International Coalition for Sustainable Infrastructure

Accelerating implementation of climate resilience in infrastructure

2022 OECD Infrastructure Forum

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ICSI IS THE GLOBAL MOVEMENT FOR ENGINEERING ACTION

ICSI is the **voice of the engineering community** on **infrastructure sustainability, resilience and climate action**.
ICSI places engineers to be at the forefront of climate action, harnessing their ability to provide solutions and matching it with urgently-needed demand. The solutions we develop and promote will deliver impact "on the ground" where it is needed most.

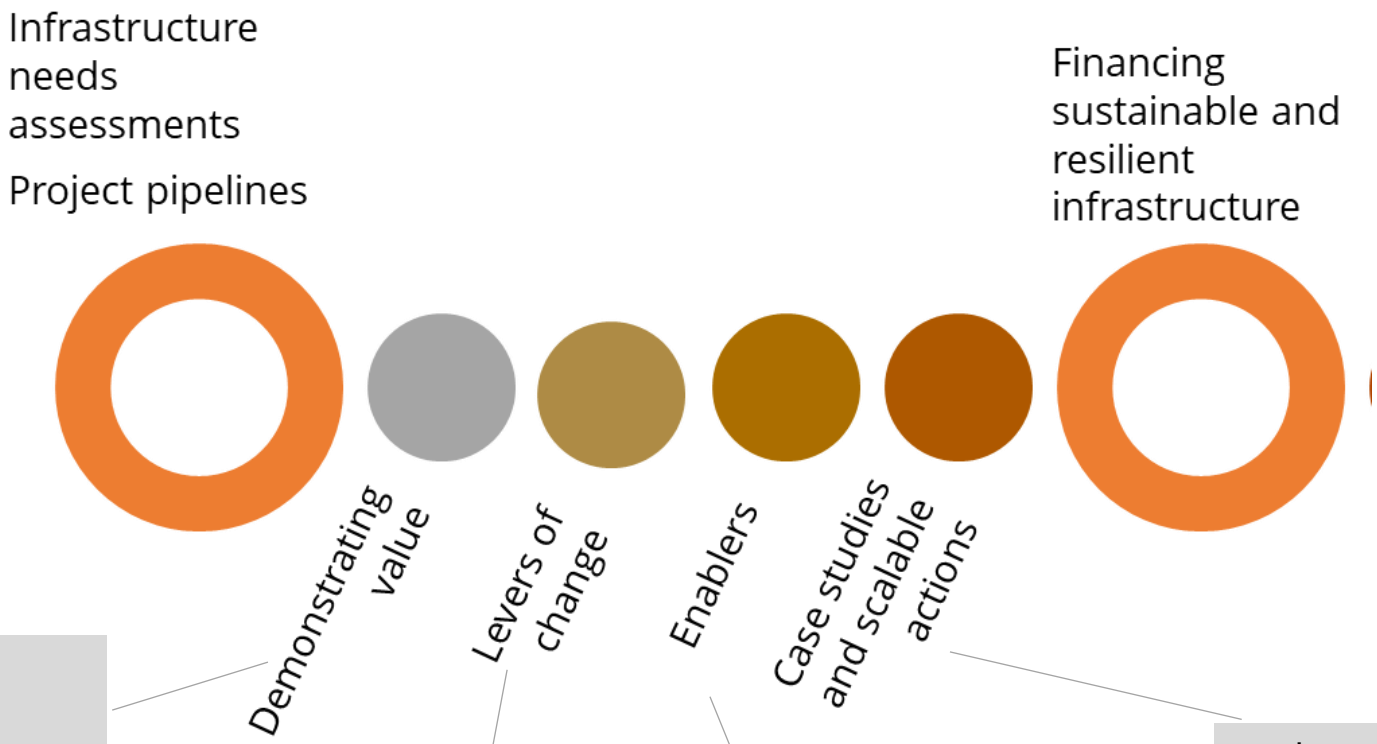
The engineering community has the technical expertise and the credibility to deliver resilient and sustainable infrastructure solutions that are transferable, adaptable and outcomes-based.

