2017-18
Annual Report and Accounts

NHS Digital

Information and technology for better health and care

Health and Social Care Information Centre (HSCIC) Annual Report and Accounts 2017-18.

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Chairman's foreword

Two years ago, we began transforming NHS Digital into a modern services provider that delivers for patients, citizens and the health and care workforce.

Over the past 12 months, we have strengthened our leadership team with the appointment of Sarah Wilkinson as Chief Executive, who brings to our organisation two decades of experience of running large IT organisations in complex service industries.

We have also restructured NHS Digital to put a sharper focus on delivering a complex digital transformation programme in the NHS and social care, on improving our data services and on maintaining highly resilient live services and infrastructure.

We have challenged our own culture and behaviours to ensure that our customer service standards, and our organisational agility to respond to a rapidly changing technological and healthcare environment, are at the heart of everything we do.

Our task is not only to build and run excellent digital products and services; it is also to nurture the partnerships that magnify the impact of these technologies. We are working with our NHS partners to align closely with front line needs and to ensure the technology we build is adopted quickly, safely and effectively and the full benefits for patients are achieved.

In the last year, we played our part, too, in the development of the Government's Life Sciences Industrial Strategy and we fully support its focus on the decisive role the NHS must play in keeping the UK at the forefront of life sciences research.

Our data services are being modernised to ensure we continue to provide the secure flows of rich and connected data that will power the huge strides the NHS needs to take in innovation and research.

Small and medium-sized enterprises (SMEs) have also been central to many of the new capabilities we have implemented across our IT estate and to helping us become an innovative, learning organisation. The new NHS Apps Library provides a trusted environment for the public to access and adopt emerging digital health solutions. Our new online Buying Catalogue for Primary Care, to be launched in 'beta' format in December, will allow customers to browse and buy GP IT services online, thereby increasing competition and lowering barriers to entry. Our new Supplier Information Exchange will give SME's better information about how to partner with us and make it easier for them to deal with our procurement processes.

Data security will always be a primary consideration for the public, patients and the NHS. We welcomed the recommendations of the National Audit Office and the Health and Social Care Chief Information Officer on the WannaCry incident and took quick action to improve NHS Digital's cyber capabilities and strengthen data security guidance, training and support for organisations across the system.

Maintaining trust in the security of the data we hold on behalf of the public is an absolute priority for everyone who works in NHS Digital.

Looking forward, it is equally important that we maintain the resilience of the national infrastructure on which patients and clinicians depend for so many digital services. We are constantly examining ways to modernise how we source our capabilities and design new services so we can meet the new demands placed on the NHS.

Over the next 12 months, we will roll out improved apps and online services for the public, better decision support tools for clinicians and faster and more useful data services for those who plan and manage the NHS.

In the NHS's 70th year, we are just beginning to grasp the huge potential of the rapid advances we are seeing in areas like artificial intelligence, the Internet of Things, life sciences research and data analytics to change the way we provide health and care services.

I am hugely proud of NHS Digital's role in helping our sector unlock our digital future and truly grateful to all 3,000 people in NHS Digital who have worked so hard to make that digital future a reality.

The achievements outlined in this annual report are testament to their efforts and commitment.

Noel Gordon
Chairman
NHS Digital

Chief Executive's introduction

We in NHS Digital care passionately about the NHS and social care services in the UK and are completely committed to our mission to provide the digital, data and technology 'rail track' for the health and care system.

As we approach the 70th Anniversary of the NHS, the challenges of an ageing society, the increasing prevalence of individuals with multiple chronic conditions and the increase in complex conditions such as dementia and obesity are placing huge pressures on the system. Whilst the primary response to these pressures will come through an increase in doctors, nurses and clinical support staff, it is also critical that we enable these brilliant professionals to work as efficiently as possible.

Good data on patients, connected across primary, secondary and social care; timely and relevant insights derived from treatment histories and research data; reliable and performant core IT systems; and impeccably resilient national systems infrastructure are all critical to that efficiency. It is NHS Digital's purpose and objective to deliver these.

