Transforming Local Systems TEC Pathfinder Programme Evaluation

Final Report

April 2023

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Matter of Focus
Evidence. Action. Change.

About Matter of Focus

Matter of Focus is a mission-led company and certified B Corp based in Edinburgh.

We work with organisations, projects and programmes to explore, map, analyse and assess the outcomes that matter to them, the people and populations they care about, and their funders. We provide tools and techniques to bring together evidence, data and evaluation to ensure that projects and Programmes can meet their outcomes, are successful and adaptable, and can demonstrate that success to funders, service users and other stakeholders.

We have created an innovative and easy to use software tool, OutNav, that enables public service organisations and funders to make effective use of their data and information to learn, improve and tell the story about the difference they make.

Matter of Focus is led by Dr Ailsa Cook and Dr Sarah Morton. Ailsa and Sarah are internationally renowned thinkers, both well known for their ability to develop practical tools backed by robust evidence-based approaches, with extensive experience of delivering solutions for public service organisations.

Acknowledgements

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Executive Summary

> " I really like the approach, I think it's brilliant … because folk, like myself, could have preconceived ideas of what customers want, of what they need. But [with this] you work with [people] to come up with solutions and ideas of how they can be resolved. So I think it's brilliant."
>
> — Pathfinder team member

Background

This report shares findings from the final evaluation of the Transforming Local Systems (TLS) Pathfinder Programme. The TLS Programme was funded by the Scottish Government's Technology Enabled Care (TEC) Programme, Digital Health and Care Directorate between 2019 and 2023. It established four Pathfinders and their Named Partners to contribute to the transformation of local health and social care systems using digital technology, shifting local delivery upstream towards prevention and self-management. A novel model of national programme support was established to support the Pathfinders to use the Scottish Approach to Service Design (SAtSD) to transform an aspect of the local system. This 'managed programme of support' for the Pathfinders was led by a multi-agency, multi-disciplinary 'National Team'. The National Team was composed of the TEC Programme of the Scottish Government's Digital Health and Care Directorate, Healthcare Improvement Scotland's ihub, the Office of the Chief Designer, Scottish Government Mental Health and Social Care Directorate, and the Digital Office for Local Government.

The four Pathfinders were Aberdeen City, East Ayrshire, the Highlands, and Midlothian. The Named Partners were East Renfrewshire, Orkney, South Lanarkshire, and the Western Isles. Each Pathfinder consisted of a partnership of service users, Health and Social Care Partnerships (HSCPs), NHS and/or third and independent sector organisations.

This evaluation has been conducted by Matter of Focus and builds on the developmental evaluation support for the Pathfinders and the National Team provided by Matter of Focus using its software OutNav since early 2020.

Context for delivery

The Pathfinders were established with explicit recognition that the transformation of local systems is hard to do, and it was anticipated that they would need new tools, approaches, resources, and flexible support to realise the ambitions of the Programme. The 2018 National Digital Health and Care Strategy and the subsequent refresh in 2021 highlighted the need for service redesign on both a national and local level. This was needed to make the best use of digital technologies in the design and delivery of services that support the transformation of local systems towards prevention and self-management and improve the care and wellbeing of people in Scotland.

Between 2020 and 2022, key staff were diverted from their roles into crisis management as part of the Covid-19 response, significantly impacting programme delivery. The 2021 National Strategy

refresh recognised the need to respond to the opportunities and challenges presented by the pandemic, and while digital technologies are considered central to supporting Scotland's recovery, digital exclusion is highlighted as a key issue. Digital services need to be accessible, and people need digital options. In this context, the Pathfinders remain relevant, contributing learning on how service redesign can help people to access the data, information, and digital services they need to better manage their health and wellbeing.

Figure 1. Transforming Local Systems Pathfinders and their areas of focus

Highland: To transform the Highland Respiratory Care pathway towards a pathway that is truly patient centred, by co-designing it with patients and all those who either use or provide respiratory services from the outset.

Aberdeen City: To understand how Technology Enabled Care (TEC) can play a role in supporting the delivery of multi-agency services for people aged 18+ who experience domestic abuse.

Pathfinders
Named Partners

Orkney
Western Isles
Highland
Aberdeen City
Midlothian
East Renfrewshire
East Ayrshire

East Ayrshire: To use Technology Enabled Care (TEC) as a key enabler to fully transform health and social care provision for people with long-term health conditions living in the Irvine Valley.

Named Partner: East Renfrewshire & Orkney

Midlothian: To transform traditional models of care to enable the increasing numbers of people living with frailty to achieve their best possible quality of life.

Named Partner: South Lanarkshire

The evaluation approach

The evaluation takes a theory-based approach, using contribution analysis to test the TLS Programme's theories of change and develop contribution stories that establish how well the Programme has worked and its impact. Data collection and analysis took place between September and December 2022, involving semi-structured interviews with key stakeholders from the Pathfinders and from the National Team, a review of documentary evidence, and analysis of data captured in OutNav. OutNav is the cloud-based software developed by Matter of Focus and provides a single platform for evaluation planning, analysis, and reporting. Using OutNav, Matter of Focus supported the National Team and the Pathfinders to develop outcome maps (or theories of change) in 2020 which have been examined in this evaluation.

Findings

The following section presents high-level summary findings on the difference the Pathfinders are making, and the key enablers of impact. Individual impact reports providing detailed findings on how the Pathfinders have used the SAtSD and the extent to which this has contributed to transforming an aspect of the local system can be found in Appendices 1 - 4.

What difference are the Pathfinders making?

1. **The Pathfinders have delivered valuable solutions supporting the implementation of the 2021 Digital Health and Care Strategy.** The Pathfinders have helped people to have digital access to information, their own data, and services, which support their health and wellbeing (priority one of the strategy).

Table 1. Pathfinder solutions against the 2021 Digital Strategy priorities

| Strategy Aim	Aim 1: Citizens have access to, and greater control over, their own health and care data – as well as access to the digital information tools and services they need to help maintain and improve their health and wellbeing	
Priority	**Pathfinder Solution**	Description
Digital Access to Information	**Aberdeen City:** Development of a Dynamic Database of Specialist Domestic Abuse Support Services	A one 'true source' digital database with guidance and information about support, service provision and referral pathways.

	East Ayrshire: TV screens in GP surgeries Digital Hub in Community Centre	Citizens can access information about digital services from the Digital Hub. TV screens will be updated regularly with useful and relevant information to citizens.
	Highland: Your Breathing Matters – online open learning sessions The Respiratory Resource Hub Improved Respiratory Guidelines on NHS Highlands systems	Digital resources supporting both citizens and healthcare professionals to access digital information on the respiratory care pathway, with the aim of sharing information, building capacity and empowering individuals to self-manage their health and wellbeing.
Access to Digital Services and Tools	**East Ayrshire:** Multi-Disciplinary Team meetings Digital Health and Care Support Worker	Online MDT meetings established for patients to discuss their long-term health conditions with a multi-disciplinary team of health professionals. The Digital Health and Care Support Worker will support people to access digital services, products, and tools.
	Highland: Improved access to Community Respiratory Team (CRT) and Pulmonary Rehabilitation (PR) funded by the Interface Care programme Your Breathing Matters – online open learning sessions	Increased access to essential services such as the Community Respiratory Team and pulmonary rehabilitation through its digital courses and resources (taken up by the Interface Care programme).
	East Renfrewshire and Orkney Named Partners: Tech Peer Mentor	Tech Peer Mentor supporting people to access telecare options and other digital services and supports in the health and third sector.
	South Lanarkshire Named Partner: virtual and physical TECH Zone	TECH Zone to facilitate people to access digital supports and services.

Data Driven Services and Insights	Midlothian: Collaborative Care Architecture and Circle of Care Concept	User research and data insights are supporting DHI's 'Collaborative Care Architecture' – a tiered architecture underpinning the Circle of Care concept connecting carers, professionals and people, enabling people to gain access to integrated services, maintain and control their data efficiently and effectively.

2. **Evidence of the desirability of citizen-owned data has emerged across the Pathfinders, as a whole.** Through challenges around siloed data, governance constraints limiting systems integration, and the need for aligned infrastructure, systems and governance have been common themes. These issues fundamentally determine the extent to which HSCPs can extensively transform services. The Pathfinders have highlighted the need for national support and direction to overcome these challenges.

3. **The Pathfinders have been able to contribute evidence on the challenge of establishing digital foundations, and on what a 'future state system' might look like.** The Midlothian Pathfinder has contributed very significantly to supporting greater understanding of the challenges and digital components underpinning the ambition for citizens to manage, access and own their own data. The Pathfinder's user research has supported the Digital Health and Innovation Centre (DHI) in their development of a blueprint for the 'Collaborative Care Architecture' – a tiered architecture underpinning the Circle of Care concept connecting carers, professionals and people enabling them to gain access to integrated services and data efficiently and effectively (see Figure 2). The Pathfinder is continuing to support DHI to develop a functional clickable prototype for the Circle of Care concept. The Highland Pathfinder has also supplied evidence and raised awareness of the importance and desirability of citizen-owned data (see Figure 3).

Figure 2. Collaborative Care Architecture
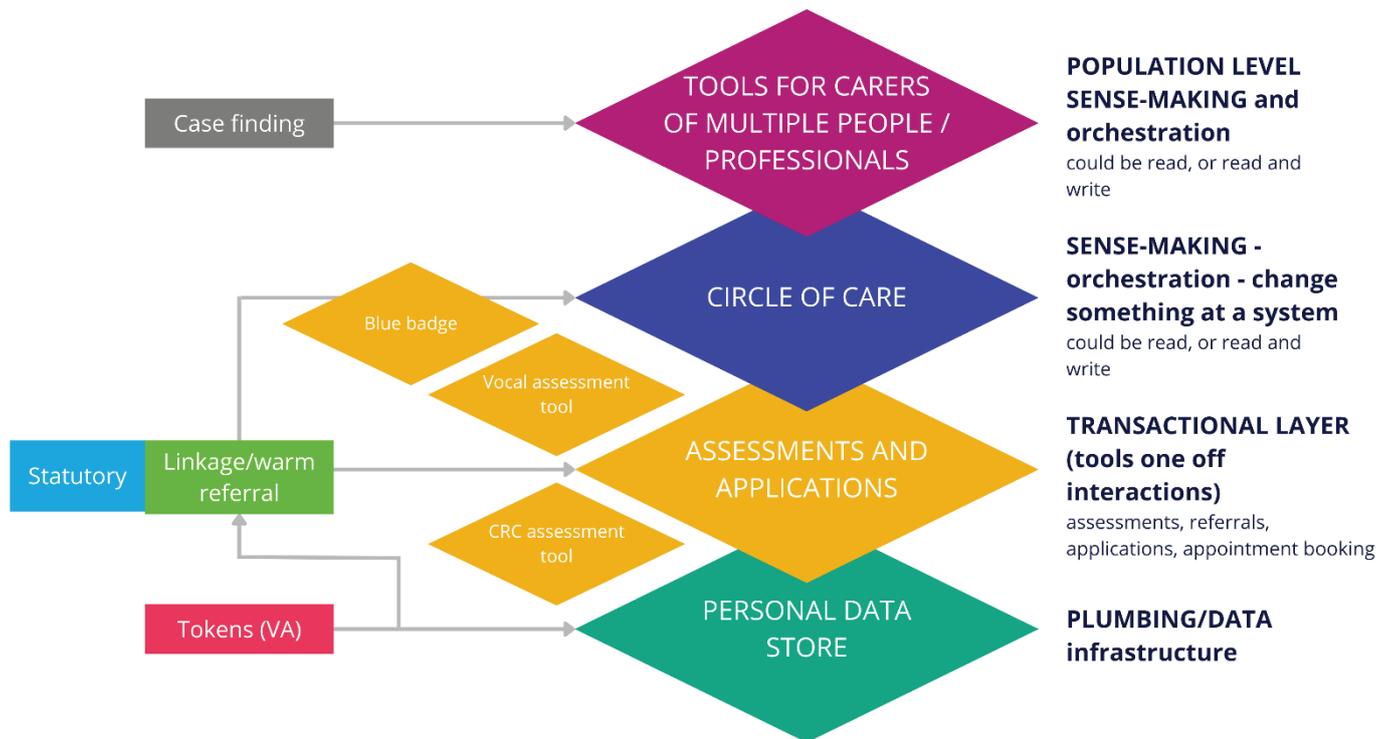
4. **Evidence from the Pathfinders hints at the fact that though many digital technologies may exist, there is still a need for a transitional process of raising awareness, empowering, changing attitudes and behaviour, supporting and upskilling people in the use of digital.** Through their work they have promoted digital inclusion and highlighted that beyond the need for digital choice, there is a need for digital transition. Most of the Pathfinders have developed discrete solutions that can be implemented in the short to medium term (see Table 1). Many of these solutions are relatively simple to deliver and relational. Many solutions highlight the need for digital 'go-betweens': tools, approaches and *people* who can support citizens to make an informed choice on how they wish to access services and empower citizens to effectively use digital technologies to proactively manage their health and wellbeing. These solutions – critically – directly respond to needs and priorities expressed by local people and how people wish to use digital technologies to engage with services.

5. **The Pathfinders using the SAtSD have all developed solutions that have the potential to transform local systems towards prevention and self-management in the long term.** The Pathfinders have built networks across the system improving how service providers, users, carers, citizens, and people interact with each other, changing how parts of the local systems function. They have identified 'hubs' or 'navigators' that can empower people and facilitate their understanding and engagement of digital solutions and services, to improve lives and wellbeing.

6. **Evidence from the Pathfinders shows that to achieve a large shift in the system, there is a dual need for support at the national level, empowering the citizen by establishing the fundamental digital foundations underpinning how people and organisations can interact digitally in the system, and support at the local level, empowering the citizen by**

using 'facilitators', 'navigators' or 'hubs' to mediate between the digital offering and the person (see Figure 4). The Pathfinders have demonstrated, using the SAtSD, that much can be done at the local level to create the conditions for success, at the national level, by pinpointing key leverage points within the system that can shift and transform the system towards prevention and self-management. These leverage points centre on empowering the citizen.

7. **Overall, the Pathfinders are all generally well positioned for impact and the implementation of the SAtSD to achieve outcomes for people can be said to be effective.** While the direct impacts of most of the solutions themselves is not yet known, due to the early stage of implementation, the evaluation finds that as a result of the strong user, stakeholder, and community engagement the solutions designed were relevant and addressed the issues that mattered to people.

Figure 3. Highland Pathfinder 'Test' interface prototype of a patient digital record
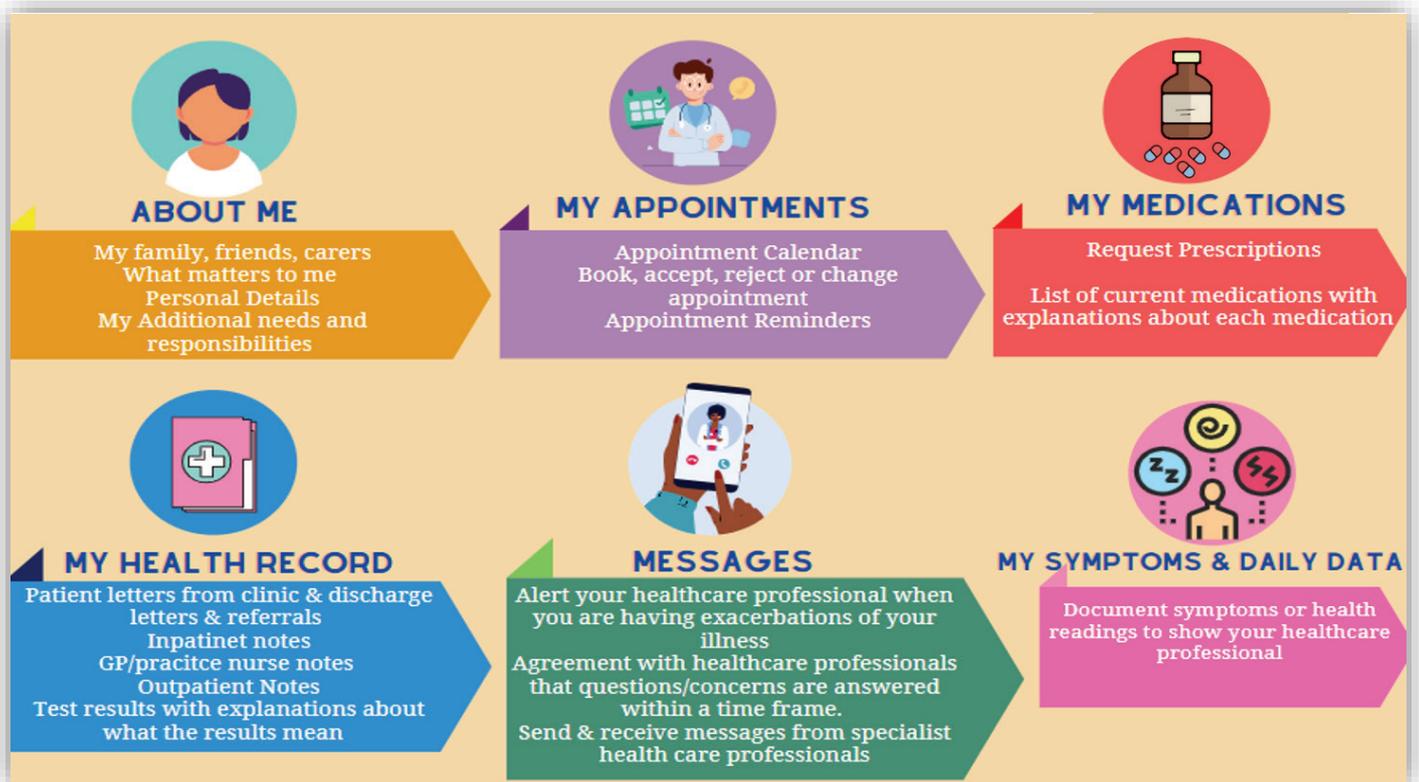
Figure 4. Transforming Local Systems using Digital Technology

The Digital Citizen of the Digital Future

The Empowered Citizen

Data driven insights

The Empowered Citizen

Digital access to information

Access to digital services, products and tools

The 'Navigator' / The Hub

Digital foundations underpinning the circle of care and citizen-owned data

Digital, the integrator for systems change

Facilitating access to digital information, services and tools

Digital, the enabler of systems change

What have been the key enablers of impact?

The following factors have been identified as key enablers of impact:

- **The National Team's support to the capacity of the Pathfinders in the implementation of the SAtSD.** The National Team have played a critical role in building the capacity of the Pathfinders in the implementation of the SAtSD and in new tools, methods and approaches for user engagement.
- **The focus on establishing equal and broad partnerships across the HSCP, NHS, third sector, and local community in the early set-up phase of the programme**. These partnerships have been critical to successful project delivery. They have also been important in strengthening relationships and connections between key actors in the local system. This has been identified as a key pathway towards achieving the broader systems changes needed across health and social care that contribute to better outcomes for people.
- **The third sector have played an important role in the Pathfinder**. They have contributed important insights, new connections and partnerships, and importantly, facilitated engagement with people with lived experience, especially during the pandemic.
- **Expertise in service design.** The Pathfinders that benefited from service design or research expertise within their teams were more ambitious in their project's objectives and outputs.
- **Citizen and user participation.** The Pathfinders have made strong efforts to engage citizens, people with lived experience, staff, healthcare professionals and other stakeholders. As such, the solutions are highly relevant to the local contexts, and there are early indications that that the solutions will or are being taken up.
- **The individuals involved in the Pathfinder have been critical to achieving the wider changes in behaviour and culture needed in health and care organisations.** They have been important in ensuring digital technologies, new ways of working with partners, and user participation are at the heart of how health and social care systems are transformed in ways that improve outcomes for people. Many are acting as change agents within their own teams, departments and organisations, championing both the SAtSD, new ways of working with partners, and the role played by digital technologies to transform health and social care.
- **Senior leadership buy-in.** Where there has been buy-in from senior leadership there has been evidence of changes in practice and strategy at the organisational level. There has been emphasis on the SAtSD and digital technology in transforming services to be more person-centred.
- **Flexibility of the national support.** The National Team have provided tailored support to each of the Pathfinders to accommodate the differing paces at which they were moving through the SAtSD. They have also responded flexibly in response to Covid-19. This flexibility has been critical in ensuring the Pathfinders were well supported throughout the implementation of project activities, particularly, as due to their intrinsic nature as Pathfinders, they were navigating and seeking to effect change in complex settings. This required a learning and adaptive approach.
- **Embedded evaluation.** Embedding evaluation in delivery was recognised by the National Team as critical to ensuring a sustained focus on realising the desired outcomes for people.

The Pathfinders have been working in complex and constantly changing environments. They have needed to adopt an adaptive, reflective, and learning approach to meet their objectives.

Conclusion

The Pathfinders have achieved good progress in implementing a variety of solutions that have the potential to transform local systems towards prevention and self-management in the long term. There is evidence that there are changes occurring within the Pathfinder organisations themselves as well as in the wider health and social care systems of the localities and that this is due to the way the Programme was implemented through the National Team's managed programme of support and the use of the SAtSD.

The Pathfinders have shown that it is not simply a matter of 'digital choice' or of providing digital options. People need to be *able* to access digital technology. They need to be *aware* of digital options. They need to know *how* to use them in ways that best meet their needs. Finally, they need to be able to make *informed* decisions over their own health and social care. This is critical to ensuring people do not fall through the cracks, and are not digitally excluded and unable to access information and services that can enable them to make preventative and proactive choices that improve their health and wellbeing. This is where the use of the SAtSD has been valuable. It has enabled the Pathfinders to understand how services can be delivered such that they are truly person-centred.

The TLS Programme has shown that HSCPs can play a very important role and be at the vanguard of local systems transformation using digital technology. However, staff need to be equipped with the digital and service design skills to deliver services that can serve the needs of people.

Lessons

1. Lessons for the scale up and spread of the Pathfinder solutions in the Transforming Local Systems Programme

1.1 **It is important that the Pathfinders maintain monitoring and evaluation processes to ensure they continue to capture data that will support future impact assessment to enable policymakers to understand not only what has worked, but how, and in what context, and to enable better understanding of how solutions may be scaled up or spread to other localities**. This is particularly important as the Pathfinders are at an early stage of delivering their solutions.

1.2 **The research and data sets produced by the Pathfinders can be shared with other HSCPs to enable them to implement a quicker service design process**. The Pathfinders have all supported research on the key health and social care themes, that has much value in itself and can be reused.

1.3 Due to nature of the solutions, low-cost feasibility studies may be undertaken to pilot the solutions in other localities to assess their scalability and spread. The Pathfinders that have invested in developing small-scale and low-tech solutions alongside prototyping more ambitious digital solutions have been best placed to realise impacts on people within the time frame of the Programme. These solutions may be adapted in other contexts.

> ## 2. Lessons for transforming local systems through Pathfinder programmes

2.1 Including time to establish the Programme at the start and to support impact activities at the end is important. This is an area that could be strengthened in future Programmes.

2.2 Engaging people at every stage of the Pathfinder process has been key to success. The process has generated valuable and well-structured insights that continue to guide the implementation process and that can be used in other work. In this respect the SAtSD holds considerable value.

2.3 The SAtSD is an effective approach to support the transformation of local systems. The approach allowed stakeholders and citizens across the service journey to come together and develop a shared understanding of the challenge and system, and a shared vision for change.

2.4 Investment in partnership working, and engaging the third sector as equal partners, is invaluable. The broad partnerships formed have ensured that the findings from the process are robust and that the system is ready for the solution.

2.5 Investing in the capability and skills of the Pathfinder teams, including ensuring they have the right tools and resources, has been key to realising success. This was a new way of working for many people, and the investment was vital to enable team members to apply the SAtSD effectively to transform their local system.

2.6 Protected time and resource to do this work is essential. Funder support and flexibility, embedded evaluation, and opportunities to reflect on progress, adapt and respond in an agile and thoughtful way to challenges were critical to managing change in a complex system.

2.7 Achieving complex whole systems change to improve the lives, health and wellbeing of people has required HSCPs to think and work differently. It has meant managing uncertainty and a commitment to a person-centred approach. It requires capacity and capability in applying whole systems friendly approaches such as the SAtSD, integrated services, multi-disciplinary teams, and perhaps mostly importantly senior leadership buy-in.

2.8 The investment in a national model of support has been effective in supporting Pathfinders to implement local systems transformation and was highly valued by Pathfinders. An adapted approach may be useful for future programmes building on learning from this evaluation. Such as for example, ensuring tenders include a focus on some degree of SAtSD capacity and capability, evaluation and impact, multidisciplinary teams, and partnerships, as well as senior leadership buy-in up-front before Pathfinders are commissioned. Sharing lessons from the TLS Pathfinders, and widely disseminating SAtSD resources and guidance may ensure that future Pathfinders are positioned to implement local transformation systems with a reduced need for significant national support.

3. Lessons for transforming local systems towards prevention and self-management using digital technology

3.1 **Digital exclusion hinders progress towards a cultural shift in the use of digital technology. Digital exclusion is not only due to a lack of access to devices and technology but also due to lack of awareness and understanding of the supports and services available.** There is a need to drive awareness, support understanding, and create opportunities for digital use to build the capacity and capability of people to ensure they are empowered to navigate their own health and social care needs.

3.2 **The transition to digital is transforming health and social care. However, a person-centred approach which empowers the citizen is needed to ensure that people are not left behind.** The SAtSD has been a useful mechanism to apply a whole systems lens to understanding the problem from the perspective of people (citizens, healthcare professionals and carers). It has allowed the identification of key leverage points to influence the system: identifying and establishing navigators and facilitators in the system to mediate the space between citizens and digital technology.

3.3 **For the empowered citizen to transition to become the 'digital citizen' of our digital future, strong foundations are needed.** National direction and support are needed to ensure people can access integrated services and have control over their data so they can take preventative and proactive action that supports their health and wellbeing.

3.4 **HSCPs can play a role in local systems transformation by supporting 'digital translation' for local people and using person-centred and whole systems approaches, such as the SAtSD, to design services that meet the needs of people.** But there remains a significant skills gap in the health and care sector workforce. Staff need to be equipped with the digital and service design skills to deliver services that can serve the needs of people.

1.0 Introduction

1.1 About this Programme

The Transforming Local Systems (TLS) Pathfinder Programme (2019-2023) sought to contribute to the transformation of local health and social care systems using digital technology, shifting local delivery upstream towards prevention and self-management.

The TLS Programme was delivered as a collaboration between the Technology Enabled Care (TEC) Programme of the Scottish Government's Digital Health and Care Directorate, Healthcare Improvement Scotland's ihub, the Office of the Chief Designer, Scottish Government Mental Health and Social Care Directorate and the Digital Office for Local Government. The Programme was managed and supported by a National Team drawn from the Scottish Government and ihub.

In 2019, four Pathfinders areas - Aberdeen City, East Ayrshire, Highland, and Midlothian- were selected to implement and test the Scottish Approach to Service Design (SAtSD) across their housing, social care, and health partnerships in relation to a key area of concern in the localities. This was taken forward through a managed programme of support. Four smaller projects were also set up and paired with the Pathfinders. The 'Named Partners' were East Renfrewshire, Orkney, South Lanarkshire and Western Isles.

1.2 About this report

This report shares learning from the final evaluation of the TLS Programme conducted between September 2022 and March 2023. The purpose of the final evaluation is to assess the performance and impact of the TLS Programme (including the contribution of the National Team and the Pathfinders) covering the period December 2019 to March 2023. Two interim evaluation reports were produced in 2019 and 2021 (the latter produced by Matter of Focus).

This final evaluation builds closely on a process of embedded, developmental evaluation that has underpinned this work from inception. Matter of Focus has provided this embedded evaluation support to the TEC Pathfinders and the National Team since 2020. The approach has involved providing support to the Pathfinders and the National Team for continual reflection, evaluation, and reporting on progress throughout implementation. Utilising Matter of Focus's software OutNav, the Pathfinders have embedded evaluation in project delivery since 2020, providing a wealth of data and learning to draw upon in this summative evaluation. This report pulls together high-level findings and conclusions from the Programme.

1.3 Evaluation aim

The overall aim of the evaluation is to assess the performance and impact of the TLS Programme. The evaluation will assess what the Pathfinders have achieved and how they have been working, as well as the processes and governance structures at the Programme level and how this has impacted delivery.

The evaluation also aims to assess the value of the SAtSD and the management approach adopted by the Scottish Government.

Finally, the evaluation aims to provide lessons for the effective scale up and spread of the Pathfinder solutions and approaches for effective transformation in health and social care and recommendations for future programmes seeking to adopt a similar approach.

These aims are addressed through the following evaluation questions:

EQ1. How has the TLS Programme been delivered? How well has it worked?

EQ2. To what extent has the managed approach been effective?

EQ3. What impact will the Programme have on transforming local systems towards prevention and self-management?

1.4 Structure of the report

The report is structured as follows:

Section 2 provides an overview of the TLS Programme, the rationale for the Programme, the strategic and policy context.

Section 3 describes the evaluation approach adopted to assess the performance and impact of the TLS Programme.

Section 4 presents findings of the report against the three main evaluation questions above.

Section 5 sets out the conclusions and lessons from the evaluation.

Appendix 1: Aberdeen City Transforming Local Systems Impact Report.

Appendix 2: East Ayrshire Transforming Local Systems Impact Report.

Appendix 3: Highland Transforming Local Systems Impact Report.

Appendix 4: Midlothian Transforming Local Systems Impact Report.

Appendix 5: Named Partners Impact Report.

1.5 Evaluation Users

This evaluation is intended to inform learning by the National Team in the Technology Enabled Care (TEC), Digital Health and Care Directorate as well as wider stakeholders in the Scottish Government.

Lessons set out in Section 5 may also be useful for other programmes and organisations seeking to implement a similar approach, namely integrating digital in whole systems change.

The individual Pathfinder reports in Appendices 1 - 4 provide detailed findings on the impact of the Pathfinders and the solutions implemented. These may be useful for organisations in the housing, health and social care and the third sector working on domestic abuse (Appendix 1, Aberdeen City Pathfinder), long-term health conditions (Appendix 2, East Ayrshire Pathfinder), respiratory care pathways (Appendix 3, Highland Pathfinder); frailty (Appendix 4, Midlothian Pathfinder).

2.0 Background

2.1 About the Tranforming Local Systems Programme

2.1.1 Overview

The Transforming Local Systems (TLS) Pathfinder Programme (2019-2023), funded by the TEC Programme, Digital Health and Care Directorate, Scottish Government, supported the creation of 'Pathfinders' to contribute to the transformation of local health and social care systems using digital technology, shifting local delivery upstream towards prevention and self-management. A fundamental element of the TLS Programme was supporting the Pathfinders to use the Scottish Approach to Service Design (SAtSD) to transform an aspect of the local system.

The four Pathfinders were Aberdeen City, East Ayrshire, Highland, and Midlothian. Each Pathfinder worked in partnership with service users, local authority, NHS and third and independent sector organisations to co-design preventative and (where appropriate) digitally enabled services, supports and self-management approaches for citizens using the SAtSD. Four smaller projects ("Named Partners) - East Renfrewshire, Orkney, South Lanarkshire and Western Isles - were also set up and paired with the Pathfinders.

The Programme was delivered as a collaboration between the Technology Enabled Care (TEC) Programme of the Scottish Government's Digital Health and Care Directorate, Healthcare Improvement Scotland's ihub, the Office of the Chief Designer, Scottish Government Mental Health and Social Care Directorate, and the Digital Office for Local Government.

The Programme was managed and supported by a 'National Team' drawn from the Scottish Government and ihub. This novel model of national support is described as a 'managed' programme of support in this report and included:

- national co-ordination, support and 'critical friend' challenge;
- design expertise, including learning sessions and coaching in the application of the Scottish Approach to Service Design;
- subject expertise on technology enabled care;
- knowledge exchange and skills development;
- materials and tools;
- co-ordinated support from national agencies, developed on a case-by-case basis;
- monitoring, evaluation and learning support for the Pathfinders provided by Matter of Focus.

This coordinated support from the National Team aimed to support the Pathfinders in delivering the following overarching objectives of the TLS Programme:

- supporting local health, care and housing partnerships to contribute to system transformation towards preventative and (where appropriate) digitally-enabled services and supports;
- testing out the Scottish Approach to Service Design in the context of housing, social care and health multi-sector partnerships;
- establishing a replicable model of national support, and;
- sharing and spreading the learning from the approach to inform other Programmes.

The Pathfinder Programme was co-designed with applicant organisations to apply the principles of the SAtSD and was committed to a common set of aims which can be summarised as follows: To facilitate transformation of local health and social care services using digital technology to shift local delivery upstream to prevention and self-management, with a focus on:

- Person: developed with and for citizens, users of services and carers;
- Place: particular localities of self-identified communities;
- Partnership: equally including the housing, independent and third sectors;
- Personal outcomes: improving personal outcomes and key national indicators.

2.1.2 The Scottish Approach to Service Design

The vision of the Scottish Approach to Service Design (SAtSD) is that the people of Scotland are supported and empowered to actively participate in the definition, design, and delivery of their public services. It explicitly acknowledges the need for collaboration between different organisations - national and local government, health, public bodies, charities, and the third and private sector - to deliver end-to-end service journeys for citizens.

It advocates organisations involved in delivering public services seeing and aligning their functions with the *whole* service journey, rather than many individual organisations working in a fragmented way to meet user needs for only part of the service journey. "We need organisations to work together to understand problems. By working together in a common way, we can design effective service journeys that help people out of a difficult situation as efficiently and effectively as possible."[1] Underpinning the SAtSD are seven principles:

1. We explore and define the problem before we design the solution.
2. We design service journeys around people and not around how the public sector is organised.
3. We seek citizen participation in our projects from day one.
4. We use inclusive and accessible research and design methods so citizens can participate fully and meaningfully.
5. We use the core set of tools and methods of the Scottish Approach to Service Design.
6. We share and reuse user research insights, service patterns, and components wherever possible.
7. We contribute to continually building the Scottish Approach to Service Design methods, tools, and community.[2]

The Design Council's Double Diamond model is a visual diagram showing the four design stages of the SAtSD (see Figure 1). It shows the importance of taking the time to understand the problem before designing solutions. Each Pathfinder has adopted this approach to identify, test and design solutions.

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[1] www.gov.scot. (n.d.). The Scottish Approach to Service Design (SAtSD). [online] Available at: link
[2] ibid

Figure 1. The Design Council Double Diamond
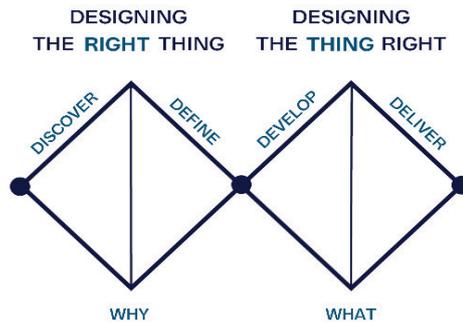
Throughout the TLS Programme the National Team have developed a suite of resources and training materials to support the Pathfinders and other organisations to put the SAtSD into practice. Pathfinders have been guided through the process, one stage at a time.

2.1.3 Monitoring, evaluation, and learning: The Matter of Focus approach and support to the National Team and Pathfinders

Since 2020, Matter of Focus has supported the Pathfinders and the National Team to embed monitoring, evaluation, and learning (MEL) into programme and project delivery.

To develop a MEL plan and framework, Matter of Focus first supported the National Team and each Pathfinder to develop 'outcome maps' (or theories of change). Matter of Focus's simple framework below is used to break the change process down into meaningful steps and the headings are used to develop an outcome map (or 'theory of change') that shows how planned activities are expected to contribute to intended outcomes.

