



# Digital Strategy 2020 – 2024

February 2020



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# Introduction

Ensuring our staff and patients have access to the digital technology and information they need is a key part of our strategy for 2019 – 2024.

## Delivering outstanding care, every time

### Our strategy for 2019-2024

Our vision is to provide outstanding care, every time for our patients, staff and the communities we serve.

We have agreed four priorities that will drive what we do and influence the decisions we will take over the next five years.

Strong foundations	Excellent local services	Closer collaboration	Leading specialist healthcare
<p><b>To provide outstanding care, every time</b></p> <ul style="list-style-type: none"><li>• We will provide outstanding care, every time</li><li>• We will provide the right care, in the right place, at the right time<ul style="list-style-type: none"><li>• We will invest in our staff</li></ul></li><li>• We will manage our funding and spending, and invest in our future</li><li>• We will improve our buildings and hospital estate</li><li>• We will make sure our staff and patients have access to the digital technology and information they need, when and where they need it</li></ul>	<p><b>To provide excellent local hospital services for the people of Wandsworth and Merton</b></p> <ul style="list-style-type: none"><li>• We will provide planned care that fits around our patients' lives using the latest technology</li><li>• We will provide more same day emergency care</li></ul>	<p><b>To work with others to provide health services for people across south west London</b></p> <ul style="list-style-type: none"><li>• We will work with our partners to provide care closer to patients' homes</li><li>• We will work with neighbouring hospitals to make sure patients get the care they need</li><li>• We will work with others to meet the changing needs of our ageing population</li></ul>	<p><b>To provide specialist healthcare for the people of south west London, Surrey, Sussex and beyond</b></p> <ul style="list-style-type: none"><li>• We will continue to be the main provider of specialist services for our region, including as the major trauma centre</li><li>• We will be a major centre for cancer, children's and neuroscience services</li><li>• We will take part in commercial opportunities that enable us to invest more in NHS care</li><li>• We will develop tomorrow's treatments, today, through innovation, research and training</li></ul>

Easier access to information, including through digital technology, is reshaping the way we live our lives, and the way we access and interact with services.

This strategy sets out our ambitions for building on that opportunity over the coming years.

