

Transport Infrastructure Ireland

TII Innovation Strategy

2025-2026

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1. Executive Summary

In a rapidly changing world, TII must innovate to meet future challenges, delivering sustainable transport infrastructure, and high-quality services. This Innovation Strategy supports the vision and core values in our Statement of Strategy and sets our approach to innovation.

New and improved technologies, products, processes, marketing, and organisational innovations are driving rapid change and creating positive opportunities. Additionally, challenges such as climate change, network resilience, and digital transformation present new demands on our operations. TII recognises both the inherent risks and the importance of seizing these opportunities to support our future infrastructure and services.

Leveraging knowledge and expertise is crucial for creating and delivering meaningful change. Addressing barriers to innovation and actively championing its acceleration are essential to ensuring that this knowledge and expertise are fully enabled and mobilised to drive change.

This strategy stems from TII's remit to deliver and operate safe and efficient national roads, light rail and metro networks, Greenways, Active Travel, the National Cycle Network. It also supports delivery of, alternative fuels infrastructure adjacent to the national road network.

This strategy also supports the vision of The Department of Public Expenditure, NDP Delivery and Reform's Better Public Services Strategy

– Public Service Transformation 2030 Strategy¹ which provides the direction for strategic reform in the Public Service. Its vision is for *“inclusive, high quality and integrated Public Service that meets the needs and improves the lives of the people of Ireland.”*

In delivering its networks, TII constantly evolves to support the economy and better quality of life for everyone. TII seeks continuous improvement delivering substantial, incremental, and transformational innovation through the processes and systems that underpin its standards, specifications, and contracts.

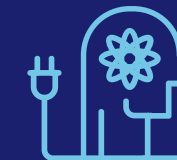
TII focuses on innovation (whether continuous, incremental, or transformational) that delivers efficiency gains for both internal and external customers. When innovation is required to enable paradigm shifts or significant step changes, more disruptive innovation may be necessary.

Adopting new ideas and practices is intrinsic to our long-term direction. We are determined to support innovation that directly addresses our key challenges without impacting safety or sustainability. Innovation presents huge opportunities not just for TII and but also its stakeholders, partners, including its value and supply chains.

Implementing this strategy requires fostering an innovative ethos that encourages creativity and experimentation.

1. <https://assets.gov.ie/static/documents/better-public-services-public-service-transformation-2030-strategy.pdf>

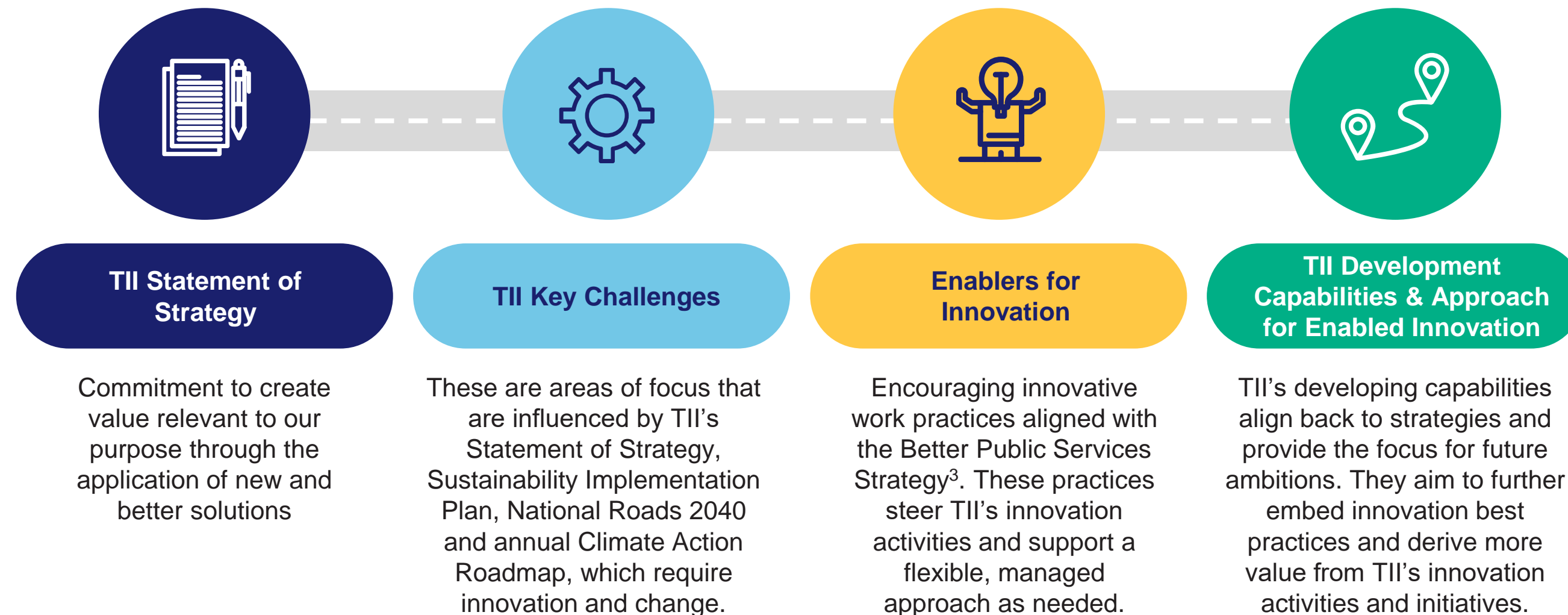
“Through innovation we create value relevant to our purpose through the application of new and better solutions.”



