

Making the most of existing assets

By Professor Janette Webb, University of Edinburgh

The devastation, and deaths, following recent thunderstorms in Scotland sharply demonstrate our vulnerability to impacts of climate disruption, and the necessity for resilient and adaptable public infrastructures.

Mainstream thinking on infrastructure is however not suited to the context of the multiple global vulnerabilities we are now facing.

The convention is that 'more is better' with 'mega-projects' regarded as boosting economic growth, *and* political capital. This might seem particularly attractive now, when long term public borrowing costs are ultra-low, and the economy is in severe recession.

Improving our existing infrastructure

The recent history of big projects has however revealed their questionable material benefits, even in more stable times, with results often evaluated as poor quality at a high price (Flyvbjerg, 2009).

There is also abundant evidence that our future welfare and livelihoods depend increasingly on the less glamorous work of improving our existing infrastructures, including natural eco-systems.

Better public value – including skilled jobs and welfare - can be derived from systematic upgrading and regeneration of what we have, rather than building new (Kay, 2016).

Infrastructure Commission for Scotland

In the 'easier times' of 2019 and early 2020, Scotland's Infrastructure Commission reviewed the evidence about investing in infrastructure for a net zero carbon economy and an inclusive, fairer society.

A key conclusion was that achieving such outcomes will depend on prioritising whole life cycle cost and resource value of investment options. The corresponding recommendation was to establish a presumption in favour of enhancing, re-purposing or maintaining our existing assets.

But we will need new assessment methods and more collaborative working at all scales to make this happen.

Most future infrastructure already exists

Most of the infrastructure that will be in use in 30 years' time already exists. Prioritising investment in the effectiveness and efficiency of these assets makes sense; it is integral to regenerating local economies and increasing the numbers of decent jobs, as well as helping to mitigate, and adapt to, climate disruption.

Property maintenance is crucial

When budgets are stretched, cutting maintenance is an easy short-term option, but a false economy in the longer term. Proper maintenance not only ensures assets perform more effectively now, but those that have been well maintained should be easier to repurpose, adapt and refurbish when needs change.

In other parts of Northern Europe, this is already recognised. A recent visitor from a German municipal utility company, or *stadtwerke*, for example, commented on Scotland's beautiful buildings, but questioned why they were not in better condition. In Germany, he suggested, similar buildings would be draught proofed, water-tight and cost-efficient to run.

Prioritisation of energy efficient buildings

Since the Scottish Government made energy efficiency of buildings a national *infrastructure* priority in 2015, we have the framework in place for achieving this here. The Energy Efficient Scotland Programme proposes some significant innovations across government and industry supply chains to upgrade the entire building stock, promising an offer of finance to all property owners.

Local governments are expected to develop comprehensive heat and energy efficiency strategies customised to local needs. Planning would use new socio-economic assessment methods which prioritise welfare benefits and carbon savings. Making the final Programme work will however need political leadership and concerted public engagement; the return on this kind of investment in renovation, upgrade and, in some cases, repurposing of buildings is better lives for Scotland's population.

Sharing resources to deliver benefits

Done well, the Energy Efficient Scotland Programme, with its focus on buildings as infrastructure, can also initiate new thinking on the benefits of sharing resources and assets across (the more than 150) Scottish public bodies. Current public sector capital planning is geared to independent decisions by each specialism – whether health, social care, education, or community facilities - against different performance and accounting rules, and timetables.

Recommendation of combined decarbonisation route map

A fragmented approach to public sector infrastructure decision making prevails, and this can also marginalise life cycle carbon cost in favour of short-term economies.

The Commission recommended instead a presumption against like for like replacement, or construction of new single purpose assets in favour of shared, and more internally adaptable, facilities. While new, specialised assets are needed in some circumstances, this should not be the default. It also recommended that a combined decarbonisation route map, across the two major carbon contributors – heat and transport – should be developed to enable the combined energy and technology mix of those to be jointly considered, planned and implemented.

Such new thinking also needs to take advantage of the increasingly available recovered and recycled materials, rather than traditional higher carbon equivalents, in a step closer to Scotland's ambition to develop a circular, zero waste economy.

Call for action

Government actions in response to the pandemic have shown the radical changes, including in fiscal policy, which can be made in a very short period. Building back better means doing better in resource management, wasting nothing, and prioritising shared and sustainable prosperity.

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She was a member of the Scottish Government Fuel Poverty Review Panel and adviser on Energy Efficient Scotland proposals. She is a peer reviewer of UK Government BEIS social research on heat networks, and adviser to the Industrial Strategy Challenge: Prospering from the Energy Revolution. She chaired the Committee on Climate Change 2016 Advisory Group on Energy Efficiency and Heat.

Refs

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