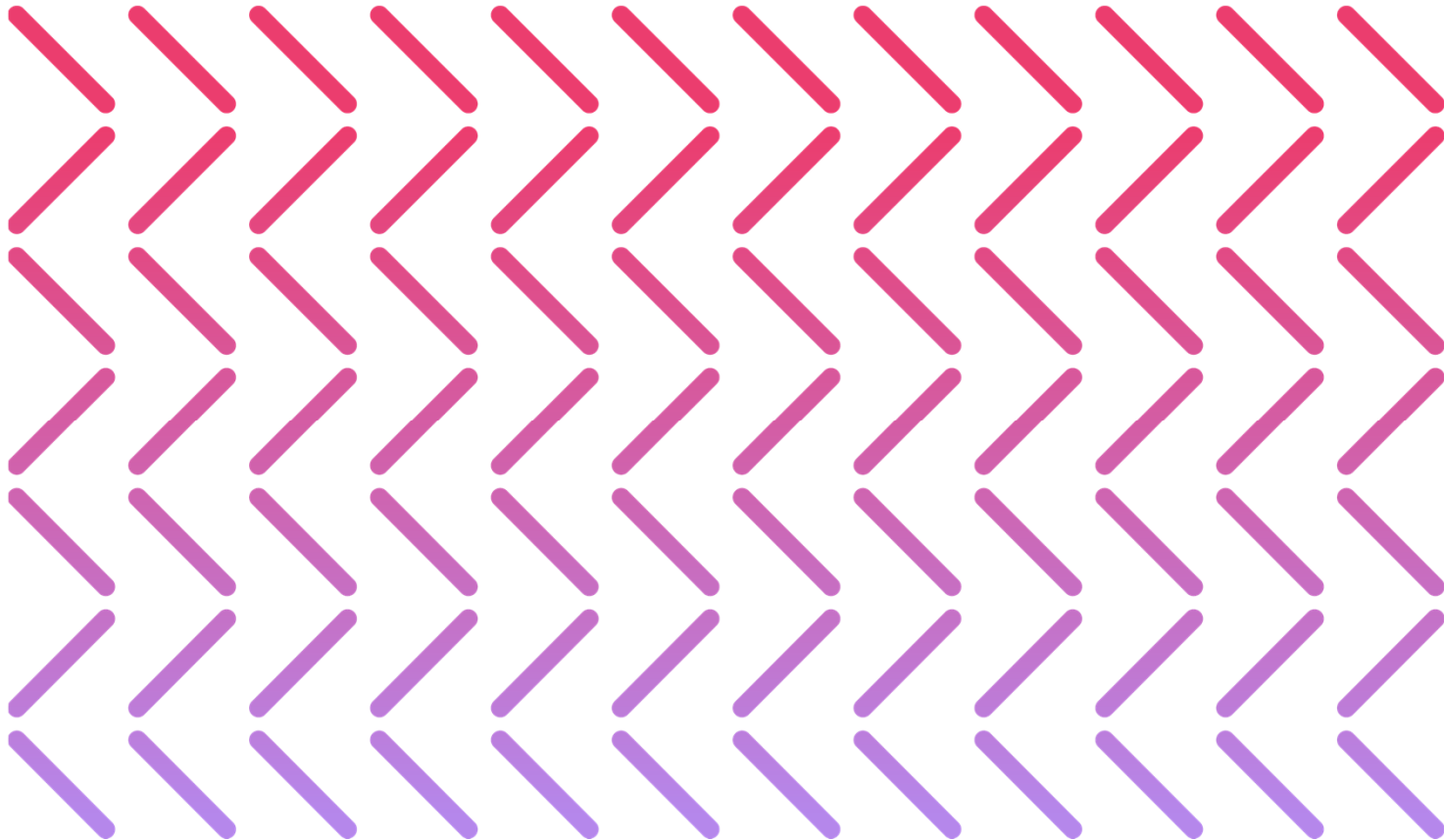
# Engaging with our staff and patients

In developing this strategy, we:

- Drew on messages we heard as part of developing the Trust's overarching five-year strategy, when we engaged with more than 500 staff and patients
- Undertook additional focused staff and public events with around 40 attendees
- Undertook a survey of our staff, receiving over 100 responses

The feedback we received helped shape our plans for the future.

# Where we have come from, and where we are now



# Our staff and patients want us to improve our ICT

A range of public/staff engagement events were held to develop the Trust's clinical strategy, where feedback on ICT was a common theme. Public and staff engagement events have also been held specifically to help develop the digital strategy. Key priorities for our stakeholders included:

## Public

- **Engaging with patients in different ways** (e.g. by text re appointments, or by phone/skype for consultations, one-stop-shop appointments).
- **Enabling clinicians to work together differently** (e.g. accessing patient data from other providers, using skype for MDTs)
- **Infrastructure** (slow computers, patchy WiFi, standardisation across different Trust sites)

## Staff

- **Infrastructure** (aging hardware, WiFi, slow computers)
- **Business intelligence** (improving reporting, use of data for performance, use of data for research)
- **Supporting better/more efficient working:** (electronic systems to track patients, specimens, equipment; electronic systems for prescribing drugs/patient notes; use of tablets/mobile devices; using technology in training); electronic management of clinic rooms/booking
- **Importance of working collaboratively with partners and other trusts** (including on improving/simplifying electronic referral, sharing data,
- **Internal communication** (new intranet)
- **Clinical Systems** (better integration, new ways of communicating with patients e.g. via patient portals, apps)

## ICT staff

- **Infrastructure**
- **New models of care for patients** (e.g. one-stop-shop, use of videoconferencing for patients with long-term conditions)
- **Single open system** – where consultants, GPs have all the patients' clinical history and when patients visit a hospital or GP they can see all the patients' clinical information
- **Supporting staff** (e.g. Working voice recognition, more use of handheld and tablet devices)

# The NHS Long Term Plan envisages ‘digitally-enabled care’

The NHS Long-Term Plan outlines the following key priorities on ‘digitally-enabled care’:

