



NETWORKS

# Innovation Strategy

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# Foreword



By evolving our innovation strategy, focusing on long-term challenges, and delivering flagship projects, we aim to support Ireland's energy transition while fostering collaboration across the ecosystem.

In recent years, the electricity network has become increasingly central to advancing national targets and strategies related to housing, economic growth and climate change, with a particular focus on enabling the electrification of heat, transport and industry and the connection of renewable electricity generation.

As we transition towards a clean electric future and meet the needs of our growing population, there is an accelerating requirement to connect further renewable generation (e.g., solar panels), heat pumps, electric vehicles and chargers, and smart meters to the electricity distribution network.

As society becomes increasingly reliant on electricity to meet its energy needs, significant and sustained investment will be needed to enhance network resilience, build additional capacity and handle complex flows of electricity and data across the network.

In this fast-evolving landscape, innovation will be critical in overcoming challenges and enabling new opportunities. To this end, ESB Networks has engaged extensively with industry stakeholders to consult on our innovation plans and share insights from our innovation programme.

Stakeholders across a range of sectors have indicated strong support for our innovation project portfolio, offered thoughtful proposals for collaboration, and highlighted opportunities to accelerate the transition to a Net Zero-ready electricity network. Their feedback has been instrumental in shaping our innovation strategy, which sets out:

- **The focus of our innovation programme** – setting out challenges we are seeking to address to enable stakeholders and collaborators to come forward with ideas and solutions;
- **An overview of how we innovate** – to help collaborators understand how we are organised for innovation and the processes we follow, to make it easier for them to participate; and,
- Our view on the **stakeholders we are seeking to collaborate with**, how we are working to engage with them, and how they can reach out to us.

A handwritten signature in dark ink that reads "Nicholas Tarrant".

**Nicholas Tarrant**  
Managing Director, ESB Networks



Contents and purpose of this document

This document is intended for both external and internal collaborators to provide clarity on what innovation means within ESB Networks, and how we innovate in support of our business strategy.

Purpose of this document

- Establishes how we define “Innovation” for ESB Networks
- Offers guidance for external collaborators, making it easier to participate in our innovation activities.
- Outlines the process we follow to manage projects from idea to completion to ensure innovation is delivered with confidence and impact.
- Outlines how we manage innovation across our business to accelerate and streamline delivery.



Contents

- 1 Our innovation focus**  
This section outlines the focus areas of our innovation activity to support our Networks for Net Zero business strategy.
- 2 Innovation across our business**  
This section outlines the horizons of our innovation activity and how we are organized to deliver innovation across our business.
- 3 Collaborating with stakeholders**  
This section outlines the stakeholders we engage with, why their input is essential, and how collaborators can get involved with our innovation activity.
- 4 Our process for innovation**  
This section provides an explanation of how we govern, deliver, and monitor our Innovation activity, as guidance for collaborators who want to work with us.

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## Our innovation focus



## Our role in delivering the energy transition

At ESB Networks our purpose is to deliver a clean electric future, and to play our part in making Ireland's Net Zero goal a reality.

Climate change is one of the greatest challenges facing humanity. It is widely accepted that unprecedented action is required to limit greenhouse gas emissions to avert the worst consequences of climate change and protect both current and future generations.

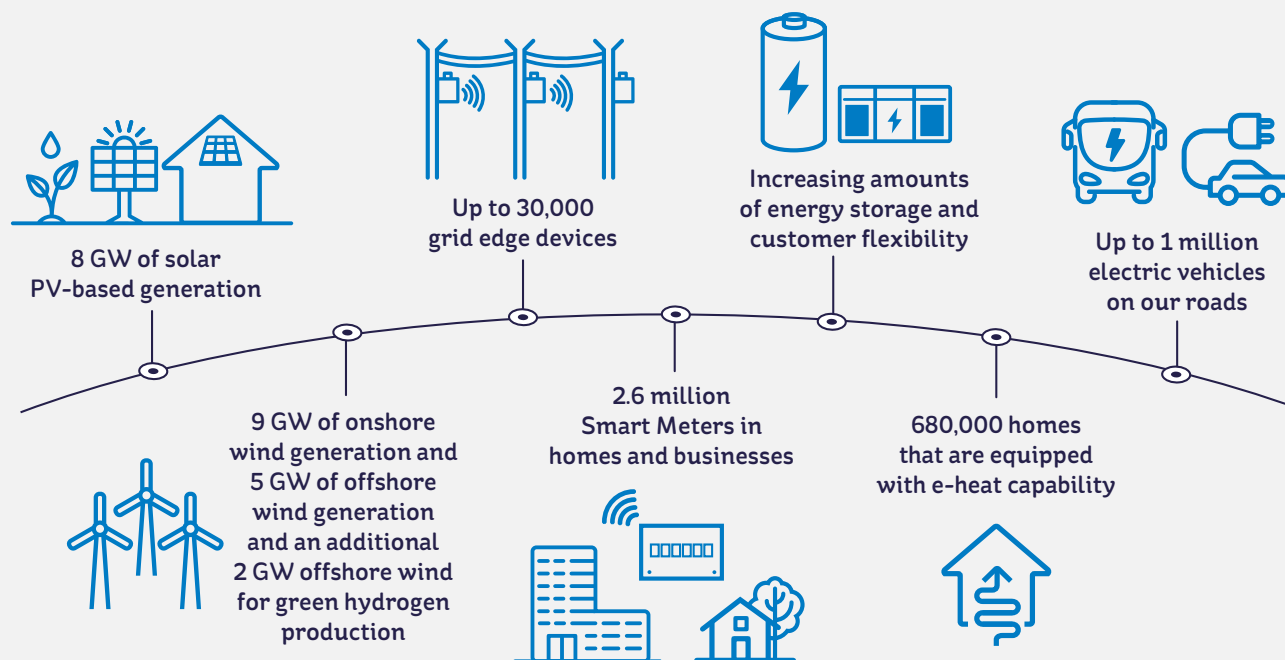
Our purpose in ESB Networks has always been to connect and distribute electricity - safely, securely, and affordably.

Acknowledging the central role that electricity plays in climate action, our role is to support the delivery of a clean electric future by enabling the electrification of heat, transport and industry, and connecting renewable generation at scale in support of the Irish Government's Climate Action Plan targets.

Our purpose is therefore to deliver a Net Zero-ready electricity network by 2040, to enable Ireland's goal of delivering Net Zero no later than 2050.



### Developing a Net Zero-ready distribution network



In the decade ahead, all customers, from renewable generators to home and business customers, will adopt new technologies, products and services that will change how they generate, store, or consume electricity.

As the electricity system transitions to Net Zero, our role is to deliver a smart and sustainable distribution system that supports this transition. This will require a transformation of our network, our systems, and our approach.