Figure 2. The Matter of Focus headings
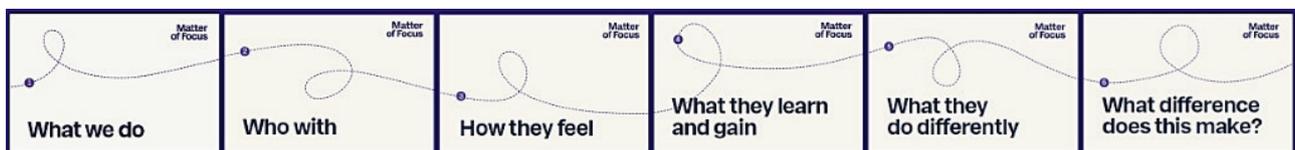
The outcome mapping process brought together representatives from the National Team and Pathfinders in a workshop where participants worked together to map the context for the work, share examples of success and to draft an outcome map that captured the change process underpinning the Programme. The Matter of Focus team then worked with the National Team to refine the outcome map. This involved work over two stages to finalise outcome maps that show a) how the work of the Pathfinders, as they went through the Discover, Define, Develop and Deliver stages of the SAtSD, would lead to interim and final outcomes and b) how the work of the National Team in guiding and supporting them on this journey was expected to lead to overall Programme success. The outcome map for the Programme developed for the National Team is included in Figure 4. For the Pathfinders, an outcome map was developed for each phase of the SAtSD (the outcome map for Deliver is in Figure 5, the outcome maps for Discover/Define and Develop are included in Appendix 6)

The outcome maps also provided a framework for embedded evaluation, enabling the National Team and the Pathfinders to track progress, analyse and report on findings. The Matter of Focus approach to supporting programmes or projects with embedded monitoring, evaluation and learning is informed by contribution analysis, action research, participatory approaches, and evidence to

action. The approach is underpinned by Matter of Focus's cloud-based software OutNav[3] that provides a single platform for all evaluation planning, analysis, and reporting. The approach recognises that when working in complex environments it is not possible to simply measure and attribute the difference that projects make to improving outcomes for people. However, it is possible to tell a robust story about how the project activities have *contributed* to making a change.

Since 2020, Matter of Focus has supported the National Team and the Pathfinders to consider and collate evidence against their outcome maps in a series of twelve online collective support sessions held with the Pathfinders and National Team. Each two-hour session provided an opportunity for teams to share progress with the National Team and with each other, get help with evaluation issues, and have protected time to reflect and evaluate their progress in OutNav. Through these sessions and the ongoing support provided by Matter of Focus, the teams have produced analysis and reports in OutNav that have informed this summative evaluation and been shared locally to update wider partners on learning and progress. Overall, the learning from this developmental evaluation process has both shaped the implementation of the Programme and fed into the findings of the summative evaluation presented in this report.

2.1.4 Integrated systems change

There are four key assumptions underpinning the TLS Programme's outcome map (theory of change).

1. The Pathfinders supported by a consortium of national organisations (through the 'managed' programme of support) will be able to implement the SAtSD effectively to transform local systems.
2. The Pathfinders composed of partnerships consisting of service users, local authority, NHS and third and independent sector organisations will be able to work together towards a whole systems understanding of the problem and co-design effective service journeys that support whole systems shift towards prevention and self-management.
3. Digital technology, used in appropriate contexts, can facilitate this shift towards prevention and self-management by empowering citizens to better manage their health and wellbeing, by supporting independent living and enabling citizens to access digital services that support prevention and self-management.
4. With evaluation support, the Pathfinders will be able to effectively embed ongoing monitoring, evaluation and learning in delivery which will enable them to reflect on progress, respond to and influence systems change.

The essence of the Programme's Theory of Change speaks to "a local whole systems approach which responds to complexity through an ongoing, dynamic and flexible way of working. It enables local stakeholders, including communities, to come together, share an understanding of the reality of the challenge, consider how the local system is operating and where there are the greatest opportunities for change. Stakeholders agree actions and decide as a network how to work together in an integrated way to bring about sustainable, long-term systems change."[4] The SAtSD is the

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[3] www.matter-of-focus.com/OutNav
[4] Public Health England (2019). Whole systems approach to obesity: A guide to support local approaches to promoting a healthy weight. [online] Available at: link

mechanism to apply the whole systems approach, and digital technology (in appropriate contexts) is an enabler of whole systems transformation towards prevention and self-management.

Figure 3. Integrated systems change

Figure 4. Programme outcome map. A replicable model of support for transformation using the SAtSD.

What we do	Who with	How we/they feel	What we/they learn and gain	What we/they do differently	What difference does this make?
Invest in, develop and sustain a national multi-agency team including design and TEC expertise to lead the programme	Core team from different agencies supported by Steering Group and wider TEC programme and DHAC directorate	This is an exciting, challenging and important opportunity and I'm motivated to play my part	New tools, methods and approaches, skills and confidence in service design	Use the Scottish Approach to Service Design to transform an aspect of local systems	There is progress towards shifting local provision to prevention and self management (using digital technology as appropriate)
Co-design the programme, and its values and principles with applicants and pathfinders	Each local Pathfinder Team and their named partners		Capacity and resources to engage and focus on important issues/priorities		
	National stakeholders	Supported, valued, challenged and empowered. Open to embrace new perspectives and approaches		We consolidate our learning and refine a replicable approach to supporting system transformation using service design	There is a replicable approach to providing co-ordinated, effective support
Provide ongoing funding, learning, coaching, support and critical friendship to the pathfinders within an appropriate accountability framework	Relevant experts and opinion leaders		Understanding of how our managed programme approach is working and what can be improved		

Figure 5. "Deliver" pathway in the Pathfinder outcome map

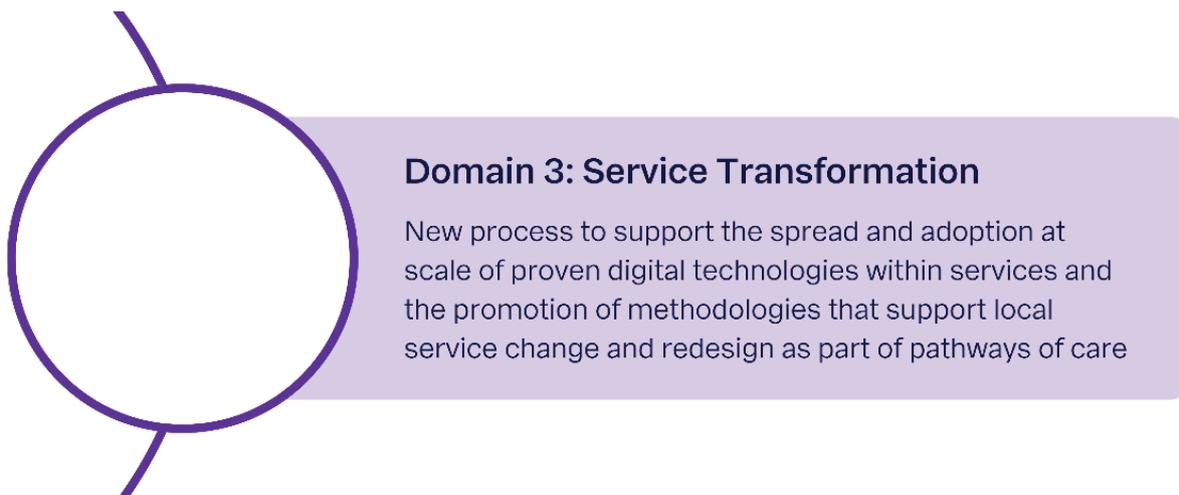| What we do	Who with	How they feel	What they learn and gain	What they do differently	What difference does this make?
Test the prototyped solutions in a live environment and at greater scale	People working in organisations that deliver and manage relevant services and supports	This is a valuable and exciting opportunity and I'm motivated to play my part	A solution that the pathfinders implement	Implement the solution	People are better able to manage their condition and live better lives
	Wider local and national stakeholders	Safe and supported through the process		We take action to remove barriers to people accessing support and taking up the innovation	
Capture evidence through the testing process to prioritise and continually improve our solutions	A diversity of people who the solution is designed to benefit	This is the right range of solutions, confident in the solution because of the process we took	Know how to make the solution sustainable	People adopt the solution	Positive change in the indicators of success
	Relevant technical partners				

2.2 Why this Programme?

The TLS Programme emerged in the context of a greater strategic focus on digital technology in health and social care. This is described in the first National Digital Health and Care Strategy, which was published in 2018 and presented what it described as "a once in a lifetime opportunity to create a digital and interoperable health and social care system."[5] The strategy recognised the central role played by digital in public services reform and specifically in health and social care (also emphasised in the 2016 Health and Social Care Delivery Plan). The vision of the strategy is described as focusing on how digital can support the strategic aim of Health and Social Care in Scotland to offer high quality services, with a focus on prevention, early intervention and supported self-management. While recognising the potential and opportunity presented by digital in transforming health and social care, it also identified several challenges often experienced by people and organisations when trying to navigate digital technology and share and access data. Examples include information governance, interoperability of systems, digital standards, digital participation and digital solutions that meet the needs of people.[6]

The 2018 strategy highlighted six key areas – or domains – of focus. One domain was 'service transformation': the "spread and adoption at scale of proven digital technologies within services across Scotland". To achieve this, the strategy recognised the need for local service change and redesign in pathways of care, supported by national approaches and strategies. It noted that "too often initiatives fail to be adopted at scale due to insufficient focus on designing and implementing new 'ways of working' and the culture change that accompanies it". It emphasised that the delivery of the strategy required a partnership endeavour to drive transformation across the whole system including all partners delivering services and supports to citizens, such as Health and Social Care Partnerships, industry, academia, and the third and independent care sectors. It also highlighted the importance of co-designing person-centred approaches with users by embedding the Scottish Approach to Service Design.[7]

Figure 6. Domain 3 of the Digital Health and Care Strategy, 2018

Domain 3: Service Transformation

New process to support the spread and adoption at scale of proven digital technologies within services and the promotion of methodologies that support local service change and redesign as part of pathways of care

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[5] The Scottish Government (2018). Scotland's Digital Health and Care Strategy: enabling, connecting and empowering. [online] Gov.scot. Available at: link
[6] ibid
[7] ibid

The TLS Programme emerging in this context, in 2019, established four Pathfinders led by HSCPs that would adopt and implement the SAtSD, with national support, to deliver local digital solutions (where appropriate) that responded to the needs of people. The objective of the TLS Programme was to contribute to the transformation of local systems and to shift delivery upstream towards prevention and self-management. The Programme was designed to respond to two key aspects of the 2018 Digital Health and Care Strategy: firstly, facilitating whole systems transformation, and secondly, implementing the SAtSD.

In the intervening period since the Pathfinders have been funded, when the global pandemic has propelled a shift towards digitally enabled communication and collaboration while simultaneously highlighting the dangers of digital exclusion, there has been a heightened focus on the potential for digital technologies to transform services. This is reflected in the 2021 refresh of the National Strategy for Digital Health and Social Care. The refresh seeks to "[build] on the progress that has been made to date, whilst taking account of the opportunities and challenges brought about by the changed landscape ..."[8] Important elements of the strategy refresh include a recognition of the dangers associated with digital exclusion, as well as a recognition that for progress to be made, the focus needs to be on people and how they can use digital technology as opposed to how systems use technology. Related to both these issues are the challenges in creating citizen-owned data and systems around it, and providing digital choice, key ambitions of the strategy.

The 2021 Strategy's vision is 'to improve the care and wellbeing of people in Scotland by making best use of digital technologies in the design and delivery of services.' It outlines six priorities:

- **Priority One:** Digital access: People have flexible digital access to information, their own data and services which support their health and wellbeing, wherever they are.
- **Priority Two:** Digital services. Digital options are increasingly available as a choice for people accessing services and staff delivering them.
- **Priority Three:** Digital foundations. The infrastructure, systems, regulation, standards, and governance are in place to ensure robust and secure delivery.
- **Priority Four:** Digital skills and leadership. Digital skills are seen as core skills for the workforce across the health and care sector.
- **Priority Five:** Digital futures. Our wellbeing and economy benefits as Scotland remains at the heart of digital innovation and development.
- **Priority Six:** Data-driven services and insight. Data is harnessed to the benefit of citizens, services and innovation.

The strategy highlights the importance of building from the Transforming Local Systems Pathfinders to improve digital access, and the importance of involving citizens in all stages of the design and delivery of digital services to increase engagement and improve data quality, in line with the Scottish Approach to Service Design.

2.3 Context for delivery

It has been clear from conception that this Programme is being delivered within a challenging context and that realising the transformation of local systems towards prevention and self-management is hard to do. In 2016, Audit Scotland noted poor progress across Scotland in the implementation of new models of health and social care intended to improve outcomes for people

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[8] Scottish Government (2021). Digital health and care strategy. [online] www.gov.scot. Available at: link

and realise efficiencies within the system.[9] This has been echoed in subsequent reports focusing on cornerstone policies designed to deliver more person-centred services, notably Self Directed Support[10] and Health and Social Care Integration.[11] This picture is not unique to Scotland. For example, research on the implementation of the Vanguard New Model of Care Programme by NHS England showed that whilst the pilot sites studied were able to make good progress towards laying the foundation for change, none of them had been able to make the desired changes within the time available.[12] The research highlighted that it was not just the range of contextual factors operating at macro, meso and micro levels, but their interplay that both helped and hindered progress.

The TLS Programme has been designed with an awareness of these longstanding challenges around implementation. It was clear from the beginning that the Pathfinders would need new tools and approaches, resources and flexible support to realise the ambitions of the Programme. In addition, the following specific contextual issues were identified early in programme delivery as being particularly important to shaping progress:

- Confidence and skills of partnerships in engaging local communities in service transformation and the willingness of people in those communities to engage;
- Strength of the partnership between different stakeholders and in particular the ability for third and public sector partners to engage as equals;
- Knowledge, confidence and skills of Pathfinder staff in data collection, analysis and use;
- Capability and capacity to adopt new approaches, such as the SAtSD.

Findings from the interim evaluation showed that these contextual factors played out in different ways across the four Pathfinders. For example, some Pathfinders came to the Programme with well-established partnerships between public and voluntary sector partners, whilst others needed to build these partnerships through the process. This reinforced the need for support from the National Team to be provided in flexible and bespoke ways to each Pathfinder site.

Another important contextual challenge emerged during the Programme. The Programme had been running for less than a year when Scotland went into lockdown in response to the Covid-19 pandemic. As documented in the interim evaluation, lockdown impacted the delivery of the Programme in diverse ways, ultimately hindering the ability of the National Team and the Local Pathfinders to deliver their activities as planned. In addition, in three out of the four Pathfinders, key staff were diverted from their role in the Programme as part of the pandemic response.

As described above, the Digital Health and Care Strategy was refreshed in 2021 to respond to the challenges and opportunities that have emerged in the wake of the pandemic. Digital technologies are acknowledged as central to supporting Scotland's recovery. Specifically, the role digital technologies can play in enabling interoperability, embedding and sustaining health and social care

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[9] Changing models of health and social care. Prepared by Audit Scotland. (2016). Available at: link
[10] Health and social care series. Self-directed support 2017 progress report. Prepared by Audit Scotland. (2017). Available at: link
[11] Health and social care integration. Update on progress. Prepared by Audit Scotland. (2018). Available at: link
[12] Maniatopoulos, G., Hunter, D.J., Erskine, J. and Hudson, B. (2020). Large-scale health system transformation in the United Kingdom. Journal of Health Organization and Management, 34(3), pp.325–344. Available at: link

integration, and in transforming health and social care services to meet the needs of people is recognised.

The first priority in the strategy refresh is focused on ensuring people have digital access to information, their own data, and services which support their health and wellbeing. The strategy acknowledges that while there is better access to flexible and digitally enabled support, digital exclusion is a key issue in that people may lack access to devices, skills, confidence, knowledge, or opportunities to use digital services.[13] There is a recognition of the need to make digital services as accessible as possible and to give people the choice to access digital services. This is essential in "shifting the focus of health and care systems from crisis intervention towards prevention, early intervention, enablement and supported self-management."[14] The ambitions of the strategy go further in aspiring to enable citizens to have access to their own data and control over their own health and care information. In this context, the Pathfinders remain relevant contributing learning on how the use of the SAtSD can support the design and delivery of person-centred services that enable people to access the data, information and digital services they need to better manage their health and wellbeing.

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[13] Scottish Government (2021). Digital health and care strategy. [online] www.gov.scot. Available at: link
[14] ibid

3.0 Evaluation approach

3.1 Overview

The final evaluation was a summative evaluation. It assessed the overall performance and impact of the TLS programme. The evaluation examined what the Pathfinders have achieved and how they have been working. It also assessed processes and governance structures at the Programme level and how this impacted delivery.

The approach used to assess the extent to which the Programme has contributed to outcomes draws on Contribution Analysis: "an approach to evaluation developed by Mayne (2001, 2008, and 2011) which aims to compare an intervention's postulated theory of change against the evidence, in order to come to robust conclusions about the contribution that it has made to observed outcomes".[15]

The evaluation assessed the extent to which progress has been made towards the outcomes in the Programme's outcome map (Figure 4) by answering the following evaluation questions. The main evaluation questions and the sub-questions were co-developed with the National Team and have been designed to interrogate the outcome map (Figure 4) and the underlying assumptions (outlined in section 2.1.4.)

Table 1. Evaluation questions and sub-questions

Main Question	Sub-Questions
How has the TLS Programme been delivered? How well has it worked?	• What processes and structures have been put in place at the Programme level contributing to the effective delivery of the Programme? • Have effective monitoring, evaluation and learning processes been put in place? • Are there areas for improvement?
To what extent has the managed approach been effective?	• Is there evidence that the TLS Programme support has been deemed valuable by participating Pathfinders? • To what extent has the capacity of the Pathfinders been supported to deliver the Programme? • Is there evidence to suggest there is a replicable approach to providing co-ordinated, effective support to implement the SAtSD to transform local systems?

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[15] White, H. and Phillips, D.R. (2012). Addressing attribution of cause and effect in small n impact evaluations: towards an integrated framework. Available at: link

Main Question	Sub-Questions
What impact will the Programme have on transforming local systems towards prevention and self-management?	• How and to what extent have the Pathfinders used the Scottish Approach to Service Design? • What difference are the Pathfinders making? • Is there evidence of change in the wider health and social care system in local areas? • To what extent have individuals in the Pathfinders acted as "agents of change" within their own organisations/workforce? To what extent will this be sustained going forward? • What have been the key enablers and barriers to impact?

The evaluation also drew on the data collated in the OutNav software against each outcome map for the Pathfinders. Throughout the Programme, each team went through a systematic process of reviewing their evidence against each outcome (or 'stepping stone') and building a reflective account of progress. In this way the Pathfinder teams have built up detailed and evidenced accounts of their decisions and progress through the four stages of the process: Discover and Define (explored through one outcome map), Develop and Deliver (see outcome maps in Appendix 6).

3.2 Method

The evaluation examined the questions using the following process:

1. Gaining an overarching understanding of the 'Programme' and the contribution of the National Team, including examining structures and processes for set-up and management of the Programme. This has been informed by a review of Programme-level documentation and interviews with the National Team.
2. Building a layered understanding of the Pathfinders, their outputs and early results through a detailed examination of Pathfinder data and analysis recorded in OutNav, Pathfinder reports, conducting stakeholder interviews and attending end of project/Programme events.
3. Assessing the impact of the Pathfinders as described in the evaluation approach, by exploring the Pathfinders' theories of change using contribution analysis to establish how activities and outputs are having or are expected to have an influence on overall impacts.
4. Understanding the Pathfinders in the context of the overarching objective of the Programme in contributing to the 'transformation of local systems'.

To ensure the robustness of our findings we have triangulated evidence by reviewing and assessing data from several different sources, including Programme documentation, OutNav data, Pathfinder reports and stakeholder interviews.

3.2.1 Data Collection

In the period September 2022 to December 2022, the evaluation conducted semi-structured interviews over Microsoft Teams with stakeholders involved in the TLS Programme including from the National Team, the four main Pathfinders and the Named Partners. The Interview Schedule, which was co-designed with the National Team, can be found in Appendix 8.

In addition, the evaluation has involved reviewing a large amount of data recorded by the Pathfinders against their outcome maps in OutNav, as well as Programme-level documentation.

The team also attended end of project/Programme events and have collated notes which have informed this evaluation.

Table 2. Overview of the evidence base for the evaluation

Data source			Total
Stakeholder interviews	Pathfinders	16	28
	National Team	8	
	Named Partners	4	
Documents reviewed	Pathfinder reports in and outwith OutNav	13	19
	Programme documentation, including interim evaluations, and national strategies	6	
OutNav Data	Each Pathfinder has collected data in OutNav on an outcome map or theory of change they developed for the phase in the SAtSD (Discover/Define, Develop/Deliver). Pathfinder teams uploaded relevant data in the OutNav platform and their own outcome map and from this, contribution analysis and stories of impact were developed. Consequently there is a wealth of data from the Pathfinders which has been assessed as part of this evaluation.		

3.3 Strengths and limitations of the approach

The method and approach used to assess the Programme and the Pathfinders has been successful. Specifically:

- The evaluation team conducted **many stakeholder interviews**, with relatively even spread across all four of the Pathfinders, in addition to interviews conducted with Named Partners and the National Team. Interviews were also held with individuals previously but no longer part of the Programme.

- There has been **positive and active engagement** with the evaluation process. Interview length ranged from 30-60 minutes, with all stakeholders taking an active interest. The evaluators managed to interview at least three quarters of the individuals on the original list of core team members provided by the National Team, barring those who had moved on to other posts. Stakeholders included individuals from the HSCPs, NHS, as well as third sector organisations.
- The evaluators have **attended end-of-project and Programme events** which have supported the findings in the evaluation.
- This evaluation has hugely benefited from the fact the Pathfinders had **embedded evaluation in project delivery using OutNav.** Consequently, there has been a wealth of relevant data to draw on and analyse as part of this evaluation.

There have also been some limitations:

- Due to the Covid-19, there has been **significant staff turnove**r in the Pathfinder teams. Consequently, many of the individuals interviewed joined the Pathfinder part way through. However, this has been mitigated by the fact that the National Team commissioned two previous evaluations in 2020 and 2021, ensuring key information from the early phases of the Programme has been captured. In addition, many of the individuals from the third sector organisations interviewed have been involved from the start.
- During the period of data collection, **the Pathfinders had not yet drawn to a close**. All Pathfinders were in the **last phase of implementation**, namely the 'Deliver' phase of the SAtSD, which had been somewhat delayed due to Covid-19. Consequently, most of the Pathfinders had only recently started the Deliver phase and many of the 'solutions' developed have not yet been implemented fully. This clearly has implications for the evaluation in terms of being able to draw robust evidence-based findings on the 'impact' of the Pathfinder solutions on the lives and wellbeing of people. This has been mitigated in the evaluation by working closely with the Pathfinders in the final phase of delivery, attending end-of-project/Programme events and helping them to develop outcome maps, and monitoring and evaluation plans to map out and monitor the intended impact of the solutions going forward.
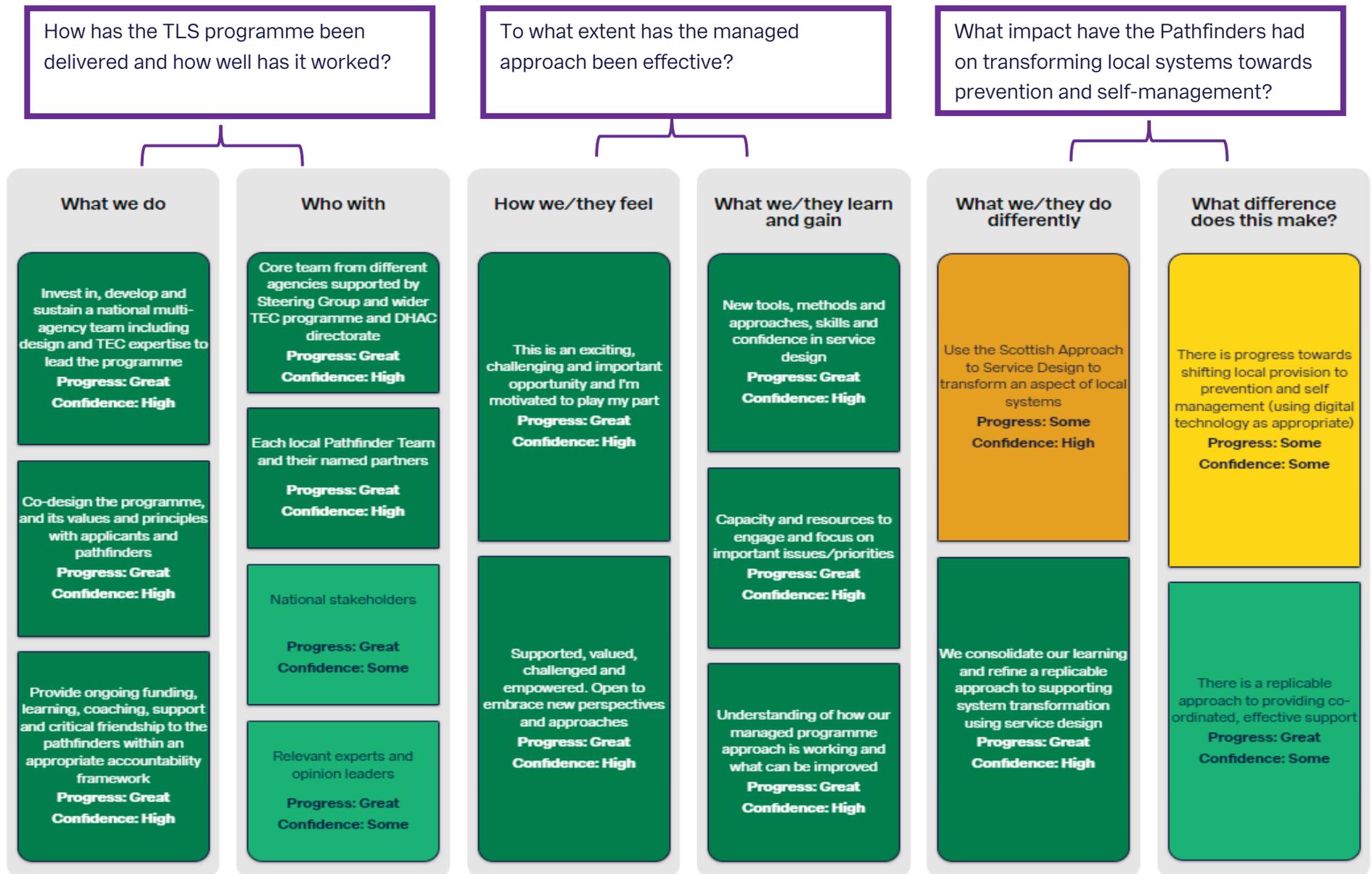
4.0 Evaluation findings

4.1 Overview

The following section outlines the overall findings of the final evaluation. It addresses the following three main evaluation questions and sub-questions. These evaluation questions allow us to test the Programme's outcome map (theory of change), the underlying assumptions, as well as the extent to which progress has been made against the outcome map (see Figure 7).

Table 3. Main evaluation questions and sub-questions and summary of progress

Main Question	Sub-Questions	Summary of Progress[16]	Section in report
How has the TLS Programme been delivered? How well has it worked?	• What processes and structures have been put in place at the Programme level contributing to the effective delivery of the Programme? • Have effective monitoring, evaluation and learning processes been put in place? • Are there areas for improvement?	**Great Progress** **High Confidence**	4.2
To what extent has the managed approach been effective?	• Is there evidence that the TLS Programme support has been deemed valuable by participating Pathfinders? • To what extent has the capacity of the Pathfinders been supported to deliver the Programme? • Is there evidence to suggest there is a replicable approach to providing co-ordinated, effective support to implement the SAtSD to transform local systems?	**Great Progress** **High Confidence**	4.3
What impact will the Programme have on transforming local systems towards prevention and self-management?	• How and to what extent have the Pathfinders used the Scottish Approach to Service Design? • Is there evidence of change in the wider health and social care system in local areas? • What difference are the Pathfinders making? • What have been the key enablers and barriers to impact?	**Some Progress** **Some Confidence**	4.4

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[16] These relate to the colours in the outcome map in Figure 7. For the full evidence standards see Appendix 7.

How has the TLS programme been delivered and how well has it worked?

To what extent has the managed approach been effective?

What impact have the Pathfinders had on transforming local systems towards prevention and self-management?

What we do

Invest in, develop and sustain a national multi-agency team including design and TEC expertise to lead the programme
Progress: Great
Confidence: High

Co-design the programme, and its values and principles with applicants and pathfinders
Progress: Great
Confidence: High

Provide ongoing funding, learning, coaching, support and critical friendship to the pathfinders within an appropriate accountability framework
Progress: Great
Confidence: High

Who with

Core team from different agencies supported by Steering Group and wider TEC programme and DHAC directorate
Progress: Great
Confidence: High

Each local Pathfinder Team and their named partners
Progress: Great
Confidence: High

National stakeholders
Progress: Great
Confidence: Some

Relevant experts and opinion leaders
Progress: Great
Confidence: Some

How we/they feel

This is an exciting, challenging and important opportunity and I'm motivated to play my part
Progress: Great
Confidence: High

Supported, valued, challenged and empowered. Open to embrace new perspectives and approaches
Progress: Great
Confidence: High

What we/they learn and gain

New tools, methods and approaches, skills and confidence in service design
Progress: Great
Confidence: High

Capacity and resources to engage and focus on important issues/priorities
Progress: Great
Confidence: High

Understanding of how our managed programme approach is working and what can be improved
Progress: Great
Confidence: High

What we/they do differently

Use the Scottish Approach to Service Design to transform an aspect of local systems
Progress: Some
Confidence: High

We consolidate our learning and refine a replicable approach to supporting system transformation using service design
Progress: Great
Confidence: High

What difference does this make?

There is progress towards shifting local provision to prevention and self management (using digital technology as appropriate)
Progress: Some
Confidence: Some

There is a replicable approach to providing co-ordinated, effective support
Progress: Great
Confidence: Some

In Figure 7, the colours in the outcome map are an assessment of progress against the map (Green = Great progress, Amber = Some Progress, Red = Low progress), the depth of colour indicates the level of confidence in the data (the deeper the colour, the higher the confidence in the data). A full explanation of the evidence standards and criteria applied in this assessment are included in Appendix 7.
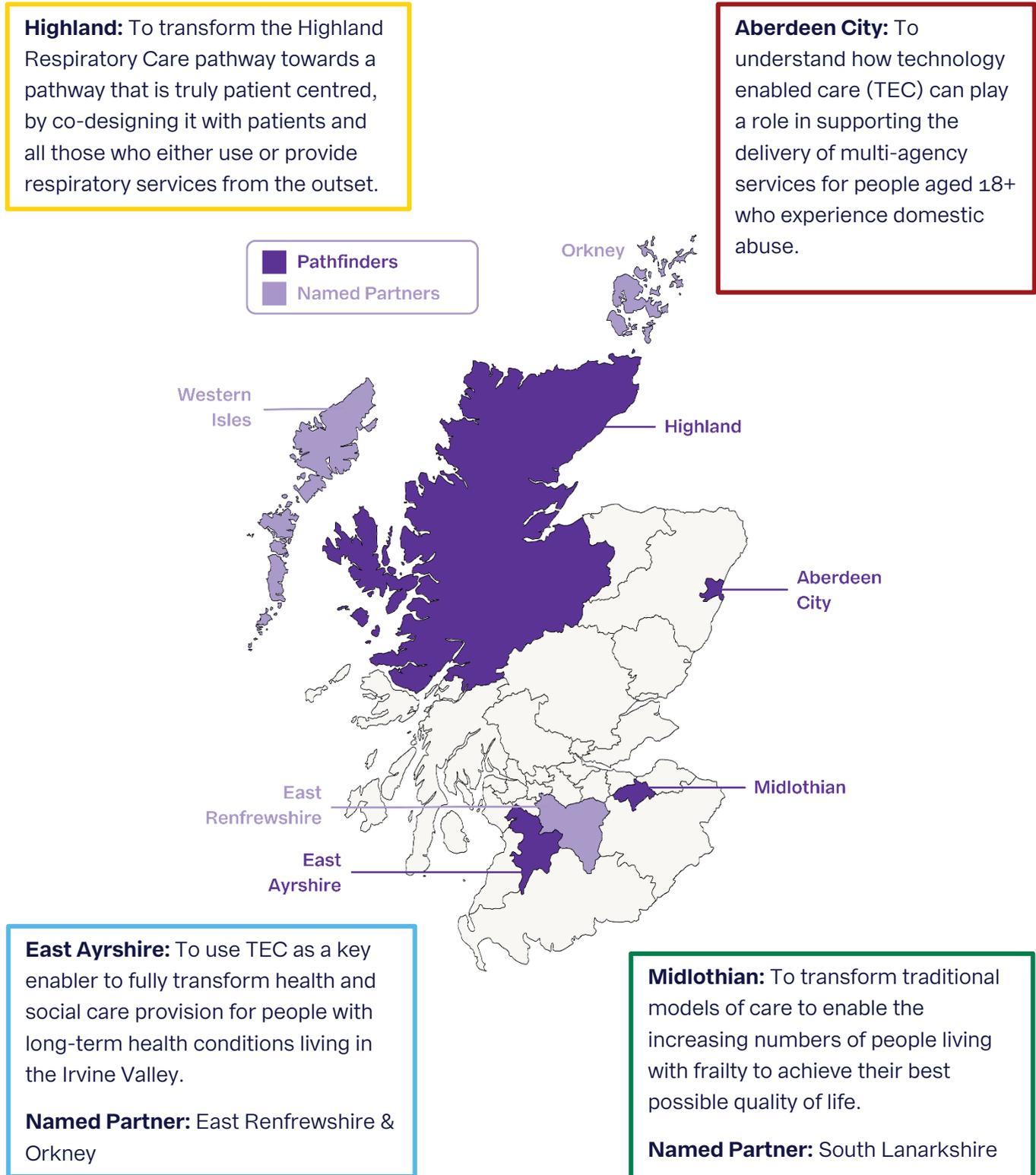
4.2 How has the TLS Programme been delivered and how well has it worked?

Section 4.2 explores how the TLS Programme has been delivered and how well it has worked. It focuses on the process and structures that have been put in place to deliver the Programme and how effective they have been.

Table 4. Key findings: How has the TLS Programme been delivered and how well has it worked?

| Key Findings: |
|---|
| **Overall, innovative and effective structures and processes have been put in place at the Programme level, resulting in the effective delivery of the Programme.** The design of the Programme was highly innovative, and the Programme has been well-managed by the National Team. The focus on equal partnerships has been an important aspect of the Programme and has contributed to the Programme achieving its objectives. The National Team has provided proportionate oversight of the Programme and introduced mechanisms to ensure a sustained focus by the Pathfinders on personal outcomes. The Named Partners have focused on delivering tangible solutions, which leverage TEC to support people to better manage their health and wellbeing, based on existing evidence.
The value of the Named Partner approach should be explicitly seen as potentially providing a future replicable approach to build capacity across several different HSCPs and localities with limited resources. The Pathfinders needed a clearly delineated inception phase that was long enough to allow for the set-up of their projects. Stakeholders described the need to create the 'right conditions' at the start in terms of having the right level of leadership engagement at the outset. Finding the right balance of skills and expertise within the Pathfinder teams themselves has been challenging. |

Figure 8. Transforming Local Systems Pathfinders and their areas of focus

Highland: To transform the Highland Respiratory Care pathway towards a pathway that is truly patient centred, by co-designing it with patients and all those who either use or provide respiratory services from the outset.

Aberdeen City: To understand how technology enabled care (TEC) can play a role in supporting the delivery of multi-agency services for people aged 18+ who experience domestic abuse.

Pathfinders
Named Partners

Orkney

Western Isles

Highland

Aberdeen City

Midlothian

East Renfrewshire

East Ayrshire

East Ayrshire: To use TEC as a key enabler to fully transform health and social care provision for people with long-term health conditions living in the Irvine Valley.