ICSI
International Coalition for Sustainable Infrastructure

- **Delivering through strategic partnerships**
- **Scaling up through thought leadership and knowledge-sharing**
- **Tracking global impact**

Policymakers and infrastructure owners and operators have an urgent demand for climate action in infrastructure.

ICSI POSITION PAPER ON SCALING UP FINANCE FOR INFRASTRUCTURE RESILIENCE



- Recognizing and communicating deep uncertainty
- Making the case of economic viability for resilience
- Expanding traditional understandings of benefits
- Allocating benefits, costs and risks

- Using levers of change to drive positive system-level impacts
- Transferring knowledge between sectors and contexts

Building blocks that facilitate resilient infrastructure finance

- Learning from practice
- Focus on scalability and transferability of key actions

Lead authors

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CLIMATE POLICY INITIATIVE

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ICSI POSITION PAPER – LEVERS OF CHANGE AND ENABLERS

LEVERS OF CHANGE

areas of work that have the potential to **enhance *systemic resilience***, or tackle the causes of low systemic resilience, **whilst synergistically addressing other grand challenges or societal priorities initiatives** that seek to solve or mitigate problems on a global scale

ENABLERS

- Policy and regulatory frameworks
- Multi-level governance
- Public-private sector collaboration
- Standards and certification
- Data, information and technology
- Capacity building

ICSI POSITION PAPER – EXAMPLE ACTIONS

Innovative financing

- Make use of levers of change to increase access to financing and create wider system change.
- Adapt financial approaches created for other levers and/or used by other sectors.
- Develop a rapid payout mechanism to support build back better efforts – when appropriate to do so.

Good Governance

- Invest in planning and other strategic pre-development activities – choosing the right projects
- Develop review mechanisms to incorporate new data/new transaction approaches to secure regulatory approval and attract investor interest.
- Include citizens participation.
- Integrate DRM and climate adaptation policies.
- Establish a function that is responsible for dealing with the climate emergency linking national to local policies

ICSI POSITION PAPER – KEY MESSAGES

- Resilience needs to be viewed systemically and investment in resilience should support this approach.
- Proof of concept framing of key factors with significant potential to upscale and accelerate resilient infrastructure finance, including levers of change and enablers.
- Elevate praxis-based education (learning from practice) as an avenue to accelerate implementation. Lessons learnt can be translated into tangible actions that are scalable and transferable to other sectors and contexts.
- Potential next steps include the development of ‘playbooks’ aimed at different actors and a repository of case studies to learn from.
- Bringing in the right mix of technical experts more intentionally in the early stages would greatly support the development process.

LEARNING FROM PRACTICE

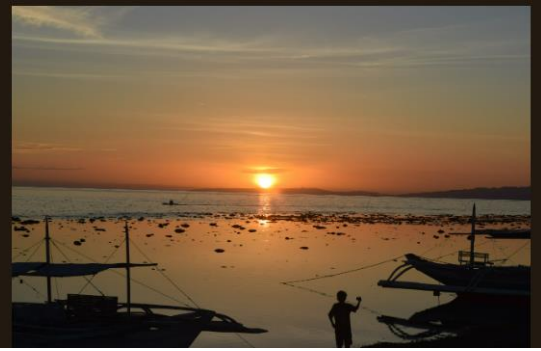
Planned Adaptive Regulation: Learnings from the Delta Programme

Australian climate extremes and building transport network resilience

CASE STUDY

The use of Real Options Analysis in the case of Nakdong River, South Korea

Flooding in the Nakdong River basin, in southeast South Korea, resulted in US$ 2.58 billion in the three decades leading up to 2015, despite the presence of flood prevention mechanisms throughout. With precipitation set to increase across South Korea due to climate change, the risk of more frequent and more severe flooding increases across 23 municipalities in the basin. Therefore, investments in further flood control facilities (FCFs) will be required over the coming decades. In the case of the Nakdong River basin, researchers defined the areas at risk of flooding and future climate scenarios. These were used to estimate potential damage costs under those future

