



infuse

GWASANAETHAU ARLOESOL Y DYFODOL
INNOVATIVE FUTURE SERVICES



Infuse Handbook

Mindsets and methods for
innovation in public services



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Region





Infuse was supported by the European Social Fund through Welsh Government and was a collaboration between Cardiff University, Y Lab, Nesta, Cardiff Capital Region and the ten local authorities that make up the region led by Monmouthshire County Council.

Foreword

Since the Infuse programme was established, I've been proud to support as many colleagues as possible to participate. At the Vale of Glamorgan Council we recognise how important innovation is across the public sector. It is so important as the needs of our residents and colleagues become more complex in a constantly changing environment. The alternative is to try to do more with less, which in reality means doing less with less. That's not what I or my colleagues work in public service to do.

Infuse has inspired us to do better and faster. The use of data and insights to really understand issues is key. Frameworks to challenge our preconceptions and build up solutions that really deliver is a legacy that I want to see across our organisation and all others. This has already made a difference in how we engage with citizens, how we develop services that work alongside them and how we look to work together in the future.

I'm excited that we are now working with our Infuse alumni to put in place an approach to organisational innovation that will apply to all areas, starting with our digital ambitions. Without the Infuse programme, this would not be so advanced or have such an impact. And impact is what we are all about and need to deliver for our residents.

Rob Thomas, Chief Executive, Vale of Glamorgan Council



Introduction

Innovation in public services is complex and challenging. The barriers and blockers to it are numerous. Bureaucratic and top-down organisations, siloed working, dwindling resources, an unprecedented demand on services – the list goes on. With public servants often in fire-fighting mode, innovation can slip down the agenda or worse, disappear from it altogether.

From 2020 to 2023, Infuse provided four consecutive cohorts of public servants from across the Cardiff Capital Region (CCR) with the skills, tools and confidence they would need to get innovation back on the agenda in their organisations. In so doing, Infuse created a regional network of alumni, embedded in local government, health boards, government departments and beyond, with a shared understanding of the need for change and the tools to help us get there.

As Infuse progressed, it became clearer to the team delivering the programme that for innovation to be embedded as a way of working, individuals with the right skills and attitudes are important, but equally important are the right mindsets and the right organisational conditions. Infuse was initially designed around three ‘skills’ labs - adaption (which focused on innovation tools and adapting existing solutions), data and procurement. By the fourth cohort, the adaption lab had grown into ‘the explore phase’, allowing more time for participants to explore and question their own mindsets and organisational conditions - reflective of this shift in our understanding.

Throughout the programme, participants were supported to collaboratively apply their learning to real-world challenges under two broad thematic areas; ‘accelerating decarbonisation’ and ‘supportive communities’. You can read more about the experiment-based approach the programme took in the next section.

We have not set out to create an ‘ABC’ of how to do public service innovation. Nor have we produced a blow-by-blow account of what Infuse did. Instead, this handbook brings together key messages from our programme managers and the broader teams they each worked with in developing content for the programme - a collection of cultural conditions and mindsets necessary for innovation to thrive. After each key message in the following sections, you will find the tools that were tested through the programme and found to be most effective for carrying these messages through to practical application.

We hope that this handbook will serve as a useful reference to anyone thinking about setting up a similar programme in the future. Our aim is that those in leadership roles at team and whole organisation level will be able to use this document to think through what they can do to create the conditions necessary for innovation. And finally, we want this handbook to support those public servants grappling with complex problems to pause, reflect and then consider potential ways forward based on testing, learning and iterating.

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ADAPTION LAB



The explore phase (adaption lab)

Rooted in innovation theory and groundbreaking Nesta research, a key aim of the adaption lab was to build an understanding of what it means to innovate in public services, as well as the core skills and key attitudes needed to do so. The lab also sought to build confidence and an 'innovation mindset' in participants, preparing them to navigate and overcome any barriers they might encounter on their innovation journeys.

The adaption lab eventually grew into 'the explore phase' of the programme, incorporating protected space to meaningfully explore the challenges that would form the basis of the experiments participants would carry out later in the programme. This lab also provided the opportunity for participants to reflect on their own ambitions and motivations related to innovation and the role they could play.

Key messages



It is vital to protect time and create the space to meaningfully explore challenges in order to identify opportunities to innovate.



Adopting an experimental approach can greatly increase opportunities to learn and test new ideas whilst mitigating risk.



Developing an innovative mindset is just as important as creating opportunities for practical action.



Protect the time and create the space to explore

There is a huge amount of untapped potential across the public sector in Wales. Public servants are often experts in their fields and each Infuse cohort has amassed hundreds of years' worth of experience between them. Infuse sought to direct this knowledge and expertise towards two thematic challenges: 'accelerating decarbonisation' and 'supportive communities'. But where to begin? How do we go from considering huge societal challenges to identifying a clear and narrow focus for an experiment?

One of the unique aspects of the adaption lab was the protected time away from juggling competing demands and full inboxes to try and do just that- to really get to grips with complex problems and to begin to formulate ideas that would attempt to tackle them.

»» KEY TOOLS

The Infuse approach to problem exploration

There are a significant number of factors to consider when identifying the focus for an experiment so we implemented a deliberate and iterative process, which allowed participants to consider thematic expertise and inspiration, showcase their own knowledge and collaborate with others to break down challenges.

This process of finding the focus for an experiment is messy and can be challenging - here we outline how we broke it down into four steps.

Step one: Prioritisation There are a huge number of sub-challenges that fall under Infuse's two thematic areas of focus. We identified a number of these with the help of our thematic leads and participants and invited the latter to take part in an activity that sought to prioritise the challenges. Participants were given an amount of (fake!) money and invited to 'spend' it on the challenges they felt most deserving. We then added up the total spend for each area and were able to identify which of the sub-challenges drew the most investment. These were then taken forward for further exploration.

Step two: Initial exploration 'Conversation cafe' <https://www.liberatingstructures.com/17-conversation-cafe/> is one of a suite of tools known as 'liberating structures' that helps support people to explore profound challenges through a collaborative approach. The format encourages people to have thoughtful and meaningful conversations, where listening is key and debate and argument are less important. The goal is that through increased understanding of a challenge, a consensual hunch is formed that will release capacity for new action.

The initial rounds of this process sought to surface how people felt about the themes and topics, followed by further rounds to understand what people knew about the themes, what they noticed/learned, and what they hypothesised about creating change. At this stage participants could be involved in conversations covering a number of different challenge areas but eventually they identified the challenge that resonated most and that they believed would most benefit from a collaborative approach.

Step three: Problem-framing Problem-framing is a thinking method used to understand, define and prioritise challenges. It's a way to better comprehend specific problems so we can begin to identify how to solve them. The approach is underpinned by a series of principles, including encouraging people to embrace complexity and uncertainty, and a commitment to doing things differently. At this stage we asked participants to more firmly commit to a specific challenge area so they could explore it in greater depth.



One of the templates we used during problem framing - adapted from a tool by States of Change - <https://states-of-change.org>

Step four: Developing learning questions A learning question pinpoints the part of a challenge that a piece of work will generate learning about. For example if we are looking at the challenge 'The region does not have the appropriate infrastructure to enable mass takeup of electric vehicles', a learning question might be 'What are the important things to consider when developing a network of EV charging points?'. The process of developing learning questions in Infuse was designed to give participants structure, further narrow down their focus and provide the foundation for experiments.

In between each of the steps participants were encouraged to further explore emerging challenge areas as part of their 'homework'. This exploration could take the form of desk research or scheduling conversations with colleagues etc. Participants were also encouraged to reflect on their own areas of interest and what was in their gift to influence.