## Our strategy for delivering a Net Zero-ready electricity network

Our Networks for Net Zero strategy sets out our approach to delivering a Net Zero-ready electricity network by 2040, and this sets the frame for the focus of our innovation activity.

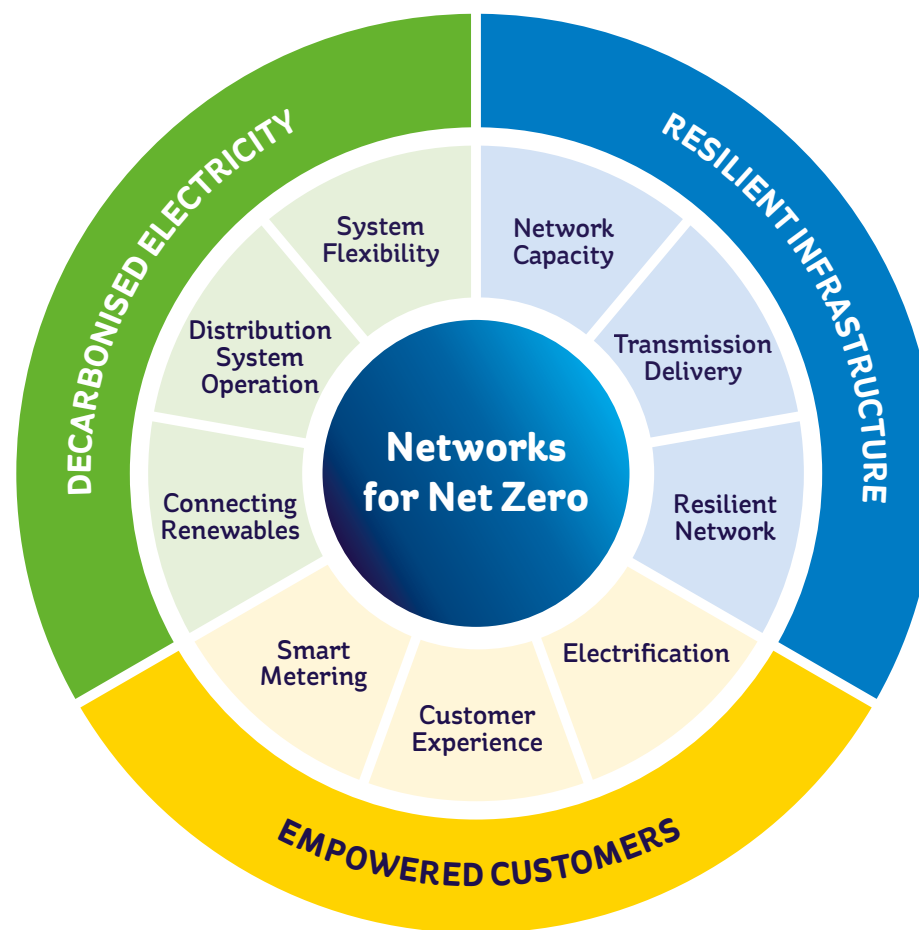
Our Networks for Net Zero strategy sets out ESB Networks' commitment to achieving a Net Zero-ready electricity network by 2040. It also describes our role in supporting national policy targets relating to economic growth, housing development and the Climate Action Plan. The strategy aims to support the development of a flexible and smart electricity network that will serve as a foundation for a clean electric future.

The transformation of the energy system will require significant changes to create a smarter, more flexible electricity system where customers are empowered and incentivised to contribute to network efficiency. This transformation will require collaboration with stakeholders, customers, and industry partners.

ESB Networks has identified three strategic objectives which are core to the delivery of our Net Zero strategy: Decarbonised Electricity, Resilient Infrastructure, and Empowered Customers, each of which contains three key areas of focus as illustrated in the figure opposite.

To accelerate this transformation, ESB Networks has established structures and programmes to drive change, including the **Distribution Markets System Operator**, which is driving an integrated design across distribution markets (retail and flexibility) and system operations, and our **Powering Ahead** transformation programme, building digital and data capabilities and solutions that are enabling our business in new ways.

Whilst innovation is delivered by all areas of our business, our **central innovation team** works closely with colleagues across all business units to support the delivery of our strategy by exploring innovative technologies and business models to accelerate and enable change.





## Our innovation focus

We have aligned our innovation focus to our Networks for Net Zero strategy. We will maintain a balance of focus across these themes in our project portfolio.



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## Innovation across our business





## What do we mean by innovation?

Innovation can help to accelerate delivery of our strategy where there are opportunities to explore and prove new approaches that would be unlikely to be progressed under normal business funding.

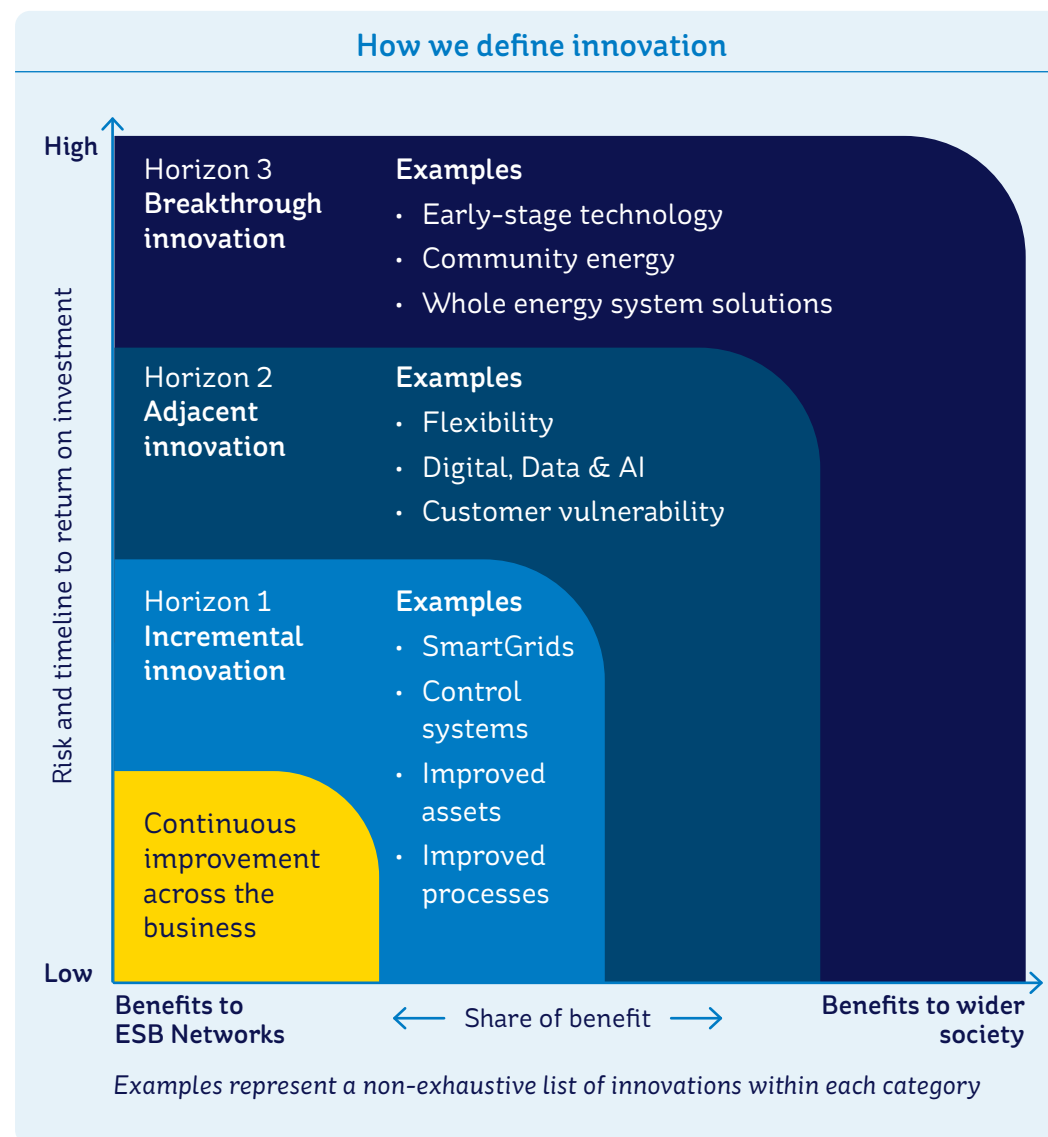
Innovation is essential to the energy transition, enabling the development and adoption of new technologies and business models. Innovation stimulus funding is used in many markets to drive technology, process, business model, policy and regulatory, or social change. It is used where there is higher risk of return, or provides broader public or systemic benefits that do not accrue to the entity making investments.

