Appendix WWUQ9A- Supplementary Innovation Evidence

Supplementary evidence to address quality reductions on the innovation strategy. Specific areas highlighted were:

1. How activities will be delivered: We would have expected WWU to give further detail on how it delivers its innovation activities, such as the process for how an innovation goes from inception to deployment to BAU.
2. Network collaboration to identify and deliver NIA projects: We expected more detail to be given on how WWU will collaborate with other networks to identify and deliver projects, including the processes it has in place to do this and how they work in practice.
3. Ensuring projects aren't duplicative: While WWU gives some information on how it ensures projects aren't duplicative, we would have expected further detail to be shared here as to the processes they have in place and how they work in practice.
4. An explanation of why the innovation in question cannot be funded from the totex allowance: While WWU explains at a portfolio level why NIA is needed and NIA related projects cannot be funded by totex funding, it does not explain this at an innovation level as requested in the Business Plan Guidance.

1.How activities will be delivered:

At WWU we have a robust governance structure for innovation projects from idea inception to delivery of the project and any ongoing follow-on projects as you can see in figures 1. & 2.

Each project is different, so where a project is successful and we're able to implement, there are several stages to consider in the delivery process as the plan is being assembled e.g. investment funding and approval, communications, benefits tracking, training, HSE approval. Every project is different, so a specific delivery plan is put in place for each to maximise success of the implementation.

Section 16. of the innovation strategy annex (Implementation and roll out evidence) outlines a wide variety of examples of our innovation implementation success. One example of delivery is completion of an NZASP re-opener application for HyLine Cymru which needed a stakeholder engagement plan in addition to the application completion process and supporting communication plan - wwu-hyline-cymru-nzasp-re-opener-final-wwu-redacted-v4.pdf

This is inherently different to how an implementation plan for the Ductile Iron Window Cutter (that was also given as an example in the annex) which required rigorous testing and approvals for implementation, a full training and communication plan, and ongoing benefits tracking.