Our Data Services Platform is our strategic facility for securing, integrating and enabling access to data for research communities and partner organisations responsible for managing the health and care system, where they have a legal basis for that use.

Deepening the richness and the connectedness of the data available to these users, incorporating new data sets such as omics data and patient-generated data from wearables and personal monitors, increasing the sophistication and robustness of the analytical frameworks used to investigate this data, and expanding the services provided to research teams, are all key to facilitating the enormous potential of the data within the system.

The NHS holds an extraordinary and internationally incomparable data set: nowhere else are there such rich longitudinal data descriptors for the health of such a large population within a single system. It is unquestionably true that this data can generate insights that can save lives, as well as improving individual care, speeding-up diagnosis and enabling efficient planning of services.

We agree with the National Data Guardian that individuals must, however, have complete authority as to whether their data is used in these ways, and we have therefore delivered the nhs.uk/your-nhs-data-matters service, which allows individuals to register whether they wish to opt in or out of their data being used.

We are the primary provider of independent statistical analysis for the health and care system. This year we produced 275 statistical publications, including long-established datasets on topics from population trends to service performance results, and new experimental statistics in areas such as mental health.

We also responded to public debate and the specific needs of our users by providing clarifying data and bespoke analysis where required.

NHS Digital's statistics are developed entirely independently from government. We are accountable to the Office for Statistics Regulation for the trustworthiness, quality and value of our statistics and our guiding principle is to develop statistics that meet the needs of our broad user community, whose requirements and feedback we seek on a regular basis.

We welcome the GDPR era and the rigour it mandates in the handling and use of data. We were diligent in our preparation for the new regime and, through our website's Register of Data Processing Activities, are fully transparent about all of the information assets under our control that contain personal data, and the rights of citizens to understand, access, amend or influence the handling of that data.

We have delivered many new and enhanced digital and technology systems and services this year, many of which are highlighted on the following pages and therefore not repeated here. We gave particular attention to the changes that we knew would improve the system's resilience during the critical winter months and intend to do the same this year. To this end, we improved the link between NHS 111 providers and NHS services, allowing more direct bookings of patients into urgent care treatment centres and GP out-of-hours provision, and piloted direct prescribing by NHS 111 handlers. We also made improvements to the usability of the Summary Care Record system, rolled-out Electronic Repeat Dispensing, and increased access for community pharmacy to key systems like NHSmail and the Summary Care Record. New data, including patient-level analysis of the use of services, and daily situation reporting to NHS England and Public Health England, have given us a much better evidence base for increasing system resilience in the future.

Throughout the year, we continued to operate our Live IT services and infrastructure with exceptionally high levels of availability and performance, as detailed in the Live Services section of this report.

We came through the WannaCry ransomware attack in May without national systems being compromised, but more alert than ever to the areas of fragility in local systems across the health and care network. We continue to extend the capabilities of our Cyber Security Operations Centre and work to make our systems, services and expertise increasingly available to the system at large, so that we can partner more closely with organisations in their local remediation and resilience programs.

The pace and intensity of our work will increase in 2018-19, in line with escalating demand, an incredible era of innovation and opportunity in healthcare technology and the increasing cost and risk associated with digital, data and technology obsolescence in many parts of the system.

The demand is not simply for more, but for but new types of service requiring new skills and new approaches, and for services available to a much broader population of users, delivered faster and aligned with citizens' everyday experience of commodity digital services.

As an organisation we will adapt and modernise to meet these new challenges. We have established a dedicated program to drive organisational transformation during the coming year, with the goal of introducing new capabilities, new delivery models increasingly integrated with external partners and providers, and new ways of working. The year ahead will be challenging and exciting in equal measure.

