Environmental Implementation:

A Guide for Local Authorities

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Environmental Policy Implementation Community

Part of the IES family

The Institution of Environmental Sciences

Contents

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About the Environmental Implementation Community

The Environmental Policy Implementation Community (EPIC) is a member-led, specialist interest group at the Institution of Environmental Sciences (the IES).

EPIC members are local authority officers and other environmental professionals delivering environmental protection, climate action and nature recovery on the ground. The community works together to understand delivery challenges, share good practice and advocate for implementation-minded policy.

About the Institution of Environmental Sciences

The Institution of Environmental Sciences (the IES) is at the forefront of uniting the environmental sciences around a shared goal: to work with speed, vision and expertise to solve the world's most pressing environmental challenges, together. As the global professional membership body for environmental scientists, we support a diverse network of professionals all over the world – and at every stage of their education and careers – to connect, develop, progress and inspire.

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Foreword

Gary Kass, Chair of the EPIC Implementation Science Working Group, *IES Vice-President, Chair IES External Policy Advisory Committee, Visiting Professor, Centre for Environmental Policy, Imperial College, Member of Office for Environmental Protection College of Experts.*

The history of environmental policy teaches us a very clear lesson: implementation matters. As we face increasingly urgent environmental crises, it has never been more important to design and deliver policies that make a tangible difference – improving outcomes for our communities, our economy, and our planet. This is the difference between having an air quality strategy and children growing up breathing clean air. It is the difference between committing to insulate housing and families living in warm, sustainable homes.

Policy delivery is the environmental challenge of the next decade. But too often, implementation is overlooked – treated as something to think about later. It is easy to talk about what we intend to do. The harder challenge is to work through how to do it, to actually deliver, and then to make the change stick. This guide shines a spotlight on the critical but frequently neglected aspects of policy implementation, with the aim of supporting both policy-makers and practitioners to improve environmental outcomes.

Our focus within the IES's Environmental Policy Implementation Community (EPIC), is on local authorities, the delivery powerhouses of environmental policy. Whether tackling climate change, remediating contaminated land, expanding cycle infrastructure, or addressing noise complaints, local authorities are on the implementation frontline. Most EPIC members are local authority practitioners, but we hope this guide will also prove useful to those working beyond local government.

The guide sets out a few key messages about implementation. It is a long-term process, requiring teams to Explore, Prepare, Deliver, and Sustain. There are barriers and enablers to successful implementation: this guide is designed to help you to reflect on them and choose strategies to work around or with them. Crucially, implementation is a social process: success depends on people, their behaviours, and the systems and structures that support them to collaborate effectively. And from the start, good policies must be designed with implementation in mind; underpinned by continuous improvement.

We are immensely grateful to the working group and EPIC members who contributed to developing this guide. It has been nearly two years in the making, and many experts have generously given their time and wisdom to advise us on what began as a novel idea – applying implementation science to the environmental sector. We extend special thanks to the Education Endowment Foundation for their sage advice and their permission to adapt elements of *A School's Guide to Implementation* in developing this document.

This first edition draws on evidence from other fields – notably education and healthcare – where implementation science is more established. We expect to revise and expand it as the evidence base for environmental policy implementation grows, and as we learn from feedback from our members.

We are conscious of the complex realities in which environmental policies are implemented: increasingly politicised narratives, competing interests, and constant pressures on time and resources. This guide does not remove those challenges, but it aims to provide a practical resource to help policymakers and delivery teams navigate the complexities and uncertainties involved and reflect on and improve their practice. By offering evidence-informed approaches to implementation, we aim to help those working in environmental policy achieve greater impact – and to contribute to securing the sustainable futures we all depend on.

Introduction

Why implementation matters

Local authorities are at the forefront of delivering environmental action.[1] Over 300 local authorities in the UK have declared climate emergencies and many have developed ambitious and innovative policies on climate, biodiversity and environmental pollution.[2]

Yet vision, targets, strategies, policies and plans count for little without effective delivery. Too many commitments remain unmet: the OEP's 2025 Progress Report found that only nine of the Government's forty-three environmental targets are on track.[3] We face a significant Implementation Gap – one we must close if we are to achieve the shifts we need.

Turning evidence and ideas into effective policy that works in the real world is the defining environmental challenge of the coming decade. Implementation is complex and difficult to do well – it relies on people, collaboration and persistence.

Implementing in environmental systems is particularly challenging. This guide supports local practitioners in navigating the messy, unpredictable nature of change, offering practical advice on implementation.

Who this guide is for

This guide is primarily aimed at local authority staff with responsibilities for implementing environmental policy, such as management and officers working in:

- Sustainability and climate
- Waste management
- Planning and building control
- Environmental protection and environmental health
- Ecology
- Transport
- Public health
- Public realm, including parks and gardens

We refer to these staff throughout the guidance as 'local teams'. However, it is likely to be relevant to the full range of organisations delivering environmental policies on the ground, many who work closely with local authorities, such as the Environment Agency, community groups or local housing associations. We are also aware that we stand on the brink of significant local government reorganisation, with devolution deals, new legislation and shifts in regulatory priorities emerging. As such, local teams' roles, priorities and remits may well shift significantly depending on context.

How to use this guide

This guide sets out an implementation process that local teams can use to help structure their approaches to implementation. It has four phases: Explore, Prepare, Deliver and Sustain.

This guide defines implementation as 'acting on evidence-informed decisions'. It is designed to support the implementation of policies that have already been developed. Sometimes local authorities will be implementing policy developed at the national level – this may or may not be a statutory requirement. In many cases, officers and management will be implementing policies set by their Council's leadership.

Policies set out *what* a local authority intends to do, but can vary significantly in detail. Local teams may be directed to 'increase the number of trees', or they may be directed to 'plant 3,000 trees in the next five years, developing a Tree Preservation Order register and tree maintenance programme'. This guide aims to support local teams in both circumstances with turning the *what* into the precise detail of delivery – the *how*.

For example, policies may include:

- Introducing a Clean Air Zone
- Reducing street flooding
- Increasing the number of trees in the area
- Improving understanding of contaminated land reports
- Insulating local authority housing stock

"The leader of the Council announces a new initiative and then you have to suddenly scramble around and try to work out how we are going to do it."

– EPIC workshop participant

It should be noted that defining implementation as 'acting on evidence-informed decisions' is a deviation from other common definitions of implementation used in the literature, which often include policy development. For instance, A Schools Guide to Implementation, upon which this guide draws from extensively, defines implementation as 'making and acting on evidence-informed decisions'.

While we have chosen this focus on 'acting' on decisions, this does not mean that the process of policy development should not explicitly consider implementation and involve practitioners.

Important note: Evidence on environmental implementation

This guide is built on evidence of what supports effective implementation. But there is limited available evidence on environmental implementation in local authorities. Consequently, this resource draws on research about implementation from other fields – such as health care and education – paired with the evidence base and experience of effective implementation in local authorities, and from a number of academic fields, such as implementation science, policy studies and evaluation. In particular, this guide draws heavily from the Education Endowment Foundation's A Schools Guide to Implementation, which was underpinned by realist evidence review undertaken by a team from the University of Exeter.

This resource is designed as a starting point to help local authority teams think about implementation. It should not be considered or used as a definitive guide to implementation given the current state of the evidence.

Box 1. Key terms

Implementation: acting on evidence-informed decisions

Policy: the 'thing' that is being implemented, that may also be referred to as a measure, intervention, activity or project

Local teams: the people implementing the policy, and supporting those implementing the policy

Barriers and enablers: the factors that reduce or increase the likelihood of successful implementation

Implementation strategies: the strategies that can be put in place to overcome implementation barriers and activate enablers, leading to higher likelihood of successful implementation

Master checklist

This checklist summarises the key steps required throughout the implementation process. It is designed as a quick reference tool to be used alongside the full guidance document.

Explore

- ☐ Do we have a clear theory of change for the policy, informed by evidence and systems analysis?
- ☐ Have we selected an evidence-informed approach to the policy that fits the challenge and is appropriate for our local context?
- ☐ Have we identified potential barriers and enablers to implementation in our setting?
- ☐ Is the approach feasible to implement?

Prepare

- ☐ Do we have an implementation plan, and has planning been conducted collaboratively to build shared understanding?
- ☐ Is there clear agreement on the core components of the policy?
- ☐ Have we developed a tailored package of strategies to implement the policy and address anticipated barriers?
- ☐ Do we understand our implementation outcomes and policy outcomes, and how these will be monitored?

Deliver

- ☐ Do staff feel supported by leadership?
- ☐ Is initial training reinforced through ongoing support such as feedback, refresher sessions, and reminders?
- ☐ Are systems in place to monitor implementation, and is time allocated for local teams to reflect on data, learn and make adaptations?

Sustain

- ☐ Have we carried out a thorough review of implementation, considering outcomes as well as any changes in context, barriers, and enablers?
- ☐ Have we reached a clear decision on whether to continue, scale up, or stop the policy?