»»» CASE STUDY

One of the first challenges our participants encountered when embarking on their Infuse journey was deciding on a challenge area to explore. There are lots of competing factors to consider - personal interest and motivation, what is within their gift to influence, what organisational priorities need to be considered etc. Initial exploration can end up opening up a can of worms, something that cohort three's Geoff Hobbs of Natural Resources Wales (NRW) discovered. He initially explored models for co-stewardship of community assets and then spent the majority of his time on Infuse grappling with deciding an experiment question under this broad heading.

As part of this process Geoff undertook a huge amount of research and engagement which meant that his research question constantly evolved as he unlocked new insights and discovered the complexity of the challenge. He pored over policy documents and strategies, identified and tested assumptions, explored prospective stewardship models, and found colleagues grappling with similar challenges. He did this whilst also assessing existing appetite within the organisation for the development of a potential new approach.

This new approach was a transformational way that NRW could engage and collaborate with communities to participate in woodland management, contributing to Forest Resource Plans. Geoff's aim now is to continue to investigate the ability of NRW to develop meaningful partnerships with communities and wider stakeholders.



Adopting an experimental approach

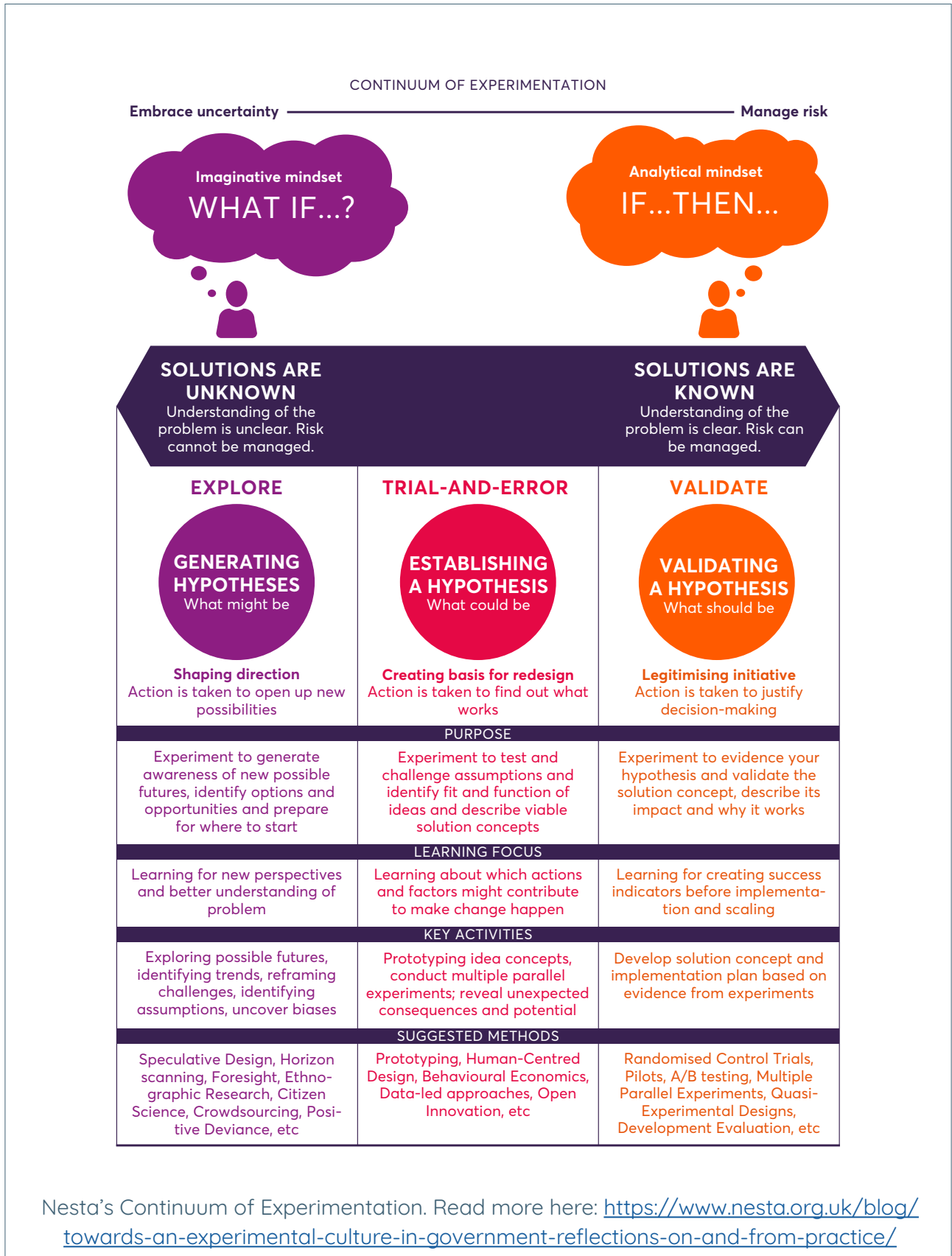
Experimentation is a way of trying something new while putting in place the necessary structures to find out if it works, how it works and for who it does (and does not) work. Experimentation is more than just ‘pilots’ which are about seeing how a fully fledged idea will work out (in the real world). Experimentation can happen all the way through the idea development process, and the earlier and simpler the experiment, the less risk if they fail. Experiments can test just part of an idea - often they are small, carried out frequently and are quick to deploy - and they always focus on learning.

We often don’t know how innovations will work out so experimentation means that any solution can be treated as a work-in-progress, to be improved upon. This approach allows organisations to explore new solutions, reducing wasted time and resources on initiatives that do not work.

There are several ways to experiment, depending on the context and rigour required. Sometimes it can involve working closely with the people who will use the end solution to see how an innovation works in real life, such as prototyping. Other times, it can involve using more robust evaluation methods – such as randomised controlled trials (RCTs) – to test an idea and create evidence to support it. The type of experiment you carry out will depend on where you are in your journey to understanding the problem and exploring potential solutions (more on this below).

The adaption lab encouraged participants to always ensure their experiments answered a question or tested a hypothesis. Different kinds of experiments suit specific types of work, from offering a way to test highly uncertain propositions through to managing risk successfully. Through Infuse we saw a range of different types of experimentation taking place, from early exploration work, through to proving the effectiveness of a defined solution.

The continuum of experimentation



Nesta's Continuum of Experimentation was developed as part of our work exploring the importance of experimentation in government. At one end of the continuum, where possibilities and solutions are unknown, an imaginative mindset is required. Experiments at this end of the spectrum are exploratory and aim to identify a range of possible outcomes. This is where a successful result might be a range of new hypotheses to test.

At the other end of the spectrum, where possibilities and solutions are better known, activities focus on justifying decisions and managing risks. This process applies the analytical mindset and uses rigorous scientific procedures to validate possible solutions before scaling them. This analytical approach is driven by testing an established hypothesis - "if we do this, then we believe this will happen". An experiment is successful when the validity and effectiveness of a hypothesis is tested and new knowledge is generated about what works, for whom and in what circumstances.

»»» KEY TOOLS

Creating a hypothesis statement

During the adaption lab, we returned again and again to a formula that helped participants to develop their own hypothesis-driven experiment designs:

If we... <insert the idea>
then... <outcome that will happen>
because... <rationale for why we think the outcome will happen>



Here are some examples of the statements participants produced:

If we... added additional questions relating to people's background stories to our triage process...

then... the appropriateness of referrals would improve...

because... people's needs may be better understood.

Tristan Dunlop, Monmouthshire County Council, cohort three

If we... take a centralised approach to the collection and collation of our data...

then... this will ensure our services continue to be relevant, supported and invested in, even during these difficult financial times, for the benefit of our communities and future generations

because... we can analyse, present and share it in a way that will better show the impact our work makes to the key priority areas identified within community health & wellbeing.