2. What is Innovation in TII?

TII recognises its innovation capability needs to continually evolve to meet key challenges.

“The innovation capabilities of an organisation include the ability to understand and respond to changing conditions of its context, to pursue new opportunities, and to leverage the knowledge and creativity of people within the organisation, and in collaboration with external interested parties.”¹



“

Innovation is the ideation and implementation of a new or improved product, process or service, or a new organisational method in business practices, workplace organisation or external relations.²

”



1 | ISO 56002 Innovation management — Innovation management system — Guidance

2 | Based on OECD definitions utilised by CSO.ie

3 | <https://assets.gov.ie/static/documents/better-public-services-public-service-transformation-2030-strategy.pdf>.



3. Innovation and TII Statement of Strategy

TII's purpose is to provide safe and sustainable transport infrastructure and services, delivering a better quality of life, supporting economic growth, and respecting the environment. TII is committed to promoting innovation to succeed in its vision to deliver and operate sustainable transport infrastructure; ensuring Ireland's national road and light rail infrastructure is safe and resilient, delivering better accessibility and sustainable mobility for people and goods; and being recognised as an organisation that values its people, customers, and partners.

This Strategy for innovation supports the delivery of TII's Statement of Strategy.
In doing so, it:



Outlines how TII proposes to accelerate and further mobilise innovation to deliver its purpose and vision.



Builds on TII's current innovation context and recognises that innovation maturity needs to grow and develop.



Aligns with TII's goals and identifies how innovation can help deliver TII's strategic objectives and address its key challenges.



