Futureproofing in Asset Management

Institute for Manufacturing, Cambridge, April 2nd 2014

Keith Waller
Infrastructure UK
Content

• Infrastructure investment in the UK
  – National Infrastructure Plan

• Improving delivery and asset performance
  – Infrastructure Cost Review

• Next steps
What we do:

- Infrastructure UK is a unit within the Treasury, that works on the UK’s long-term infrastructure priorities and secures private sector investment.

Responsibilities:
- co-ordinating and simplifying the planning and prioritisation of investment in UK infrastructure
- improving UK infrastructure by achieving greater value for money on infrastructure projects
National Infrastructure Plan

• Government vision for UK infrastructure
• Strategic need for investment
• Pipeline and priority investments
• Delivery progress
• Funding and financing infrastructure investment
UK commitment to long-term spending (SR13)

£15bn

£370m

£16bn

£22.5bn
Budget 2014

- £150 million funding for flood defence and £200 million pothole fund
- Freezing the Carbon Price Support rate at £18 in 2016-17
- Urban Development Corporation for Ebbsfleet Garden City
- Cambridge Gain Share
- Approval of £270 million UK Guarantee for Mersey Gateway
- New Planning Court to fast-track disputes
- Increase the PWLB limit from £70 billion to £95 billion
UK infrastructure investment pipeline

Pipeline value by sector

Source: HM Treasury Major Infrastructure Tracking unit
Funding infrastructure investment

Chart 6.A: Funding mix for each infrastructure sector

- **Overall**: £377.1 billion
- **Transport**: £121.4 billion
- **Energy**: £218.8 billion
- **Communications**: £14.3 billion
- **Flood**: £3.9 billion
- **Water**: £15.1 billion
- **Waste**: £2.3 billion
- **Intellectual Capital**: £0.8 billion

Source: HM Treasury Major Infrastructure Tracking unit
NIP 2010

• First ever national plan, published October 2010, set out hierarchy for investment:

1. **Maintenance and smarter use of assets**
   - The priority is to make the best use of the extensive assets that are already in place through maintenance and demand management.

2. Targeted action to tackle network stress points and develop networks

3. Transformational large scale capital projects

• Requires effective asset management strategies across the networks
Improving delivery – 2010 Cost Review

Infrastructure Cost Review 2010:
• UK civils costs consistently in upper quartile
• Potential savings of up to 15% identified (£2 billion to £3 billion annually)

Key implementation plan objectives:
• Pipeline visibility and certainty
• Long term funding and planning
• Grouping projects into programmes
• Competition/procurement models
• Risk management and use of OB
• Engineering standards
• Infrastructure data/benchmarking
• Effective asset management

...need to change client and industry behaviours
Infrastructure Cost Review outputs

July 2012
- Evidence of clients getting smarter at simplifying their requirements
- Ongoing work in clients to remove unnecessary standards and focus on outcomes

April 2012
- Industry, clients and government producing a co-ordinated approach
- Work now progressing on other sectors and skills

July 2012
- Implementation Group chaired by Richard Coackley
- Recommendations adopted in regulatory approach for AMP6

Nov 2013
- Guidance on improved approaches to managing risk
- Linked to supplementary Green Book guidance
- Legacy “expert risk group”
Infrastructure Carbon as a driver of cost reduction

- Published November 2013
- Concludes reducing carbon can drive reduced whole life cost
- Sets out actions to reduce carbon from construction and operation of UK infrastructure assets
- Target 24 MTCO$_2$e / year by 2050
- Industry leaders from government, clients and supply chain signed pledge to work to deliver recommendations
- Key to consider at project outset to drive the right behaviours
Infrastructure Routemap Overview

Draft
Pipeline and skills

- Strategic context for infrastructure investment set out in NIP, backed by £375bn pipeline
- Challenge: how best to use this to understand:
  - Overall skills demand
  - Pinch points on capacity & capability – either in regions or for particular skills – across sectors
  - To give infrastructure industry the confidence to invest strategically for the market, not just tactically for a project
    - In skills and capability
    - In tools and products
    - In goods and services
  - that can improve delivery, build resilience, futureproof & maximise whole life value of infrastructure assets
Future challenges

• WHAT?

• Recognising increased levels of investment in economic infrastructure and demands for value for money:
  – What should asset owners do to ensure they specify *appropriate* futureproofed assets?
    • Role for industry / academia to shape thinking
  – Defining whole life value of an asset (cf WLC)
    • Value can include socio-economic benefits
    • Noting costs may accrue to asset owner, benefits to asset user
  – Providing evidence base for repair vs replace, proactive vs reactive
    • Common approaches for both green and brownfield assets?
Future challenges

• **HOW?**

• Developing and delivering best practice
  – Infrastructure is a system / network – how best to bring system thinking into asset management strategies
  – Do we need standard assets or asset standards?

• **Innovation**
  – Doing the same thing - properly
  – Doing the same thing – differently
  – Doing a different thing
    • How should industry / academia engage to help develop solutions?
    • What new skills are required to deliver better infrastructure? And how best to develop these?