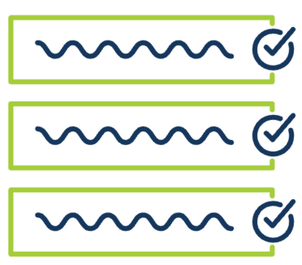
Primary Care Innovation Toolkit

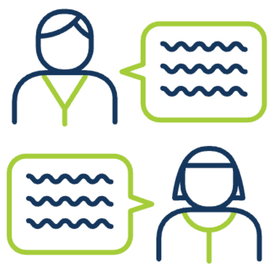
How to implement the right innovation or digital tool for your organisation.

Innovation toolkit



Identify the right solution

Understand your organisation's needs to find the right tool.



How to engage with patients

Learn how to engage with patients and the public to develop a digital service that meets their needs.

Learn how to evaluate

Discover ways to evaluate how effective your digital service or technology.

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Introduction

This toolkit was created to support primary care networks in digital implementation.

The innovation toolkit supports primary care networks through their digital journey. As we work towards supporting the NHS workforce and improve clinical care through digital transformation we must work to help provide education and improving digital maturity in primary care.

This toolkit will be useful for anyone involved in pathway transformation or innovation implementation.

This toolkit was created by:

- **Dr Nausheen Hameed:** Dr. Hameed is a GP partner in North Central London ICS and primary care lead at UCLPartners. She is a GP with a passion for digital innovation and pathway transformation .
- **Dr Mimoza Hoti:** Dr. Hoti is a research scientist in genetics by background and currently an Innovation Manager at UCLPartners, supporting the spread and adoption of innovations.

The toolkit was created with input from the **Enterprise**, **Evaluation**, **Cardiovascular Health** and **Patient and Public Involvement and Engagement teams** within UCLPartners and **ORCHA, NHS Digital, Liberal Partners, Health Tech Enterprise, NHS Health Education England, MedCity.**

Identifying the problem

The toolkit is a way to understand your organisation's needs and support you to implement the right innovation or digital tool.

We would suggest you try to answer the following 10 questions before proceeding to the next part of the toolkit. You can use our interactive framework or share with your team members.

Needs assessment

1. What are the key quality improvement needs of the organisation which could be process based or objective led?
2. How big is your organisation, practice list size/ number of employees?
3. How can technology act as an enabler to your quality improvement needs?
4. What is the current method / process for doing this?
5. Will technology be helping with one or more of the following: saving money, improving patient outcomes or improving operational efficiencies?
6. What roles will be supporting the delivery of this implementation?
7. What is the timeline for implementing this solution?
8. What impact are you expecting to achieve?
9. What are your organisation's perceived risks/ barriers to successful implementation?
10. Is this idea scalable?

Download a spreadsheet so you can share this amongst your organisation to complete offline

Key drivers for implementing digital tools

- Support with Quality and Outcomes Framework (QOF): Quality and Outcomes Framework guidance for 2022/23 (england.nhs.uk)
- Support with IIF: Report template – NHSI website (england.nhs.uk)
- Support with ARRS: Network Contract DES Additional Roles Reimbursement Scheme Guidance December2019.pdf (england.nhs.uk)
- Support the Greener NHS programme: Greener NHS

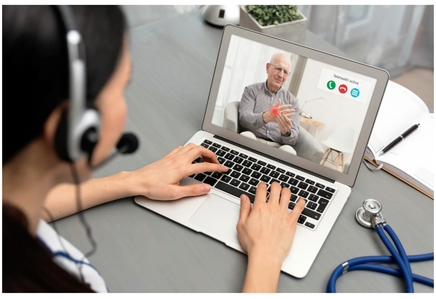
How to source technology

Aims and objectives

1. Understand what the NHS buying catalogue is and how to access it
2. Know what a horizon scan and accelerator programmes are and how AHSNs can support your innovation needs
3. List three other online resources to source market ready digital tools

Once you have identified your organisations needs and have an idea on how innovation can support this, you may look to deploy a digital solution. One of the options is to look through the NHS buying catalogue, but you can also contact your local AHSN for support or the NHS digital playbooks.

Information provided by NHS Digital



The NHS Digital Buying Catalogue

Background

Digital services and technology are the backbone of General Practice. They enable safe and effective patient care by surfacing key patient data, or supporting effective treatment from multiple locations, but more than that, new technologies and digital services can transform the way primary care works – think virtual appointments.

New innovative technologies can allow primary care to keep up with modern life and offer services that truly meet modern patient needs, whilst making the lives easier for clinicians. But, a lot of technology and digital services are provided by third parties, and it can be difficult to know what's available, and if it is going to work.

Buyers in Primary Care need to find assured technology and digital services which will do the job. It can be difficult to know exactly what to look for, or which suppliers can be trusted to deliver.

The GP IT Futures programme have developed the Buying Catalogue to make it simpler, easier, and more transparent to procure assured technology and digital services – informing and educating buyers about what is available and opening minds to the possibilities that new technologies can bring.

What is the Buying Catalogue?

The Buying Catalogue is a digital marketplace where buyers in Primary Care can browse, compare, and find the best solutions to fit their needs. Think of it as the Amazon of NHS Primary Care where you can look at a range of assured and trustworthy IT systems.

The Buying Catalogue is a one stop shop for trustworthy technology and digital services, making it quick and easy for Primary Care staff to get the tools they need to support their patients.

Why should you use the Buying Catalogue?