Implementation process

This guide sets out a process to support local authorities with implementation.

The process is organised into four phases: Explore, Prepare, Deliver, and Sustain (see **Figure 1**).

However in reality, implementation is rarely neat or linear. It is rare to start an implementation process 'from scratch' and phases often overlap or need to be revisited. Implementation strategies may have to adapt as circumstances change. This process should therefore be seen as a flexible guide that offers structure to help local authorities navigate the complexities of implementation.

Each phase sets out implementation strategies that local teams may want to use to overcome common barriers.[4] Many of these strategies can be used in more than one phase. You can also find a complete list of implementation strategies, including all the phases they can be used in, in the Appendix (link to section).

Box 2: The importance of behaviours and context

As well as following an implementation process, the implementation literature is clear of the importance of underlying **behaviours** and **contextual factors** to ensure implementation strategies are effective.

A Schools Guide to Implementation, upon which this guide draws heavily, grounds its process in three behaviours (**unite, explore** and **reflect**) and contextual factors (**what is being implemented, systems and structures** and **people**). While this guide focuses on the implementation process, these **behaviours** and **contextual factors** are embedded (**and bolded**) throughout.

Local authorities should constantly seek to develop these behaviours and contextual factors, not just through the process of implementation, but to increase their implementation readiness. For more information (in an educational context), see A Schools Guide to Implementation.

Figure 1. Implementation process

Allow enough time for effective implementation

Effective implementation often takes time. Complex initiatives that address whole environmental systems often take years or even decades to show results. It is therefore important not to dismiss a policy as a failure before it has had the opportunity to take effect.

Equally, it matters where the time available is invested. Ideally, local teams should invest significant time in preparation and planning before moving into delivery. However, it is recognised that local authorities are often under pressure to implement quickly due to resource constraints and political pressures.

Local authorities are busy places, with many different responsibilities. Many of the things they do are statutory requirements. Where possible, however, it is often a good idea to focus on a manageable number of projects and to pursue these diligently. Local leaders should coordinate projects and resources to avoid siloed working and staff overload.

In some cases, existing activities may need to be scaled back or stopped to make space for new projects. Changing established habits and practices is rarely straightforward, so de-implementation – the deliberate stopping of an approach – should be managed carefully, noting potential resourcing and political implications (see Sustain).

Explore

The complexity and uncertainty of environmental systems means it can be difficult to identify the most effective ways to implement policy. In Explore, local teams should spend time reflecting on the policy, and consider barriers and enablers to implementing it.

Implementation teams

Who is doing the implementation? Establishing an implementation team is a critical step in ensuring effective progress. You may choose to form the implementation team during the *Explore* phase, or at the latest, during the *Prepare* phase.

The team should bring together **people** with a diverse and relevant mix of skills, ideally drawn from across all key departments, to oversee and support implementation. Their roles may include creating an implementation plan, collecting and monitoring data, and acting as a rapid-response unit when unexpected challenges arise.[5] Clear roles and responsibilities are essential, and the team should work closely with project sponsors and steering groups.

Further resources:

- The CES Guide to: Implementation Teams

"My authority has a strategic operational plan. We have large projects that are not allocated to a specific department. Instead we have key staff and budgets associated with them, which means we have good working groups set up for dealing with particular areas of work."

– EPIC Workshop participant

Explore the policy and the problem

Local teams should take time to carefully **reflect** on the policy and the problems it is trying to address. They should consider the wider systems in which it sits, and examine available evidence on the issue. They may go back and forth between examining the evidence, and understanding the wider system, with both approaches potentially throwing up new aspects of the problem to consider (see **Figure 3**).

Gathering and reflecting on the evidence

Local teams should build an evidence-informed picture of the problem by gathering and reflecting on a wide range of data, information and knowledge.

Different forms of evidence have different strengths and limitations (see **Table 1** in the Appendix for an example). Recognise and be transparent about the limitations and uncertainties in your evidence and reflect on how this affects your decision making.

As part of this evidence-gathering, insights may be drawn from key stakeholders and the local community. When done well, this type of engagement not only improves the evidence base but also helps strengthen implementation.

Further resources:

- The CES Guide to: Using Evidence

Community engagement

Many forms of evidence (see **Table 1** in Appendix) will require input from communities or stakeholders. Yet **engagement** is important at every stage of the implementation process. The depth of engagement may vary – from consultation to co-production – as can the methods used, which might include surveys, workshops or citizens' assemblies.

Research on implementation consistently tells us that engagement is critical for building shared understanding and support around a policy. Effective engagement can strengthen public backing by clearly setting out the problem and the reasoning behind the policy solution. Communicating a clear and unambiguous purpose – in plain English rather than technical jargon – helps build trust, manage expectations, and secure long-term commitment.

Local authorities are already experienced in community engagement, and in many cases it is a statutory requirement when introducing new policies. However, meaningful engagement requires time and resources. When implementing environmental policy, careful planning and delivery are especially important. The politicisation of some environmental policies (such as net zero), and the rise of mis- and disinformation – often spread through social media – are significant and growing challenges. These must be explicitly anticipated and addressed as part of the engagement strategy.

Further resources:

- Comms Hub (LGA)
- Co-production (LGA)
- The value of co-production (NIHR)
- Participedia
- CES Guide to: Communicating Change in Organisations (CES)
- A guide to disinformation affecting local authorities and their communities (LGA)
- Mitigating climate misinformation (UK100)
- Talk like a human: Lessons on how to communicate climate change (C40 Cities)

Conduct a systems analysis

To build a strong understanding of the problem, local teams could undertake some formal approaches – such as compiling a systems map of the issues and how they link together, and considering plausible scenarios for how the situation might change over time. These approaches put the principles of systems thinking and futures thinking (see Appendix) into practice.

Draw on the evidence, and consider:

- What is the problem? What are the consequences from the perspective of different stakeholders, e.g. local community groups, water companies or government agencies.
- What are the causes of the problem? Recognise that it may not be possible to identify a 'root cause' of a problem in a complex environmental system.
- What environmental, social, economic and political factors (see section on local politics) are at play? How are they connected?
- Who else is working to tackle this problem? Who are your key stakeholders?
- How might this problem and proposed policy impact or provide opportunities for other issues or work under local authority control?
- Are feedback loops present? Identify any positive or negative feedback loops that may amplify or stabilise change.
- How might the forces of change combine to create different plausible future states?

Tip: Even if the issue feels familiar or a solution seems obvious, it is important at this stage to recognise and set aside any assumptions. Think – am I jumping to a pre-made conclusion or justifying a decision that has already been made?

It is often very helpful to continue to apply systems and futures thinking throughout the process, **reflecting** on measures and approaches in light of new evidence or experiences.

Box 3. Rich pictures

A practical way to capture this is by creating a rich picture. This is a visual image showing the key elements of the system, and the relationships between them (see **Figure 2** for an example).

Tip: Invite stakeholders from across the system to help draw it together. You can make one alone – but it will be much richer (and more fun) if you involve people with different perspectives.