We stand ready for this challenge. In the critical years immediately ahead of us, NHS Digital will provide strong strategic leadership in planning and designing the digitisation of health and care services, will maintain our world-class engineering capability, will strengthen our expertise in data management and data science and will deliver outstanding products and services for health and care. We will continue to build productive relationships with the rich and fast-growing market in healthcare technology. Above all, we will remain completely focused on the needs of citizens, patients, clinicians, researchers and colleagues in the health and care system and will measure our success through their eyes.

Huge thanks for enabling our work and the benefits it has delivered throughout 2017-18 go to our Board, to NHS Digital's dedicated staff and to all our colleagues across the system.

Sarah Wilkinson
Chief Executive
NHS Digital

Overview

NHS Digital is the national information and technology partner for the health and care system.

We provide leadership in planning and designing digital services and we apply world-class engineering talent to developing outstanding products that improve the lives of the public and help professionals to provide better care.

We work closely with the rich and fast-growing market in healthcare technology to nurture innovation and we maintain the infrastructure services that are not only critical to effective healthcare delivery today but are the bedrock of the improved services now being developed.

We are working to improve the accessibility, quality and timeliness of information and analysis available to clinicians and system managers, but also to ensure the public's information is kept securely, used appropriately and made available to patients themselves so they can manage their own health and care.

We manage many of the nation's critical health and care data assets and are responsible for using that information to continuously generate clear and actionable insights that help our partners manage the system, commission better services, understand public health trends better, improve treatment and delivery and drive growth in the UK's research, medical technology and life sciences sectors.

Our work is about empowering the public, helping professionals and producing information that improves treatment and makes taxpayers' money go further.

Our partners

We depend on partnerships across the health and care system to deliver our work. Key partners and stakeholders include:

Department of Health and Social Care	NHS England	NHS Improvement
Care Quality Commission	NHS Business Services Authority	Local Government Association
Health Education England	Genomics England	Healthcare UK
British Medical Association	Medical royal colleges	National Data Guardian
Information Commissioner's Office	Public Health England	Health Data Research UK

Named senior leaders are responsible for aligning our work with the priorities and delivery plans of these organisations.

Across our portfolio, we also work closely with other partners including: the National Cyber Security Centre; National Institute for Clinical Excellence; Office for Life Sciences; Crown Commercial Services; HM Treasury; Government Digital Services; Infrastructure and Projects Authority; Medicines Healthcare Regulatory Authority; Innovate UK; and Healthcare UK.

Many third parties are critical to the delivery of our portfolio. These include: policy organisations (including The King's Fund, The Health Foundation and The Nuffield Trust); industry and supplier representative bodies (including TechUK); national bodies (including the NHS Confederation); NHS Providers; NHS Clinical Commissioners; the Association of Directors of Adult Social Services; the Professional Records Standards Body; SNOMED International; and INTEROPen.

Supporting local organisations

Ultimately, our purpose is to support the digital, data and technology needs of the health and care system. We measure our success based on the impact we have, as assessed by recipients of our systems and services including:

- local NHS organisations (including trusts, GP practices, pharmacies, community care providers, and sustainability and transformation partnerships)
- local authorities, including their social care and public health functions
- research, academic, life sciences and business intelligence organisations

Our Product Development directorate is organised to align with stakeholders in specific sectors: citizen technology; primary and social care; acute, ambulance and mental health services; and medicines and pharmacy.

This structure helps develop cross-sector perspective and a more connected approach.

We are applying a 'product lifecycle management approach' that makes each function responsible for supporting the full portfolio of products we provide, for each client group, throughout all stages of the product lifecycle – from products still in concept stage through to those that have been live for many years. IT organisations can lose focus on products when they are not the subject of current change programmes. At NHS Digital, we understand that products are critical throughout their lifecycles for our clients across health and care.

Our Implementation and Business Change function has changed the way we work with local partners and how we understand their needs. Traditionally, we supported service implementation and uptake at the individual programme level.

We now have a dedicated team, working alongside regional NHS England and NHS Improvement colleagues, focused on supporting local implementation of our full range of products and services.