Joanne Davies, Monmouthshire County Council, cohort three



Idea generation

The purpose of idea generation is to help a group (or individual) rapidly generate, sort, prioritise and choose ideas to develop and test. The first step was to ask participants to come up with ideas individually that will address the challenges identified. The second step was to build consensus around promising ideas by asking them to vote on the ones they thought would have the most potential. Finally, ideas were then placed on an impact vs feasibility matrix, such as the How-Now-Wow matrix from the Hyper Island Toolbox (<https://toolbox.hyperisland.com/how-now-wow-matrix>) to help prioritise them further.

Prototyping

Prototyping involves making an idea visible or tangible, so you are able to share and test it with others, in order to learn from their feedback or the way they use the prototype. The approach tends to be used by engineers, designers, or those in the digital roles and is used for prototyping not only products, but also services, experiences, and systems.

Prototyping sits firmly in the trial and error phase on the continuum of experimentation - a hypothesis is in the process of being established and a prototype can take an idea from concept to something more tangible. The value of prototyping is that it can be used to generate feedback quickly - it requires little in the way of resources (both in terms of time and money) and is a great way to start including a wider range of stakeholders, such as users, citizens and decision makers.

There is lots on prototyping in this 'Designing for Public Services' guide, jointly created by Nesta and Ideo: <https://www.nesta.org.uk/toolkit/designing-for-public-services-a-practical-guide/>



»» CASE STUDY

Cerian Powell, in collaboration with colleagues from Blaenau Gwent and Caerphilly, used his time on Infuse to explore how he could increase public participation in decision-making by creating meaningful opportunities for communities to get more involved, with a particular focus on capital spend. When exploring this challenge, the team also concluded that there were several barriers to engagement that needed to be addressed: that communities lacked incentives to engage, didn't necessarily understand how local public services were funded, or that a lack of accountability currently exists around decision-making.

The group wanted to test whether developing a gamified way to engage residents could help tackle the challenge outlined and address some of the barriers identified above. Cerian developed a prototype using a spreadsheet to demonstrate what that gamified engagement could look like in practice. The first section had information of how spending decisions were made and asked users to rank a series of local issues in terms of priority. The second section allowed users to act as council leader for the day and take control of the budget. Each decision made had a direct influence on the remaining budget, whether the council had to use reserves, or whether any savings could be made that could be reallocated.

The group planned to test the prototype with colleagues, incorporating any feedback into future iterations. The aim was to potentially develop an application at a later stage in the process and ultimately see a greater involvement of citizens and more accountability in relation to council decisions.



An innovative state of mind

Innovation is often held up as a way to solve society's biggest challenges. At Infuse, we know innovation doesn't happen on its own, and the right skills, competencies and mindsets are needed to drive innovation forward.

The social challenges faced by the CCR are representative of the challenges faced across Wales. Infuse has been fortunate to be able to test its own hypothesis that a combination of learning and hands-on experience is a good recipe for upskilling large cohorts of public servants, rapidly, at the same time as generating impact on these complex issues.

Nesta's competency framework

Infuse focused on key attitudes as well as the tools and methods to successfully drive innovation in government and solve public problems. Taking a lead from Nesta's competency framework (see page 16) (<https://www.nesta.org.uk/toolkit/skills-attitudes-and-behaviours-fuel-public-innovation/>), which visualises the skills and attitudes that underpin the ability to experiment and solve public problems, we believe that innovation is personal and attitudinal - it starts with the individual and is a state of mind.

Innovation practice in the public sector has often focused on learning new methods. But while methods and tools (and the training sessions they come with) are valuable, on their own they are not enough. Putting the tools in the hands of people with the right mindset and confidence to challenge the status quo will make the difference.

Here are the key behaviours and mindsets Infuse has found to be imperative:

LEARNING

to enjoy problems and not overcommitting to solutions

CONNECTION

with and curiosity about the real world, and a desire to create better public services for everyone.

EMBRACING

uncertainty

CONFIDENCE

to ask more questions and to tackle complex problems

APPRECIATING

failure as a learning opportunity

Citizen & Stakeholder Engagement

Actively involving citizens, stakeholders and unusual suspects

Creative Facilitation

Creatively processing different perspectives and deliberating multiple options

Building Bridges

Orchestrating interaction to find common ground and create shared ownership

Brokering

Mediating contrasting interests and reducing friction between multiple stakeholders

Political & Bureaucratic Awareness

Operating political dynamics and bureaucratic procedures to ensure strategic support

Financing change

Understanding the many ways to liberate and use financial resources for innovation

Intrapreneurship

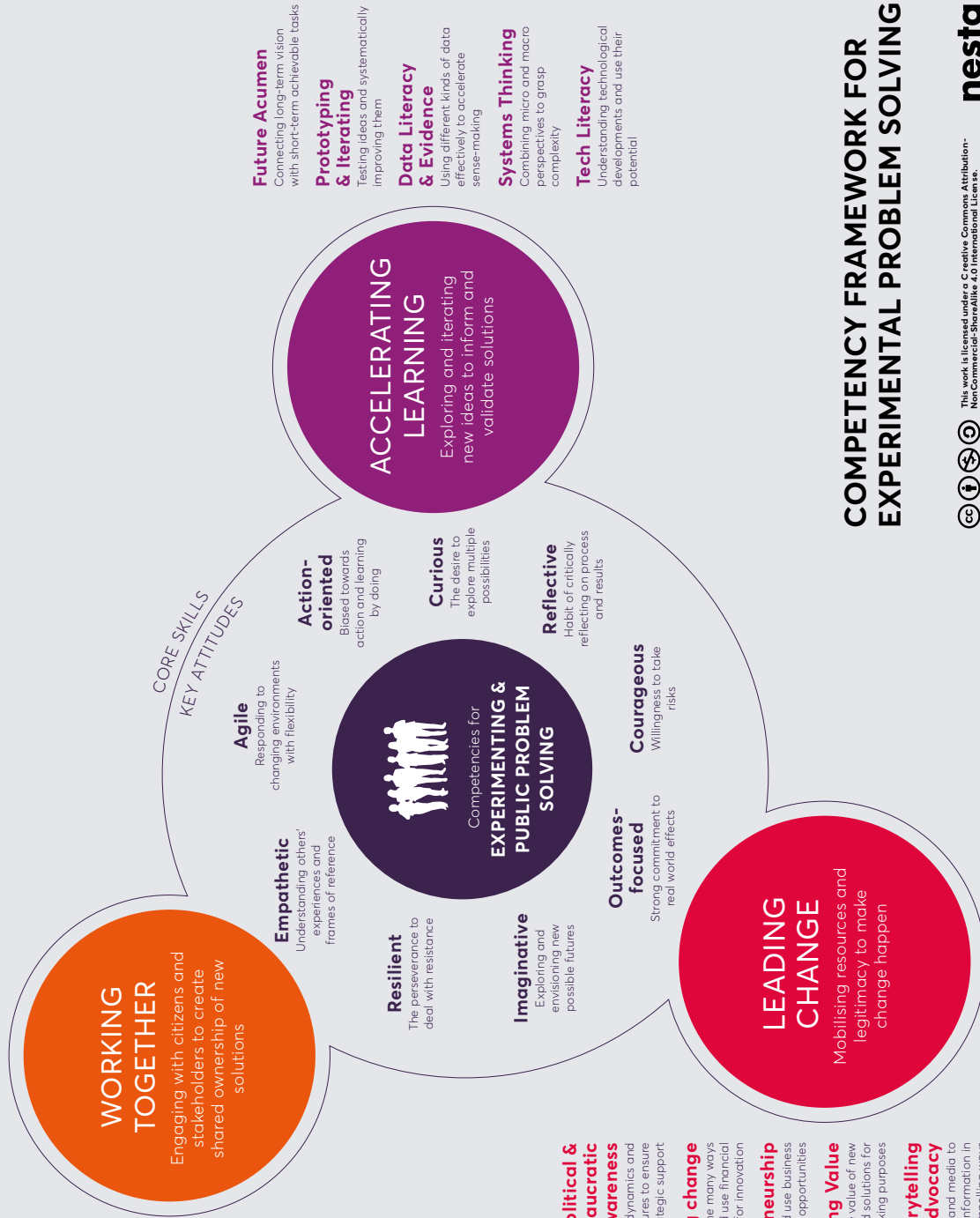
Being insurgent and use business acumen to create opportunities