Named Partner: East Renfrewshire & Orkney

Midlothian: To transform traditional models of care to enable the increasing numbers of people living with frailty to achieve their best possible quality of life.

Named Partner: South Lanarkshire

4.2.1 What processes and structures have been put in place at the Programme level contributing to the effective delivery of the Programme?

The TLS Programme was co-designed with HSCPs who were invited to two workshops in what was described as a Programme 'discovery' phase. At the end of the discovery phase, four main place-based Pathfinders were funded: Aberdeen City, East Ayrshire, Highland, and Midlothian; as well as four Named Partners: East Renfrewshire, Orkney, South Lanarkshire and Western Isles. The Scottish Government set up the Programme such that the Pathfinders would be supported by a 'National Team', to learn about service design, tools and methods and to take a person-centred approach to designing solutions to problems that meet the needs of people. The Pathfinders consisted of partnerships drawn from HSCPs, NHS, primary and secondary care, the third sector, and academia. They explored specific themes or issues identified as of relevance and import to the local area. Aberdeen City focused on domestic abuse, East Ayrshire on long-term health conditions, Highland on respiratory services, and Midlothian on frailty.

Figure 9. The Transforming Local Systems Programme structure
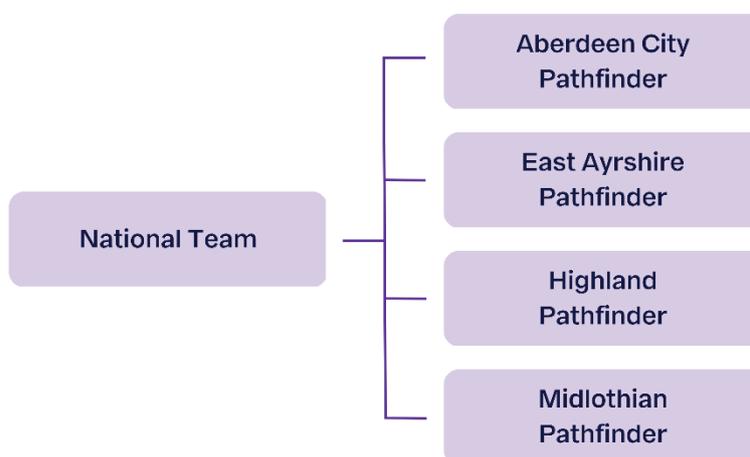
The design of the Transforming Local Systems Programme was highly innovative. It brought together new thinking on Technology Enabled Care (TEC) and service design (encapsulated in the SAtSD) as well as responding to the newly made commitments in the 2018 Digital Health and Care Strategy. The concept of the Programme where Pathfinders are supported by national organisations to adopt the SAtSD to transform local services with digital technology was completely new at the time and remains novel.

> " [N]o one was really doing anything like this at the time in government or in healthcare … so we were very much doing something completely new and we were quite open about that from the very beginning."
> - National Team Stakeholder

The process of involving stakeholders in early co-design and the focus on four key principles: Person, Place, Partnership and Personal Outcomes was important during the early design phase of the Programme. These four key principles as well as the fundamental focus on the use of

the SAtSD to transform health and social care, were an essential guide for the co-design of the Programme. Fourteen of the thirty-two HSCPs that submitted an expression of interest, were invited to co-design workshops and were given seed funding to support the development of their proposals.[17] Maintaining a focus on key principles while co-designing a programme was important in building a shared understanding of the programme. Additionally, the strong focus on equal partnerships emerged from the co-design process. While clearly challenging for some, as seen in the Phase One evaluation report, the co-design process has been highly valuable. The Pathfinders have remained committed to the core principles of the Programme throughout and committed to the Programme, despite the challenges presented by the pandemic. One stakeholder described the co-design process as being critical to this.

> **"** One of our theories of change was that if you gave the Pathfinder the option to say this is the area we're going to focus on, that it would be an important strategic area for them and that they would bring with them the rest of their partnership because we recognise that a) anything they did it was going to be a lot of work and b) it needed to be embedded as a solution going forward, so giving them the option to choose the area of focus was a deliberate strategy to get that stickability. I think it's paid huge dividends. The commitment of the Pathfinders has been fantastic, really, really amazing all the way through the Programme, even with changes of personnel."
>
> -   National Team stakeholder

Figure 10. The principles of the TLS Programme. The 4Ps: Person, Partnership, Place and Personal Outcomes
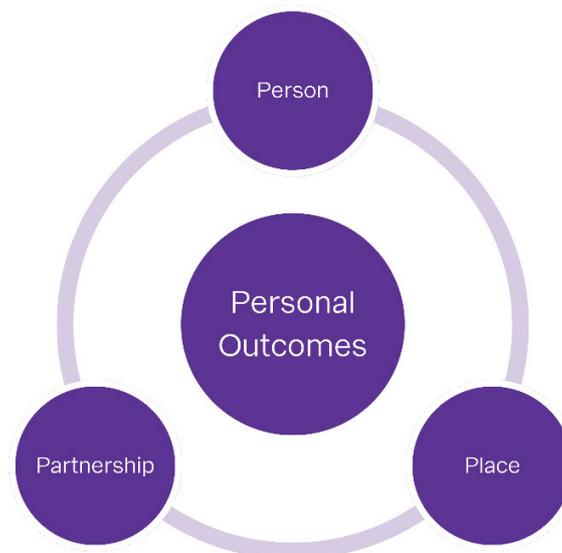
The principle of *equal* partnership within the Pathfinder is another forward-thinking aspect of the Programme's design. The evaluation finds that this has been important in the Programme

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[17] V2, J. and Falconer (2020). TEC Transforming Local Systems (TLS) Pathfinder Programme Phase 1 Evaluation: From Concept to Pathfinders. [online] Available at: link [Accessed 21 Apr. 2023]

achieving its objectives. The Programme emphasised the need for the Pathfinders to establish broad partnerships across HSCPs, NHS and third sector organisations, where the latter were also funded. As highlighted in the 2019 Discovery End Phase report produced by the National Team: "A strong priority was placed on as broad a partnership as possible to encourage innovation, holistic person and 'community' focus and accountability for results and for resources."[18] Despite this emphasis on equal partnerships, the implementation of this was not initially straightforward, with some applicants including third sector partners only after some back and forth with the National Team. One Pathfinder, initially slow to include the third sector, now cites their involvement as integral to the Programme. In a Shared Learning Event held in Edinburgh in September 2022, Pathfinder members agreed that the inclusion of the third sector partners was critical to the success of the Programme. Several third sector partners interviewed expressed feeling like equal partners.

> 66 A game changer including third sector in everything"
> - Stakeholder attending the Shared Learning Event

> 66 I would say we were equal partners in the decision making on how it was going forward."
> - Third sector partner

The need for additional encouragement from the National Team for equal partnerships to be established highlights, firstly, the approach somewhat clashed with how HSCPs were accustomed to delivering projects, and secondly, the importance of the National Team in taking a 'managed approach' to the Programme and ensuring the core principles of the Programme were upheld. Going forward, the evaluation finds that it is important that partnerships of this nature continue to be encouraged in nationally funded programmes and that structures and processes are put in place to establish them. These could include, for example, setting up 'National Teams' similar to that in the TLS Programme or establishing guidance that clearly outline the core principles of the programme, and mechanisms to ensure they are upheld.

The Pathfinders have been encouraged to engage with a wide variety of partners beyond those initially involved in the proposal stage. The 'core' group of partners for each Pathfinder are included in Table 5. However, at each phase of the SAtSD, the Pathfinders have engaged a variety of different partners and stakeholders. Most important among them are the people with lived experience, clinicians, and healthcare practitioners from a wide range of services and sectors (for example ambulance, leisure, housing), small community organisations (such as those that were engaged by the East Ayrshire Pathfinder) and specialist and generalist organisations (such as those engaged in the Aberdeen Pathfinder).

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[18] Scottish Government (2019). Discovery End Phase Report Final. [Internal Document].

Table 5. Pathfinder core partners

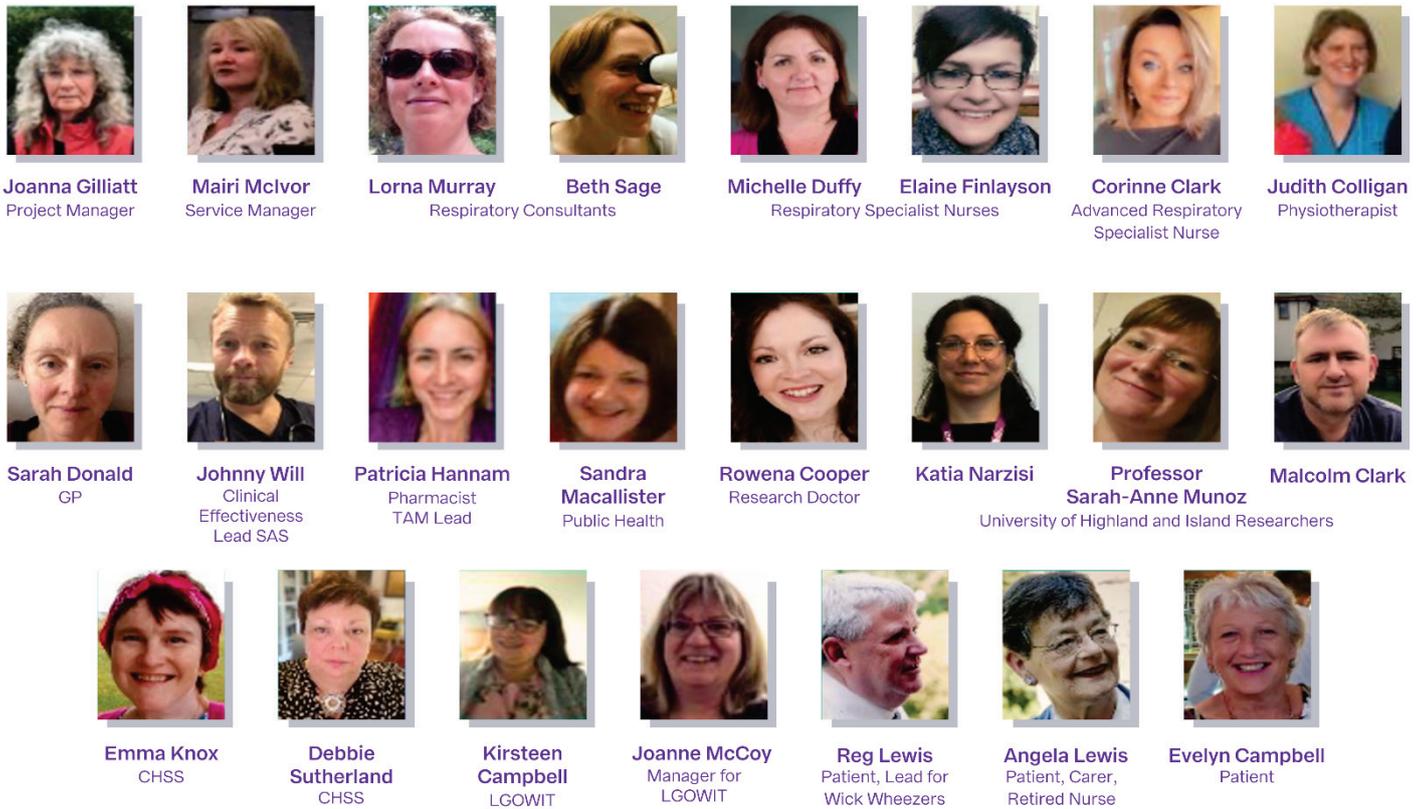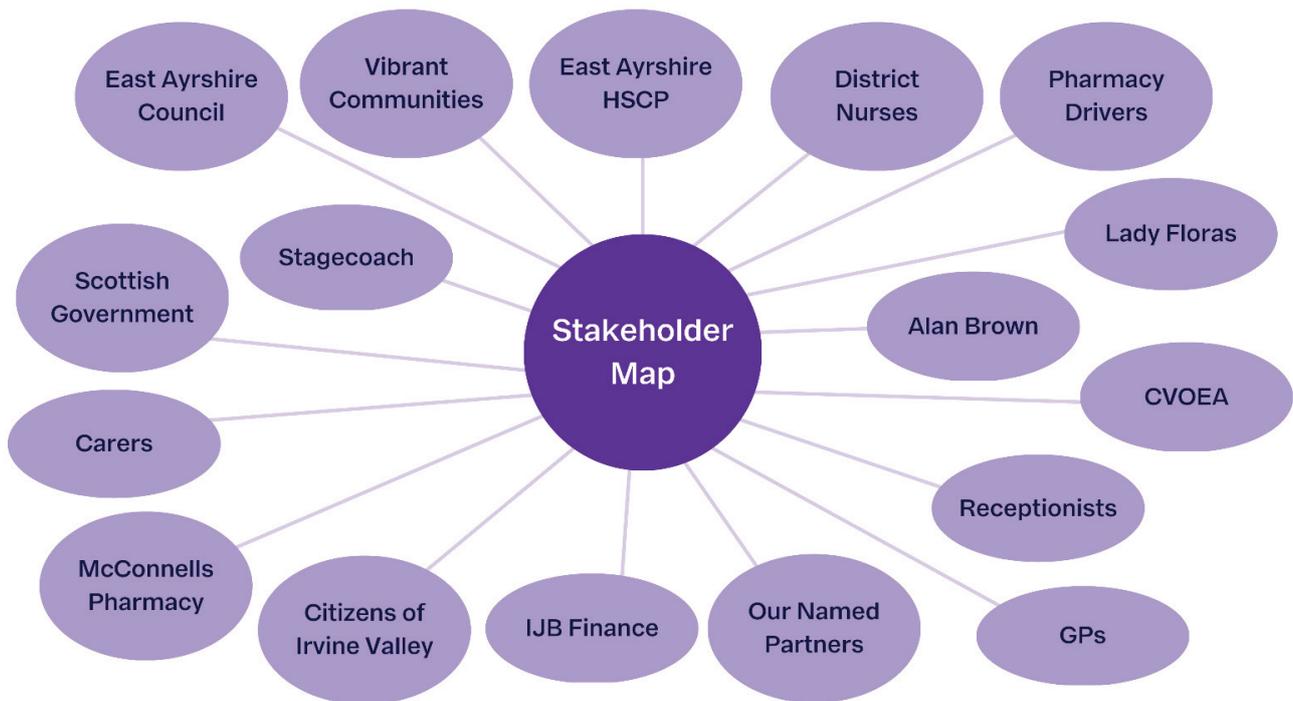| Pathfinder	Partners
Aberdeen City	• Aberdeen Council for Voluntary Organisations (ACVO) • Aberdeen Health and Social Care Partnership • Snook • Steering Group: Aberdeen HSCP (Social Work, Wellbeing and TEC), ACVO, NHS Grampian, Violence Against Women Partnership, Adult Public Protection, Safe Lives, Snook
East Ayrshire	• East Ayrshire HSCP, Thinking Differently Team, and Clinical Director • Primary Care Multi-Disciplinary Teams (MDTs) in Irvine Valley • Council of Voluntary Organisations (CVO) East Ayrshire
Highland	• NHS Highland's Technology Enabled Care (TEC) team • University of Highlands and Islands (UHI), Division of Rural Health and Wellbeing • NHS Highland acute and community respiratory clinicians including research doctor • Let's Get On With It Together (LGOWIT) • Chest Heart and Stroke Scotland (CHSS)
Midlothian	• Midlothian HSCP • The Red Cross • Voice of Carers Across Lothian (VOCAL) • Digital Health & Care Innovation Centre (DHI) • The Glasgow School of Art

Figure 11. The Highland Pathfinder core team

Joanna Gilliatt
Project Manager

Mairi McIvor
Service Manager

Lorna Murray
Respiratory Consultants

Beth Sage

Michelle Duffy
Respiratory Specialist Nurses

Elaine Finlayson

Corinne Clark
Advanced Respiratory
Specialist Nurse

Judith Colligan
Physiotherapist

Sarah Donald
GP

Johnny Will
Clinical
Effectiveness
Lead SAS

Patricia Hannam
Pharmacist
TAM Lead

**Sandra
Macallister**
Public Health

Rowena Cooper
Research Doctor

Katia Narzisi

**Professor
Sarah-Anne Munoz**
University of Highland and Island Researchers

Malcolm Clark

Emma Knox
CHSS

**Debbie
Sutherland**
CHSS

**Kirsteen
Campbell**
LGOWIT

Joanne McCoy
Manager for
LGOWIT

Reg Lewis
Patient, Lead for
Wick Wheezers

Angela Lewis
Patient, Carer,
Retired Nurse

Evelyn Campbell
Patient

Figure 12. East Ayrshire stakeholder map

The concept of the 'Named Partner' emerged after the application process and 'discovery phase' in response to requests from participants. After the discovery phase, participants agreed the Programme would be more impactful if few large projects were funded rather than many smaller projects. However, some of the smaller projects were deemed valuable, if not viable on their own. It was agreed by participants that a set of projects (Named Partners) would be given a significantly lowered amount of funding (between 10K -15K in year one and two) and these would be paired with the Lead Pathfinders. These pairings were intended to enable the Named Partners to benefit from the main Pathfinders, in terms of building capacity and understanding of the SAtSD, and capability in programme design and delivery. The Named Partners were also envisaged as a 'Critical Friend' to the Pathfinders, contributing skills or assets or supporting the main Pathfinders in the delivery of their work. The four main Pathfinders and their Named Partners are included in Box 1 below.

Box 1. Named Partners

Aberdeen City: **Western Isles**

East Ayrshire: **East Renfrewshire and Orkney**

Highland: **None**

Midlothian: **South Lanarkshire**

Glasgow City had been engaged as a Named Partner for Midlothian in the FY 2019/20 but withdrew from the Programme the following year due to challenges and changes in priority associated with the pandemic.[19] The Highland Pathfinder also did not have a formal Named Partner but established a good partnership with NHS Ayrshire and Arran through the East Ayrshire Pathfinder.

Given the small size of the Named Partners, they have not been assessed in the same way in this evaluation as the main Pathfinders. An overview of the main activities, outcomes and solutions of the Named Partners is provided in the report in Appendix 5.

Overall, the Named Partner concept has evolved significantly over the lifetime of the Programme and though it has developed as intended, learning from the approach is valuable. It was initially conceived that the Named Partners would work with the Lead Pathfinders and support them in the implementation of the SAtSD, using learning from the Lead Pathfinders in the delivery of their own projects. However, the Named Partners suffered delays in set up and were significantly impacted by Covid-19 due to their small size. Additionally, it became clear early on that the Named Partners had different priorities from the Lead Pathfinders. For example, where Midlothian was focused on frailty, South Lanarkshire was focused on TEC and specifically, community alarm service redesign.

Unlike the Lead Pathfinders, the Named Partners conducted limited primary research or discovery work as part of the SAtSD. This should be expected given the limited funds. Overall, the Named Partners have focused on delivering tangible solutions, which leverage TEC to

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[19] Scottish Government (2021). TLS Programme Named Partner Update for the Steering Group. [Internal Document]

support people to better manage their health and wellbeing, based on existing evidence. East Renfrewshire and Orkney set up a Tech Peer Mentor post, using learning from East Ayrshire, to ensure people, health professionals in the acute sector, and Voluntary Sector organisations were fully informed of how patients could be supported at home, and to gain a better understanding of the technologies available to help them effectively manage their health conditions at home. South Lanarkshire established a Tech Zone in its Health and Social Care Campus in Blantyre, where people can engage with and learn about TEC. Western Isles specifically responded to Covid-19 and supplied iPads to Care Homes in the Western Isles, enabled with NHS Near Me technology, to allow people to be better connected and to alleviate some of the negative impacts of lockdown to well-being.

The value of the Named Partner approach should be explicitly seen as potentially providing a future replicable approach of using a hub and spoke model to build capacity across several different HSCPs and localities with limited resources. The hubs are the Lead Pathfinders, and the spokes are smaller projects attached to the main Pathfinders that benefit from being involved in terms of capacity. The expectation that the Named Partners would be involved in supporting the Lead Pathfinders to implement the SAtSD was unrealistic, due to time and resource constraints. The Named Partners, however, have all benefited from attending shared learning events and workshops and have a far greater understanding, capacity, and capability of applying SAtSD. Some individuals noted plans to use the SAtSD in future projects. South Lanarkshire for example has significant funding to implement the community alarm service redesign, where they plan to apply the SAtSD.

The Scottish Government, in setting up the Programme, applied the principle of partnership to itself too. The 'National Team' set up to support the Pathfinders consisted of the Scottish Government's Digital Health and Care Directorate, Healthcare Improvement Scotland's ihub, the Office of the Chief Designer, Scottish Government Mental Health and Social Care Directorate and the Digital Office for Local Government. The composition of the National Team has evolved over time as the needs and requirements of the Programme have changed.

> **"** Actually doing this as a partnership ourselves too is practising what we preach."
>
> - National Team Stakeholder

The requirement for the Pathfinder's applications to be signed by senior leaders ('Executive Sponsors') was a clear effort by the National Team to ensure there was a level of buy-in and scrutiny into the Pathfinders' work at a senior level from the very beginning. Additionally, the National Team required senior executives to join regular Pathfinder review meetings. This high-level engagement with senior leaders has been critical to the progress made by the Pathfinders, however it was affected by the pandemic and engagement has been inconsistent throughout the lifespan of the Programme.

> ❝ We required … that the application was signed by at least two partners from different sectors … That it was signed by Chief Officers to get senior engagement and we continued that connection with Exec leads, Senior Officers, Chief Officers, all the way through the Programme to get that buy-in into what was going to emerge as results."
>
> - National Team stakeholder

Despite the significant unanticipated delays in project delivery due to Covid-19, the National Team provided consistent support throughout, enabling the Pathfinders to maintain progress despite the challenges and disruptions caused by the pandemic. During Covid-19 there was significant reduction in capacity. Many team members were pulled off the projects into other areas of crisis management or national projects. Covid-19 also removed the Chief Officer focus from review meetings with the Pathfinders.[20] The staff turnover and the hiatus in project activities did impact the Pathfinders' momentum and consistency of activities. When staff were eventually reappointed, each member had to be re-inducted by the National Team and heavily supported to get up to speed with project activities and to apply the SAtSD. Overall, however, at the time of the stakeholder interviews for this final evaluation, the Pathfinders appeared to have recovered and adapted to the pandemic. The Pathfinders responded well by shifting user engagement online for a period and were supported by the National Team to apply new tools and methods. The shift online, however, has impacted the breadth of engagement, specifically, impacting the ability of the Pathfinders to engage with people with lived experience. New staff, however, were bringing in new energy and direction to the Pathfinders. All the Pathfinders were either in or shortly to commence the Deliver phase at the time of interview.

> ❝ It's easy to forget and minimise in retrospect, but overnight most activity on the programme stopped dead. People were redeployed and never came back. Handover to those remaining very junior and isolated members of staff was minimal. The impacts of it continued to be felt for over 2 years."
>
> - National Team stakeholder

4.2.2 Have effective monitoring, evaluation and learning processes been put in place?

The National Team has provided proportionate oversight of the Programme and introduced mechanisms to ensure a sustained focus by the Pathfinders on personal outcomes. Initially, it was conceived that there would be a Gateway review after each phase of the SAtSD. However, findings from the Interim Evaluation showed that the reporting requirements were considered high and disproportionate by the Pathfinders. The process was adapted to include regular reviews with the National Team which still required engagement from senior leadership from the Pathfinders.

In 2020 Matter of Focus was selected by the Pathfinders to provide tailored evaluation support. Matter of Focus worked with the National Team and the Pathfinders to co-develop outcome maps. The outcome maps set out the hypothesised pathways by which the Pathfinders expected to achieve

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[20] TEC Transforming Local Systems Pathfinders Executive Summary Interim Programme Level Evaluation Report. (n.d.). Available at: link [Accessed 21 Apr. 2023].

outcomes through the implementation of each phase of the SAtSD. As part of this process, the National Team and the Pathfinders have been supported to collate data and evidence against the pathways in OutNav in a series of twelve online collective support sessions facilitated by Matter of Focus. The sessions provided an opportunity for teams to share progress with the National Team and with each other, get help with evaluation issues, and have protected time to reflect and evaluate their progress in OutNav. Matter of Focus also supported the Pathfinder teams to develop 'end-of-project' reports based on the information in OutNav. Two of the Pathfinders plan to continue to use OutNav to track the implementation of their solutions going forward.

Embedding evaluation in delivery was recognised by the National Team as critical to ensuring a sustained focus on personal outcomes. Embedded evaluation is, like many aspects of the Programme, an innovative approach. It is a recognition that the Pathfinders are working in complex environments and will need to be adaptive and flexible to achieve their outcomes. Consequently, they need an evaluation approach that is suited to the delivery approach. Embedded or developmental evaluation occurs when evaluation becomes embedded in Programme/project development and implementation. It is the process of "facilitat[ing] systematic data-based reflection and decision making in the developmental process" and is well suited to "guide adaptation of projects and Programmes to emergent and dynamic realities in complex environments."[21]

This support has contributed to enhancing the capacity of the Pathfinders in evaluation. Several individuals interviewed spoke of how they valued the evaluation support offered and the use of the software tool OutNav to collect data, monitor and evaluate their work. Several individuals were particularly assiduous in utilising the software and approach.

> 66 The programme was great because it was very organised, very orderly and using the Matter of Focus, OutNav program really helped me when I came into the programme because it allowed me to kind of go and look at what was needing done, where you know what stepping stones were still "red", what was "amber" ... and what was "green" I didn't need to worry about. And yeah, it was just a great project overall and moving forward on one of the big challenges."
>
> - Pathfinder team member)

> 66 The OutNav software, just love it. Love it. So much so that the local authority I work for now, I'm encouraging them to take it on because it was amazing because it just gave such a clear guide of what I need to do."
>
> - Pathfinder team member)

> 66 I learned a lot ... around the Scottish Approach to Service Design as well and the work with Matter of Focus on evaluation and OutNav."
>
> - Pathfinder team member

Despite the value of embedded evaluation, there is learning that can be drawn from the Programme in improving the approach. OutNav and the tailored support provided by Matter of

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[21] Michael Quinn Patton (2011). Developmental evaluation: applying complexity concepts to enhance innovation and use. New York: Guilford.

Focus were brought in approximately a year after the start of the Programme, and unfortunately just before the country entered lockdown. As a result, getting the understanding and buy-in from all Pathfinders on the approach and the use of the tool took time. In addition, with staff turnover, due to Covid, short-term contracts and ordinary churn, some Pathfinders lost momentum in maintaining a consistent approach to data collection and monitoring. The introduction of a new evaluation approach alongside a novel approach to service design was also seen as challenging.

> " An evaluation framework with Matter of Focus from the very beginning would have been great, but the fact that came in part way through was quite challenging. And there was, I guess, there was also a lot of new things being introduced to everybody, a new way of doing evaluation, a new way of working with design and they were like … 'you're asking so much of us.' So that was really challenging too."
>
> - National Team Stakeholder

Overall, the Pathfinders have all used OutNav to collate and analyse data, providing significant data for analysis to support this evaluation.

4.2.3 Are there areas for improvement?

On the whole, innovative and effective processes and structures have been put in place to ensure the successful delivery of the Programme. However, there are several areas highlighted in stakeholder interviews where it was felt improvements could be made.

The Pathfinders needed a clearly delineated inception phase that was long enough to allow for the set-up of the complex projects. Most stakeholders interviewed described the set-up phase as taking a long time. Others described the Discover phase as taking too long. One stakeholder reflected that the Discover phase felt so long because it had merged with the set-up phase. The Pathfinders also needed to gain ethical approval before starting user research which contributed to delays.

> " If we acknowledged that it always takes six months to create the conditions to get a programme started, it just does. If you're going to appoint staff, if you're going to apply for ethical approval, if you're going to do the design piece properly and get all the right people engaged and set your governance up and explain to people what this is, it takes time."
>
> - National Team stakeholder

> " It has to be said that … it did take quite a long time to get the project set up, it took quite a long time to get people in post, and to get the ethical approval and so on."
>
> - Pathfinder team member

The consequence of not establishing a clear set-up phase is this places pressure on project teams and confusion over whether the project is on track. The length of time it took to set up may be one

reason (in addition to the delays caused by the pandemic) that all the Pathfinders were delayed in commencing the Deliver phase.

Other national stakeholders described the need to create the 'right conditions' at the start in terms of having the right level of leadership engagement at the outset. Some stakeholders felt that more needed to be done at the beginning of the Programme to bring in leadership, whether that was from within the National Team or from the HSCPs themselves. While all proposals needed to be signed off by senior management, and senior management have attended review meetings, senior leaders were not engaged in the initial co-design workshops and senior buy-in has not been consistent across the Pathfinders.

> **"** [Set] the right conditions from the outset ... You need to invest significant effort in setting the right conditions, particularly from a senior leadership level. I think there is a desire not to focus too much leadership at the beginning because it sets the wrong tone, like you're micromanaging ... But I think a bit more senior leadership around improvement initiatives at the beginning to the conditions right ... [is needed]."
>
> - National Team stakeholder

> **"** I think there's quite a lot of valuable stuff that we've learned in terms of what sort of buy-in you need from managers, how long it's going to take to do, even the discovery phase and getting that built in."
>
> - National Team stakeholder

The Pathfinders required more time and support from the National Team than was anticipated, particularly in the early implementation stages of each phase of the SAtSD. The Pathfinders required significant support in understanding and applying the SAtSD, which was ultimately provided by the National Team. This was exacerbated by the fact there was staff turnover in the Pathfinders meaning the National Team were continually engaged in building the capacity of new staff on the SAtSD. The high degree of support needed from the National Team may impact the replicability of the model. Much of the learning around the effective implementation of the SAtSD has been captured by the National Team and is being published as an online person-centred resource with case studies and templates on the SAtSD. The availability of this resource may reduce the need for an intense programme of support for projects to implement the SAtSD.

Finding the right balance of skills and expertise within the Pathfinder teams themselves has been challenging. While a multi-sectoral focus was a prerequisite of the Pathfinders, less guidance was placed on the composition of the team. In dealing with complex issues, multi-specialisms are required, from service design, data analysis, visual data representation, user research, to information governance. With service design for example, many individuals involved in the Pathfinders had little to no expertise. Some of the Pathfinders brought in external service design expertise by partnering with organisations such as DHI and Snook. Others relied more heavily on the National Team. One stakeholder noted that it made sense for the National Team to provide this support due to the specialist nature of the skill sets required and if all expertise was outsourced, there would be limited capacity built within teams. The National Team model therefore holds value in as much as it is a means of providing capacity building support for the Pathfinders. However, there is a need to

establish a balance between the realistic possibilities of building capacities within teams and ensuring that specialist niche skills are available within the team to provide the multidisciplinary skill set needed to address complex problems. There may have been value in requiring Pathfinders to establish a multi-disciplinary approach at the outset by forging multiple partnerships and bringing in a diverse team, recognising the value of a multidisciplinary approach in addressing complex problems.

> **"** If you re-set this up from scratch would you have actually said one of the core people that we need to have in the core team is an information governance specialist so that each problem they would know the clues and the tricks to unlocking some of those? … An IG expert could have seen them coming."
>
> - National Team stakeholder

> **"** [A lesson is] possibly embed people more within the partnership in terms of service design expertise. So you know here's half a day a week of a service designer and they will sit in your programme team and work with you."
>
> - National Team stakeholder

4.3 To what extent has the 'managed' approach been effective?

A key assumption of the TLS Programme is that the Pathfinders supported by the National Team in a 'managed' programme of support will be able to implement the SAtSD effectively to transform local systems. This section assesses the degree to which the managed approach has been effective. It assesses whether programme support has been deemed valuable by the Pathfinders and the extent to which the National Team have built the capacity of the Pathfinders to effectively implement the SAtSD.

Table 6. Key findings: To what extent has the 'managed' approach been effective?

Key Findings:
Overall, the 'managed' approach taken by the National Team has paid dividends. The National Team have navigated the challenges involved in ensuring accountability of funds, while guiding the project teams, building their capacity, and being flexible and responsive to the needs of the Pathfinders. • The National Team has supported the Pathfinders through each of the phases of the Scottish Approach to Service Design, providing technical expertise, operational support, and critical friendship. • The role played by National Team has been highly regarded and appreciated by the Pathfinders and there is strong evidence to suggest that involvement in the TLS Programme has been extremely valuable for the Pathfinder teams. • The National Team have effectively built the capacity of the Pathfinders to implement the SAtSD.

- The model of the National Team supporting and managing the Pathfinders has been very effective. The National Team's managed approach has worked well and has been important for the effective delivery of the Programme and its ability to continue throughout the pandemic.
- While the specific role played by the National Team in delivering this Programme can be considered effective, there are some challenges which impact the replicability of the approach.

4.3.1 Is there evidence that the TLS Programme support has been deemed valuable by participating Pathfinders?

There is strong evidence to suggest that involvement in the TLS Programme has been extremely valuable for the Pathfinder teams. The majority of stakeholders interviewed spoke with enthusiasm about the Programme. Many expressed that they had learned a great deal from their involvement in the Programme. Almost all stakeholders said they had learned a lot about the Scottish Approach to Service Design in general, and specifically about the importance and value of user participation and co-design. For many, this was the first time they had applied the SAtSD and the first time they had consistently engaged citizens at such an early stage of project development and service design. For many, this was the key feature of the SAtSD that really inspired them, personally and professionally, and was seen as the keystone for ensuring services were designed to be outcome-focused and person-centred. It was also seen as the key differentiator of the SAtSD from other service design or improvement models to public services.

> I learned a lot … around the Scottish Approach to Service Design as well and the work with Matter of Focus on evaluation and OutNav. I've also learned about a huge range of other areas of work I hadn't been involved with before through being involved in the programme."
>
> - Pathfinder team member

> I think for the Local Authority using this, the Scottish Approach was fantastic because [our Local Authority] have a strong ethos and are always involved in the community."
>
> - Pathfinder team member

> I really like the approach, I think it's brilliant … because folk, like myself, could have preconceived ideas of what customers want, of what they need. But [with this] you work with [people] to come up with solutions and ideas of how they can be resolved. So I think it's brilliant."
>
> - Pathfinder team member

> The value has been that it has provided the time and the space and the resources for this piece of work to be done and for some real developments [to have occurred]."
>
> - Pathfinder team member

> " A key part of that should be, which I think this Scottish Approach to Service Design brings in, is the bit about it really being around the individual. And … those that are impacted."
>
> - Pathfinder team member

> " The challenge around the Scottish Approach to Service Design is that you will always have people – and sometimes I'll be one of them - who'll say 'I know what to do" and they'll jump in and do it. But is it always the right thing to do? Through the TEC Pathfinder, there's a focus on developing services with and for people, a truly person-centred approach."
>
> - Pathfinder stakeholder

For some, while the SAtSD was not novel as a concept, the emphasis on creating a partnership of equals was highly valued.

> " The discovery stage research I, sort of, took as given, but I think some of the other elements of the approach we were encouraged to take have been very powerful. I don't know if the wording 'partnership of equals' appears in the Scottish Approach to Service Design as such, but we were very much encouraged to take that approach, so we included people from health, third sector, housing … and patients themselves obviously, and worked as a partnership of equals, and we've had a lot of people with very different skills and backgrounds and knowledge involved - having people with such diverse experiences working together consistently over quite a long period of time has been very powerful."
>
> - Pathfinder team member

> " We as a third sector organisation felt equal in the development of the project … So we felt listened to and included."
>
> - Third sector partner

Many stakeholders noted they would use the SAtSD again, and several people had moved into different roles and were now actively implementing it outside of the Pathfinder and more broadly across their organisations (see Section 4.4.2). However, a number of stakeholders, while noting their enthusiasm for the approach, felt it would be unlikely and infeasible for them to apply it with such purity in the future, but noted they would certainly adopt its principles, particularly in terms of the approach to user engagement. One issue was the length of time needed to deliver the approach.