National strategy

We are part of the collective effort by NHS and social care organisations to use data and digital technology to improve the quality, accountability, responsiveness and efficiency of services.

The NHS's 'Five Year Forward View' strategy and the National Information Board's 'Personalised Health and Care 2020' technology strategy, published in 2014, provide the strategic framework for digital transformation. Together, they lay out a compelling vision of the use of digital technology to transform the quality, responsiveness, efficiency, and reach of services, while allowing citizens to take much more control. These objectives inform all of our relationships with partners across the health and care system.

We are working closely with NHS Improvement (NHSI) to help local health systems to be more efficient and improve patient care. Our data is vital to NHSI's Model Hospital capability and to reducing the variation in performance between NHS acute hospitals, highlighted by Lord Carter's review. Patient Level Information Costing Systems (PLICS)

are giving NHSI the intelligence it needs to test new standards before implementation and we are also working together on the Trust System Support Model (TSSM), which supports providers with challenging rollouts of major capabilities.

Timely and accurate data also plays a critical role in the Care Quality Commission's (CQC's) regulation of health and social care. NHS Digital and CQC have a data-sharing agreement to allow monthly flows of data. This supports the regulation and review process, helping the CQC to conduct targeted inspections as well as in-depth reviews, like the annual 'State of Care' report. We are also collaborating on aligning the CQC's inspection processes with key digital priorities including cyber security and improving adoption of services such as Child Protection – Information Sharing.

Public Health England (PHE) is a major partner in commissioning health survey data and we co-operate closely in the public health campaigns built on that information, using channels such as NHS Choices, NHS.UK, and the NHS Apps Library. We are working together to improve access to data and predictive analysis for public health staff and to transfer PHE data collections to our Data, Insights and Statistics function.

Our collaboration with Health Education England (HEE) is centred around providing workforce data and joint working on programmes to address digital inequalities and develop the digital skills of the health and social care workforce.

Implementing the NHS Five Year Forward View

In 2017-18, we worked with the Department of Health and Social Care, NHS England, and our partners on the Digital Delivery Board to sharpen the definition and governance of the cross-system Digital Transformation Portfolio. The 10 domains of delivery outlined in 2016 have been reorganised into five areas of work focused on specific outcomes for the public and health and care professionals.

NHS Digital is the lead national delivery partner for this work and our product development, data, infrastructure, live services and cyber security functions are critical to success.

We are:

- empowering patients to maintain their own health, manage their illness or recovery, and interact with the NHS in a way that improves convenience and effectiveness
- supporting clinicians in delivering high quality care by giving them great communications, secure access to information about their patients and cutting-edge decision support and monitoring tools
- integrating services across health and care so that patients can maintain their health and their independence during illness and so that care professionals can identify and monitor problems
- managing the health system in a way that minimises the burden of data collection, brings together the data necessary for quality improvement and cost reduction, and creates a single source of truth to improve forecasting, modelling and planning
- creating the future by making the NHS and social care system a world leader in the use of machine learning, in data driven clinical research, in the life sciences and in genomics and its integration with healthcare

Our teams are also building the infrastructure and technical environment that supports these five areas of delivery. We are providing a secure network infrastructure, a fully interoperable IT environment (allowing systems to link together), an identity system that allows patients to access their records and services securely and easily, and a trusted and accessible app ecosystem.

A new organisational structure

In 2017-18, we overhauled NHS Digital's organisational structure to allow us to meet our commitments to the health and care system.

Our programmes, services and corporate functions are now grouped together into seven directorates, which provide clearer lines of accountability, more integrated delivery and a strategic perspective on what our customers and the health and care system require.

