Invitation to tender: Cost of digitising the NHS and social care

Also included:

- Sample contract
- Tender response form (via our online applicant portal)
- Contract budget template (on the online portal)

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September 2023

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About the Health Foundation

The Health Foundation is an independent charitable organisation working to build a healthier UK.

We will play our part in building a healthier nation by focusing on three key priorities.

Improving people's health and reducing inequalities	We will work with others to improve people's health and reduce inequalities by: • increasing understanding about the economic and societal benefits of good health • focusing on the key role of economic, social and environmental factors in shaping health and driving inequalities • working with stakeholders to build cross-sector support and mobilise action for the changes needed to promote healthier lives.
Supporting radical innovation and improvement in health and care services	We will support radical innovation and improvement in health and care services by: • promoting and evaluating new approaches to improve and transform services • helping to build an ecosystem for the generation, spread and adoption of new ideas and innovations • strengthening cultures and capability to deliver change among health and care professionals, organisations and systems.
Providing evidence and analysis to improve health and care policy	We will provide evidence and analysis to improve health and care policy by: • publishing high quality research • producing analysis, insights and commentary to inform discussion and debate • working with stakeholders to develop long-term thinking and solutions to the challenges facing the health and care system.

We are also continuing to develop our thinking and practice on the ways we can have a positive impact on our mission through how we work, particularly through the following three cross-cutting themes.

Equity, diversity and inclusion: We are committed to equity, diversity and inclusion as an employer, a funder, and in our contributions to health and care policy and practice in the UK. Download our equality and diversity policy.

Public participation: We're also developing how we engage and involve people – individuals and communities – in what we do. We want to embed public participation more consistently and more widely across our work, to realise the benefit of multiple and diverse

perspectives.

Environmental sustainability: We are committed to our environmental sustainability work, through both our research and analysis and through our grant programmes.

Further details about the organisation can be found at **www.health.org.uk**.

Summary

The Health Foundation is seeking a supplier (or consortium) to develop an estimate of the capital and revenue costs required to achieve digitisation within health and social care. The objective of this work is to help inform future policy and funding decisions made by the government and NHS England, as well as help inform public debate to improve health and health care. We would like suppliers to scope and deliver estimates by April 2024.

We will work with the supplier to agree what can feasibly be included when estimating digitisation costs, but are keen to ensure alignment with how digitisation is currently defined and measured (such as digitisation targets in the Plan for Digital Health and Social Care). As a starting point we would like suppliers to:

- provide an estimate that includes health, and social care if feasible
- include capital costs for the core components of digitisation, as well as revenue costs associated with implementation and ongoing use and maintenance of digital technologies
- cover England and, if possible, the rest of the UK.

The budget for this project is up to a **maximum** of £200,000 including VAT and expenses. The work will start in December 2023 with a final technical report and estimate produced by April 2024 and advice for a potential follow-on project delivered by June 2024.

The Health Foundation may wish to commission a follow-on project at a later date via competitive open tender, to conduct a more in-depth analysis. This will be informed by the findings of this project.

Background to the cost of digitising the NHS and social care project

Digitisation has been a long-standing goal for the NHS, with a particular focus on electronic health records and Wi-Fi connectivity, as well as IT hardware and software. Previous efforts include the National Programme for IT and Personalised Health and Care 2020 which set out a vision for a paperless NHS to be realised by 2018. The Plan for Digital Health and Social Care, published in June 2022, set the ambition for all integrated care systems (ICSs) and NHS Trusts to have core digital capabilities, including electronic health records, in place by March 2025. In social care, the aim is for 80% of Care Quality Commission (CQC) registered providers to have digital social care records by March 2024.

In recent years, the potential of technology and data-based innovations to improve health care service delivery has grown exponentially, with AI attracting significant attention at present. Not only is digitisation important to enable the basic effective functioning of health and care services, and to meet patient and staff expectations in the digital age, it's also an essential prerequisite for the implementation of other tech-based innovation. This bears

emphasis as policymakers increasingly see innovation – particularly digital and data-driven technologies, such as AI – as one of the key solutions to the challenges the NHS faces.

However, while significant financial and human resources have been invested in digitisation activities over the last decade, progress has been slow. Levels of digitisation vary across the country and across parts of the health and care system (such as general practice, community, mental health, acute, residential and domiciliary care), with some provider trusts yet to implement an electronic health record system. Reports by the NAO and more recently the Expert Advisory Panel to the Health and Social Care Committee concluded that while progress has been made, it falls short of what is needed to ensure the NHS is fit for the 21st century. While there are several contributing factors to this, the expert panel report found that a lack of robust investment has been the root cause of much of this lack of progress. Although the Plan for Digital Health and Social Care earmarked £2.1bn to support digitisation goals, this has since been reduced, and plays against a backdrop of historic low capital investment – both of which raise questions about whether digitisation targets are achievable.