Appendix WWUQ9A- Supplementary Innovation Evidence

Figure 1. Project pipeline process from idea inception to initiation

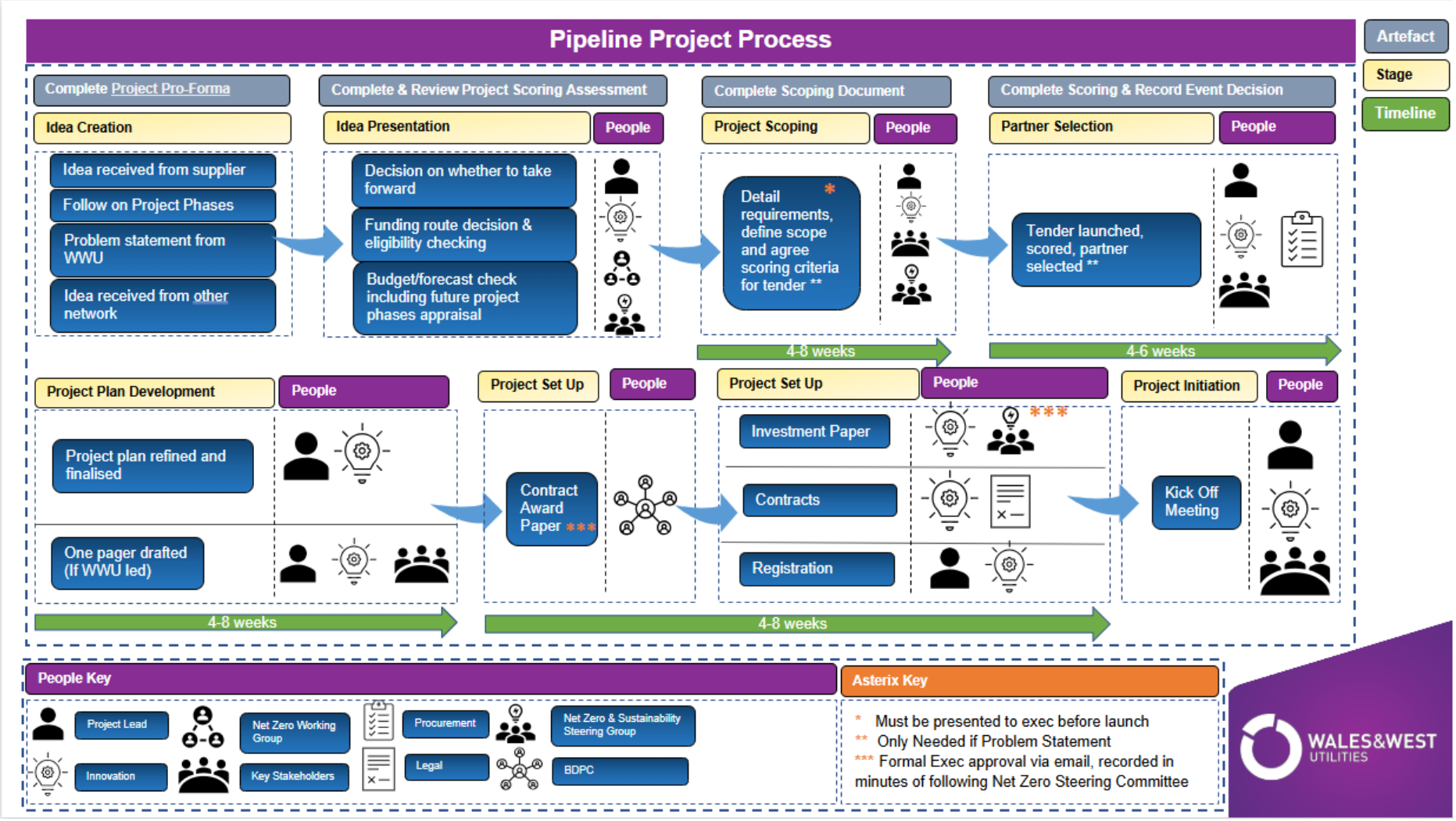
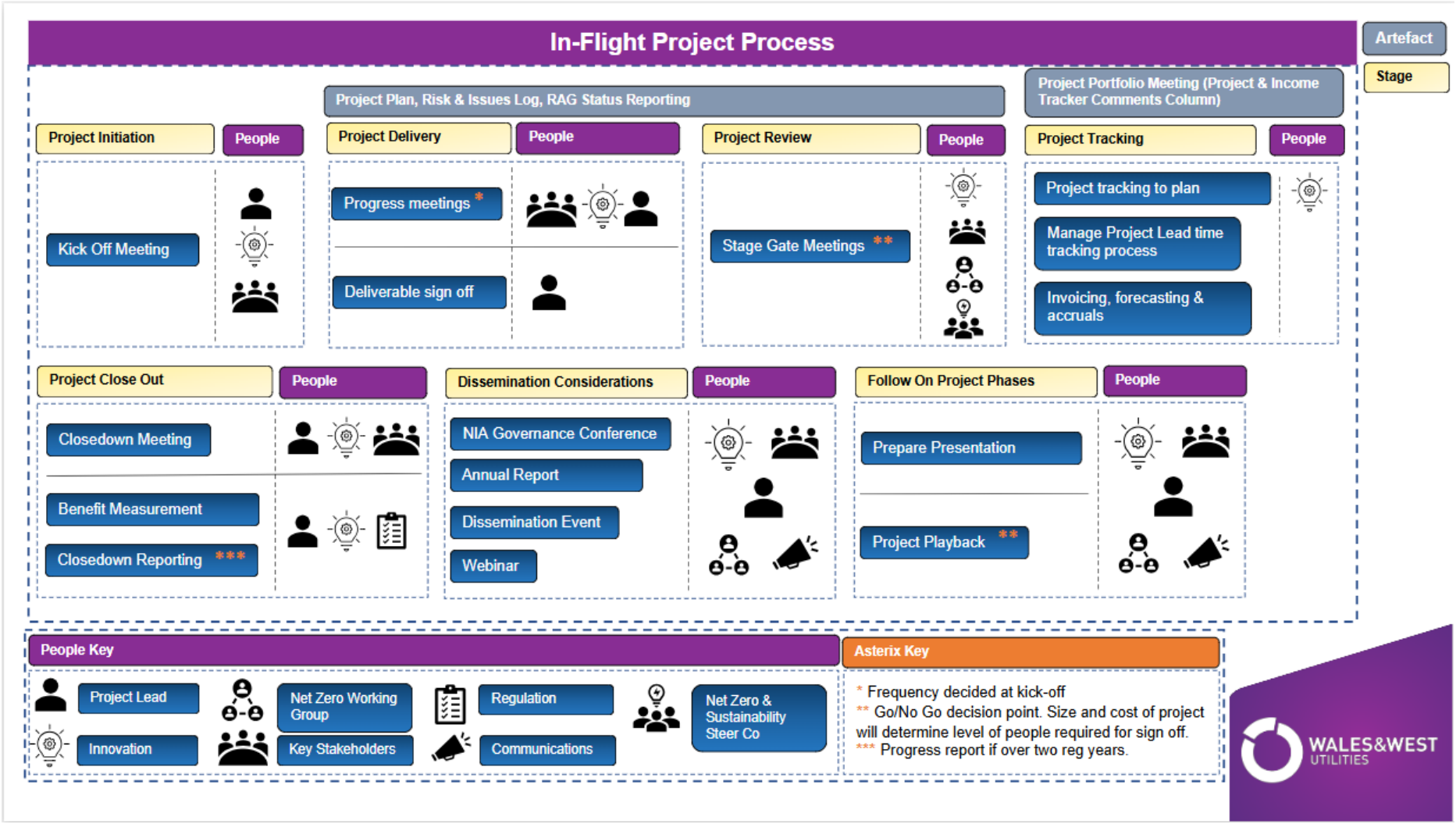