> **"** Somebody should develop a smaller scale version of the Scottish Approach to Service Design. In the real world it isn't possible for projects, which require significant funding and real ongoing commitment from a wide range of professionals and patients, to go on for 3 1/2 years. The world doesn't work like that. A scaled approach to the SAtSD should be developed, with advice and a toolkit for how to achieve change within a manageable timeframe and on a manageable scale."
>
> - Pathfinder team member

Another issue was the challenges of engaging people with lived experience, particularly seldom-heard or hard-to-reach groups. For some Pathfinders this was more of a challenge than for others, specifically the Aberdeen Pathfinder, but generally across the board this was difficult. However, this should also be understood in the context of the Covid-19 lockdowns. In a review of the Pathfinders' documentation in OutNav, and in stakeholder interviews, the role of the third sector in engaging people with lived experience in the Pathfinder during the Discover phase was seen as critical.

> **"** It's the hard-to-reach patients who are hard to reach - you may get some highly motivated patients who are involved, but are they representatives of patients in the general?"
>
> - Pathfinder team member

Related to this, a number of stakeholders noted that to varying degrees the Pathfinders needed to scale back their ambitions so that they were more realistic and pragmatic in the contexts in which they were being implemented. As such, the blue sky thinking of Discover felt in somewhat stark contrast to the Define and Develop phases which were driven by pragmatism. There were concerns expressed that this would perhaps undermine the buy-in gained from involving citizens and users in the first phase. Some stakeholders, however, pointed out the overriding value of involving citizens nonetheless, not only to ensure services were person-centred but also in raising awareness and influencing behaviour change. Others also noted that some of these issues could be mitigated by ensuring regular feedback loops with citizens throughout the entire process to ensure they were well-informed of the barriers and of progress. This feeding back to citizens has been achieved to varying degrees of success across the Pathfinders; many of the challenges of doing this can be related to Covid-19, time limitations and the difficulty of engaging people with lived experience.

Another key issue mentioned by stakeholders was the cultural shift needed to apply the approach, and the difficulty in asking people to spend time simply trying to 'understand the problem' without making prejudgments or assumptions on what the problems were or the solutions or projects that would need to be delivered. Interviews with stakeholders indicate that this was an issue not only for the third sector who are used to just "getting on with things" but also for senior management in local authorities and in the NHS who, driven by tight timelines and budgets, and traditional project delivery and operational systems, needed to work towards a specified output. In terms of the latter, there was a real need for senior management within local authorities and the NHS to buy into the Pathfinder and the SAtSD, in general, for the outputs to be taken up. The

Pathfinders have managed to achieve this with varying degrees of success (see Section 4.4.2). Stakeholders from third sector organisations involved generally across the board expressed that they had found the Programme valuable, while acknowledging the mental shift needed to be able sit in the problem space for longer than they were accustomed to. Though they also noted that they were used to engaging users and people with lived experience as a matter of course, and therefore could adapt their processes to those required by the SAtSD fairly easily.

> " One of the challenges of SAtSD, you spend a lot of time in the let's not come up with a solution phase, what's our problem …"
>
> - Third sector partner

> " I do really like it, I think it works well. The biggest challenge with it isn't so much how we as the team use it, it's describing it to others and trying to make sure others don't try and solutionise …"
>
> - Pathfinder team member

> " It's always short-term funding, it's always getting on, it's always seize the day and there's such a great aspect to let's get on and do it and there's great agility. But it's how do you embed that agility and innovation long term for long-term outcomes for population areas?"
>
> - Pathfinder team member

A few people from the third sector noted the benefits to business development in the sense that a greater understanding of the SAtSD had been useful in terms of aligning them to the goals of the Scottish Government, enabling them to "speak their language".

> " I think it's been helpful for us as a charity, but also it aligns us to the Scottish Government and the NHS."
>
> - Third sector partner

> " [The service designer] spoke the language better than we did in the third sector to our counterparts in health and social care, and particularly within design forums and working with the government on this Pathfinder we did need to understand that language … why don't we know that language, when actually we've been doing it for years?"
>
> - Pathfinder team member

A few stakeholders spoke of the value of the Programme in terms of their professional development.

> " For me, the Pathfinder was really, really good for [my] professional development. I've now gone on to a more senior position with another local authority. So for me using the Scottish Approach to Service Design and having that very structured project management approach was fantastic and I got a lot of personal learning from it."
>
> - Pathfinder team member

> **"** I gained in-depth knowledge about technology enabled care … and that's given me a new direction in my career."
>
> - Pathfinder team member

4.3.2 To what extent has the capacity of the Pathfinders been supported to deliver the Programme?

The National Team has invested much time and effort in supporting the Pathfinders to deliver their work. The National Team has supported the Pathfinders at every stage of their implementation of the SAtSD. A few members of the National Team noted that the support the Pathfinders needed was to some extent greater than expected. This was particularly the case given the Pathfinders had varying degrees of service design and research expertise in their teams. Aberdeen and Midlothian both engaged external service designers to support them, although due to staff changes this was not consistent throughout. Aberdeen initially had a service designer embedded in the team, who left after a period, leading them to eventually engage the organisation Snook in the final phase. On the other hand, Highland partnered with the University of Highlands and Islands, and so benefited from research expertise. East Ayrshire did not have a research or service design partner. Despite this, East Ayrshire fully embraced the approach and the tools and techniques introduced to them.

It was also initially envisaged that the National Team would deliver one workshop to all the Pathfinders at once for each phase of SAtSD. However, the Team quickly realised after the first all-Pathfinder workshop that the Pathfinders were moving at different paces and that to support them effectively the National Team would need to deliver a - more demanding series of - separate bespoke training workshops (Define, Develop, Deliver) for each Pathfinder.

> **"** [The National Team's role was to] deliver and facilitate all of the engagement and the learning sessions, the workshops we ran with people and [we also provided] subject matter expert[ise] to provide support to the local teams as they were going through the double diamond and working on their projects."
>
> - National Team Stakeholder

> **"** We definitely didn't intend, didn't expect it to be as intensive as it was, and [to] require quite so much support but, no one was really doing anything like this at the time in government or in healthcare - it was all very, very new. And so we were very much doing something completely new and we were quite open about that from the very beginning."
>
> - National Team Stakeholder

Evidence reviewed in this evaluation has shown that the capacity of the individual Pathfinders to deliver the SAtSD has been clearly enhanced. Many of the individuals involved in the Pathfinders had little experience with the SAtSD generally and with user research processes and creative research tools. Much effort was expended by the National Team in building the Pathfinders' capacity around the SAtSD, particularly given the high level of staff turnover across the Pathfinders as each new team member needed to be inducted in the approach. However, on the whole, as seen above, individuals involved in the Pathfinder felt that they had learned a lot about the SAtSD, gained value

from it and in some cases were now in a position to champion it more widely in their organisations (see Section 4.4.2).

Many individuals spoke also of the benefits they gained from being introduced to research techniques and online creative tools for collaboration and sense-making, such as Miro and Mural, which were considered invaluable during Covid-19. Some also spoke of the fact they were continuing to use these tools in lots of different dimensions of their work and described how this often set them apart from others. The East Ayrshire Pathfinder, in particular, enthusiastically adopted many tools and approaches to delivering presentations, workshops and online meetings, to the extent that they were asked by the HSCP senior management to facilitate other HSCP workshops and meetings.

> And so, [I'm] definitely using those principles and I'm using Miro boards and nobody else uses Miro. It's going through that process and it's about gathering up data so that I can then develop these kind of user personas. I'm also planning to do "how might we" [statements], just exactly what we did in Pathfinder."
>
> - Pathfinder team member

> In my day job now as Head of Business Development. I'm pulling quite a lot out of the experience … 'oh I remember when we used Miro for that and it worked really well.'"
>
> - Third sector partner

> I see a mindset shift a lot of the teams, and I see a shift in being more creative, being more visual."
>
> - National Team Stakeholder

> The double diamond worked really well. [But] I think they over-complicated it. There was too much analysis of analysis."
>
> - Third sector partner

On the other hand, a couple of stakeholders interviewed felt that the number of tools they were introduced to was overwhelming.

> We had these workshops when we were being told about research techniques and I hadn't really quite understood, I suppose, that this was coming to people as being novel because to me it isn't novel. I've done research in the past and it's obvious to me that you have to do research to find out what the problem is before designing the solution, but that evidently isn't really obvious within the NHS."
>
> - Pathfinder team member

> I think we used over 8 or 9 different digital tools. Some of them worked really well and some of them not so well. I think more analysis beforehand on what was suitable for this project. As someone, a partner, trying to deliver the

project. I found that quite disruptive, which shiny tool are they going to use today."

- Third sector partner

> The sessions were never about … 'Here's the tools you're going to be using. You **have** to use these, go off and use them.' It was more a case of 'This is the ambition of this phase. Here's a selection of tools that you **could** use …' There are some very typical tools that we use, but actually you don't have to. And I think one of the learnings, one of the takeaways I definitely have, is that I think, there was too much choice for some of them."

- National Team Stakeholder

In general, there was considerable praise for the support provided by the National Team and the appreciation for the Team was widely expressed across the individuals interviewed. In interviews, this related to the support offered by the National Team in terms of increasing their understanding of SAtSD, introducing them to new concepts, creative tools and approaches for user participation, research, and analysis. It also related to the support the National Team gave them to apply those new tools and approaches.

> The National Team were super supportive to the Pathfinder. We used to have a regular catch-up with them and they were very clear in what they were expecting from us. I liked [the National Team's] approach, [it] was very much laid out on the table. This is what we expect, giving us ideas on how we could get there, but […] never authoritative. It was left open to us and support was fantastic. We could drop them an e-mail at any point and they would come back to us, you know, and give us other ideas. The support was amazing and I think as well they were really encouraging."

- Pathfinder team member

The National Team not only provided technical support on the SAtSD and tools but also supported the Pathfinders to apply the philosophy more generally. Evidence from interviews and documentation shows that from the very outset, the National Team adopted the role of what has often been described as a critical friend. The National Team were available at the outset to provide detailed technical guidance and support to the Pathfinders, in terms of the SAtSD. They have also provided a listening ear to the challenges faced by the Pathfinders, offering advice when requested and when needed. For example, all the Pathfinders were strongly encouraged to develop equitable partnerships outside the HSCP or the NHS, particularly with the third sector. Some Pathfinders took to this quickly and others needed more encouragement from the National Team to implement this. Overall, the National Team have given the Pathfinders the time, space and freedom to navigate the complexities of the issues they are exploring, to learn and adapt their approaches, and move towards valid and credible solutions.

> **"** Again, the National Team were really helpful with that because they would come back and say, well, have you thought about this or there were times when we would try something and maybe it wouldn't work and we would adapt it. So they were always keen to learn from us as much us learn from them, which was good because nobody felt afraid to take a risk and try something."
>
> \- Pathfinder team member

The evaluation finds that the 'managed' approach taken by the National Team has paid dividends. The National Team have navigated the challenges involved in ensuring accountability of funds, while guiding the project teams, building their capacity, while being flexible and responsive to the needs of the Pathfinders - a necessity due to the very nature of it being a 'Pathfinder' Programme. The National Team has supported the Pathfinders through each of the phases of the SAtSD, providing technical expertise, operational support, and critical friendship. As expressed in interviews, the role played by the National Team has been highly regarded and appreciated by the Pathfinders.

4.3.3 Is there evidence to suggest there is a replicable approach to providing co-ordinated, effective support to implement the SAtSD to transform local systems?

The model of the National Team supporting and managing the Pathfinders has been very effective. The National Team's managed approach has worked very well and has been important for the effective delivery of the Programme and its ability to continue throughout the pandemic. Specifically, the National Team has played an important role in supporting the Pathfinders to implement the SAtSD, given low levels of capacity in this area. Additionally, the National Team's emphasis on equitable partnerships, the involvement (and critically, funding) of the third sector, as well as sign-off and regular engagement with senior leaders, have also been fundamental aspects of the successful delivery of the Programme. The National Team also provided consistent support during the pandemic, providing additional capacity building for new staff, encouraging the Pathfinders to maintain focus on delivery, and supporting them to navigate challenges and disruptions associated with the pandemic.

While the specific role played by the National Team in delivering this Programme can be considered effective, there are some challenges which impact the replicability of the approach. The Programme has taken longer than expected to reach completion. Even at the end of a four year programme, the Pathfinders are only just reaching the Deliver stage, part of this relates to delays associated with Covid-19 and delays associated with set-up (the Pathfinders needed time to set up contracts, gain ethical approval, to bring partnerships together) but a key part of this also relates to the fact it took a considerable amount of time for the Pathfinders to implement the SAtSD in its entirety.

The question on the replicability of the approach rests not just on whether the model of National support has been valuable (whether the programme has been delivered well because of the model of support), but also on what the overall value of the Programme has been (whether it has generated enough value to suggest it should be replicated), and on an understanding of the key enablers and barriers to impact (what key factors are most important to replicate). The latter two points will be addressed in the next section (Section 4.4).

4.4 What impact have the Pathfinders had on transforming local systems towards prevention and self-management?

This section examines what the TLS Programme has achieved. It presents high-level summary findings on the impact of the Programme and progress towards transforming local systems towards prevention and self-management. Individual impact reports providing detailed findings on the impact of each of the Pathfinders and how the Pathfinders have used SAtSD can be found in Appendices 1 - 4.

Assessing progress against the outcomes in the final two columns of the Programme's Outcome map ('what they do differently 'and 'what difference does this make'), this section specifically seeks to address the following questions:

- How and to what extent have the Pathfinders used SAtSD?
- Is there evidence of change in the wider health and social care system in local areas?
- What difference are the Pathfinders making?
- What have been the key enablers and barriers to impact?

Table 7. Key findings: What impact have the Pathfinders had on transforming local systems towards prevention and self-management?

Key Findings:
The Pathfinders using the Scottish Approach to Service Design have all developed solutions that have the potential to transform local systems towards prevention and self-management in the long term. • The Pathfinders have all closely applied the principles of the SAtSD in their projects. • There is strong evidence of wider changes that have been effected in local systems through the partnerships established by the Pathfinders. • There is strong evidence that individuals within the Pathfinder teams are acting as 'agents of change' either within their own organisations or in the broader system. And there are early signs of organisational and cultural change. • The Pathfinders using SAtSD have all developed solutions that have the potential to transform local systems towards prevention and management in the long-term. Though due to the early stage of delivery, the direct impacts of the solutions will not be known for some time. • The Pathfinders have all supported research that has much value in and of itself and is being re-used, which is a key principle of the Scottish Approach to Service Design. • The Pathfinders are directly contributing solutions that help people to have digital access to information, their own data, and services, according with priority one in the 2021 Digital Health and Care Strategy. • The Pathfinders have contributed evidence on the challenges and barriers to improving the flow of information between services, and on the need for national support in establishing digital foundations and overcoming information governance challenges.

- Evidence from the Pathfinders suggests that though many digital technologies may exist, there is still a need for a transitional process of raising awareness, empowering, changing attitudes and behaviour, supporting and upskilling people in their use. This transitional process is needed to facilitate the required cultural shift for the effective usage of digital technologies at scale to improve lives and wellbeing.
- Overall, there is a dual need for support at the national level, empowering the citizen by establishing the foundations underpinning how people and organisations can interact digitally in the system, and support at the local level, empowering the citizen by using 'facilitators', 'navigators' or 'hubs' to mediate between the digital offering and the person
- Learning from the Programme should be fed into a redesign of the approach to ensure its wider implementation, including ensuring the conditions of success are established at the start of the Programme, and that time is factored in for research and capacity building.

Figure 13. Summary of Pathfinder progress

Summary of Pathfinder Progress

Pathfinder	Target population	Number of people engaged through the project	Aim	Solutions	Progress with implementation
Aberdeen	People over 18 who have experienced domestic abuse.	150 citizens and stakeholders.	Use TEC to support delivery of multi-agency services for people 18+ who experience domestic abuse.	Dynamic Database of Specialist Domestic Abuse organisations.	Database is in development.
East Ayrshire	People with long term conditions living in the Irvine Valley.	190 citizens and stakeholders.	Use TEC as an enabler to transform health and social care provision for people with long term conditions living in the Irvine Valley.	TV screen in GP practices. Digital noticeboards. Digital Health and Care Support Worker. TEC Backpack. Online MDT consultations.	All solutions in development. The Digital Health and Care Support Worker post advertised in early 2023
Highland	People with respiratory conditions.	500 citizens, stakeholders, healthcare staff.	Transform the Highland Respiratory Care pathway to be truly patient centred.	Twelve solutions designed to improve patient information, patient support, clinician knowledge and data sharing and flow.	Seven solutions delivered. One ready for delivery. Four to be taken up by other teams.
Midlothian	People living with frailty and their unpaid carers.	120 older people and unpaid carers.	Transform traditional models of care to enable people living with frailty to achieve their best possible quality of life.	Harmonised data model. Personal Data Store. Collaborative Care Architecture underpinned by Circle of Care.	Non-functional clickable prototype to be delivered in March.

4.4.1 How and to what extent have the Pathfinders used the SAtSD?

The Pathfinders have all closely applied the principles of the SAtSD in their projects. As described in the previous section (Section 4.3), the National Team has worked closely with the Pathfinders to enable them to implement the approach. While the Pathfinders have all progressed, in a steady and disciplined way, through each of the phases of SAtSD, there have been some differences in implementation. The Highland Pathfinder had significant research expertise within the team and was well positioned to use typical research approaches to engage users. Midlothian, on the other hand, benefited from having a service designer within the team and several innovative tools were used to engage users. East Ayrshire neither had service design nor research expertise and relied heavily on the support of the National Team to move between the phases and maintain focus. The Aberdeen Pathfinder experienced challenges after the service designer who had been part of the team in the early phases of the project left.

The Pathfinders have also differed in the number of citizens and stakeholders they have managed to engage in all phases of SAtSD. The Highland Pathfinder alone has engaged over 500 people, citizens, stakeholders, and healthcare practitioners.[22] The Aberdeen Pathfinder, in Discover was able to engage with key organisations in the domestic abuse space but not citizens due to the sensitivities around the topic. This was further compounded by lockdown restrictions during the pandemic. East Ayrshire, on the other hand, managed to engage strongly with the community, engaging one hundred and ninety citizens and stakeholders overall. One stakeholder interviewed questioned whether SAtSD was suitable in all contexts and whether it should be only used in cases where substantial citizen engagement could be achieved.

The delays in project delivery have meant that most of the Pathfinders were only just starting to deliver their solutions, and therefore the impact of these solutions on the lives and wellbeing of people will, necessarily, take time to emerge. A summary of how and the extent to which each Pathfinder has used the SAtSD and early indications of impact is included below. A full impact report for each of the Pathfinders, which using a contribution analysis approach tracks the progress of the Pathfinders towards impact, can be found in Appendices 1 - 4.

> " One of the things they talk about in SAtSD is the co-design with stakeholders, the patients but also the professionals who are actually involved in using the service. I haven't been involved in a project where that has been such a strong element before."
>
> - Pathfinder team member

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[22] Padlet. (n.d.). Highland Pathfinder Final Report. [online] Available at: link [Accessed 21 Apr. 2023].

Box 2. Aberdeen City Pathfinder

About: The Aberdeen City Pathfinder is led by Aberdeen Council for Voluntary Organisations Third Sector Interface (ACVO TSI) and the Aberdeen Health and Social Care Partnership. It is focused on exploring how TEC can play a role in supporting the delivery of multi-agency services for people aged 18+ who experience domestic abuse. The Pathfinder is delivering one core solution, a domestic abuse directory of specialist organisations. The Pathfinder is at a relatively early stage in delivering the solution.

How and to what extent has SAtSD been used: Over the course of a year, until the end of 2020, the Pathfinder engaged with a wide range of specialist and allied service providers in Aberdeen City and wider Grampian, and from national service providers. Many of these providers were engaged in one-to-one interviews lasting more than an hour. Service providers and practitioners were engaged through online surveys and online sense-making workshops during the Discover phase.

The Pathfinder has established some important and strong working relations with two key organisations, SafeLives Scotland and the Violence Against Women Partnership (VAWP), which formed part of its steering group, and played a key role in the Define phase. However, the Pathfinder faced challenges in engaging citizens with lived experience due to the nature of the topic and due to barriers presented by Covid-19.

A partnership with service design organisation Snook was established to support the Pathfinder in the Develop and Deliver stage. Snook undertook further user engagement and will deliver the Pathfinder's core solution - a 'Dynamic Database' of support services that allows users to access a 'one true source' of guidance and information about support, service provision and referral pathways relating to domestic abuse in Aberdeen.

Overall, using SAtSD, the Pathfinder has successfully mobilised support across several key agencies and brought together a multi-agency consortium including the police, health and social care, domestic abuse specialists, and the third sector to provide guidance and feed into the delivery of the Pathfinder's main solution. There is the expectation that once the directory is operational, partners who have been involved in the project will direct their staff and other stakeholders towards it to create a critical mass of engagement with the service to ensure it is mainstreamed and engaged with effectively.

Box 3. East Ayrshire Pathfinder

About: The East Ayrshire Pathfinder is at an early stage of delivering several viable solutions with the aim of transforming health and social care services for people with a long-term health condition living in the Irvine Valley. The solutions include creating a post for a Digital Health Support Worker; a TEC backpack; Online Multi-Disciplinary Team (MDT) consultations, and digital screens in GP practices. The Pathfinder's core team includes the East Ayrshire Health and Social Care Partnership, the Thinking Differently team, a clinician, and a third sector partner, Council of Voluntary Organisations (CVO) East Ayrshire. The Pathfinder is at an early stage in delivering its solutions.

How and to what extent has SAtSD been used: The Pathfinder has had an extensive reach into the community, engaging even those hard-to-reach individuals and communities. The Pathfinder engaged one hundred and forty-five people from the community in the Discover phase of the SAtSD to understand the problem. The Pathfinder has also made a concerted effort to engage wider stakeholders across all phases of the project and increase its profile. The Pathfinder has closely engaged with SMART Supports in the Thinking Differently Team, and the Irvine Valley Community Connector services within CVOEA; both offer important TEC services in East Ayrshire. The Pathfinder's partners have been critical to ensuring the Pathfinder was able to engage widely in the community. Additionally, both services have offered important insights into service delivery and the citizen journey, specifically in the Develop phase of the Pathfinder.

A key role played by the Pathfinder has been sharing learning and raising awareness of its activities to communities, senior stakeholders and relevant organisations delivering services and supports in the local area. This has been recognised by the Pathfinder as a key pathway to increasing uptake and buy-in for the Pathfinder's solutions. Improving digital inclusion has also been an important part of the project, and the Pathfinder has undertaken a variety of activities to increase digital inclusion and build confidence and capacity around digital.

The Pathfinder is improving access to information. It is setting up TV screens in GP practices, which will provide information on local services available to citizens in the Irvine valley and creating a new post for a Digital Health and Care Support Worker. The new post will also improve people's ability to access early intervention support through digital services. The Digital Health and Care Support Worker will carry a 'TEC backpack' and act as a go-between for GPs and people needing long-term support. The Pathfinder is also in the early stages of setting up Multi-Disciplinary Team (MDT) group consultations for patients using Near Me technology, in collaboration with the Clinical Director of East Ayrshire HSCP. Online MDT group consultations were defined as a solution to the problem of limited access to services in an area where public transport is lacking. Overall, the Pathfinder is at an early stage of delivering its core solutions but has created firm foundations, through strong connections with the community, stakeholders, and healthcare practitioners, to ensure the actionability of its solutions.

Box 4. Highland Pathfinder

About: The Highland Pathfinder aimed at transforming the Highland respiratory care pathway towards one that is truly patient centred. It has developed twelve solutions in response to the priority areas of change identified through user engagement in the Discover phase. The Pathfinder is led by NHS Highland's TEC team, in partnership with the University of Highlands and Islands, respiratory clinicians, a research doctor and two third sector partners, Let's Get On With It Together (LGOWIT) and Chest Heart and Stroke Scotland (CHSS).

How and to what extent has SAtSD been used: The Pathfinder has undertaken extensive user engagement in all phases of SAtSD. The Pathfinder engaged with patients and healthcare professionals through workshops, informal interviews, and discussion groups in the Discover phase, to gather views and to develop a systems understanding of the respiratory pathway from the perspective of users. Overall, one hundred and thirty-four patients were engaged either in workshops, surveys, focus groups, or informal interviews in the first phase. During the Define and Develop phase, the Pathfinder continued to have a good level of engagement with patients and healthcare professions, to inform the analysis and prioritisation process undertaken to extract key themes, priorities and to refine the problem statement. The Highland Pathfinder's third sector partners CHSS and LGOWIT were critical to ensuring people with lived experience were engaged in these early phases.

The Highland TEC Pathfinder has made significant progress in improving patients' access to information. The Pathfinder has developed a Respiratory Resource Hub, with clinically approved information on respiratory conditions, self-management approaches and information on further support services. The Pathfinder is also delivering open learning sessions, branded 'Your Breathing Matters', for patients and carers, which are run bi-monthly online using a Near Me Group Consultation platform. Overall, there is good evidence showing that the Highland Pathfinder is effectively improving knowledge and strengthening capacity of people to manage their own conditions and prevent exacerbation. The Pathfinder has also created new processes at an organisational level in NHS Highland (NHSH) to ensure capacity strengthening of healthcare professionals in the system is embedded, including delivering a regular series of online respiratory learning sessions via ECHO to healthcare professionals in community, primary or secondary care and developing new respiratory guidance for staff.

The Pathfinder has successfully gained the support of other organisations and programmes to adopt some of the solutions that it, itself, is unable to take forward due to financial or technical constraints. For example, the Scottish Government funded Interface Care Programme, aimed at reducing hospital stays by delivering alternative safe and high-quality care, will provide funding for an additional specialist respiratory nurse as well as an administrator to support the Community Respiratory Nursing Team and educational activities undertaken by them. Also learning and recommendations from the Pathfinder on pulmonary rehabilitation will be taken up by the Interface Care Programme.

Overall, the Pathfinder has effectively raised awareness of the essential role played by specialist respiratory nurses and there is promise that the solutions it has implemented and recommended will have a wide reach over the long term.

Box 5. Midlothian Pathfinder

About: The Midlothian Pathfinder is working with Digital Health and Care Innovation Centre (DHI), the Glasgow School of Art, the Red Cross and VOCAL to develop a long-term digital solution to improve people's access to services, and to improve connections and the flow of information between services. The Pathfinder specifically aims to improve the experience of care and support for people living with frailty, their family, carers and staff.

How and to what extent has SAtSD been used: The Pathfinder has undertaken extensive user engagement throughout the project with people, staff, and carers to get a better understanding of the complex system, and the current pathways for care for people living with frailty in Midlothian. The Pathfinder also used an innovative approach, based on creating a 'Circle of Care' map, to engage people with lived experience. DHI, who are key partners in the delivery of the Pathfinder solutions, have specifically benefited from the health and care knowledge and expertise brought by the partnership and Red Cross and VOCAL. This is reflected in the new strategy developed by DHI which shows the Innovation Centre's pivot towards becoming more person centred. As a direct result of the project, 'integrated co-managed care' is one of the four core pillars of the strategy and is expected to comprise a quarter of the Innovation Centre's workplan over the next ten years.

The co-design activities undertaken in the Discover/Define stage have enabled the Pathfinder and DHI to get a better understanding of what a 'future state system' facilitated by digital tools might look like. The Pathfinder has supported DHI to refine their process for collaborative service mapping in Health and Social Care and have generated a vision or blueprint for future care. This so-called 'Collaborative Care Architecture' moves beyond the normal focus on user interfaces, to consider an ecosystem of software systems that integrate and extend. Several elements of this blueprint are being developed into prototypes. Within this effort, DHI has been exploring the Circle of Care concept. The concept rests on the idea of citizen-owned data, where citizens have access and control over their data and can permit others, family, health and social care staff or carers to access and share relevant information and data across the system to ensure they receive better care. The Midlothian Pathfinder has specifically contributed a significant amount from the health and care perspective to the Circle of Care concept, through its co-designed user journeys and the engagement work during the Discover phase. Resources from the Pathfinder have enabled DHI to commission Mydex, who in early 2023, will produce a set of functional prototype apps integrated into a personal data store. This will show how the individual apps held by citizens, carers, and various professionals will support the generation and reuse of the person's story. This story data can then be used later to power 'Circle of Care' functional prototype development.

Developing the Collaborative Care Architecture is a long-term investment, with several technical development phases still to occur, as well as information governance barriers to be overcome before it can be implemented in practice and at scale. The Pathfinder and DHI are currently determining if the solution can be brought into a national development process, with greater potential for its scalability, and spread. The Pathfinder is contributing to the critical mass that is needed to drive a digital solution with truly transformative potential in the long term. In the short term, there are indications that the 'high value/impact' data set that is being developed in the Pathfinder is likely to inform national strategy as well as support other local transformation projects due to its robustness as a data set, and its reusability.

4.4.2 Is there evidence of change in the wider health and social care system in local areas?

There is good evidence of early indications of wider systems changes as a result of the Pathfinders' activities. This is primarily due to the new and improved partnerships that have been established through the Pathfinders that are improving how the relevant systems are functioning or are expected to function in the future. Almost all the stakeholders interviewed across HSCPs, the NHS and local authorities indicated that their involvement in the Pathfinder had led to either the creation of new partnerships and linkages across the system or improved and stronger partnerships. Many felt that the new closer ways of working between the actors in the local systems would lead to more effective and better-informed service delivery with better outcomes for people. The Highland Pathfinder, for example, has resulted in new connections between the NHS and third sector organisations, and these connections are currently being leveraged in the Pathfinder to a degree not previously experienced. This has had a tangible impact on how people can experience and access services. Stakeholders in the Highland Pathfinder agreed that improvements in partnerships between actors in the system would lead to an improved service offer and service delivery for people.

> Highland … have managed to progress and get third sector physios helping with pulmonary rehab, which was again … that was a 'no, that cannot happen' … but [they have worked] their way around it."
>
> - National Team Stakeholder

> I think it's really highlighted how much we all work in little silos and bringing the different teams together has been really, really helpful. And I think going forwards that something we don't want to lose …"
>
> - Pathfinder team member

> We have had some really positive things come out of the project, really positive outcomes … People from different parts of the respiratory service getting to know each other better and working together, working well with people from the third sector and the Scottish Ambulance Service …. those will go on into the future."
>
> - Pathfinder team member

In Midlothian, the Pathfinder has led to a formal partnership being created between two third sector organisations to improve information flow and outcomes for people.

> We have now created a formal partnership and we have a dedicated carer connector who works for the Red Cross but links in with VOCAL very closely."
>
> - Third sector partner

East Ayrshire's solutions specifically aim to improve patients' access to information and support, reducing the burden on GPs and shifting the system toward prevention and self-management. These solutions are fully dependent on the strong partnerships between the HSCP and primary care. East Ayrshire, as described in Appendix Two, has also invested heavily in building partnerships across

their local community, engaging citizens and community organisations in their work and sharing learning to influence wider system change.

> ❝ [Partnership building] was absolutely key … one of the first things I did … was I reached out to local organisations and went out on visits to meet them all face to face. And then I started to bring them together on a monthly basis to share our work and give them updates on what's been happening and looking at how together we can progress [the Pathfinder]."
>
> - Pathfinder team member

There is also strong evidence that individuals within the Pathfinder teams are acting as 'agents of change' within their own organisations, which may in the long term be a catalyst for change in the wider health and social care system. Individuals involved in the Pathfinders all spoke positively and, in some cases, passionately about the value of the activities undertaken thus far and the potential for the Pathfinders to contribute to real change that could make a difference in the lives of people. There is clear evidence of changes in practice and behaviour at the individual level, where individuals are championing the activities and work undertaken by the Pathfinders. In general, the Pathfinders have also recognised the importance of sharing learning externally with other organisations to improve understanding and awareness of challenges faced by users, and ways in which they might be addressed, to contribute to wider system changes.

One specific area where it is expected that individuals in the Pathfinders will influence wider change is in the broader use of the SAtSD in their departments or more extensively across their organisations. As noted in Section 4.3.1 most stakeholders found the approach valuable and many felt that even if they were not to apply the approach in its entirety, they would apply some of its principles in their work going forward. Several people both in the third sector and in local authorities originally involved in the Pathfinders have moved into more senior roles and expressed plans to implement the SAtSD going forward.

> ❝ A really positive outcome is that I am now introducing the 'double diamond' to the whole [organisation]. So one of my strategies now for the department is to create a services redesign framework that everyone can use … and we are going to provide a toolkit and we're going to cascade training so that no matter what your project is, what your service development is, or your idea, we'll all be using the same standard … So that's been a really positive outcome."
>
> - Third sector partner

> ❝ I've switched Local Authority. [In my new project] I'm doing a "Discover" phase. I'm doing the surveys. I'm finding out what's happening on the front line with practitioners, what service users are experiencing. Because I need to understand that ground level. I've already set up focus groups … so, definitely using those principles …"
>
> - Pathfinder team member

> 66 I'll be able to bring that type of approach to other services within the Red Cross in Scotland. My operations manager, my director, were very interested in how this was working. So it's gone wider than just local, across the national organisation."
>
> - Third sector partner

There is some early evidence that changes in ways of working are being embedded at the organisational level. Evidence of changes in processes and structures at an organisational or strategic level are strongly indicative that changes will go beyond the individual, influencing a wider change in practice across the organisation as whole. For example, team members of the Midlothian Pathfinder have developed a new digital implementation plan for their department, which has been approved by the Senior Leadership Team and the HSCP's parent organisations. The plan has 8 pillars, of which service design is one. Other aspects of the plan include building up capacity around digital within the Leadership team itself. In December 2022, the Pathfinder team was expecting to lead an Executive Management Team development learning workshop, with a session led by Lou Downe, author of *Good Services*, a guide to good service design. The implementation plan is an attempt to capitalise on opportunities created through the Pathfinder to try to effect cultural shifts around service design and digital within the wider HSCP.

The East Ayrshire Pathfinder has shared learning across the HSCP. It has also hugely benefited not only from having significant support from senior leadership but also from having a team in the HSCP – the 'Thinking Differently' team – that already focused on TEC and was receptive to implementing new ways of working. One stakeholder described East Ayrshire Council taking learning from the Pathfinder and using the approach in new localities.

> 66 We've even been looking at how we can use the approach in completely different areas, including town centre regeneration and in our ambition to be a digital council right out to a digital community."
>
> - Pathfinder Stakeholder

There has also been evidence of changes in organisations other than the HSCPs. DHI, a partner of the Midlothian Pathfinder, has implemented a new organisational strategy. As a direct result of the project, 'integrated co-managed care' was included as one of the four core pillars and is expected to comprise a quarter of the Innovation Centre's workplan over the next ten years. DHI described the strong relationship between Midlothian HSCP and Red Cross and VOCAL as significantly contributing to this change in focus, resulting in DHI gaining a greater understanding of integrated care and a hugely valuable data set born from the co-design phase with users.

However, to sustain progress, the Pathfinders need buy-in from their senior leadership as the TLS Programme moves into the legacy phase. Though the level of buy-in from senior stakeholders for the Pathfinders' work was very good in the early phases, as the Programme has evolved, been extended, and weathered the pandemic, and as personnel have changed, senior leadership's commitment to the Pathfinders has ebbed and flowed. As the TLS Programme moves into a legacy phase, there is a need for buy-in to be secured by the Pathfinders to ensure the sustainability of the work and the solutions, which depends less on the National Team and more on the ability of the

Pathfinders to make the case for their work. The extent to which this will occur varies across the Pathfinders. One Pathfinder described the challenges in getting buy-in at a senior level for SAtSD due to the long-time frames involved and the lack of clarity and direction at the outset.