Demonstrating Value

Articulating the value of new approaches and solutions for decision-making purposes

Storytelling & Advocacy

Using narratives and media to articulate vision and information in compelling ways



COMPETENCY FRAMEWORK FOR EXPERIMENTAL PROBLEM SOLVING



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Core skills and key attitudes needed for innovation - take from Nesta's Competency Framework:
<https://www.nesta.org.uk/toolkit/skills-attitudes-and-behaviours-fuel-public-innovation/>

Organisations are only as good as the people who power them, and the adaption lab aimed to encourage this state of mind in participants. With more public servants equipped with an innovation mindset, it is more likely we will be able to develop meaningful solutions to some of the complex issues facing us within the CCR and beyond.



“(Infuse) challenges traditional thinking –innovation and collaboration challenge the status quo and encourage participants to question existing practices and explore unconventional approaches. This mindset shift can be both exciting and challenging. It required us as participants to step outside of our comfort zones and embrace new ways of thinking.

Being relatively new to working in a LA [local authority] environment I think falling into the trap of doing the same old, same old way of thinking is quite easy and natural to do. The Infuse programme has made me realise that I should hang on to my ‘untraditional’ way of thinking and see it as a benefit rather than something that I need to change.”

Steve Davies, Vale of Glamorgan Council, cohort three



»» KEY TOOLS

Tools and further reading

Reverse mentoring

Reverse mentoring was a significant element of Infuse and involved empowering participants to share their learning up the usual chain of command by giving them the role of mentor to a member of their organisation’s leadership team. It encouraged a new way of thinking, creating an expectation among those leadership teams that Infuse participants would be arriving to sessions ready to challenge usual ways of working and advocate for new approaches.

New operating models

‘From the margins to the mainstream’ (https://media.nesta.org.uk/documents/Margins_to_Mainstream.pdf) is part of Nesta’s new operating models handbook, a set of learning products which explore the new operating models emerging in local government – how they work, what they look like and the key features needed to promote success elsewhere.





DATA LAB



The data lab

The Infuse data lab equipped public service professionals with some of the key mindsets and methods needed to innovate with data. Based on a growing understanding that skills and tools alone would not be enough, the data lab evolved over the four cohorts to really focus on three key messages that start with mindset-shifts and are backed up by valuable tools:

Key messages



Public bodies seeking to innovate in their use of data should aim to be data-enabled, rather than data-driven.



Public bodies need to proactively create the right conditions for data innovation.



Using data with integrity will increase public confidence and trust.



Be data-enabled, not data-driven

The distinction between being data-driven and data-enabled may seem a little semantic, but hear us out. The case for focusing on being data-enabled was initially made to Infuse by Eddie Copeland, who is currently Director of the London Office of Technology and Innovation (LOTI) and was formerly Director of Government Innovation at Nesta, and he had us convinced.

According to Eddie, being data-driven means starting from the data and using it to determine your course of action. But he asks ‘Do we really want data dictating what we do?’ Taking such an approach can create significant problems for data projects, for example:

- There can be a temptation to undertake data-trawling exercises, spending months or even years looking for more and more data before we take any action.
- Data-governance compliance procedures become more complex, because we are unclear about the specific data we need and the specific ways in which we plan to use it.
- Analysts’ jobs are made harder because they cannot know how the insights they create are going to be used and so cannot determine the best way to present these, or the best data to include.

Instead, Eddie argued that we should seek to be what he described as ‘data-enabled’. This means seeing data as one of several tools we have at our disposal when seeking to take a particular course of action to reach a specific goal or outcome. Crucially, we do not start with the data, instead we start by determining what we want to achieve and then consider whether having better data would enable us to do something differently in order to reach that goal.



»»» CASE STUDY



The need to be data-enabled became clear to many Infuse participants as they developed and ran their experiments. Cohort one's Paul Hudson's (Caerphilly County Borough Council) work centred on reinvigorating the high street in the county's town of Bargoed, and explored the potential for creating a digital fabrication lab (a physical space providing access to a range of digital fabrication tools) as part of this. Initial stakeholder engagement with Cardiff Metropolitan University, which runs its own fab lab, led Paul to consider what specific data he would need to use to enable a decision to be made about whether a similar concept would be viable in Bargoed.

Paul determined that data on the types of small and medium enterprises (SMEs) operating in the catchment area would be necessary to build a picture of the local industrial landscape and target the sectors most likely to use a digital fab lab. He also recognised that quantitative data would not be sufficient and that qualitative data about their needs and the likelihood of them drawing on this kind of resource would also be necessary.

Tools to help organisations take a data-enabled approach

London Office of Technology and Innovation (LOTI) data project methodology - a data-enabled approach

LOTI's outcomes-focused methodology for data projects (<https://loti.london/resources/data-methodology/>) was one of the key tools we introduced to Infuse participants as part of the data lab.



Source: London Office of Technology and Innovation

Consisting of six stages, the methodology prompts users to begin by thinking about the outcomes they are aiming for, and then to determine the actions they would need to take to reach those outcomes. At this second stage, it asks the question 'Who could do what differently if they had better data?' If we are unable to answer that question, then it's unlikely that lack of data is the key barrier to action. The methodology then prompts us to consider what we would need to see on a screen to enable the actions we want to take, and then what data is needed to create that view. The final stages consider whether the data can be used ethically and legally, and what other enablers will need to be in place (budget, leadership buy-in etc) for a project to be a success.



»»» CASE STUDY

Amy Ryall (Bridgend County Borough Council) was part of a group of cohort three participants from different authorities focusing on various aspects of skills for decarbonisation. Amy found the LOTI methodology particularly helpful.

“I really enjoyed the data sessions and using the LOTI model. They explained that data should help make decisions but shouldn’t be the driving force for them. The change that needs to be made should be the starting point when tackling a challenge, and the LOTI framework helped me to think differently about diving straight in and gathering data without considering what was needed to help come up with a possible solution.

“The process helped me reflect on my survey questions more carefully and the enablers stage also made me consider what other changes will need to happen to inform staff and encourage them to take up development opportunities linked to sustainability and decarbonisation.

“I think taking this approach in future will help demystify the whole data process by taking a step back and considering the people, the change, and what is needed before gathering information – becoming data-enabled instead of data-driven!”

Data action stories

Data action stories are another really useful and very simple tool for an individual or organisation seeking to take a data-enabled approach.

Data action stories were introduced to the data lab team by Ben Proctor, Innovation Director at Data Orchard. You can read more about them in this blog post: <https://www.dataorchard.org.uk/resources/introducing-data-action-stories>

A kind of ‘data-focused hypothesis statement’, data action stories can be a really simple way of checking whether lack of data is the key barrier to action in a given scenario. They can also be a great way of boiling an idea down to a really simple message to explain it easily to others.

A data action story follows the logic;

If only we knew(insight)
we could(action)
so that(outcome)

As with stage two of the LOTI model, if you cannot write a data action story, chances are that lack of data is not the thing stopping you from taking the action you wish to take.