Pre-pandemic, England saw a decade of low capital investment, during which parts of the capital budget, which covers funding for infrastructure, equipment and IT, was reallocated to the revenue budget to cover day-to-day running costs, resulting in underinvestment and a critical maintenance backlog in the NHS. The latest capital budget is significantly higher than the previous decade; however, this is in the context of investment in the last decade being £33bn less than the average across the EU14.

In the last decade, IT-related investment has been rising as a share of total capital spending, mostly driven by the rise in intangible assets such as software licenses, but still only accounted for less than 5% of the value of NHS capital in 2017/18. This is despite evidence that digital infrastructure could contribute to improving patient health outcomes and performance, and experts have also highlighted the role of physical IT infrastructure, improved IT linkages and better use of health data in building more resilient health care systems.

What is clear is that further investment is needed to ensure all health and care providers and systems have core digital capabilities, which are sufficient to improve, innovate and deliver change. However, what is less clear is how much investment will be required, given the complexity of digital transformation and the varying levels of current digital maturity across these providers and systems.[1] To our knowledge, there is currently no published recent estimate of the cost associated with ensuring that health and social care providers possess the core digital capabilities.[2]

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[1] For example see variability in digital maturity scores across ICSs in England: Talora, J. Revealed: First ICS digital maturity ratings. *HSJ,* 18 July 2023.

[2] A recent Organization for Economic Cooperation and Development (OECD) paper indicates that on average, OECD countries would need to invest an extra 0.08% (ranging from 0.00 to 0.21%) share of GDP on capital spending (covering equipment, IT hardware, but also other types of capital spending), and 0.05% (0.00 to 0.12%) in development of software and databases in health and social care to maintain responsive health information systems. These estimates are based on what it would take for

Details of the work

Rationale for the project

This proposal would seek to commission a supplier to develop estimates of the capital and revenue costs required to achieve digitisation within health and social care over the duration of the next decade and take account of some or all of the following:

- Current approaches to defining and measuring digitisation, as well as related policy ambitions, including the 'digitisation targets' set out in the Plan for Digital Health and Social Care, NHS England's What Good Looks Like and the latest Digital Maturity Assessment, which assesses the digital maturity of each ICS and their constituent health care providers.

- Manifesto commitments for the forthcoming general election, in particular Labour's Mission Plan for ensuring the NHS has modern technology (and we acknowledge these commitments may evolve over the course of the work).

We would work with the supplier to agree what can feasibly be included when estimating digitisation costs, but as a starting point we would include capital costs for the core components of digitisation set out in the above policy documents, as well as revenue costs associated with implementation and ongoing use of digital technologies. A more detailed description of the project can be found in the '**Designing the project**' section.

Contribution to the Health Foundation's strategic priorities and our desired impact of this project

This project will make an important contribution to the Health Foundation's radical innovation and improvement and policy strategic priorities (as set out on page 2) and our routes to impact. A detailed assessment that provides a realistic and as robust as possible estimation of the costs of digitisation would allow us to generate impact in the following ways:

1. informing future policy and funding decision making by the government and NHS England

2. supporting national policymakers in strategic planning for digitisation in the NHS and social care

3. informing funding decisions in the next government spending review and budget, and

4. providing the basis for possible deeper, follow-on analysis into the cost of digitisation, building the evidence and making the case for long-term capital investment strategies in the NHS and social care.

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all countries to reach the 75-percentile level of capital spending among OECD countries, rather than defined targets of levels of digital capabilities.

This project may also have the added benefits of helping leaders of regional health care systems and local health care providers in estimating costs for their own organisations and areas and understanding what costs are required to achieve their own digitisation plans.

Designing the project

We are seeking a supplier (or consortium) who can design and deliver an estimate of the cost of digitising the NHS and social care over the duration of the next parliament (2025/26 to 2029/30). As mentioned previously, we would like the estimate by April 2024 to inform future policy and funding decision making by the government and NHS England in time for the UK general election. The chosen supplier will be expected to cover England and, if possible, the rest of the UK.

The project should comprise three key stages:

1. scoping and design phase

2. delivery of the project

3. provision of advice for a possible follow-on project to produce a more in-depth analysis informed by this project (for instance, learning about any data constraints or methodological limitations encountered, and what might be needed to overcome them).