Corporate Services

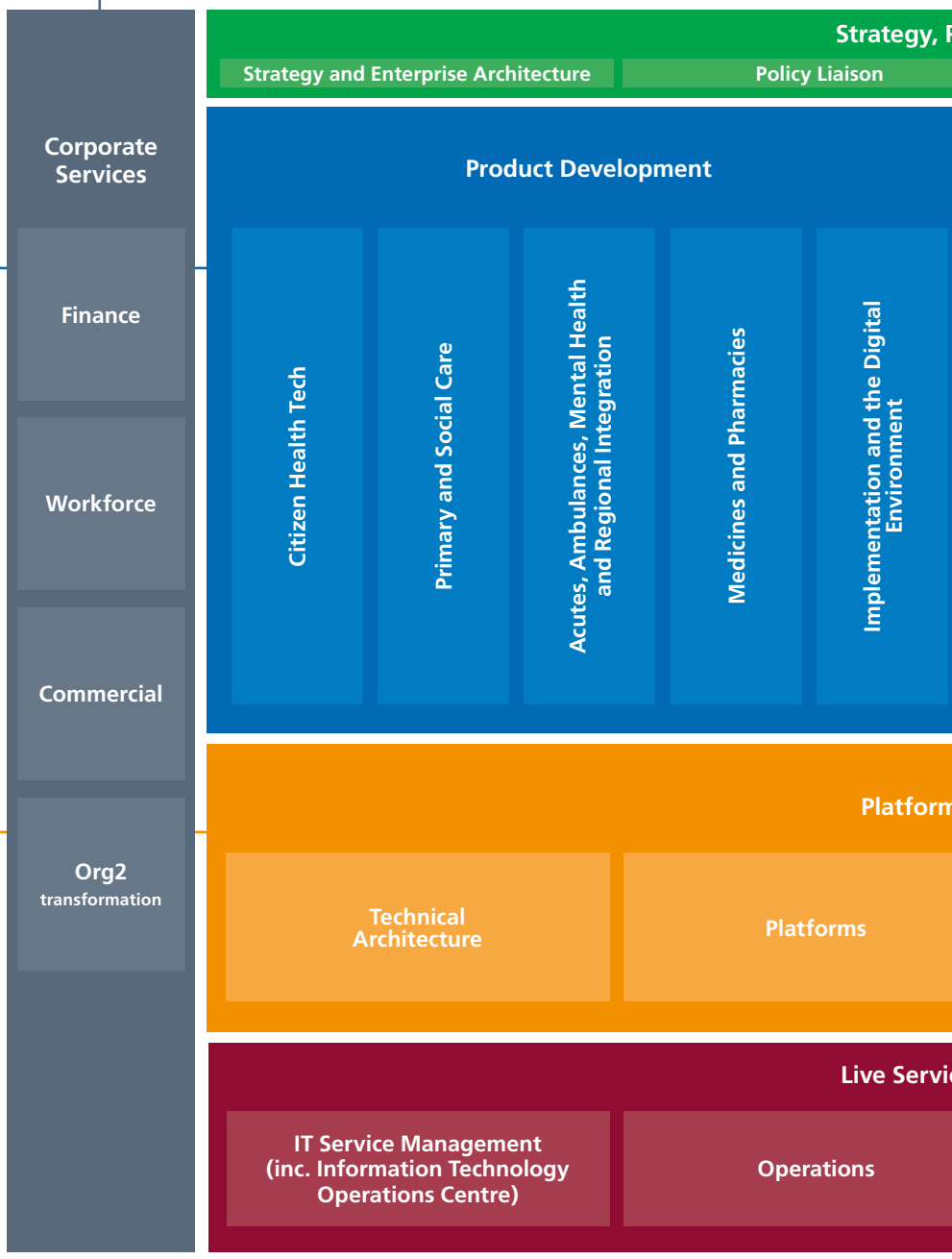
Includes our financial, commercial, people and workforce functions. It is responsible for delivering the improvement programme Org2 over the next two years.

Product Development

Designs and builds the new applications and services that make a difference for the public and improve health and care services. The directorate works closely with the healthcare technology market and is structured to align directly with stakeholders in key areas: in citizen technology; primary and social care; acute, ambulance and mental health services; and pharmacy.