Figure 2. Project in-flight process from initiation to close down

Appendix WWUQ9A- Supplementary Innovation Evidence



2. & 3. Network collaboration to identify and deliver NIA projects, and, ensuring projects aren't duplicative:

We have utilised a wide variety of working groups as networks during RIIO-GD2 including the 'End User Safety' group which was outlined in our Innovation Annex on page 41 in reference to delivery of evidence required to support government policy and the HSE. These groups work together collaboratively to identify projects and deliver them and assessing outcomes.

We also have a Gas Innovation Governance Group (GIGG) which is supported by IGEM Future Energy Networks (FEN) owns and maintains the Future Energy Networks Innovation Process (FENIP), aligning it with Ofgem's governance rules, including eligibility criteria, project registration procedures, data disclosure, Intellectual Property Rights (IPR) treatment, and impact assessment requirements.

We have a Terms of Reference document that outlines key areas that we govern, and relevant areas are outlined in Table 1. below with evidenced examples:

4. Why the innovation in question cannot be funded from the totex allowance:

Technology readiness levels (TRL) are a type of measurement system used to assess the maturity level of a particular technology. Every innovation project is evaluated against the parameters for each technology level and is then assigned a TRL rating based on the project at start and end state; there are nine technology readiness levels (list below), and they help to determine whether a project or proposal is considered innovative and hence uncertain due to risk of technology maturity.

As explained our NIA innovation strategy plan cannot be funded from totex allowance due to risk level and inherent uncertainty; any totex related innovation needs to self-fund and pay back within a price control.

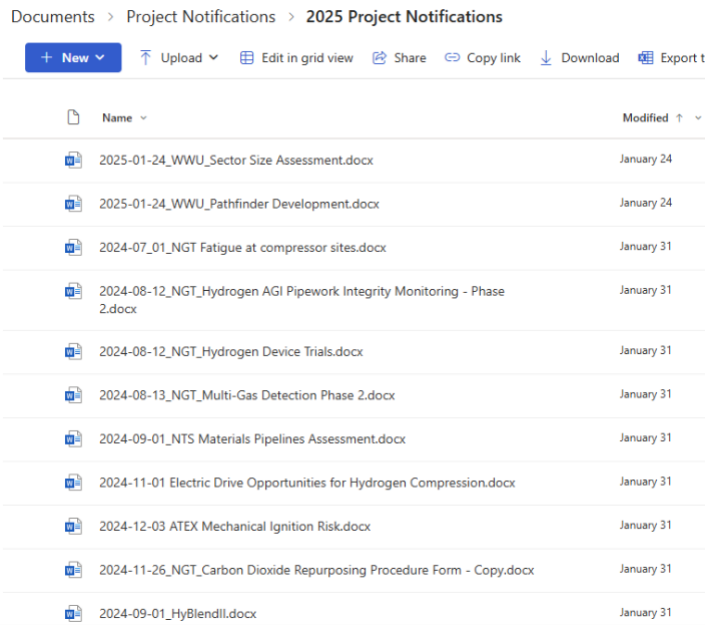
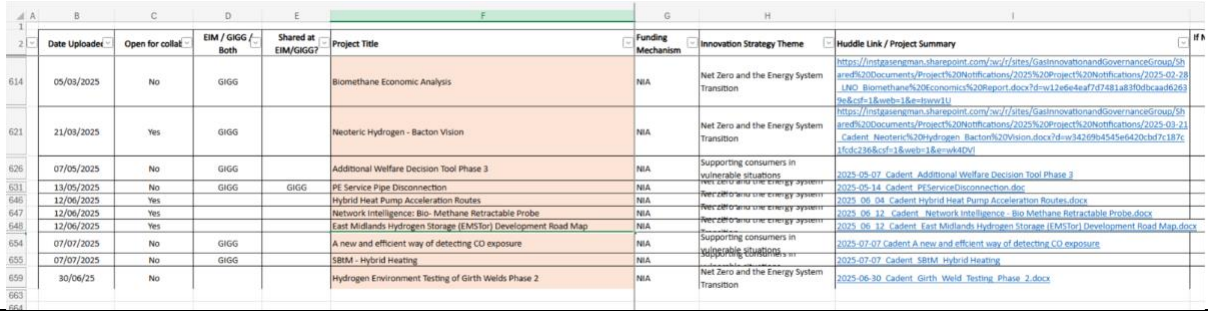
The NIA innovation outlined in the innovation strategy is related to future of energy scenarios and vulnerable customers, which do not inherently meet the direct network benefit that would enable totex to be utilised for this type of innovation. Any innovation that can be developed using totex in the business plan is referenced in the table on page 15 of the innovation strategy as requested by Ofgem.