It's important that buyers in Primary Care can find assured technology and digital services which will do the job. The Buying Catalogue helps to make the process easier by providing a list of assured services and suppliers in one place and giving confidence to choosing a new supplier or service.

How does the Buying Catalogue work?

The Buying Catalogue is accessible online, and anyone can browse the large number of assured technology and digital solutions.

Users can browse solutions and get an idea of what is available. Buyers must register for a buyer user account in order to progress a procurement, and this will provide access to the ordering area of the platform.

What are the limitations of the Buying Catalogue?

The goal is to create a full end-to-end digital procurement process which makes it easy to find and buy technology and digital services in one place. The Buying Catalogue doesn't list everything yet, but the supplier solutions that are listed, have met a set of criteria and standards so that users can trust them.

Horizon Scanning

A horizon scan is a search undertaken to look at current market ready solutions in each area of technology. AHSNs often undertake / have knowledge of solutions on the market place and can help provide guidance on innovation if needed. Examples of horizon scans can include those used for remote monitoring or automation tools which can be similar to an options appraisal. If your organisation requests this information, it may be more useful to approach your local AHSN who may be able to guide you on delivering this.

This may include companies that are newly entering the market from accelerator programmes such as the NHS Innovation Accelerator or Digital Health. London Accelerator DH.LA.

Digital Playbooks

The digital playbooks have been developed to support clinical teams to reimagine and redesign care pathways by showcasing tried and tested technologies to solve real-world problems. Explore the digital playbooks to find out about challenges faced by people working in different NHS organisations and discover their solutions and best practice.

Key resources

- NHS Buying Catalogue
- NHS Digital Buying Catalogue
- Digital playbooks – Key tools and information – NHS Transformation Directorate (england.nhs.uk)
- Department of international trade digital playbook: Connecting UK Digital Health (eventscloud.com)

Patient Engagement

Aims and objectives

1. What does PPI mean and why is it important to consider?
2. The why/who/how approach to getting PPI.
3. How to plan and structure PPI engagement to minimise barriers to participation.

Introduction

Patients' experiences of digital access to NHS services are often clunky and fragmented, and uptake of digital options for ordering repeat prescriptions and booking appointments in primary care remains low despite the functionality being widely available. At the same time, there are indications that poor staff experience of IT systems can negatively impact on their working lives. This underlines the importance of understanding users' needs and involving them in the design of new technologies.

Patient and Public Involvement Engagement (PPIE) can be described as the different ways patients, carers and members of the public can work with healthcare professionals, researchers and clincial decision makers to inform, influence, and shape projects and programmes within health and care. This is because people who care about, and use, health and care are experts by experience: they have first-hand knowledge and insights from their day-to-day lives.

Only through speaking and listening to patients, carers and the public can we understand more about what is and isn't working for people currently, and by working together we can find solutions that better respond to their needs.

Working together in this way can have significant benefits:

- It can improve quality of life by designing and delivering treatment and care approaches that better address community needs.
- It can help reduce health inequalities by designing and delivering programmes which are more accessible and equitable to all.
- It can lead to cost-savings through better resource allocation and increasing efficiency and uptake of treatments/services.

As well as the benefits it has for you and your work, NHS England staff have a legal obligation to involve patients in planning and commissioning within Primary Care[1]. The Integrated Care Boards (ICBs) have also committed themselves to engaging with local communities as part of their strategy development[2,3].

NHSE has now made equality and impact assessments especially relevant to technology. Suppliers must demonstrate how they include/consider all protected characteristics in the research and design and application of the technology as opposed to potential exclusion which widens health inequalities.

Three steps to excellent involvement

There is not a one-size-fits-all approach to PPI: and so each project you do will be completely unique. This is because there are different reasons for doing PPI ('why') and different communities you can work with ('who') which will influence what type of activity you might need to do ('how').

However there are three steps of thinking that will help you design and develop excellent PPI activities:

Step 1: Why? Your Purpose

Before doing anything else, you need to have a clear idea of what you're hoping to achieve through the involvement: why are you doing this?

PPI activities are about providing opportunities for patients, carers and the public to inform, influence, and shape projects and programmes within health and care, so some aspect of this should be included in your purpose. For example: your purpose might be to get insights about the roll-out of a new online booking system. Or you might be looking to work together to decide what healthcare areas need priority investment.

No purpose is better or more valid for PPI than another, as long as they **always** offer patients power and influence in decision making.

Step 2: Who? Your audience

Once you have your purpose mapped out, you can then think about defining your audience: who do you need in the room to achieve your purpose?

It pays to be specific when you think about your audiences. This is because if you try to target 'everyone' or the 'general public' you may not have the people with the right knowledge or most useful insights—stopping you from achieving your purpose. Instead think about what communities would bring the most knowledge/insight to the work, for example people from specific geographies, specific demographics, people with lived-experiences, people who have specific interest areas.

Step 3: How? Your approach

This final step allows you to start converting your thinking into delivery: how do you make an activity that will allow you to meet your purpose and appeal to your audience?

There are lots of different activity types that you could use, from surveys through to priority setting partnerships. To decide which approach is best for you, go back to your purpose and think what type of exchange you want to be able to have with the patients, carers, and public members who are attending. Are you looking to mainly hear their feedback and ask for their opinions or are you wanting to design solutions together?