The scoping and design phase will be pivotal in helping to ascertain what type of estimate would be possible. The Health Foundation has held several initial scoping meetings with various stakeholders including NHS England to test the feasibility of the project and ensure the outputs would be as useful as possible. We anticipate that the supplier will conduct further conversations with a range of stakeholders and teams within NHS England, which will be a key component of the scoping phase of this project to understand how achievable our estimates can be for the different care settings we are proposing to cover.

We expect that, to deliver the work, the chosen supplier will need to include the following elements:

- A stocktake of the current level of digital maturity in the NHS and social care. An indicative table of (non-exhaustive) data sources is included in the Appendix.

- A definition of what a digital health and social care system would look like, drawing from the existing literature and policy papers (see Background to the cost of digitising the NHS and social care project section above).[3]

- An estimate of the capital costs (and revenue costs to maintain the system) required to reach the benchmark defined in footnote 2. As much as possible, these cost

[3] Including, but not limited to, the National Audit Office report on Digital transformation in the NHS, the King's Fund's report on Digital change in health and social care or the review of Adult social care technology innovation and digital skills commissioned by NHSX.

estimates will be broken down by the different categories of costs (e.g. IT technologies, staff training etc.).

Defining 'digitisation'

Currently, there is no nationally defined core level of digitisation, although the Digital Maturity Assessment Team at NHS England have established what is required for electronic health records and plan to define core levels of digitisation more broadly at some point in future.

The definition of digitisation will be explored by suppliers during the scoping phase of the project. It will be important to align with pre-existing and recognised criteria of digital maturity (e.g. Digital Maturity Assessment and What Good Looks Like guidance). While these existing frameworks will be useful, most outline digitisation at an optimum rather than basic or core level and may be too high-level alone to create a measurable set of criteria.

Regarding the 'elements of digitisation', our stakeholder engagement has highlighted the importance of considering the additional costs associated with the effective implementation of digitisation changes, that go beyond the costs of purchasing the technologies themselves. Therefore, we would like the supplier to also provide an estimation of costs associated with training, implementation and ongoing maintenance.

These discussions also encouraged us to consider making estimations at an ICS level, even if that may include provider level estimates as well. Our starting position would be an estimation of capital costs for:

- electronic health record systems (EHRs)
- IT hardware and software
- broadband and Wi-Fi connectivity
- cloud storage
- cyber security
- meeting standards for interoperability between IT systems.

If feasible, it would also include revenue costs, which would be an important aspect of a successful transition to a digital NHS and social care system. These costs would ideally also include:

- training of staff to use them effectively (digital literacy)
- implementation of the above technologies (such as initial software licenses and data storage)
- ongoing maintenance (including software updates and subscription renewals), based on annual costs for 5 years.

When we discuss the scope of our work with the potential supplier, we may wish to explore the feasibility of including other capital costs including digital imaging (such as X-rays, MRIs

and CT scans), telemedicine and remote monitoring technologies, as well as electronic prescription services, digital health apps and tools, and AI technologies.

The various inclusion and exclusion criteria on the definition of digitisation and settings (likely to depend on methods and available data sources) will be decided by the Health Foundation in discussion with the supplier.

Methodology

If appropriate, more than one methodology could be used to obtain an estimate of the costs required to digitise the NHS and social care over the next parliament. The set of methods includes using benchmarking analysis, or estimating the progress made using the funding allocated so far or using investment in other countries or other sectors of the economy (top-down approach). Alternatively, a bottom-up approach could be employed by applying the costings for the digitisation of more advanced health or care providers to the wider sector. The high number and diversity of social care providers might require a different approach than for health care.

We would also like the supplier to provide a plausible range of cost estimates or to give a sense of the uncertainty in the estimates. We are also keen to explore the use of scenario planning for cost estimates which can envision different future scenarios and plan courses of action that maximise the chance of achieving the targets for digitisation. For instance, the supplier may want to rely on different scenarios that could vary the level of digitisation achieved and/or the timeframe over which this is feasible.

Following delivery of the estimate and accompanying technical report in April 2024, the supplier will also provide advice by June 2024 for a possible follow-on project to produce a more in-depth analysis, and to highlight where further in-depth work would be of most value.

Ways of working

The work will be managed by a project team involving a Research Manager and Research Officer in the Research team, alongside two colleagues from the REAL Centre (Economist) and the Innovation and Improvement team (Senior Improvement Fellow).

We will want to engage regularly and collaborate with the supplier on this project, but we will agree the nature of updates with the provider at the inception meeting. We anticipate the supplier will provide agile updates throughout the duration of the study and we will work together with the supplier, once appointed, to co-design the ways of working.