Priority	Detail	SGUH digital strategy therefore needs to...
Empowering people	For instance: the NHS App will create a standard online way for people to access the NHS; women will be able to access their maternity record digitally, support will be given to the development of a range of apps to support particular conditions, patients with long-term conditions will have access to their health record via the NHS app, patients will be able to incorporate information into their own personal health records	<ul style="list-style-type: none"> <li>Support patient empowerment: e.g. enabling patients to access / in some cases change their personal health records, or to manage their conditions through apps</li> </ul>
Supporting health and care professionals	we will ensure that health and care professionals have the tools they need to efficiently deliver safe and effective patient care – e.g. supporting staff to capture health & care information digitally at the point of care.	<ul style="list-style-type: none"> <li>Continue the shift from paper to electronic systems</li> </ul>
Supporting clinical care	for instance, the NHS app and its browser-based equivalent will enable people to follow a simple triage online to help them manage their own health needs or direct them to the appropriate service; patients will have more access to ‘virtual’ GP and outpatient appointments, helping to reduce face-to-face outpatient activity by 30%; and all providers will be expected to advance to a “core level of digitisation” by 2024, covering clinical operational processes across all settings, locations and departments, with robust modern IT infrastructure services for hosting, storage, networks and cyber security).	<ul style="list-style-type: none"> <li>Support the delivery of new models of care – particularly ‘virtual’ outpatient appointments</li> <li>Support the modernisation of IT infrastructure</li> </ul>
Improving population health	for instance, deploying population health management solutions to help Integrated Care Systems understand the areas of greatest health need	<ul style="list-style-type: none"> <li>Support steps taken by the SWL system towards use of population health management solutions</li> </ul>
Improving clinical efficiency and safety	for instance: pathology networks, exploiting the potential of artificial intelligence, leading to quicker test turnaround times and improved access to more complex tests; diagnostic imaging networks enabling the rapid transfer of clinical images from care settings to the relevant specialist to interpret; protecting the NHS from cybercrime	<ul style="list-style-type: none"> <li>Ensure the Trust is well placed to benefit from the quality &amp; efficiency opportunities resulting from new technologies such as AI</li> <li>Ensure the Trust meets national cyber security standards</li> </ul>

# We have ambitious plans for the NHS in South West London

The draft SWL plan submitted to NHSE/I sets out a range of commitments on the use of technology, data and information:

Priority	Examples of actions in SWL plan
1. Creating straightforward <b><u>digital access to services</u></b> ; helping patients/carers managing their health	<ul style="list-style-type: none"><li>• Piloting SWL personal health record, allowing people in SWL to access their own care record – to be rolled out by 2021</li><li>• Create a personal health and care application so that people can manage their hospital appointments by 2021</li></ul>
2. Ensuring <b><u>clinicians can access and interact with patient records</u></b> / care plans wherever they are	<ul style="list-style-type: none"><li>• Use digital technology to transform outpatients, reducing face-to-face visits by a third over 5 years</li><li>• Identify where digital process changes (e.g. machine learning) can improve pathways</li></ul>
3. Making <b><u>data interoperable and accessible</u></b>	<ul style="list-style-type: none"><li>• Deliver and make available whole systems intelligence so that the needs of our entire population can be predicted and met</li><li>• Expand the SWL population health management proof of concept to primary care and our four acute trusts</li></ul>
4. Improving system-wide <b><u>infrastructure</u></b> , processes and roll-out of nationally required digital capabilities	<ul style="list-style-type: none"><li>• Secure investment to improve infrastructure</li><li>• Plan/procure infrastructure as a system rather than individual organisations</li><li>• Create a robust, common technical and application infrastructure, including core hospital electronic patient record systems, across SWL</li></ul>



# The Trust's 5-year strategy relies on digital improvements

7 key implications for the digital strategy from the Trust's 5 year strategy:

Section of SGUH strategy	Digital strategy needs to.....
<p><b>Strong foundations</b></p> <p>(outstanding quality; improved performance; right workforce model, skills &amp; culture; financial improvement; estates improvement)</p>	<ol style="list-style-type: none"> <li>1. Support efforts to improve efficiency</li> <li>2. Support our ambitions on quality / safety (e.g. via interoperable clinical systems)</li> <li>3. Support estates improvement &amp; make the Trust a more attractive place to work (e.g. by enabling flexible / home working)</li> </ol>
<p><b>Excellent local services</b></p> <p>(planned care that fits around patients' lives, using latest technology; more same day emergency care)</p>	<ol style="list-style-type: none"> <li>4. Enable the Trust to deliver new models of care, built around patients' lives (e.g. virtual consultations)</li> </ol>
<p><b>Closer collaboration</b></p> <p>(work with partners to deliver care closer to home; work with DGHs to rebalance specialist/DGH work across SWL; work with partners to meet needs of ageing population)</p>	<ol style="list-style-type: none"> <li>5. Enable closer collaboration with the wider health system (e.g. through appropriate sharing of patient information, work via the Acute Provider Collaborative joint IM&amp;T projects)</li> </ol>
<p><b>Leading specialist healthcare</b></p> <p>(main provider of specialist services for our region, including as MTC; major centre for cancer, paediatrics and neurosciences; pursue commercial opportunities; innovation, research &amp; training)</p>	<ol style="list-style-type: none"> <li>6. Support the appropriate sharing of information across our specialist networks (e.g. with Surrey and Sussex for tertiary services; with the RMP Cancer Alliance for cancer)</li> <li>7. Support the Trust's research output (e.g. by enabling researchers to access appropriate patient data)</li> </ol>