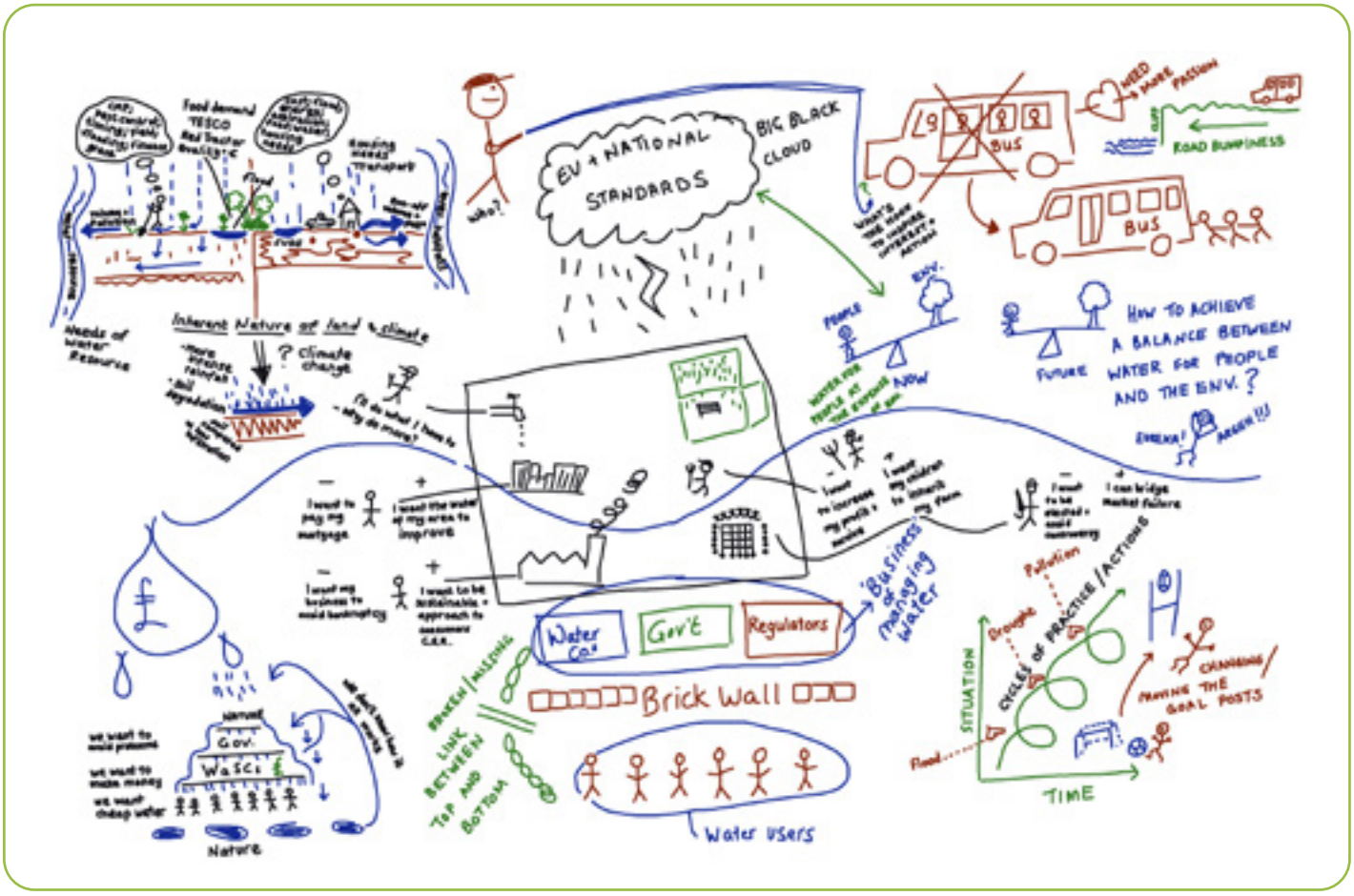


Figure 2. A rich picture of the 2016 water governance situation in England.[6]

Develop a theory of change

A Theory of Change sets out how we expect change to happen. It makes explicit the underlying assumptions, pathways, and conditions that we believe are key to successful implementation. The evidence gathering and the systems analysis should feed into the Theory of Change, and these stages can be revisited throughout the implementation process (see **Figure 3**).

By mapping out short, medium, and long-term outcomes, a Theory of Change will enable local authorities to design monitoring systems that focus on meaningful indicators and to develop a robust, proportionate evaluation framework (see Prepare). Local teams should **engage stakeholders** when developing a Theory of Change to give legitimacy and build consensus around the rationale and need for certain actions.

Further resources:

- Defra's Theory of Change Toolkit

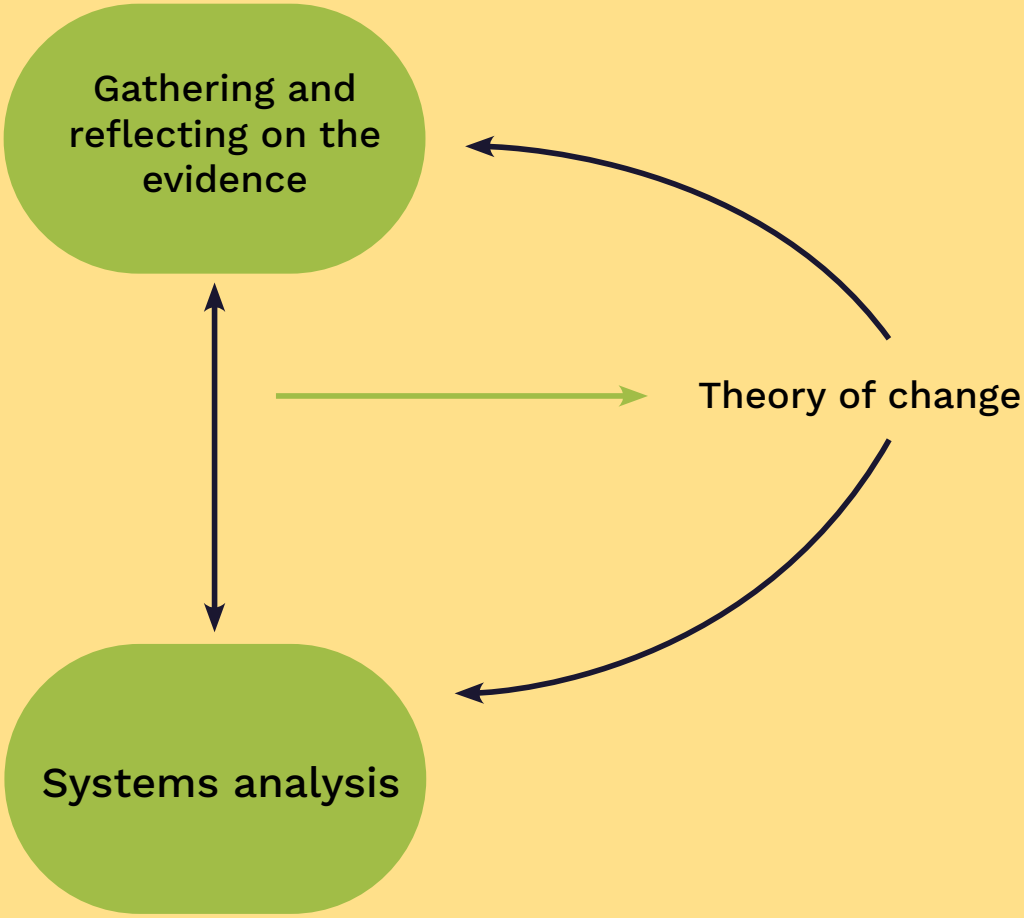


Figure 3. Theory of Change development.

Explore different approaches

Once you have developed an understanding of the problem and the policy, local teams can explore how they might go about implementing it. For example, a local team that has been tasked with introducing a Clean Air Zone might undertake a feasibility study to assess traffic patterns, pollution hotspots, and the likely impact of different types of Clean Air Zone (for example, charging vs. non-charging). In practice, choices will be constrained by factors such as resources, timescales and local priorities and it would be helpful to keep these under review as the situation changes.

Reviewing current practices

A critical step is to establish what policies and practices are already in place that are trying to solve, or are impacting, the identified problem. It may be that current practices are not working and need to be stopped or reduced (see later section on de-implementation). It may be the case that current practices have the potential to

address the problem and just need strengthening or implementing more consistently. It is often tempting to pursue a shiny new policy but building on what already works is often more effective. It may also be the case that actions to address one problem could have unidentified consequences, for example alleviating flooding in one location may worsen it elsewhere, or some carbon reduction measures may increase air pollution.

Local teams should also explore the beliefs and **contextual factors** that underpin current practices. This can shed light on why certain initiatives have gained traction while others have struggled. For example, establishing officers' and councillors' views on the role of the council in addressing climate change may help explain differing levels of support for sustainability measures.

Consider evidence about what has worked elsewhere

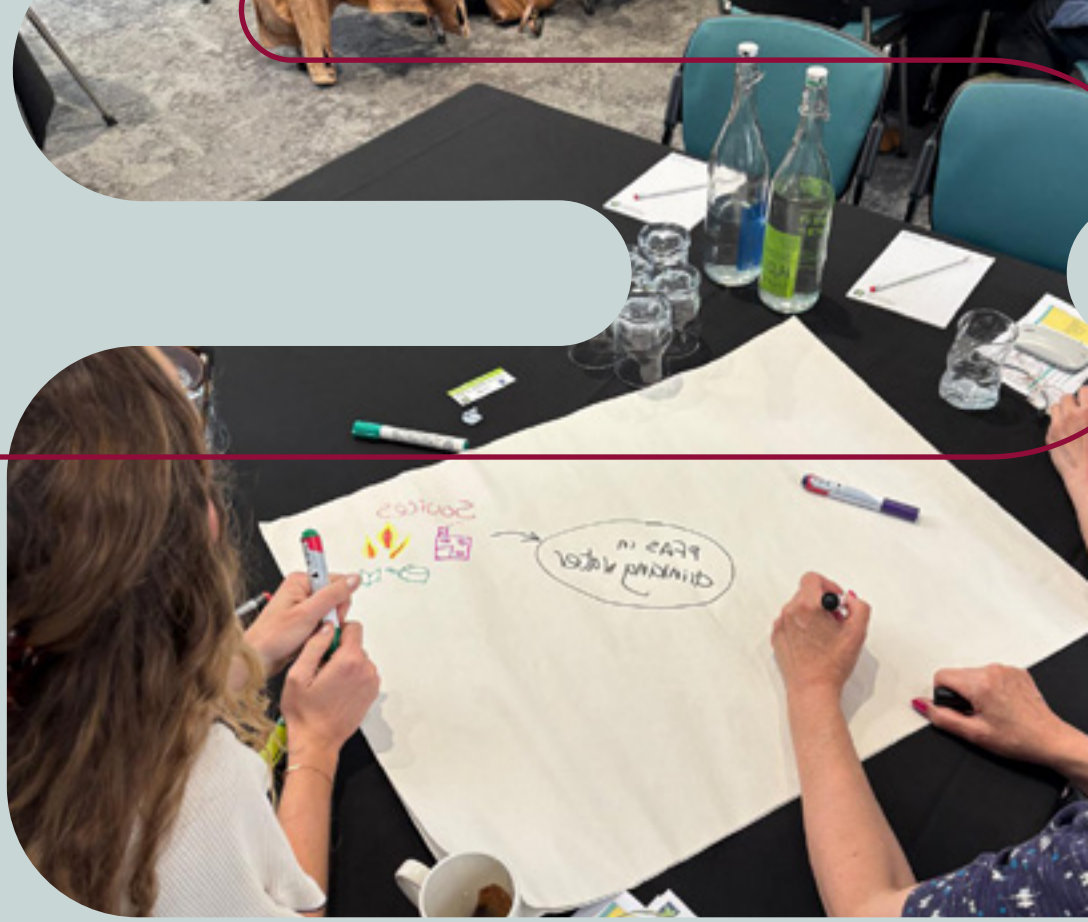
The goal here is to identify potential actions based on existing evidence of what has worked – or failed – in other contexts.