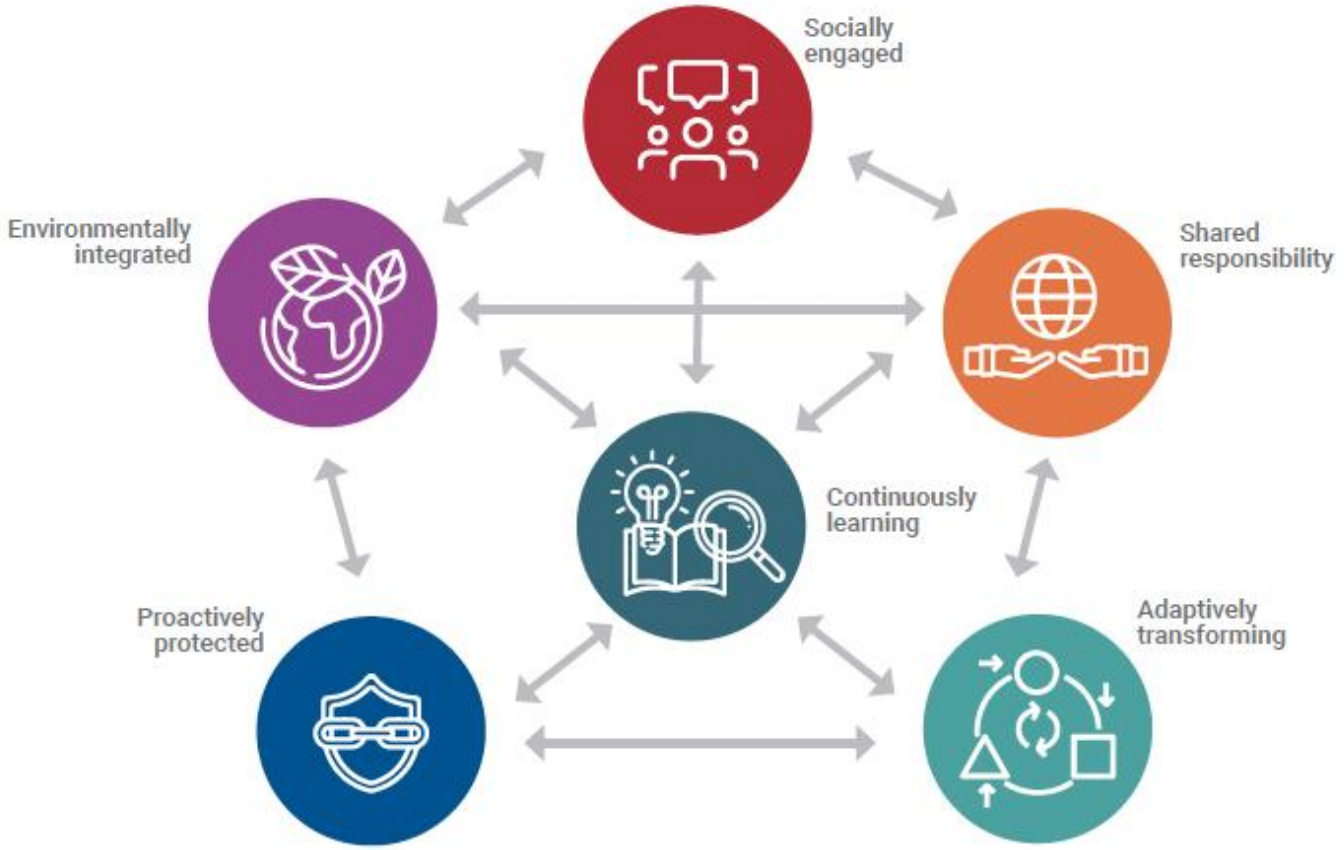


CASE STUDY

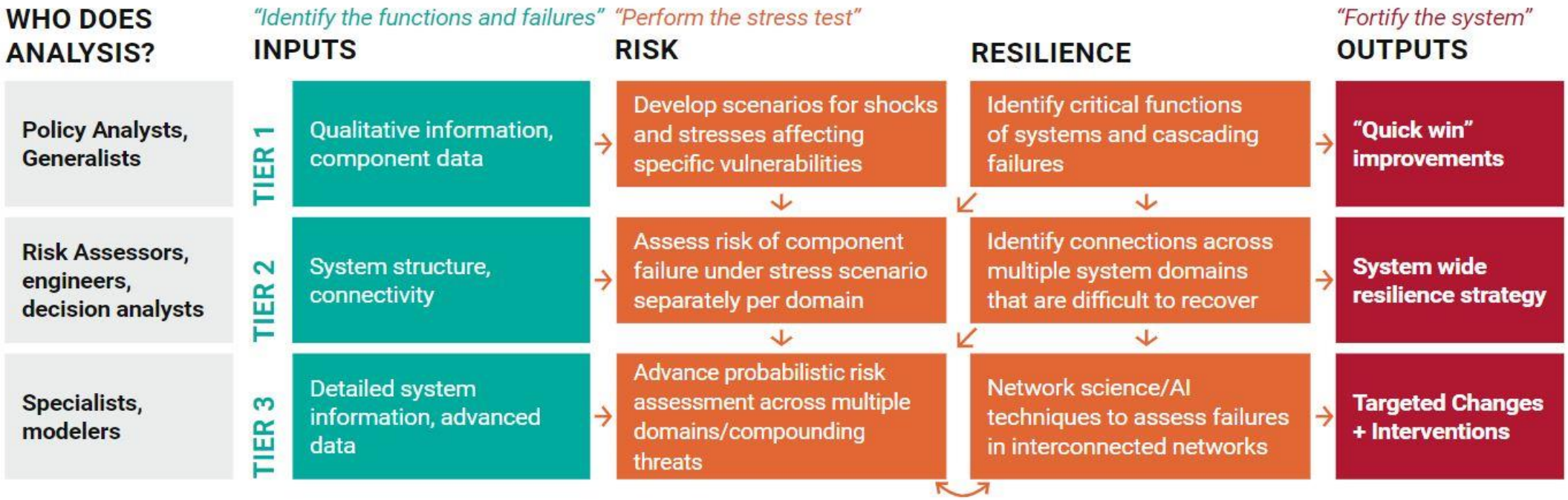
The UK Committee on Climate Change as an effective coordination mechanism to address climate resilience

The UK's Committee on Climate Change (CCC) is required by the Climate Change Act (2008) to maintain the UK Government's political commitment to climate goals and adherence to the Climate Change Act. The government is obliged to respond to the committee's recommendations and advice[a]. The motivation behind its creation was to solve the problem of addressing intergeneration issues within institutions governed by short-term political cycles. In addition to an advisory role, the CCC acts as an independent monitor of the government's progress towards emissions reductions goals, and climate change mitigation and adaptation efforts[b]. In this way, the role