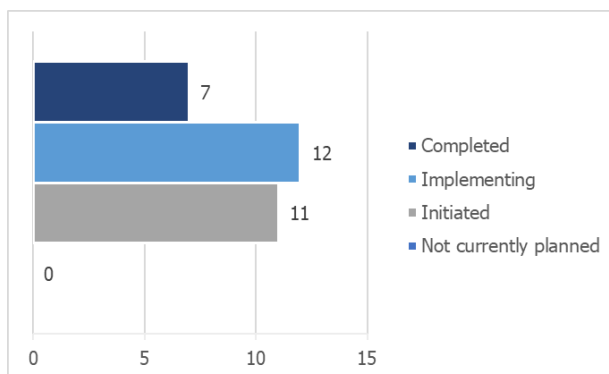
Description: Providing alternative solutions to traditional asset-based investment including ANM systems to manage areas of constraint, DER contracts and despatch etc.

Figure 8 illustrates the roadmap for activity C which consists of 5 unique steps:



**Figure 8 Investment Planning – Activity C roadmap**

Figure 9 shows the total number of organisations' contributions to the unique steps. As of March 2021, 40% of the steps of this activity is under implementation. Just over one third of the steps is in the organisations' pipeline to implement but have not started yet ("Initiated"), and 7 steps (23%) have been completed.



**Figure 9 Progress against implementation of "Investment Planning" – Activity C (No. of steps-contributions of each organisation)**

The tables on the following pages provide detailed information for each step under Activity C.

### Step 1

Step:	Update commercial decision- making processes.
<b>Step type:</b>	Network actions
<b>Description:</b>	Reflecting recent changes in investment planning processes, commercial decision making can be enhanced with time-series data and/or new decision tools. Commercial decision making should also be aligned with internal processes such as Operations, Asset Management, Policy and Procurement.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	January 2017 - December 2025
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Implementing(6)
<b>Additional information:</b>	This is a common step for all DNOs, being implemented outside ENA ONP workstreams. Each DNO uses internal processes and systems to update commercial decision-making processes. This is a step that will be completed within RIIO-ED2 period. Alignment of operational processes, procurement and policy would enable this functionality.

### Step 2

Step	Development of a Customer Engagement group (CEG)
<b>Step type:</b>	Network actions
<b>Description:</b>	DNOs to set up a CEG to enable stakeholder engagement as well as ensure transparency in investment decision process
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	November 2018 - December 2023
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(1), Implementing(1), Completed(4)
<b>Additional information:</b>	This is a common step for all DNOs, being implemented outside ENA ONP workstreams.

### Step 3

Step	Stacked approach to Service valuation
<b>Step type:</b>	Enablers / Dependencies / Barriers
<b>Description:</b>	Stacked approach to Service valuation for the longer term when markets are more developed. Inclusion of layers such as losses and social factors. Specifically via TRANSITION and its inclusion within the Oxfordshire Programme which comprises of TRANSITION, Project LEO and MERLIN.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	June 2020 - June 2022
<b>Organisation type:</b>	TEF(1)
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	This is a TRANSITION-led step which will enable functionality related to activity C.

#### Step 4

Step	Streamline processes and tools involved in generating timely and relevant information on availability of contracted flexibility
<b>Step type:</b>	Network actions
<b>Description:</b>	Create clarity on availability of flexibility options by bringing together various information (our system needs, the DERs connected to our network, their connection agreements, and potential flex agreements in place with them between us and them + between ESO and them). Ideally, this intelligence is generated automatically, through integration of various databases. At present some of this information is already available in SWRR.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	September 2018 - December 2023
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(2), Implementing(2), Completed(2)
<b>Additional information:</b>	A common step for all DNOs, implemented outside ENA ONP workstreams. The use of connection agreements database will facilitate this step.