Some common activity types you can draw on are:

- **Surveys:** These are best when you're trying to consult with large numbers of people. These will help give you preferences, but it is difficult to get meaningful insights from them as people will very rarely give you detailed feedback, even in open text boxes.
- **Interviews:** These are best when you're trying to consult with smaller numbers on a one-to-one. These will help you get a sense of preferences and can allow you to get more meaningful insights as you can ask 'why' people have responded in the way they have.
- **Focus groups:** These are best for when you want to consult with groups to get a sense of areas of agreement and areas of dissent. Focus groups allow participants to engage in conversations with one another giving added richness. You can also use them as spaces to explore compromises collectively.
- **Workshops:** These are best when you want to collaborate and work in partnership. These can help generate discussions between public groups around collective areas and allow people to work together to create new solutions. Workshops could be all public attendees, or you could invite public and professional contributors into the space to work together.
- **Advisory Panels:** These are best when you want to consult and collaborate with patients, carers and the public on a long-term basis. You can work with a mixed group of representatives semi-frequently on a variety of tasks.

You might find it useful to mix-and-match some of these approaches (start with a survey and then do a focus group to explore survey results) or you might want to try something completely different: as there is no right way to do involvement, you can experiment and innovate to find an approach that helps you achieve your aim.

You should also give some consideration to the preferences of your audiences to choose the approach or create something that appeals to them and enables their participation. Are there certain methods or activities that would suit them better—for example would they prefer to be involved in discussions or do something hands-on? Are there times, days, or locations that would make it easier for people to attend?

Minimising barriers to involvement

Embedding PPI into the development and implementation of health and care programmes allows us to take a more well-informed approach to service design. This allows us to create more accessible and inclusive services which can go some way to addressing health inequalities within communities.

Because of this, it's important that patient involvement activities are designed in a way that empowers and enables diverse voices to participate. This is why it is important to spend some time minimising barriers to involvement during your design: what sorts of things could stop patients, carers and public groups from working with you?

Some common considerations to make include:

- **Being flexible in the days and times that you run activities:** we all lead different lives, so provide people with options of when sessions will take place so that they can join the slots that work best for them.
- **Choosing locations that are welcoming, familiar and accessible:** not everyone is comfortable in, or able to travel to, healthcare spaces so instead go to the communities you want to engage with and use the spaces that they usually congregate in.
- **Advertising opportunities through multiple channels:** not everyone will be regular visitors to health and care spaces, so instead actively reach out to your groups of interest through advertisements in the places they may get their information from (social media, community mailing lists, charities, places of worship).
- **Making sure the language you use is clear and jargon-free:** to make everyone feel like they are able to get involved, use language that is accessible to everyone regardless of their educational/professional backgrounds and better supports those who may have English as a second language.
- **Providing online and in-person options for involvement:** there are some communities that have trouble in participating online for various reasons—including digital inequalities—so you should always consider if you can run both online and in-person versions of your involvement activities (or hybrid). Alternatively, you could explore what additional support they might need to participate online (e.g. data packages, new software, walkthroughs on platforms).
- **Providing additional support for people to attend:** try and make sure you have provision for reasonable accommodations for the communities you are trying to engage so this could include things like translators, large-print versions of materials, captioning, wheelchair access, or even mobile data packages.
- **Paying people for their times and expenses for being involved:** as we are asking people to give their time and expertise to get involved in projects, we should show that we value this insight through offering payment. This also means that those who may have been unable to participate in voluntary capacities due to their personal circumstances previously may now be supported to get involved.
- **Creating environments where everyone is supported to share**

their views: to enable everyone to feel comfortable we need to create spaces where everyone can participate equally. This can be done by helping the individuals feel like a group through introduction activities, context setting, and outlining ground rules for the collective work. In the sessions itself, you should be there as a neutral facilitator—there to listen and acknowledge—allowing a lot of open space for discussions and collaboration between participants.

Key resources and further information

- NHS England Get Involved
- National Institute for Health and Care Research PPI Standards
- National Co-ordinating Centre for Public Engagement
- UCLPartners Patient and Public Involvement and Engagement (PPIE) strategy

Funding

Aims and objectives

1. What sources of funding are available to primary care organisations.
2. How to utilise NHS England and national programmes to secure funding for your organisation such as the Adoption fund and NHS digital partnership awards.
3. Understand the benefits of adopting technology in a pilot phase.

Overview

Funding and investment can be the key to developing innovation and supporting implementation in the NHS. For external funding there are a few options that support primary care. Here we share a few funding opportunities. Your local AHSN can provide advice about the correct funding for your project.

Funding can depend on whether you may be searching for funding to commission an innovation or become an innovator within your organisation. Listed below are some key opportunities that have arisen where placing a joint bid with an innovation or technology provider may be able to provide funding to your organisation.

What is unified tech fund?

While strategy for digital transformation has remained consistent, a long history of attempts to fund the digitisation of the health and care system has resulted in a patchwork of funding strategies and opportunities. These can be confusing and difficult for you to engage with.

The NHS transformation directorate has tried to tackle this by bringing together several national technology funds available to NHS organisations.

Digital First

Digital First Primary Care is the name of a programme which supports the transformation of primary care by promoting the implementation, understanding and improvement of digital tools within general practice.

The tools can support patient access to appropriate and timely care, help practices better manage demand, and improve patient and staff experience.

