Live Labs 2
On the ground behaviour change

Behavioural Opportunities Report

January 2026

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Executive summary

Across the three local authorities, low carbon trials appear to be a great success, but there is uncertainty about the road ahead

Local authorities are open and **enthusiastic** about experimenting with new materials and technology…

- Local authorities are interested in innovating with new materials and processes. There is a sense of pride attached to innovation, and being one of the first to try new things.
- While each site faces unique, location-specific challenges, engineers are interested in learning from what others are doing and seeing whether it could be applied to their context.
- Financial support from the trials has been extremely helpful - allowing local authorities to try new low carbon materials, while minimising risk to their finances if these were to fail.

… but **concerns** about cost and durability means innovation feels a slow and risky process...

- Low carbon trials require longitudinal evaluations to ensure materials perform well over time – this means there is currently uncertainty about committing to new materials long-term.
- As budget remains a key concern, local authorities are unsure what will happen once they no longer have the funding, and if it would be feasible for them to continue trialling new materials.
- Decision makers face pressures, not just internally with budgets, but externally due to public perceptions and political pressure.

... and while some barriers can be addressed on an individual level, wider **system-level** risks need to be shared.

- Individual motivation for innovation and a culture of collaborative working drive innovation across local authorities, especially where materials and equipment are in ready supply.
- But breaking entirely away from the status quo remains difficult as long as concerns about risk and accountability underpin decision-making.
- This points to a need for shared risk and liability to ensure the wider system supports the fantastic on the ground change delivered by low carbon trials.

Investing in lower-carbon approaches is a balancing act – requiring trade offs between enthusiasm and practicality

Balancing **motivation** vs **feasibility**

Motivation for innovation varies across local authorities and depends on robust organisational structures with innovation prioritised at a senior level.

Establishing cultures of innovation requires collaboration, contractor buy-in, individuals' willingness to invest time and effort in new approaches, and a clear evaluation process.

Trial funding has made low-carbon materials more **feasible**, incentivising local authorities to invest in materials that would otherwise be too expensive to test without complete confidence in performance.

Looking ahead, despite some low carbon innovations being cost-saving (e.g. using recycled materials), higher infrastructure and material costs could make innovation less certain.

Balancing **risk** vs **accountability**

The issue of **accountability** for failure is complex. It relies on transparency, good communication and existing baselines of shared trust. This is built through positive contractor-engineer relationships, joint working and knowledge-sharing, clear ownership of trials and recognition for successes at every level.

The trials have given local authorities space to financially de-risk material failure e.g. Coventry are using trusted contractors, requiring 2-3 year supplier guarantees and only testing one layer per section of the road.

But the psychological **risk of failure** remains – and can still mean pushback from those on the ground who want to avoid blame if/when things go wrong, particularly when facing reputational impacts.

There are a number of behaviour change opportunities to leverage key drivers and overcome key challenges to innovation

Key driver	Intervention opportunity
MOTIVATION The desire to innovate or be seen as innovative	• **Innovation Awards** – recognising outstanding low carbon projects • **Salient Signage** – publicly highlighting low carbon roads
COLLABORATION Good relationships with contractors	• **Joint Innovation Hubs** – between contractors, councils & suppliers • **Shared Success Stories** – a national tracker/leaderboard for low carbon
INFRASTRUCTURE Geography, tools and physical ability to trial	• **Innovation Readiness** - an indicator signalling councils are ready • **Innovation Time Bank** – processes to protect time for innovation

Key challenge	Intervention opportunity
RISK Risk of material or process failure	• **Shared Risk & Liability** – system level intervention whereby budget for innovation / material failures is ringfenced by DfT / Treasury
STATUS-QUO Innovation requires breaking habits and norms	• **Decision Prompts** – nudges in materials selection for low carbon • **Implementation Intentions** – specifying what/why of innovation
RESPONSIBILITY Lack of recognition and clear roles for innovation	• **Innovation Champions** – roles created at every level of seniority to challenge existing processes and advocate for new

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Objectives and methodology

Background and objectives

As Amey approaches the final year of the Live Labs 2 programme, the challenge of delivering behaviour change across local authorities is a key focus.

Ultimately it is both strategic decision makers and teams 'on the ground' who will be responsible for both selecting lower carbon materials and following new processes to deliver decarbonisation of local highways infrastructure and assets.

Our exploratory research sought to:

- Explore the steps involved in lower carbon highway maintenance -specific behaviours and decision points - from planning to delivering works.
- Identify the key stakeholders who play a role in decarbonisation efforts.
- Understand the contextual factors influencing these behaviours.
- Inform the development of cost-effective, evidence-based interventions that drive sustainable organisational change.

The ultimate aim is to leave the Live Labs team with a set of evidence-based behaviour change interventions, and a specific testing plan, that local authorities can begin to roll out across the UK.

Our approach took a three-step process to Identify, Explain and Influence roads maintenance behaviours

Identify
the specific teams and desired behaviours

First, we **immersed ourselves in what is already known** about materials selection through reviewing existing research and conducting a behavioural mapping workshop with key stakeholders.

Outputs included two behavioural maps of the *repairs* and *resurfacing* journeys.

These detailed the key stages involved, key actors, behaviours, barriers/drivers, and potential opportunities for intervention.

Explain
how context influences behaviour 'on the ground'

Then, we **designed and conducted exploratory research** with highway maintenance teams in Coventry, North Lanarkshire and Lincolnshire. These were chosen because of their high engagement in innovative approaches.

Primary research included:

- Initial interviews with inspectors and engineers for each local authority to understand their decarbonisation efforts to date, and plan the approach for our site visit.
- Full-day in-person ethnographies in each location to immerse ourselves in their context, visiting a range of sites, exploring quarries and interviewing stakeholders from the council, suppliers and contractors.
- Follow up interviews with x3 mid-level engineers to gather a different perspective from those who are further removed from senior decisions.

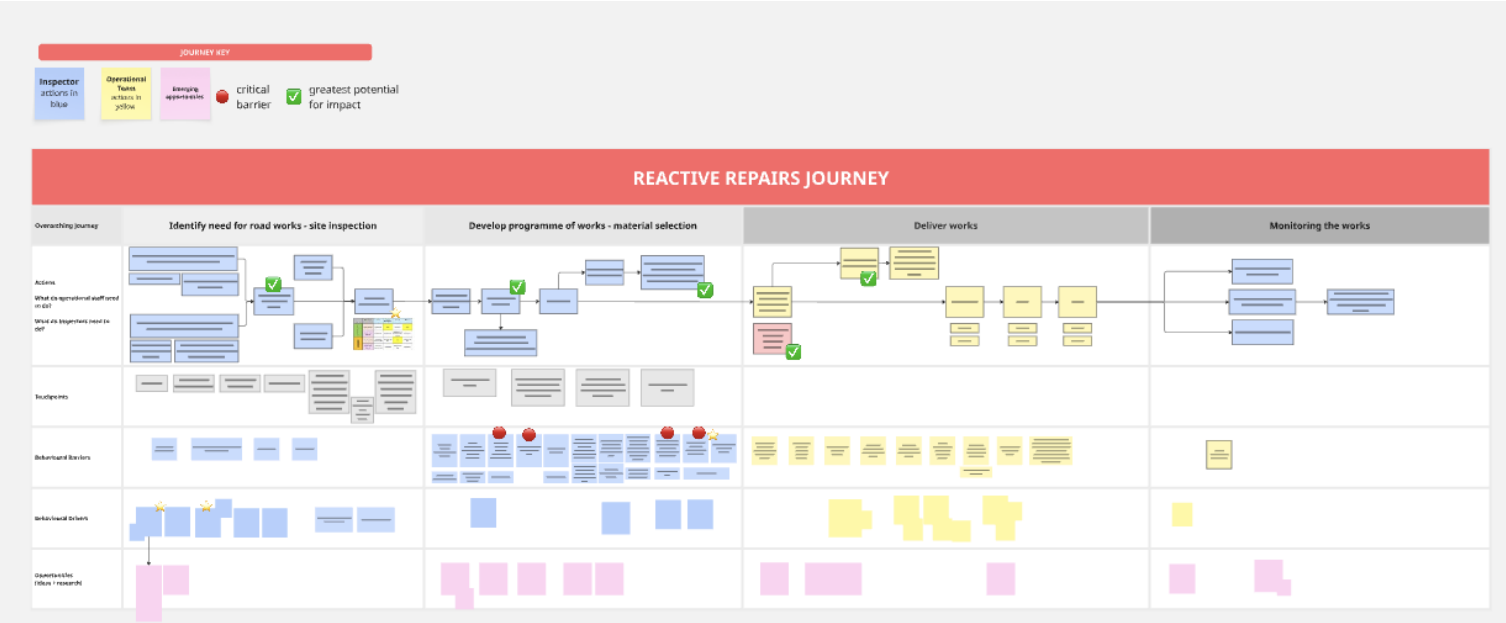
Influence
behaviour with evidence and insight-based interventions

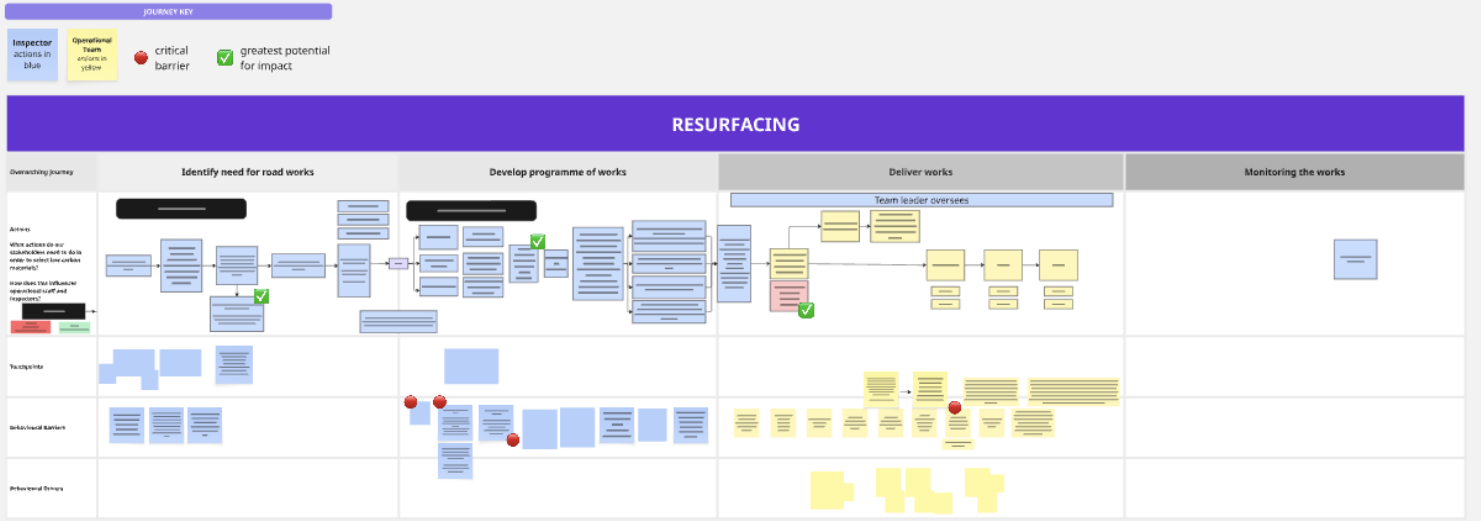
Next, we **co-created ideas for interventions** which combined specific insight from the research with well evidenced tools from behavioural science literature.