Engaging with research evidence is associated with more effective implementation. When implementation leaders draw on evidence to explain why an approach is likely to address an environmental issue, staff are more likely to support and buy into it. Similarly, when staff **engage** with evidence to understand how an intervention is designed to work, it is more likely to be implemented faithfully.

However, approaches should not be simply 'lifted and shifted' from elsewhere. Instead, local teams should analyse the factors that made it succeed or fail in those contexts and assess whether similar conditions exist in their local authority or local area, both currently and in the future. Ideally, evidence of what might work will be based on robust evaluations that have been conducted in similar local authorities and shown to have consistent, positive effects. But this is unlikely and context-specific knowledge, experience and skills will always be needed to adapt approaches to local circumstances.

Further resources:

- Using research evidence (NESTA)



Vignette #1

showing the importance of reflecting on the evidence about what has worked elsewhere.

The Environment and Communities Committee at Redwood Council has announced a new policy of planting 3,000 trees in the next five years. An implementation team is formed, and considers what has worked elsewhere, including a neighbouring unitary authority that has had success with a large-scale tree planting programme in one large area. They explore replicating the project, but consider that it would fail in their area due to different soil conditions, land availability and maintenance capacity. Instead, they consider taking a different approach, working with schools, residents and other groups to plant trees in community spaces across the district.

Explore barriers and enablers

Implementation may be enabled or constrained by many factors. **Reflecting** on these barriers and enablers helps local teams judge whether they are ready to progress with implementation and to select appropriate implementation strategies.

Tip: Research suggests there is benefit in simply asking colleagues and stakeholders about anticipated barriers to implementation and what support would be useful.

Some common barriers and enablers for environmental policies are:

- **Resourcing:** Resource constraints are common, with limited budgets and competing priorities across statutory services. Assigning staff and procuring equipment can also be challenging.
- **Skills:** Skills gaps in environmental planning, technical areas and project management can hinder delivery. For instance, see the review of the Green Homes Grant Voucher Scheme
- **National policies:** National policies can act as a supporting mechanism for local policies or make implementation very difficult. For example, a national communications campaign to increase recycling would enable the implementation of a new food waste collection policy by a specific local authority
- **Governance:** Governance processes may be perceived as bureaucratic, leading to delays if not well-designed
- **IT systems:** Legacy systems and infrastructure
- **Engagement:** Engaging stakeholders meaningfully will be critical, especially when balancing technical requirements with community expectations (see community engagement section)
- **Local politics** (see **Box 4**)
- **Other well-known implementation 'pinch-points':** Implementation pinch-points for the specific policy, which can be indicated in the evidence or from personal or organisational experience

Although it is important to anticipate implementation barriers prior to delivery, unexpected issues are very likely to arise once an approach is being used.

> 'Surprises are inevitable!'
>
> – Peter Schwartz[7]

It is critical, therefore, to continually **reflect** on barriers and enablers and address implementation challenges in a responsive, flexible and adaptive way.

Box 4. Local politics

Local politics (and intersections with national and global politics) is often a very strong barrier or enabler for environmental policy implementation in local authorities.[8] Aligning short-term political cycles with long-term environmental goals requires careful planning and sustained commitment.

Officers should consider:

- **Politicians:** Who are the key political agents, such as councillors, cabinet members, committee chairs? Understanding political networks can help predict support and resistance.[9] Consider engaging politicians early and keep key supporters in the loop to maintain support and prevent surprises.[10] It can also be useful to gather stories and data that councillors can use publicly to defend the policy or claim a 'win'.[11]

- **Timing:** Electoral timing affects decision-making and priorities.[12] Map the key political calendar moments, such as election dates, budget-setting periods, and key committee meetings, and set out your implementation plan with these dates in mind.

- **Local priorities:** Implementation is often aided when approaches are aligned with dominant political agendas or are framed in terms of multiple benefits.[13] Organisational culture also influences change uptake, so consider your local political culture, is it risk-averse, opportunity-seeking, innovating incrementally or radically?[14]

- **Other well-known implementation 'pinch-points':** Implementation pinch-points for the specific policy, which can be indicated in the evidence or from personal or organisational experience.

Finally, you need to be prepared for all of these things to change. There may be a change in political leadership, or a sudden surge of interest in a policy due to a local news story being published. Track political (and other) shifts and be ready to reframe and adapt approaches if needed. Try and build cross-party support based on shared or aligned values and goals so that policies survive leadership changes.[15] Try to institutionalise the policy, by embedding it in statutory frameworks (see Sustain).[16]

Prepare

In Prepare, local teams should prepare for implementation by creating an implementation plan (see the Appendix for an example implementation plan).

Plans should be developed **collaboratively**, to create ownership and buy-in, and written in clear, plain English, to ensure that everyone is on the same page. There are 4 parts in an implementation plan:

1. Barriers and enablers
2. Core components
3. Implementation strategies
4. Monitoring and evaluation

1. Set out barriers and enablers

Summarise your findings from the Explore phase. What are the potential barriers and enablers to implementation?

2. Choose core components

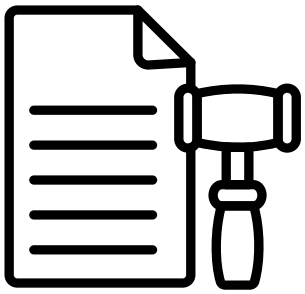
How are you going to implement the policy? To do this you should break down and agree the '**core components**' of the approach that are needed to make it work (see **Figure 4** for an example). These should be fixed, and applied consistently even if the context or setting of the intervention changes. Having defined core components also helps monitor implementation fidelity – if you have delivered what you are supposed to have delivered.

Tip: Make sure that everyone is on the same page about the core components – it can be surprisingly difficult!

"We had one person within a local authority team that said we did need a certain permit, and another one who said we didn't. So there were different understandings of what the policy is, what is being implemented, in the same team. We see that a lot across the piece."

– EPIC workshop participant

Core component 1 – Legal framework



- The CAZ is formally adopted through council decision-making processes.
- Traffic Regulation Orders are drafted, setting out vehicle restrictions and enforcement powers.

Core component 2 – Infrastructure and Technology Deployment

- Automatic Number Plate Recognition cameras are installed at key entry and exit points.
- A digital payment and compliance system is procured, integrated with national vehicle databases to check emissions standards.
- Signage is placed across the city to clearly mark the boundaries of the CAZ.

Core component 3 – Supporting residents

- Grants and loans are introduced to help residents and small businesses upgrade to compliant vehicles.
- Public transport improvements (extra bus routes, park-and-ride expansions) are rolled out in advance of the CAZ launch.
- A public information campaign promotes alternatives like cycling, walking, and car sharing.

Figure 4. Clean Air Zone D Example: Core Components

3. Select your implementation strategies

How are you going to ensure your approach is implemented successfully? How are you going to address the barriers and enablers identified in the Explore phase?

You will often need multiple strategies, and it may help to think about the different people and groups, such as individual practitioners, local authority teams, business and the local community, need different strategies.

You may need to tailor your strategies as new barriers and enablers emerge – see Deliver.

Clarify governance systems

Effective environmental implementation within councils relies on strong project governance. Governance provides the structure for decision-making, accountability, and oversight, ensuring that environmental projects align with strategic priorities, are well-managed, and deliver public value.

Environmental governance begins with strategic alignment. Projects must support the council's priorities. This alignment ensures that resources are directed toward initiatives with the greatest impact. Decision-making authority should be structured through gateway reviews and committee approvals, ensuring transparency and accountability.