We define innovation across three horizons:

- **Incremental innovation** focuses on introducing, optimising, and scaling existing technologies or processes, with low risk and/or near-term benefits.
- **Adjacent innovation** focuses on more developed propositions, or applying existing capabilities in new ways, with moderate risk and/or mid-term benefits.
- **Breakthrough innovation** focuses on early technologies and business models, or entirely new ways of working, with higher risk and/or longer-term benefits.

The regulator allocates funding to ESB Networks for the implementation of work programmes across its business. Incremental innovation activities that contribute to these programmes are funded through these specific allowances. Additionally, a separate innovation and electrification allowance is allocated to support longer-term and higher risk initiatives, or projects that do not fall under other existing programmes or allowances.

Our aim is to maintain a balanced innovation portfolio across the three horizons, and we target an innovation portfolio comprised of 70% Incremental, 25% Adjacent and 5% Breakthrough projects. The use of our innovation and electrification allowance however is more focused on the Adjacent and Breakthrough horizons, as they are associated with a higher risk to return on investment, yet are crucial for driving early stage learning to address challenges that may deliver value over longer time horizons.



## How we manage innovation

We promote a culture of innovation across our business, with a central innovation team providing support to business teams, whilst also taking a lead on longer-term 'Breakthrough' innovation.

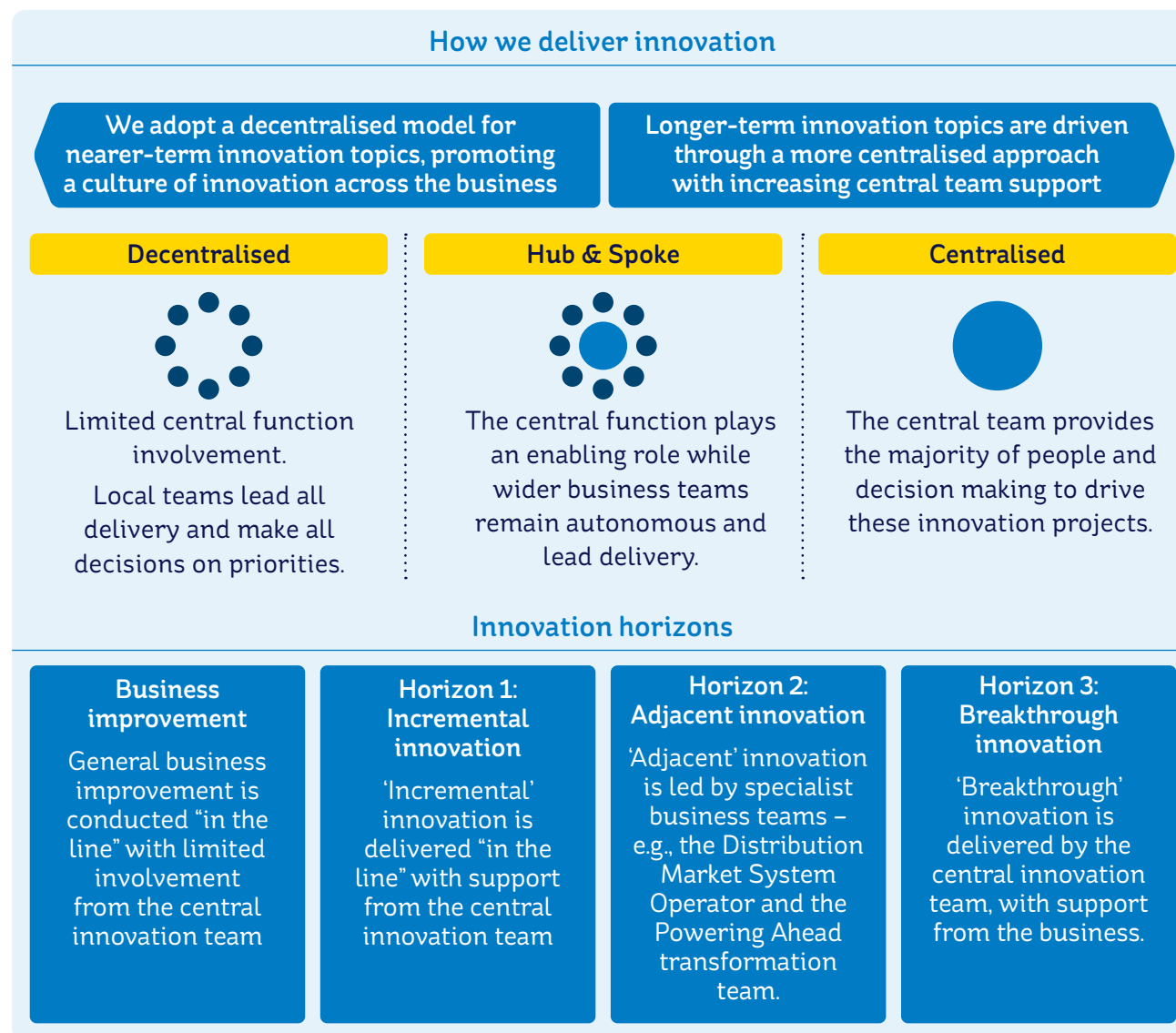
Our central innovation team is a dedicated group within ESB Networks that plays a key role in enabling the successful delivery of our innovation strategy while collaborating with colleagues across the organisation.