We ran several internal creative workshops to develop a longlist of intervention ideas.

These intervention ideas were then presented to stakeholders in an online workshop to gather their feedback and to enable us to prioritise and refine the most promising ones.

See the behavioural journey map for roads repairs & resurfacing here





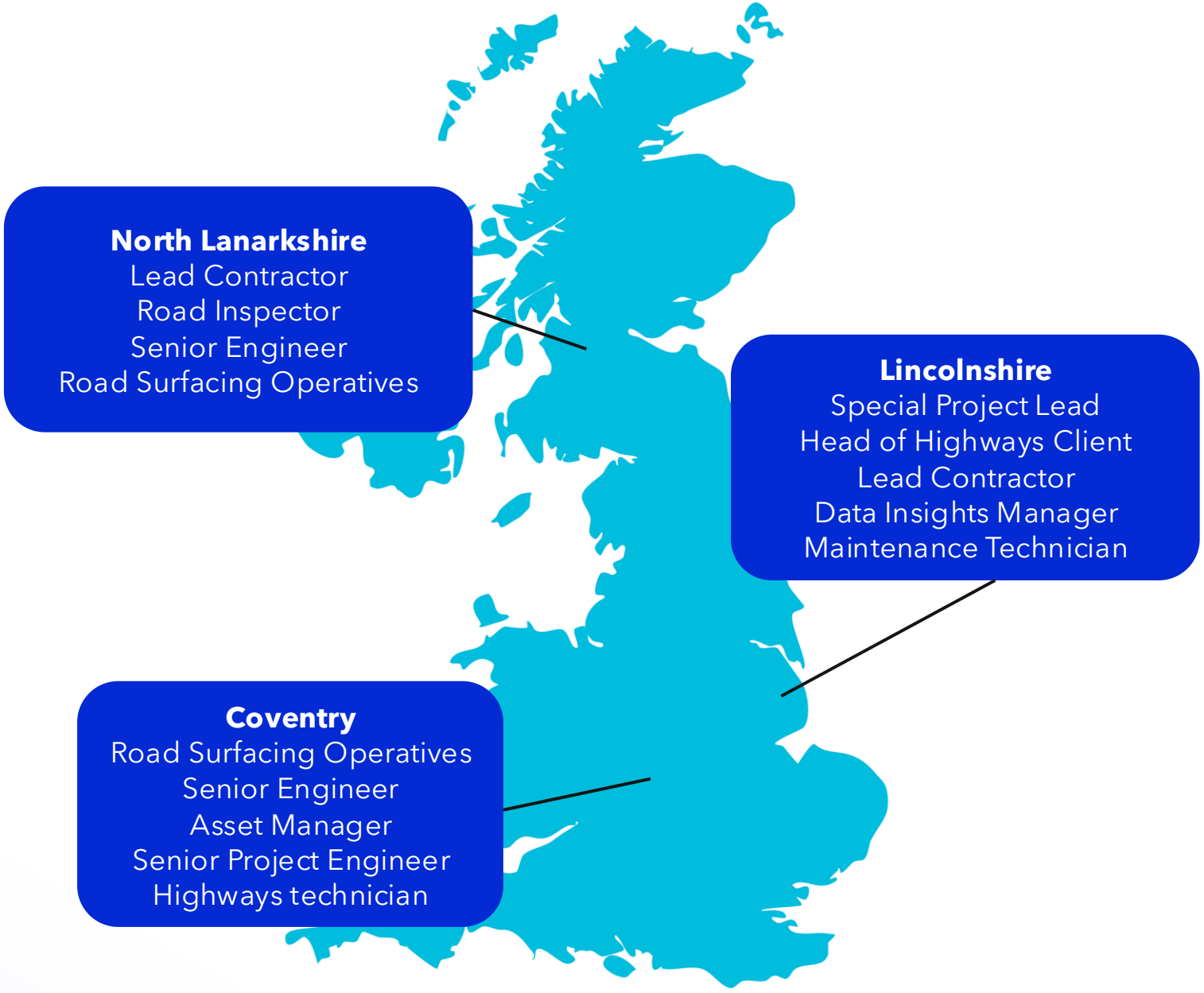
Sample

The fieldwork took place from September 2025 – October 2025.

Following preparatory interviews we spent a full day at each location where we observed live lab trials and conducted interviews with different stakeholders including group interviews with teams 'on the ground'.

Through these visits we were able to gather detailed insight on highway maintenance projects and identify context-specific barriers to, and opportunities for innovation.

Follow-up interviews were conducted with both operatives and senior decision makers to ensure data collected from each council was thorough at each organisational level.



Interviewee titles and location

North Lanarkshire

Context

- Cold, wet climate characterised by snow or rain for much of the year
- Small local authority team
- Limited access to equipment due to location e.g. one machine shared with other local authority

Focus of trials

- North Lanarkshire are conducting a 6-month trial using the ***Road Mender,*** a machine that uses a mastic asphalt derived from end-of-life waste tyres for surface dressing.
- Operatives are trained in house for two weeks and visit pre-determined sites to resurface roads.

"It's very, very, very hard-wearing. It lasts for years, It's not just a temporary fix. It's really, really good. The only issue is we've only got one [machine]." - Inspector

Lincolnshire

Context

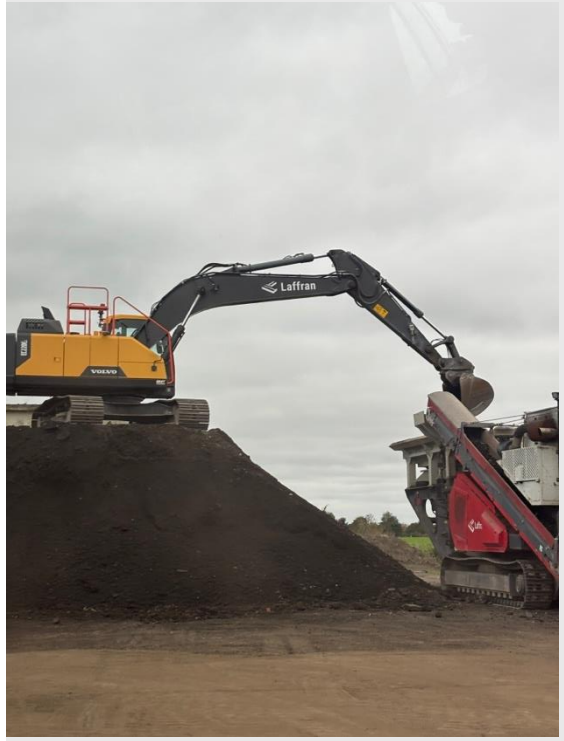
- Network includes lots of busy roads near tourist hotspot cathedral
- Large local authority team with lots of engineers
- Own materials testing lab and quarry
- Shared data hub with Balfour Beatty in LCC office

Focus of trials

Two new materials in low density locations including:

- ***Foam based*** – existing material crushed and foamed on site creating a sticky, reusable base.
- ***Retread based*** – cold recycling, crush and pulverise existing road.

"I think [recycling materials] is brilliant, it's cost effective. It does exactly what it says on the tin, and you can recycle it again."
- Engineer



Coventry

Context

- Long-term involvement in trials
- Small local authority team with few engineers
- Own materials database without reliance on external platforms
- Existing "green" focus e.g. CCC fleet of electric cars

Focus of trials

- Coventry are currently trialling five materials on one road in separate sections including a mix of standard and trial binders and surface courses such as Grapheme.

"We are comfortable with the level of risk because I've taken steps to de-risk the process throughout."
- Senior Engineer

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Key findings

Across the three local authorities, low carbon trials appear to be a great success, but there is uncertainty about the road ahead

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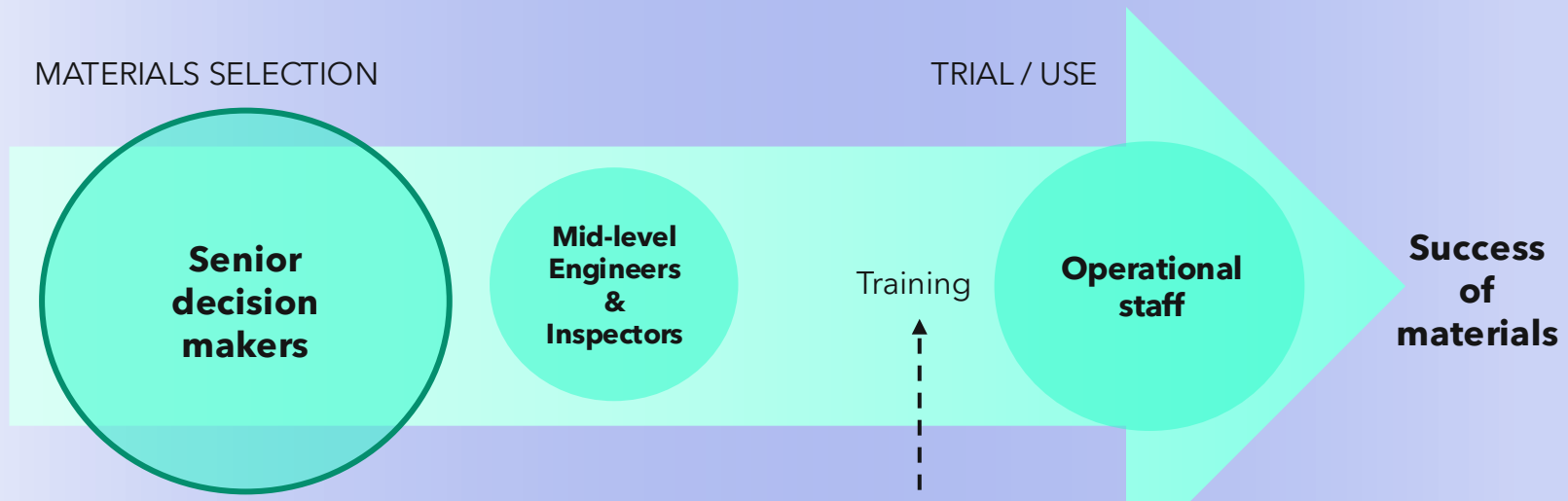
Everyone contributes to the success of materials - but senior decision makers play a key role in selection

While our initial focus was on influencing operational teams to use low-carbon materials, we found that the behaviours of 'on the ground' teams are only one part of the puzzle.

Decisions made earlier in the process, along with supporting infrastructure, policies, and leadership alignment, appear to be even more critical enablers. To successfully increase low-carbon material use, we must consider the full decision-making ecosystem, not just on the ground behaviour change.