Recruit, train and empower implementation leaders

Designate individuals to take responsibility for driving forward a new initiative, coordinating across teams, and keeping delivery on track. Implementation leaders can bridge departments, signal legitimacy and maintain momentum.[17]

Improve implementers' buy-in

Ensure those who are delivering the intervention – such as frontline staff, service managers, elected officials and partner organisations – are supportive. For instance, involve them in designing decisions, make the case using tailored practical evidence, align incentives, remove blockers and protect their time.

Inform local opinion leaders

Recruit respected local leaders (e.g. councillors, respected community members) who can publicly back and model the change (e.g. cycling or retrofitting their house). They can translate policy into relatable terms; residents may distrust official messaging but respond positively when information comes from a trusted local figure.[18] Provide them with protected time and clear and concise briefings.[19]

For example, the City of Trees' Citizen Forester and partnership model leveraged local leaders and on-the-ground champions to sustain tree-planting programmes across Greater Manchester.

Prune competing initiatives

Cut back, reschedule or consolidate competing tasks and initiatives so that officers can focus on delivering a new initiative.[20] For example, some authorities have merged fuel poverty, retrofit, and energy advice services into single delivery hubs.

Test-drive and pilot approaches

Try a small-scale, time-limited implementation of an intervention before full roll-out. This can test feasibility, generate evidence and learning, build support, de-risk innovation, and support adaptation.[21]

Access new funding

Secure additional funding beyond existing core budgets. For example, private finance, pooling resources across authorities or with anchor institutions, philanthropic or lottery funding, or income-generation.[22]

Draw on external experts

Draw on external experts – academics, consultants, practitioners, NGOs, or experienced peers – to help council staff or councillors strengthen their understanding about new practices. Expert input can also reassure stakeholders that policies are informed by evidence.[23] This could be through workshops, technical advice or opportunities to shadow expert practitioners.[24] For example, the Retrofit Academy works with councils to train and mentor housing staff through shadowing retrofit specialists.

Develop and distribute educational materials

Produce and distribute user-friendly resources (guides, toolkits, templates, checklists, online modules, videos) to help staff, community partners and other stakeholders understand and deliver new practices correctly. This helps to standardise practice and scale-up knowledge and reduces dependency on experts.[25]

Change the physical infrastructure

Change the physical or organisational environment in which people operate, to make desired behaviours easier and more likely. For example, changing a stakeholder meeting with farmers from a corporate meeting room to a local wildlife space, and at a time that works for their schedule.[26]

Provide individual and system level incentives

Provide rewards (like gift cards, recognition, awards, training opportunities) and system level opportunities (external recognition schemes, free training, budgets linked to progress).[27]

Communities of practice

Bring together officers and other practitioners to share knowledge and troubleshoot problems. They can act as safe spaces to frankly discuss barriers (e.g. finance). They can help scale up successful interventions, and help sustain implementation over time by embedding learning in networks not individuals[28] (see **Box 5** for examples).

Box 5. EPIC

The Environmental Policy Implementation Community (EPIC), who produced this guide, holds communities of practice exploring common challenges faced by those implementing nature recovery, contaminated land, air quality, sustainability and noise pollution policy on the ground. All environmental professionals working in local authorities can join EPIC for free.

Other organisations also provide relevant communities of practice:

- Local Government Association, including their Sustainability Action Network
- UK100
- Local Governments for Sustainability

4. Plan monitoring and evaluation

Robust monitoring and evaluation are essential for understanding whether policies are being delivered as intended and whether they are effective. Building these processes in from the start allows for learning and adaptation as implementation progresses.

Monitoring environmental policy is, however, inherently challenging. Outcomes are often diffuse – spread across different regions, species, and communities – and may only become evident over long timescales. Key indicators such as soil carbon, biodiversity health, or groundwater recharge often require costly or technically complex measurements, and data is frequently patchy or inconsistent. Even when good data exists, isolating the effect of a specific policy from other drivers in a complex system (e.g climate variability, market forces, land-use change) is rarely straightforward. For example, wetland restoration may take years before improvements in water quality or bird populations are observed, and those changes may also reflect rainfall patterns or upstream land management rather than the restoration project itself.

Most local authorities will have specialist monitoring and evaluation teams. This section is not intended as a comprehensive manual, but instead highlights some key considerations, especially when it comes to the monitoring and evaluation of implementation, as well as overall policy effectiveness.

Outcomes

There are two key types of outcomes to monitor and evaluate:

Implementation outcomes – These show how well a policy has been implemented on the ground (e.g. number of people trained, length of cycle lane completed). They can be assessed across eight areas (see Evaluating Implementation below).

Policy outcomes – These show the impact of a policy (e.g. increases in cycling trips, reductions in air pollution and carbon emissions). They can be broken down into short, medium and long-term outcomes, and should be linked to the Theory of Change (see Explore).

Achieving implementation outcomes increases the likelihood that the policy has been successfully delivered and, if the Theory of Change holds true, that wider policy outcomes will follow.

Create a useable monitoring system

To prepare for monitoring, local teams should select a set of reliable indicators that can be used to monitor these outcomes, and design systems for collecting, analysing and using implementation data. Monitoring should be meaningful, useful, and proportionate to available resources.

The presence of a monitoring system does not mean it will be used. Delivery teams and stakeholders need to be **united** in their understanding of why monitoring matters and how data will be used. **Involving them in the design** helps build ownership and ensures monitoring is seen as a tool for learning and improvement, not just oversight.

Tips for effective monitoring:

- Focus on the most critical outcomes – don't try to measure everything
- Use existing or routinely collected data wherever possible
- Integrate monitoring into established processes (e.g. team meetings, reporting cycles)
- Make sure everyone understands what is being monitored and what is expected of them

Evaluating implementation

Proctor *et al* (2011) identified eight key outcomes that can be used to evaluate implementation (see **Figure 5** on the next page)

Local teams should use the outcomes that they think are most relevant. Evaluation should support, not burden, delivery teams, and be realistic about staff time, skills, and budget.

Further resources:

The CES Guide to: Reporting on the Progress of Policy Implementation (Centre for Effective Services)

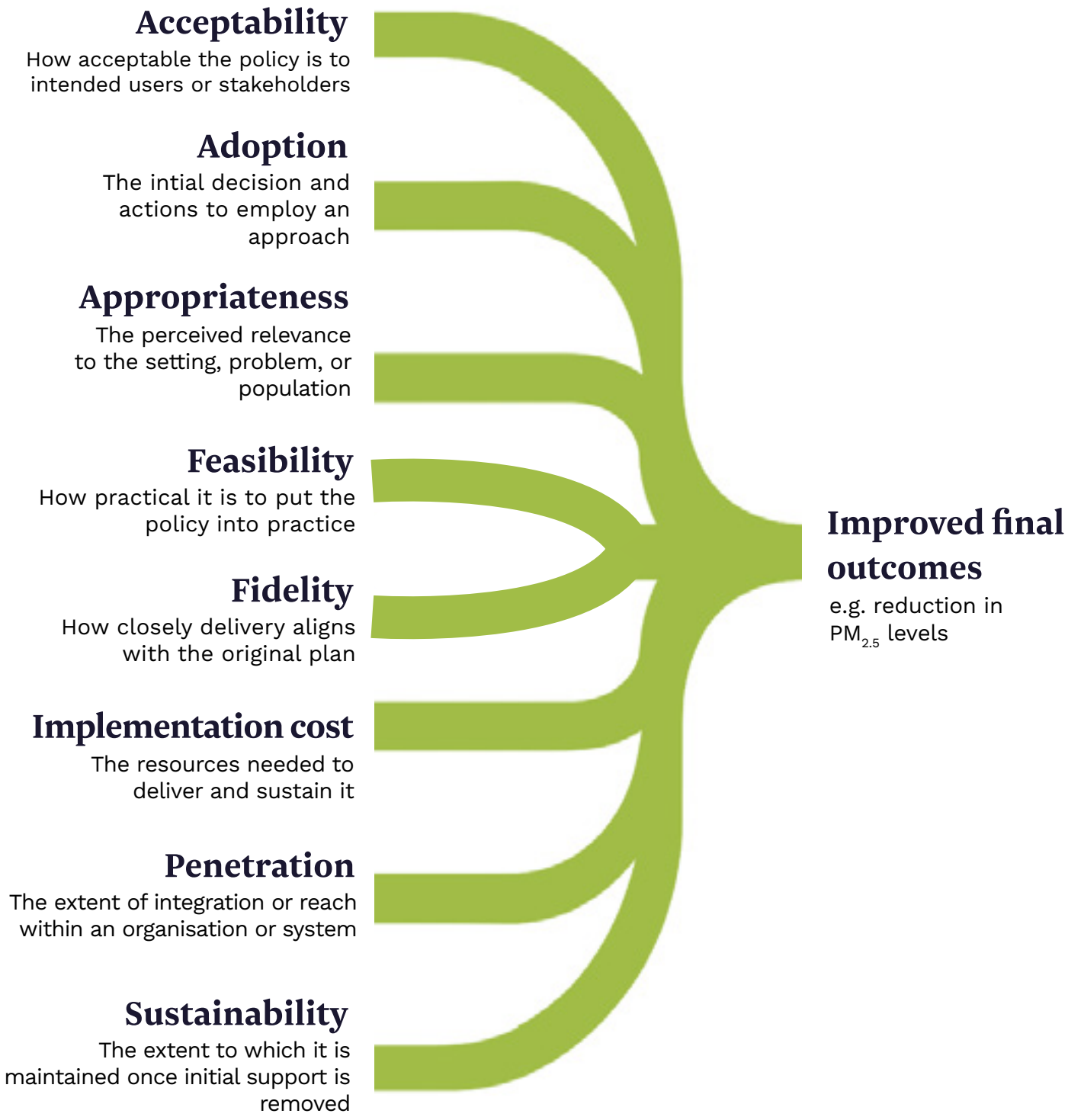


Figure 5. Proctor's implementation outcomes. Source: Proctor, E. et al (2011) https://pubmed.ncbi.nlm.nih.gov/20957426/