which the CCC plays within the UK's national climate change policy space is pivotal in not only effectively coordinating mechanisms to address climate resilience across present government structures, but it also ensuring that efforts are coordinated temporally, across timescales that extend across multiple decades. Institutions such as the CCC are therefore well-suited to help to add resilience to the early lifecycle phases of infrastructure development, where long-term planning

UNDRR PRINCIPLES FOR RESILIENT INFRASTRUCTURE

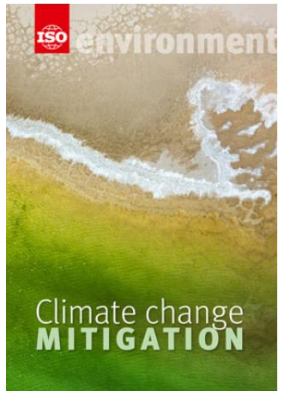


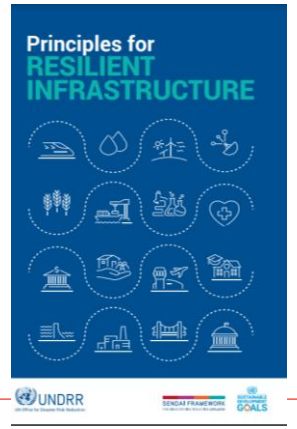
UNDRR STRESS TESTING FOR RESILIENCE



MAINSTREAMING CLIMATE COMPATIBLE INFRASTRUCTURE

- System approaches
- Lifecycle view
- Outcome-led decision-making
- Actionable pathways to implementation
- Capacity building
- Outreach and advocacy