The supplier will also be required to engage at key milestones during the project with our *cost of digitising the NHS and social care* working group, as specified in the Deliverables section on page 9. The working group will be chaired by our Assistant Director of Improvement (Insight and Analysis). Other working group members will include internal colleagues from REAL, research and improvement teams, as well as 3–5 external experts from the Health Foundation Board and Directors, national policymakers (including from DHSC and NHS England), and/or from academia. We also have access to a group of experts by experience with whom our supplier would be able to work if they wish.

A Privacy Impact Assessment will be submitted by the Health Foundation to the data protection team. If the supplier has not worked with the Health Foundation before they will be required to complete a data protection assessment.

A light-touch review of the project and provider will take place following the delivery of the revised protocol at the end of the scoping phase of the project. Continuation of funding will be dependent on satisfactory progress and delivery against the agreed purpose and deliverables, recognising that the estimates produced within the timeframe may have some limitations.

Deliverables and requirements

Specific deliverables are to include:

Deliverables	**Date**
Revised protocol following the scoping phase of the project ***and*** engagement with the *cost of digitising the NHS and social care* working group	January 2024
Interim project meeting updates from supplier with the Health Foundation project team throughout project (depending on methodological milestones and when decisions need to be made between the supplier and the Health Foundation to progress the project)	As agreed at the inception meeting
Final technical report for the Health Foundation including the scope of the work (i.e. setting out if sectors of care or types of costs have been excluded from the analysis), explicit assumptions, methodologies and reasons for choosing these, estimate(s) and uncertainty around these calculations, as well as the limitations of the analysis and the likely impact of these limitations on the findings ***and*** engagement with the *cost of digitising the NHS and social care* working group	April 2024
Recommendations for a follow-on project to produce a more in-depth analysis informed by the data constraints and methodological limitations encountered producing initial cost estimates	June 2024

Audiences for this work

The primary audiences for this project are:

- Health Foundation Directors and Board
- national policymakers (including from Department of Health and Social Care and NHS England) and
- political parties.

Secondary audiences include the NHS (England, Scotland, Wales), Health and Social Care Northern Ireland, and in particular regional systems, such as ICSs, health boards and health and social care providers. Additional outputs for this project will be tailored to the relevant target audience.

We will work closely with the supplier to develop key messages and any communications and public affairs (including media) related to the project. We are keen to ensure that the

development process of this work supports our wider stakeholder engagement work. Our aim in terms of dissemination is to provide outputs that are useable by those in policy and politics who are research literate but time poor.

Costs

Based on previous similar work commissioned by the Health Foundation, the budget is a **maximum** of £200,000 including VAT and expenses. We are open to working with either a single supplier or consortium bid.

We will commission this study by issuing a contract for services and, as such, we expect VAT is likely to be payable on all aspects of the work. **Please consult your contracting team and/or finance team to ensure that VAT has been included appropriately before submitting your proposal and budget.**

What we are looking for (selection criteria)

The following criteria will be used to assess the applications and inform the shortlisting process:

- how the approach meets the needs of the Health Foundation and aims of this study
- suitability of the proposed approach, including ways of working with the Health Foundation and other stakeholders mentioned in this invitation to tender
- expertise in producing rigorous and robust quantitative analysis, ideally including cost estimation, in health and social care
- strong understanding of the elements of digitisation in the context of health and social care. Experience of estimating the costs of digitisation would be desirable.
- knowledge of health and social care in the UK and relevant datasets, as well as the external policy landscape
- appropriate project management, risk management and quality assurance
- capacity to deliver
- value for money
- appropriate data protection measures
- commitment to environmental sustainability.

Submitting your tender and selection process

How to apply

Please complete your application by **12.00 (midday)** on **Monday 30 October 2023**. **We will not accept proposals submitted after this time.**

You will need to log in/register a new account on our portal, then select the relevant opportunity. We use a standard online form for all tender responses and there is opportunity to upload relevant documents.

Suppliers will need to submit their completed application form via our applicant portal, referring to our guidance.

We welcome applicants to submit any questions to research.mailbox@health.org.uk by **17.00** on **16 October 2023.**

Questions and responses will then be provided anonymously on the Health Foundation's webpage.

Assessment and selection

Assessment of applications will take place during early to mid-November 2023. Your application will be assessed by representatives from the Health Foundation and external advisers.

We plan to inform applicants whether proposals have been shortlisted in the week commencing **20 November 2023.**

We intend to interview shortlisted applicants on **30 November and/or 1 December 2023** to explore proposals in more depth. Please ensure you have availability on those days.

Proposals will be assessed using the criteria noted above.

It is important to the Health Foundation that the chosen provider is able to demonstrate that the right calibre of staff will be assigned to the project; therefore, the project leader who will be responsible for the project should be present during the panel interviews if your application is shortlisted.

