

OPINION Foreseeable futures: the power of logic mapping

Decision-making and planning through the coronavirus uncertainty requires bold leadership and an understanding that there are many possible versions of the future, says **Peter Wright**, associate director, Transportation at AECOM

Does it look clearer with lens one or lens two? It's a common question posed at the opticians, but it chimes with the challenges faced by transport planners as we emerge from lockdown and map the future of infrastructure networks.

Pre-lockdown, we could leave the house and go wherever we wanted, whenever we wanted, with whoever we wanted, but circumstances – and mobility – have changed.

So, what lenses should we look through to plan for possible futures? In these uncertain times, scenario planning and logic mapping are powerful tools that balance desired economic, social and environmental priorities while emphasising unwanted or unintended outcomes.

Never in my time as a transport planner did I think I would see graphs showing the daily movements of people by different modes of transport on prime time national TV.

But that is exactly what happened during the pandemic as the Prime Minister and chief medical officers referred to these figures regularly as part of their daily briefings.

As a transport planner, I enjoy analysing patterns of movement and changes in behaviour, as do many others, I'm sure.

However, the clarity of figures provided by the Department for Transport – 90-95% reduction in use of rail and underground, 80% or more reduction in bus patronage and a 75% drop in motor vehicles usage – were startling and showed us all just how fundamentally life as we know it has changed; much of it before the Government-imposed lockdown (see figure 1).

Data on travel behaviour has never been so prevalent and this has enabled us to see how

patterns of movement have been changing across the globe. What is clear is that, while the patterns are similar in many ways – from lockdown imposed, through reduction in travel, to lockdown release with reduced use of public transport and increased travel by private vehicles – there are differences in approaches by national governments, cities, individuals and communities that have led to different choices and behavioural responses.

Now, as the world transitions from lockdown, there is an opportunity to look at the choices and behavioural responses to prepare for what comes next.

Decision-making and planning through the coronavirus uncertainty requires bold leadership and an understanding that there are many possible versions of the future. Here, I explain how scenario planning and logic mapping can help shape decision-



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making – informing policy decisions and strengthening leadership at the same time.

WHAT IS LOGIC MAPPING AND WHY IS IT RELEVANT NOW?

Logic mapping has been used for some time in programme planning and transport evaluation. It is a "systematic and visual

way of presenting the key steps required in order to turn a set of resources or inputs into activities that are designed to lead to a specific set of changes or outcomes". It is not rigid or prescribed, but an iterative and flexible way of communicating choices and impacts – intended and otherwise – to achieve a series of objectives.

As society and businesses increase levels of activity, transport commentators and advisors have spoken of the chance to return to a 'new normal' where the 'good behaviours' of lockdown are maintained. However, to capitalise on the momentum offered by changes in working patterns and more local travel horizons, we need to plan for scenarios where the economic recovery is viewed through environmental and social lenses.

While there are obvious advantages if trajectories are aligned between businesses and operators, as well as national and local government, logic mapping helps ensure that any desired objectives are viewed alongside any unintended or unwanted consequences.

CORNWALL COUNCIL: USING LOGIC MAPPING TO TACKLE CORONAVIRUS WHILE ADDRESSING CLIMATE CHANGE

Cornwall Council, along with all the authorities in the south-west, declared a Climate Emergency in 2019 – with the ambition of becoming carbon-neutral by 2030.

The county made a commitment to act as its extensive coastline is more vulnerable to the impacts of climate change than many parts of the UK. These impacts include flooding, rising sea-levels and susceptible infrastructure.

Now, as the area emerges from lockdown, AECOM is working with the council to ensure that plans to address the recovery from coronavirus are underpinned by its transport, development and economic actions to deal with climate change.

What it and other authorities and businesses do now will influence the local (and global) CO₂ emissions path for decades.

Cornwall Council has already stated that actions to meet the objective of net zero by 2030 should also address increasing inequalities, poverty and the health of individuals and their communities.

Furthermore, it recognises that the short- and medium-term actions and economic incentives to aid the recovery from coronavirus could, if not addressed, have longer-term impacts on achieving its climate emergency objectives.

The council is now using logic mapping to explore mobility options (not just transport) and their possible consequences while

responding to coronavirus and aiding transport recovery.

This includes (re)launching its "Superbus" fares pilot and Transport for Cornwall as and when it is safe to encourage more people to use public transport.

Logic mapping allows them to respond to current constraints while keeping focus on their original objectives of creating "a step change in public transport through improvements in local bus patronage" as well as mitigating the effects of climate change, by reducing congestion and improving air quality in addition to increasing people's activity levels.

Rather than indefinitely delaying spending the £23.5 million pilot funding allocated for reducing bus fares in the county, AECOM and Cornwall Council are using logic mapping to redesign the scheme to deliver against the original objectives with the additional requirements and evaluation associated with coronavirus restrictions.

This means planning for futures where a choice now does not prevent something happening in the future or is irreversible against a set of recognised objectives, giving a wider awareness to how interventions can complement and facilitate one another.

CHANGING THE WAYS WE MEASURE SUCCESS

Traditionally, appraisal in infrastructure is driven by measures of economic performance, particularly in transport. Adapting to the challenges and capitalising on the opportunities offered requires a change in the ways we measure success – logic mapping helps to do this.

Without amending our evaluation frameworks we could slip back to what we know best (carbon-emitting industries) and a greater inequality in a post-crisis world, with the poorest hit hardest.

We should not rebuild as we have in the past. Instead, if we focus on rebuilding with cleaner energy and sustainable infrastructure, there are potentially bigger benefits for the economy and more job creation – something that will underpin social recovery (see figure 2).

London is already ahead of the curve in this regard. In the short- to medium-term Transport for London (TfL) has taken the bold steps to not only provide more space for

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walking and cycling through the Streetspace for London programme, but it has also extended the operation and increased the price of its Congestion Charge to ensure the newfound road space is locked in, sending a clear signal to business and residents that people are central to the futures London is creating.

Furthermore, the London Plan's Sustainable Infrastructure policy requires building infrastructure within a circular economy, minimising waste and reducing impacts on the environment.

TAKING ADVANTAGE OF A ONCE IN A LIFETIME OPPORTUNITY

We may never have a better opportunity to plan transport and cities with the environment and society engaged as part of the process.

As Manchester's first Cycling and Walking Commissioner and Olympic gold medalist Chris Boardman recently said with regard to locking in the good behaviours that emerged from the coronavirus restrictions, "this is a once in a lifetime opportunity, probably multiple lifetimes... In a sense, it is an emergency situation". While there is an imperative to react quickly, scenario planning and logic mapping allow us to plan for futures where the benefits can be felt in the immediate and near-terms, without compromising future generations.

It's as close as we get to a crystal ball.

▼ **Figure 2: Jobs created, directly and indirectly, by spending on energy efficient, renewable technology and fossil fuel**