The Digital First programme fund launched in 2019 is a five-year revenue stream with a focus on the use of digital and online tools to improve access to the core elements of primary care services. This will support:

- CCGs to embed and build on the digital transformation advances made in primary care as part of the pandemic response.
- all practices to deliver the core digital offer set out in the GP Contract and to increase use of digital tools by staff and patients, including through digital inclusion initiatives.
- all staff to work remotely.
- implementation in all PCNs and practices to streamline digital pathways to increase usability for patients, embed triage and support at-scale working.
- Digital First Accelerator projects that either test a new digital innovation or enable deployment of a tested solution in a new area or context, to solve performance or clinical priority issues. They must have the potential to be scalable across the system or regional footprint and to be sustainable over time.

SBRI Healthcare

Established to support the development of new innovations which meet known NHS challenges. This demand-led approach enables industry to respond directly to healthcare challenges and feeds the innovation pipeline with products that have an existing demand from the NHS. This allows for faster adoption and spread of these products benefitting patients. Find out more about SBRI Healthcare.

Digital Health Partnership Award

The Digital Health Partnership Award has been created to help NHS organisations in England to bid for funding to accelerate the adoption of digital health technologies to support patients with long-term conditions. NHS organisations are able to bid for funding to accelerate new and ready to scale digital health technologies.

Pilots are a great way to get to use a tool. Most providers in their early stages will need to provide real world validation of their digital tool. In this instance they will often provide their product and or services as little or no cost in order to gather market insight and research. This may be useful as you can also take the time to decide if the tool is appropriate and can deliver what is intended. There are of course important considerations such as time and project management costs and whether your organisation can accommodate the provider in terms of training staff and data sharing.

If you would like to find out more about what pilots or digital tools are available to test in real world validation settings, please contact the commercial team.

National Institute for Health and Care Research (NIHR)

NIHR programmes funds:

- Commissioned and
- Research identified topic areas

NIHR has a range of different programmes, each of which fund different types of research covering public health and social care research. An example is Invention for Innovation (i4i).

Information Governance and Clinical safety

Aims and objectives:

1. Understand what ORCHA does and how it can help your organisation.
2. Be able to define key elements of regulation as they apply to digital health tools being used on a commissioned basis within a Healthcare organisation.
3. Who to contact should you need further support and guidance.

The rapid pace of innovation in digital health brings with it significant legal and regulatory policy challenges. ORCHA (Organisation for the Review and Care of Health Apps) carry out independent reviews and accreditations of healthcare apps and are commissioned by NHSEI and NHS Transformation Directorate and support innovators through their regulatory journey. ORCHA's Digital Health Formularies allow health and care professionals to select the best digital health solution and accurately recommend it to a patient, with toolkits, training and governance needed for risk management.

Information provided by ORCHA

Regulatory requirements

The Regulatory landscape can be very confusing for Digital Health providers as 'old' regulations and standards are being 'adapted' to meet the very different scenarios that these solutions throw up. Healthcare Regulators globally are wrestling with how to provide a suitable regulatory regime for these innovative products and services.

ORCHA assesses the compliance of Digital Health Technologies (DHT's) by focusing on four principal domains. This allows to help providers of healthcare to clearly understand their responsibilities and developers of DHT's the regulation that applies to their products and the certification required to satisfy various deployment scenarios.

The majority of these elements are a requirement of the Digital Health Technology Assessment (DTAC) framework, outlined by NHSE Transformation Directorate. Overall compliance is a function of their **complexity** and **intended use**. For example, an administrative app such as a rota system will have a differing level of necessary compliance compared to a Digital Therapeutic App such as a regulated insulin management app.

Additional support is available at ICS level and via the Academic Health Science Health Network (AHSN) or local Commissioning Support Unit.

ORCHA provides online learning resources through their 'Digital Health Academy' available free to all HCP's through the ORCHA Landing Page and the Health Education England Learning Portal.

Data protection & privacy

Requirements ensure that data protection and privacy is 'by design' and the rights of individuals are protected. The following requirements apply to most digital health technology products however there may be some products that do not process any NHS held patient data or any identifiable data.

General Data Protection Regulations (GDPR) & Information Commissioners Officer (ICO) Registration

Conformity is mandatory for all developers collecting any **personal data** and will have to demonstrate compliance with user rights and the legal basis for the uses of data under GDPR. This is done through a well written and transparent Privacy Policy. Many DHTs will additionally collect sensitive information and so need to be registered with the ICO.

Data Protection Impact Assessment (DPIA)

A DPIA is a process designed to help **systematically analyse, identify and minimise** the data protection risks of a project or plan. It is a key part of a developers' accountability obligations under the UK GDPR when done properly helps developers to assess and demonstrate how they comply with all of data protection obligations. This will need to be signed by a commissioning body however a validated template will be the output of DTAC certification.

Data Protection Officer (DPO)

DHTs that process sensitive information are required to name a DPO and register with the Information Commissioners Office, this can be checked online, and evidence of exemption will need to be provided. DPO details need to be provided including their suitability, how they are involved in process and systems covered by the DPIA. This is covered in the DTAC.

NHS Digital Data Security and Protection Toolkit (DSPT)

DSPT completion is required by all organisations that have access to NHS patient information to provide assurances that the proper measures are in place to ensure that this information is kept safe and secure. Covering similar ground as the GDPR,Cyber Essential Plus and ISO 27001. Developers need to complete the annual online self-assessment tool to measure their performance against the National Data Guardian's 10 data security standards.

☑ GDPR Compliance ☑ ICO Registration & DPO

☑ Data Protection Impact Assessment ☑ NHS Digital Data Security and Protection Toolkit

Technical Security, Stability & Interoperability

DHTs must meet industry best practice security standards, and demonstrate they are stable to be utilised in a healthcare setting. Evidence of this is required utilising external testing with details relating to the specific technology, and not generally to the developer organisation.