Infuse participants have consistently highlighted data action stories as one of the most useful tools they were introduced to through Infuse. Here are some examples of the stories participants have produced:



If only we (the 21st century schools team) **knew...** how schools currently contribute to decarbonisation (both through their energy usage and any offsetting through solar panels etc)
we could... make an informed decision as to which schools need investment
so that... we can further reduce emissions, understand the priorities, costs, stakeholders and wider impacts of any investment actions and improve understanding and opportunities to implement climate change mitigation.

Lisa Thomas, Caerphilly County Council, cohort one



If only we knew... why patients are not accessing the appropriate information, support and services that are available to effectively meet their health and wellbeing needs
we could... amend our communications about these services
so that... patients access the appropriate information, support and services, reducing demand on GP practices for conditions/ services that could be responded to/treated elsewhere.

Emma Davies-McIntosh, Aneurin Bevan University Health Board, cohort two



If only we knew... which small businesses in the rural western Vale of Glamorgan are being affected by the cost-of-living crisis, and in what ways
we could... work with them to co-create interventions to test
so that... we know which interventions are most effective and are able to make a case for rolling these out across the VoG ahead of next winter.

Penny Fuller, Vale of Glamorgan Council, cohort three





Creating the conditions for data innovation

The extent to which public and third sector professionals are able to innovate with data is constrained by the operating conditions in their organisation. For Infuse participants, considering these constraints within their own organisations helped them to determine how ambitious their Infuse experiments should be. Their ability to influence these constraints depends on many factors, but especially their own psychological safety at work - whether they feel that they work in an organisation where it is safe to challenge the status quo.

We focused on two main areas that we felt would have the most impact - understanding data maturity and creating a learning culture.

»» CASE STUDY

Through the research question ‘How can we learn from our current practice to develop a model for collecting information from citizens and staff in a way that demonstrates an asset-based community development (ABCD) approach?’ Ellie Howard (Newport City Council, cohort alpha) explored both aspects of creating the conditions for data innovation.

Ellie took four existing datasets that had been created during the Covid-19 pandemic, and used ‘measurement for learning’ tools introduced through Infuse to assess these against four questions:

- What sort of questions did we ask?
- How did this reflect ABCD practice?
- How could this process be better adapted to reflect ABCD?
- What other barriers or challenges are there related to this?

She then drew a series of conclusions about data collection and use across the council, making recommendations for what could be done differently at an organisational level, including breaking down silos and using data to enable effective and efficient decision-making – key elements of organisational data maturity.

Ellie worked alongside a broader team of Infuse participants from different organisations who explored various aspects of ABCD. You can read more about this here: <https://www.monmouthshire.gov.uk/infuse/abcd-approach/>

Data maturity

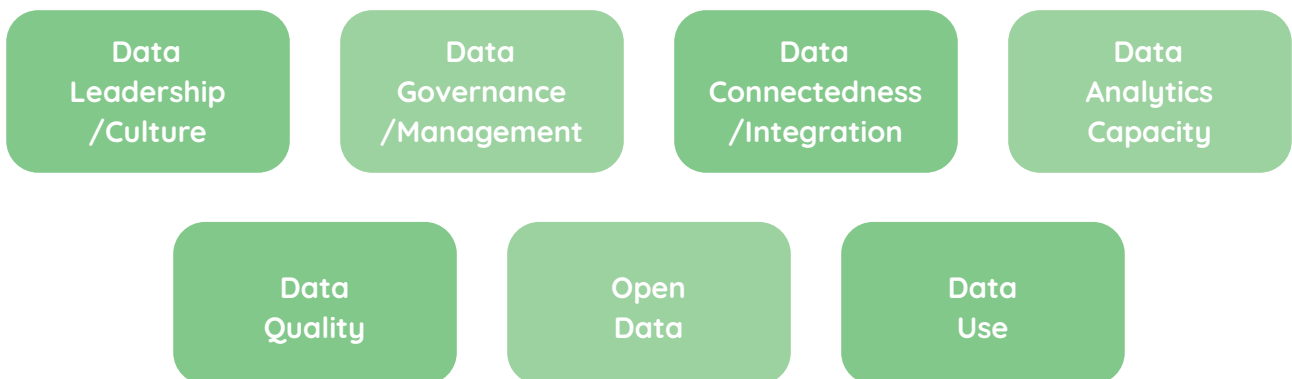
The CCR is sometimes described as a data-rich region, being home to the Intellectual Property Office, the Office for National Statistics and Companies House, which together hold over 70% of UK Government data. The region also boasts three universities, each offering data-focused degrees and generating new research in the fields of data science and predictive analytics.

Despite this, research by Audit Wales published in December 2018 showed that most local authorities in Wales were not sufficiently 'data mature' to be able to make best use of these rich resources. While local authorities were collecting significant amounts of personal, financial and community-level data, the research found they were not investing in the skills required to make best use of it.

Data maturity is perhaps best understood as an organisation's 'readiness' to take on data work of increasing complexity. The more 'data mature' an organisation is, the greater the opportunity to innovate with the ways in which data is being used to shape the organisation's services. Most local authorities still have some way to go in their data maturity journey.

There are multiple 'frameworks' for data maturity, which allow organisations to assess their current position and consider how they might progress, and we've included links to some of these in the 'key tools' section below.

While they each emphasise slightly different elements, broadly speaking, the elements of data maturity are:



In the data lab, we worked with participants to help them understand their organisation's level of data maturity, to consider what this might mean for any data innovations they were considering testing and to start to think about what their organisation might need to do to progress its level of data maturity.



»»» CASE STUDY

Hazel Clatworthy's experiment in cohort three provided a great example of the relevance of data maturity. Hazel was focused on plans to bring in shared hybrid and electric cars for staff use as part of larger decarbonisation efforts across Monmouthshire County Council. She needed to find out where these 'pool' cars would be best located to encourage staff to switch from less efficient (and more expensive) private vehicles. Hazel was hoping that data from staff mileage claims as well as from payroll about home and office locations could be used to do a sophisticated data analysis.

Fairly quickly, Hazel found that there were some data quality challenges which made this approach difficult. The more she investigated, the more issues she found with data quality so she changed tack. Hazel settled on a methodology which was based on an assessment of both the strengths and weaknesses of the council's data maturity. While data quality was an issue, she found internal experts in GIS (map-based data systems) who could help her get the best out of it. She plans to supplement this analysis with qualitative research with staff.

Data maturity reports and frameworks

Audit Wales data maturity framework

Developed specifically for use in Welsh local government, the Audit Wales framework breaks data maturity up into seven elements - leadership; corporate standards; integrated customer data; data protection; data analytics; data-driven decisions; and open data. These are each assessed against three levels to find a data maturity score.

Read more about this in Audit Wales - The maturity of local government in use of data (pp 11-13) at <https://www.audit.wales/publication/maturity-local-government-use-data>

Nesta wise council data maturity framework

Developed for use by local authorities, the data maturity breakdown in the Nesta framework is slightly more granular than the Audit Wales one, consisting of ten elements which are each assessed against five levels. The elements are data collection: data organisation: data quality: data governance: openness: decision-making: performance and evaluation: optimisation and automation of processes: data skills capability: and data awareness and culture.

Read more about this in Nesta - Wise Council (pp 104-107) at https://media.nesta.org.uk/documents/wise_council.pdf

Data Orchard data maturity framework

Developed for use by the non-profit sector, Data Orchard's data maturity framework has also been used successfully by local government and other public sector organisations. Consisting of seven elements which are assessed against five 'stages' of data maturity, its granularity sits between the other two frameworks mentioned above. The elements making up Data Orchard's model are uses; data; analysis; leadership; culture; tools; and skills. The Data Orchard model is additionally backed up by an online assessment tool.