#### Step 5

Step	Support development and publication of Capacity Signposting Requirements
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	2021 WS1B P5 product continues to seek improvements in network capacity reporting for signposting areas most suited to new connections and where there are network issues potentially benefitting from flexible services. ENA ONP will support the development and publication of Capacity Signposting Reports.
<b>ENA ONP Product:</b>	2021 WS1B P5
<b>Timeline:</b>	January 2021 - December 2021
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 6

Step	Support development of Network Development Plans
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	2021 WS1B P5 product will define the common high-level DNO end to end process for delivering the NDP licence requirements in the context of planning network investments and other reporting. ENA ONP's work will build on 2020's work on capacity signposting and Standard Network Capacity Report. BEIS's note shared with the ENA in October 2020 recognise P5's contribution to date and welcomes that WS1B will define the format of the NDP statement
<b>ENA ONP Product:</b>	2021 WS1B P5
<b>Timeline:</b>	January 2021 - October 2021
<b>Organisation type:</b>	ENA ONP(1)
<b>Progress:</b>	Implementing(1)
<b>Additional information:</b>	<a href="https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf">https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf</a>

#### Step 7

Step	New licence condition on Network Development Plans
<b>Step type:</b>	Enablers / Dependencies / Barriers
<b>Description:</b>	Ofgem is introducing a new licence condition n 25B for the Electricity Distribution Standard Licence, requiring Electricity Distributors to publish Network Development Plans (NDP). The NDPs will define network plans over a five to ten year window, including the use of flexibility services, as well as defining the expected uptake of LCTs. This requirement is derived from the Clean Energy Package and will be laid through Statutory Instrument by BEIS.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	September 2020 - December 2020
<b>Organisation type:</b>	Regulator(1)
<b>Progress:</b>	Completed(1)
<b>Additional information:</b>	

#### Step 8

Step	Publication of Network Development Plans
<b>Step type:</b>	Network actions
<b>Description:</b>	DNOs to implement processes required to publish NDPs. The NDPs will define network plans over a five to ten year window, including the use of flexibility services, as well as defining the expected uptake of LCTs.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	January 2021 - May 2022
<b>Organisation type:</b>	DNO(6)
<b>Progress:</b>	Initiated(5), Implementing(1)
<b>Additional information:</b>	

#### Step 9

Step	Steps from individual organisations related to this activity
<b>Step type:</b>	Aggregated steps
<b>Description:</b>	This step aggregates steps required for individual DNOs or TOs to implement DSO functionality, but which have no wider industry relevance.
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	October 2020 - March 2024
<b>Organisation type:</b>	DNO(2)
<b>Progress:</b>	Initiated(2)
<b>Additional information:</b>	Individual steps have been added by 2 DNOs, related to the Distribution NOA processes and to improving capabilities and skills of their workforce.

#### Activity D: Security of supply (D&G)

Description: Ensuring security of supply and network resilience is maintained in accordance with regulatory planning and design codes.

This activity includes only one step which is at conceptual stage of development and dates of implementation are not known yet.

##### Step 1

Step	Design standard for generation
<b>Step type:</b>	Development / definition activity
<b>Description:</b>	Design standard for generation similar to the SQSS. DCRP Working Group reporting to ENFG (P2/7 and P2/8 Working Group of DCRP) deliverables
<b>ENA ONP Product:</b>	N/A
<b>Timeline:</b>	N/A
<b>Organisation type:</b>	ENA(1)
<b>Progress:</b>	Initiated(1)
<b>Additional information:</b>	<p>This is a step which is not currently considered by the ENA, but it was agreed to be included in the DSO Implementation Plan for future updates and because was originally identified by the Least Regret Analysis of the five Future Worlds, under Workstream 3 of ENA ONP. The implementation of the step is not in scope of the Open Networks. Link to the 2019 Least Regret Analysis document is found below:</p> <p><a href="https://www.energynetworks.org/assets/files/ON-WS3-2018%20P7%20Update%20on%20Least%20Regrets-v1.pdf">https://www.energynetworks.org/assets/files/ON-WS3-2018%20P7%20Update%20on%20Least%20Regrets-v1.pdf</a></p>