# The Trust's plans in a range of other areas also rely on digital improvement

The Trust is currently developing a range of corporate strategies which also need to be reflected in our digital strategy:

Strategy	Key implications for digital strategy
Research	<ul style="list-style-type: none"><li>• Commits to rebuilding the datawarehouse in a way that makes it a resource for researchers</li></ul>
Workforce	<ul style="list-style-type: none"><li>• Commits to building an environment more conducive to flexible working</li></ul>
Quality	<ul style="list-style-type: none"><li>• Commits to better use of data and electronic systems to improve quality of care</li></ul>
Education	<ul style="list-style-type: none"><li>• Commits to providing education in innovative ways, including through better use of technology</li></ul>
Outpatients	<ul style="list-style-type: none"><li>• Involves a 'menu' of changes to outpatient services (e.g. self-care, improved referrals, enhanced virtual triage, phone clinics) designed to deliver vs the national ambition to reduce face-to-face attendances by 33%. Each item of this menu could require different levels of ICT support.</li></ul>

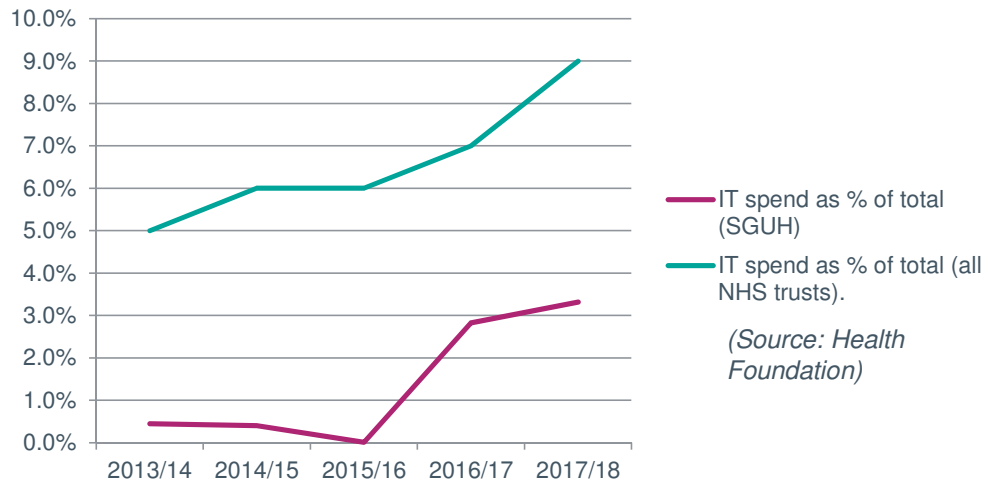
# But historically, we have invested less in ICT than our peers

Information technology is playing an increasingly important role in healthcare worldwide.

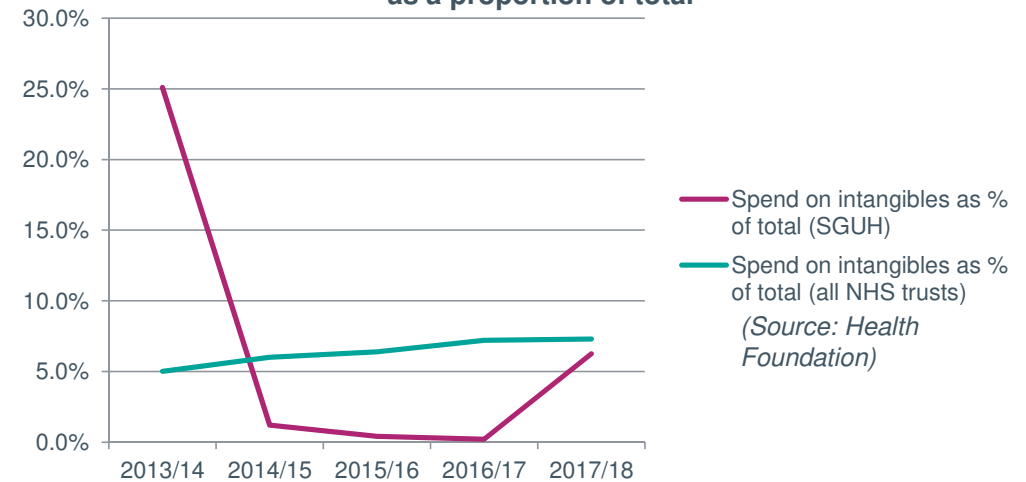
In the UK, NHS trusts are reflecting this in their spending despite a challenging financial environment. In the last decade, UK capital spending in healthcare has been below the OECD average, falling as a percentage of GDP, and NHS trusts have seen significant fluctuation in capital budgets. Despite those relatively low levels of funding and significant fluctuation, capital spending on IT and intangible assets (mostly software licenses) has steadily grown.