Read more about this in Data Orchard - Data Maturity Framework for the Not-for-profit Sector at <https://www.dataorchard.org.uk/resources/data-maturity-framework>

A learning culture

In 2019 and 2020 Nesta carried out some work with a pioneering group of local authorities that were exploring new ways to tackle complex societal problems. Part of the work of this group, known as the ‘upstream collaborative’ (<https://www.nesta.org.uk/project/upstream-collaborative/>), involved looking at the role of measurement in driving change. The group concluded, and our work in Infuse indicates this is still the case, that measurement in local authorities focuses almost exclusively on ‘accountability’ rather than on ‘learning’.

HM Treasury’s Magenta Book (the main government publication on evaluation) states that there are two main reasons for evaluation - accountability and learning. Measurement for accountability tends to focus on outputs, such as how many instances of an intervention were delivered or how many people were engaged. By contrast, measurement for learning focuses on outcomes - what is or is not working and why.

When public money is being spent, accountability is clearly important - funders, politicians, public servants and citizens need to know what is being delivered with public funds. But focusing entirely on outputs at the expense of learning can stifle innovation. It can appear less risky to keep doing what we’ve always done than to try something new that may not work.

For innovation to thrive, we must create a culture in public services that values learning what does and does not work and why. As long as we are capturing data that enables us to learn from the new things we try, we should view that learning as a success in itself, rather than badging new interventions that do not work as we anticipated as failures.

»» KEY TOOLS

Measurement for learning - further reading

Nesta - Meaningful Measurement

<https://www.nesta.org.uk/report/meaningful-measurement/>

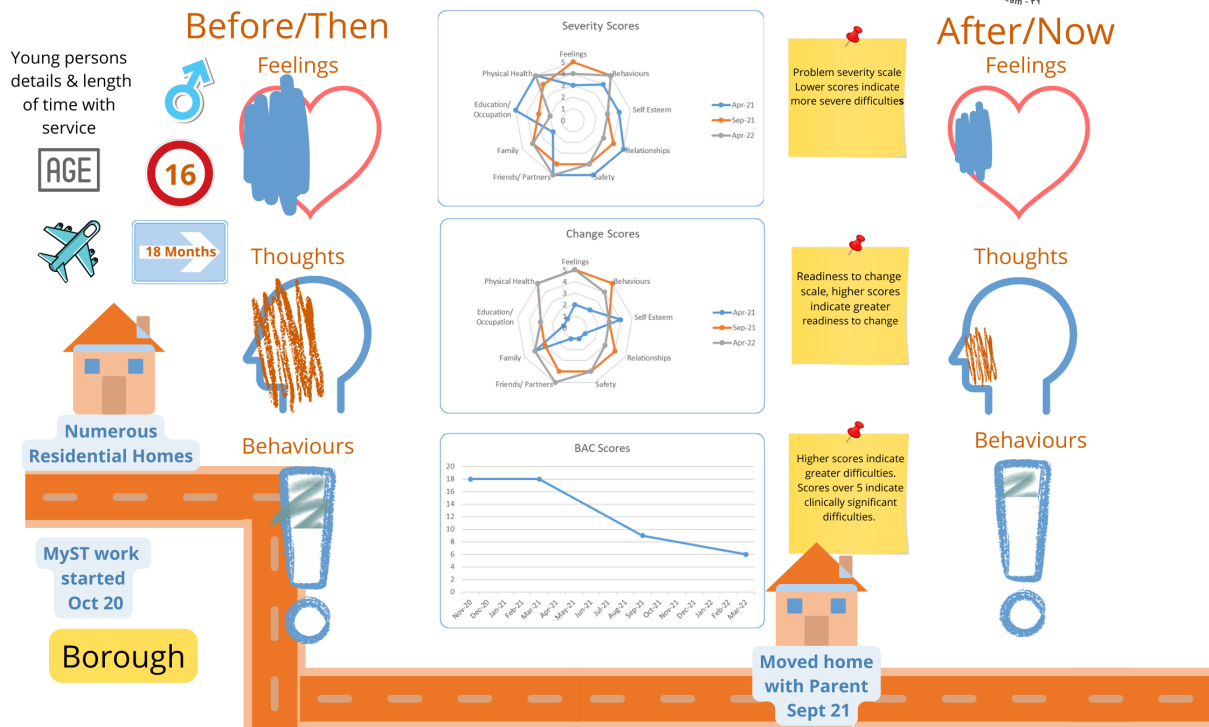
Centre for Public Impact - Measurement for Learning Values and Principles

<https://www.centreforpublicimpact.org/insights/measurement-learning-values-principles>

My MyST Journey



Outcome Measures



»»» CASE STUDY

Cohort one participant, Cariad Warrilow (Caerphilly County Borough Council) carried out an experiment that truly embraced the ‘meaningful measurement’ concept. Cariad focused on the question ‘Can we develop a data capture template or tool that demonstrates the wider impacts and outcomes of the service on young people’s lives better than what is provided by the current LIKERT (see below) methodology?’. She took a user-centred approach to redesigning the MyST (a multi-agency partnership supporting looked after children to remain in/return to their local communities) service’s impact measurement methodology.

The LIKERT methodology consisted of a series of ‘rating’ questions (scored one to five), assessed at fixed intervals, with little or no context, to understand the impact of the service on users. These questions were disliked by the young people using the service, and were highly susceptible to change based on short-term contextual factors. Cariad used a prototyping methodology to co-design a new measurement tool with young people which would overcome both of these issues and empower young people to assess their own progress, at the same time providing much richer information to the service delivery team.

Stakeholder engagement allowed Cariad to assess how best to approach the experiment to achieve maximum buy-in, thinking about where different stakeholders might sit on a spectrum of openness to learning. As a result, Cariad did not get rid of the old methodology entirely, but strengthened it with new measures to help make a more meaningful assessment of the service’s impact. You can read more about Cariad’s experiment here: <https://sway.office.com/48P7FzF03ADtnWTV?ref=Link>



Using data with integrity

We are all familiar with the reasons why our data needs to be treated with integrity, especially when it's handled by public services. The individual, financial and reputational damage of mishandling personal data can be significant. It can also have a corrosive effect on faith in democracy. The public sector response has sometimes been quite conservative: drawing staff's attention to scary fines for GDPR failings, for instance.

Our work on Infuse likes to look at this problem in a different way. What if the ethical collection and use of data can support democracy? Data can be a tool for truly understanding people's lives and sharing with them the power to create the services they need. In the data lab, participants were encouraged to think through how data can be used in this way, and where we can share the tools and mindsets that already exist to help.

»» KEY TOOLS

Open Data Institute's (ODI) data ethics canvas

We introduced participants to the ODI's data ethics canvas, a really useful tool made up of a series of prompts covering many aspects of data ethics. The canvas is a starting point to think about data ethics and is simple enough to be used by non-data specialists.

ODI data ethics canvas <https://theodi.org/article/the-data-ethics-canvas-2021/>



»» CASE STUDY

Tristan Dunlop (Monmouthshire County Council, cohort three) embraced the idea that understanding people's lives is crucial to working with them to create the services they need. His experiment was based on the following data action story:

If only we knew what we needed to know about people's circumstances to match them with the most appropriate support
we could adapt our processes to collect that information from them
so that more people are referred to the appropriate support.

Recognising the importance of service users' first contact with a service (especially one centred on wellbeing), Tristan chose to focus on the initial triage process. He first mapped the triage process then created four possible user journeys through the system based on the varying engagement levels of both the user and staff member.

He then designed and tested a new, person-centred set of reflective triage questions and an employability-focused wellbeing resource, specifically highlighting how the team works and the services available.