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Understanding innovation – drivers & challenges

To understand behaviour we can look at the individual, social and environmental context

We use the **ISE framework*** to help us categorise the things that influence their behaviour:

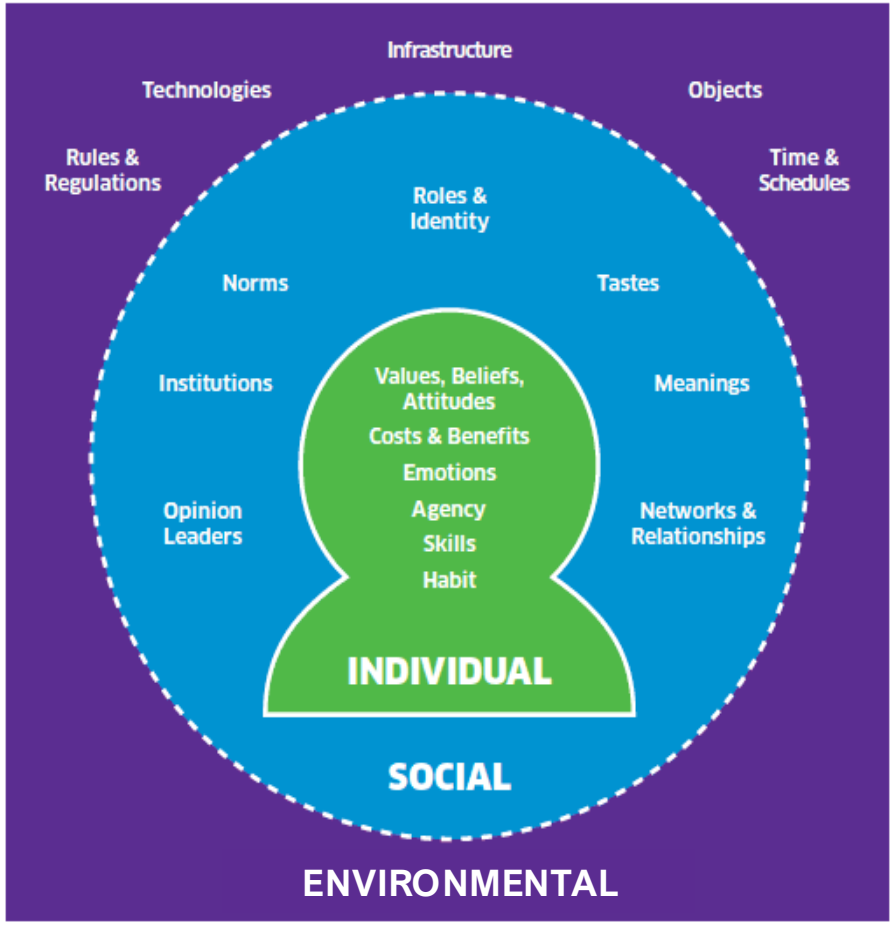
Individual includes personal values, attitudes, beliefs, emotions, skills and habits.

Social includes established norms, social networks & relationships, personal roles and identity.

Environmental includes time and schedules, wider infrastructure, rules and regulations.

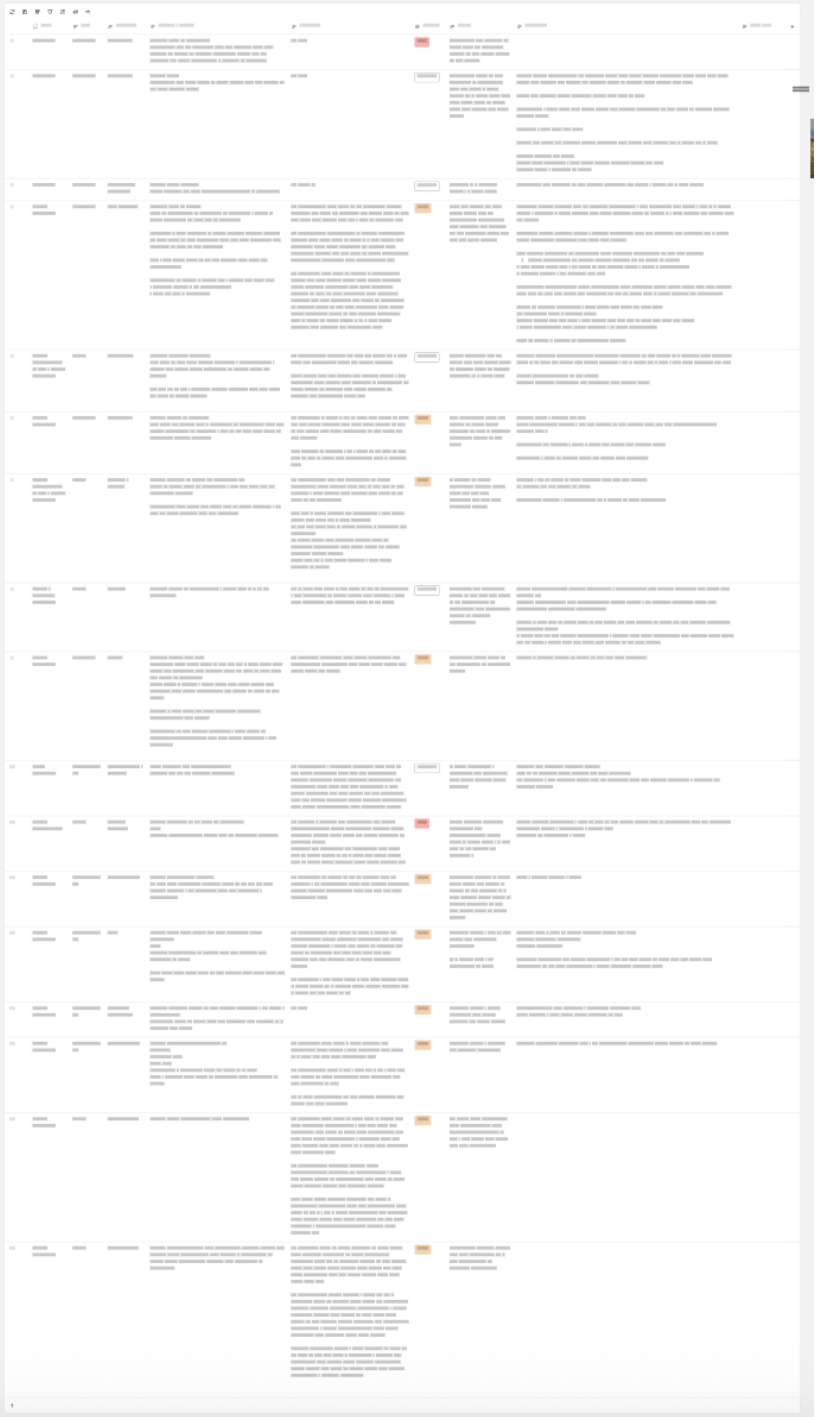
Using ISE encourages us to think more broadly about the range of factors that influence behaviour, and therefore the context in which decision makers are operating.

This can help us improve our chances of creating behaviour change – as we can better develop interventions that address factors across individual, social and environmental contexts.



* The ISE framework is the ISM framework – with the 'material' category reframed as 'environmental' for the purpose of this research – to avoid confusion with the material selection topic of Live Labs

https://www.gov.scot/publications/influencing-behaviours-moving-beyond-individual-user-guide-ism-tool/



Thinks
Insight & Strategy

Based on our initial research, online interviews, in-person ethnographies and follow up interviews we created a long list of drivers and challenges to innovation.

We unpicked each of these factors by exploring:

- Who was impacted - stakeholder role and seniority
- The evidence supporting it – including any location specific insights
- Its categorisation – Individual, Social or Environmental
- Any underpinning behavioural insights

We then rated each factor according to its impact on innovation. Drivers and challenges rated *High impact* on innovation are explored further in this report and are linked directly to intervention opportunities.

Overall, there are several key drivers...

MOTIVATION
The desire to innovate or be seen as innovative

COLLABORATION
Good relationships with contractors

INFRASTRUCTURE
Geography, tools and physical ability to trial

...and challenges for innovation

RISK
Risk of material or process failure

STATUS-QUO
Innovation requires breaking habits and norms

RESPONSIBILITY
Lack of recognition and clear roles for innovation

Driver 1: Motivation to innovate

There is a strong sense of pride and identity tied to being seen as *innovative*

Pride in producing high quality work

- Many describe motivation and satisfaction in trialling new low-carbon materials and methods, feeling they are getting ahead of the curve.
- The individuals we spoke to mention putting in extra time, such as out of work hours and weekends, to supervise and evaluate live lab trials ensuring they go smoothly and are successful.
- Operatives were willing to put effort into ensuring materials were laid correctly and to a high standard when using new equipment so the public would be satisfied, the trials would receive positive feedback, and the local authorities would then continue using these innovative methods in the future.

Driver 1: Motivation to innovate

Innovation indicates strong leadership and credibility within the sector

Desire to be seen as innovative

- Local authorities try to promote what they are doing internally and externally to ensure innovation is well embedded in their culture.
- There is a desire to not only be seen as an innovative local authority to the public but also to other local authorities, and to central government. This is not only to feel pride in their work but also to ensure funding for innovation is available to them.
- Some councils we spoke to feel political pressure to uphold this reputation as it benefits their politicians' relationship with the public and central government.

"We have always tried to innovate and do things in the background. It feels like currently we are being told to share more publicly what we're doing and I agree with it!"
– Head of Highways

Driver 1: Motivation to innovate

This motivation to innovate is seen more at senior decision maker levels, than in operatives

INDIVIDUAL

At senior levels, innovation is enabled through structures, partnerships and formal processes that create space for experimentation.

"I think at the top level it's probably about setting a structure that allows innovation."
- Head of Highways

At operational levels, there is less autonomy and therefore any motivation to innovate depends more on a sense of psychological safety – the confidence that trying something new will not lead to blame if it fails.

"[working with this material] It's hard, it takes away the pressure of time…It's quicker but it's hard going."
- Operative

Lincolnshire has built a reputation for innovation with an in-house lab and a track record of successful trialling. This identity motivates them to continue progressing in their field and remain an innovation leader.

"We're always trialling stuff, we're always seen to be at the front of innovation." – Head of highways

Coventry teams report putting in extra hours to ensure trials go smoothly so they will be a council at the forefront of innovation.

"It's coming in anyway, so I want to be one of the first to get in there and understand how it works." – Senior Engineer

North Lanarkshire operatives feel pride in using innovative machines and that they are the only ones trained to do so in their council.

"So I would say that the road mender with the new material was probably a big highlight for us. I enjoyed that." - Operative

Driver 2: Collaboration

Good working relationships with contractors and suppliers makes innovation a smoother process

Trust and accountability

- All local authorities emphasised that trust and accountability in contractor relationships are key. A productive relationship involves working together to achieve the best outcome for both sides.
- Having trust in those laying the materials eliminates some of the uncertainty involved in new materials, giving confidence that best practice is being followed and high standards are ensured no matter what is being trialled.
- Contractors also expressed confidence in Live Lab trials when their knowledge and expertise is felt to be valued and their input is invited. Local authorities with good long-term working relationships who are willing to review their proposed schemes after contractor feedback have an existing baseline of shared trust.

Driver 2: Collaboration

Successful innovation depends on knowledge-sharing within and between local authorities

Communication and knowledge sharing

- Good communication is needed at a wider level between all stakeholders – from policy makers to contractors – to ensure alignment on benefits, priorities, and processes.
- Knowledge-sharing within local authorities involves on-site, hands-on demonstrations where contractors /suppliers demonstrate new materials. This is often an ongoing process involving chit-chat, site briefings, or operative tips as materials are used. This is often how local authorities learn about new materials, making trust and open communication with suppliers crucial.
- Knowledge-sharing across local authorities via regional meetings to share trial learnings, or less structured peer networks e.g. Facebook posts and "grapevine" tips also builds familiarity. Having this knowledge allows local authorities to translate trial outcomes elsewhere into local specifications for their patch.

SOCIAL

"We all want to hold hands on the journey [to decarbonisation], but we all need to be talking to one another." – Lead Contractor

Driver 2: Collaboration

Each local authority has different ways to facilitate collaboration from frequent meetings, shared workspaces and onsite training

SOCIAL

At senior levels, collaboration is enabled through early on-site presence and joint working, formal partnering arrangements that ensure risk-sharing and mutual benefits.