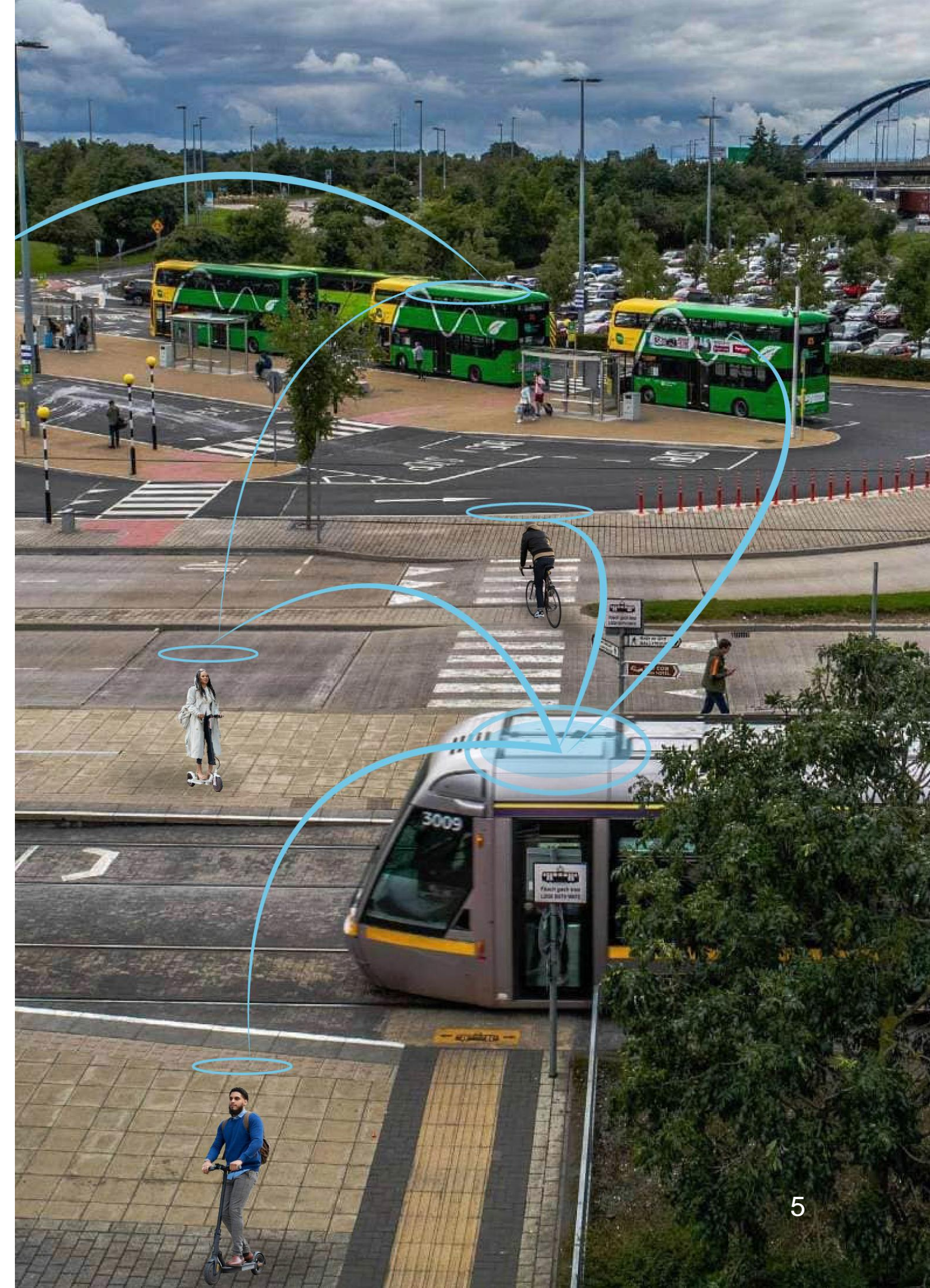
Recognises successful innovation delivery requires leadership to foster new ways of collaboration and to champion innovative working.



Acknowledges TII's need to embrace innovating differently, to deliver solutions that respond to emerging opportunities and challenges.



Calls on existing and new partners to work with TII



4. TII's Key Challenges for Innovation

TII Key Challenges

To provide focus, TII has identified twelve key challenges. These challenges present opportunities for innovation in TII's transport networks and for collaboration with its stakeholders, partners, value and supply chains.

There are also opportunities from the digitalisation of transport systems and networks (such as the utilisation of artificial intelligence, digital communications, monitoring and machine learning).

The challenges faced are significant, requiring innovation to address them in the short, medium, and long term. TII remains focused on solutions that enhance safety, efficiency, and sustainability. Its innovation activities prioritise new and better solutions, which creates value relevant to its purpose, when addressing its key organisational, sectoral, and service challenges. These are set out in the Statement of Strategy, Sustainability Implementation Plan, National Roads 2040 and TII's annual Climate Action Roadmap.