Cyber Essentials

A valid Cyber Essentials certificate is mandatory for any product used within the NHS; this ensures that the developer has appropriate processes in place to guard against the most common cyber threats.

Security Testing

In order to comply with the DTAC criteria, products must have a had recent penetration (PEN) testing undertaken. The testing confirms that the DHT is not vulnerable to security threats by benchmarking against OWASP Top 10 security risks and appropriate CVSS vulnerability score. In addition, the developer should document a code security review processes has taken place.

Interoperability

Regulatory requirements are based on the level of integration with other devices and systems. For example, connected devices should conform to ISO 11073 (Personal Health Data (PHD) Standards) and integration with health records must utilise recognised standards for authentication and data exchange such as FHIR, OAuth 2.0 and TLS 1.2.

☑ Cyber Essentials ☑ Penetration Testing ☑ Code Security Review

☑ ISO 11073 ☑ Data Standards

Professional assurance and clinical safety

It is essential that a developer ensures that their DHT should have the appropriate Medical Device classification if required. For DHTs to be used within health systems, developers should ensure they are not subject to additional regulation and have appropriate risk management procedures assessed. It is of note that DCB0160 Clinical Risk Management for the deployment and use of Health IT Systems should be adhered to by commissioning organisations which will require the early involvement, development and sign off by an organisations Clinical Safety Officer.

Medical Device Registration

Not all products will require registration under the Medical Device Regulations to ensure safety and quality - this depends on the functionality and ranges from a Class I to Class III. Products that do, must display a UKCA / CE mark and provide details of their registration for DTAC certification.

Registration Requirements

Some DHTs form part of additional health service provision e.g. telehealth consultations. In this case, those services should consider if they require registration e.g. Care Quality Commission or General Pharmaceutical Council.

Safety, Risk Management & Clinical Safety Officer (CSO)

For any DHT being used in a clinical environment consideration for use and the potential impact on patient safety need to be carefully considered. A clinical risk management plan as outlined in DCB0129 will need to be in place (complemented by the commissioning organisation producing a formal risk assessment under DCB0160). These documents will provide up to date Clinical Safety Documentation, in the form of a Hazard Log, a Clinical Safety Case Report and Clinical Risk Management System. In addition, a developer will appoint a Clinical Safety Officer (CSO) with appropriate skills to demonstrate this compliance – for DTAC this includes relevant training through NHS Digital.

☑ Medical Device Registration ☑ CQC/ GPC Registrations ☑ DCB0129 & CSO

USER EXPERIENCE

The NHS have developed service standards which a DTAC assessment will evaluate. There are international accessibility standards that developers can use to ensure that a wide range of people can access and use web-based and mobile technologies which are assessed as part of baseline reviews of technology.

Web Content Accessibility Guidance (WCAG)

Compliance with WCAG is a requirement of any DHT being used by public bodies in the UK. A WCAG 2.1 standard of AA is required to ensure that everyone can use a web or mobile based service.

NHS Service Standards

A DTAC assessment will, in addition, award a Usability score to a DHT. This reflects the process of design, development and continuing improvement of a product. From understanding users and demonstrating that the solution is designed to solve whole problems of users, the standard focuses on the benefits case of a technology and that a multidisciplinary team are involved. Other points are obtained by detailing customer support and service reliability.

☑ WCAG2.1 ☑ NHS Service Standards

Useful Links

- NHS Learning Hub – https://learninghub.nhs.uk/Catalogue/ORCHA
- ORCHA Academy https://orcha-academy.com/

Data Protection & Privacy

- ICO – https://ico.org.uk/
- Data Security and Protection Toolkit – https://www.dsptoolkit.nhs.uk/
- Data Protection Impact Assessment (DPIA) template

Technical Security

- About Cyber Essentials – https://www.ncsc.gov.uk/cyberessentials/overview
- Penetration Testing – https://www.ncsc.gov.uk/guidance/penetration-testing

Professional Assurance & Clinical Safety

- Clinical Safety Team – NHS Digital – https://digital.nhs.uk/services/clinical-safety
- Clinical Risk Management Training – NHS Digital –

- Clinical Risk Management Training – NHS Digital – https://digital.nhs.uk/services/clinical-safety/clinical-risk-management-training

- Evidence standards framework – NICE – https://www.nice.org.uk/about/what-we-do/our-programmes/evidence-standards-framework-for-digital-health-technologies

User Experience

- NHS digital service manual – https://service-manual.nhs.uk/

- World Wide Web Consortium (W3C)- https://www.w3.org/

Evaluation

Aims and objectives:

1. Be able to describe three types of evaluation.
2. How to create a logic model.
3. What to consider when planning an evaluation.

Introduction to evaluation

What is evaluation?

Evaluation is any systematic process to judge merit, worth or significance by combining evidence and values (Better Evaluation, 2022).

Why do an evaluation?

We have limited resources available for healthcare and decisions must be made when allocating these limited resources for different services or technologies. Having an explicit, science-based criteria for decision-making is important since it improves accountability and decision-makers need some metrics to ensure optimum decisions are being made.

Delivering an evaluation is often a requirement of funding when implementing a new programme. However, the benefits of developing an evaluation strategy extend far beyond one evaluation. By co-creating a logic model and establishing clear data flows for an evaluation, the programme team can rapidly identify where they can access data, have data readily available for reporting and track the progress of their programme to short, medium and long-term outcomes.