"I like to be there generally in day one... make sure everyone's right."
- Inspector

At operational levels, it requires clear roles and relationships, honest direct communication, and involvement from the outset of trials - being trusted to lay materials and feedback on processes.

"I think we all want to hold hands on the journey, but we all need to be talking to one another."
- Supplier

Lincolnshire shares office space with contractors which supports day-to-day coordination, enables data-sharing and feedback loops, and allows for direct in-person oversight from inspectors / engineers.

Coventry teams report reciprocal trust with contractors, who are highly experienced and confident laying new materials, and with whom risk is shared. Inspectors / engineers make frequent on-site visits and work closely together.

North Lanarkshire feel positive engagement with suppliers is just as important as with contractors. Understanding how low carbon materials are made (e.g. quarry visits) can increase designers' motivation to use them. Teams also describe how training and onsite demonstrations of materials are key levers to success.

"I found engagement with the suppliers through Live Labs trials very beneficial (e.g. MPA / Holcim meetings). They would point us in the right direction without being focussed on their own interest."
- Inspector

Driver 3: Infrastructure to innovate

Innovation requires less effort when the right geography, tools and physical ability to trial are in place

Road & traffic conditions

- The local authorities we spoke to describe carefully selecting trial roads for length, straightness, consistent conditions, and lack of heavy traffic.
- These roads allow for trialling and comparison of multiple materials with less risk if the materials fail.
- Local authorities demonstrate more flexibility when trialling recycled materials, which are seen as more predictable.

Materials / equipment

- Access to local tools and quarries reduces the wait time for trials and allows for iterative trials over larger areas, making routine use more feasible.
- Readily available and familiar equipment reduces barriers for operatives/contractors, increasing adoption where crews can "use the same kit".
- Adequate equipment and staff both determine whether a new material can be adopted at scale: single machines or lone operators limit rollout.

Sufficient staffing

- Having enough staff means providing dedicated time for the trials and ready access to in-house expertise so local authorities can run managed experiments rather than one person doing multiple roles. Small teams or multi-tasking staff constrain the potential scope of work and require more careful scheduling.
- Larger crews and local operational capacity increase delivery speed and scale, which reduces disruption.

Driver 3: Infrastructure to innovate

Having the right infrastructure in place has ensured low carbon trials have been efficient and effective across the local authorities

ENVIRONMENTAL

At senior levels, having the right infrastructure means having easy, cost-effective access to equipment and materials, and the expertise and capacity within the team to dedicate to trials.

"We could split a few, even if we had two … then you would have one in your area all the time."
- Inspector

At operational levels, it means aligning workforce and unit availability to enable live lab trials at scale and speed, minimising waiting times and public disruption.

"The only thing I would request is like two heaters on the trailer on the pickup [because the material takes a while to heat up]. I would make the boiler heat up quicker so I can keep putting the material down once I'm laying." – Operative

Lincolnshire has its own lab and local quarries supplying materials needed for lower carbon processes / engineers, allowing them to more easily monitor material conditions.

"Having that collaborative approach with other supply chain partners, having that link to other labs and other authorities. So we're always quite well-connected as an authority."
- Head of Highways

Coventry has good proximity to a variety of machines and materials, as well as strong relationships with contractors who are trained to lay them and confident trying new things.

"Our engineers speak to contractors and see what they think and what materials they use. Because of our relationship with the contractors, they are happy to listen."
- Senior Engineer

North Lanarkshire has the Road Mender machine – which uses recycled materials on site – but low availability of this machine in the region means they can only use it for a limited time.

"I think all the feedback they're getting has been positive. I wouldn't be surprised if after maybe six months they did get another one."
- Inspector

Challenge 1: Risk

There are still concerns regarding how successful using new materials will be and the knock-on impact of poor performance

Material / operational risk

- New materials require specific conditions such as low moisture in the air. This can increase risk of failure. Limited long–term performance evidence also leads to hesitation about how well a material will actually uphold.
- Failure also means potential cost of relaying, budget overruns and wasted investment which can have serious financial impacts.
- If materials fail in a high-density traffic area it can create network disruptions and reputational damage.
- Political pressure to "innovate successfully" can create additional performance expectations and risk to fundings.
- The precise location, including weather conditions and ground composition will have an impact on material success – meaning learnings have to be contextualised.

Challenge 1: Risk

Local authorities think carefully about how many materials they trial and where and how trials happen to mitigate risk of failure

ENVIRONMENTAL

Lincolnshire has many high-profile locations such as the cathedral. Trialling materials in high profile locations is too risky for publicity and financial risk of failure.

"There's no way we could do a trial near the Cathedral. We can't trial things and fail - due to budget." - Senior Engineer

Coventry holds contractors accountable by ensuring they are only testing one material at a time and following best practice.

"I've tried to de-risk it throughout, taking out new things when they aren't needed, using cheaper materials" - Senior Engineer

North Lanarkshire experiences wet and cold weather more frequently which increases the risk of materials failing or not being suitable.

"When its raining, you can't lay it when its raining...If the ground was wet it would be too cold" - Operative

Challenge 1: Risk

The psychological risk of failure and its consequences can lead to innovation hesitancy

Concern about blame and accountability

- Individuals at all levels, from decision makers to operatives, worry about being held accountable for material performance, particularly if failures are out of their control.
- Accountability for failure is often unclear – with failures being due to both the design of the scheme (engineers) and the laying (operatives). This increases anxiety and reluctance to try new approaches.
- There is a professional reputational risk as individuals don't want to be associated with a failed scheme.
- If a material fails there is a risk the public will complain, especially in high-profile locations with high density traffic.
- Environmental topics attract scrutiny and therefore, decisions can be criticised regardless of the outcome.

Challenge 1: Risk

Depending on career level, risk presents differently but each local authority has ways they try to mitigate its impact

At senior levels, there is both a reputation and political risk associated with failure. They may feel financially exposed due to potential budget loss and failure to achieve strategic goals.

"The public feel like things are getting worse - but condition data shows that network is improving, so we're trying to combat this more publicly by putting out innovation information." – Senior Engineer

At operational levels, there is concern about accountability and being blamed for materials failing due to unpreventable circumstances or accidentally getting the process wrong and having to re-do sites.

"This product has come along, and it performs not miserably but to a lower degree than people would have possibly wanted. And the responsibility for that is unfairly shouldered by the contractor." - Operative

Psychological Safety

Concerns about risk, blame and accountability suggest that sometimes there can be a lack of psychological safety. This can limit motivation or willingness to take risks – due to a fear of judgement.

This judgement may not originate within local authorities themselves, but from public scrutiny or political pressures.

Challenge 2: Status quo

Innovation requires breaking habits and norms at all levels

Disruption of established norms

- All local authorities have established ways of doing things that make work more routine and predictable.
- More experienced senior engineers approaching retirement often have preferences for certain materials/approaches, or are unmotivated to put in the work needed for change.
- Tacit knowledge and habitual practice often drive choices – experienced inspectors and operatives tend to "know what type of street it is straight away" and rely on routine judgement rather than new considerations.
- Data systems are often pre-programmed to select certain materials for certain schemes, meaning innovation has to be actively programmed in.
- This leads to something called 'status quo bias' – which is the preference to stick with existing ways, rather than invest effort in trying something new.

Challenge 2: Status quo

Dedicated time and work is needed to build confidence and comfort with new materials and processes

Lack of time or effort for change

- Innovating requires time, training and staffing requirements. These can be barriers within the context of busy working lives and other competing demands.
- New materials often need specific trained roles and extra labour/time, so teams tend to stick with processes that won't disrupt productivity or workflow.
- Comfort with and confidence in particular tried and tested materials can make it hard to take a risk with a new material whose performance isn't guaranteed – especially if patch geography or weather conditions mean many materials are unsuitable or require longer to get accustomed to.
- Practical on-site constraints (weather sensitivity, heating/setup time, plant locations, haul time) make operative crews default to familiar methods that minimise downtime and logistical complexity.

"I've seen other materials trialled over the years numerous times and I think you've got to stick with the tried and tested unless you can get something the same durability that's better."
– Senior Engineer

Challenge 2: Status quo

Stakeholders we spoke to suggest that individuals who have been in their positions for a long time may be more reluctant to innovate

At senior levels, crew preferences, generational differences and desire to avoid unnecessary public disruption mean change is more likely if innovations reduce time/closures, offer cost or publicity incentives, or fit existing workflows.

"As much as people might not think of it as if you get awarded you're gonna flex about it, you're gonna put it on your RCC front page…. I think for some people that will definitely change their ways." – Senior Engineer

At operational levels, dealing with site constraints, weather and logistics barriers means many default to existing practices to minimise disruption, complexity, training and labour time.

"Speed of construction and if I can do this quickly, I don't get the public on my back. And also it saves me on traffic management." - Contractor

Lincolnshire has many experienced long-term engineers who are confident in their patch and have grown resigned to not seeing major change over the years, making it challenging to change their ways now.

"They might have been in the job for 10 years and not seen a change and they're thinking … this is my old ways, I'm stuck in them." – Senior Engineer

Coventry note that budgetary constraints and political pushback against sustainable innovation can limit their ability to challenge norms.

"If you've got a budget of 100,000... you can only do two roads in a greener way, or you could do 10 roads." – Senior Engineer

North Lanarkshire has specific requirements and conditions due to location and weather, meaning still defaulting to a material phased out of other, milder areas (asphalt). Longer-term habits and bigger risk of failure drive caution.

"It works. I've seen other materials trialled over the years numerous times and I think you've got to stick with the tried and tested." – Senior Engineer

Challenge 3: Responsibility

Ownership of trials and choice of materials is concentrated at a senior level

Lack of ownership or autonomy

- Decision-making is top-down and depends on contract or scheme specifications, so mid-level engineers and operatives have limited agency to choose materials even when motivated to do so.
- Live lab trials and material selection are usually passed down from a senior level and mid-level staff are not usually included in these processes or aware of what would be needed to introduce new materials.
- Mid-level staff aren't actively encouraged to learn about new materials and processes, and there is a sense that this is outside their remit as there are no processes in place for their feedback.
- Operatives also lack autonomy or incentive to challenge material choice.

Challenge 3: Responsibility

To take an active role in innovation, individuals need the time and space to prioritise this, and they also want to feel there is a real reward for their efforts

SOCIAL

Mid-level engineers tend to be too busy for proactive learning (e.g. going to conferences) that could inspire innovation, and are not always motivated to go above and beyond.

"At the lower levels, to innovate they need to have the time. And also the confidence that there isn't going to be finger pointing if things go wrong."
- Head of Highways

At operational levels, lack of meaningful involvement in material selection, limited time or support for pro-active learning, and the absence of real reward keeps many complacent about innovation.

"It's spread down from management... I'm sure if we put a hand up to go and get trained in it [we could]. It's quite busy at the moment though."
- Senior Engineer

Across local authorities, responsibility for innovation is rarely formally recognised or embedded within specific roles or job descriptions. Instead, innovation tends to rely on individuals who are personally motivated to pursue it. This suggests an opportunity to formalise responsibility for innovation to better embed and sustain it.