At St George's, in recent years spending on IT has been below average, and spend on intangible assets has been 'feast or famine', as the graphs below illustrate. In 18/19 the Trust reversed some of these trends and c. 17% of capital additions were on IT and 6% on intangibles.

**Capital additions on IT as a proportion of total**



**Capital additions on intangibles as a proportion of total**



# We face a range of strengths, weaknesses, opportunities & threats – which drive where we go next

## Strengths

- **Staff capability / capacity:** having moved away from heavily outsourced approach, growing capability/capacity in IT department
- **Range of newly installed systems:** e.g. shift from paper to electronic systems in inpatient & some outpatient areas; establishment of SWL Health Information Exchange. Benefits are likely to be felt over course of coming five years as these systems are embedded.

## Opportunities

- **South West London-wide working:** e.g. opportunities to enable clinicians across SWL to access relevant patient data from other providers; opportunities from economies of scale (joint procurement; SWL-wide approach to information management); population health management approaches
- **New ways of interacting with patients:** e.g. consultations between patients and clinicians by video, greater use of mobile devices, use of apps to help patients manage their own health, with significant quality and financial benefits.
- **New ways of working:** e.g. greater use of virtual MDTs, use of machine learning, technology to enable home working, voice recognition: with significant quality, financial, estates and workforce benefits.