TRL levels and definitions are as follows:

- TRL 1: basic principles observed and reported
- TRL 2: technology concept or application formulated
- TRL 3: analytical and experimental critical function or characteristic proof-of-concept
- TRL 4: technology basic validation in a laboratory environment
- TRL 5: technology basic validation in a relevant environment
- TRL 6: technology model or prototype demonstration in a relevant environment
- TRL 7: technology prototype demonstration in an operational environment
- TRL 8: actual technology completed and qualified through test and demonstration
- TRL 9: actual technology qualified through successful mission operations.

Appendix WWUQ9A- Supplementary Innovation Evidence

Table 1.

Process	How	Evidence
Peer Review and Assurance	GIGG provides regular oversight through structured peer review of proposed innovation projects. This includes: • Submission of Project Notification (PN) documents to a secure FEN-administered SharePoint site • Logging and tracking of all Project Notifications (PNs) in a central master tracker • Assessment of each proposal for eligibility by network Project Managers and potential collaboration opportunities • Review findings recorded and flagged for discussion at the next GIGG meeting • Routine quality monitoring of the PN tracker is a standing item on the GIGG agenda, enhancing assurance and accountability. Once approved, projects are registered on the FEN Innovation Portal. (Prior to 2025, projects were hosted on the Energy Network Association's (ENA) Smarter Networks Portal.)	1.Project Notification Documents (GIGG SharePoint)  2.Project Notification Tracker Spreadsheet (GIGG SharePoint) 

Appendix WWUQ9A- Supplementary Innovation Evidence

The Avoidance of Duplication	GIGG processes ensure duplication is avoided by coordinating a structured peer review process for all submitted Project Notifications. Each proposal is shared via a secure SharePoint site and recorded in a central tracker, where Innovation Project Managers across all five gas networks assess whether similar work is already underway, planned or has been completed either by another network or more widely. This collaborative review enables early identification of overlap, encourages alignment or consolidation where appropriate, and supports efficient use of innovation funding by prioritising complementary or distinct projects. Exceptions or potential duplications are flagged for discussion and resolution at GIGG meetings.	1.Example of duplication challenge for Decentralised Hydrogen Storage Project **From:** Hannah O'Donnell <Hannah.ODonnell@wwutilities.co.uk> **Sent:** Tuesday, July 15, 2025 16:56 **To:** Barnett, Georgia <Georgia.Barnett@cadentgas.com> **Cc:** Sian Rowlands <Sian.Rowlands@wwutilities.co.uk>; Ashley Williams <Ashley.Williams@wwutilities.co.uk>; Lydia Whatley <Lydia.Whatley@wwutilities.co.uk>; Darren Cushen <Darren.Cushen@wwutilities.co.uk> **Subject:** RE: [EXT] Re: Delocalised Hydrogen Storage - Feedback (Challenge) Good Afternoon Georgia, Apologies for the delay in getting back to you, and thank you again for your helpful feedback and for highlighting the relevant projects. I appreciate the opportunity to clarify the background to our proposed *Decentralised Hydrogen Storage* project. **Summary of Reviewed Projects** **1. NGN – PATCH (NGN_SIF_10106835)** Focus: Metal hydrides for industrial-scale hydrogen storage; includes COMAH. **Gap**: Single-technology focus; no cross-technology comparison or wider GDN deployment assessment. **2. SGN – HyScale LOHC Phase 2 (SIF_SGN0022)** Focus: LOHC-based bulk, inter-seasonal storage and transport. **Gap**: Strategic-scale only; not suitable for decentralised, modular, or near-term GDN use. **3. SGN – Energy Storage Strategy (NIA2_SGN0002)** Focus: System-level strategic study across multiple vectors. **Gap**: Lacks practical feasibility work, COMAH detail, or deployment guidance for GDNs. **4. NGN – H21 Network Storage (NIA_NGN_206)** Focus: Future network-scale hydrogen production and storage. **Gap**: Long-term view only; no support for short-term or decentralised storage options. **5. NPG – Project VOLT** Focus: Multi-vector microgrids including hydrogen. **Gap**: Conceptual only; does not assess storage technology types or deployment feasibility. **6. UKPN – SHARED** Focus: Localised hydrogen and hydride storage for electricity system resilience. **Gap**: Electricity sector focus; does not compare multiple hydrogen storage options or gas network applications.