Box 5. Evaluation methods

When evaluating implementation and policy outcomes, there are a variety of methods that may be used, including theory-based methods (e.g. realist evaluation), participatory methods (e.g. citizens panels) and study designs such as experimental (e.g. randomised controlled trials) quasi-experimental designs (e.g. natural experiments) and hybrid designs.

Detailed guidance on evaluation methods is out of the scope of this guide but further support can be found:

- Magenta Book Supplementary Guide: Handling Complexity in policy evaluation (HM Treasury)
- The Complexity Evaluation Toolkit (CECAN)
- Developing and evaluating complex interventions (UK Medical Research Council)
- The CES Guide to: Evaluation Methods (Centre for Effective Services)
- Implementation Science Research Development Tool (Centre for Mental Health Policy and Evaluation)

Vignette #2

showing how a local authority might monitor implementation outcomes

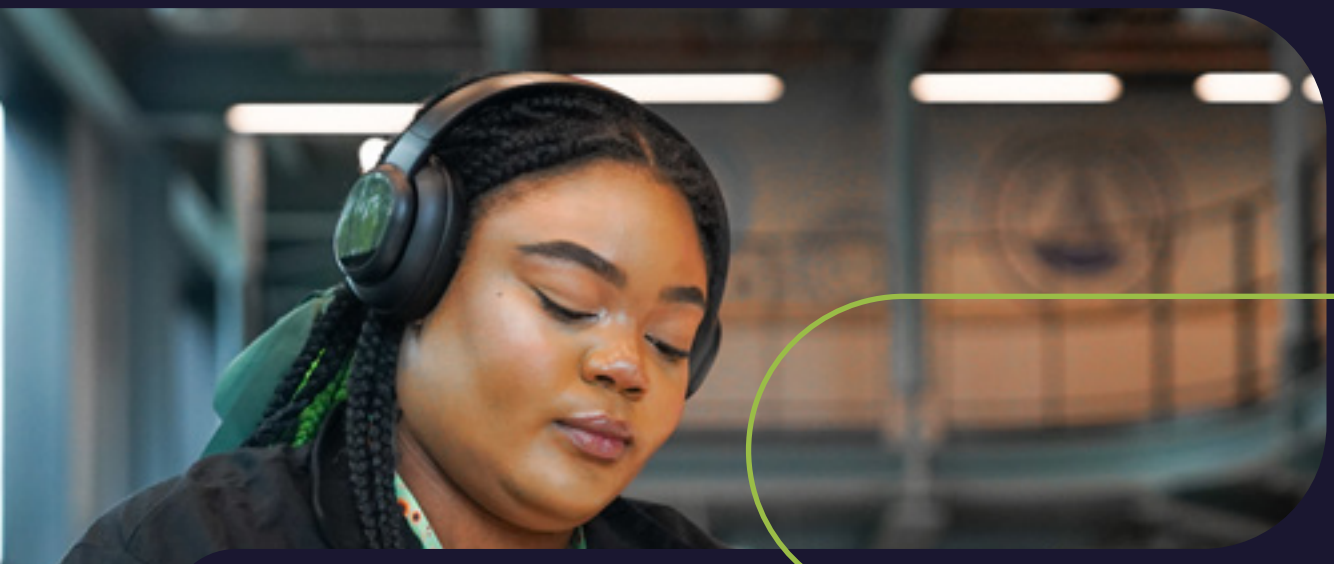
An implementation team at Greenwood Council is preparing to introduce a new ‘plain English’ standard for contaminated land reports, with the aim of improving understanding across the authority and among external stakeholders. They consider how to monitor implementation of the new policy and decide to track the following:

Adoption – how many Contaminated Land Officers have taken up the new standard

Appropriateness – feedback from stakeholders who use the reports on whether the new style is helpful

Penetration – the proportion of reports meeting the standard, assessed using accessibility checker

Feasibility – feedback from officers on whether they find the plain English approach practical in their day-to-day work



Deliver

Delivering any new approach can be challenging, as people get used to new ways of doing things. Below are some key implementation strategies to overcome common barriers during the Deliver phase.[26]

Support staff

Delivery can be a stressful time for local teams, especially at the very start of a new approach, and so leaders should take extra care to support staff during this time. This can be achieved by:

- Sharing the responsibility for implementation and **engaging** people in decisions
- Providing extra time
- Focusing on realistic goals
- Removing administrative tasks
- **Engaging** staff in discussions about their wellbeing (see **Box 6**)

Box 6. Staff wellbeing

Burnout and stress is often cited in the implementation literature as a key barrier to successful delivery.[29]

Resources for supporting wellbeing in local authority teams:

- Wellbeing LGA
- Guidance on addressing burnout and stress in council employees and frontline workers (LGiU)
- Mental health case studies (LGA)
- How to promote wellbeing and tackle the causes of work-related mental health problems (Mind)

Note that it is important not to treat wellbeing support as the answer to systemic challenges that may be causing the stress in the first place. For instance local authority staff may be experiencing stress because they know they cannot rely on enforcement to ensure compliance.

Reminders

Timely reminders can ensure the new approach is being implemented correctly and maintain momentum. There is strong evidence in the related fields of health and social care that reminders improve implementation.[30] In local authorities, this could include:

- Prompts – agenda add ons in meetings, end of week emails, prompts from peers in meetings, visual prompts such as posters
- Self-evaluative checklists – e.g. checklists for officers conducting site visits
- Form design – e.g. having 'electric vehicle' pre-selected in a fleet booking form
- Habit forming – linking new tasks to existing routines e.g. 'every Friday when you send weekly updates, also log your team's energy-saving actions'

Follow-on training

Having initial training when a new approach is rolled out is important, but if this is never re-visited, and staff are left to 'get on with it' then the initiative is unlikely to take hold. Follow on training is needed to give staff support with the challenges they are now experiencing on the ground.

Follow up on training could include:

- Refresher sessions
- Best practice showcases from peers (early adopters) or experts
- Coaching or mentoring (could be peer-to-peer)
- Providing feedback and encouraging practitioners to reflect on their own performance

Tip: not all staff are likely to need the same type of follow on training.

Celebrate and acknowledge successes

Acknowledgment and encouragement of good implementation practices from leadership can be an effective strategy in the *Deliver* (and *Sustain*) phase. In local authorities there is unlikely to be a financial reward for success, but bringing local teams together at key milestones to update on and celebrate progress can help bring people together, and re-unite everyone on their common goal.

Monitor and improve

Delivery should be a learning process. In order to learn lessons and act on them, monitoring and evaluation is crucial. This is when you get to understand what the real barriers and enablers are, not just the anticipated barriers and enablers we started to consider in the explore phase.

Yet putting monitoring into practice can be difficult, especially if it requires significant input from staff and stakeholders. If you don't have buy-in on the importance of monitoring, then it can feel like an unnecessary burden, and may be ignored or not done properly. This is why it is important that monitoring data (whether

technical data from sensors or feedback from residents) is well planned, used and acted on – and *seen to be used and acted on*. It is critical that local teams are given time to **reflect** on implementation data and consider learning and adaptations, for implementation to be effective.

Communication and reporting mechanisms, such as dashboards and highlight reports, are important for keeping stakeholders informed and engaged. These tools are vital for maintaining public trust and ensuring that councillors, officers, and residents understand project progress and risks. Risk management is embedded through the use of registers and escalation protocols, helping councils navigate regulatory, financial, and reputational challenges.

Sustain

Do we want to continue the approach? If yes, how do we make it sustainable, or scale it up? If no, how do we stop it?

Conduct a thorough review of implementation

Post project reviews and official oversight is often provided by programme boards and scrutiny panels, with performance metrics focused on environmental outcomes.