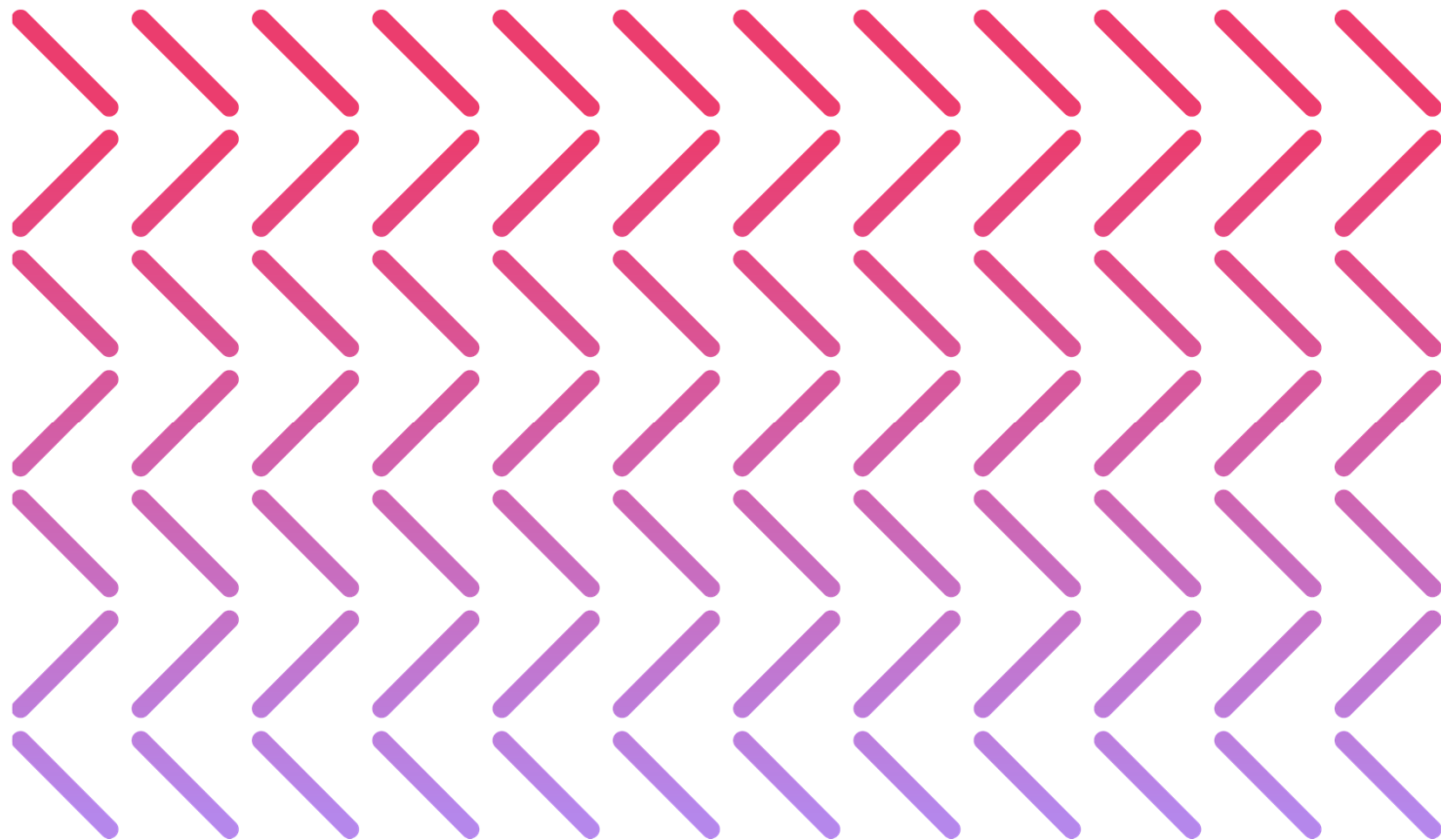
## Weaknesses

- **Capability/capacity:** Trust recently moved away from heavily outsourced approach; still building right mix of capability/capacity in IT department. Trust not 'informatics/IT-savvy' as an organisation
- **Infrastructure:** ageing infrastructure, sometimes no longer supported, with limited capacity
- **Clinical systems:** raft of specialist systems are not interoperable, leading to inefficiencies and safety risks
- **Non-clinical systems:** email system has limited capacity and is not secure. Full functionality of Microsoft Office not being used. Systems used by corporate teams (HR, finance, estates etc) often old & unsupported, do not support SWL-wide working, and do not interact with clinical systems.
- **Communications & telephony:** limited virtual MDT working, and fragmented use of apps for communication between clinicians. Ownership of/responsibility for equipment unclear. Old switchboard system with high risk to business continuity. Old intranet.
- **Data collection / information management:** data collection still partly paper-based. IM primarily focused on monitoring 'what has happened internally' rather than future /benchmarking vs others. Reactive approach to data quality, often responding to commissioner challenge. Datawarehouse not built to deal with volume of data now available and does not link to database in real time.
- **Access to capital:** likely to be a key constraining factor in coming years
- **Resilience:** related to ageing infrastructure and switchboard system.

## Threats

- **Cyber security:** a key national concern and the biggest growth area in criminal activity.
- **Tertiary networks:** risk that if the Trust's systems do not support appropriate sharing of information/referrals with tertiary networks (Surrey, Sussex, Cancer Alliance) that work could come under threat

# Where we go next



# Our vision for 2024 is for staff and patients to have access to the digital technology and information they need, when and where they need it.

To deliver on that vision, we will pursue three strategic priorities:

## 1. Robust infrastructure

- We will upgrade our IT infrastructure and telephony systems
- We will upgrade and renew the systems that underpin clinical and non-clinical work within the Trust, and ensure the different systems we use increasingly operate as one
- We will strengthen our systems and processes for cyber-security

## 2. New models of care for our patients

- We will use information technology to interact with our patients differently (phone, online, video), sparing them trips to hospital wherever possible
- Our approach to business intelligence will be proactive, outward-looking, and focused on enabling future improvement of our services

## 3. New ways of working for our staff

- We will enable our clinicians to access the information they need from other NHS providers at the point of contact with a patient
- We will complete the shift from paper-based to efficient and effective electronic clinical systems
- We will enable our staff to do more work remotely
- We will use the latest technology and systems to help staff work efficiently and effectively – including making use of big data and AI

# We will make our infrastructure more robust

When we surveyed staff on their key priorities as part of developing this strategy, the top priority was seen as upgrading our IT infrastructure (e.g. network, VDI capacity, WiFi, Computers). Cyber crime is a national priority, and all NHS organisations will be required to undertake a range of measures to protect themselves against this growing threat.

Building a robust IT infrastructure is therefore one of our key strategic priorities, and one that will enable our other ambitions to deliver new models of care for our patients, and support new ways of working for our staff.