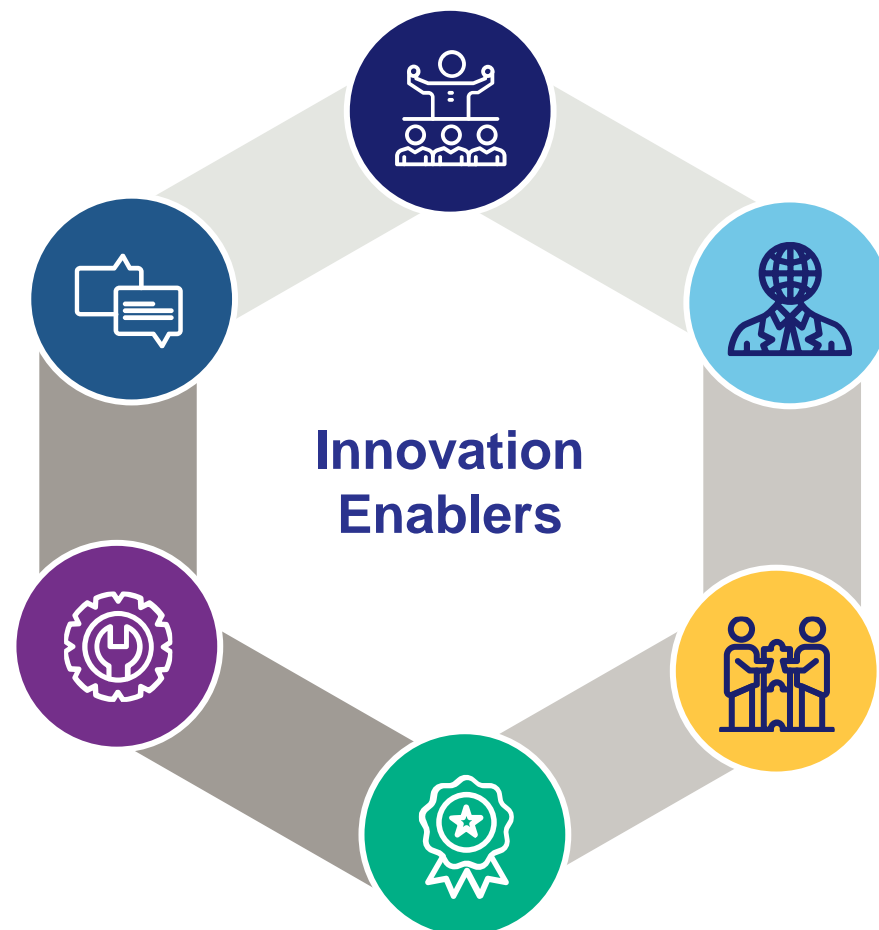
TII's Key Challenges



5. Innovation Enablers

TII has identified six enablers which collectively create an environment which maximises the impact of innovation to deliver safe and efficient transport infrastructure.

These enablers foster an innovative ethos across the organisation and partners across the value and supply chains. They also create an environment where new ideas are embraced, and new value is realised, enabling the co-delivery of projects and initiatives that objectively address TII's key challenges.



Leadership

Leadership values and supports projects, programmes, operators, managers and technical leaders responsible for achieving and delivering innovations.

Culture

An innovation culture creates, nurtures, and safeguards innovation. It is characterised by openness, encouragement of learning, investigation, continuous improvement, feedback, and the celebration of successes.

Collaboration

Collaboration fosters a sense of shared endeavour. It is required internally across the organisation, and externally with strategic partners, value and supply chains, peer organisations, and across the innovation ecosystem. This is achieved through open, transparent engagement focused on delivering outcomes.

Recognition & Purpose

Recognition of the need, purpose, and value of innovation creates an environment of openness that expects and encourages further innovation.

Governance & Decision Making

Governance provides an effective and efficient structure for the decision-making required to progress and embed innovation in TII. It also facilitates the appropriate balancing of risk and opportunity when innovating.

Communication & outreach

Communication is the foundation of all enablers at every stage of the innovation process. It ensures progress, encourages inclusivity, and contributes to achieving the best outcomes. A critical success factor is evaluating the benefits and lessons learned from innovation and transferring this knowledge, insight, and expertise.