> My only concern around [SAtSD], more a cultural thing within public organisations ... I get the impression ... you need real buy-in from senior management, because you kick start projects with a project initiation document, which lays out what the problem is, this is how we are going to solve it ... but with the SAtSD, you have that huge bit of work before you even initiate the delivery part of the project ... and my impression is for senior management that's a lot of work being done, before they see any particular output. It's a lot of work even to get to the point [where we might say] there's nothing we can really do to resolve this ... It's a really good methodology, but ... cultures just have to change a bit."
>
> - Pathfinder team member

Finding additional funding from already tight budgets for the TEC Pathfinder solutions has also been identified by stakeholders as a fundamental challenge in assuring the sustainability of their solutions.

> [The solution has] funding for two years and so there remains the problem about what happens at the end of that two years ... One of our problems is that our organisation overspends all the time, so we're all under real pressure to reduce spending, which means that money needed for change has to be found from within existing budgets - but there's nothing that can be cut, which means it's going to be really difficult to find that money."
>
> - Pathfinder team member

However, in the current financial landscape, the problem of tight budgets is not a problem unique to the Pathfinders. Health and Social Care Partnerships across the board are under pressure to find ways of being more effective and efficient. The key issue is whether the Pathfinders can elevate their work above other competing priorities to ensure there is traction and continued buy-in at a senior level to make progress towards the sustainable implementation of Pathfinder solutions.

> The financial situation in Health and Social Care is so challenging at the moment that, even if you have identified and developed new and innovative ways of working, it might still be difficult to gain approval to develop further unless you can build a strong financial business case in terms of benefits and efficiencies."
>
> - National Team stakeholder

> The only way that we or likely any Council will be sustainable is if we work out how we maximise the use of digital and there's a lot we can learn from the Pathfinder Programme."
>
> - Pathfinder Stakeholder

A key aspect of being able to build a successful evidenced-based business case rests on the Pathfinders achieving positive long-term outcomes. As identified by the Christie Commission report (2011)[23], the shift in the focus of public services reform toward prevention is a critical pathway to making the best use of public sector budgets. The Pathfinders have all co-designed solutions that are aimed at shifting the system towards prevention in the long term. However, given most of these solutions have either only recently been implemented or are yet to be fully implemented, it is unclear the extent to which they are impacting services and users' lives. Therefore, to ensure future buy-in and the sustainability of their solutions, it is critical that the Pathfinders integrate Monitoring, Evaluation and Learning (MEL) systems to track the progress of their work and the impact of their solutions. A robust MEL system will enable the Pathfinders to collate the evidence needed to develop a successful business case and proposals to future-proof their solutions in the long term. All of the Pathfinders are currently considering the monitoring systems that they plan to put in place to track the long-term impact of their solutions.

4.4.4 What difference are the Pathfinders making?

The Pathfinders using SAtSD have all developed solutions that have the potential to transform local systems towards prevention and self-management in the long term. While the direct impacts of most of the solutions themselves is not yet known, due to the early stage of implementation, this evaluation finds that as a result of the activities undertaken during the early phases of the SAtSD, the Pathfinders are all generally well positioned for impact. The Pathfinders are at different stages in implementing their solutions. The Highland Pathfinder has made significant progress towards the implementation of its solutions. The Aberdeen City and East Ayrshire Pathfinder are in the latter stages of implementing their solutions. The Midlothian Pathfinder stands out as the Pathfinder with the most ambitious solution aimed at making progress towards a national digital solution for citizen-owned data. In all cases the Pathfinders seek to transform the way people interact with data and information using digital technology to be able to better manage their health conditions and live better lives. More detail on each of the Pathfinders can be found in the individual impact reports included in Appendices 1 - 4.

The Aberdeen Pathfinder, though having struggled during the pandemic to engage people with lived experience due to the nature of the topic, has made progress in delivering its core solution, namely the development of a directory of specialist organisations providing support to people who experience or are at risk of experiencing domestic abuse. The Pathfinder has effectively laid the groundwork to ensure widespread awareness and utilisation of the directory due to strong connections and good levels of engagement with key stakeholders in the domestic abuse space in Aberdeen.

The East Ayrshire Pathfinder is in an early phase of implementing several viable solutions. The excellent community and stakeholder engagement work by East Ayrshire as well as its strong connections with primary care have laid the groundwork for its core solutions to be taken up. The Pathfinder is taking forward solutions to improve citizens' access to information, highlighted as a key problem in the Irvine Valley during the Discover phase. Specifically, the Pathfinder is setting up TV screens in GP practices, which will provide information on local services and supports available to citizens in the Irvine valley. The Pathfinder is also creating a new post for a Digital Health and Care

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[23] Scottish Government (2011). Christie Commission on the future delivery of public services - gov.scot. [online] www.gov.scot. Available at: link

Support Worker who will act as a go-between for GPs and people needing long-term support.[24] While not yet fully implemented, there is considerable potential for the Digital Health and Care Support Worker, if sustained as a solution, to provide a key pathway to extending the reach and impact of the Pathfinder, ensuring people with long-term conditions can access early intervention and preventative support and are digitally included.

The Pathfinder is also in the early stages of setting up Multi-Disciplinary Team (MDT) group consultations for patients using Near Me technology, in collaboration with the clinician who continues to champion the project in her capacity as the Clinical Director of East Ayrshire HSCP in the project. The Clinical Director will implement the MDT project as part of her PhD. The first round of MDT sessions is anticipated to be on the topic of Long Covid, but the aspiration is for a series of MDTs to be developed with healthcare specialists, addressing one long-term health condition per year. The Pathfinder is at an early stage of delivering its core solutions but its strong links with primary care and with the community have created firm foundations to ensure the actionability of its solutions with significant reach to maximise the impact on people's health and wellbeing. However, short-term funding, specifically for the Digital Health and Care Support Worker, presents challenges for the sustainability of the solution.

The Highland Pathfinder has developed multiple solutions targeting key leverage points across the entire system of health and care, with the prospect of whole systems transformation. Some of these solutions have already been implemented, while others are being taken forward by other organisations. There is great promise that the solutions implemented and recommended by the Highland Pathfinder will have a significantly greater reach over the long term than that currently achieved. Several solutions are well-embedded in the existing processes and structures of NHS Highland and are no longer tied to the Pathfinder per se, ensuring greater sustainability. There is evidence also showing that the Pathfinder is already increasing the capacity of people to manage their conditions in the long term through several different solutions targeting different points in the system. For example, the Pathfinder has created information sharing and capacity building sessions for patients and people with long-term respiratory conditions, as well as for healthcare practitioners to help them better support people to manage their conditions. The Pathfinder has improved written guidelines for practitioners accessible within NHS Highland's systems. Importantly the Pathfinder has also raised awareness of the essential role played by specialist respiratory nurses. The Community Respiratory Team has been fully embedded in the Pathfinder's work: specialist respiratory nurses are involved in the Your Breathing Matters and ECHO sessions (set up by the Pathfinder) and in providing expert knowledge for the Respiratory Resource Hub. In fact, the Interface Care Programme aimed at reducing hospital stays by delivering alternative safe and high-quality care and early discharge, has taken on the Pathfinder's recommendations to support the Community Respiratory Team. Interface Care will also adopt the Pathfinder's recommendations for pulmonary rehabilitation. The latter, along with the partnership with leisure centres to introduce pulmonary rehab health sessions on their sites, will improve patient experience, their ability to access information and to self-manage their condition. Short-term funding, however, remains a challenge for the sustainability of the solutions beyond the lifetime of the Interface Care Programme.

The digital solution for citizen-owned data that is being developed by DHI, with contributions from the Midlothian Pathfinder is a long-term investment, with several technical development

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[24] Stakeholder interview

phases yet to occur and information governance barriers to be overcome. However, the solution has truly transformative potential. The proposed digital solution – based on the Circle of Care concept – rests on the principle of citizen-owned data, where the citizen has access and controls their data, permitting others to share it. The solution is strongly aligned with the national strategy and there is great potential for the concept to be taken forward nationally by Midlothian's partner, DHI.

Beyond the implementation of the solutions, the Pathfinders have all supported research and data on key areas that has much value and is being re-used. The data set providing insights on frailty that emerged from user engagement in the Midlothian Pathfinder is being developed to support the implementation of the 'Circle of Care' concept. There is also strong evidence that the data set is highly valued and may be utilised to support other local transformation projects or used as a 'high impact' data set in national projects, such as the National Care Service and Digital Front Door (see Box 6). The Aberdeen Pathfinder has produced literature during its Discover phase that is of value and has been published by Iriss.[25] East Ayrshire has made considerable efforts to share its learning on managing long term health conditions with stakeholders and partners throughout the project. Highland has significantly contributed to the evidence-base for respiratory care and has developed guidance and improved literature for practitioners in NHS Highland.

> **❝** Having now moved jobs, the discovery phase insights that were captured by the Midlothian frailty work with DHI were hugely valuable and informative in terms of people's needs of care services and an understanding of the journey that people go through to try and get support … It's a really rich resource for [my new project] to look at and pull from. So I keep sharing that link."
>
> - National Team Stakeholder

[25] Iriss. (2020). Service response to domestic abuse during COVID-19. [online] Available at: link and Iriss (2020). Language and service provision surrounding abuse in Scotland. [online] Available at: link [Accessed 21 Apr. 2023].

Box 6. Midlothian Pathfinder: Reuse of a 'high impact' data set

Building on the co-designed outputs of the user engagement phase of the Midlothian Pathfinder, DHI is creating a harmonised data model for the Red Cross, VOCAL and Midlothian HSCP. The data model shows a single user journey for a person and their carer, including all typical, non-unique interactions, assessments, processes, and conversations that take place over a period of time.

> **"** Our working hypothesis is that the person who is frail in this story and the carer, that over the course of their engagement of a year, that 50% of that data is identical. They are answering the same questions, with the same answers over and over again. And it hasn't changed very much.
>
> "There is another pathway of the data that is truly unique … [But] the reality is with the other data, that seems unique, they are trying to get the same outcome from the system. They are asking questions to generate same insight, decision. We're trying to figure out what the 'high impact data set is' [telling story once]."
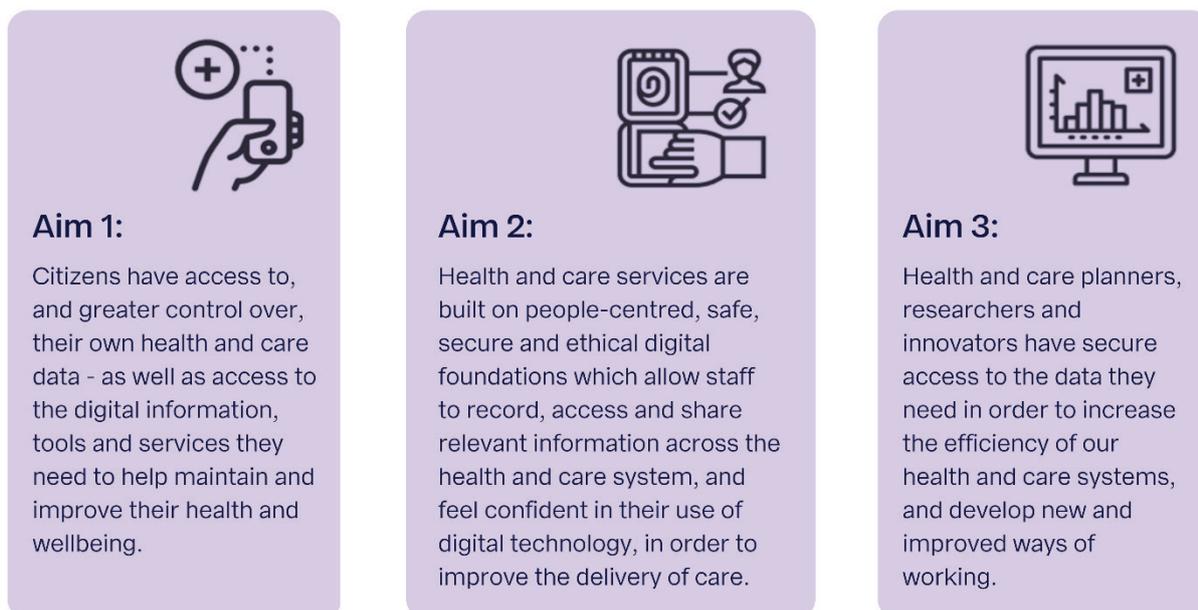
A high impact data set, with methods for its storage and sharing, would be very beneficial to support development of the National Care Service data platform and inform the Digital Front Door, and DHI is having early conversations with key strategic partners involved in its development, who have all indicated the value of the well-evidenced data model, and its potential to be foundational for their work. In addition, DHI is creating a 'pattern recognition board' with Mydex, who are also DHI's supplier supporting other health and care related projects (the Promise and the Moray HSCP). A pattern recognition board identifies the common components between the projects to enable aspects from the Midlothian project to be replicated in other projects.

> **"** It will go blazingly quick if people leverage what we have done because they will be able to do three months of translation work as opposed to deep participatory user design, because they have such good foundations [Midlothian data set] and confidence of rigour … and it is very translatable."
>
> - Pathfinder stakeholder

Overall, the Pathfinders have delivered valuable solutions supporting the implementation of the 2021 Digital Health and Care Strategy. The Strategy outlines three aims to deliver the vision of improving the care and wellbeing of people by making best use of digital technologies in the design and delivery of services. The Pathfinders have advanced progress mostly against the first aim of the strategy.

Figure 14: 2021 Digital Health and Care Strategy Aims

Aim 1:

Citizens have access to, and greater control over, their own health and care data - as well as access to the digital information, tools and services they need to help maintain and improve their health and wellbeing.

Aim 2:

Health and care services are built on people-centred, safe, secure and ethical digital foundations which allow staff to record, access and share relevant information across the health and care system, and feel confident in their use of digital technology, in order to improve the delivery of care.

Aim 3:

Health and care planners, researchers and innovators have secure access to the data they need in order to increase the efficiency of our health and care systems, and develop new and improved ways of working.

The Pathfinders are directly contributing solutions that help people to have digital access to information, their own data and services, which support their health and wellbeing, wherever they are (priority one of the strategy). The Dynamic Database of specialist support organisations developed by Aberdeen City will be a critical 'one true source' digital portal with guidance and information about support, service provision and referral pathways. East Ayrshire are seeking to provide digital access to information by establishing TV screens in GP surgeries and by setting up a Digital Hub and noticeboard in a community centre. Highland have created several digital resources supporting both citizens and healthcare professionals to access digital information on the respiratory care pathway, with the aim of sharing information, building capacity and empowering individuals to self-manage their health conditions. The Pathfinders are also supporting access to digital services and tools. For example, East Ayrshire is establishing Multi-Disciplinary Team meetings and has created the new post of the Digital Health and Care Support Worker, who will support people to access digital services, products, and tools. Highland have also supported access to essential services such as the Community Respiratory Team (CRT) and pulmonary rehabilitation through its digital courses and resources (this work will be taken up by the Interface Care programme).[26] Many of the Named Partners have supported access to digital tools and supports. East Renfrewshire and Orkney have established a Tech Peer Mentor post, who helps people to access telecare options and other digital services and supports in the health and third sector. South Lanarkshire has created a virtual physical TECH Zone to facilitate people to access digital supports and services.

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[26] See Appendix 3: Highland Impact report for further information

Table 8. Pathfinder solutions against the 2021 Digital Strategy priorities

Strategy Aim	Aim 1: Citizens have access to, and greater control over, their own health and care data – as well as access to the digital information tools and services they need to help maintain and improve their health and wellbeing	
Priority	**Pathfinder Solution**	**Description**
Digital Access to Information	**Aberdeen City:** Development of a Dynamic Database of Specialist Domestic Abuse Support Services	A one 'true source' digital database with guidance and information about support, service provision and referral pathways.
	East Ayrshire: TV screens in GP surgeries Digital Hub in Community Centre	Citizens can access information about digital services from the Digital Hub. TV screens will be updated regularly with useful and relevant information to citizens.
	Highland: Your Breathing Matters – online open learning sessions The Respiratory Resource Hub Improved Respiratory Guidelines on NHS Highlands systems.	Digital resources supporting both citizens and healthcare professionals to access digital information on the respiratory care pathway, with the aim of sharing information, building capacity and empowering individuals to self-manage their health and wellbeing
Access to Digital Services and Tools	**East Ayrshire:** Multi-Disciplinary Team meetings Digital Health and Care Support Worker	Online MDT meetings established for patients to discuss their long-term health conditions with a multi-disciplinary team of health professionals. The Digital Health and Care Support Worker will support people to access digital services, products, and tools.
	Highland: Improved access to Community Respiratory Team (CRT) and Pulmonary Rehabilitation (PR) funded by the Interface Care programme. Your Breathing Matters – online open learning sessions	Increased access to essential services such as the Community Respiratory Team and pulmonary rehabilitation through its digital courses and resources (taken up by the Interface Care programme).

|	East Renfrewshire and Orkney Named Partners: Tech Peer Mentor	Tech Peer Mentor supporting people to access telecare options and other digital services and supports in the health and third sector.
	South Lanarkshire Named Partner: virtual and physical TECH Zone	TECH Zone to facilitate people to access digital supports and services.
Data Driven Services and Insights	Midlothian: Collaborative Care Architecture and Circle of Care Concept	User research and data insights are supporting DHI's 'Collaborative Care Architecture' – a tiered architecture underpinning the Circle of Care concept connecting carers, professionals and people, enabling people to gain access to integrated services, maintain and control their data efficiently and effectively.

Evidence from the Discover phase of the Pathfinders shows that key issues identified in the Digital Health and Social Care Strategies remain as significant barriers. Healthcare professionals, people and their carers involved in the Pathfinders have expressed frustrations at the difficulty of accessing their own data, or the need to repeat information again and again to different organisations working within different systems. Many of the issues brought up by users relate to information governance challenges identified in the first Digital Health and Care Strategy - "people expect their health and care information to be available to them, and to those responsible for helping them, when and where they need it. At the same time, they want assurance that their personal information is being handled appropriately, safely, securely, and in an approved and controlled way."[27] These challenges have been identified as a significant barrier impeding the ability of people and organisations to work and interact in ways that may be able shift the system to prevention and self-management. While the Pathfinders have been unable to solve these information governance challenges – which are widely recognised as needing national support and direction – they have been able to contribute further evidence on the challenge, and on what a 'future state system' might look like.

The Midlothian Pathfinder has contributed very significantly to supporting greater understanding of the challenges and digital components underpinning the ambition for citizens to manage, access and own their own data (see Box. 7) though the evidence of the desirability of citizen-owned data has emerged across all the Pathfinders. Despite this, challenges around siloed data, governance constraints limiting systems integration, and the need for aligned infrastructure, systems and governance have been common themes in the Pathfinders (see individual Pathfinder impact reports, in Appendices 1 - 4). As acknowledged in the 2021 Digital Strategy, establishing digital foundations – infrastructure, systems, regulation, standards, and

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[27] The Scottish Government (2018). Scotland's Digital Health and Care Strategy: enabling, connecting and empowering. [online] Gov.scot. Available at: link

governance – are essential for ensuring information flow and the delivery of services is integrated, consistent, and streamlined meeting the needs of citizens and stakeholders. The Midlothian Pathfinder has sought to address the latter challenge. The Pathfinder's user research has supported DHI in their development of a blueprint for what they have termed the 'Collaborative Care Architecture' – a tiered architecture underpinning the Circle of Care concept connecting carers, professionals and people enabling them to gain access to integrated services and data efficiently and effectively. Developing the Collaborative Care Architecture is a long-term investment, with several technical development phases still to occur, as well as information governance barriers to be overcome before it can be implemented in practice and at scale. The Pathfinder and DHI are currently determining if the solution can be brought into a national development process, with greater potential to overcome information governance issues, and for its scalability, and spread.

Figure 15. DHI Collaborative Care Architecture
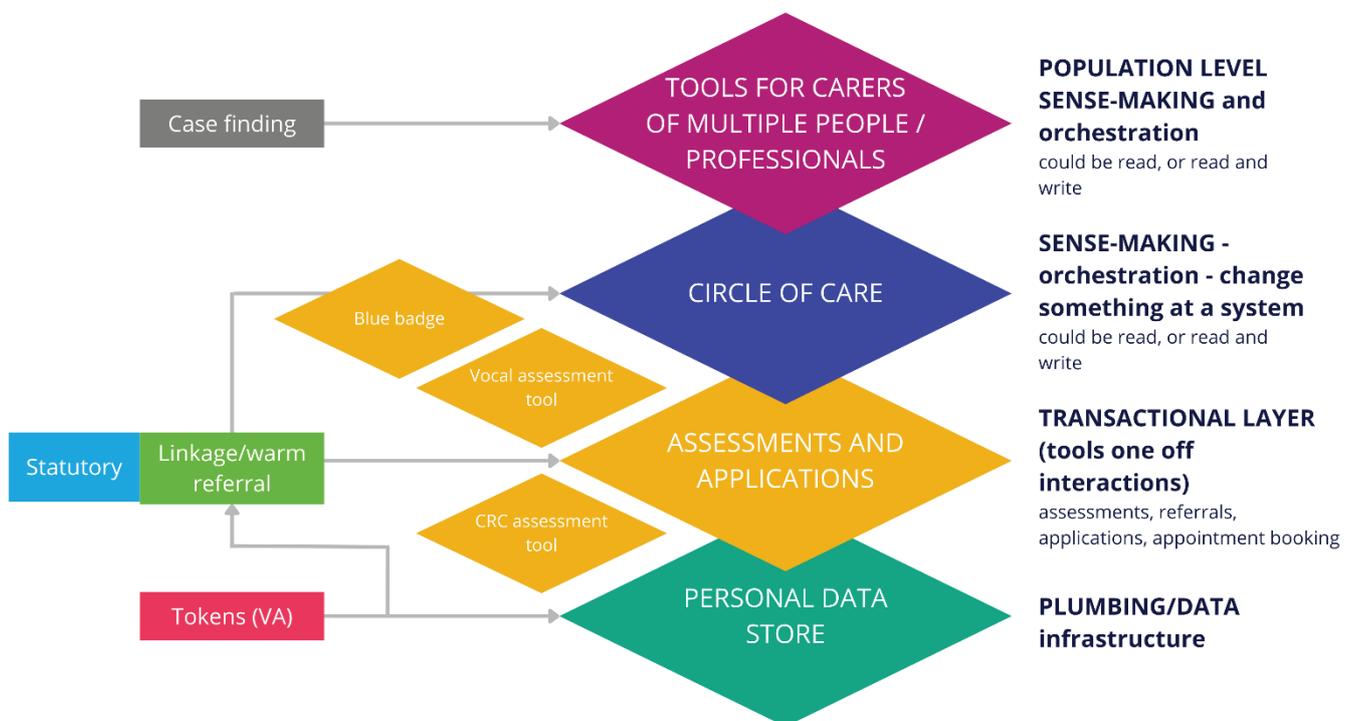
Despite challenges related to information governance and digital infrastructure, which fundamentally determine the extent to which HSCPs can extensively transform services, most of the Pathfinders have developed discrete solutions that can be implemented in the short to medium term. These - critically – directly respond to needs and priorities expressed by local people and how people wish to use digital technologies to engage with services. Many of these solutions are relatively simple to deliver and often relational but still have the potential to improve people's health and wellbeing.

Box 7. The Value of Citizen-Owned data

The Pathfinders have supplied evidence on the value of citizen-owned data. The Highland Pathfinder, for example, has raised awareness of the importance and desirability of citizen-owned data. In 2021, the Pathfinder surveyed 26 patients, gathering their views on what an electronic patient record should include and its desired functions. Most popular were test results, with explanations of the results; clinic letters summarising the clinic appointment; primary care notes and outpatient notes.

Figure 16. Highland Pathfinder 'Test' interface prototype of a patient digital record

ABOUT ME
My family, friends, carers
What matters to me
Personal Details
My Additional needs and responsibilities

MY APPOINTMENTS
Appointment Calendar
Book, accept, reject or change appointment
Appointment Reminders

MY MEDICATIONS
Request Prescriptions
List of current medications with explanations about each medication

MY HEALTH RECORD
Patient letters from clinic & discharge letters & referrals
Inpatinet notes
GP/pracitce nurse notes
Outpatient Notes
Test results with explanations about what the results mean

MESSAGES
Alert your healthcare professional when you are having exacerbations of your illness
Agreement with healthcare professionals that questions/concerns are answered within a time frame.
Send & receive messages from specialist health care professionals

MY SYMPTOMS & DAILY DATA
Document symptoms or health readings to show your healthcare professional

The Midlothian Pathfinder has contributed to ongoing work by DHI on the Circle of Care concept. The proposed digital solution for the Circle of Care rests on the concept of citizen-owned data, where citizens have access and control over their data and can permit others: family, health and social care staff or carers, to access and share relevant information and data across the system to ensure they receive better care. This addresses some of the issues related to data ownership and information governance. Specifically, resources from the Pathfinder are supporting development of a non-functional clickable prototype of the Circle of Care. A clickable prototype of the Circle of Care will enable people to have the illusion of experiencing the Circle of Care interactions of a future state system. This is part of a bigger piece of work headed by DHI to create a Collaborative Care Architecture moving beyond the normal focus on user interfaces, to consider an ecosystem of software systems that integrate and extend.

A key finding of the evaluation, then, is that though work needs to continue at the national level to unpick some of the more complex issues related to information governance and digital foundations, progress is still being made on the local level. This can be attributed to the fact that many of the digital solutions developed by the Pathfinders are still dependent on people facilitating digital access, improving digital inclusion, and upskilling citizens on digital use. People in the Irvine Valley will have access to a Digital Health and Care Support Worker, who will act

as a go-between for GPs and patients, travelling hub to hub, with a TEC backpack, empowering people to use TEC solutions to manage their long-term health conditions. In Highland, citizens and health practitioners can access learning sessions online facilitated by healthcare professionals to improve their understanding of respiratory conditions and to gain access to additional supports and services that will enable them to take proactive and preventative action to manage their health conditions. Similarly in Aberdeen, people in health and care services will be better informed of domestic abuse referral pathways and services so that they, as individuals, will then better support people who make disclosures to them about being at risk of or living with domestic abuse. The findings from user research and the Discover phase led the Midlothian Pathfinder to focus on the 'hubs' in the system to overcome barriers people face in accessing support and in navigating the complexity of the health and care system, building on the concept of the 'Circle of Care', where 'hubs' can be 'professionals' (for example third sector organisations, VOCAL or the Red Cross) who guide people through the health and care system; carers who navigate on behalf of the person; or people living with frailty who prefer to navigate for themselves. Hubs were placed at the centre of the solution, as they were identified by people as the kind of support that was most valued, helping 'the digitally anxious' to use technology, access person-centred care, and to enable self-reliance (see Pathfinder Impact Reports in Appendices 1 - 4).

Evidence from the Pathfinders hints at the fact that though many digital technologies may exist, there is still a need for a transitional process of raising awareness, empowering, changing attitudes and behaviour, supporting and upskilling people in their use. This transitional process is needed to facilitate the required cultural shift for the effective usage of digital technologies at scale to improve lives and wellbeing. This is the space where the Pathfinders have had most value. The Pathfinders have built networks across the system improving how service providers, users, carers, citizens, and people interact with each other, and identified 'hubs' or 'navigators' that can facilitate people's understanding and engagement with digital solutions and services, to improve lives and wellbeing. The Pathfinders have demonstrated, using the SAtSD that much can be done at the local level to create the conditions for a digital future by pinpointing key leverage points within the system that can shift and transform the system towards prevention and self-management. These leverage points centre on empowering the citizen.

Ultimately, the Pathfinders have shown us to achieve a large shift in the system, there is a dual need for support at the national level, <u>empowering the citizen</u> by establishing the foundations underpinning how people and organisations can interact digitally in the system, and support at the local level, <u>empowering the citizen</u> by using 'facilitators', 'navigators' or 'hubs' to mediate between the digital offering and the person. Just like the use of GPS devices (dependent on a complex system of satellites, ground stations and receivers) in our cars help and empower us to undertake and navigate complex journeys, a Digital Front Door underpinned by digital foundations, will help and empower the citizen to navigate their network of health and social care needs. With ease of use, time and practice, a cultural shift towards the regular usage of these systems may be achieved. Still having access to a guide can facilitate the transition and include those who would otherwise be excluded. The role of the 'facilitator' or 'navigator' is key to ensuring more people have opportunities to engage with digital solutions. The Pathfinders have shown that it is not simply a matter of digital choice or of providing digital options. People need to be able to *access* digital technology. They need to be *aware* of digital options. And they need to know *how* to use them in ways that best meet their needs. They need to be able to make *informed* decisions over their own

health and social care. This is critical for ensuring people do not fall between the cracks, digitally excluded, and unable to access information and services that can enable them to make preventative and proactive choices that improve their health and wellbeing.
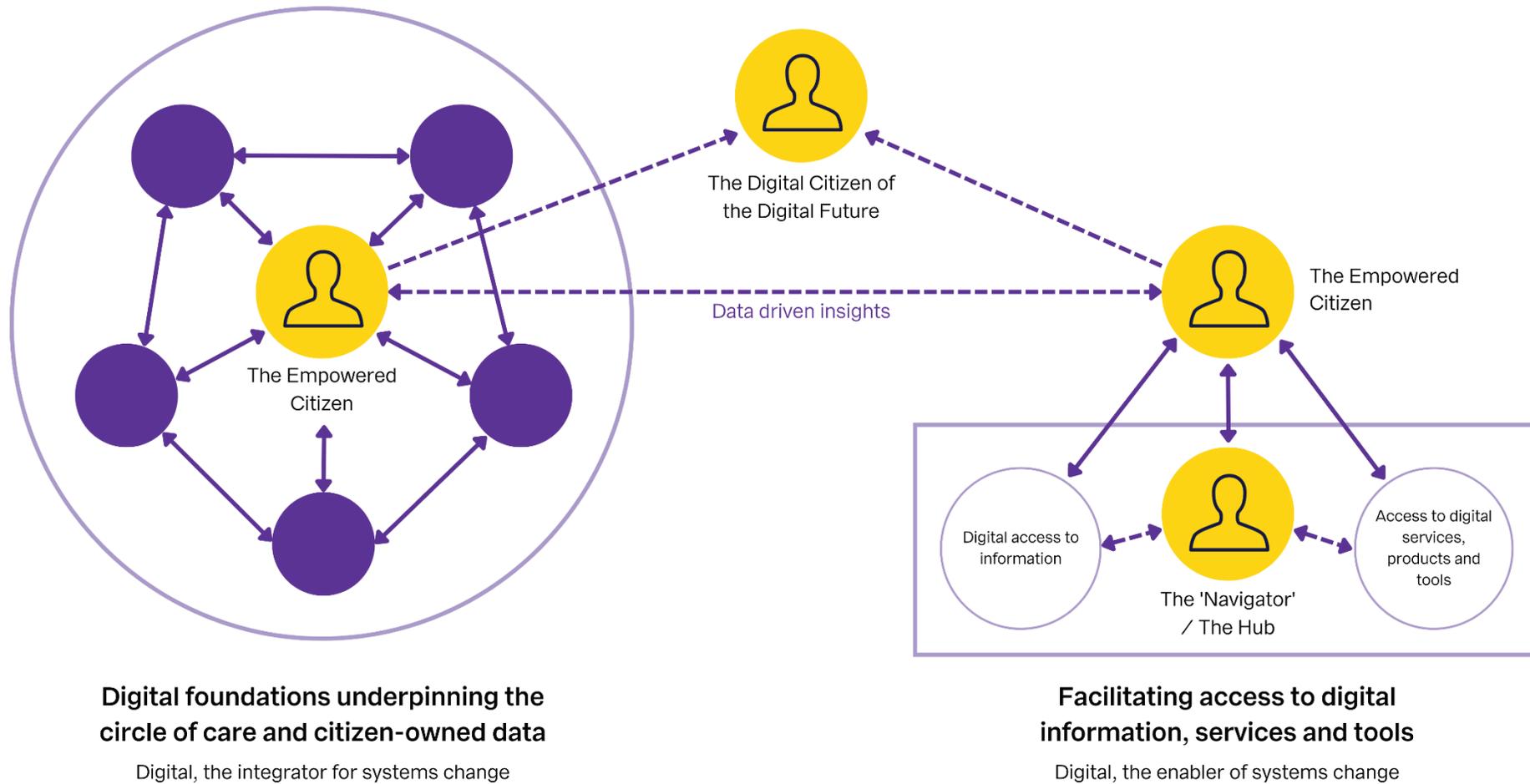
This is where the use of the SAtSD has been valuable. SAtSD has enabled the Pathfinders to understand how services can be delivered such they are truly person-centred. The TLS Programme has shown that HSCPs can play a very important role and be at the vanguard of local systems transformation using digital technology. But there remains a significant skills gap in the health and care sector workforce. Staff need to be equipped with the digital and service design skills to deliver services that can serve the needs of people.

4.4.5 What have been the key enablers and barriers to impact?

Overall, the following factors have been key enablers in ensuring the Pathfinders have been able to maintain progress, deliver results and position themselves for impact. Key enablers include:

1. **The National Team's support to the capacity of the Pathfinders in the implementation of the SAtSD.** The SAtSD was new to almost everyone involved in the Pathfinders. The National Team, as described in the previous Section 4.3.2, have played a critical role in building the capacity of the Pathfinders in the implementation of the SAtSD, and in supporting the use of new tools, methods and approaches for user engagement.

2. **The focus on establishing equal and broad partnerships across the HSCP, NHS, third sector, and local community in the early set up phase of the programme.** The National Team supported the Pathfinders significantly in the early stages to establish broad and diverse partnerships in their localities. These partnerships have not only been critical to successful project delivery but the strengthening of relationships and connections between key actors in the local system through the Pathfinder has been identified as a key pathway towards achieving the broader systems changes needed across health and social care that contribute to better outcomes for people.

3. **The involvement of third sector partners in the Pathfinders.** The third sector have played an important role in the Pathfinder, contributing important insights, creating new connections and partnerships with other organisations and sectors, as well as facilitating engagement with people with lived experience, especially during the pandemic.

4. **Expertise in service design.** While the national model of support did offer significant support in service design the Pathfinders which benefited from a service design or research expertise within their teams were far more ambitious in their project's objectives and outputs.

5. **User participation, including citizens.** A key principle of the SAtSD is the engagement of users at every stage of the design process. The Pathfinders, on the whole, have been assiduous in implementing this aspect of the SAtSD. User engagement has been extensive; the Pathfinders have made strong efforts to engage citizens, people with lived experience, staff, healthcare professionals and other stakeholders. The solutions developed by all the Pathfinders are very closely linked to the insights and feedback gained from users. The solutions are highly relevant to the local contexts, and there are early indications that that the solutions will or are being taken up, partly because of the process of engaging users undertaken by the Pathfinders, and partly because of the role played by the Pathfinders in increasing awareness and access to information and services, and in supporting digital inclusion. User participation is one of the key enablers of impact.

Figure 17. Transforming Local Systems using Digital Technology

The Digital Citizen of
the Digital Future

The Empowered
Citizen

Data driven insights

The Empowered
Citizen

Digital access to
information

Access to digital
services,
products and
tools

The 'Navigator'
/ The Hub

**Digital foundations underpinning the
circle of care and citizen-owned data**

Digital, the integrator for systems change

**Facilitating access to digital
information, services and tools**

Digital, the enabler of systems change

6. **The role played by core members and partners of the Pathfinders.** The people involved in the Pathfinder are critical to achieving the wider changes in behaviour and culture needed in health and social care organisations to ensure that digital technologies, new ways of working with partners, and user engagement are at the heart of how health and social care systems are transformed in ways that improve outcomes for people. Individuals involved in the Pathfinder have demonstrated significant commitment to the Pathfinder, many of whom are acting as change agents within their own teams, departments and organisations, championing both the SAtSD, new ways of working with partners, and the role played by digital technologies to transform health and social care.

7. **Senior leadership buy-in.** Although senior leadership buy-in has not been consistent throughout the programme and across all of the Pathfinders, in cases where there has been buy-in from senior leadership there has been evidence of changes in practice and strategy at the organisation level, in that they have placed emphasis on the role of SAtSD and digital technology in transforming health and social care to be more person-centred.