We promote a culture of innovation across our business. As such, innovation which aligns closely with business activities (i.e., 'Incremental' and 'Adjacent' innovation) is delivered within operational business units, with support from the central team in a "Hub & Spoke" model.

This "in-the-line" approach ensures that innovation is owned by the relevant subject matter experts, particularly where it involves refining technical deployments, updating design standards and guides, or directly supporting customer needs.

The central team takes a lead in 'Breakthrough' innovation, delivering projects primarily resourced from the central team with input from wider business experts where needed.

This approach, modelled on best practices from other network operators, strikes a balanced model for driving innovation across ESB Networks. It continues to support "in-the-line" innovation, empowering experts across the business, whilst ensuring effective governance and support, and a focus for leadership of outward-looking innovation.



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## Collaborating with stakeholders





Who we collaborate with

Collaboration is central to the success of ESB Networks' innovation programme. We collaborate, inform and engage at different levels with a wide range of stakeholders.

ESB Networks engages with a broad range of internal and external stakeholders in all aspects of what we do, including regulators, policymakers and planning authorities, and connecting and connected customers. Working with stakeholders is central to the success of our innovation programme as it allows us to understand stakeholder, customer and operational team issues and challenges, and to co-create workable solutions.

At present, this primarily focuses on entities that are either closely linked to the energy industry – such as equipment manufacturers and consultancies – or those actively involved in innovation – such as academic institutions, start ups or local authorities.

As we broaden our strategic focus to deliver projects that enable wider system and societal benefits, we expect to interact with a more diverse set of stakeholders and new customer segments, including those who are seeking to decarbonise, reduce their impact on the grid or manage their energy use more effectively, and representatives of communities challenged by the energy transition, such as vulnerable customer groups.

We need stakeholders and collaborators to engage with us to bring ideas and work together to develop and test new technologies and propositions. In turn they need us to make it easy for them to come forward and get involved. This strategy document aims to make our objectives and approach clear, and invites stakeholders to come forward to engage with us.



Our engagement channels			
Help us deliver our strategy	Bring challenges that need solving	Bring ideas and new technologies	Participate in our projects and trials
Collaborate to build new propositions	Share learnings and best practices	Bring insight to inform solutions	Give feedback on the impact of innovation

How you can engage with us

Collaborators and stakeholders can engage with us through a range of channels and events, and we invite them to do so to propose challenges, ideas, and opportunities for collaboration.

Our innovation team runs a calendar of events and participates in a range of industry forums in search of new ideas and collaborators that can enhance our innovation programme. We also have a range of communication channels through which stakeholders can reach out to our team at any time.

Given the wide range of stakeholder activity across our business on various topics, we coordinate our engagement via ESB Networks’ Stakeholder Engagement Strategy & Plan . This document outlines our business-wide approach to engaging with customers and stakeholders, and contains additional detailed information regarding our aims and objectives for interested stakeholders.

We aim to support our stakeholders and collaborators through:

A clear innovation strategy and focus areas

This document sets out our refreshed strategy and ambitions, and the focus areas for future innovation projects.

Engagement and collaboration opportunities

We offer a variety of channels for proactive outreach and to handle inbound queries and requests. We also welcome collaboration through events, forums, and challenge-driven idea generation.

A transparent and simple innovation process

We’ve reviewed how we manage innovation to help us support increased external collaboration, set out in the “Our innovation process” section.

Access to insights and learnings

The results of our innovation is available in our reports, and additional information is provided on our website.

Our engagement channels

Our website contains details of upcoming events and channels through which you can get in touch.

Industry conferences, exhibitions and events	Industry forums and working groups
Innovation reports, papers and strategies	Social media, emails, leaflets, newsletters, and adverts
Webinars	Our innovation website
Bilateral discussions	Focus groups
Formal consultations and surveys	Industry groups and programmes
Ecosystem access	Partnerships

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## Our innovation process





Governance of the innovation portfolio

Our governance approach ensures that the project portfolio we manage contributes meaningfully to our business objectives and broader societal goals.

We maintain a central view of the innovation project portfolio across our business. Projects funded through the central innovation and electrification allowance are governed via a 3-stage gated process, used to: review and select ideas, approve projects for delivery, and ensure a structured approach to project close-down.

For higher value projects, delivery decisions are made biannually at meetings of the ISG which is comprised of senior managers from across the business. This group ensures that innovation projects align with the strategy and priorities of the business. Oversight is provided by the Senior Leadership Team (SLT), which is briefed annually to maintain visibility of the portfolio and ensure it can provide support as needed.

This approach ensures that:

- We maintain the balance of our portfolio in alignment with our business strategy, ensuring an optimal mix of near-term and longer-term benefits.
- Risk is managed across the portfolio to ensure that projects are well supported and that innovation drives tangible business value.
- Projects are assessed on a level playing field to enable new innovators to bring forward ideas that get included in the project pipeline.
- Benefits are realised and tracked to inform our future focus.
- We are not funding the same innovations twice, or overlapping with progress being made elsewhere in the business or across wider network operators.
- We are leveraging best practice in delivering innovation projects and ensuring the right stakeholders are involved in the right projects.
- Where projects impact on wider business governance needs – such as in data management, cybersecurity, or making changes to policies and procedures – the relevant teams are engaged to align with those additional governance requirements.

Stage-gate process for centrally funded projects

A structured stage-gate process is used to support key decision-making at three points during our innovation process.

Gate 1

**Idea Screening and Evaluation**

To ensure the most appropriate projects move forward, we hold portfolio review meetings monthly (and by exception) to prioritise and screen ideas prior to more detailed project scoping and design.

Gate 2

**Approve Project Delivery**

This gate ensures that viable projects that align to our strategic objectives advance to project delivery. Approval is provided by the ISG during biannual meetings. Projects may return for further approval as they progress through phases, for example, following a feasibility study, a project may submit a proposal for a larger delivery phase.