"I think you've got a set out as a management team that we are willing to innovate and we're looking to innovate and have that continuous improvement." - Head of Highways

"If they're told that this is the way that we want to move forward, whether it's looking at low carbon ways of working... people start thinking about that from the get go." – Senior Engineer

5

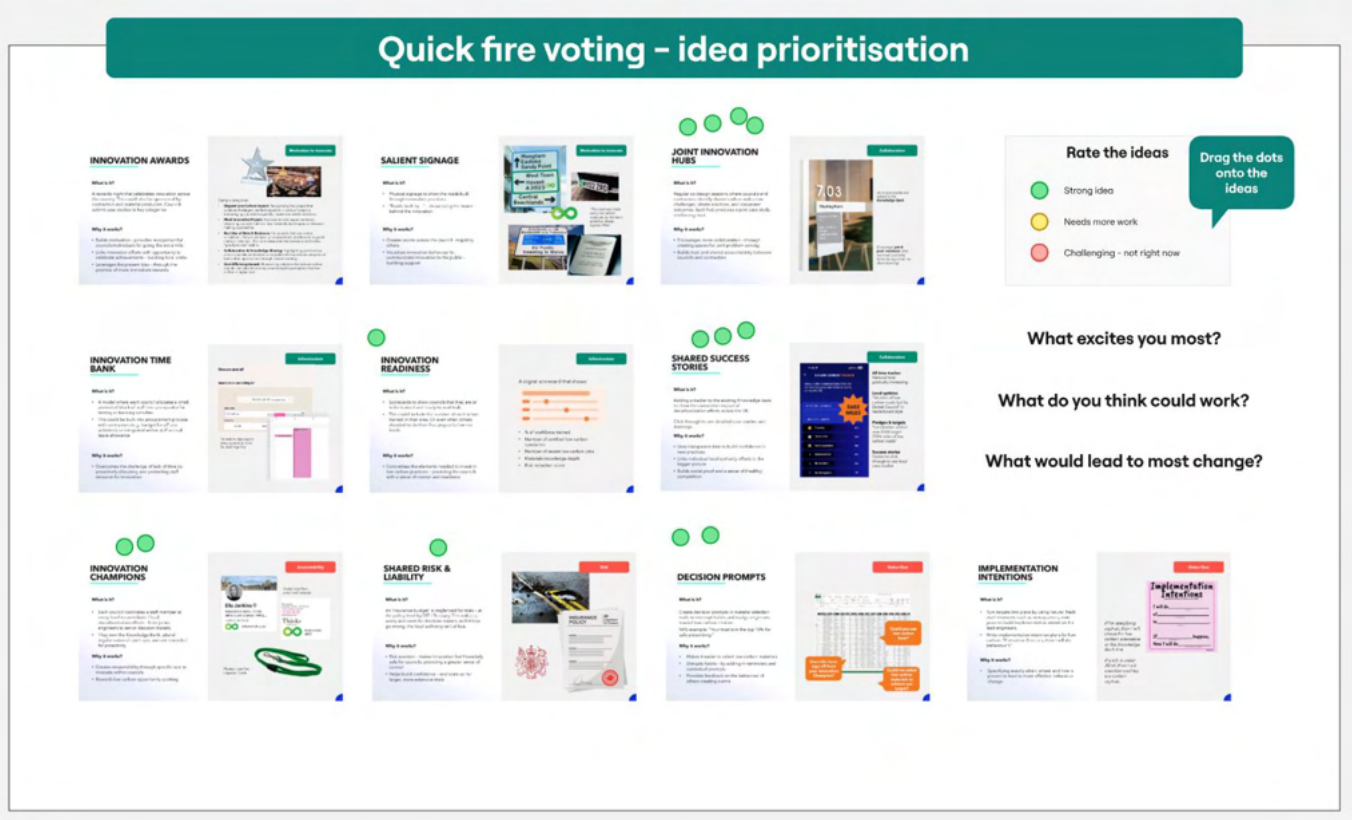
Opportunities for behaviour change

Intervention opportunities have been co-created and prioritised with stakeholders

A suite of intervention opportunities have been developed - designed to harness the key drivers of innovation and address the challenges holding it back. These interventions have been collaboratively refined with input from stakeholders. Their expertise has played a key role in prioritising the shortlist of interventions - based on their likely feasibility and impact.

The following section presents:

- **1 system-level intervention** that sits beyond the scope of this project but is considered critical for enabling change at scale.
- **5 prioritised interventions** judged to have strong potential to encourage innovation
- **4 deprioritised interventions** that were deemed impractical, costly or too time-intensive to take forward



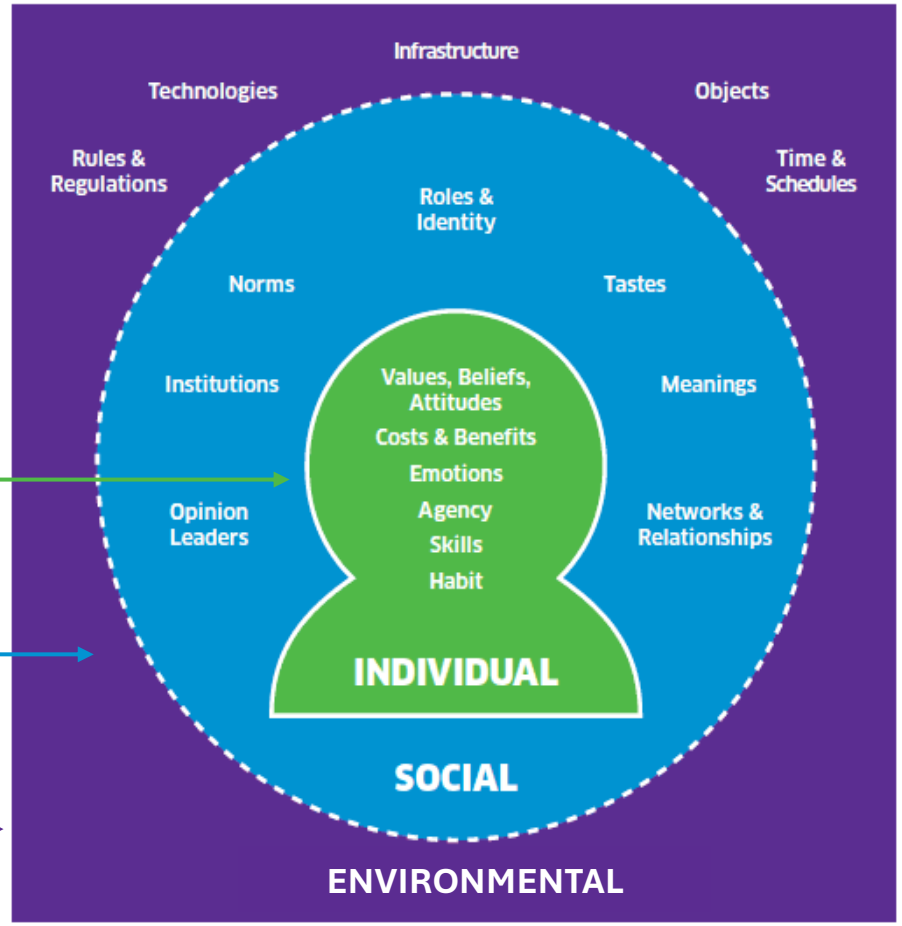
Decarbonising roads maintenance requires a layered intervention strategy, rather than a ‘silver bullet’ idea

Switching to low carbon approaches for highway maintenance is complex – impacted by a range of Individual, Social and Environmental factors. To promote behaviour change, different interventions will be needed that tackle challenges and leverage drivers across these domains. Some of these interventions require major investment or system change, so will take a longer time to pursue. Others are quick wins, reflecting ‘nudges’, or tweaks to existing processes. The most effective way to achieve change is to pursue several interventions, ***layering them up over time***. For example:

Decision Prompts
Targets Challenge 2: Status quo
Quick win

Joint Innovation Hubs
Targets Driver 2: Collaboration
Medium term investment

Shared Risk & Accountability
Targets Challenge 1: Risk
Longer term investment



On the following slides, you will see descriptions of the interventions, with behavioural science rationale

Idea description
Short summary of what the intervention is

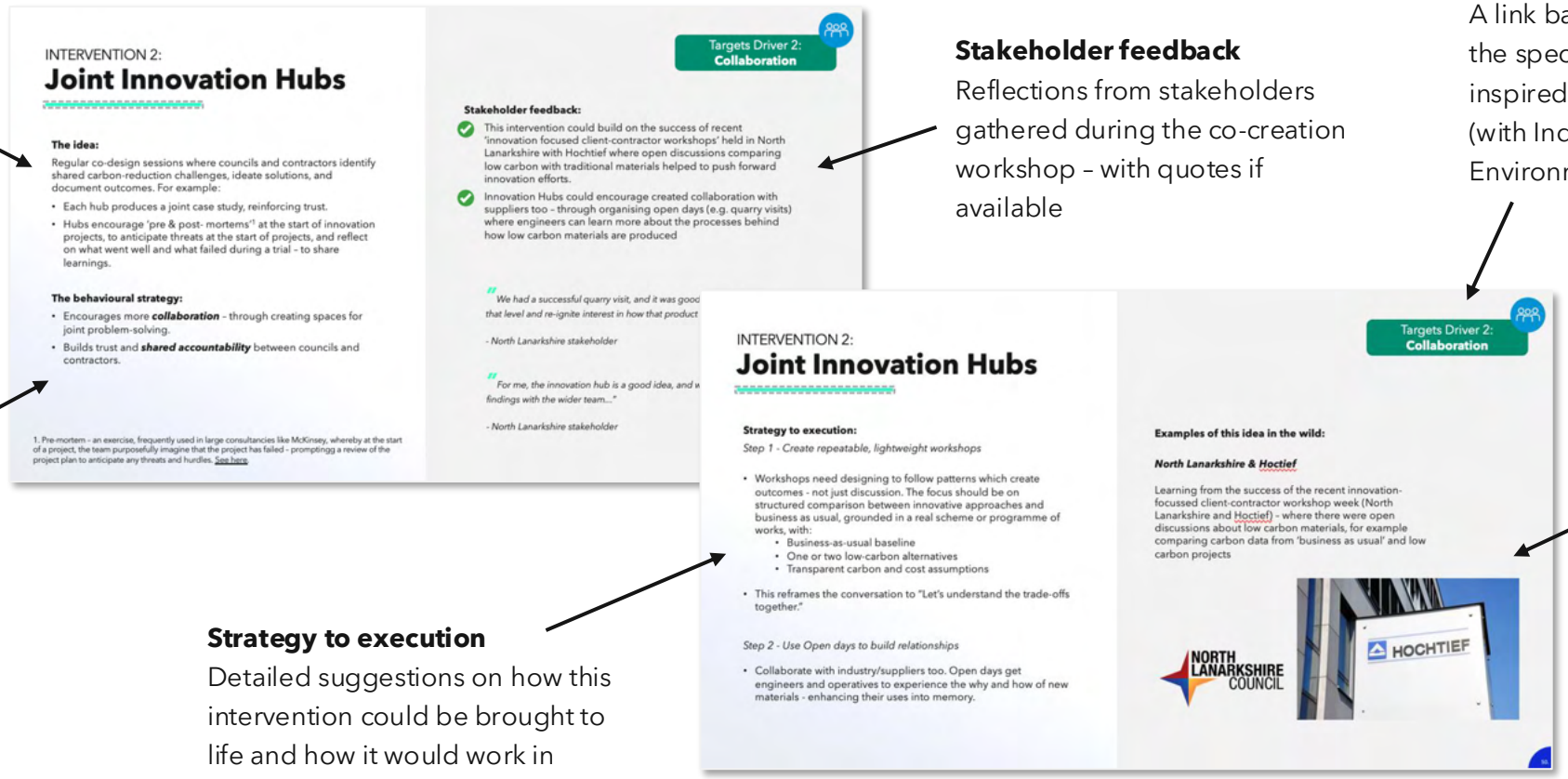
Behavioural strategy
The behavioural principle or supporting evidence that underpins the idea – with references to specific principles that may warrant further explanation

Strategy to execution
Detailed suggestions on how this intervention could be brought to life and how it would work in practice (only for prioritised interventions)

Stakeholder feedback
Reflections from stakeholders gathered during the co-creation workshop – with quotes if available

Target driver or challenge
A link back to the research – the specific insight that has inspired this intervention (with Individual, Social or Environmental layer)

Examples from the wild
Proof points – of this concept, or similar concepts (only for prioritised interventions)



System-wide change

To accelerate decarbonisation in highways maintenance, the sector must ultimately address the overarching challenge of risk and liability for failure.