8. **Flexibility of the national support.** The National Team has responded and adapted to the needs of the Pathfinders. The National Team adapted its initial programme of support providing tailored support to each of the Pathfinders to accommodate the differing paces at which they were moving through the SAtSD. The National Team also responded flexibly in response to Covid-19, responding to the needs of the Pathfinders as they navigated internal pressures and changes. The National Team offered additional support to new staff and supported the Pathfinders to refocus and maintain with project activities. The National Team also adapted programme requirements in response to feedback, adopting a collaborative, shared learning approach instead of formal biannual Gateway reviews. This flexibility has been critical in ensuring the Pathfinders were well supported throughout the implementation of project activities, particularly, as due to their intrinsic nature as Pathfinders, they were navigating and seeking to effect change in complex settings, require a learning and adaptive approach.

9. **Embedded evaluation.** Embedding evaluation in delivery was recognised by the National Team as critical to ensuring a sustained focus on realising the desired outcomes for people. The Pathfinders have been working in complex and constantly changing environments. They have needed to adopt an adaptive, reflective, and learning approach to meet their objectives. The Pathfinders participated in twelve collective support sessions to reflect on progress and activities, and to share learning with each other. This protected time for sense-making has been critical for the Pathfinders to take stock of progress and maintain focus on project activities despite the challenges presented by staff turnover and Covid-19.

The following factors have been identified as barriers to the Pathfinders making progress towards outcomes and impacts:

1. **Limited capacity and capability to undertake the SAtSD.** There was limited understanding and experience of using the SAtSD among the Pathfinders teams, and it took considerable investment of effort by the National Team to support the capacity of the Pathfinders. It also took a long time for the SAtSD to be implemented in its entirety. The Discover phase specifically took a relatively long time to complete. Though some of the time delays can be attributed to Covid-19 and set up delays. Discover may also have taken so long because all the Pathfinders undertook primary research. Primary research takes time, it requires ethical

approval, collection, collation, and analysis of data. It requires user-centred and inclusive approaches. Furthermore to achieve impact, feeding back findings to people and stakeholders, ensuring the uptake of research, influencing capacity, policy and practice are all added activities that take time. It is important to note, however, that the SAtSD does not mandate the need to undertake primary research.

2. **Delays associated with Covid-19 –** Covid-19 was a significant barrier. The pandemic led to a significant reduction in capacity. Many team members were moved into other areas of crisis management or national projects. Change in staff and the hiatus in project activities did impact the Pathfinders' momentum. The shift toward user engagement online also impacted the ability of the Pathfinders to engage people with lived experience. Delays to project delivery had knock-on effects on the Deliver phase for many of the Pathfinders. Some stakeholders reported feeling 'rushed' to deliver core solutions.

3. **Staff turnover.** There has been significant staff turnover over the lifespan of the Programme. This can be partly attributed to Covid-19 and the change in staffing and prioritisation that occurred. However, it was also a consequence of short-term contracts. Some staff left before the end of their contracts to accept other work as they did not want to risk being without work at the end of the contract. The loss of skills and in particular the loss of capacity in SAtSD was a significant issue. The National Team had to invest time in bringing new staff up to speed with project activities as well building capacity on the SAtSD.

4. **Insufficient time for set-up.** The Pathfinders needed a clearly delineated inception phase that was long enough to allow for the set-up of the complex projects. There was a need to acknowledge the time needed to establish equal partnerships, to engage senior leadership to get their buy-in, and to ensure ethical approval for activities. Without a clear inception phase, project timescales are not realistic.

5. **Lack of specific impact related activities.** Given the time constraints on the Pathfinders, the focus of the Pathfinders' projects was on progressing through the phases of the SAtSD and getting to the final stage of 'delivering' solutions. The Pathfinders placed less attention on developing an impact strategy to support the implementation and scale up of the solutions. Ideally, there would have been sufficient time at the end of the Programme to allow the Pathfinders to implement impact related activities. As the Programme had already been extended due to Covid-19, it was not possible to extend it further to incorporate an 'impact' phase. But this should be taken into consideration as learning for future programmes.

6. **Lack of consistency in senior leadership engagement.** Again, partly as a consequence of Covid-19, there was fluctuation in the extent to which senior leaders in HSCPs were able to engage in the Pathfinders. There were also changes in staffing, resulting in shifts in focus and strategic prioritisation. This has impacted the sustainability of some of the Pathfinder solutions, where some solutions are backed by short term funding. There is a need for the Pathfinders to secure greater buy-in at a strategic level to ensure longer term commitment to the implementation of solutions. Going forward, the Pathfinders will need to develop MEL frameworks to track the impact of their solutions to create a robust evidence base to gain ongoing funding or in-kind support.

7. **Information governance challenges.** Whole systems change has been constrained by the considerable information governance challenges that impact how information flows among stakeholders, citizens, and carers and how data is shared and accessed. How information flows and who owns the data are key elements impacting how the system functions.

Improving information flow, and clarity on how and whether citizens can manage and own their own data, will enable streamlining of processes. This will save time and effort, support integration of health and social care, ensure organisations connect and work better together to meet people's needs and empower people to take preventative or proactive action to manage their health and wellbeing.

5.0 Conclusion

The Pathfinders have achieved good progress in implementing a variety of solutions that have the potential to transform local systems towards prevention and self-management in the long term. Although the direct impacts of the solutions won't be known for some time there is evidence that there are changes occurring within the Pathfinder organisations themselves as well as in the wider health and social care systems of the localities and that this is due to the way the Programme was implemented through the managed programme of support by the National Team and through the use of the SAtSD.

A clear success of the Programme has been in its ability to build the capacity of the Pathfinders in the implementation of the SAtSD and in using new tools, methods, and approaches for user engagement. Many of those involved in the programme are now acting as change agents in their own departments and organisations. This is where the National Team has had significant value.

In addition, the managed approach adopted by the National Team has been effective in supporting the implementation of the Pathfinder projects in their complex settings. A managed and adaptive approach ensured the Pathfinders were well supported and able to navigate, respond and adapt, and maintain focus on delivering project activities to improve outcomes for people in complex health and social care systems even when faced with the unprecedented challenge of Covid-19.

There are also early indications that the solutions developed by the Pathfinders will contribute to benefits to people themselves if sustained. The strong user, stakeholder, and community engagement of the Discover phase in SAtSD has played a critical role in ensuring that solutions were relevant and addressed the issues that mattered to people. In this way the implementation of the SAtSD to achieve outcomes for people can be said to be effective.

The Pathfinders have demonstrated how other localities can contribute to the implementation of Scotland's Digital Health and Care Strategy. They have made considerable contributions to improving people's digital access to information and services and supporting the longer-term goal of citizen-owned data. Through their work they have promoted digital inclusion and highlighted that beyond the need for digital choice, there is a need for digital transition. Many solutions developed by the Pathfinders highlight the need for digital 'go-betweens': tools, approaches and *people* who can support citizens to make an informed choice on how they wish to access services and empower citizens to effectively use digital technologies to proactively manage their health and wellbeing.

The Pathfinders have highlighted the need for upskilling the workforce in digital skills and service redesign, and the need for strong leadership at the helm of the digital transformation. The Pathfinders have contributed further to the body of evidence calling for aligned infrastructure, systems, regulation, standards, and governance – the digital foundations that underpin successful scale up at the local, regional and national level. Finally, the data produced by the Pathfinders themselves is of value, research insights on themes explored by the Pathfinders can be reused or adapted in other localities to support service redesign there.

The evaluation has demonstrated the value of the national programme of support as well as the value of the Pathfinders activities and solutions. However, it has also highlighted some challenges.

- Transforming local systems with a focus on prevention and self-management at scale is hard to do. Despite the investment of £2 million and the four-year timescale, direct benefits for people are only just emerging in two of the four Pathfinders. This challenge is reflected in the wider evidence base around public service transformation. In developing and implementing their solutions, Pathfinders have had to contend with a whole host of contextual and systemic challenges impacting the lives of people and the ways in which health and social care is delivered and organised. Pathfinders have been wrestling with issues such as digital poverty, poor transport systems, siloed working, commissioning practices, poor digital infrastructure, lack of data-sharing arrangements, and information governance, to name a few.
- The issues that the Pathfinders have needed to address to transform their local systems have been complex and longstanding, sometimes referred to as 'wicked' issues. The focus of the Programme on whole systems has been vital in setting realistic expectations as to what can be achieved, and the scope of work and partnership required to deliver this. Despite this, working with the system has enabled the Pathfinders to navigate complex issues and to develop a cluster of solutions that are well placed to be sustained and improve outcomes for people.
- Whilst all the Pathfinders have been able to develop digitally enabled solutions that show great promise in improving outcomes for people, the implementation of digital solutions has been particularly challenging. Some of the digital infrastructure issues encountered are beyond the scope of this Programme to address. The Programme has generated important insights that can be taken forward nationally to address these issues.

Considering the value of the Programme as well as some of the challenges, lessons, outlined in the next section below, focus on how the approach may be 'adapted' rather than 'replicated' going forward.

5.1 Lessons

The evaluation provides lessons for the effective scale up and spread of the Pathfinder solutions, lessons for future Programmes seeking to adopt a similar approach and finally, lessons for supporting transformation to prevention and self-management using digital technology.

> **1. Lessons for the scale up and spread of the Pathfinder solutions in the Transforming Local Systems Programme**

1.1 The Pathfinders are at an early stage of delivering their solutions. In some cases, solutions have yet to be implemented. It is therefore important that the Pathfinders maintain monitoring and evaluation processes to ensure they continue to capture data that will support future impact assessment. Undertaking a future theory-based impact evaluation of the Pathfinders will enable policymakers to understand not only what has worked, but also how, and in what context, to enable better understanding of how solutions may be scaled up or spread to other localities.

1.2 The Pathfinders have all supported research on the key health and social care themes, that has much value in itself, and may be reused. Some of the data sets and research are already currently being reused. The research and data sets can be shared with other HSCPs and localities that may be experiencing similar challenges. This may enable them to implement a service design process that may be quicker due to their ability to reuse primary research and key data sets.

1.3 Overall, **the Pathfinders that have invested in developing small-scale and low-tech solutions alongside prototyping more ambitious digital solutions have been best placed to realise impacts on people within the time frame of the Programme**. Due to the nature of the solutions developed by the Pathfinders low-cost feasibility studies may be undertaken to pilot the solutions in other localities to assess their scalability and spread.

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2. Lessons for transforming local systems through other Pathfinder programmes

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2.1 Including time to establish the Programme at the start and to support impact activities at the end was important, and an area that could be strengthened in future programmes. Building the partnership, recruiting team members, negotiating access and ethical approval to engage with local people all took time and, in some cases, longer than anticipated.

2.2 Engaging people at every stage of the Pathfinder process has been key to success. Whilst the engagement carried out in the Discover and Define stages took time and effort, all the Pathfinders have generated solutions that respond effectively to problems defined by people. The process has generated valuable and well-structured insights that will continue to guide the implementation process and that can be used in other work. In this respect the SAtSD holds considerable value.

2.3 The SAtSD is an effective approach to support the transformation of local systems. The approach ensured the Pathfinders held the perspectives and experiences of people whom their work is intended to benefit front and centre through the process. It allowed stakeholders and citizens across the service journey to come together and develop a shared understanding of the challenge and system, and a shared vision for change. The integrated approach underpinning the SAtSD ensured there was space for organisations and stakeholders to build on their existing skills and strengths and work together in the system to deliver solutions. As such, each Pathfinder team took their own unique journey through the approach.

2.4 Investment in partnership working, and engaging the third sector as equal partners, is invaluable. The broad partnerships formed have ensured that the findings from the process are robust. The investment in partnership working has created the foundation for the successful delivery of these solutions, as well as further system transformation.

2.5 Investing in the capability and skills of the Pathfinder teams, including ensuring they have the right tools and resources, has been key to realising success. This was a new way of working for many people, and the investment was vital to enable team members to apply the SAtSD effectively to transform their local system. Many individuals have gone on to use these skills, tools and resources in other work within their local area.

2.6 Protected time and resource to do this work is essential. Funder support and flexibility, embedded evaluation, and opportunities to reflect on progress, adapt and respond in an agile and thoughtful way to challenges are critical to managing change in a complex system.

2.7 Achieving complex whole systems change to improve the lives, health and wellbeing of people means managing uncertainty, and a commitment to a person-centred approach. This requires HSCPs to think and work differently. It requires capacity and capability in applying whole systems friendly approaches such as the SAtSD, integrated services, multi-disciplinary teams, and perhaps mostly importantly senior leadership buy-in.

2.8 The investment in a national model of support, including support to develop new skills, coaching, critical friendship, facilitation of peer learning and support, accountability and guidance, has been effective in supporting Pathfinders to implement local systems transformation. This aspect of the Programme was not only highly valued by Pathfinders but enabled the translation of the overall vision of the Programme, tools, approach, and resources to each local context. An adapted approach may be useful for future programmes. The lessons for supporting the transformation of local systems highlighted here (2.1 – 2.8) if embedded in the early design of future programmes may mean that the level of support and resource required for a National Team is reduced. In a similar way that HSCPs in other localities may reuse research insights and data from the Pathfinders, the Scottish Government is well positioned to reuse the learning and insights, tools and resources developed during this TLS Pathfinder Programme. This includes ensuring tenders include a focus on some degree of SAtSD capacity and capability, evaluation and impact, multidisciplinary teams, and partnerships as well as senior leadership buy-in up-front before Pathfinders are commissioned. Sharing lessons from the Pathfinders, and widely disseminating SAtSD resources and guidance may also ensure that future Pathfinders are better positioned to implement local transformation systems.

3. Lessons for transforming local systems towards prevention and self-management using digital technology

3.1 Digital exclusion hinders progress towards a cultural shift in the use of digital technology. Digital exclusion is not only due to lack of access to devices and technology but also due to lack of awareness and understanding of the supports and services available. The Pathfinders have shown that people see the value of digital technology, in transforming how they access information and integrated services, and in giving them greater control of their data, empowering them to take preventative and proactive action to support their health and wellbeing. However, there is a need to drive awareness, support understanding, and create opportunities for digital use to build the capacity and capability of people to ensure they are empowered to navigate their own health and social care needs.

3.2 The transition to digital is transforming health and social care. However, a person-centred approach which empowers the citizen is needed to ensure that people are not left behind. The SAtSD has been a useful mechanism to apply a whole systems lens to understanding the problem from the perspective of people (citizens, healthcare professionals and carers), allowing the identification of key leverage points to influence the system: identifying and establishing

navigators and facilitators in the system to mediate the space between citizens and digital technology, to raise awareness, build capacity, support access to information and services and to contribute to redesign that meets the needs of people.

3.3 **For the empowered citizen to transition to become the 'digital citizen' of our digital future, strong foundations are needed.** Challenges around siloed data, governance constraints limiting systems integration, and the need for aligned infrastructure, systems and governance have been common themes, echoing the priorities set out in the national strategy. National direction and support are needed to ensure people can access integrated services and have control over their data so they can take preventative and proactive action that supports their health and wellbeing.

3.4 **HSCPs can play a role in local systems transformation by supporting 'digital translation' for local people and using person-centred and whole systems approaches, such as the SAtSD, to design services that meet the needs of people.** But there remains a significant skills gap in the health and care sector workforce. Staff need to be equipped with the digital and service design skills to deliver services that can serve the needs of people. Investing in capacity and capability of staff is a necessity in transforming local systems using digital technology.

Appendix 1: Aberdeen Transforming Local Systems Impact Report

AIM: To understand how Technology Enabled Care (TEC) can play a role in supporting the delivery of multi-agency services for people, aged 18+ who experience domestic abuse.

Overview

The Aberdeen Pathfinder is led by the third sector interface Aberdeen Council for Voluntary Organisations Third Sector Interface (ACVO TSI) and the Aberdeen Health and Social Care Partnership, and is focused on exploring how Technology Enabled Care (TEC) can play a role in supporting the delivery of multi-agency services for people aged 18+ who experience domestic abuse. Given the sensitivity of the subject, the Pathfinder recognised, at the outset, the need to ensure due consideration of risks to people with lived experience, and those to whom disclosures are made, when conducting research and when considering solutions. The Pathfinder is delivering one core solution, a domestic abuse directory of specialist organisations, in response to the challenges identified through user engagement during the Discover phase. These include, firstly, the challenges people face in recognising whether they are experiencing domestic abuse. Secondly, the challenges people experiencing domestic abuse face in accessing support and comprehensive information safely, securely, and quickly. Thirdly, the problem support agencies or providers have in knowing where to go for up-to-date information about different services and in sharing referrals to the right place at the right time.

The Pathfinder is at a relatively early stage in delivering the solution and there is limited data to assess how the solutions per se are working. In this section we will assess how well the Pathfinder is making progress towards impact or is positioned for impact, by examining four key questions. Evidence is drawn from data collated by the Pathfinders in OutNav against three pathways (Discover/Define; Develop; Deliver - see Appendix 6).

- Which stakeholders did the Pathfinder engage across all four phases of the SAtSD and how ('who with'), the value of the project to them ('how they feel')
- To what extent are there changes in (or progress made towards changes in) knowledge, skills, relationships, capacity to support the intended changes in the system ('what they learn and gain')
- To what extent is there evidence of the application and adoption of the solutions, or new ways of working ('what they do differently')
- To what extent is there evidence of the scalability and spread of the solutions or new approaches, and the impact on people ('what difference does this make').

Stakeholder Engagement and the value of the project to them ('who with')

The Pathfinder has engaged stakeholders in its research throughout the project. Over the course of a year, until the end of 2020, the Pathfinder engaged with a wide range of specialist and allied service providers in Aberdeen City and wider Grampian, and from national service providers. Many of these providers were engaged in one-to-one interviews lasting more than an hour. Service providers and practitioners have also been engaged through online surveys as well in online sense-making workshops during the Discover phase. Many of the connections came through the Project's networks, especially ACVO TSI's. The Pathfinder also developed a stakeholder map, comprehensively mapping the domestic abuse services system in Aberdeen.

Despite good initial engagement, many organisations were unable to commit further time to the project. One stakeholder noted:

> **66** They were so strapped, already the waiting list was so huge [even] before the pandemic started. There was a real lack of infrastructure and funding and then we were asking them to input into this project on a regular basis."
>
> - Pathfinder team member

However, the Pathfinder did establish some important and strong working relations with two key organisations, SafeLives Scotland, and the Violence Against Women Partnership (VAWP) - the key player in bringing specialist domestic abuse sectors together. SafeLives were also already involved in the Whole Lives Scotland project focusing on domestic abuse in Aberdeen City, providing a channel for the Pathfinder to feed its learning and activities into. The Pathfinder aligned its project delivery to VAWP's action plan in a deliberate move to provide value to VAWP.[28]

The Pathfinder faced challenges in engaging citizens with lived experience due to the nature of the topic and due to barriers presented by Covid-19. The Pathfinder initially anticipated creating a 'Citizen Research Group' to support the design and implementation of research activities with a wider group of citizens. However, despite promoting the group and circulating among specialist service providers, there was limited uptake. The Pathfinder also sought to leverage connections it had made with domestic abuse service providers and key third sector partners to connect with citizens. Again, there was limited engagement with a small sample of only 8 people responding to an online consultation. The Pathfinder was able to engage more citizens when it brought in the service design organisation Snook as a formal partner during the Develop phase of the project. Snook conducted user interviews with individuals or with small groups to gauge their views and feelings around three concepts defined by the Pathfinder, which explored different ways of improving care pathways and experiences of people with lived experience and practitioners. The team from Snook also noted the challenges in engaging people with lived experience, particularly participants from under-represented groups. In total, Snook was able to engage seventeen people with lived experience as well as nineteen practitioners. The difficulties in engaging citizens led one stakeholder to question whether the Scottish Approach to Service Design (SAtSD) was suitable in this context

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[28] Stakeholder interview

and whether it should be only used in cases where substantial citizen engagement could be achieved.

Knowledge, skills, relationships and capacity ('what they learned and gained')

Despite challenges in engaging stakeholders and citizens, and maintaining its project team, the Pathfinder has been well guided by a multi-agency steering group made up of some of the key organisations operating in the domestic abuse landscape, including Safe Lives and VAWP. The composition of the steering group did change over the period of the project, reflecting the evolution of the Pathfinder towards focusing its solution on supporting practitioners and people who receive disclosures to access information and effectively provide support to people with lived experience. One stakeholder noted:

> " Define told us we were not looking for a general public solution because many, many organisations have been delivering apps … So we wanted to focus on everybody across health and social care because we were aware from research that people didn't feel confident about disclosure, and disclosure could happen at any time. That was the problem. There was no pathway."
>
> - Pathfinder team member

> " But I think what's been very helpful for us is that at the end of Define, we reviewed the whole of the steering group, got new people in that were more representative of what was happening in health and social care."
>
> - Pathfinder team member

> " It became apparent at the end of that phase that we needed far more specialist input."
>
> - Pathfinder team member

This pivot was expressed by one stakeholder as being important because domestic abuse should not simply be pursued through criminal justice processes, but needs to be embedded in health and social care support provision for people who have experienced or are at risk of domestic abuse. Staff across the health and social care system also need to be trained in trauma-informed practice. This need for a shift in the system was one that the Pathfinder was seen as needing to speak to. The Pathfinder successfully mobilised support across several key agencies and brought together a multi-agency consortium including the police, health and social care, domestic abuse specialists, and the third sector at a critical juncture. The multi-agency consortium was able to provide guidance and consider the concepts being developed and feed into the delivery of the Pathfinder's main solution. The solution is a dynamic database of support services that allows users to access a 'one true source' of guidance and information about support, service provision and referral pathways relating to domestic abuse in Aberdeen. However, it is less clear whether bringing these groups together has resulted in greater integration and cohesive working across agencies operating in the domestic abuse landscape.

Figure 1. Domestic abuse support pathway, Aberdeen TEC Pathfinder, Define stage report

Over the course of the project, the Pathfinder has produced important research contributing understanding to the wider domestic abuse landscape over the course of the project. It commissioned the Institute of Research and Innovation in Social Services (Iriss) to conduct two evidence pieces: 'Service response to domestic abuse during Covid-19' (May 2020), and 'Language and service provision surrounding abuse in Scotland' (March 2020). These evidence pieces have informed the Pathfinder's secondary research and analysis and have also been published by Iriss on its website.[29]

In March 2020, the Pathfinder built on the early stakeholder mapping activities it had conducted in Discover and developed a prototype service tracker for Aberdeen City. The tracker was expanded to include wider Grampian as a result of a request made by the Specialist Midwife for Public Protection, NHS Grampian. The tracker was called the 'Grampian abuse support services tracker'. The tracker outlines the current scope of service provision for organisations who offer support to people experiencing domestic abuse in Grampian. The information from the tracker will feed into the dynamic database solution being developed by the Pathfinder. However, it will need to be checked to ensure it contains the most up-to-date information about organisations and services.

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[29] Iriss. (2020). Service response to domestic abuse during COVID-19. [online] Available at: link and Iriss (2020). Language and service provision surrounding abuse in Scotland. [online] Available at: link [Accessed 21 Apr. 2023].

> " Because ... the service designer in Aberdeen City's team had been doing a lot of the stakeholder mapping and trying to understand who did what and how it all connected ... when Covid happened, domestic abuse rates rose, [they were] able to pull together a directory, which was just a word document that explained who was where and doing what ... so people could look at it and say here's the support that we need to ... put in place for this person. That just didn't exist before, so there have been small wins along the way that have been really great."
>
> - National Team Stakeholder

Application or adoption of the solutions or new ways of working ('what they are doing differently')

The Pathfinder was significantly impacted by Covid-19 at the critical mid-point, when the project was moving from Discover/Define to Develop/Deliver. The service designer left, and key individuals from the Health and Social Care Partnership were pulled off the project to work on Covid-19 priorities. The partnership with Snook did bring greater direction to the Pathfinder as it commenced Develop and Deliver and filled in some gaps in the user research. However, it has taken a long time for that partnership to get off the ground, resulting in significant delays to the project. The Pathfinder did eventually benefit from two new individuals in the Health and Social Care partnership being appointed to the project, "who brought in new energy and new ways of looking at things and also cemented the work with health and social care as well."[30]

While the Aberdeen Pathfinder has yet to implement its solution, namely a domestic abuse directory of specialist organisations, it has laid the groundwork to ensure it is well-utilised. The Pathfinder effectively brought together several groups and organisations in the local area, all actively involved in providing specialist abuse services, who are all well-informed of the planned directory. There is the expectation that once the directory is operational, partners who have been involved in the project will direct their staff and other stakeholders towards it to create a critical mass of engagement with the service to ensure it is mainstreamed and engaged with effectively.

Scalability and spread of the solutions or new approaches and the impact on people ('what difference is this is making')

The decision was made to embed the domestic abuse directory within Aberdeen City Council's website 'Aberdeen Protects' to ensure the sustainability of the directory and to maintain a focal area for domestic abuse advice. The Pathfinder chose to commission Snook to develop the functional directory that will be embedded into the site as opposed to getting it built by Aberdeen City Council's IT services, due to the latter's lack of time and resource to commit to the project within required time frames. However, Aberdeen City Council will be responsible for maintaining, updating, and troubleshooting the directory. There was some reflection within the Pathfinder that it would have been preferable to have involved Aberdeen City Council earlier in the process, and to have commissioned IT services to build the directory, to gain buy-in and ensure their future commitment to maintaining and troubleshooting the site.

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[30] Stakeholder interview

Appendix 2: East Ayrshire Transforming Local Systems Impact Report

AIM: To use Technology Enabled Care (TEC) as a key enabler to fully transform health and social care provision for people with long term health conditions living in the Irvine Valley.

Overview

The East Ayrshire Pathfinder is at an early stage of delivering several viable solutions with the aim of transforming health and social care services for people with a long-term health condition living in the Irvine Valley. The Pathfinder has defined five core solutions (a Digital Health and Care Support Worker; a Technology Enabled Care (TEC) backpack; Online Multi-Disciplinary Team (MDT) consultations and digital screens in GP practices) in response to key problems identified through user engagement in the Discover phase. Firstly, the lack of information on services available in the Irvine Valley, which causes barriers to access. Secondly, difficulties travelling, particularly using public transport, to appointments in the Irvine Valley. Thirdly, long waiting times to access services. Fourthly, poor connectivity, high levels of data poverty, and lack of digital skills and experience.

The Pathfinder is at a relatively early stage in delivering these solutions. In this section we will assess how well the Pathfinder is making progress towards impact or is positioned for impact, by examining four key questions. Evidence is drawn from data collated by the Pathfinders in OutNav against three pathways (Discover/Define; Develop; Deliver - see Appendix 6).

- Which stakeholders did the Pathfinder engage across all four phases of the SAtSD and how ('who with'), the value of the project to them ('how they feel')
- To what extent are there changes in (or progress made towards changes in) knowledge, skills, relationships, capacity to support the intended changes in the system ('what they learn and gain')
- To what extent is there evidence of the application and adoption of the solutions, or new ways of working ('what they do differently')
- To what extent is there evidence of the scalability and spread of the solutions or new approaches, and the impact on people ('what difference does this make').

Stakeholder Engagement and the value of the project to them ('who with')

The Pathfinder has had broad engagement with a wide array of stakeholders in all phases of the Scottish Approach to Service Design (SAtSD). The Pathfinder's core team include the East

Ayrshire Health and Social Care Partnership, the 'Thinking Differently' team, a clinician and a third sector partner, Council of Voluntary Organisations (CVO) East Ayrshire. Outside the core team, the Pathfinder has engaged extensively with the community, people with lived experience, healthcare professionals, third sector organisations and wider local and national stakeholders.

Figure 1. East Ayrshire stakeholder map

The Pathfinder has had an extensive reach into the community, engaging even those hard-to-reach individuals and communities. The Pathfinder has successfully raised awareness of its work and has integrated well with the community. The community has been widely engaged in the Discover, Define and the Develop phase in creative and engaging ways. The Pathfinder engaged one hundred and forty-five people from the community in the first phase of the SAtSD to understand the problem. Prior to lockdown as a result of Covid-19, the Pathfinder delivered face-to-face community events such as Tea and TEC Galston, local workshops, community interviews on the local Stagecoach bus service and in Lady Floras housing complex. Although much of the subsequent engagement activity moved online, in the form of online surveys, interviews and emails, the Pathfinder made a concerted effort to adopt a hybrid approach where possible. The Pathfinder held several face-to-face 'How Might We' workshops in September 2021, including with citizens. Sessions were held in a well-known community space called the DOT Hub. The creative approach taken by the team has enabled it to successfully reach a broad base of individuals, including those who are digitally excluded, suffer from mental health problems, or physical health conditions. One stakeholder noted:

> ❝ People are excited about it and talk all the time about the team getting on buses to have a chat with them."
> - Pathfinder stakeholder

Feedback forms (small data set) provided by the Pathfinder show that participants felt the Pathfinder was a valuable project for the Irvine Valley.

Figure 2. Feedback from citizens

One stakeholder noted:

> So the people who were involved in the program, we used to gather feedback from them, we always had that feedback option for them and they would tell us things like 'it felt really good to know that we are being listened to … and it's really good that we are helping to solve problems.' The community loved being involved. They really, really enjoyed it because I think as a public, any public sector organisation you have to move away from this ethos of us fixing everything. It's got to be much more about co-production, and giving that ownership and empowerment to people … we always had the belief that if you got the community involved from day one, they're much more likely to buy into it."
>
> - Pathfinder team member

The Pathfinder also engaged wider stakeholders across all phases of the project and sought to increase its profile. Throughout each phase of the project the Pathfinder invited community, voluntary, and third sector organisations to its workshops. Many stakeholders that participated in the early Discover and Define workshops were also invited to participate in the Pathfinder's 'How Might We' (HMW) sessions which were remote, self-guided sessions. A total of two hundred and eighty HMW statements were collected, which were refined down to twelve key statements. The Pathfinder further invited citizens and wider stakeholders in December 2021 to its ideation workshops focusing on each of the HMW statements, resulting in the creation of nineteen concept cards and twenty-six solution cards, which were prioritised and refined with stakeholders.

Figure 3. Feedback from Stakeholders

The Pathfinder has recognised the importance of developing useful connections and fostering relationships to not only ensure any solutions it develops are well-targeted, person-centred, and relevant, but also to encourage buy-in from key stakeholders. Specifically, the Pathfinder has closely engaged with SMART Supports in the 'Thinking Differently' team and the Irvine Valley Community Connector services within CVOEA; both offer important TEC services in East Ayrshire, and both have been heavily engaged in the Pathfinder. CVOEA, the third sector interface, was one of the Pathfinder's core partners, and one of their TEC Community Connectors was part of the core team until June 2022. A Peer Mentor from the SMART Supports team also joined the team in June 2022, and will support the Pathfinder in the final phase of delivery. The Pathfinder's partners were critical to ensuring the Pathfinder was able to engage widely in the community. Additionally, both services, more widely, have offered important insights into service delivery and the citizen journey, specifically in the Develop phase of the Pathfinder.

> " Obviously the third sector interface had lots of contacts in the community. So it made it much easier for us..."
>
> - Pathfinder team member

The Pathfinder also engaged Public Health Scotland in its ideation workshop, which has contributed to one of the core solutions of the Pathfinder, providing relevant public health information to be included in the information publicised on screens in GP surgeries.

Finally, the Pathfinder has benefited from having a clinician on their team, who later then became the Clinical Director for East Ayrshire Health and Social Care Partnership and will be taking forward one of the Pathfinder's solutions (see 'Application' section).

Figure 4. East Ayrshire current resources
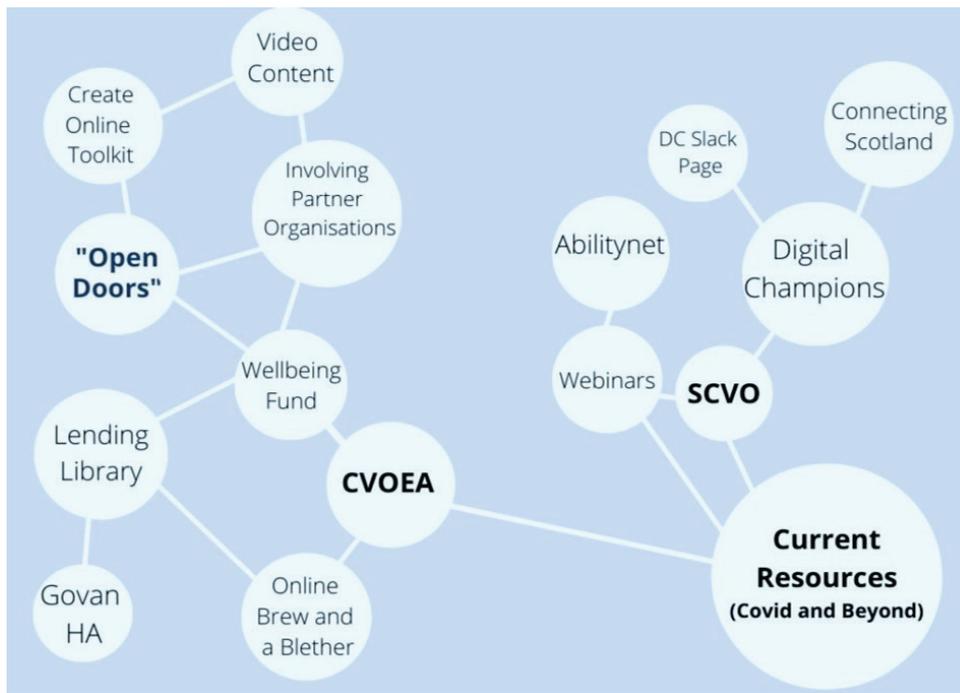
The Pathfinder has presented at several senior management boards. The CEO at East Ayrshire Council has supported and promoted the project,[31] and the Pathfinder has connected with the Chief Executive for the East Ayrshire Health and Social Care Partnership. The Pathfinder has developed strong connections with the Northern Locality Planning Group (NLPG), created to allow local communities to actively contribute to service planning, and to work with public and third sector organisations to improve people's lives. The Pathfinder has attended NLPG meetings and raised awareness of its work to services delivering in the local area. Additionally, leveraging its connection within the 'Communities and Economy' team in the DOT Hub in Newmilns, the Pathfinder is using the site to deliver one of its core solutions. Many of the stakeholders engaged have been invited to join the Pathfinder's steering group.

> " We were really good at getting out to people because we would … put posters in the windows. We would, you know, reach out through senior management team meetings here. We would send out communications through the local authorities. We were just using different means to get people involved and linked in."
>
> - Pathfinder team member

Knowledge, skills, relationships and capacity ('what they learned and gained')

The Pathfinder has generated a wealth of learning and understanding around the issues and challenges faced by people with long-term conditions in the Irvine Valley. It has made significant efforts to share this learning with its stakeholders and partners. A key role played by

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[31] Celebrating Our Successes by Eddie Fraser. (2019). Available at: link [Accessed 21 Apr. 2023].

the Pathfinder has been sharing learning and raising awareness of its activities to communities, senior stakeholders and relevant organisations delivering services and supports in the local area. This has been recognised by the Pathfinder as a key pathway to increasing uptake and buy-in for the Pathfinder's learning and solutions. The Pathfinder has ensured it has fed back its analysis of user research to citizens, some of whom were invited to a HMW session. This session with six citizens generated one hundred and twenty HMW statements, which has informed the Pathfinder's solutions.

Figure 5. 'How Might We' Statements

Citizens were also engaged in the Pathfinder's prototyping stage and engaged at relevant events and the Pathfinder has started a newsletter to keep people informed of its activities. To further support access to information the Pathfinder worked with its third sector partner CVOEA in summer 2020 to develop an online toolkit, including videos, for people in East Ayrshire, highlighting support services in the area and providing helpful advice.