Appendix WWUQ9A- Supplementary Innovation Evidence

Process	How	Evidence
		Identified Gaps and Our Contribution **Area** | **Existing Projects** | **Gap Filled by Our Project** **Technology breadth** | Single-tech focus (e.g. hydrides, LOHCs) | Cross-tech review: MOFs, hydrides, LOHCs others **Deployment scale** | Strategic, bulk, or industrial | Focus on decentralised, urban/industrial/off-grid GDN applications **Feasibility assessment** | Often high-level | Deployment-level: COMAH, compression, cost, lifecycle, maintenance **Use-case matching** | Not addressed | Development of a technology-to-use-case matrix To clarify, our project builds on and complements the important work already done to date. Projects like PATCH, HyScale, and the Energy Storage Strategy have helped define the technology landscape and strategic direction for hydrogen storage. Our focus is now on bridging the gap between concept and implementation — by evaluating which decentralised, non-geological storage technologies are technically, operationally, and regulatorily viable today, and how they can support GDN flexibility and resilience during the early hydrogen transition. This project also directly complements our sister project, the Hydrogen Rollout Assessment. Together, these projects will inform a follow-on phase, where we plan to map out a location-specific implementation plan for decentralised hydrogen storage across the network. We hope this provides clear assurance that our proposal is informed by prior work, avoids duplication, and fills a well-defined gap. Let me know if you have any further questions. Thank you! Kindest regards, Hannah O'Donnell **Hannah O'Donnell | Net Zero Project Manager - Hydrogen** Wales & West Utilities, Spooner Cl, Celtic Springs, Newport, NP10 8FZ 07779879051

Appendix WWUQ9A- Supplementary Innovation Evidence

Process	How	Evidence
Knowledge Sharing and Transparency	<u>Knowledge Sharing and Transparency</u> GIGG facilitates the sharing of project data, learnings, and outcomes across all members via the FEN Innovation Portal. <u>FEN Innovation Portal</u> This portal promotes compliance with data publication, progress reporting, and knowledge transfer obligations key components of the NIA governance framework: Ofgem. <u>Stakeholder Engagement</u> Dissemination Historically, the Gas Networks have shared details of their past 12 months innovation work at the Energy Innovation Summit (EIS), hosted annually by the ENA. This event is very electricity biased, and since news of the gas networks separation from the ENA they have been exploring other opportunities to disseminate to a more appropriate audience. In 2024 and 2025 the gas networks used Innovation Zero at Olympia as the main dissemination event, back up by other smaller events throughout the year. Going into 2026 there is a subgroup looking into our wider engagement strategy, including improving access to stakeholders and innovators at the beginning of the process, and disseminating the outcomes as the innovation becomes reality.	We have an innovation calendar of events that we attend as networks and we have at least one main dissemination event a year but always do more. This is in addition to our annual innovation reports, whole network annual report and basecamp, plus we have utilised webinars and workshops and working groups and will continue to do so to provide additional dissemination opportunities for networks, in addition to our own individual comms plans and strategies.