Doing so will require system-level changes that sit beyond the remit of this project. However, given the significance of this barrier, we have included the following intervention idea to reflect its critical role in enabling innovation progress.

INTERVENTION 1:

Shared Risk & Reward

Targets Challenge 1: **Risk**

The idea:

At present, often the risk of innovation failure sits heavily on the local authority side, whilst the benefits of innovation success in terms of cost reduction, efficiency or even carbon reduction, may not be adequately shared between all partners.

Having an 'insurance budget' that is ringfenced for innovation projects – at the policy level by DfT / Treasury – could reduce worry and costs for decision makers, as if things go wrong, the local authority wouldn't be at loss. Specifying the reduced cost / increased efficiency outcomes more clearly into contracts could mean that the benefits could be pooled more fairly across partners.

The behavioural strategy:

- Overcomes ***risk aversion***[1] - makes innovation feel financially safe for councils, providing a greater sense of control.
- Helps ***build confidence*** – and scale up for larger, more extensive live lab trials.

"We had to lay a new material, rip it up and replace it with hot asphalt. If we had an insurance policy, this would take away the uncertainty or the unwillingness to explore low carbon materials."

- North Lanarkshire stakeholder

1. Rabin, M. (2000). *Risk Aversion and Expected-Utility Theory: A Calibration Theorem. Econometrica, 68*(5), 1281–1292

Stakeholder feedback:

- Stakeholders welcome the idea of ringfencing budget for innovation failures – suggesting there would be increased confidence to trial low-carbon materials if they knew they would get money back if things fail.
- They suggested that if insurance existed – it would need to cover workmen, different treatment types, layers, inspectors and auditors.
- Stakeholders suggest that an insurance budget could also be derived from suppliers and contractors – similar to warranties.
- They note that there could be contractual agreements for shared risk between contractors and local authorities, which support the achievement of both party's organisational goals to decarbonise and innovate.
- Discussion considered whether the funding should be for low carbon material innovation generally, or specifically for low carbon material failures.
- Another suggestion is that DfT could provide funding to expand existing low carbon innovations to other locations – eg helping Lincolnshire sell materials from their foam-based plants to other nearby locations.

"I think the shared risk and liability model would have to be reversed in that it would be better for a trial budget to be available nationally and local authorities cover failures from their own budgets. It would be difficult to manage if we were all applying for 'failure' funding."

- North Lanarkshire stakeholder

Prioritised interventions

The following intervention ideas were prioritised by stakeholders – using their expertise to identify which ideas are both feasible and likely to deliver meaningful impact.

Stakeholders included:

- Mark Heaton, Snr Project Leader Special Projects, Lincolnshire
- Michael Lal, Senior Engineer, Coventry
- David Struthers, Operations Manager, Hochtief / Amey
- Bruce Lunn, Contract Manager, Hochtief
- Elaine Nicol, Roads Maintenance Manager, North Lanarkshire
- Scott Walker, Roads and Assets Service Manager, North Lanarkshire
- Alex Morgan, Innovation Project Manager, Amey

INTERVENTION 2:

Joint Innovation Hubs

Targets Driver 2:
Collaboration

The idea:

Regular co-design sessions where councils and contractors identify shared carbon-reduction challenges, ideate solutions, and document outcomes. For example:

- Each hub produces a joint case study, reinforcing trust.
- Hubs encourage 'pre & post- mortems'[1] at the start of innovation projects, to anticipate threats at the start of projects, and reflect on what went well and what failed during a trial – to share learnings.

The behavioural strategy:

- Encourages more ***collaboration*** – through creating spaces for joint problem-solving.
- Builds trust and ***shared accountability*** between councils and contractors.

Stakeholder feedback:

- This intervention could build on the success of recent 'innovation focused client-contractor workshops' held in North Lanarkshire with Hochtief where open discussions comparing low carbon with traditional materials helped to push forward innovation efforts.
- Innovation Hubs could encourage creative collaboration with suppliers too – through organising open days (e.g. quarry visits) where engineers can learn more about the processes behind how low carbon materials are produced.

"We had a successful quarry visit, and it was good to get down to that level and re-ignite interest in how that product is produced"

- North Lanarkshire stakeholder

"For me, the innovation hub is a good idea, and we can share findings with the wider team..."

- North Lanarkshire stakeholder

1. Pre-mortem – an exercise, frequently used in large consultancies like McKinsey, whereby at the start of a project, the team purposefully imagine that the project has failed – prompting a review of the project plan to anticipate any threats and hurdles. See here.

INTERVENTION 2:

Joint Innovation Hubs

Targets Driver 2:
Collaboration

Strategy to execution:

Step 1 - Create repeatable, lightweight workshops

- Workshops need designing to follow patterns which create outcomes - not just discussion. The focus should be on structured comparison between innovative approaches and business as usual, grounded in a real scheme or programme of works, with:
    - Business-as-usual baseline
    - One or two low-carbon alternatives
    - Transparent carbon and cost assumptions

- This reframes the conversation to "Let's understand the trade-offs together."

Step 2 - Use Open days to build relationships

- Collaborate with industry/suppliers too. Open days get engineers and operatives to experience the why and how of new materials - enhancing their uses into memory.

Examples of this idea in the wild:

North Lanarkshire & Hoctief

Learning from the success of the recent innovation-focussed client-contractor workshop week (North Lanarkshire and Hoctief) – where there were open discussions about low carbon materials, for example comparing carbon data from 'business as usual' and low carbon projects.

NORTH LANARKSHIRE COUNCIL

INTERVENTION 3:

Shared Success Stories

Targets Driver 2:
Collaboration

The idea:

Creating a tracker to show the cumulative impact of decarbonisation efforts across the UK. Features could include:

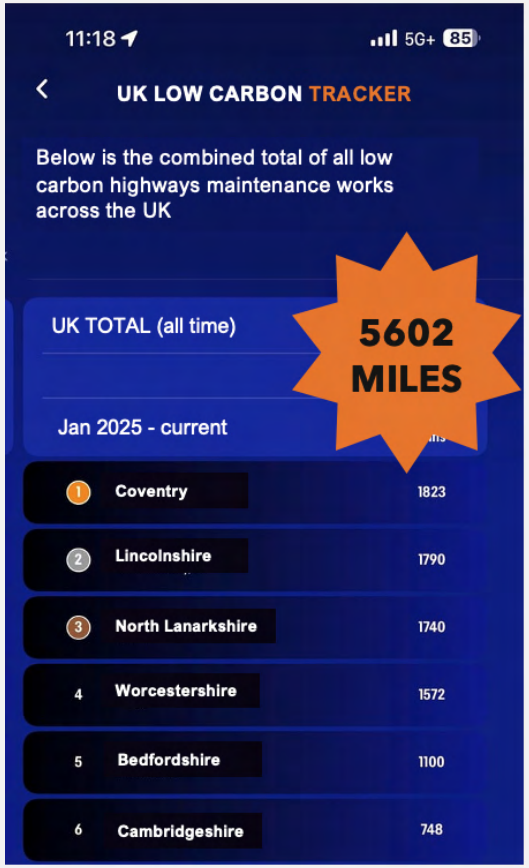
- All time tracker - national total gradually increasing
- **Local updates -** "56 miles of low-carbon roads laid by Dorset Council" in leaderboard style
- **Pledges & targets -** "Lincolnshire added new 2026 target: 250+ miles of low carbon roads"
- **Success stories -** Option to click through to see local case studies.

The behavioural strategy:

- De-risking via **social proof**[1]: Adoption of new materials and practises can be increased if councils see peers doing these behaviours. The dashboard shouldn't just show "Carbon Saved." It must implicitly say that "Everyone else is doing this safely; you are falling behind if you don't."
- Links individual local authority efforts to the bigger picture – boosting ***motivation***

Stakeholder feedback:

- Stakeholders feel strongly that robust data is needed to get engineers to feel confident in new materials
- They emphasised the importance of data being held in one, easily accessible location - for example the Knowledge Bank
- Stakeholders want to be able to report on carbon emissions per material/job – to enable them to set targets (e.g. reduce carbon by 5-10% per year) and report back to the council
- The leaderboard table idea was discussed as being feasible as part of Phase 2 of the Knowledge Bank



Example execution

1. Social proof – the behaviour of others can hugely influence our own behaviour - Deutsch, M., & Gerard, H. B. (1955). *A study of normative and informational social influences upon individual judgment. The Journal of Abnormal and Social Psychology, 51*(3), 629–636.

INTERVENTION 3:

Shared Success Stories

Targets Driver 2:
Collaboration

Strategy to execution:

Step 1 – Standardise and collect data

I. Define key metrics to measure based on what Engineers trust. An intuitive starting place might be to total the number of miles delivered with low carbon materials to create a feeling of a national norm. "5,602 miles of low-carbon roads delivered".
II. Create data points for each material based on usage. E.g., "Used on 500+ miles of UK roads (High Confidence)."

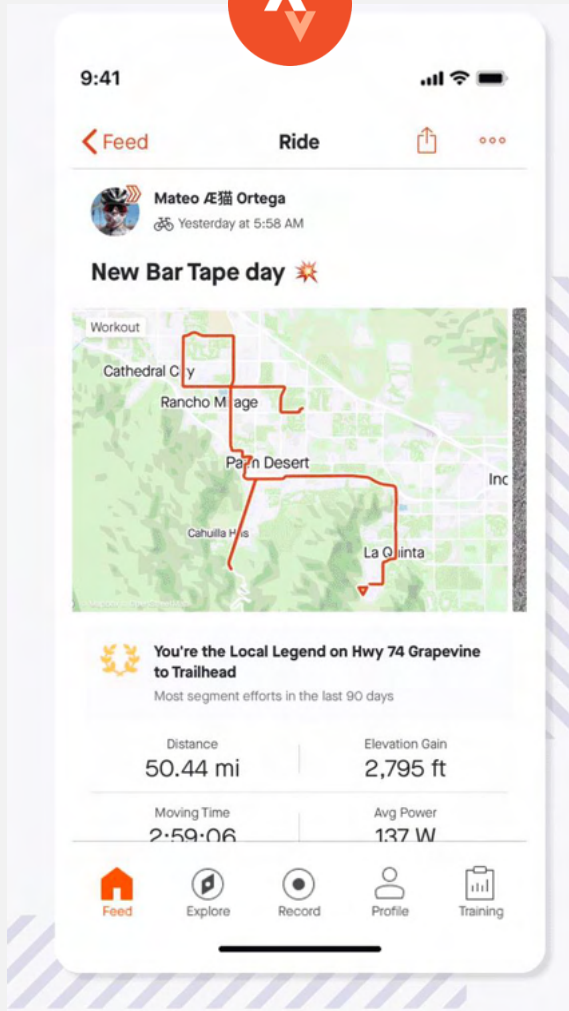
Step 2 – Build the leaderboard

- Combine data into a council leaderboard to show who is exceling and creating some healthy competitions.
- Ensure the leaderboard changes regularly and is mentioned when a project is completed.
- Leaderboards can demotivate those at the bottom. So celebrate success and key behaviours, this could mean showing the top 10 councils for total miles laid and celebrating those starting their first projects. Example: "You are #1 among Rural Councils" or "You are in the Top 10% for Recycled Asphalt usage."