When can you do an evaluation?

Learning for delivery: Early on in a programme, you can use evaluation to determine what has been working well and what has not been working so well, to make informed changes and improve outcomes as you go.

Assessing outcomes: At the end of a programme, you can use evaluation to determine if your programme is having a positive impact for patients, and whether the programme should continue. At this stage you could also look at resource utilisation as a result of the programme, for example reduction in A&E attendances.

Learning for elsewhere: If a programme has been successful in one GP practice, it could spread and be scaled up. Evaluation is a core activity in supporting technologies to grow across the NHS as lessons learned from other locations are key in developing sustainable strategies for implementation.

Types of Evaluation

Process evaluation

- Assesses whether a programme has been implemented as intended
- Can be used to establish why a tool would be useful in some populations and not others

Impact evaluation

- Assesses whether a programme has been successful in achieving its intended outcomes (as per the logic model) and unintended outcomes

Economic evaluation

- Determines whether a programme was best use of resources

You may also consider conducting an economic evaluation to understand the cost-effectiveness of the technology you are interested in. Depending on the purpose of your evaluation, different types of economic evaluations might be appropriate. Usually, we would like to know how much it would cost to deliver one additional unit of health gain. In a cost-effectiveness analysis, different health technologies or healthcare interventions are compared to understand whether one of them is more/less cost-effective than the others. In some cases, the alternative might be doing nothing, and this has some consequences that need to be considered. It is not always sufficient to just demonstrate the cost-effectiveness alone since local decision-makers would need to know the impact of providing a specific service on the available budget. To estimate this, a budget impact analysis needs to be conducted.

Undertaking an economic evaluation might not always be feasible but it is often possible to find published economic evaluations of similar technologies to gain an understanding of potential health and cost implications.

There are also terms that cut across these types of evaluation, such as:

Formative evaluation: Used to make improvements

Summative evaluation: Used to make a decision whether to continue with the programme or tool (start/stop)

View more information and examples of types of evaluation.

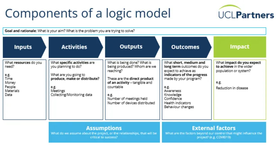
How do I do an evaluation?

Planning and logic models

Evaluation should be embedded at the start of the programme, to ensure data and metrics are available to make informed decisions.

One method of doing this is by creating a logic model. A logic model is a road map that describes the shared relationships between your inputs, outputs, outcomes and impact of your programme. Logic models should be created in collaboration with stakeholders, to create shared goals and understanding of the intended impacts of the programme and how you plan to achieve them. In creating a logic model at the start of a programme, you are also able to clearly identify how certain aspects of the programme can be evaluated and can serve as a touchpoint throughout the programme to check if you are on the way to achieving your intended impacts.

A template, such as below, can be used to create your logic model – more templates are available.



What to consider when designing your evaluation:

- **What would you like to know?** Describing the objectives of your evaluation will help determine what kind of evaluation you should perform and when you should begin.
- **What is already available?** Undertake an evidence review to see how others have approached similar evaluations and check if there are validated tools (e.g. surveys, patient reported outcome measures) which you could use. The FutureNHS collaboration platform and Fab NHS Stuff publish examples of case studies and evaluation reports. Networks such as AnalystX (on FutureNHS) can also be a useful source of examples, training and opportunities for collaboration.
- **What resources can you commit to this evaluation?** Time and space should be made available to support an evaluation and should be an important consideration when applying for funding. The resources you can commit can also help determine the scale of the evaluation.
- **At what scale do you want to evaluate?** You may want to focus on depth (i.e. detailed evaluation of a single site or aspect) or breadth (i.e. a wide ranging evaluation covering multiple locations or populations).
- **What information should you collect?** Planning what information you need to support your evaluation is essential to ensure timely collection and analysis. The logic model can be used as a framework to build a data strategy, where you detail when and how you plan to collect and analyse the data (both qualitative and quantitative) required. This is particularly important if you are planning to use patient data in the evaluation, as you will have to assess what information governance measures are required to access and manage the data safely. Your local information governance lead should be a key contact at this stage in the programme, and you may have to complete a Data Protection Impact Assessment (DPIA) which will help you determine what steps you need to complete to access data safely for your evaluation.
- **Who would you like to involve in your evaluation?** You should map and involve key stakeholders who should influence the design of the evaluation. You may also want to gather insights from staff and patients who are using or benefitting from the tool as part of data collection. Informed consent should be collected from participants in evaluation. For more information on consent and templates, please refer to these examples from the NHS Health Research Authority.
- **How can you minimise bias in your approach?** Consider if your programme will require independent evaluation, to avoid the biases in "marking your own work". Your local AHSN (Academic Health Science Network) can support evaluations.

Frameworks

There are a frameworks and toolkits available which you could use to evaluate your tool or programme:

- Non-adoption, abandonment, scale-up, spread, and sustainability (NASSS) framework
- Better Evaluation Rainbow Framework
- Evaluation Works toolkit

Evaluation Training

Training in evaluation can be accessed free of charge through the NIHR Applied Research Collaboration North Thames Academy. They deliver courses in evaluation throughout the year aimed at staff in frontline services in the NHS, local government and social care organisations. They also regularly publish resources that can be accessed in your own time.