Platforms and Infrastructure

Develops the mission-critical IT infrastructure of the NHS and social care system. Our teams are building new platforms to support NHS Digital's data management and product development and facilitating cloud usage, identity and access management, and a fully interoperable IT infrastructure that provides more flexibility for providers and developers.

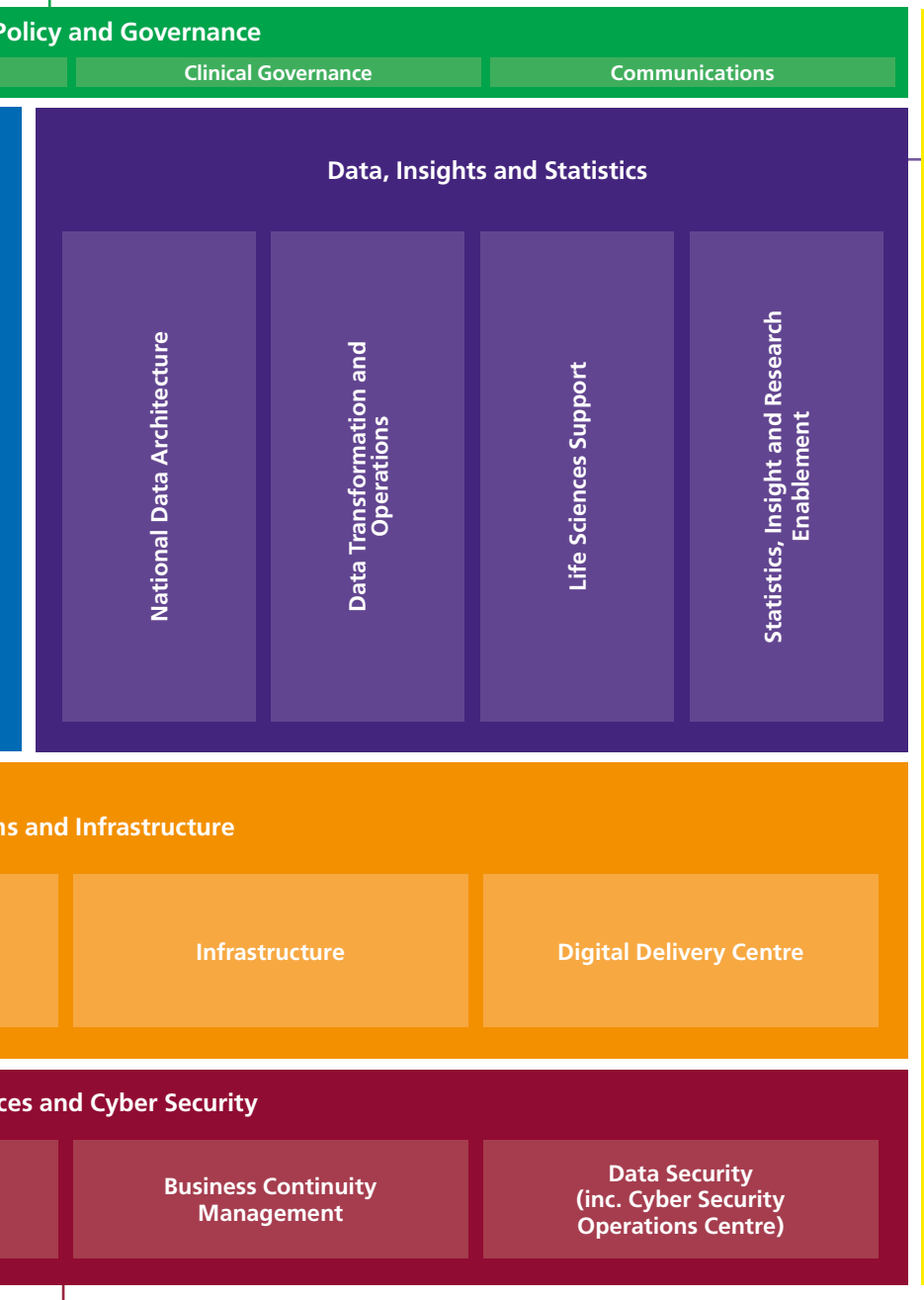


Strategy, Policy and Governance

Defines our strategic agenda based on the needs of our customers and the political, technical, government and market environment. It provides clinical and information governance guidance and oversight and works with the Department of Health and Social Care and our national and local partners to shape our policies and governance.

Assurance and Risk Management

Ensures all our work is quality-assessed and assured from business and technical perspective. The team monitors, evaluates and reports on programme and service delivery as well as all aspects of operational risk and mitigation planning, working closely with internal and external audit functions and our board's Assurance and Risk Committee.



Data, Insights and Statistics

Fulfils our role as the data custodian for the health and care system and our responsibility to support healthcare research and improve the information available to clinicians and system leaders.

Live Services and Cyber Security

Responsible for the reliable, secure and effective operation of all live systems that we operate for the health and care system, including core services like e-referrals, electronic prescriptions, NHSmail and cancer screening. The directorate fulfills our responsibilities as the national lead on cyber security for the health and care system.

Our directorates

1. Product Development

Product Development designs and builds the new applications and services that improve health and care services and give the public more information and control.

Key area

Citizen Health Technology

A new generation of digital technologies is revolutionising how we look after our health and wellbeing.

In the future – and for many people this is already a reality – apps and online services will be as normal a part of condition management as a box of pills. Instead of locking patient records away in filing systems, we want individuals not only to have access to but to start to play a central role in managing records to inform their health and care.

In 2017-18, we took important steps in harnessing the potential of these technologies.