Consider:

- What evidence do we have that the approach has been successful (see the monitoring and evaluation section)?
- How well has the policy been implemented (for example, in terms of reach, fidelity, and acceptability)?
- How has the overarching challenge and needs changed? Is the policy still fit for purpose?
- How has the implementation context changed?
- Does the policy need any adaptations?
- Are the implementation strategies still appropriate?

Based on these deliberations, you should consider three options: sustain, scale-up, or de-implement.

Tip: Local teams may undertake a combination of the three options. Scaling up a policy may require sustaining the policy in the original area or pilot. Or it may be necessary to sustain some aspects of the policy, and de-implement others.

Option 1 – Sustain

If an approach is working and is still aligned to local needs, then local teams should move to sustain implementation. This should be done through embedding and institutionalising an approach, so it becomes part of 'business as usual'.

This is often forgotten – implementation science stresses the gap between short term outcomes and sustainable, long-term outcomes. It is easy for an initiative to fizzle out once initial enthusiasm fades or key people leave. This is why it is important to ensure from the start that

implementation is spread across a team, and to ensure that individuals are engaged and united, and continue to reflect on whether the intervention is fit for purpose.

"Great things that we set up five or 10 years ago might not work anymore because some people have changed roles or have left."

– EPIC workshop participant

Ensure you continue successful implementation strategies and add new ones if needed. For example:

- Revisiting and adapting implementation plans
- Refreshing professional development
- Acknowledging and supporting good implementation practices
- Ensuring that improved outcomes are clearly visible to staff and the local community
- Including it in staff inductions
- Embedding the approach in the authorities organisational structures, through inclusion in policies, plans and staff inductions
- Ensuring financial viability through generating self-sustaining income

For example, the London Plan's long-term sustainability trajectory (e.g. congestion charge, bike-sharing, air quality funding) shows how consistent political leadership and embedded planning policies help sustain environmental progress across political cycles.

Option 2 – Scale up implementation

If successful and appropriate, an approach might be scaled up across an entire local authority area, or across local authority networks.

As an intervention is scaled, the context for implementation also changes. New implementation barriers and enablers also emerge, which may require new implementation strategies.

Specific toolkits and guidance might provide practical advice on scaling up particular projects, for example the UK Green Building Council's Local Area Retrofit Accelerator Toolkit has a section on scaling up.

Vignette #3

showing an implementation leader considering whether to scale up implementation.

Blackwood Council successfully pilots a retrofit scheme in 200 homes, improving insulation and energy efficiency. The pilot is well received and delivers measurable carbon savings. The authority now wants to scale up across 20,000 homes in its housing stock.

Before making a decision, Sally, the local authority housing lead, consider new barriers and enablers:

- The pilot was financed through a short-term government grant, how are we going to secure more funding?
- The pilot was managed by a small trusted contractor. Is there an adequate supply chain (enough accredited installers and materials) to deliver the scale up?
- The pilot was able to be managed entirely by her housing team, what new teams and stakeholders might we have to work with?
- The pilot was small enough that close oversight of each property was feasible, will we be able to achieve quality checks at scale?

Option 3 – De-implementation

Implementation science tells us to 'do fewer things better'. Local authorities are busy places, with a lot of responsibilities, but not a lot of time and money. Over time, they are likely to keep adding new strands of work – but how often are strands taken away?

It is necessary at times to intentionally stop doing things – called de-implementation – especially if approaches have served their purpose or are not working, or *are not working well enough*. This enables local teams to take a considered approach to doing what matters most. Yet de-implementation can be complex and challenging.[31] It might be difficult to admit that an approach is not working, especially if it has taken a lot of time and energy.

"I find this (de-implementation) doesn't happen hardly at all – there seems to be a real fear of stopping anything so just find people trying to progress lots of things and them all moving very slowly." – EPIC focus group participant

It is important to note that implementation is an emerging area of Implementation practice and science. It is not the opposite of implementation but it is a stand alone process that needs careful planning and execution. This section offers a starting point, but it is not a comprehensive guide.

Consider:

- Is the evidence demonstrating a low impact, no impact or negative impact?
- Does the challenge still exist?
- Does the solution still work?
- Do the costs outweigh the benefits?
- What is the opportunity cost of this policy? Is there a better way to address the challenge?
- Has technology or science made the policy obsolete?

This should be something that should be considered regularly at work, and especially at the start of any new implementation process.

Tip: De-implementation does not have to be a full stopping of an approach, but could be a scaling back.

Box 7: Further reading on de-implementation

There is a limited literature on de-implementation in local government and in the environmental sector. However, Evidence for Learning Insights into de-implementation provides a useful guide for schools that may be helpful for local authority teams as well.

Other useful further reading:

- Shedding Light on De-implementation, Centre for Implementation
- Hornets, Slugs, Bees and Butterflies: not-to-do lists and the workload relief revolution (education perspective)

Appendix

Systems thinking

Systems thinking helps us see the bigger picture – how different elements connect, interact, and influence each other. The UK Government has a Systems Thinking toolkit which provides accessible guidance. Systems approaches share several key principles:

Boundaries: No system exists in isolation. We set boundaries to focus on what's relevant, but these are simplifications. Ask: What's inside? What's outside? Whose voices are included or excluded? Choices here can have ethical consequences.

Inter-relationships: A system is defined by how its parts relate, not just the parts themselves. For example, it's not enough to list components like engines, people, or ecosystems — we must understand the links between them.

Perspectives: No one sees the whole picture. The "Pig Model" illustrates this: a vet, a farmer, a chef, a vegan, and a parent all see a pig differently. Each of these people will see the pig differently: as a patient, as an economic unit, as a source of ingredients, as something to be protected, or a source of food for their children. The same applies to stakeholders in any environmental system. So understanding the multiple perspectives of those with an interest in the system your concerned with is key.

Emergence: A system can behave in a way that can't be predicted from understanding each of its elements e.g. a murmuration of starlings is a classic example

Dynamics and Loops: Elements within the system are related in such a way that they feedback on themselves, either negatively or positively e.g. the body's ability to maintain a pretty constant temperature is a good example of a negative feedback loop, while exponential growth of a pathogen is a good example of positive feedback.

Futures thinking

When trying to get a handle on the behaviour of any system, or think about how it might change over time, we can always go and collect more data or add more elements into our model of the system. But issues like 'emergence' and the point that all evidence is inherently grounded in the past, while policy is forward-looking, means that our ability to predict precisely and reliable how any policy may play out is always significantly limited,

Futures thinking accepts that we can't predict the future exactly – but we can anticipate different possibilities. We talk about futures (plural) because there's no single inevitable outcome.

The UK Government has a Futures Thinking toolkit which provides accessible guidance. Key steps include:

- Horizon scanning – Identify signals of change happening now that may shape the future
- Trend analysis – Work out which trends are certain or uncertain, and which matter most for your system
- Scenario building – Use horizon scanning and trend analysis to develop plausible future scenarios, then test how your policy and its implementation plan might fare in each

For example, a nature protection policy may face more challenges in a future focused on nationalist economic growth than in one prioritising international sustainability.

The goal isn't to predict or pick a future, but to make policies more resilient. While you can't "future-proof" completely, thinking ahead helps prepare for shocks and surprises.

Table 1. Master list of implementation strategies

Implementation strategy	Page	Description	Explore	Prepare	Deliver	Sustain
Create implementation teams	12	The team should bring together people with a diverse and relevant mix of skills, ideally drawn from across all key departments, to oversee and support implementation.	✓	✓		
Conduct a systems analysis	14	Undertaking formal approaches - such as compiling a systems map of the issues and how they link together, and considering plausible scenarios for how the situation might change over time.	✓	✓	✓	✓
Gather and reflect on the evidence	13	Collect and analyse evidence to understand the problem and appropriate approaches to implement the policy.	✓	✓	✓	✓
Develop a theory of change	15	Set out the assumptions, pathways, and conditions that are key to successful implementation, based on evidence gathering and systems analysis.	✓	✓	✓	✓
Identify barriers and enablers	19	Identify potential barriers that could hinder implementation as well as supportive factors that could enhance implementation.	✓	✓	✓	✓
Consider evidence about what has worked elsewhere	17	Collect insights from other local authorities that have implemented this policy.	✓	✓		
Engage stakeholders and the local community	13	Engage stakeholders and relevant community groups throughout implementation.	✓	✓	✓	✓
Develop an implementation plan	23	Create a detailed implementation plan in a collaborative process. Keep revisiting and updating the plan as needed.	✓	✓	✓	✓
Clarify governance systems	23	Make sure that chains of decision-making and accountability are clear.		✓	✓	✓
Recruit, train and empower implementation leaders	23	Designate individuals to take responsibility for driving forward a new initiative, coordinating across teams, and keeping delivery on track.		✓		
Improve implementers' buy-in	23	Ensure those who are delivering the intervention are supportive.		✓	✓	
Inform local opinion leaders	23	Recruit respected local leaders who can publicly back and model the change.		✓	✓	