Further reading

- Evaluation: what to consider
- Midlands DSN Guide to Evaluation Design, Principles and Practice
- Get started: evaluating digital health products
- How to Value Digital Health Interventions? A Systematic Literature Review
- NICE health technology assessment guidelines
- NICE economic evaluation guidelines for public health interventions

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Business Planning

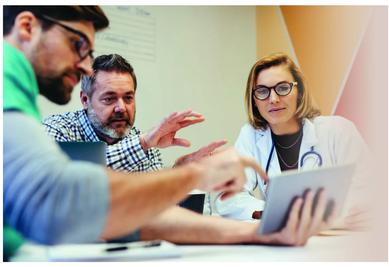
Aim and objectives

1. Understand why a business case might be required.

2. How to structure a business case.

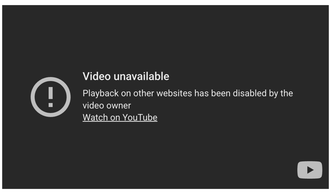
3. Being able to present a business case.

Information provided by Health Tech Enterprise



Business case

A business case is an important written document that outlines the rationale for initiating a project or task. A business case can also be used to explain and document the value and/or benefits that an organisation will gain from making an investment in a new product or service and outlines the **why**, **what**, **how** and **who** necessary to decide to embark on a new project or procure a new product or service. An effective business case can therefore be used to leverage senior management buy-in and approval for the procurement of that new product or service.



The following steps are useful to consider when developing and pitching a business case:

1. How to write a business case

The purpose of a business case is communication and so be clear, concise, eliminate conjecture and jargon, be brief and convey only the essentials. Remember that writing a business case is not a one-person mission and so make sure that you have all team members and subject matter experts required to provide input into the development of the business case. Further tips on how to write a compelling business case can be found here.

2. Business case structure and content

The key elements of a business case for procuring new products or services might include:

- **Executive summary**

A short summary of the entire business case. Often the last section to be written and conveys all the vital information contained in the business case.

- **The problem and/or opportunity**

Often the longest section and should include detailed information regarding the current need for a new product or solution, the problem that you are seeking to solve or the new opportunity which you might want to evaluate and implement.

- **The proposed solution(s)**

Undertake a market assessment and explain why the proposed solution will seek to address the problem, how it is better than existing solutions and how it aligns with an organisation's strategic aims. Also include what metrics will be measured to demonstrate success and how these outcomes will be reported.

Options Appraisals should always be present.

- **Benefits/Disbenefits**

Highlight the benefits of implementing the new solution such as improved patient care or future cost savings compared to the current standard of care and over what period these might be realised. Include whether there might be any disbenefits or drawbacks of implementing the new solution and how these might be overcome (eg. reduced face-to-face time with a doctor which might impact the elderly population).

- **Risks**

Conduct a risk assessment to identify all risks associated with implementing a new technology or service. Highlight how likely such risks are to occur, their impact and how they might be mitigated.

- **Investment required**

Highlight the costs associated with implementing the new solution. These might include costs of conducting an evaluation, the cost of the solution itself and costs associated with implementation/staff training.

- **Timescales**

What are the timelines required to evaluation and/or implement the new solution?

- **Operational impact**

What will be the operational impacts of evaluating and/or implementing the new solution? These could include re-allocation of staff time to evaluate the new solution which might impact on existing services or the time needed to train staff to learn how to utilise the new solution. Can any services be decommissioned through implementing the suggested changes?

- **Resources required**

What resources and/or personnel will be required to evaluate and/or implement the new solution? What will be the future financial or resource savings from implementing the solution?

Find out more on what to include in a business case.

3. Presenting the business case

The process of getting your business case approved is one of incremental negotiation, not unlike the approval of legislation. There is a need to socialise the concept, gather a coalition of support and negotiate with key stakeholders. Dependant on scale this may be achieved in a single meeting or it may require some weeks of considered engagement in a variety of meetings.

As you socialise your business case be prepared, develop an 'elevator pitch' version of your case and a short presentation version (eg. approximately 2-3 minutes maximum) highlighting the current need/problem you are seeking to address, the preferred solution and what the benefits to the organisation will be. Practice giving very succinct but complete answers and developing a strong rhetorical link in the case.

Change Management

Aims and objectives

1. What is change management and why is this important in your digital implementation journey.
2. How to successfully use change management to gain the best outcomes for your innovation.
3. Factors to consider which reduce barriers and enable change within your organisation.

Information provided by Libera Partners

Why do I need to consider change management, when implementing new innovations?

In public services, managing change when it comes new technology is often an afterthought. It's a "let's implement this now" (with the expectation it will work), rather than it being the well thought out and executed plan it should be.

For example, during the pandemic, primary care moved to using online consultation systems overnight. This meant that very little time was available to consider any benefits which could accrue from implementing the software. It's the nature of the beast and we all know why: time and money. The thing is, time spent planning for change now, will save you both time and money in the long run.

According to productivity expert Brian Tracy, every minute you spend planning will save you 10 minutes in execution.

Regardless of industry, approximately 70% of projects fail because not enough time is spent considering the impact of change on the people involved. Below, we explore some key points for anyone thinking about installing software. We'll also take a look at how by planning ahead, leaders can encourage their teams to embrace change, rather than recoil in horror at the very thought of it.

The Management of Change

Change management is applying structure to the process of change, in order to lessen resistance to it from the people affected. The truth is most people do not like change. Resistance to change however, is often the result of misinformation or a general lack of understanding. It's your role as the advocate for change, to engage your team in the need for change and to ensure they understand how the technology can support the delivery of that change.