Examples of this idea in the wild:

Strava solved the challenge of not everyone being a super star athlete by celebrating smaller wins. Their local legends feature celebrates fastest, furthest and most frequent runs in a local area. Giving the gift of 🏆 to more.

NHS Model Health System is a data-driven benchmarking tool that lets NHS trusts compare their performance on productivity, quality and responsiveness with national averages and peer organisations. This enables leaders to see where they differ from others and what good looks like in practice - to pinpoint opportunities for improvement. See here.



INTERVENTION 4:

Innovation Champions

Targets Challenge 3:
Responsibility

The idea:

Each council nominates a staff member at every level to contribute or lead decarbonisation efforts – from junior engineers to senior decision makers. They own the Knowledge Bank, attend regular national catch ups, and are rewarded for proactivity.

What is critical about this idea is that these individuals are given:

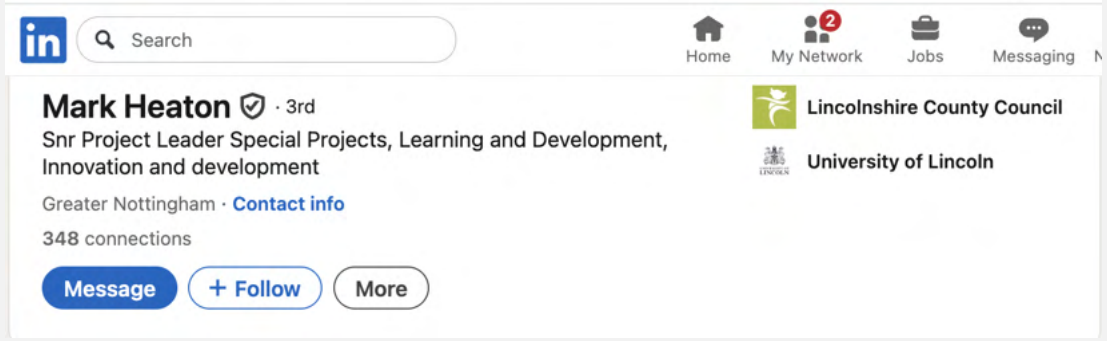
- **Time -** explicitly allocated, not "on top of the day job"
- **Authority -** clear remit to challenge defaults
- **Recognition -** visible, career-relevant reward

The behavioural strategy:

- By formally labelling someone an "Innovation Champion", you trigger **Identity Priming**[1] and the **Consistency Principle**[2]. Once someone accepts a label (e.g., "I am an innovator"), they unconsciously alter their behaviour to align with that self-image.
- Roles also create **responsibility**, what is critical is that responsibility needs to be clear, to spot opportunities and challenge current defaults.

Stakeholder feedback:

- Stakeholders shared that sometimes there are already individuals who naturally take on these roles - for example the participants themselves have been championing innovative practices - however, this is not always recognised or rewarded.
- Stakeholders responded positively to the idea of champions existing at different levels of seniority – suggesting that recent graduates will be already bought in to the idea of sustainability.



Example of highly motivated stakeholders already actively taking innovation roles

1. Identity priming - Oyserman, D., Fryberg, S. A., & Yoder, N. (2007). *Identity-based motivation and health.* Journal of Personality and Social Psychology, 93(6), 1011–1027.
2. Consistency principle - Cialdini, R. B. (2009). *Influence: Science and practice* (5th ed.). Boston, MA: Pearson Education.

INTERVENTION 4:

Innovation Champions

Targets Challenge 3:
Responsibility

Strategy to execution:

Stage 1 - Recruitment

Invite, don't assign: Make it a nomination process. Research shows that active commitment leads to higher engagement[1]. The request should be delivered from an authority figure to signal commitment.

Stage 2 - Empowerment

- Give champions, responsibility, time and rewards.
  a. The 10% Time. Remove tasks and give 10% of their time to innovation.
  b. Give Champions a new word/action that makes it easier to question default decisions. Let them generate this themselves. For example, a physical & digital question mark, used to question if we've considered low-carbon.
  c. Define the Champion roles (not one-size-fits-all). For example, *Early-career Champion – researches new materials, trials, and case studies, maintains local Knowledge Bank inputs.*

Stage 3: Recognise & Reinforce

- Create rewards for Champions that are motivating. Count it towards promotions.
- Create feedback loops so that Champions feel good about their work. This could include ways to share insights, learnings, wins and failures from across the country.

Examples of this idea in the wild:

Digital & Data Champions (UK Civil Service)

Used to drive adoption of new tools and practices. Champions act as translators between policy and delivery. Visibility and senior sponsorship are critical. See here.

Healthcare Academic Studies

Research shows that champions help drive adoption of best practises, see here.

The effectiveness of champions in implementing innovations in health care: a systematic review

Wilmer J Santos [1], Ian D Graham [2 3], Michelle Lalonde [1 4], Melissa Demery Varin [1], Janet E Squires [5 6]

Affiliations + expand

PMID: 35869516 PMCID: PMC9308185 DOI: 10.1186/s43058-022-00315-0

Abstract

Background: Champions have been documented in the literature as an important strategy for implementation, yet their effectiveness has not been well synthesized in the health care literature. The aim of this systematic review was to determine whether champions, tested in isolation from other implementation strategies, are effective at improving innovation use or outcomes in health care.

Methods: The JBI systematic review method guided this study. A peer-reviewed search strategy was applied to eight electronic databases to identify relevant articles. We included all published articles and unpublished theses and dissertations that used a quantitative study design to evaluate the effectiveness of champions in implementing innovations within health care settings. Two researchers independently completed study selection, data extraction, and quality appraisal. We used content analysis and vote counting to synthesize our data.

Results: After screening 7566 records titles and abstracts and 2090 full text articles, we included 35 studies in our review. Most of the studies (71.4%) operationalized the champion strategy by the presence or absence of a champion. In a subset of seven studies, five studies found associations between exposure to champions and increased use of best practices, programs, or technological innovations at an organizational level. In other subsets, the evidence pertaining to use of champions and innovation use by patients or providers, or at improving outcomes was either mixed or scarce.

1. Ariely, D., & Norton, M. I. (2008). *How actions create–not just reveal–preferences*. Trends in Cognitive Sciences, 12(1), 13–16.

INTERVENTION 5:

Decision Prompts

The idea:

Create decision prompts in material selection tools to interrupt habits and nudge engineers toward low-carbon choices.

Low carbon materials could be set as the default selection, and the decision prompt could ask engineers if they want to change them.

The behavioural strategy:

- Makes it ***easier*** to select low-carbon materials
- Uses ***defaults***[1] – changing the pre-selected option – which is one of the most effective behaviour change strategies
- Disrupts ***habits*** – by adding in reminders and contextual prompts
- Provides ***feedback*** on the behaviour of others creating norms

> *"At the design stage when you are designing a scheme, you could have the prompts within your team like: How much more is it going to cost? What's the carbon figures, at that design level? So, there's two parts to prompt, initial putting together of scheme list then actual design stage."*
>
> *- North Lanarkshire stakeholder*

1. Defaults - Johnson, E. J., & Goldstein, D. (2003). *Do defaults save lives?* Science, 302(5649), 1338–1339.

Targets Challenge 2:
Status Quo

Stakeholder feedback:

- Stakeholders suggest decision prompts could be integrated throughout the materials planning journey – from collaborative innovation workshops with the design team and contractors, to reviewing the scheme list, to the design stage.
- Stakeholders suggested that there could be opportunities to use this intervention at supplier and contractor levels too to encourage collaboration throughout the process. e.g. Have you thought about low carbon? What's the cost difference here?
- However, there is the challenge that every local authority does things differently (has different systems or procedures in place) so it could be difficult to mandate changes.

> *"If it's built into the process its kind of like double checking yourself as you go along... That is if you have procedures and processes in place.."*
>
> *- North Lanarkshire stakeholder*

INTERVENTION 5:

Decision Prompts

Targets Challenge 2:
Status Quo

Strategy to execution:

Step 1 – Identify decision points

Map where key material choices are made across the project lifecycle (specification, approval, procurement). Get as close to the decision as possible when there is still time for change. This could be in spreadsheets, meetings etc.

Step 2 – Design behavioural prompts

Draft behaviourally informed prompts that ask users to consider low carbon options. Use strategies such as:

- Social proof – "Teams like yours have saved 10% costs using low carbon materials, have you considered [Insert material]?"
- Salience - "This is a high carbon option, have you considered alternatives?
- Loss Aversion - "Proceeding with this option may lock in higher carbon and cost, in the long run, why not try this alternative?"

Step 3 – Test and iterate

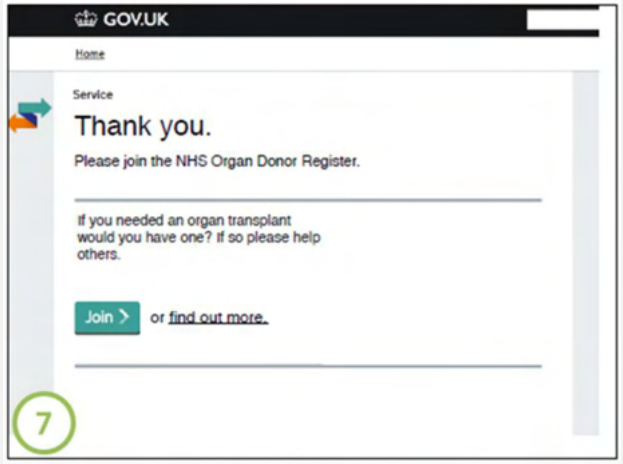
Pilot prompts in a small number of tools or teams, measure selection changes, refine wording and timing and then scale to broader councils. Think about delivery methods and how AI could automate these prompts and creatively change them, so they don't wear out.

Examples of this idea in the wild:

Nudging organ donation through prompts on a government website

Adding a prompt – a small message integrated in driving licence applications - increased organ donor registrations significantly. A reciprocity-based message was shown to be especially effective in an RCT - potentially adding ~96,000 extra registrations annually.