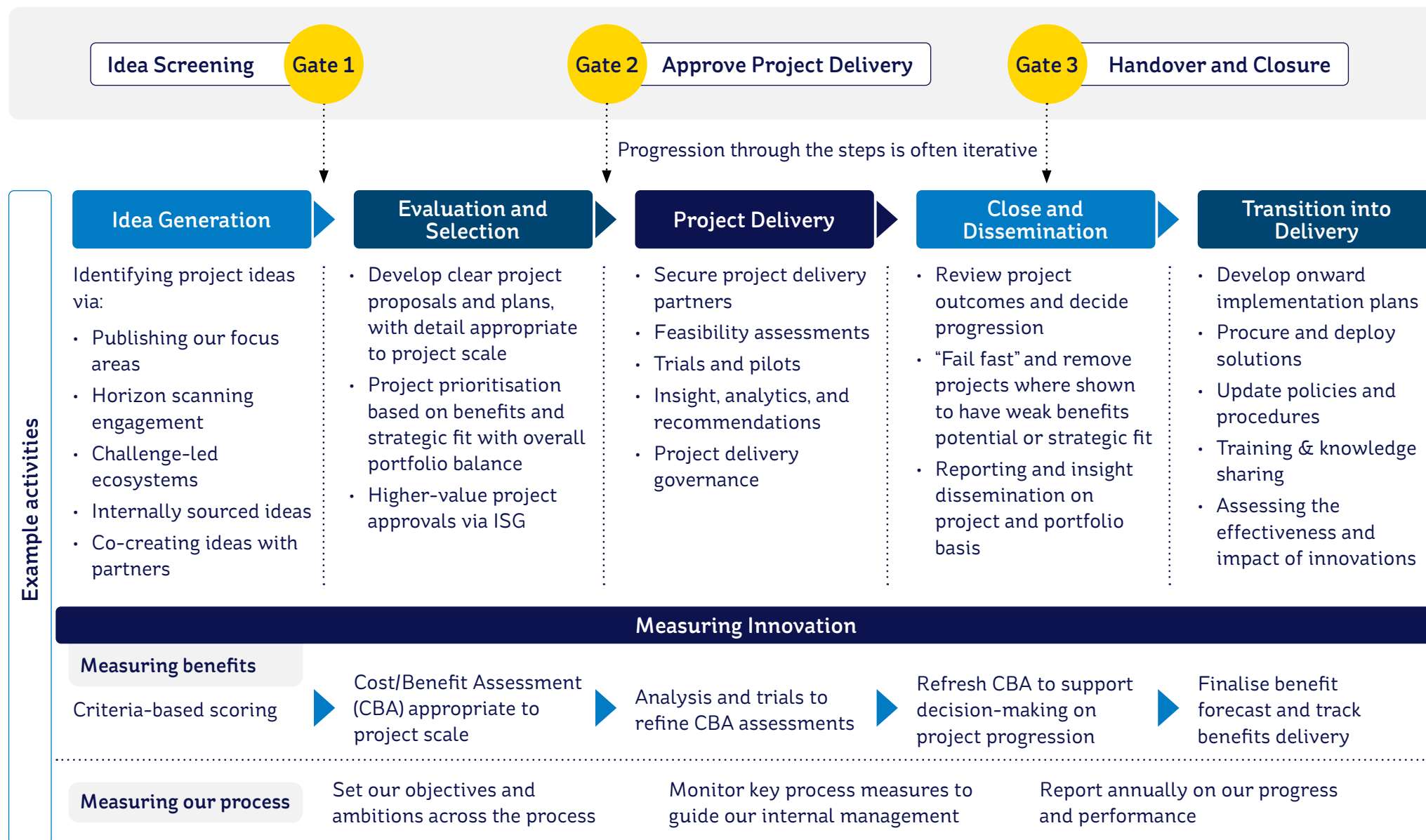
Gate 3

**Handover and Closure**

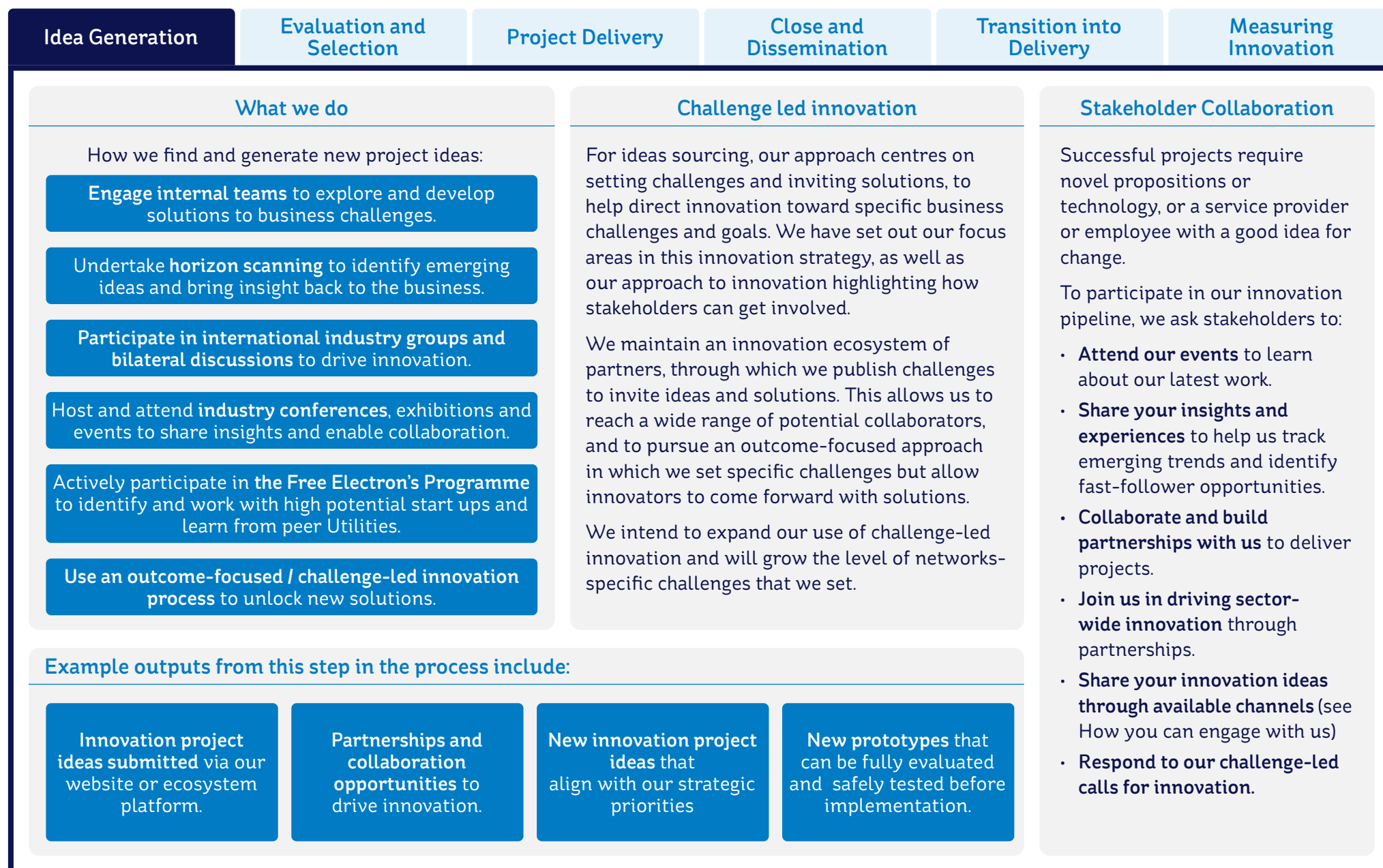
This gate ensures each project’s closure and knowledge dissemination, and assesses whether it will move forward for delivery into the business. Additionally, it serves as an opportunity to stop or pause the project to avoid unnecessary investment, or explore new project ideas, extensions or evolutions to unlock additional value.