## Objectives

We will upgrade our IT infrastructure and telephony systems

We will upgrade and renew the systems that underpin clinical and non-clinical work within the Trust, and ensure the different systems we use increasingly operate as one

We will strengthen our systems and processes for cyber-security

## Key deliverables

- virtual desktop infrastructure (VDI) upgrade,
- Replacing network to be fit for the future
- data centre upgrade,
- conversion of most telephony to voice over internet
- new staff intranet.
- Improved use of digital platforms in education/training

- New electronic systems in specialties such as maternity and theatres
- Update/replacement of key non-clinical systems (e.g. Windows 10, Office 365).

- Implementation of secure email
- Implementation of 'demilitarised zone'

# We will enable new models of care for our patients

Strong information management is an essential foundation to the Trust's desire to improve the care we offer our patients. Access to linked and searchable clinical, radiological and pathological datasets is also a key enabler to the Trust's desire to develop new treatments via research, as set out in the Trust's 2019-24 research strategy.

Better use of information technology will also underpin our ability to interact with our patients differently, particularly for outpatient consultations. This is a key priority nationally, for our local commissioners and for the Trust itself, and has been a consistent part of the feedback from our staff and public engagement.

## Objectives

Our approach to business intelligence will be proactive, outward-looking, and focused on enabling future improvement of our services

We will use information technology to interact with our patients differently (phone, online, video), sparing them trips to hospital wherever possible

## Key deliverables

- Re-build of data warehouse, including to enable better use of data by researchers across the Trust
- Build capability/capacity for more proactive approach to information management
- Specialty-level development of iClip to enable more virtual outpatient clinics / fewer face-to-face attendances, starting with some prioritised specialties in 20/21
- Development of 'patient portal', enabling patients to access and amend their health records



# We will enable new ways of working for our staff

ICT has a major impact on the working lives of our staff – causing frustration at its worst, and improving staff experience and productivity at its best.

Improving our infrastructure will have a significant impact here, with staff able to use faster, more responsive and more integrated ICT. But above and beyond that, we also want to make it easier for our clinicians to work across sites and organisational boundaries, and to make use of the latest technology.

## Objectives

We will enable our clinicians to access the information they need from other NHS providers at the point of contact with a patient

We will enable our staff to do more work remotely

We will use the latest technology and systems to help staff work efficiently and effectively – including making use of big data and AI

We will complete the shift from paper-based to efficient and effective electronic clinical systems

## Key deliverables

- Optimise use of Health Information Exchange
- Interoperable clinical systems with key partners across South West London / specialist networks

- Embed tools that enable virtual/cross-site/home working (e.g. document sharing, videoconferencing), to support the Trust's workforce strategy

- iClip optimisation to support Trust quality priorities (e.g. deteriorating patients)
- Support assessment and introduction of diagnostic AI where appropriate
- Develop & deliver effective training via multiple platforms

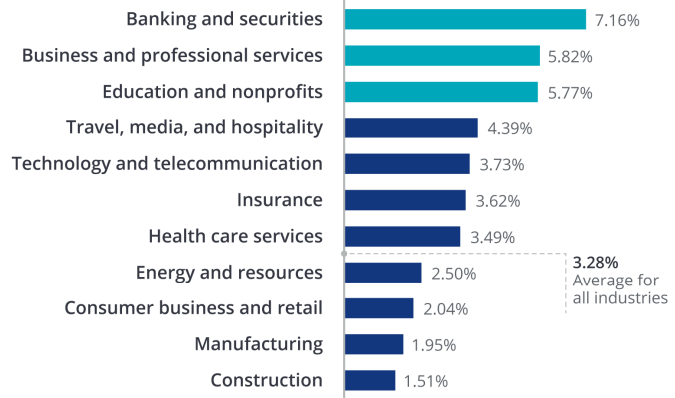
- Roll-out of iClip across outpatient services
- Optimising inpatient systems to reduce use of paper

# To deliver this strategy, we will aspire to invest 4% of turnover in ICT each year

Historically, St George’s has tended to invest between 2% and 3% of its turnover on ICT. This has often been below average for NHS trusts, and below average for the health care industry. It has also followed a pattern of ‘feast or famine’, with high spending one year followed by low spend the next, making it hard to plan. We now face the challenge of gaining lost ground as a result of historic underinvestment, as well as investing to deliver our ambitions for the future.

The amount we spend on ICT is not entirely within our control, as capital spending is partly dependent on national decision-making. That said, over 2020-24 our planning assumption is that we need to invest 4% of turnover on ICT, and we will work with our system partners to seek to deliver that.