Instructions for tender responses

The Foundation reserves the right to adjust or change the selection criteria at its discretion. The Foundation also reserves the right to accept or reject any and all responses at its discretion, and to negotiate the terms of any subsequent agreement.

This work specification is not an offer to enter into an agreement with the Foundation, it is a request to receive proposals from third parties interested in providing the deliverables outlined. Such proposals will be considered and treated by the Foundation as offers to enter into an agreement. The Foundation may reject all proposals, in whole or in part, and/or enter into negotiations with any other party to provide such services whether it responds to this specification and request for response or not.

The Foundation will not be responsible for any costs incurred by you in responding to this specification and will not be under any obligation to you with regard to the subject matter of this specification.

The Foundation is not obliged to disclose anything about the successful applicants, but will endeavour to provide feedback, if possible, to unsuccessful applicants.

Your application is to remain open for a minimum of 180 days from the proposal response date.

You may, without prejudice to yourself, modify your proposal by written request, provided the request is received by the Foundation prior to the proposal response date. Following

withdrawal of your proposal, you may submit a new proposal, provided delivery is effected prior to the established proposal response date.

Please note that any proposals received which fail to meet the specified criteria contained in this invitation to tender will not be considered for this project.

Confidentiality

By reading/responding to this document you accept that your organisation and staff will treat information as confidential and will not disclose to any third party without prior written permission being obtained from the Foundation.

Providers may be requested to complete a non-disclosure agreement.

Conflicts of interest

The Foundation's conflicts of interest policy describes how it will deal with any conflicts which arise as a result of the work which the charity undertakes. All external applicants intending to submit tenders to the Foundation should familiarise themselves with the contents of the conflicts of interest policy as part of the tendering process and declare any interests that are relevant to the nature of the work they are bidding for. The policy can be found and downloaded from the Foundation's website at the following location: https://www.health.org.uk/COI.

Timetable

Item	Date
Questions to be submitted to research.mailbox@health.org.uk A summary of questions and responses will be provided anonymously on the Health Foundation's ITT webpage for this project	**By Monday 16 October 2023 (17.00)**
Closing date for applications	**Monday 30 October 2023 (12.00)**
Review of applications and shortlisting	Early to mid November 2023
Confirmation of shortlisted applicants	w/c 20 November 2023
Interviews to be held	**30 November and 1 December 2023**
Successful applicant notified	w/c 4 December 2023
Inception meeting	w/c 11 December 2023

Questions

If you have any queries relating to the tendering process or the nature of the service required, please email research.mailbox@health.org.uk by **Monday 16 October 2023 (17.00).** We will aim to reply to queries within five working days.

Contract arrangements

The Health Foundation's standard contract for delivery of services is attached to this invitation to tender. Please ensure that you have read our sample contract and agree to the terms. Any queries about the contract terms should be detailed in your application.

Appendix

Sources of data for health and social care

Source	Data	Geography	Level of disaggregation	Time period
ERIC data	Capital investment; Type of medical records (paper or electronic); Cost to eradicate building backlog	England	Trust or hospital site	Yearly – 1999/00 to 2021/22 (with change in data definition)
Trust Account Consolidation (TAC)	Valuation of intangible assets	England	NHS hospitals (trusts and foundation trusts)	Latest 2021/22
OECD	Medical technology (e.g. scans); Gross fixed capita formation in the health care system (broken down into: Infrastructure / Machinery and equipment / Intellectual property products)	UK	Country, by type of provider (e.g. hospitals)	Yearly – 2010 to 2020
OECD national accounts	Capital formation by activity (construction / equipment / Computer software and development)	UK	Country	Yearly – 2000 to 2019
Review of the use of digital technology in the social care sector (qualitative survey)	The extent of digital technology use across social care; digital skills and confidence among workforce; identification of barriers or enablers to development of digital skills and adoption of technology	England	Country	2021 (one-off review)
Talora, J. Revealed: First ICS digital maturity ratings. *HSJ,* 18 July 2023.	Digital maturity scores by ICS	England	ICSs	Report not yet publicly available

Source: ERIC (estates returns information collection) data, Tables 4a, 7 and 10 from Report files. OECD National Accounts Table 8A. Capital formation by activity ISIC rev4. Notes: OECD data are not always regularly updated and therefore may not provide an accurate description of the existing level of capital.

Note: Applicants may also want to read the latest report on progress on the Frontline Digitisation Programme published by the Infrastructure and Projects Authority for England (2022-23 annual report), which notes that the target for full Electronic Patient Record coverage has been pushed back by one year to March 2026.