## Our innovation process

To effectively implement our Innovation Strategy, we have revised our end-to-end process as illustrated below. Each step is described in further detail in this section.

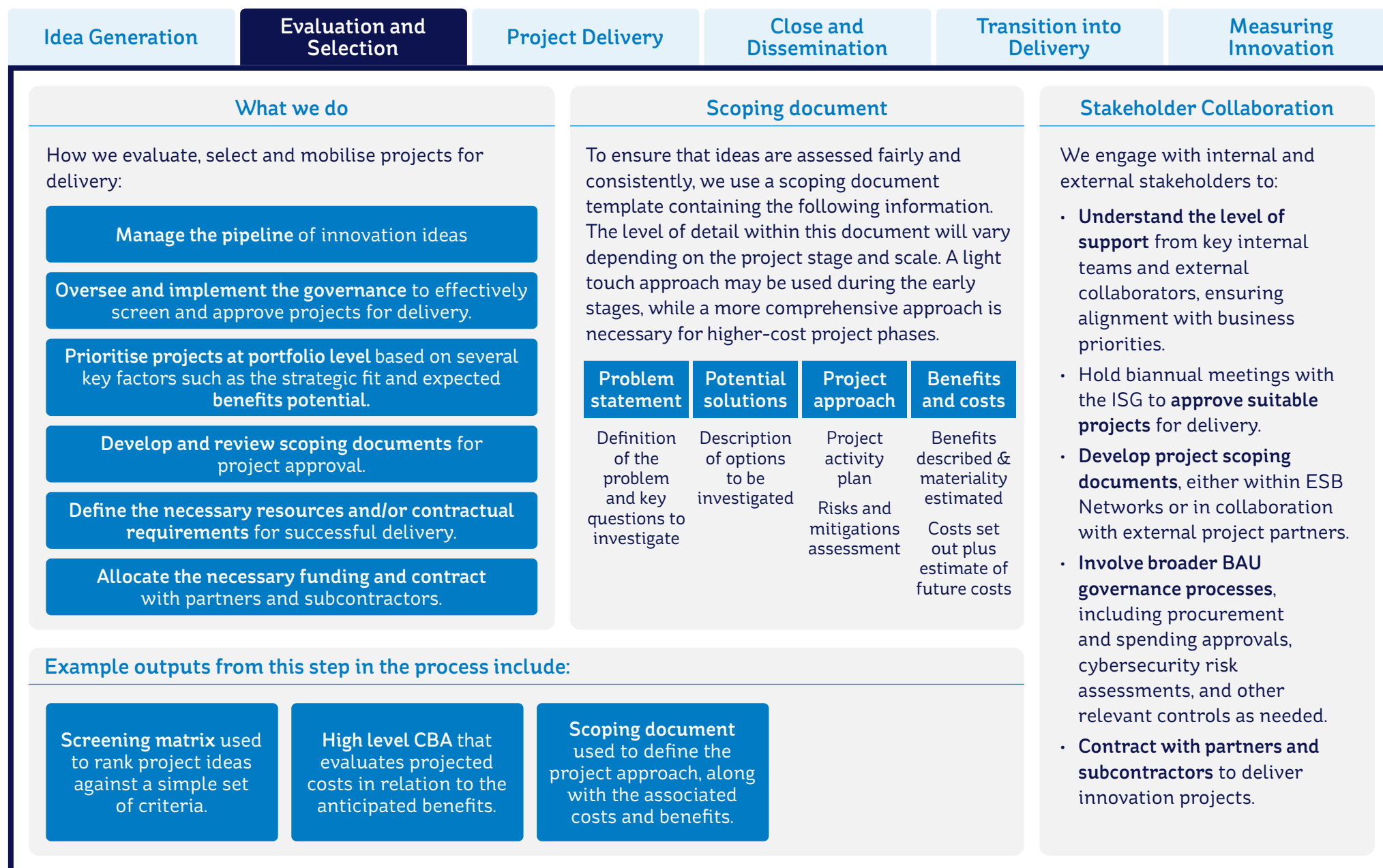


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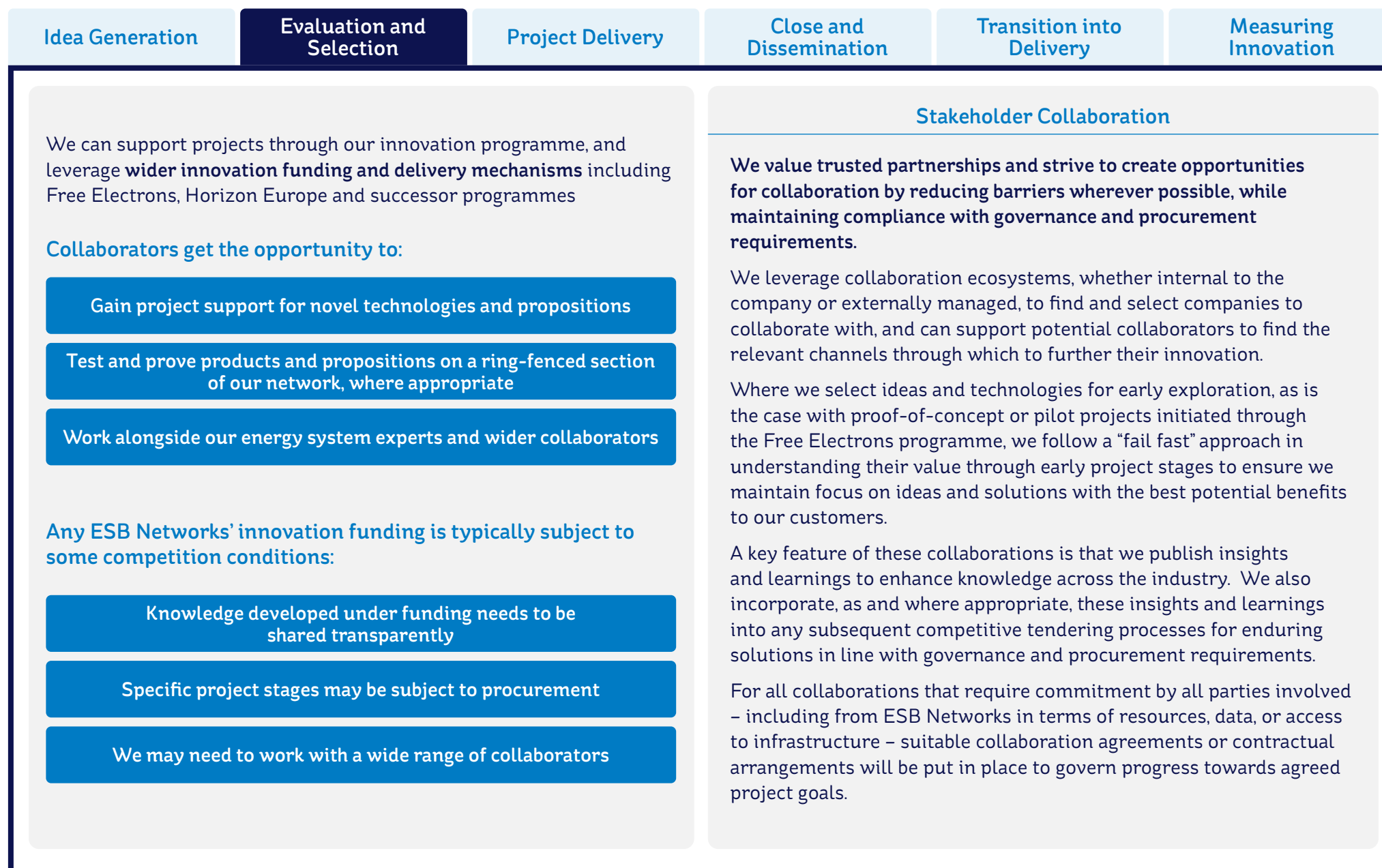