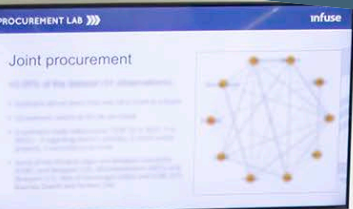
Tristan points out that the experiment has highlighted the connection between relationships, emotions, clarity and processes. "If relationships and rapport are not built, a person may not feel comfortable to disclose what support they need. Social desirability bias or disguised compliance is possible, this is where people will give answers they think the professional wants to hear.

"Conversely, if relationships are effective, this provides a foundation for the referral, referrer and recipient (triage worker) to listen to and understand a person's perspectives, values and needs.

"Similarly, emotions and their currency play a part in the effectiveness of referrals. How is the person feeling? Are they able to be honest? Do they feel listened to? What is going on for the referrer? Are they really understanding what is being said and in some cases, what remains unsaid?"



PROCUREMENT LAB



The procurement lab

The public sector in Wales spends over £6 billion per year on goods and services. This is a substantial figure which provides important market opportunities to maximise the impact of the public purse and achieve wider strategic outcomes.

It is important that the procurement strategy aligns with the wider strategic aims of the organisation to ensure the procurement spend addresses the needs of the community that it serves. When used effectively, the power of procurement can secure maximum value for money by enhancing wider community benefits and addressing the decarbonisation agenda, with little or no extra cost.

With the impending procurement reform (<https://www.gov.wales/procurement-reform-transparency-html>), procurement professionals have a duty to reconsider how they spend money and instead of focusing on the lowest cost (most economically advantageous tender - MEAT), going forward they should prioritise the additional 'value' (most advantageous tender - MAT) that can be gained through contracts.

Procurement needs to achieve wider public value but this may require a change in mindset and culture, not only by the procurement professionals but across the organisation. This shift in understanding is one of the key objectives for the procurement lab.

Key messages



Everyone can play a role in improving strategic public spending.



Sustainable procurement is the key to achieving strategic outcomes.



How you buy can be just as important as what you buy.



Everyone can play a role in improving strategic public spending

The vision for public sector procurement set by Welsh Government is as follows:



Welsh public sector procurement is a powerful lever with ability to affect sustained change to achieve social, economic, environmental and cultural outcomes for the well-being of Wales.



This national strategy for Wales is further guided by ten principles which can be found here: <https://www.gov.wales/procurement-policy-statement-html>

In addition, the Well-being of Future Generations (Wales) Act 2015 (<https://www.gov.wales/well-being-future-generations-act-essentials-html>) provides a moral compass for public bodies in Wales, proposing seven well-being goals and five ways of working. These principles need to be deeply embedded in procurement spend. Practising strategic and sustainable public procurement means that organisations can achieve wider social, economic, environmental and cultural well-being aims through their purchasing power. Procurement professionals must demonstrate that they explore the additional values-based outcomes that can be achieved through effective procurement practices. To do this well requires a deepened understanding across the whole organisation so that a sufficient pipeline is created to innovate and add value.

To start the transition in thinking, Infuse participants, who were mainly non-procurement professionals, were able to relate to sustainable decisions from a personal perspective. During the procurement lab sessions we explored the types of factors that influenced decision-making when buying food or clothes. We asked, did participants always take the cheapest option or was it better to focus on quality? Further questions covered any consideration for the environment and road miles or logistics costs, and exploring locally sourced options.

Meat and food production were some of the main responses where participants attempted to 'buy British' and support local farmers as well as reducing food miles. They also considered where their clothes were made and did not want to support certain regimes with their purchases. Fairtrade was another example where participants considered factors beyond cost in their decision-making, wanting to make a societal impact through what they bought.

By reflecting on their own spending habits, this helped participants to recognise that public organisations can also make purchasing decisions which have wider impacts and contribute to their strategic aims.

There was often an assumption that purchasing decisions were the role of the procurement teams but the emphasis in the procurement lab was that **for the sustainability agenda to be truly successful, everyone in the organisation needs to consider their role in helping maximise the impact of public spending.**

For example, when building a community facility, there is the potential to source sustainable materials, support local businesses and work with communities to explore local employment opportunities and the types of provisions that will be run. A community project like this would involve economic development teams, community workers and decarbonisation teams. Procurement professionals can provide important input in the early design of this construction work, but it is often the case that many public bodies have limited capacity and resources. Therefore, the lab focuses on a whole organisational approach to think about how each team can contribute to this agenda.

Instead of assuming that procurement teams have capacity and skills to seek the most local and sustainable solutions, Infuse participants realised there needed to be a more **collaborative approach** to maximise the impact of public spending and to reconsider their roles in doing so.





»»» CASE STUDY

Denise Raffill, Welsh Government, cohort three, was already exploring ways to address the concerning decline in procurement capacity through apprenticeship schemes. However, presentations in the Infuse programme further highlighted the urgency to develop a skilled workforce – especially around sustainability and net zero. She sought to answer the question ‘How can we effectively replicate a successful capacity building programme in one region of Wales into another region, and measure its success?’

Infuse prompted an opportunity for Denise to explore the breadth and impact of existing thinking in this area. This, Denise says, proved to be a valuable process, leading to questions on the visibility of the profession, misconceptions of the function itself and its ability to add value plus its attractiveness as a career option overall.

Discussion through the procurement lab provided an opportunity to explore a funded placement programme, through pilot arrangements via collaboration with North Wales public bodies replicating a similar programme in place in the South Wales region.

Multiple challenges were faced such as tight timescales and aligning the project with the university academic year, but the four-step approach to refining the problem introduced during the explore phase, the data action story tool and individual conversations with colleagues and other associates enabled Denise to work up an action plan. The outcome so far is that two students were offered 12 month paid placements in commercial teams in Welsh public bodies of different sectors. Discussion is ongoing with one other potential host organisation in a different sector, so the project continues.

LOTI innovation in procurement toolkit

We introduced participants to the London Office of Technology and Innovation's innovation in procurement toolkit which is a useful guide for non-specialists looking to embrace their role in improving strategic public spending. <https://loti.london/resources/innovation-in-procurement-toolkit/>

Cheryl Haskell from cohort one shared some reflections with us on how the toolkit helped her to embed innovation in her work for Monmouthshire County Council:

“

“The LOTI innovation in procurement toolkit enabled me to reconsider my initial problem, and then deconstruct it with a view to determining the real issue, which started out as being “the system” and eventually moved on to exploring the mindsets of users.

From using it I learned that procurement is a much bigger concept than simply “purchasing” and that in using a toolkit to prepare, design and execute I was mindful to include customers, colleagues and systems in designing a solution that could meet needs in various different ways and more holistically. The toolkit was very easy to use in its step-by-step methodology and was aimed at people with no specialism in procurement.”

”



Sustainable procurement is the key to achieving strategic outcomes

Sustainable procurement involves sourcing responsibly to maximise the impact on people and the planet, while also considering price. So instead of simply rewarding the cheapest option for purchases, organisations examine the whole life cost and maximise the benefits to the local economy and environment through the four p's of sustainable procurement:



Preparation



Proactive
Contract Management



Proportionality



Pipelines

1. Preparation

One of the most important points to remember in relation to sustainable procurement is that achieving additional impacts on the environment, local economy or community, takes time. Therefore, it is vital that key priorities are addressed when planning.

First, sustainability initiatives should align with the organisational strategy and local or regional needs of the community in which it serves. For example, if improving health and well-being is a key organisational objective, this needs to be reflected in the procurement outcomes when delivering value through public spend.

A second key priority is that sufficient pipeline is given to enable planning and engagement with the supplier community. A prior identification notice (PIN) signals to the marketplace that a contract opportunity is forthcoming. This can be followed up by a 'meet the buyer' event or supplier engagement day.