Systems Thinking

Inclusive Engagement

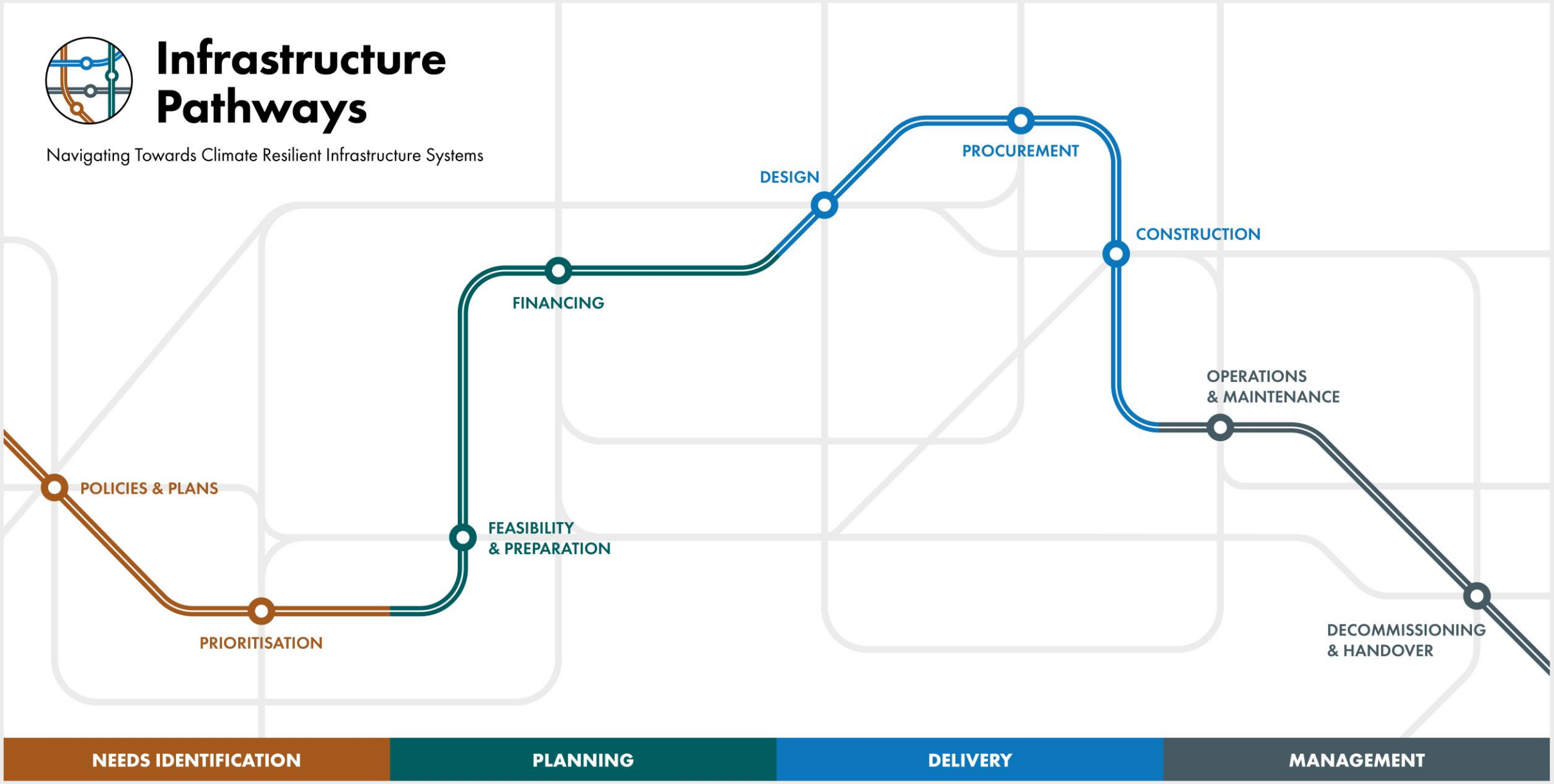
Evidence-based Decision-making

Future-oriented Planning

Reflection and Iteration

Infrastructure Pathways

Navigating Towards Climate Resilient Infrastructure Systems



Thank you.

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