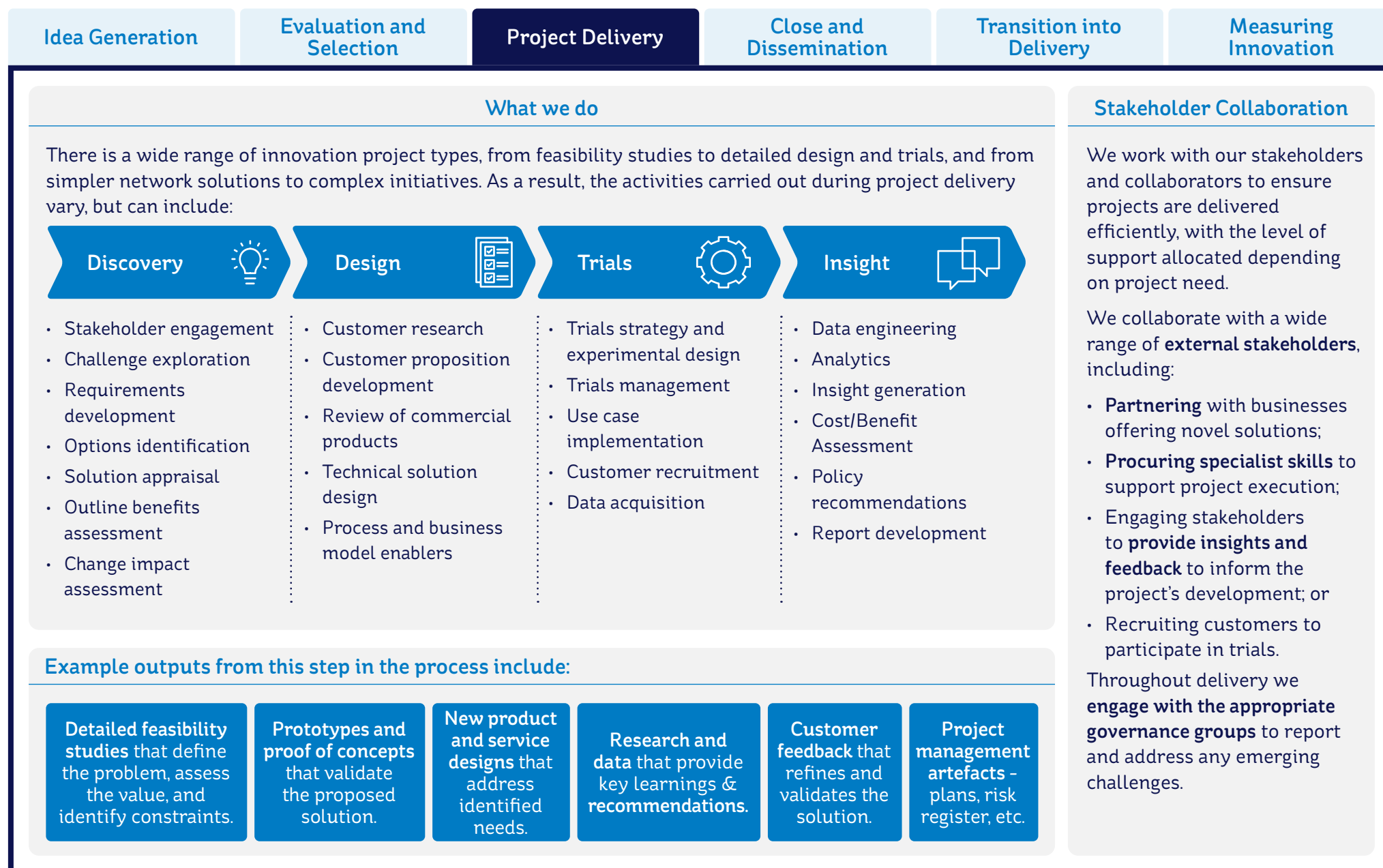
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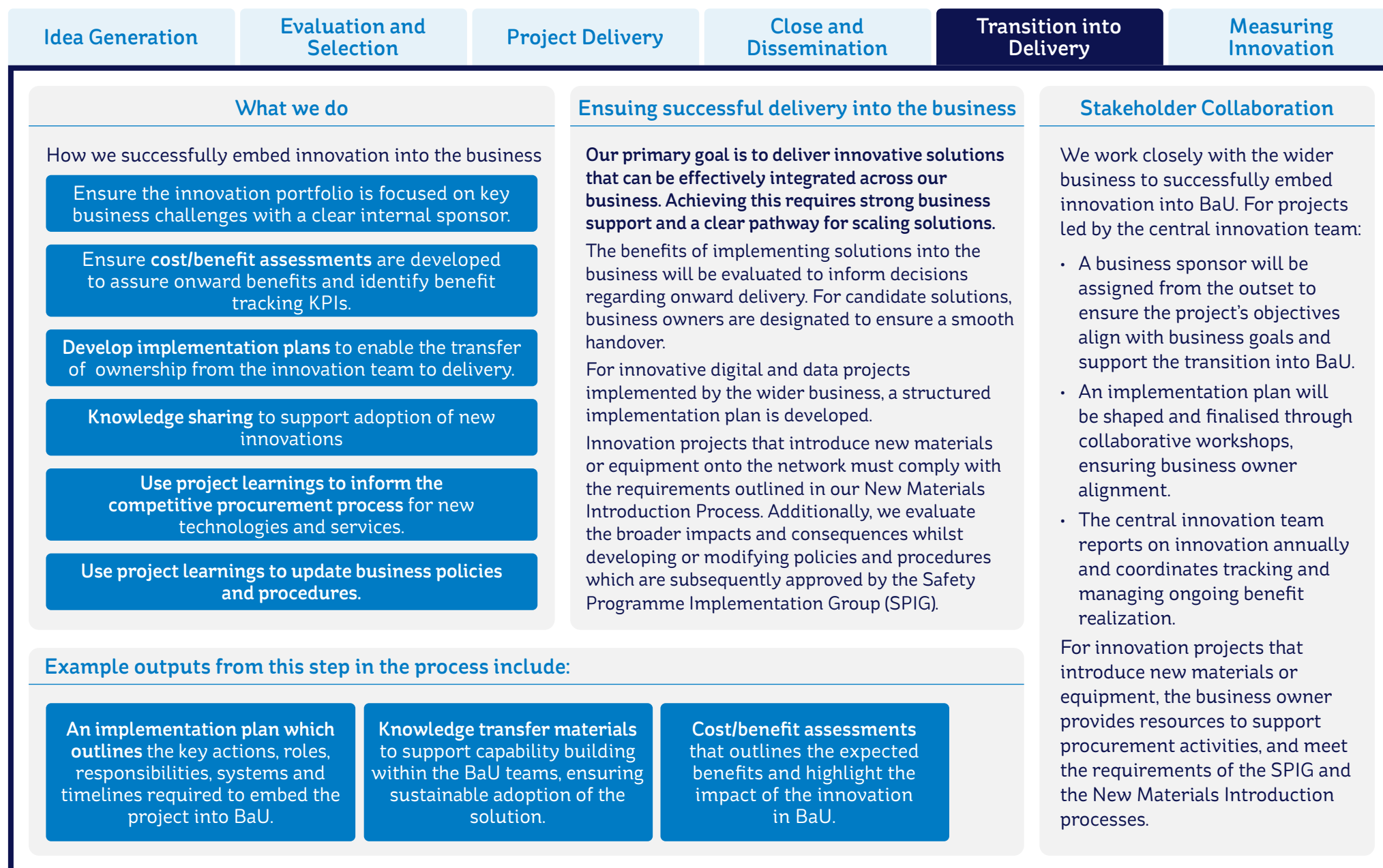