Market engagement is important to gain an understanding of what products and services exist, and to think about how value can be added through the procurement process. Allowing enough time in the procurement process to do these activities should lead to more significant impacts from procurement spend. But this can only happen if there is buy-in from the rest of the organisation to enable sufficient pipeline. This also enables businesses, especially SMEs, time to scale up their operations and supply chains.

The importance of early market engagement was another consistent message communicated throughout the procurement lab, helping Infuse participants to appreciate the significant contributions that a whole organisational approach can have in maximising impact through procurement spend.

2. Proactive contract management

Once additional sustainable value and impacts have been identified, it is important to consider how they will be monitored to ensure the conditions promised by suppliers are being met. If, for example, you have included measures of lowering emissions in the tender, you will need to consider if you have a baseline measure or if there is an environmental expert required to help demonstrate the impact. If we're asking for additional apprenticeships or additional training, how will those be reported and what happens if the criteria are not being met?

Due to capacity challenges in procurement teams, a key question may arise to establish whose responsibility it is to manage contracts. This monitoring is often not considered as part of sustainable procurement but without it, there is no guarantee that additional impacts will be realised.

3. Proportionality

In our experience, organisations often make the mistake of trying to maximise all aspects of additional value with every purchase they make. There is a plethora of guidance on adding value with a whole range of different sustainability stipulations that can be added to tenders. Follow these links for more information:

Public sector procurement: <https://www.gov.wales/public-sector-procurement>

Procurement - The Future Generations Commissioner for Wales:
<https://www.futuregenerations.wales/work/procurement/>

However, if not understood and not embedded into the procurement process, sustainability can become a tick box exercise where stipulations are added tokenistically without consideration of how appropriate or realistic they are for suppliers.

Proportionality and feasibility are important concepts to consider. Instead of taking a one size fits all approach, it is a more effective use of time and resources to prioritise those areas of spend where most impact can be achieved.

However, there will be categories of spend, such as housing, education and social care where significant impact can be achieved through public spend. So it is important to think ahead and explore and agree internally which areas of spend will generate the most impact, and to prioritise those areas.

4. Pipelines

The procurement pipeline is key to achieving sustainable procurement as it allows everyone in an organisation to think how they can add value and identify opportunities for the local community and environment.

The three previous p's (preparation, proactive contract management, and proportionality) are approaches to creating and measuring additional impacts when directly involved in purchasing items or commissioning services. The procurement pipeline provides information on all the upcoming purchase requirements for an organisation. This is an important part of the procurement process for exploring upcoming tenders and to consider how you or your department could help maximise the impact of that spend using knowledge and expertise outside of the procurement team. It also provides opportunities to highlight tenders with potential local suppliers and speak to people in the team and the organisation to find out more information.



»» CASE STUDY

Inspired after attending the procurement lab for cohort two, Owain Morris (Sport Wales) realised that while sustainability is one of the organisation's business priorities, this could be reflected better in its procurement process. He therefore undertook an experiment which tested how sustainability could be embedded into procurement, at an organisation with limited procurement resource. He realised that sustainable procurement practices needed to be embedded into procurement processes across the organisation and therefore explored the opportunities and barriers associated with the current process as well as what can be learnt from other organisations' best practice. This experiment is still being implemented but by working cooperatively with his colleagues Owain has secured buy-in from the whole organisation to deliver sustainable procurement to maximise the organisation's strategic outcomes.

Tools to help organisations embed sustainable procurement:

Preparation

WRAP Cymru and Crown Commercial Services have both produced guides to help you consider early market engagement. These are helpful resources and toolkits to support the rationale and support early engagement activity. The links offer different methods of doing so. The Social Value Exchange is also a helpful tool for linking up contractors with charities and third sector bodies to make social value more relevant and specific to an area.

Crown Commercial Services - <https://www.crowncommercial.gov.uk/news/how-to-carry-out-early-market-engagement-successfully-procurement-essentials>

Wrap Cymru - <https://wrapcymru.org.uk/resources/guide/sustainable-procurement-early-market-engagement-guidance>

Social Value Exchange - <https://www.socialvalueexchange.org/>

Proactive contract management

The Social Value Portal has created a guide for ensuring social value is implemented which will be very helpful for anyone not familiar with contract management or social value clauses.

Social Value Portal - <https://socialvalueportal.com/resources/report/social-value-movement/contract-management-in-social-value/>

Proportionality

The Themes, Outcomes, and Measures (TOMs) framework for Wales offers some helpful tips and examples of the different types of social, environmental and cultural considerations that you might want to include to maximise the impact of your spending.

National TOMS - <https://www.nationalsocialvaluetaskforce.org/national-toms-wales>

Pipelines

It will soon be a statutory requirement for all public bodies to produce procurement pipelines, so they will soon be visible to the public. In the meantime here are a couple of examples of live and previous procurement pipelines from public sector organisations.

Wales Collaborative public sector procurement opportunities:

<https://www.gov.wales/sites/default/files/publications/2022-08/procurement-pipeline-for-welsh-public-sector-2022.pdf>

NRW procurement pipeline:

<https://naturalresources.wales/about-us/what-we-do/strategies-and-plans/procurement-information/nrw-upcoming-contracts-procurement-pipeline-2022/?lang=en>

Swansea City deal:

<https://www.swanseabaycitydeal.wales/media/1722/sbcd-procurement-pipeline-jan-23-final.pdf>



How you buy can be just as important as what you buy

When considering sustainable procurement one of the first questions in the procurement cycle (<https://www.cips.org/intelligence-hub/procurement/procurement-supply-cycle>) is to establish whether there is a need to buy new at all.

The Welsh Procurement Policy Statement (WPPS) mentioned earlier in the handbook notes the importance of ‘progressive procurement’ through a ‘circular economy’ and ‘foundational economy’ approach. Welsh Government stipulates that procurement professionals should consider recycled, re-used and remanufactured products. These principles apply not only to the product or service being procured but also the supply chain of the main contracting organisation.

Before starting the procurement process, it is important to remember that the greatest impacts are recognised when considering the circular economy, where goods and services do not need to be bought from new but if so, after use, they can be recirculated to minimise or eliminate waste altogether as explained in this video - <https://www.youtube.com/watch?v=QdIMWdBUB6E&t=36s>

To make this happen effectively, early market engagement is key to delivering best value.

»» KEY TOOLS

Case study approach

The procurement lab used case study scenario-building to support participants to take a more proactive approach to procurement. We provided participants with an example of potential public spending, and working in small groups they were tasked to identify how they would maximise the impact of that spend. Providing an example from outside their usual work area resulted in creative ideas and thoughts about how to implement sustainable procurement but also realising the role they and other members of their teams could play in implementing this important agenda.

Some of the case study scenarios used for this exercise were:

Decarbonisation of housing - A local housing association wants their social housing supply to be carbon neutral by 2030. They want to ensure that in doing so they also maximise the benefits to the local economy and encourage sustainability.

Question: How would you achieve these aims and maximise the social value of this exercise?

School food - Two public bodies in the CCR have decided they want to reduce their costs by jointly purchasing food supplies for their canteens. They also want to reduce the carbon footprint from their food purchasing if possible.

Question: How can you maximise the social value from this project and is there any potential to broaden its scale?

Infuse participants were asked to further consider whether their case study topic was a **simple, complicated or complex problem**. Each group was invited to present their proposals and share insights with the remainder of the cohort which led to some rich discussions about different approaches to consider in real life.



infuse

GWASANAETHAU ARLOESOL Y DYFODOL
INNOVATIVE FUTURE SERVICES



Infuse@monmouthshire.gov.uk

www.monmouthshire.gov.uk/infuse



Y Lab



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sir fynwy



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