See here



INTERVENTION 6:

Innovation Readiness

Targets Driver 3:
Infrastructure

The idea:

The primary barrier isn't the motivation to innovate, but the lack of perceived capability. Scorecards to show councils that they are or to be trained and ready to start live lab trials. This could include:

- Number of certified low-carbon specialists / contractors
- Number of recent low-carbon jobs
- Materials knowledge depth
- Risk reduction score

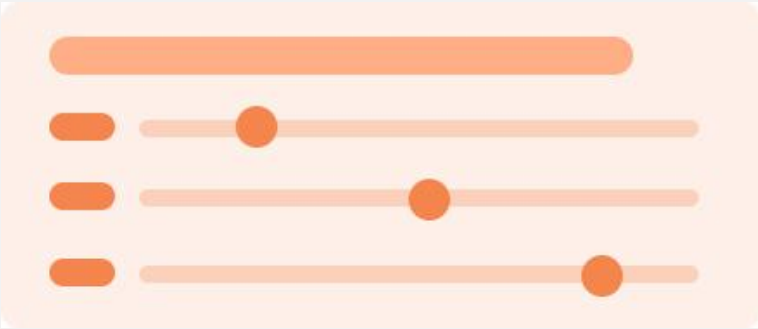
The behavioural strategy:

- ***Concretises***[1] the elements needed to invest in low carbon practices – providing the councils with a sense of control and readiness.
- ***Signals*** to suppliers and contractors that this Local Authority is ready to use low carbon practices – creating social norms[2].

Stakeholder feedback:

- Stakeholders responded positively to this – all being from locations which would be deemed 'ready'.
- Coventry suggested that they actively want to do more, and trial more, and would gladly provide case studies that can inspire other locations.

> *"Coventry are innovation ready, We are ready to go. It would be nice to do more and try more stuff. Something that benefits everybody not just Coventry, the trial should benefit all councils, even if it may not work in their council at least they have a case study."*
>
> ***- Coventry stakeholder***



1. Concreteness – using concrete language (non-technical, and not abstract) is easier to understand and process. Paivio, A. (1991). *Dual coding theory: Retrospect and current status*. Canadian Journal of Psychology, 45(3), 255–287.
2. Social norms - Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). *A room with a viewpoint: Using social norms to motivate environmental conservation in hotels*. Journal of Consumer Research, 35(3), 472–482.

INTERVENTION 6:

Innovation Readiness

Targets Driver 3:
Infrastructure

Strategy to execution:

Step 1 – Design the Innovation Readiness Framework

- Create a simple, standardised Innovation Readiness Framework that shows whether a council is ready to trial low-carbon materials – and what would make them ready next.
- Design the framework so next best actions are easy to find depending on their readiness.

Step 2 – Signal willingness to innovate (to contractors & suppliers)

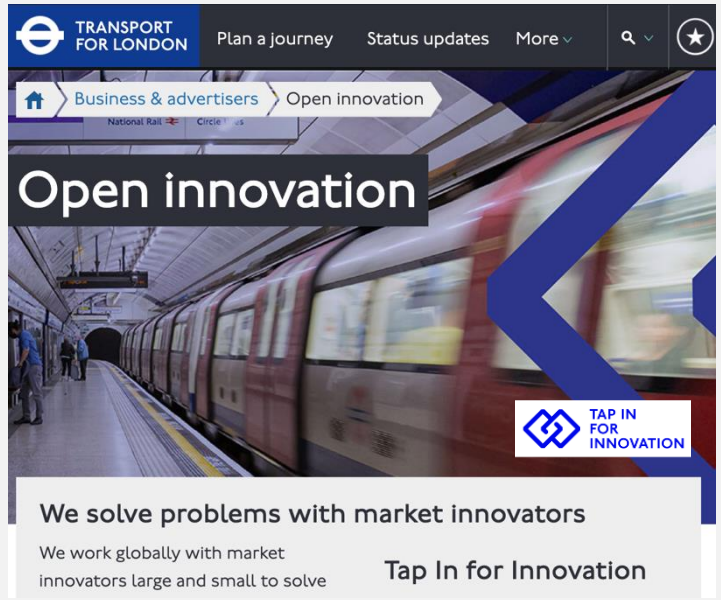
- Create explicit, credible signals that show contractors and suppliers that a council is open, prepared, and willing to innovate.
- An "innovation ready" marker in tender documents and supplier briefings creates a signal. Specifying that, "innovative proposals will be assessed on learning value as well as performance" also reduces default decision making with contractors.

Examples of this idea in the wild

Innovation signals in procurement

The Ministry of Defence, Transport for London and the NHS have used Innovation Partnerships and the Small Business Research Initiative (SBRI) to signal to potential suppliers that they welcome innovative solutions.

See here and here.



Deprioritised interventions

The following interventions were judged to have significant caveats - such as substantial time or cost requirements - or to lack sufficient potential to drive long-term behaviour change. As a result, we do not recommend that local authority teams pursue them at this stage.

They may, however, be worth revisiting in the future if adapted or if circumstances change.

INTERVENTION 7:

Innovation Awards

Targets Driver 1:
Motivation to innovate

The idea:

An awards night that celebrates innovation across the country. This could also be sponsored by contractors and material producers. Councils submit case studies to key categories. Examples of awards could include:

- Biggest Low-Carbon Impact
- Most Innovative Project
- Best Use of Data & Evidence

The behavioural strategy:

- Builds ***motivation*** – provides recognition for councils/individuals for going the extra mile.
- Links innovation efforts with opportunity to celebrate achievements – building ***local pride.***
- Leverages the ***present bias***[1] – through the promise of more immediate rewards (as opposed to the long delay time before the lifetime value of low carbon materials are realised).

Stakeholder feedback:

- Stakeholders concerns include: applying for awards is time consuming and sometimes costly. There tends to be a time lag in when the award is issued, next year's schemes will already be underway.
- Awards are a lower priority for Local Authorities compared to the private sector who they are promoting themselves.
- It is a crowded marketplace already with lots of awards.
- For an awards ceremony to be effective, stakeholers suggest integrating it with existing ceremonies (e.g. The Municipal Journal awards or LCRIG annual awards), ensuring that rewards trickle down from senior leaders to junior staff, and using AI to help draft submissions.

"Why not look at within council or across locally geographical council awards for low carbon projects rather the focussing on national awards. Reduces expense and focusses on those who actually contributed."

- North Lanarkshire stakeholder

1. Present bias - the tendency to place disproportionate weight on immediate outcomes relative to future consequences, leading people to delay or avoid actions with long-term benefits. O'Donoghue, T., & Rabin, M. (1999). *Doing it now or later*. American Economic Review, 89(1), 103–124.

INTERVENTION 8:

Salient Signage

Targets Driver 1:
Motivation to innovate

The idea:

Physical signage to show the roads built through innovative practices

"Roads built by…" – showcasing the teams behind the innovation

The behavioural strategy:

- Creates ***social proof***[1] across the council - inspiring others
- Visualises innovation behaviour to communicate innovation to the public – building support

Stakeholder feedback:

- Stakeholders liked this idea in theory – but suggest in practice it might not be feasible due to heavy regulation (The Traffic Signs Regulations and General Directions).
- They instead suggest that **public communications guidance** could be designed to increase PR opportunities for innovative practices – to spread the message that innovation is needed to drive progress.
- They also suggested that it might be more appropriate to reframe low-carbon to focus on other benefits (eg cost saving / longer lasting) in certain political landscapes.

"At the moment, the public aren't concerned about what we do or how we do it – they just want it fixed. There's a need to educate the public, and politicians about the role of innovation."

- Coventry stakeholder

"This road was made using low carbon materials, by the team at Balfour Beatty. Signed, Mike"

1. Social proof – the behaviour of others can hugely influence our own behaviour - Deutsch, M., & Gerard, H. B. (1955). *A study of normative and informational social influences upon individual judgment. The Journal of Abnormal and Social Psychology, 51*(3), 629–636.

INTERVENTION 9:

Innovation Time Bank

Targets Driver 3:
Infrastructure

The idea:

A model where each council allocates a small, protected block of staff time per quarter for testing or learning activities.

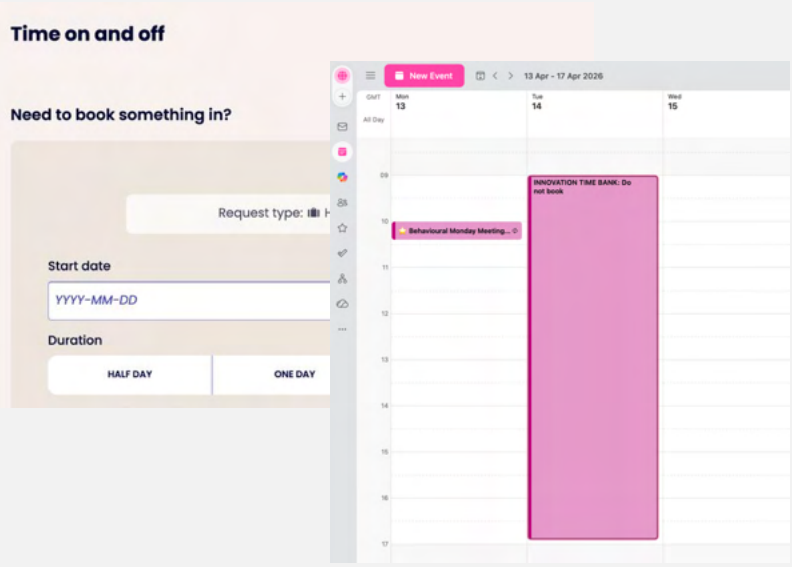
This could be built into procurement process with contractors (e.g. budget for off-site activities), or integrated within staff annual leave allowance.

The behavioural strategy:

- Overcomes the challenge of ***lack of time*** by proactively allocating and protecting staff resource for innovation.

Stakeholder feedback:

- Stakeholders did like the innovation time bank idea in theory and suggested it could made collaborative across multiple authorities / contractors.
- However this was felt not to have enough power to create significant impact – and there was much more excitement and discussion around the Innovation Hub and Innovation Champions ideas.



INTERVENTION 10:

Implementation Intentions

Targets Challenge 2:
Status Quo

The idea:

Turn targets into plans by using natural 'fresh start' moments such as new quarters, new years to build implementation intentions for lead engineers.

Write implementation intention plans for low carbon. "If situation X occurs, then I will do behaviour Y."

The behavioural strategy:

- ***Implementation intentions*** involve specifying exactly when, where and how the behaviour will be performed. Considering plans at the moment of a decision can be very influential.
- This is proven to lead to more effective behaviour change. For example, voting rates across the US have been significantly improved (9% increase) by prompting citizens on the day to make a plan to vote[1].

Stakeholder feedback:

- Stakeholders didn't have a huge amount of feedback on this specific idea. However there could be opportunities to integrate this idea subtly within some of the other prioritised interventions.
- For example, embedding Implementation Intentions within Decision Prompts – encouraging engineers to specify exactly how they will use low carbon materials when prompted to do so.

If I'm specifying asphalt, then I will check the low carbon alternative or the Knowledge Bank first.

If a job is under 20m², then I will consider cold-lay low carbon asphalt.

1. Implementation intentions were effective in increasing voter turnout for the US election: see here

Thinks
Insight & Strategy

6

Next steps

Next steps: trial design

- Understanding what works to change behaviour requires testing and the collection of real-world behavioural data. While a layered intervention strategy is recommended over the longer term, the immediate next step is to select a single intervention to pilot and measure in isolation.
- Of the prioritised options, we recommend piloting **Intervention 5: Decision Prompts**. This represents a quick win: it requires limited financial investment, can be implemented relatively quickly, and allows outcomes to be measured using objective behavioural data.
- We will work with our independent academic advisor, Dr Tattan-Birch, to design a field trial or feasibility pilot. This will be set out in a trial protocol, providing an industry-standard design that can be used to support funding applications for future field trials.

Thank you

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