Understanding the Reason for Change

Sometimes, innovations are purchased just because it's recommended; 'new technology' means it's better, right?

Not necessarily.

New innovation is only as good as the people who will operate it. If it hasn't been installed with a particular outcome in mind (to improve a service/solve an issue etc) and your team aren't clear on the end goal before it goes live, then it may not appear to be worth the investment.

"Every system is perfectly designed to get the result that it does."

— W. Edwards Deming

Research shows that in situations where software has been installed without due consideration for the end user, only about 20% of the functionality is used.

To avoid this common pitfall, it's important to consider the following questions before you decide to buy:

- Why are you considering a system update?
- Will implementing new software improve efficiency or service delivery in some way?
- What is the urgency? What happens if you don't improve your systems?
- What are the benefits of the system above what you already have installed?
- Does the tech support what you are trying to achieve?
- Will further work be required before or after implementation of the tech to achieve your desired outcome?
- Will you need to change how you work to achieve your desired outcome? And is that reasonable?
- Do you have the time/resources to train staff?

The Step Process for Leading Change

John Kotter is one of the world's leading thinkers when it comes to managing change in the workplace. His '8 Step Model' is designed to help leaders plan, implement, and drive successful change in their organisation. This is all brought to life in his very accessible book: My Iceberg is Melting. A condensed version of the '8 Step Model', can be found below:

Step 1 – Create a sense of urgency:

Creating a sense of urgency around the need for new technology prevents procrastination and complacency; essentially, it gets that ball rolling.

A recent example of this would be the pandemic: urgency was created because we couldn't have patients sitting in the waiting room.

What *could* happen if you don't replace your outdated technology?

Step 2 – Build a guiding coalition:

When you're planning to change something as fundamental a booking/back-office system, you need to ensure that your team are prepared; there's nothing more disconcerting than sudden and forced change. This step is all about getting key individuals on your side and empowering them to be fellow advocates for change. You'll need to create a team of influential people with varied skillsets and expertise, from each department of your business (senior staff, right down to your junior employees).

If the software involved will be operated/used by patients, involving them in the early planning stages will also be beneficial.

Step 3 – Form a strategic vision:

With your newly formed coalition, it's time to build a positive image for the future. Get to grips with what the system will improve for each area of the business and prepare to share that vision.

Transparency is key.

Involving representatives from each department in the planning stages, will ensure awareness is raised throughout the practice/PCN prior to installation. This will allow you to be proactive and deal with any resistance from staff and address potential issues before there is no going back.

Step 4 – Share the vision:

This is the stage in the plan where your coalition start to spread the word. They begin painting the picture for their teams, warming them up to the impending change by sharing with them just how useful the new system will be highlighting WIIFM (What's In It for Me)

Step 5 – Enable action by removing barriers:

This is about empowering your growing team to identify barriers to goals and strategically work to overcome them. These barriers could be anything from logistics and bureaucracy to an awkward individual; get the issue out in the open, discuss it and deal with it as a team.

Step 6 – Generate short term wins:

Setting short term goals along the way to your overall target, will keep your team motivated and maintain momentum. Set markers for short term wins, create awareness of them and celebrate as a team when you have achieved them.

Step 7 – Sustain acceleration:

Once you have set a series of short-term goals between the bigger wins, keep on top of them. Celebrate and move on to the next target; keep that momentum going.

Step 8 – Institute/Anchor change:

This is about ensuring that your new system and way of doing things is now the norm. You're keeping the minds of individuals in your practice/PCN focussed on using the new technology, to prevent them from reverting back to old ways of working and undermining the change. This stage may require you to remove old systems or provide extra training and coaching for your team.

Nothing Changes if Nothing Changes

If you're due to or are already in the midst of implementing new technology, hopefully, this article has provided you with some guidance.

Ultimately, successful implementation of software requires you to engage your team in the reason for change, so they fully understand the end goal and what is at stake. The system will succeed or fail based on the experiences of your end-users, so it's important you gain their input and engage them in your plans from the get-go. Afterall, you'll need their involvement in delivering the improvements you desire.

Managing change the right way does take more time, but what's the sense in investing in new software, if your practice/PCN isn't going to reap all the benefits?

"The transformation can only be accomplished by man, not by hardware (computers,

gadgets, automation, new machinery). A company cannot buy its way into quality."

— W. Edwards Deming

Glossary

Acronym/Term	Term
AHSN	Academic Health Science Network
ICB	Integrated Care Boards
ICS	Integrated Care Systems
QOF	Quality and Outcome Framework
IIF	Investment and Impact Fund
ARRS	Additional Roles Reimbursement Scheme
PPI	Patient and Public Involvement
SBRI	Small Business Research Initiative
ORCHA	Organisation for the Review of Health and Care Apps
UKRI	UK Research and Innovation
NIHR	National Institute for Health and Care Research
DTAC	Digital Health Technology Assessment
GDPR	General Data Protection Regulations
ICO	Information Commissioners Officer
DPIA	Data Protection Impact Assessment
DPO	Data Protection Officer
DSPT	NHS Digital Data Security and Protection Toolkit
DHT	Digital Health Technology
UKCA	UK Conformity Assessed marking
CE	Conformite Europeenne
CSO	Clinical Safety Officer
WCAG	Web Content Accessibility Guidance
ARC	Applied Research Collaboration

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Thanks for using the Primary Care Innovation Toolkit. Please let us know if you have any feedback on how it could be improved.

Primary Care Innovation Toolkit feedback

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