6. TII's Innovation Approach

TII's innovation approach is directly linked to its Statement of Strategy and the strong commitment to create value, relevant to its purpose, through the application of new and better solutions, building on its existing governance framework.

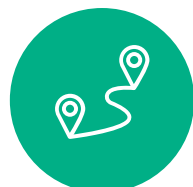
Innovation sits across TII's activities from achieving incremental efficiencies to fostering radical thinking. Regardless of the ambition, TII is dedicated to applying good innovation practices and appropriate management to gather, manage, develop, and deliver ideas. This is supported by a core focus on knowledge sharing, learning from experience, collaboration, and transfer across its activities. **There are three layers to TII's Innovation approach: Strategy, Enablers and Delivery**



TII's Innovation Strategy sets the direction for innovation in TII and sets out what needs to be achieved to ensure successful innovation in TII. It provides the link between Statement of Strategy and Delivery of Innovation.



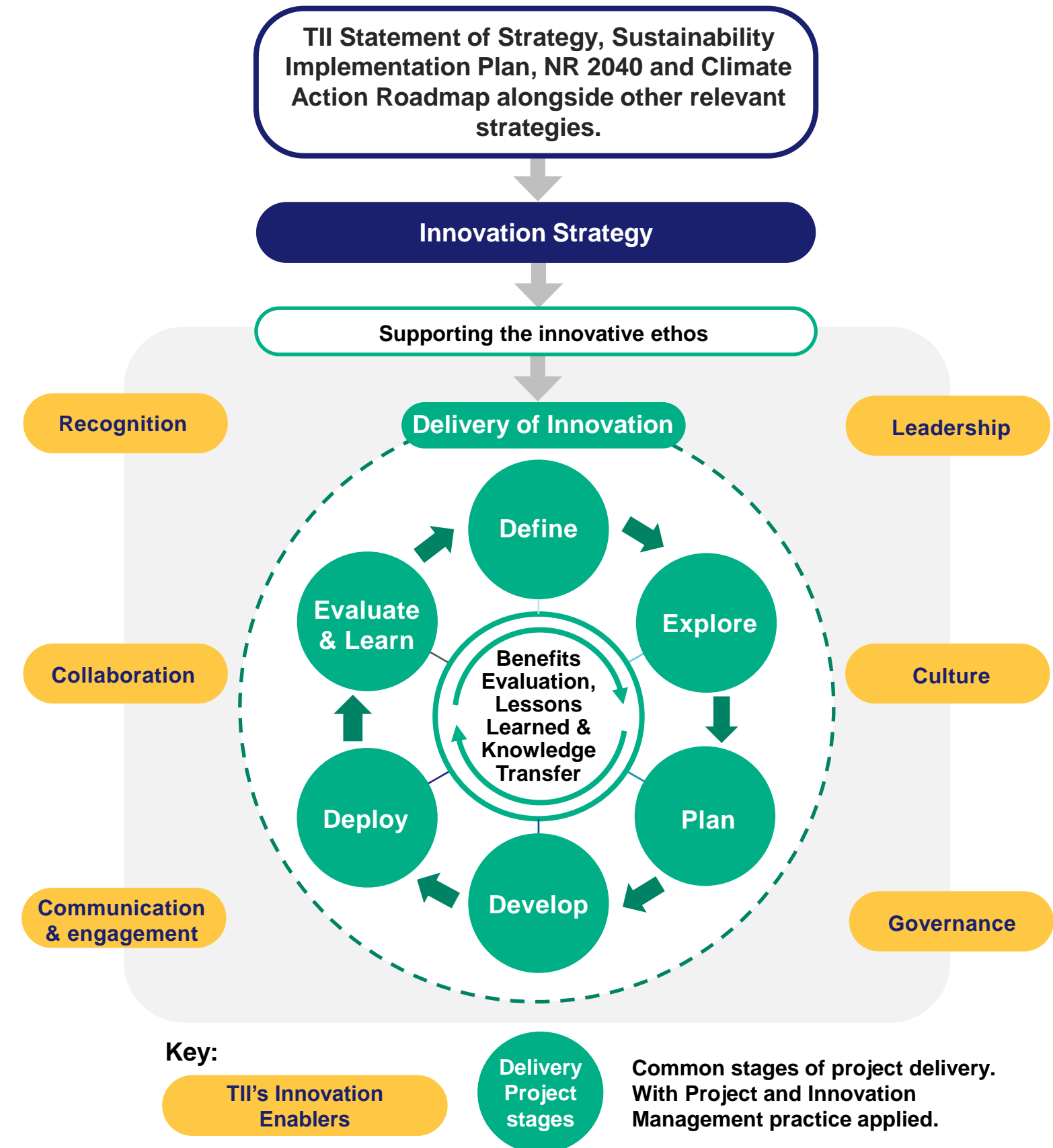
The Enablers underpin the ways of working which deliver the innovations. They are critical to decision making as well as business processes needed for successful innovation. They create the culture.