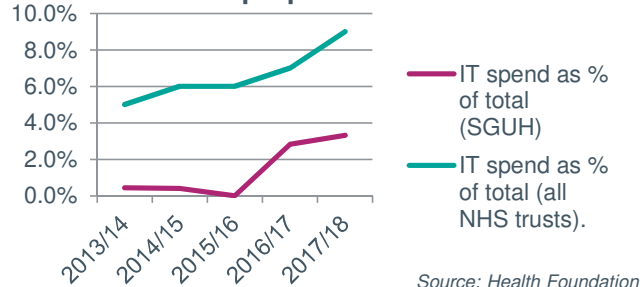
Figure 1. IT budget as a percentage of revenue



Source: Deloitte 2016–2017 Global CIO Survey, N=747.

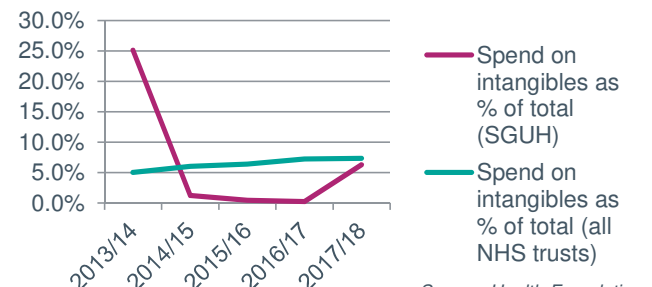
Deloitte Insights | deloitte.com/insights

Capital additions on IT as a proportion of total



Source: Health Foundation

Capital additions on intangibles as a proportion of total



Source: Health Foundation



# We will pursue a collaborative approach where it delivers demonstrable value

St George's faces a range of significant ICT-related challenges and risks, many of them particular to us as a Trust, and requiring us to seek solutions at maximum possible speed. In these instances we are likely to need to pursue individual solutions, rather than seeking to collaborate with other NHS organisations whose priorities and need to act at pace may be different.

However, elsewhere we will seek to deliver elements of this strategy in collaboration with our partners, particularly via the South West London Acute Provider Collaborative (APC). Our collaborative effort will particularly focus on our strategic objective to enable our clinicians to access the information they need from other NHS providers at the point of contact with a patient.

For instance:

- We will continue collaborating with other Trusts on the Health Information Exchange, enabling clinicians in one provider to access relevant patient data from another
- As we continue the shift from paper-based to electronic, and upgrade our existing systems, we will work with other providers to maximise interoperability between our clinical systems
- We will jointly procure new technology/systems where appropriate (e.g. building the Acute Provider Collaborative's joint procurement of a picture archiving and communication system or PACS in radiology)

# We will ensure appropriate central oversight of ICT

The Trust's 9,000 staff use hundreds of clinical and non-clinical systems, and hundreds of PCs and other devices.

We want our staff to be able to adopt new systems and equipment, but we also need to ensure that any new systems are interoperable, and that any new systems or equipment can be appropriately maintained, developed and protected in terms of cyber security.

We will therefore adopt clear corporate standards, policies, supportive pathways for innovation and governance structures that give individual services the flexibility to be innovative and adopt new technology, whilst ensuring interoperability and capacity for maintenance across the Trust.

Management of any such new assets will therefore sit with corporate ICT, and there will be a centrally-driven programme of gradually ensuring all existing systems are interoperable (which may include some services being required to move to a new system).

# We will drive forward implementation of this strategy through the annual planning process

Work is already underway to deliver some of the objectives set out in this strategy.

Each year, an implementation plan will be produced to set out actions to deliver on the ambitions set out in this strategy, and reflected in the Trust's annual business plan – for instance via corporate objectives, and the annual capital plan.

The Information Governance Group, Trust Executive Committee, and Finance and Investment Committee will track progress against the strategy on a quarterly basis. Finance and Investment Committee will regularly provide assurance to Trust Board that appropriate progress is being made.

Whilst the action set out here will reduce a range of risks that the Trust currently faces (e.g. in relation to running multiple clinical systems that are not interoperable), the scale and complexity of those risks mean that they will not be eliminated overnight. The Trust will need to continue managing IT-related risks via its established risk management processes and governance.

Delivering our ambitions will also require different ways of working and culture change within the organisation, and we will build provision for that into our approach to project implementation.

After two years, given the rapidly changing external environment, we will review this strategy and consider whether it requires a refresh.