Implementation strategy	Page	Description	Explore	Prepare	Deliver	Sustain
Prune competing initiatives	24	Cut back, reschedule or consolidate competing tasks and initiatives so that officers can focus on delivering a new initiative.		✓	✓	✓
Test-drive and pilot approaches	24	Try a small-scale, time-limited or phased implementation roll-out.	✓	✓	✓	
Access new funding	24	Secure additional funding beyond existing core budgets.		✓		✓
Draw on external experts	24	Draw on academics, consultants, practitioners, NGOs, or experienced peers to help council staff or councillors strengthen their understanding about new practices.		✓	✓	
Develop and distribute educational materials	24	Produce and distribute user-friendly resources to help staff, community partners and other stakeholders understand and deliver new practices correctly.		✓	✓	✓
Change the physical infrastructure	24	Evaluate the current implementation infrastructure and if needed change it.	✓	✓	✓	
Provide individual and system level incentives	24	Provide opportunities such as gift cards, recognition, awards, training, external recognition schemes, free training and budgets linked to progress.		✓	✓	✓
Communities of practice	24	Bring together officers and other practitioners to share knowledge and troubleshoot problems.	✓	✓	✓	✓
Develop a system to monitor implementation	27	Establish systems to monitor implementation outcomes and policy outcomes		✓	✓	✓
Support staff	31	Support staff wellbeing to reduce stress and burnout, especially during the start of delivery.		✓	✓	✓
Set up reminders	32	Set up reminders, prompts and checklists to help staff remember and implement consistently.		✓	✓	✓
Follow on training	32	Refresher sessions, best practice showcases, coaching, mentoring and providing feedback to support ongoing implementation.			✓	✓
Celebrate and acknowledge successes	32	Acknowledge and encourage good implementation practice by leadership.			✓	✓
Monitor, evaluate and improve	32	Assess how implementation is going based on implementation and policy outcomes, and adjust implementation strategies, and make any adaptations accordingly.			✓	✓
Scale-up implementation	35	Expand the policy to be implemented at a greater scale				✓

Table 2. A range of evidence local authority officers can use to identify contaminated land issues

Data source	Type	Strengths	Limitations	Using well
Part 2A Contaminated Land Register	National statutory data held by LAs	Official investigations, legally robust	Limited to determined sites, may be outdated	Confirm whether a site is formally determined
Environmental Permits and Pollution Incident Records	Regulatory compliance data held by EA, LAs	Shows sites with enviornmental breaches, locations where process chemicals handled and stored (e.g. tanks)	May not cover minor/unreported issues. May be out of date. Pre-2000 data often incomplete	Locate industrial sites with spills. Provides high level of high-risk buried infrastructure detail.
Public Health Data	Held by UKHSA, NHS, ONS	Links to potential exposure outcomes	Correlation not causation	Identify clusters for further environmental investigation
Local Authority Planning Records	Held by LA planning department	Detailed history of site redevelopment	Can be incomplete, older records may be offline. Can be difficult to search the history of a site	Check planning applications mentioning contamination
Waste Management and Licensing Records	Held by EA, local authority waste team. GIS data sets available from government website.	Identifies landfill and waste sites, including historic sites.	May require data cleaning. Does not include pre-licensing. Poor enforcement historically means the types of waste may be inaccurate. Locations are often inaccurate	Pinpoint potential landfill contamination
Historic Land-Use Maps	Held by local archive, National Library, Google Earth, private GIS providers	Reveals past industrial use	May lack accuracy, requires interpretation	Identify sites with prior industrial activity
Formal Complaints from Residents	Held by LA environmental health team, EA	Direct evidence from affected residents	Can be subjective. All complaints are recorded even if found to be unjustified (perhaps as a result of misinformation) or invalid.	Spot localised concerns for further inspection
Soil, Water and Ground Gas Monitoring Data	Field survey data from LA, consultants, EA	Objective scientific measurements	Often site-specific, costly to collect	Confirm contamination levels before determination
Survey and Interview Data	Held by LA, consultants	Contextual insights, qualitative	Less precise, subject to bias	Understand community perceptions of contamination
Aerial and Satellite Imagery	Remote sensing data from Google Earth, online sources, OS, paid imagery providers	Shows changes over time	Interpretation skill needed	Detect new disturbances or illegal dumping
Foot and Mouth burial records	Held by LA, some records may be held by AHPA but these are rare	Alternative sources of potential contamination in some areas of the country (North of England, South of Scotland) which may not be considered routinely	Locations of burial pits often not known unless the farmer/landowner has a record. As time goes on, the likelihood reduces, and a discovery strategy becomes more useful.	Locate areas of potential contamination from buried carcases. Risks of long-term pathogens unlikely however. Tends to be more of an aesthetic issue
Unexploded Ordnance – Historic UXO Bomb Plots	Held by Local archive, National Library, specialist UXO data providers	Good indication of sites where UXO may be an issue	Site specific, for Medium/High Risk sites further detailed assessment required by a specialist	Identify sites where UXO may be a factor during SI

Example Implementation Plan: CAZ D

1. Barriers and enablers

Barrier: Local politics

- Perceptions of unfairness: Businesses and residents may see the CAZ as a “tax on drivers” or harmful to low-income households.
- Political risk: Councillors and MPs may fear backlash, especially in areas where car dependency is high.
- Misinformation: Online narratives (e.g. about “15-minute cities” or government overreach) can distort the purpose of the policy.

Barrier: Procurement and skills

- Procurement or installation bottlenecks.

Barrier: National frameworks

- Local design must align with national CAZ standards to avoid confusion.

Enabler: Strong political leadership and governance

- Clear mandate: Framing the CAZ as a public health measure (e.g. reducing asthma and premature deaths) helps build legitimacy.
- Cross-party support: Minimises the risk of the policy being overturned with political changes.

Enabler: Systems and structures

- Robust IT systems: Existing reliable ANPR and payment systems reduce frustration and disputes.

2. Core components

Core component 1: Legal framework

- The CAZ is formally adopted through council decision-making processes.
- Traffic Regulation Orders are drafted, setting out vehicle restrictions and enforcement powers.

Core component 2: Infrastructure and technology deployment

- Automatic Number Plate Recognition cameras are installed at key entry and exit points.
- A digital payment and compliance system is procured, integrated with national vehicle databases to check emissions standards.
- Signage is placed across the city to clearly mark the boundaries of the CAZ.

Core component 3: Supporting residents

- Grants and loans are introduced to help residents and small businesses upgrade to compliant vehicles.
- Public transport improvements (extra bus routes, park-and-ride expansions) are rolled out in advance of the CAZ launch.
- A public information campaign promotes alternatives like cycling, walking, and car sharing.

3. Implementation strategies

- **Phased approach:** Grace periods or exemptions for essential services can ease the transition.
- **Inform local opinion leaders:** Recruit trusted local figures (GPs, schools, businesses) to endorse the CAZ.
- **Early and ongoing engagement:** Co-designing support schemes with those most affected builds trust. Clear FAQs, myth-busting campaigns, and quick rebuttals to counter misinformation.
- **Distribute resources:** Share a prompt checklist of core components with staff. Share resources that exemplify how to rebuttal misinformation.
- **Support staff:** Deprioritise other tasks for staff involved in delivering CAZ and engage staff in discussions about their wellbeing.
- **Celebrate and acknowledge success:** Hold yearly ‘CAZ birthday parties’ to provide an update, celebrate achievements and continue momentum.
- **Monitor and improve**: discuss the purpose and nature of implementation monitoring with staff. Policies are adjusted if needed - for example, tightening standards over time or expanding the zone.

4. Monitoring and evaluation

Implementation outcomes

Short-term

- **Acceptability**: Surveys show that a majority of affected stakeholders agree with the policy rationale (e.g. health benefits outweigh costs).
- **Feasibility:** Local authority is able to fully install ANPR cameras, signs, and IT systems within budget and timelines.
- **Adoption:** The local authority formally commits to introducing the CAZ through cabinet approval and legal orders.
- **Fidelity:** Core component 1 is being implemented well, with core components 2 and 3 being developed.

Long term

- **Fidelity:** All three components are being implemented well.
- **Penetration:** High proportion of non-compliant vehicles are identified and subject to charges or exemptions. Public awareness of the CAZ boundaries and rules reaches >90% of residents and businesses.
- **Sustainability:** The CAZ remains in operation beyond the initial rollout, with ongoing political and financial support. Compliance improves over time as more residents and businesses switch to low-emission vehicles, reducing reliance on enforcement.

Final outcomes

- **Reduction in air pollutants:** Measured decrease in NO_2, $PM_{2.5}$, and PM_{10} at roadside and background monitoring stations.
- **Improved compliance with legal air quality standards:** Percentage of monitoring sites falling below WHO or national limits.
- **Carbon reduction:** Estimated CO_2 savings due to fewer high-emission vehicles and modal shift.

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