## Our innovation process



## Our innovation process



## Our innovation process

Idea Generation	Evaluation and Selection	Project Delivery	Close and Dissemination	Transition into Delivery	Measuring Innovation																		
<p><b>What we do</b></p> <ul style="list-style-type: none"> <li>Use Cost/Benefit Assessments as a tool to manage the value of our portfolio and inform decisions</li> <li>Set clear objectives for innovation at ESB Networks for internal and external transparency</li> <li>Ensure our approach focusses on both the outputs of innovation and the enablers and culture we are seeking to create</li> <li>Track key measures against these objectives periodically to help us manage innovation internally</li> <li>Report on key measures annually to provide transparency for stakeholders</li> </ul>	<p><b>Monitoring and reporting on progress</b></p> <p>We have set ourselves objectives across the process to guide our focus, and identified relevant measures that help us to stay on track. We review our performance regularly and report externally annually.</p> <table> <tr> <th></th><th>Idea generation</th><th>Evaluation and selection</th><th>Project delivery</th><th>Close and dissemination</th><th>Transition into delivery</th></tr> <tr> <td><b>Objectives</b></td><td>Implement a 'Challenge-Led' approach that engages internal and external stakeholders to maximise our exposure to a wide range of ideas and solutions.</td><td>Achieve a balanced innovation portfolio across low-risk and / or near-term transformation, and high-risk and / or long-term transformation.</td><td>Maintain a broad portfolio of projects in line with strategy and ambitions.  Work with a wide range of stakeholders and collaborators.</td><td>Rescope or stop projects shown to have limited benefits potential through early testing.  Enhance the visibility of innovation efforts and promote knowledge sharing across internal teams and external stakeholders.</td><td>Maximise the impact of innovation projects through successful delivery of benefits.</td></tr> <tr> <td><b>Measures</b></td><td>% of new solutions developed from internally vs. externally sourced ideas.</td><td>Portfolio balanced across innovation horizons and themes on the following basis:  Incremental: 70% Adjacent: 25% Breakthrough: 5%</td><td>Overall portfolio scale (number of projects, total ESB Networks resource commitment)  % of projects with external collaborators</td><td># of projects rescoped / removed from the portfolio annually when appropriate.  % of projects with knowledge dissemination</td><td># of completed successful projects moved forward into delivery annually.  Total benefits potential of projects taken forward into delivery.</td></tr> </table>						Idea generation	Evaluation and selection	Project delivery	Close and dissemination	Transition into delivery	<b>Objectives</b>	Implement a 'Challenge-Led' approach that engages internal and external stakeholders to maximise our exposure to a wide range of ideas and solutions.	Achieve a balanced innovation portfolio across low-risk and / or near-term transformation, and high-risk and / or long-term transformation.	Maintain a broad portfolio of projects in line with strategy and ambitions.  Work with a wide range of stakeholders and collaborators.	Rescope or stop projects shown to have limited benefits potential through early testing.  Enhance the visibility of innovation efforts and promote knowledge sharing across internal teams and external stakeholders.	Maximise the impact of innovation projects through successful delivery of benefits.	<b>Measures</b>	% of new solutions developed from internally vs. externally sourced ideas.	Portfolio balanced across innovation horizons and themes on the following basis:  Incremental: 70% Adjacent: 25% Breakthrough: 5%	Overall portfolio scale (number of projects, total ESB Networks resource commitment)  % of projects with external collaborators	# of projects rescoped / removed from the portfolio annually when appropriate.  % of projects with knowledge dissemination	# of completed successful projects moved forward into delivery annually.  Total benefits potential of projects taken forward into delivery.
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## Strategy evolution and how to contact us

Together we can build a resilient, sustainable, and inclusive energy system and deliver a clean electric future.

ESB Network's innovation strategy will be refined over time to maintain alignment with business strategy, government and regulatory policy evolution.

We believe that collaboration with our stakeholders is crucial in achieving our goals and driving sustainable growth.

Our annual consultation is the primary channel for engagement with us on our innovation strategy and projects, providing an opportunity for stakeholders to help reshape them into the future.



For further information on innovation at ESB Networks, please visit our website: [www.esbnetworks.ie](http://www.esbnetworks.ie)





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