With respect to sharing knowledge with wider stakeholders, the Pathfinder has presented its findings at a number of East Ayrshire Health and Social Care board meetings. There was interest in the creative tools such as Miro, Mural and Mentimeter used by the Pathfinder, and the Pathfinder has been invited to support data collection and analysis for other projects in the East Ayrshire area and to facilitate meetings within East Ayrshire HSCP. The Pathfinder is sharing learning across the wider HSCP organisation by regularly engaging with the Partnership and Engagement Officer there. It is also sharing learning with the Southern Locality Planning Group in East Ayrshire Council.

Figure 6. Pathfinder research tools
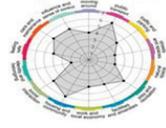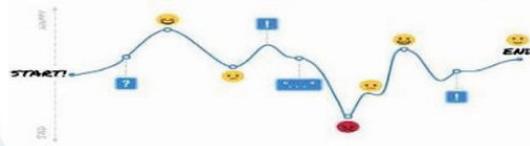
Data poverty, digital anxiousness and lack of skills and experience around digital were highlighted as key problems in the Discover phase. Improving digital inclusion has been an important part of the project, which will be taken forward in the solutions developed. During the time frame of the project, the Pathfinder undertook a variety of activities to increase digital inclusion and build confidence and capacity around digital. The Pathfinder had a TEC Community Connector from CVOEA embedded in the team. The TEC Connector ran several digital inclusion groups focused on improving confidence, social connection and health and wellbeing. The TEC Connector also provided practical support, for example supporting people with online banking, access to health services and TEC. The Pathfinder set up a Tea and TEC group, a photography group, and hosted a group in collaboration with the Crossroad Community Hub in Darvel. The groups also creatively linked in with DigiBus, facilitated by East Ayrshire Leisure Trust, which provided access to digital tools and equipment to the community in various locations. As the Pathfinder has come to an end, these groups have been absorbed by other services. For example, the Tea and TEC social group, will be absorbed by SMART Supports in the Thinking Differently Team, and the photography group has been picked up by East Ayrshire Leisure Trust.[32]

> **❝** Going out and talking to others, partners, for example, we did a bit of a link up with the Leisure Trust because they had a digital bus that was able to drive around the Irvine Valley. So it was their bus, but they allowed us to access it, to go out and do kind of digital champion type work initially."
>
> - Pathfinder team member

Maintaining the DigiBus as a solution was not considered viable due to the issues around insurance, staff, and maintenance, though it did provide a creative and innovative way of providing mobile digital support in the community and addressing issues related to accessibility, as well as engaging people around digital in the short term and raising awareness of the project. The Pathfinder is also in the early stages of setting up Multi-Disciplinary Team group consultations for patients using Near Me

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[32] East Ayrshire OutNav report

technology, in collaboration with the clinician who has been involved in the project.

Figure 7. Lunch and Learn Session at a GP Practice

Lunch, Listen, Learn – GP Practice Session

Application or adoption of the solutions or new ways of working ('what they are doing differently')

The Pathfinder is taking forward solutions to improve citizens' access to information, highlighted as a key problem in the Irvine Valley during the Discover phase. The Pathfinder is setting up TV screens in GP practices, which will provide information on local services available to citizens in the Irvine valley. One screen is already in place in a GP surgery, and the Pathfinder is involved in early conversations with pharmacies regarding the potential of setting up screens in their sites.

> ❝ We're working with GP surgeries to put TV screens into their practices and then to promote local services, key services, prescription delivery services that are going on within the Irvine Valley … They should be here this week."
>
> - Pathfinder team member

The solution was prototyped with Public Health, a local pharmacy, and a GP practice. The prototyped solution was promoted at several events in order to raise awareness and encourage citizens to engage with it. The Pathfinder is also setting up a digital hub in the 'Developing Opportunities Together' (DOT) Hub in Newmilns, where the Pathfinder developed a regular presence over the course of the project. In the Hub, people engage with digital tools, learn about digital services, and get additional help and support. The Pathfinder has also set up a noticeboard in the DOT Hub to increase information available to citizens.

In addition to improving access to information, the Pathfinder is improving people's ability to access early intervention support through digital services. The Pathfinder is creating a new post for a Digital Health and Care Support Worker who will act as a go-between for GPs and people needing long-term support.[33] People can be referred to the Digital Health and Care Support Worker by GPs with the aim of lightening the workload of GPs by supporting people to use digital smart supports or TEC to self-manage their long-term condition. The Digital Health and Care Support Worker will carry a TEC 'backpack', which will have a variety of devices that can be used to provide demonstrations to people. They will also hold appointments in the GP surgery and will also be involved in DOT Hub drop-in sessions.

> The [Digital Health and Care Support Worker] … it's basically going to be a go-between between doctors and [people] … promoting technology enabled care for example, little blood pressure monitors … wearable tech that the NHS can provide or that people can buy themselves. But we found that that can really lighten GP's workloads if people take that self-management [approach]. At the moment, there is no one in the community that can actually say I can help you set that up so, the Doctor can then say 'I can refer you to a TEC connector' who'll then get them up and running."
>
> - Pathfinder team member

The Pathfinder is in the early stages of setting up Multi-Disciplinary Team (MDT) group consultations for patients using Near Me technology, in collaboration with the clinician who continues to champion the project in her capacity as the Clinical Director of East Ayrshire HSCP in the project. Online MDT group consultations were defined as a solution to the problem of limited access to services in an area where there is a need to travel long distances to appointments, and where public transport is lacking. The Clinical Director will be starting a PhD where she will be involved in developing logical models to develop and test the approach for the MDT sessions and to evaluate their success. The first round of MDT sessions is anticipated to be on the topic of Long Covid, with a respiratory consultant already on board. Before the MDT sessions can be run, simulation training will be used to test the approach and its functionality. The Consultant involved has developed a lived experience survey, and responses will be used to support the co-design of the MDT. The aspiration is for a series of MDTs to be developed with healthcare specialists, addressing one long-term health condition per year.

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[33] Stakeholder interview

Most prevalent long term health conditions across the Irvine Valley:

- Anxiety / depression
- Hypertension
- Asthma
- Diabetes
- Chronic heart disease
- Chronic kidney disease

Though the Pathfinder is at an early stage of delivering its core solutions, it has created firm foundations to ensure the actionability of its solutions. Given the early stage in delivery, it is difficult to make judgements on the extent to which the solutions will be taken up by users and the extent to which they will be extensively adopted by relevant partners and services. However, there is good evidence, as described above, that the Pathfinder has undertaken significant groundwork through awareness raising, user engagement, and by developing strong links with the community and service organisations to ensure the relevance and need for its solutions and to ensure they are delivered in appropriate formats for the target groups. This is key for solutions to be taken up and to ensure good engagement from citizens. The Pathfinder is also considering tools/devices that will enable it to collect data and feedback on its services and solutions.

Scalability and spread of the solutions or new approaches and the impact on people ('what difference is this is making')

The SMART Supports team is absorbing several of the solutions that the Pathfinder has been unable to progress. In particular, the SMART Supports Peer Mentor who was brought into the Pathfinder will be responsible for running the legacy activities of the Pathfinder. The Peer Mentor will integrate them into SMART Supports overarching work supporting the community to use TEC. Citizens are referred through social work to the SMART Supports team who assist them by installing relevant TEC devices into their homes, such as community alarms and COMP devices. The SMART Supports Peer Mentor will maintain close engagement with the Digital Health and Care Support Worker.

The Pathfinder has strong links with primary care, which is important to ensure that its main solutions – the screens in GPs, the Digital Health and Care Support Worker and the TEC backpack – are embedded in the system and have significant reach, to maximise the impact on people's health and wellbeing. The Pathfinder hopes to evaluate and publicise the impact of the TV screens, with the ambition of rolling them out to more GP practices outside the Irvine Valley. The Pathfinder has made an agreement with the local GP practice for the Digital Health and Care Support Worker to hold sessions by appointment in the surgery every Friday. The Pathfinder has also sustained a firm relationship with the DOT Hub, a community space owned by CVOEA (a core partner of the Pathfinder), which will host the digital Hub. Many of its workshops and community sessions

were held in the Hub, and the TEC Connector was based there on various days in the week providing outreach, running digital inclusion groups, and supporting the community. It is likely that this relationship will lead to the long-term embedding of a digital Hub in DOT. However, the Pathfinder had concerns over its functionality and whether it would be fit for purpose. Consequently, the purpose of the Hub has been reimagined away from being the core location where people can engage with services and digital devices, to being a space for the community to be able to have drop-in sessions with the Digital Health and Care Support Worker. The Digital Health and Care Support Worker idea has been reimagined to act as a 'mobile Hub', who will carry a TEC backpack, and will be supplied with a car. In the future, as the post develops, there is potential for the Officer to visit care homes to provide TEC support.

While not yet fully implemented, there is considerable potential for the Digital Health and Care Support Worker, if sustained as a solution, to provide a key pathway to extending the reach and impact of the Pathfinder, ensuring people with long-term conditions can access early intervention and preventative support and are digitally included. The Pathfinder has laid the groundwork to enable the role to become embedded within the community, to be well linked with primary care, and other third sector services. There are expectations that the Digital Health and Care Support Worker will be in post by March 2023. The post will be hosted by the NHS, although the salary will be paid by the Local Authority. However, the individual will be employed on a temporary contract, which undermines the sustainability of the solution.

Appendix 3: Highland Transforming Local Systems Impact Report

AIM: To transform the Highland Respiratory Care pathway towards a pathway that is truly patient centred, by co-designing it with patients and all those who either use or provide respiratory services from the outset.

Overview

The Highland TEC Pathfinder is delivering many solutions aimed at transforming the Highland Respiratory Care pathway. Twelve solutions were developed in response to the priority areas of change identified through user engagement in the Discover phase. Specifically, qualitative research undertaken with patients and healthcare professionals indicated that there were four priority areas for change. Firstly, improving patients' access to information on all aspects of the respiratory pathway, including about their condition itself. Secondly, improving patients' access to support and additional services. Thirdly, improving healthcare professionals' confidence, knowledge, and ability to effectively diagnose, manage and make referrals on behalf of patients with respiratory conditions. Fourthly, improving secondary care processes and systems that enable patients to experience person-centred and streamlined care and support either as inpatients or outpatients, as well as the developing integrated systems for better data sharing and information flow to enable healthcare providers to effectively support patients.

The Highland TEC Pathfinder has developed solutions to address each of these priority areas. In this section we will assess how well the Pathfinder is making progress towards impact or is positioned for impact, by examining four key questions. Evidence is drawn from data collated by the Pathfinders in OutNav against three pathways (Discover/Define; Develop; Deliver - see Appendix 6).

- Which stakeholders did the Pathfinder engage across all four phases of the SAtSD and how ('who with'), the value of the project to them ('how they feel')?
- To what extent are there changes in (or progress made towards changes in) knowledge, skills, relationships, capacity to support the intended changes in the system ('what they learn and gain')?
- To what extent is there evidence of the application and adoption of the solutions, or new ways of working ('what they do differently')?
- To what extent is there evidence of the scalability and spread of the solutions or new approaches, and the impact on people ('what difference does this make')?

Stakeholder engagement and the value of the project to them ('who with' and 'how they felt')

The Pathfinder has undertaken extensive user engagement in all phases of the Scottish Approach to Service Design (SAtSD). The Pathfinder engaged with patients and healthcare professionals through workshops, informal interviews, and discussion groups in the Discover phase, to gather views and to develop a systems understanding of the respiratory pathway from the perspective of users. Despite a good overall level of engagement from patients, one member of the Pathfinder described challenges in ensuring people with lived experience were engaged. Covid-19 and the move to online engagement was cited as one factor affecting the numbers of people with lived experience that were included in the process. Overall, one hundred and thirty-four patients were engaged either in workshops, surveys, focus groups, or informal interviews in the first phase.

Figure 1. Highland Infographic

During the Define and Develop phase, the Pathfinder continued to have a good level of engagement with patients and healthcare professionals. This informed the analysis and prioritisation process undertaken to extract key themes, priorities and to refine the problem statement. The Highland Pathfinder's third sector partners Chest, Heart and Stroke Scotland (CHSS) and Let's Get On With It Together (LGOWIT) were critical to ensuring people with lived experience were engaged in these early phases.[34]

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[34] Stakeholder interview

Figure 2. Areas of change identified by patients and professionals during the Define phase
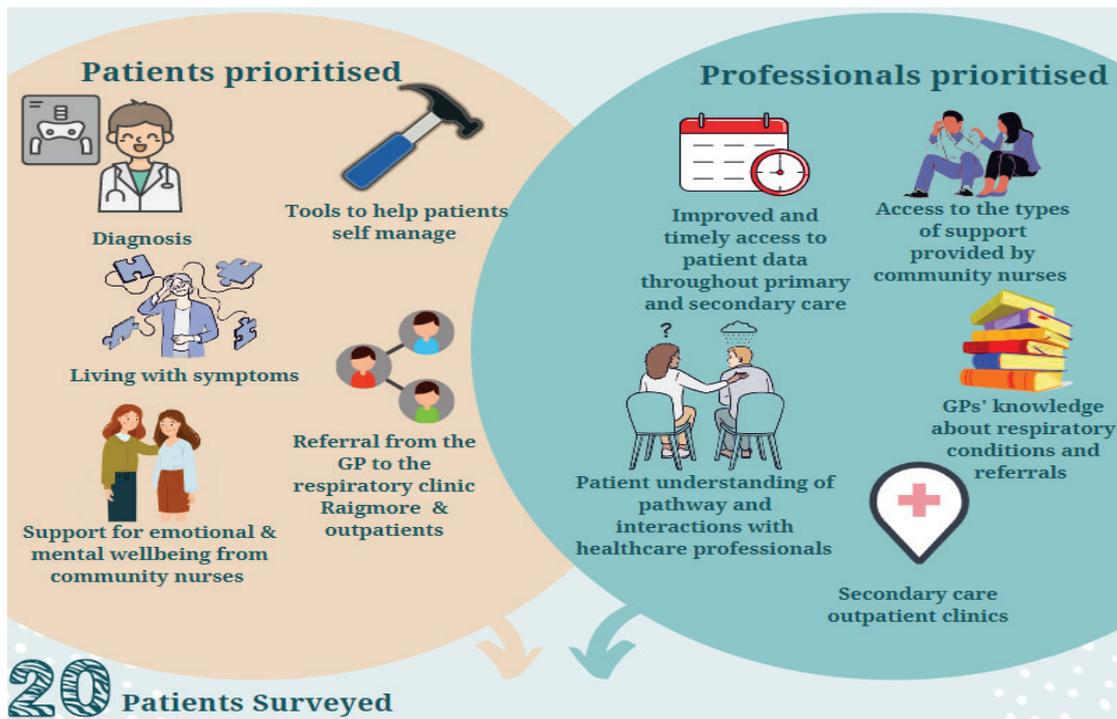
During the Develop phase, the Pathfinder delivered a well-attended stakeholder workshop, patient surveys, and several ideation workshops with healthcare professionals, to ideate and develop several solutions which were further refined over the course of three short-life working groups.

During the Deliver phase the Pathfinder worked with healthcare professionals, several different teams within NHS Highland (including the respiratory team, e-Health and TAM), its third sector partners as well as the Digital Health and Care Innovation Centre (DHI), Public Health and representatives from Primary Care to take forward and implement the solutions.

Figure 3. Highland Pathfinder 12 solutions

Patient information	Patient support	Clinician knowledge	Data sharing & flow

1. Respiratory Resource Hub – online and on paper
2. Online open learning and Q&A sessions
3. Digital access to patient's own medical records
4. Improved secondary care letters
	5. Improved access to specialist respiratory nurses
	6. Improved access to and uptake of pulmonary rehab
	7. Embed 3rd sector (CHSS & LGOWIT) within the respiratory pathway
		8. Improved Respiratory Guidelines on TAM
		9. Improved opportunities for learning & knowledge exchange through:
		  • Online teaching sessions
		  • Multidisciplinary team meetings
		  • Joint clinics
		  • Mentoring
			10. Improved secondary care systems and processes
			11. Improved clinical applications and data sharing for healthcare professionals
			12. Implemented COPD pathway & improved data sharing with SAS

The broad engagement of stakeholders across all phases of the SAtSD has been central to ensuring the solutions designed are relevant, person-centred and address identified needs. There are early indications that this approach is supporting the actionability and uptake of the research and solutions. Specifically, there has been consistent usage of the Respiratory Resource Hub. A feedback survey embedded in the Resource Hub between January and August 2022 shows nearly a quarter having been referred to the Hub by their respiratory nurse, primary care, or peer support group. Additionally, 57% of the respondents noted they came to the Hub through social media. The Pathfinder has indicated the Respiratory Hub was mainly promoted through social media and via the Your Breathing Matters (YBM) learning events which have proved to be popular. Each of the four YBM sessions run between February and August 2022 were well attended, indicating a clear need for the support and information provided in the session. One participant noted "I'm just so relieved to finally get some information and help".[35] The topics of the sessions are informed by patient views, and the Pathfinder has indicated that co-designing the sessions with the patients was a key driver for the success of YBM. Furthermore, the Pathfinder has buy-in from the Specialist Community Respiratory Team (CRT) in NHS Highland, who have agreed to manage the YBM platform and the delivery of the sessions, ensuring sustainability. Specialist Respiratory Nurses from CRT were engaged in the Pathfinder from the outset and formed part of the Core Group.[36]

Core partners involved in the Pathfinder have reported that the experience has been valuable to them.[37] One third sector partner noted that the "project has probably been relatively transformative for us as a charity".[38] Other core partners noted:

> " What took over was the collaborative approach, a lovely gel, it felt really friendly … In a way I think that validated us and gave us a bit of motivation for keeping on with the project and making things better."
>
> - Specialist Respiratory Community Nurse, NHS Highland

> " The Pathfinders group have given us a resource … we now have a plan for the way forward which has been created with patients and staff."
>
> - Respiratory Consultant

The Pathfinder has evaluated and obtained feedback from users of some of the solutions it has implemented. Feedback on the value of the Respiratory Resource Hub has generally been positive, with 66% of respondents to an embedded feedback survey agreeing they found it useful and 53% agreeing they were likely to use it again.[39] Feedback obtained by the Pathfinder on the Your Breathing Matters sessions and on the educational sessions delivered through ECHO for healthcare professionals indicate that participants have found these resources useful.[40]

[35] Padlet. (n.d.). Highland Pathfinder Final Report. [online] Available at: link [Accessed 21 Apr. 2023].
[36] Padlet. (n.d.). Highland Pathfinder Final Report. [online] Available at: link [Accessed 21 Apr. 2023].
[37] Stakeholder interview
[38] Stakeholder interview
[39] Padlet. (n.d.). Highland Pathfinder Final Report. [online] Available at: link [Accessed 21 Apr. 2023].
[40] Padlet. (n.d.). Highland Pathfinder Final Report. [online] Available at: link [Accessed 21 Apr. 2023].

Knowledge, skills, relationships and capacity ('what they learned and gained')

The Highland TEC Pathfinder has made significant progress in improving patients' access to information. Usage statistics are shown for the Respiratory Resource Hub below.

Figure 4. Usage statistics for the 'Respiratory Resource Hub'

Usage

Month	Total Page Views	Users	New Users	Average Session Duration
January	1267	230	173	15
February	1331	187	132	24
March	2500	382	318	18
April	706	99	61	21
May	1076	205	124	29
June	699	156	124	21
July	584	164	135	35
August	693	197	131	44

Usage statistics from January-July 2022 recorded by Google Analytics

By three usage measures there was a monthly increase in use from January to March, followed by a dip in April and a lower, but relatively consistent, level of use from May to August. The higher figures in March can be attributed to a focused social media promotion that month. Average session duration has shown an upward trend over the year.

There is good evidence showing that the Highland Pathfinder is effectively improving knowledge and strengthening capacity of people to manage their own conditions and prevent exacerbation. The Pathfinder is delivering open learning sessions, branded 'Your Breathing Matters', for patients and carers, which are run bi-monthly online using a Near Me Group Consultation platform. These are demonstrations or talks facilitated by a Specialist Respiratory Nurse. The talks are also made available open source on the Respiratory Resource Hub. Feedback obtained by the Pathfinder from participants of the Your Breathing Matters sessions shows that of the fifty-eight people who registered for the sessions between February and August 2022, the vast majority learned something new about their symptoms (74%) and learned new self-management strategies (81%), while 79% reported improved confidence with self-management.

Figure 5. Feedback on Your Breathing Matters

Pie Chart 1
New knowledge about conditions/symptoms
- 23%
- 3%
- 74%

Pie Chart 2
Learning new self-management strategies
- 15%
- 4%
- 81%

Pie Chart 3
Improved confidence with self-management
- 15%
- 6%
- 79%

■ No, because I already knew a lot   ■ No, it wasn't relevant to me   ■ Yes, I learnt new things about my symptoms/condition/self-management
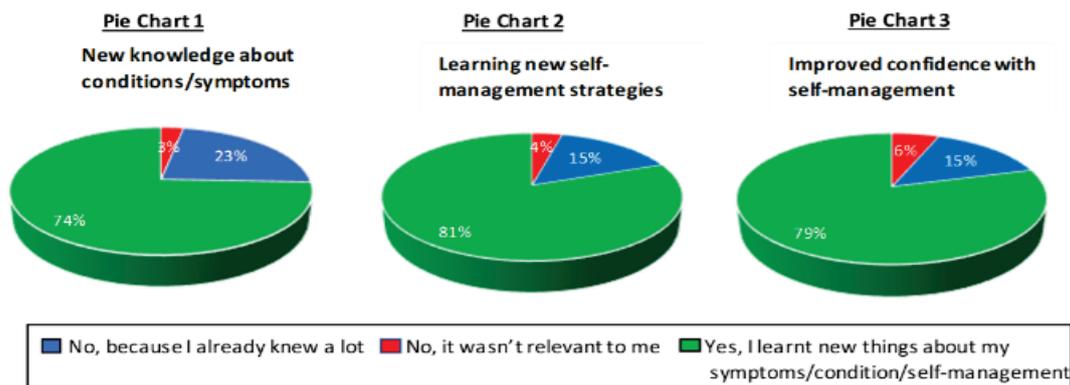
> Another brilliant session. I learnt a lot from both speakers but particularly the respiratory physio (I think she was). I did not know it was possible to move your cough from your lower respiratory to upper respiratory tract yourself!"

> Have been singing the 1 121 12321 in the woods whilst walking my dog as well as doing the diaphragm breathing and am feeling in a much better place than I was before."

The Pathfinder has created new processes at an organisational level in NHS Highland (NHSH) to ensure capacity strengthening of healthcare professionals is embedded. The Pathfinder has partnered with Project ECHO (Extension of Community Health Outcomes)[41] to deliver a regular series of online respiratory learning sessions via ECHO to healthcare professionals in community, primary or secondary care. The structure of the sessions involves presentations made by respiratory specialists, facilitated by a specialist respiratory nurse, followed by case-based discussion with participants. The sessions are intended to improve healthcare professionals' knowledge and confidence managing patients with respiratory conditions, as well as improve relationships between primary and secondary care, and referral pathways. The Pathfinder obtained feedback on the online ECHO learning sessions, aimed at building the confidence and capacity of those involved in diagnosing, managing, and making referrals for patients. One hundred and twenty-one healthcare professionals signed up to the sessions, which were held fortnightly between April 2022 and June 2022. Most of the participants who attended agreed or strongly agreed that they learned new ways to support patients to manage their condition.

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[41] Hospice, H. (2023). PROJECT ECHO. [online] Highland Hospice. Available at: link [Accessed 21 Apr. 2023].

Figure 6. Feedback from ECHO sessions
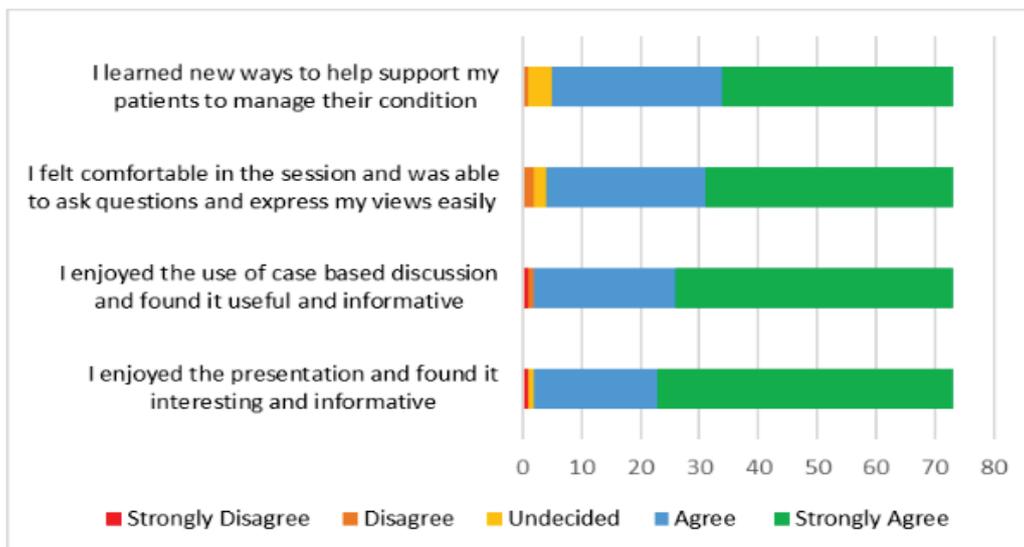
The Pathfinder has also improved and developed new respiratory guidelines made available in NHS Highland's online system 'TAM' - 'Treatment and Medicines'. The Pathfinder has developed a set of standardised respiratory guidelines, linked to national guidelines, for clinicians to support the diagnosis, management, and referral of patients with respiratory conditions. These guidelines are hosted on NHS Highland's current online information system and app known as TAM (Treatment and Medicines). A clinician has been appointed to TAM for one year to support the development of these guidelines. The Pathfinder plans to evaluate the effect of the guidelines on respiratory referrals one year after the publication of the guidelines.

Individuals interviewed from the core Pathfinder team indicated that the project had resulted in strengthened relationships. The strong partnerships built with the third sector were highlighted. One third sector partner noted they went from feeling like they were initially included in the proposal to "tick a box" to feeling like they were consistently listened to and that they were equal partners in the project.

> " We worked really well as a team and there was an inclusive listening approach … We as a third sector organisation felt equal in the development of the project … So we felt listened to and included."
>
> - Third sector partner

> " So part of it was that relationship. So speaking to people, respiratory consultants, getting known and … the double diamond approach. I generally think that's going to be transformative … I hope so."
>
> - Third sector partner

Application or adoption of the solutions or new ways of working ('what they are doing differently')

The Pathfinder's core solutions intended to improve access to information and strengthen capacity have been implemented by NHS Highland with steps taken to ensure longevity and sustainability. The Respiratory Resource Hub initially integrated into NHSH's current online resource website and app TAM is now being adopted by The Right Decision Service (RDS) (part of DHI). NHSH have been offered – at no additional expense – access to RDS's own iteration of Quris software, and migration of the Resource Hub to RDS was planned for the end of 2022. This option will improve functionality of the Hub and provide a long-term option for hosting the site. The Your Breathing Matters learning sessions intended to support patients and carers are delivered using the Near Me Group Consultation platform. The Community Respiratory Nursing Team (CRT) have taken full ownership of this solution, and it has been embedded in their operational processes. They will fully undertake the planning, delivery and evaluation of these sessions. The online knowledge exchange and learning sessions for healthcare professionals have been taken on by the Highland Hospice ECHO team, and a curriculum has been co-developed and sessions embedded in the respiratory calendar.

The Pathfinder has come up against several barriers to data sharing and information flow, hindering progress in improving secondary care processes and systems within NHS Highland (NHSH). The problem of the lack of integrated systems impeding healthcare professionals' ability to access all relevant medical data (from both primary and secondary care) was highlighted as a priority issue during the 'Discover' phase. An original key aim of the Pathfinder was to support work that has already been underway for some time in NHSH to integrate systems to enable a single point of access to data. However, limited progress has been made. A key issue complicating the task was that IT system changes cannot be implemented for the respiratory department alone. The Pathfinder has however provided additional evidence and weight towards the creation of a data sharing agreement between primary and secondary care being progressed by the e-Health department in NHSH.

Despite the limited progress in overcoming data sharing barriers at the organisational level in NHSH, the Pathfinder has effectively raised awareness of the importance and desirability of citizen-owned data, as expressed by users. Most significantly, the Pathfinder has gained the support of DHI, which is drawing learning from the Midlothian Pathfinder to support, in the long term, the creation of a digital access solution for NHS Highland to enable citizens to access their personal data. The Pathfinder's recommendations and learning have been shared with the DHI team. In 2021, the Pathfinder surveyed 26 patients, gathering their views on the healthcare records and functionality they would like to be able to access digitally. Most popular were test results, with explanations of the results; clinic letters summarising the clinic appointment; primary care notes and outpatient notes. The announcement of the Scottish Digital Front Door project shows the priority identified by the Pathfinder for patients to access their own data has also been identified at a national level.

Figure 7. 'Test' interface prototype of a patient digital record

The Pathfinder has recognised that due to financial and technical limitations it will be unable – in the time frame of the project – to sustainably implement other solutions it has defined and developed. But it has successfully influenced other organisations and programmes to adopt its solutions. In December 2021, the Scottish Government funded the Interface Care Programme, aimed at reducing hospital stays by delivering alternative safe and high-quality care. The Interface Care Programme will provide funding for an additional specialist respiratory nurse as well as an administrator to support the CRT and additional educational activities undertaken by them. The importance of administrative support to ensure the effectiveness and efficiency of the CRT was highlighted in the Pathfinder's recommendations and will ensure there is additional capacity to support the solutions developed by the Pathfinder that have been taken up by the CRT. Furthermore, the Pathfinder recommended developing an early supported discharge (ESD) service. This will be taken up by the Interface Programme, which will fund the development of a virtual ESD service, involving a remote ward on 'TrakCare' and a remote monitoring platform.

Learning and recommendations from the Pathfinder on pulmonary rehabilitation will be taken up by the Interface Care Programme. The Pathfinder has highlighted the importance of pulmonary rehabilitation for patients with pulmonary conditions and the need to move to a co-ordinated rehabilitation service with its own funding, management and common processes, including funding for specialist respiratory physiotherapists. A pulmonary rehabilitation service would improve provision, access and awareness of tools to self-manage pulmonary conditions, including courses and classes to support pulmonary rehabilitation. While the Pathfinder has not been able to develop a pulmonary rehab service, the recommendations and lessons from the Pathfinder have been taken up

by the Interface Care Programme. The Pathfinder will feed into the Programme via a rehabilitation steering group set up in NHS Highland.

The Pathfinder also has the potential to contribute to enabling people to self-manage their respiratory conditions in the long term by co-developing courses of pulmonary rehabilitation health classes, to be run in leisure centres in Highland. The Pathfinder held discussions with High Life Highland about holding Active Health classes at their leisure centres to support people who do not yet meet the criteria for pulmonary rehab. The Leisure centre has agreed to hold these sessions as part of the suite of online classes that it runs on a variety of long-term health conditions to support people towards active self-management.

Scalability and spread of the solutions or new approaches and the impact on people ('what difference is this making')

There is promise that the solutions implemented and recommended by the Highland Pathfinder will have a significantly greater reach over the long term than that currently achieved. Several solutions are well-embedded in the existing processes and structures of NHS Highland and are no longer tied to the Pathfinder per se, ensuring greater sustainability. Additionally, these solutions could be taken up by other specialities within NHS Highland and also by respiratory services within other health boards across Scotland. The Pathfinder has disseminated the outputs of its project widely through its End of Project event and has made all its resources and outputs available in an electronic library on Padlet (www.bit.ly/RespiratoryPathfinder).

Importantly, NHS Highland also has raised awareness of the essential role played by specialist respiratory nurses. The Community Respiratory Team has been fully embedded in the Pathfinder's work; specialist respiratory nurses are involved in the Your Breathing Matters and ECHO sessions and in providing expert knowledge for the Respiratory Resource Hub. Moreover, the Scottish Government funded Interface Care Programme has taken on the Pathfinder's recommendations to support the Community Respiratory Team. The Interface Care Programme will provide funding for an additional specialist respiratory nurse as well as an administrator to support the CRT and additional educational activities undertaken by them.

An important achievement of the Highland Pathfinder has been in creating a new pathway with the Scottish Ambulance Service. The Pathfinder established a new pathway for Scottish Ambulance Service and NHS Highland whereby COPD patients who called out an ambulance, but did not need to be taken to hospital, could be referred for follow-up by the specialist respiratory nurses, thereby providing a safety net for these patients. The pathway is intended to reduce hospital admissions and improve patients' access to specialist respiratory nurses and third sector organisations, as well as improve patients' confidence and ability to self-manage. The Pathfinder, however, noted in its final report "By September 2022 only 2 patients had been referred via this pathway. The reason for this is unclear, it is possible patients have not met the criteria or that individual SAS paramedics are not sufficiently aware of or confident using the pathway". While the importance of creating successful data-sharing agreements, given the significant barriers, should be recognised, this example illustrates that while data sharing is an important 'gateway' to ensuring more person-centred and efficient services, it is not, in itself, a sufficient criterion for success. Additional work needs to be done to ensure that the channels of communication opened by data-sharing agreements are well publicised, understood and used. However, if the pathway is effectively

communicated and implemented, it will support the sustainability of the Pathfinder's solutions and its ability to contribute significantly to enabling people to self-manage their long-term respiratory conditions.

While some of the Pathfinder's solutions have been taken up by other providers with the resources and technical know-how to implement them at scale, their sustainability and their successful future implementation is not guaranteed. Some solutions, such as the creation of a Digital Access solution by DHI for citizen-owned data, are not constrained to respiratory alone and therefore have potential to transform the patient experience across all specialities. This is a long-term goal as described in the Midlothian Pathfinder, but with significant potential. However, there are still many barriers towards wider implementation.

The adoption of the Pathfinder's solutions for the CRT and pulmonary rehabilitation service by the Interface Care Programme will improve patient experience, their ability to access information and self-manage their condition. However, funding for these solutions from Interface Care is for only two years.

> **"** They were asking people who were already relatively pressured. They were asking health professionals, GPs etc, who had already given time to the project but they needed to look at more sustainable ways of setting up."
>
> - Third sector partner

The Pathfinder has also increased awareness of the support and role played by the third sector.[42] The Pathfinder highlighted the importance of third sector organisations to the respiratory pathway in the Together We Care strategy consultation.[43] However, NHS Highland was unable to commit to providing additional funding for these organisations from its budget outwith the project. One stakeholder noted that the challenge lay in the siloed team structures in NHSH, which meant that financial decisions were driven by teams less bought in and involved in the Pathfinder project.[44] The implications of this is that the third sector will have to continue to self-fund, and this will limit their ability to reach a greater number of patients (including from primary care) who would benefit from their support for self-management, education and rehabilitation.

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[42] Stakeholder interview.
[43] Padlet. (n.d.). Highland Pathfinder Final Report. [online] Available at: link [Accessed 21 Apr. 2023].
[44] Stakeholder interview

Appendix 4: Midlothian Transforming Local Systems Impact Report

AIM: To transform traditional models of care to enable the increasing numbers of people living with frailty to achieve their best possible quality of life.