Delivery of Innovation: Actively managing innovation to fully evaluate benefits, understand risks, and share knowledge.

The figure illustrates the interaction of the three layers to foster innovation, ensuring benefits evaluation, lesson extraction, and knowledge sharing within TII and the broader sector are integral to successful innovation projects. A developed Innovation approach provides TII with a systematic way to plan, managed and deliver innovative projects. Clear alignment to TII's strategies is a key component, understanding the constraints and opportunities to identify the most impactful innovation areas.

TII aims to perform the right activities at the right time, adapting processes and approaches for successful scaling. Utilising various routes to deliver necessary innovations—whether incremental, transformational, or disruptive—to address key challenges. This will be achieved through close collaboration with internal and external stakeholders in TII's innovation value and supply chains.



7. Developing TII’s innovation capabilities

This Strategy supports the delivery of TII’s innovation commitments and values as set out in its Statement of Strategy. TII’s innovation capabilities will continue to develop as it harnesses innovation across all its activities to address key challenges while maintaining safe and efficient services. Achieving this will require TII to reflect on behaviours, processes, and collaborative efforts with its partners, including the value and supply chains.

TII’s innovation activities over the life of this innovation strategy will focus on achieving the following strategic aims:

Delivering safe and efficient transport infrastructure and services that are underpinned by innovation and ongoing performance improvements.

Embedding of innovations and innovation best practice throughout all stages of planning, design, construction, operation, asset management and maintenance of transport networks.

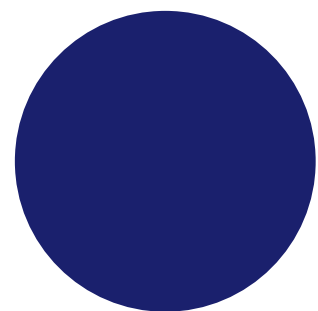
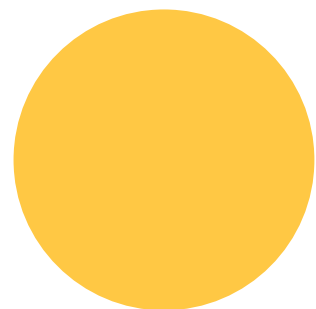
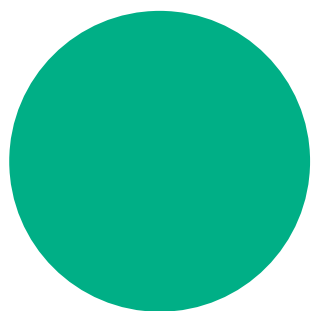
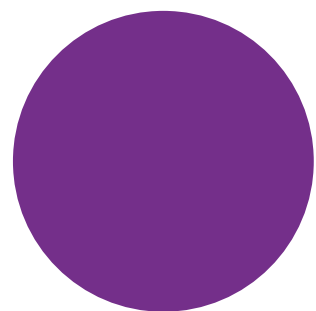


Adopting new or significantly transformational innovations to enable successful delivery of TII’s Statement of Strategy.

Harnessing existing research and collaboration to support innovations and innovation best practice at greater scale within TII.

Building on current processes in TII to embed innovation best practice, processes and/or innovations flowing from the TII Innovation Approach.





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