

Better business models for infrastructure

Existing approaches to delivering and maintaining infrastructure have been criticised for returning poor value to the taxpayer. The current drive for efficiency and cost savings provides a further stimulus to review current infrastructure management and improve business models.

Infrastructure business models describe how value from infrastructure is created, delivered and captured across different areas, including economic, social and cultural contexts. They have a major influence on the way infrastructure is used, the quality of services, infrastructure contributions towards economic, social and environmental objectives, and the public benefit that it delivers.

The report *Are you being served?* from the iBUILD Infrastructure Research Centre has set out five priority action areas and recommendations to improve infrastructure business models. It provides a summary of infrastructure research to date and lessons to be drawn from the findings.

The report particularly highlights the value of local infrastructure, which drives local economic growth, job creation and urban development through construction, management activities and facilitation of other businesses. For example, analysis of a major stimulus programme in the US highlighted that investment in local infrastructure generated more jobs, more quickly, than large-scale national capital programmes.

National infrastructure planning in the UK should therefore be complemented by similar

activities for local and urban infrastructure to maximise the potential on both levels.

Key findings

- It is crucial to understand how infrastructure systems are interconnected. The UK's infrastructure is amongst the most interconnected in the world and has a pressing need to adopt a broad and integrated approach to infrastructure planning.
- Top-down and centralised 'one-size-fits-all' approaches to infrastructure development and management discourage locally-led innovation, and often fail to recognise local benefits such as jobs, air quality and reduced fuel poverty. An appropriate proportion of infrastructure planning, investment and responsibility should be decentralised to local and regional institutions, to deliver infrastructure that better reflects local needs and priorities.
- Investment in local infrastructure provides wider health, economic and environmental benefits for society. Traditional cost-benefit analyses do not fully reflect the social value of infrastructure investment, and can emphasise schemes that deliver financial return over those which would actually benefit society. A new economic valuation system that recognises these long-term returns is essential to maximise the benefits.

Key findings - continued

- More efficient project financing, funding and delivery should be implemented through use of tools such as the Project Initiation Routemap, Building Information Modelling systems or life-cycle assessment.
- A number of demonstrator sites should be established quickly to identify the most successful approaches, encourage wider uptake and explore mechanisms for integration.

BRIEF DESCRIPTION OF THE PROJECT

The report *Are you being served? Alternative infrastructure business models to improve economic growth and well-being* is a mid-term review from the iBUILD Infrastructure Research Centre, funded by the Engineering and Physical Sciences Research Council (EPSRC) and the ESRC. It provides a summary of infrastructure research findings and associated policy recommendations for industry and the UK government.

Web:
research.ncl.ac.uk/ibuild/2015manifesto

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The views expressed in this evidence briefing are those of the authors and not necessarily those of the ESRC.

Policy relevance and implications

- National reforms in policy and regulation are needed to develop an integrated approach to local infrastructure planning, co-ordinating activities across infrastructure sectors and places.
- Housing and 'hidden infrastructure' that include efficiency measures such as insulation or rooftop solar panels affect the operation of infrastructure networks. Spatial planning and retrofit of buildings should be considered within infrastructure planning processes such as the National Infrastructure Plan.
- National and local policy frameworks should be better aligned to enable locally tailored infrastructure business models to emerge alongside 'mainstream' systems. A stronger and statutory devolved role for cities, city regions and localities in the planning, development and delivery of infrastructure must be supported by greater fiscal decentralisation, and local funding and financing options.
- Better measures of long-term economic, social and environmental benefits and costs should be incorporated into infrastructure appraisal frameworks, including the HM Treasury Green Book, to recognise wider economic and societal outcomes. These should also consider matters of resilience to disruptions such as extreme events, and longer-term pressures such as climate change.
- Local authorities should apply resource assessments as a matter of course to identify the potential value of land, property and infrastructure assets, in order to generate long-term revenue streams through energy generation or other income sources.

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