Overview

The Midlothian Pathfinder is working with Digital Health and Care Innovation Centre (DHI), the Glasgow School of Art, the Red Cross and VOCAL to develop a long-term digital solution to improve people's access to services, and to improve connections and the flow of information between services. This is with the aim of improving the experience of care and support for people living with frailty, their family, carers, and staff. The findings from user research and the Discover phase led the Pathfinder to focus on 'hubs' in the system to overcome barriers people face in accessing support and in navigating the complexity of the health and care system. Hubs can be 'professionals' (for example third sector organisations) who guide people through the health and care system; carers who navigate on behalf of the person; and people living with frailty who prefer to navigate for themselves. Hubs were placed at the centre of the solution, as they were identified by people as the kind of support that was most valued. Hubs were identified as helping 'the digitally anxious' to use technology, access person-centred care, and to enable self-reliance. This builds on the concept of the 'Circle of Care', which has been explored in variety of ways across health and social care. The Circle of Care "re-envisions compassionate healthcare by placing it in a broad social and interpersonal context, describing a multi-directional flow of care between healthcare professionals and their colleagues, patients and carers."[45] The Pathfinder sought to bring in new thinking, new approaches, and new capabilities, to incorporate Technology Enabled Care and design thinking as transformation enablers in a person-centred system of frailty care. The Pathfinder's solutions were developed in recognition of the following problems:

- Effort and data are siloed, with no readily available method to resolve this;
- Our current operating model 'puts' the citizen at the centre but is not patient centred;
- Governance constraints limit systems integration.[46]

In this section we will assess how well the Pathfinder is making progress towards impact or is positioned for impact, by examining four key questions. Evidence is drawn from data collated by the Pathfinders in OutNav against three pathways (Discover/Define; Develop; Deliver - see Appendix 6).

- Which stakeholders did the Pathfinder engage across all four phases of the SAtSD and how ('who with'), the value of the project to them ('how they feel')

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[45] Circle of Care. (n.d.). Available at: link
[46] Midlothian Pathfinder Summary (Jan 2023), internal document.

- To what extent are there changes in (or progress made towards changes in) knowledge, skills, relationships, capacity to support the intended changes in the system ('what they learn and gain')
- To what extent is there evidence of the application and adoption of the solutions, or new ways of working ('what they do differently')
- To what extent is there evidence of the scalability and spread of the solutions or new approaches, and the impact on people ('what difference does this make').

Stakeholder engagement and the value of the project to them ('who with' and 'how they felt')

The Pathfinder has undertaken extensive user engagement throughout the project. User engagement was facilitated by DHI staff from the Glasgow School of Art, who had specialist expertise in participatory design approaches. User engagement during the Discover/Define stage took place at several different levels. The first stage involved a service mapping workshop, which was held with staff from across the health and care system to get a better understanding of the complex system, and the current pathways for care for people living with frailty in Midlothian. Two key themes emerged:

Figure 1. Key themes

IMPROVING THE EXPERIENCE OF ACCESSING SUPPORT FOR PEOPLE LIVING WITH FRAILTY AND CARERS

IMPROVING MULTI-DISCIPLINARY WORKING AND DATA SHARING ACROSS THE SYSTEM
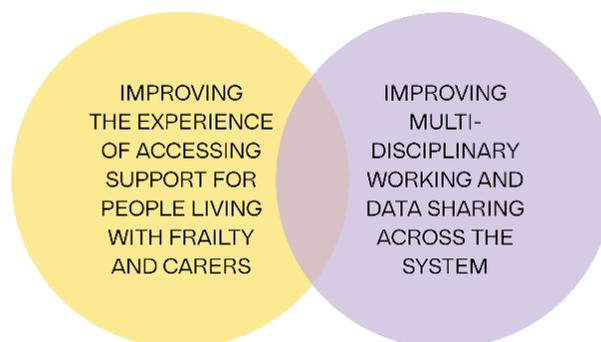
The Pathfinder also intended to engage the public through pop-up stands in public spaces and at events. However, due to Covid-19, this was redesigned, and greeting cards shaped as flowers were designed, with three questions aimed at understanding more about getting older: "What keeps you well?" "What is good about aging in Midlothian?" and "How might we support you?" One hundred and twenty greeting cards were sent out to people living with frailty, included in British Red Cross packs. Seventeen responses were received, in addition to the eight responses that were submitted online.

The tools used by the Pathfinder to interview people with lived experience have been very valuable. They have been used both as a means of gathering information but also for feeding back research to participants. Follow-up conversations to discuss the output of the research were also an opportunity to point people to useful services that they may have been unaware of. The role of third sector partners in engaging people and in conducting interviews was also important here. Overall, the Pathfinder undertook nine in-depth two-stage interviews with people

with lived experience of frailty and five with carers, to understand what supports people to feel valued, and to identify challenges or unmet needs. Due to Covid-19, the interviews took place over the phone. Interviews were carried out by two people, one from the voluntary sector (whom the participant knew) and one from DHI. The two-stage interview process was a useful way of reflecting findings back to participants. After the first interview, Pathfinder members created a Circle of Care map, which they then shared back with the participant in the second interview to identify if anything was missed or misunderstood. This was a valuable process as in the second engagement the interviewers from the voluntary sector (Red Cross/VOCAL) were able to suggest services, products or organisations that might help the individual. Additionally, one stakeholder noted, that the representation of the system using the Circle of Care visual was appreciated by many participants and it was also seen as a valuable tool by carers.

> So for each citizen interviewed we created a map and a visual ... an overview of everything that they talked about as their 'Circles of Care'. We posted that back out to them and used it to have a follow-up conversation ... We also asked people 'what did you think of it?' and we had people sharing it with their families and talking about it ... quite a reflective thing ... but overwhelmingly positive ... it enabled conversation [but] we were [also] able to say you talked a little bit about this [challenge] ... have you thought about these things [as supports] because it was a paired interview with an advisor [who] knew what supports were available in Midlothian ... When [we also] showed [the visuals] to professionals like VOCAL advisors they just looked at it and said 'this would be fantastic for talking to our carers and for us to be able to have a holistic conversation, to see the whole person'."
>
> - Pathfinder team member

> The work we did with [citizens] through Glasgow University. We went back to them with their story laid out in a visual way. And what people were coming back with was ... They didn't realize how many people were involved with them, and what had been achieved over that period of time ... And it also helped them recognise where the gaps were, but also who they could go to to support them. So for the individuals the feedback we were getting was they loved participating in it and it gave them something back and something visual that they could keep and share with their family."
>
> - Third sector partner

Figure 2. Circle of Care example for an interview participant who chose the pseudonym Georgina

As well as people with lived experience, the Pathfinder has also engaged closely with other users, including professionals from the third and independent sector as well as other healthcare practitioners. The final stage of engagement during the Discover/Define stage involved engaging professionals to reflect on the interviews that had been conducted with people with lived experience. In interviews with citizens, people had highlighted supports such as social activities, family, and friends, as well as the support provided by the third sector, GPs, nurses, and carers in navigating the complex health and care system. Barriers to navigating support included form filling, bureaucracy, waiting times, lack of awareness and confidence. Professionals were able to reflect on this information to support the Pathfinder's overall understanding. It also encouraged professionals to reflect on how they work and to identify opportunities for new ways of working.

> It's brought to life the issues that people are experiencing and so a big part of the work that we've undertaken is the engagement with carers and … it also informed internally as well. It had a double benefit."
>
> - Third sector partner

Knowledge, skills, relationships and capacity

As described in the previous section, the process of user engagement undertaken by the Pathfinder was as important as the research and information produced. The methods and data visualisation approaches were helpful in engaging people in good conversation about services and supports available. It also provided a deeper understanding of the issues, challenges and barriers faced by people living with frailty among the third sector partners directly involved in the Pathfinder, as well as other professionals.

> " I think there will absolutely be a legacy. I think it's generated some really useful conversations locally about our systems and how we share information and the experience for the people that we're supporting who get passed between service to service to service and how do we try and overcome that to give a better experience for the individual."
>
> - Third sector partner

> " It was quite an eye opener the way that it was done through the Glasgow School of Art and I think brought to our service that a) we were doing a good job and b) there were multiple partners involved and [made us think] how we could work better together for the benefit of the client. I felt it was very worthwhile. And then to share that with a wider audience in the [healthcare and] voluntary sector on the outcomes of that. It gave you a tool to use to show your work."
>
> - Third sector partner

> " So service users, you know, from two years ago … they've come back to us. They knew if they couldn't find it themselves, they could come back to us and we would be able to find them an answer or be able to help them directly ourselves."
>
> - Third sector partner

An important outcome of the Pathfinder has been to enhance the relationship between the two third sector organisations involved in the Pathfinder, VOCAL and the Red Cross.

> " We have now created a formal partnership and we have a dedicated carer connector who works for the Red Cross but links in with VOCAL very closely."
>
> - Third sector partner

Third sector partners also described the strengthened relationship with Midlothian HSCP as extremely valuable. Stronger engagement with the HSCP and the Pathfinder was described as leading to changes in internal organisational processes.

> I think it's been very valuable ... to ourselves, it's made us think about how we approach assessment of clients and we've increased that assessment and taking in things like how important anticipated care planning is, emergency care planning. So that's already been put into assessment and support planning [strategy]."
>
> - Third sector partner

A stronger relationship has also led to a third sector partner being able to support the HSCP more effectively. One partner described being more heavily involved in supporting the Council's strategic planning processes, including feeding in relevant statistics related to falls and hospital admissions.

> And it's giving us a clearer idea of what the Local Authority want in the way of ... what stats do they actually need. So a big one was the number of falls ... and because of Covid ... the mobility has reduced so there's a higher fall rate, which means higher admissions to hospital. So we are able to report back on a number of these things every quarter which to me helps the Council plan for the future. [Previously] we didn't have any way of directing it into the Council ... We've been involved in a lot of the strategic planning going forward, such as falls, such as carers, older people's planning group and Council staff are more aware of what we can produce to support them."
>
> - Third sector partner

Third sector partners described new connections they developed resulting from their engagement with the HSCP and the Pathfinder.

> I've just been invited to Health Improvement Scotland under the frailty [work] because [an individual] at the Council is leading on a piece of work."
>
> - Third sector partner

> There's been off spin off as well with SCVO [Scottish Council for Voluntary Organisations], there's been training that I've attended that I've been made aware of [by my contact in the HSCP] so that's actually enabled me to make links with other organisations or opportunities."
>
> - Third sector partner

DHI, who are key partners in the delivery of the Pathfinder solutions, have also assessed the relationship they built with the Midlothian Pathfinder and its third sector partners as hugely valuable. DHI has specifically benefited from the health and care knowledge and expertise brought by the partnership and the third sector organisations Red Cross and VOCAL.

> The Innovation Centre became more holistic and person-centred in our thinking and strategy as a result of the contact."
>
> - Pathfinder stakeholder

Reflecting this change in focus and understanding of integrated care, DHI have developed a new strategy in which, as a direct result of the project, 'integrated co-managed care' is one of the four core pillars, expected to comprise a quarter of the innovation centre's workplan over the next ten years. DHI described the strong relationship between Midlothian HSCP and Red Cross and VOCAL as significantly contributing to this change in focus, resulting in DHI gaining a greater understanding of integrated care and a hugely valuable data set born from the co-design phase with users.

Overall, the co-design activities undertaken in the Discover/Define stage have enabled the Pathfinder and DHI to get a better understanding of what a 'future state system' facilitated by digital tools might look like. "Key challenges identified were repetition of information at multiple interactions with services; lack of agency (for cared for people and their carers) though the system relies on their support; repeated failures to access benefits/services to which people were entitled; confounding processes causing stress either resulting in giving up or wasted effort through duplication of information from support services or both. These activities helped DHI refine their process for collaborative service mapping in Health and Social Care and generated a vision or blueprint for future care...This blueprint and refined process have been applied and iterated in subsequent DHI projects[47]

Application or adoption of the solutions or new ways of working ('what they are doing differently')

The co-design work in the Midlothian Pathfinder continues to contribute to ongoing work by DHI on developing the so-called 'Collaborative Care Architecture'. DHI has created a first-generation blueprint for the "Collaborative Care Architecture" which demonstrates a 'future state story' facilitated by new digital tools. This moves beyond the normal focus on user interfaces, to consider an ecosystem of software systems that integrate and extend. Several elements of this blueprint are being developed into prototypes.

Within this, DHI has been exploring the Circle of Care concept. This builds on findings from several of its projects in a broader national portfolio. The concept rests on the idea of citizen-owned data, where citizens have access and control over their data and can permit others, family, health and social care staff or carers to access and share relevant information and data across the system to ensure they receive better care. Midlothian Pathfinder has specifically contributed a significant amount from the health and care perspective to the Circle of Care concept, through its co-designed user journeys and the engagement work in the Discover phase. The next phase of work to be completed before March 2023, is the completion of a non-functional, clickable prototype of the Circle of Care, which will enable people to have the illusion of experiencing the Circle of Care interactions of a future state system.

Resources from the Pathfinder have enabled DHI to commission Mydex, who in early 2023, will develop a set of apps integrated into a Personal Data Store that will later power the Circle of Care concept. This will be undertaken using the first third of the overall target story from the co-design phase. For this portion a full data dictionary has been developed, alongside a 'simulation story' (a data sharing focused version of the future state story) to support development. Using this data,

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[47] ibid

Mydex will produce a set of functional prototype apps integrated into a personal data store. This will show how the individual apps held by citizen, carer, and various professionals will support the generation and reuse of the person's story. DHI has noted that there is still more work to be done on the data set that will sit under the full end to end story. The Glasgow School of Art is planning to undertake another round of co-design with citizens to feed into the next version of digital tools which is expected to be "significantly more sophisticated but not more complicated." This story data can then be used to power future 'Circle of Care' functional prototype development.

In the short-term, a pilot supporting integration across VOCAL and Red Cross's CRM systems is planned as part of the work leading to the development of the functional prototype. The long-term aim of the functional prototype of the Circle of Care is to allow information to be shared across the health and care system more easily, with permissions given by the citizen. While it is expected that the pilot will enable designers to test the model and identify real world challenges, it isn't anticipated that a fully functional integrated system between Red Cross and VOCAL will be developed in the short term. The pilot will feed into the overall learning for the development of the functional prototype and may involve some basic short-term improvements in the way Red Cross and VOCAL systems can communicate.

> " The proposal when you see that mapped out, you can actually see the work that's gone into it not just from one organisation, but collectively and you can potentially see the impact it would make for carers in particular to be able to engage with something that get them through systems so much easier than they're experiencing at the moment."
>
> - Third sector partner

There are plans for beyond the Pathfinder. DHI will undertake further development of the prototypes and personal data store. They will undergo further phases of testing, simulations and integration into wider health and care systems (for example GP systems).

> " Everyone who has been shown the first generation prototype as an example of a more holistic navigation based thought process … has reacted very positively."
>
> - Pathfinder stakeholder

In addition to the Circle of Care prototype, the knowledge outputs from the Pathfinder have also been assessed as extremely valuable and some of these outputs have already been integrated into national strategies. The scenario and personas developed from the user research gathered during the Discover phase of the Pathfinder is being integrated via DHI into several national strategies including the Digital Health and Care Strategy, the National Care Service, the National Health and Care data strategy and the Digital Front Door. Overall, DHI has provided a suite of nine personas across three scenarios, where frailty is one scenario, to anchor national delivery and strategy to the needs of real people based on co-design. Aspects of this are expected to be published soon.[48]

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[48] Interview with DHI

Scalability and spread of the solutions or new approaches and the impact on people

Developing the Collaborative Care Architecture is a long-term investment, with several technical development phases still to occur, as well as information governance (IG) barriers to be overcome before it can be implemented in practice and at scale. The next phase of the implementation of the Collaborative Care Architecture is yet to be determined. DHI is currently determining if the solution can be brought into a national development process, providing greater potential for its scalability, and spread. The Pathfinder is contributing to the critical mass that is needed to drive a digital solution with truly transformative potential in the long term. In the short term, there are indications that the 'high value/impact' data set that is being developed in the Pathfinder is likely to inform national strategy as well as support other local transformation projects due to its robustness as a data set, and its reusability.

Building on the co-designed outputs of the user engagement phase of the Pathfinder, DHI is creating a harmonised data model for the Red Cross, VOCAL and Midlothian HSCP. The data model shows a single user journey for a person and their carer, including all typical, non-unique interactions, assessments, processes, and conversations that take place over a period of time.

> Our working hypothesis is that the person who is frail in this story and the carer, that over the course of their engagement of a year, that 50% of that data is repeated. They are answering the same questions, with the same answers over and over again. And this is typical as people move within and between health and care services.
>
> - Pathfinder stakeholder

> Some of the remaining 50% of the data then appears unique ... [But] really they are trying to get the same outcome from the system. They are asking questions to generate the same insight or decision. We're trying to figure out what the 'high impact data set is' [telling story once]."
>
> - Pathfinder stakeholder

A high impact data set, with methods for its storage and sharing, would be very beneficial to support development of the National Care Service data platform, and DHI is having early conversations with key strategic partners involved in its development, who have all indicated the value of the well-evidenced data model, and its potential to be foundational for their work. In addition, DHI is creating a 'pattern recognition board' with Mydex, who are also DHI's supplier supporting other health and care related projects (the Promise and the Moray HSCP). A pattern recognition board identifies the common components between the projects to enable aspects from the Midlothian project to be replicated in other projects.

> It will go blazingly quick if people leverage what we have done because they will be able to do three months of translation work as opposed to deep participatory user design, because they have such good foundations [Midlothian data set] and confidence of rigour ... and it is very translatable."
>
> - Pathfinder stakeholder

There is good evidence indicating that the outputs from the Pathfinder project are scalable and sustainable. There are strong indications that the outputs from the Pathfinder will inform the future development of national strategies and are of 'high value' with significant potential to support other research, service design and transformation projects.

Appendix 5: Named Partners Report

Background

The concept of the Named Partner approach emerged during the early co-design phase of the Transforming Local Systems Programme. As described in the main report, after this 'discovery' and engagement phase, four main Pathfinders were funded. Applications that had not been successful were considered as Named Partners, whereby each main Pathfinder could be partnered with a smaller project (Named Partner), which would receive a significantly smaller amount of funding that would enable them to engage in the Programme (between 10-15K in year one and in year two). These pairings were intended to enable the Named Partners to benefit from the main Pathfinders, in terms of building capacity and understanding of the Scottish Approach to Service Design and more generally Programme delivery. For example, the Named Partners attended project and shared learning events. The Named Partners were also envisaged as a 'Critical Friend' to the Pathfinders, contributing skills or assets or supporting the main Pathfinders in the delivery of their work. The four main Pathfinders and their Named Partners are included in Box 1 below.

Box 1. Named Partners

Aberdeen City: **Western Isles**

East Ayrshire: **East Renfrewshire and Orkney**

Highland: **None**

Midlothian: **South Lanarkshire**

Glasgow City had been engaged as a Named Partner for Midlothian in the FY 2019/20 but withdrew from the Programme the following year due to challenges and changes in priority associated with the pandemic.[49] The Highland Pathfinder also did not have a formal Named Partner but established a good partnership with NHS Ayrshire and Arran through the East Ayrshire Pathfinder.

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[49] Scottish Government (2021). TLS Programme Named Partner Update for the Steering Group. [Internal Document]

Given the small scale of the Named Partners, they have not been assessed in the same way in this evaluation as the main Pathfinders. An overview of the main activities, outcomes and solutions of the Named Partners is provided in this appended report.

East Renfrewshire (East Ayrshire)

East Renfrewshire HSCP formally became the Named Partner of East Ayrshire in March 2021. The Named Partner received eighteen months of funding to introduce a 'Think TEC' and 'Peer Mentor' model in East Renfrewshire, in the form of a funded Tech Peer Mentor post, using learning from the East Ayrshire Pathfinder.

The Tech Peer Mentor sits within the Technology Enabled Care (TEC) team in the HSCP. The main role played by the Tech Peer Mentor has been to share information on, raise awareness and increase uptake of available telecare options, and their benefits, to individuals in the community, in the health and Voluntary Sector. The aim has been to ensure people, health professionals in the acute sector, and Voluntary Sector organisations are fully informed of how patients can be supported at home with a better understanding of the technologies available to help them effectively manage their health conditions at home. The focus of the project has been on the long-term ambition of reducing hospital admissions and supporting hospital to home transitions. However, as expressed in interviews, there is a recognition that the project has an opportunity to use the learning it has gained on SAtSD, through the TLS Programme, to focus further on prevention by reaching out to the community and conducting user research to understand citizens' needs, finding out as one stakeholder put it "what one thing would help you?"

Orkney (East Ayrshire)

Orkney HSCP, another Named Partner of the East Ayrshire Pathfinder also developed a proposal to establish a Tech Peer Mentor in Orkney, leveraging learning from East Ayrshire Pathfinder. The post sits within Voluntary Action Orkney (VAO) and is intended to support the planning, design and delivery of multi-agency peer mentor support Programmes across the HSCP.

The Tech Peer Mentor project aims to "promote awareness, understanding and uptake of Technology Enabled Care in Orkney. It will promote TEC solutions in service delivery and offer peer mentoring support to organisations that are developing services incorporating digital and TEC solutions to meet the health and social care needs of Orkney's citizens. The project also seeks to improve access and choice in health and social care through enhancing the digital and TEC skills, knowledge and confidence of both workers and citizens."[50] Specifically, the two pathways of the project, as described in Orkney's final Programme report, are 1) to increase citizens' TEC awareness, knowledge and access and 2) to increase practitioners' TEC awareness, knowledge and skills. Some of the key mechanisms used by the project to raise awareness are shown in Figure 1 below. One approach involved the setting up of a TEC library which provided an opportunity for people to see, use and hire out the equipment as well as engage with the Tech Peer Mentor.

Overall, through the project there have been twenty-four referrals for TEC support, including support with information, and advice on and use of TEC equipment. Of the twenty-four referrals, fourteen were referred by another service, mostly Occupational Health, while nine self-referred through family or carers. The average age was seventy-two years. 90% of those who responded to a survey stated

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[50] OutNav (2022). Orkney Named Partner Final Programme Report [internal document]

they had a positive experience engaging with the project, even among those who chose not to proceed, or for whom no suitable TEC solution was identified. "In addition to the number of citizens purchasing consumer TEC, there has been a high level of interest in the scheme to borrow the Komp device. The device has been almost continuously on loan since it was purchased by the project and there is currently a waiting list of around two months for loan of the Komp. Five of the nine families who have borrowed the device have subsequently purchased it. The success of the Komp has spread by word of mouth as people who have a trial tell other people about it and get in touch with the project."[51] Overall, eleven of those who had been referred felt the project had improved their health, wellbeing and care, and twelve felt the project had increased independence, choice or control.

Figure 1. Tech Peer Mentor Project, Public Engagement Activities

Tech Peer Mentor Project, Public Engagement Activity

In Person		**TEC Library** Weekly sessions in Kirkwall Library and one session on Sanday Island
On Social Media		**VAO YouTube channel** Tech Peer Mentor Project promotional video
		Facebook Pages: VAO, Adult Befriending, Kirkwall Library and Archive
		Twitter TEC Library sessions promotoed on Kirkwall Library's @OrkneyLibrary feed
BBC Radio Orkney		Interviews and TEC Library promoted on the 'Daily Diary'
Newspaper		Article in 'The Orcadian'
Promotional material		Posters and Flyers distributed

The Tech Peer Mentor has also engaged with practitioners from a wide variety of organisations in Orkney, including Age Concern Orkney, Relationship Scotland Orkney, Adult Social Work, Homecare and more. The project has researched TEC and facilitated meetings for Orkney Health and Care (OHAC) staff. The Tech Peer Mentor has also had opportunities to engage with practitioners and organisations through the TEC library. The project with the support of the Scottish Council for Voluntary Organisations (SCVO), has led the development of a Digital Champions Network in Orkney.

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[51] ibid

Online workshops were delivered in November and December 2021.[52] Overall, feedback from practitioners that have been engaged in the activities of the project has been positive.

South Lanarkshire (Midlothian)

The original intention was for South Lanarkshire HSCP to integrate learning from the Midlothian Pathfinder, particularly with respect to the Scottish Approach to Service Design in its own TEC Programme. The Named Partner was also envisaged as supporting the Pathfinder in undertaking user research, prototyping and testing.[53] The Named Partner has specifically integrated some lessons from the partnership in the development of its Health and Social Care Campus in Blantyre which consists of 20 technology enabled care homes to support independent living. It also includes an integrated care facility which is technology enabled and a care hub and tech zone. Learning about SAtSD prompted significant user engagement; the HSCP engaged heavily with carers, health users, citizens and family members to design the space. The funding from the TLS Programme has been used specifically to develop a proposal with the Glasgow Science Centre for the design of the Tech zone, which is intended to be an exciting, innovative and fun space for people to come and find out more about how TEC can be used as an enabler in people's lives, how people can live well independently at home, and to hear about other people's experiences with the technology. The funding was also used to develop a Virtual Tech zone, in partnership with Alzheimer Scotland and the Virtual Shed, hosted on Alzheimer Scotland Virtual Resource Centre.

The focus of the Named Partner project has been on sharing information about technology and how it can help people in their daily lives, using a physical space as well as a virtual space to demonstrate its value. The Named Partner's engagement in the TLS Programme has been a catalyst for the implementation of SAtSD in a larger project: the community alarm service redesign. The telecare team has received a significant amount of funding from the Council for a two-year project manager post to implement the service redesign using the principles of SAtSD. South Lanarkshire has a one of the largest community alarm services in Scotland that will be moving from analogue to digital. However, the HSCP is keen to not simply implement a hardware swap but to redesign the service such that it is person-centred, moving away from being a reactive service to being more predictive and anticipatory. The HSCP already held some workshops with stakeholders for the community alarm service redesign, as part of the TLS Programme supported by the Digital Office towards the beginning of 2021. However, this work stalled due to the pandemic. The plan is that this work will be reinstated through the new funded project manager post and SAtSD will be implemented fully as part of South Lanarkshire's community alarm service redesign.

Western Isles (Aberdeen City)

Western Isles HSCP was the Named Partner for Aberdeen City. The project was initially conceived as developing and improving the health systems for the island of Barra, focusing on giving citizens greater control over their care. With the outbreak of Covid-19, the project partnered with mPower and pivoted to focus specifically on supporting people in care homes to communicate with their families using technology (NHS Near Me enabled on iPads) to alleviate some of the negative impacts of lockdown to well-being. Western Isles HSCP used their first year of funding to provide iPads to all

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[52] ibid
[53] Scottish Government (2021). TLS Programme Named Partner Update for the Steering Group. [Internal Document]

ten care homes in the Western Isles (nineteen iPads). The initiative was intended to support the long term objective of mPower to support people living with long term conditions to live safely and independently at home. The Pathfinder conducted an evaluation of the work in July 2022.[54] The evaluation involved undertaking nine interviews from nine of the ten care homes, which received iPads.

Using the devices, care home residents were able to connect with friends and relatives as each care home was provided their own Near Me Waiting Area supporting virtual meetings. Residents were also able to access one-to-one GP appointments, essential during lockdown, attend virtual hospital appointments and benefit from attending Multi-Disciplinary Team (MDT) meetings. Residents also used the iPads to access online fitness and mobility classes, church services and other cultural activities. The iPads have been well received and used.[55] They have also supported digital inclusion, especially important during the pandemic, enabling continued access to healthcare services. Between April 2020 and February 2022, there were 772 connected calls using the Near Me service. Qualitative evidence suggests that there has been a reduction in visits to local GP clinics, and potentially fewer unnecessary hospital admissions.[56] The evaluation suggests that residents struggled with the technology and 'tech' savvy staff have been critical to supporting residents, and by extension supporting digital inclusion. Despite the fact the iPads have generally been well received and appreciated, the evaluation finds that iPads, however, are not suitable for everyone. Not everyone has the capacity or the desire to use them. Furthermore, for the iPads to be used successfully, staff need to be full trained. Accessibility features could be added to iPads to make them easier to use. Overall, the Named Partners project has been a discreet intervention in response to Covid-19 and has demonstrated the value in supporting older care home residents to access digital technology to enhance health and wellbeing.

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[54] NHS Western Isles (2022). Participatory Review Report. Response to the Covid-19 Pandemic. IPAD provision to care homes. [Internal Document]
[55] ibid
[56] ibid

Appendix 6. Outcome maps showing the change process for the Pathfinders

Discover/Define" Pathway in the Pathfinder Double Diamond outcome map

What we do	Who with	How they feel	What they learn and gain	What they do differently	What difference does this make?
Build a diverse team of people to lead the work	People in our communities	This is a valuable and exciting opportunity and I'm motivated to play my part	Space, time and permission to discuss issues and work differently	Take time to reflect on insights and other evidence and experiences to identify things that can be changed	People are receptive to working with us to work on the next stage and deliver change
Map the stakeholders important to our work and design and deliver engagement activities	People working in organisations that deliver and manage relevant services and supports		Improved understanding of the issues and how we can work together effectively to address them		
Collate, collect and review data and information to understand the population and people's issues	Wider local and national stakeholders	Safe and supported through the process	A network of early adopters	Work together to define the problem	Digital Pathfinders have an agreed area of focus for their transformation program

"Develop" Pathway in the Pathfinder Double Diamond outcome map

What we do	Who with	How they feel	What they learn and gain	What they do differently	What difference does this make?
Generate and explore creative ideas to address the defined problem(s) and user needs, building on learning from the discover and define processes	People working in organisations that deliver and manage relevant services and supports	This is a valuable and exciting opportunity and I'm motivated to play my part	A wide range of ideas of different ways to address the defined problem(s)	Identify the concepts that have the most potential for successful implementation to address the defined problem and user needs and test	Pathfinders have a range of tested concepts that they feel confident could work
Prototype and test our concepts and capture evidence through the process to prioritise and refine	Wider local and national stakeholders	Safe and supported through the process	A deeper understanding of how these concepts could be used to address the problem		
Review the organisational parameters, constraints and environmental impacts of their emerging concepts	A diversity of people who the solution is designed to benefit	We feel confident in and trust the process	An understanding of the feasibility of implementing the concepts and potential impacts	Deepen review of organisational parameters, constraints and environmental impacts of their emerging concepts	There are clearer process requirements for the successful delivery of the concept
	Relevant technical partners				

"Deliver" Pathway in the Pathfinder Double Diamond outcome map (Discover/Define, Develop, Deliver)

What we do	Who with	How they feel	What they learn and gain	What they do differently	What difference does this make?
Test the prototyped solutions in a live environment and at greater scale	People working in organisations that deliver and manage relevant services and supports	This is a valuable and exciting opportunity and I'm motivated to play my part	A solution that the pathfinders implement	Implement the solution	People are better able to manage their condition and live better lives
	Wider local and national stakeholders	Safe and supported through the process		We take action to remove barriers to people accessing support and taking up the innovation	
Capture evidence through the testing process to prioritise and continually improve our solutions	A diversity of people who the solution is designed to benefit		Know how to make the solution sustainable		Positive change in the indicators of success
	Relevant technical partners	This is the right range of solutions, confident in the solution because of the process we took		People adopt the solution	

Appendix 7: Matter of Focus evidence standards

Progress Ratings

Great progress

- Enough people and groups experience this in the timescale you have defined
- Risks have been mitigated and assumptions achieved

Some progress

- Some people and groups experience this in the timescale you have defined
- Some risks have been mitigated and some assumptions achieved

Low progress

- Not enough people and groups experience this in the timescale you have defined
- Risks have not been mitigated and assumptions found to be unrealistic

Confidence Ratings

High confidence

Most of these criteria apply

- more than one source of evidence with appropriate balance of types
- evidence collected purposefully and for this purpose
- reasonable number of responses
- no disagreement between evidence sources
- backed up by other research
- analysis is clear and purposeful (someone else could replicate and get broadly the same results)

Some confidence

Some of these criteria apply

- more than one source of evidence with appropriate balance of types of evidence
- evidence is collected purposefully and for this purpose
- reasonable number of responses
- no disagreement between evidence sources
- backed up by other research
- analysis is clear and purposeful (someone else could replicate and get broadly the same results)

And / or

- there is some disagreement or lack of clarity of the findings

- the data is mostly gathered opportunistically

Low confidence

Few of the above criteria apply AND / OR

- there is disagreement within the data
- assessments are based solely on an individual's perspectives

Appendix 8

Interview Schedule

Stakeholder groups

- National Team (NT) staff
- National Team partners
- Pathfinder core team
- Pathfinder partners
- Named Partners

Introduction: all stakeholders

Matter of Focus are undertaking an evaluation of the Transforming Local Systems TEC Pathfinder Programme. The evaluation builds on the interim evaluation conducted in 2021. It seeks to assess:

- How well has the TLS TEC pathfinder Programme worked? What factors have positively/negatively influenced its implementation?
- High-level impacts of the Programme
- Learning from the Programme
- Recommendations for using the TLS TEC Pathfinder approach to transforming local systems – the replicability of the national support model and managed approach and the SAtSD.

In our interview today, we'd like to understand your perspective and experience of the Programme. We are consulting broadly with stakeholders and this interview will supplement data gathered from other sources to assess progress.

The interview is anonymous, you won't be identified in reporting.

We may wish to use a quote from the interview, but we will check it with you and you won't be identified.

[recording consent] Is it OK to record and transcribe our conversation? This will not be shared with any other organisation and will only be used to inform our evaluation.

The call will be around 45-60 minutes, please feel free to stop the interview at any time.

Are you happy to continue on this basis?

Interview Schedule for NT staff and partners

Background and processes

1. Can you tell me a little bit about your involvement in the TLS Programme? When did you get involved and how?
2. Can you tell me about the TLS Programme? (why and how was it launched, ask if relevant)
3. Has the Programme changed over time? How and what have been the driving factors?
4. What is the role of the National Team? How has it supported the Pathfinders? Are there elements that have worked well? What has not worked so well?
5. Can you describe the main challenges experienced while you have been involved with the Programme?
6. Is there one thing you, personally, are most proud of?

Achievement and impact

7. Can you describe some of the main achievements of the Programme?
8. Are there specific examples from the individual Pathfinders' work that you would like to highlight?
9. What factors have made a difference in the successful implementation of the Programme/ Pathfinder work? And what factors have got in the way?

Impact and sustainability

10. Is there any evidence that the TLS TEC Pathfinder Programme has influenced other organisations in the way they implement the SAtSD?
11. What is your opinion on the value of the SAtSD approach?
12. What lessons can be learned from the implementation of this Programme for the future delivery of similar Programmes using the SAtSD? Should/can this Programme be repeated? What would you do differently if it was to be repeated?
13. Any further comments/questions?

Interview Schedule: Pathfinder core staff and partners

Background and processes

1. Can you tell me a little bit about your involvement in the TLS Programme. (Prompts: Role, when did you get involved and how?)
2. Can you briefly describe your experience of the TLS Programme? (Prompts: what has been mostly challenging? What has worked well? If relevant, ask how it aligns with local priorities)
3. How would you describe the role of the National Team? How has it supported your Pathfinder and others? Are there elements that have worked well? What has not worked so well?

Achievement and impact

4. Can you briefly describe where you have got to in your Pathfinder? (Prompts: describe some of the activities/ processes, specifically what solution(s) are you implementing in Deliver? For partners, check what stage they have been involved in and tailor question.)
5. Is there one thing you, personally, are most proud of?
6. How has the wider (social/political/economic) context impacted your work? (Prompts: impact of Covid-19 etc.; any unexpected impacts – positive/negative.)
7. What factors have made a difference in the successful implementation of the Programme/ Pathfinder work? And what factors have got in the way? (ask if not covered in question above)

Impact and sustainability

8. How valuable do you feel the Programme has been – to you personally, to your organisation, and to end users?
9. How much previous experience did you have with the SAtSD? (Ask if relevant: How has the Programme supported your knowledge and skills here?)
10. Will you or your organisation operate differently going forward? How?
11. What impact do you think the Pathfinder Programme will have on local service delivery / end users? (Prompt: What change are you most excited about?)
12. Can you please describe some of your partnerships? (Prompts: How well have these worked? Have you received feedback from partners? What do you think your partners will do differently? Will these partnerships be sustained in the future?)
13. What connections/networks have been built outside these main partnerships? How? And what difference will it make to service delivery going forward?
14. What is your opinion on the value of the SAtSD approach?
15. What lessons can be learned from the implementation of this Programme for the future delivery of similar Programmes using the SAtSD? Should/can the Programme be repeated? What would you do differently if it was to be repeated?
16. Any further comments/questions?