Our **Citizen Identity programme** is the linchpin: aiming to provide a single, secure identity for each member of the public to access digital services. It is critical that the programme gets the right combination of ease of use across the system and absolute protection for individual privacy. Over the past year, prototypes of the new service have been tested with over 100 patients in user research sessions and two candidate services have been tested with external NHS organisations.

The transformation of NHS Choices to NHS.UK aims to put citizens in the driving seat of their own health and care by putting the information they need to make good decisions at their fingertips and giving them new tools to manage their use of services.

We unveiled the 'beta' version of the **NHS.UK website** in 2017. It has already received more than 26 million visits.

We have introduced an A to Z directory of medicines and links to pharmacy and GP appointment booking services are more clearly signposted, creating a smoother path from a patient's information search to user-friendly online booking.

NHS Choices continues to be immensely popular, registering 525 million visits in 2017. About 330 million of those visits were from people using their mobile phones.

The **NHS Apps Library** was launched in April 2017 and now hosts 45 apps that have been assessed and approved by NHS Digital. From September, this included services allowing people to manage GP appointments and repeat prescriptions online.

We worked with more than 350 developers in the year to get apps onto the library. In September we launched a dedicated 'mHealth developer platform' to make it easier for app designers to navigate the assessment process.

The idea of **Personal Health Records** is that they don't just store information in new ways, they empower patients to manage their health and care more effectively. Individuals are able to maintain their personal health record and add information to it, while accessing new tools for interacting and transacting with services.

In September, we took a significant step in this direction by piloting a capability allowing patients to access their existing Patient Online GP systems and download their GP record through their NHS.UK account.

The full **NHS 111 Online** service, providing digital access to NHS 111's advice and triage for patients with urgent medical concerns, is due for launch in December 2018. Four pilots in Leeds, Suffolk, West Midlands and North London have been completed and the technology has been tested in more than 25,000 individual triage processes.

Did you know?

NHS Pathways helped handle **11.8 million** 111 calls in 2017

The Leeds pilot, which was delivered by NHS Digital's in-house teams, reported four times faster triage times compared to the existing telephone service.

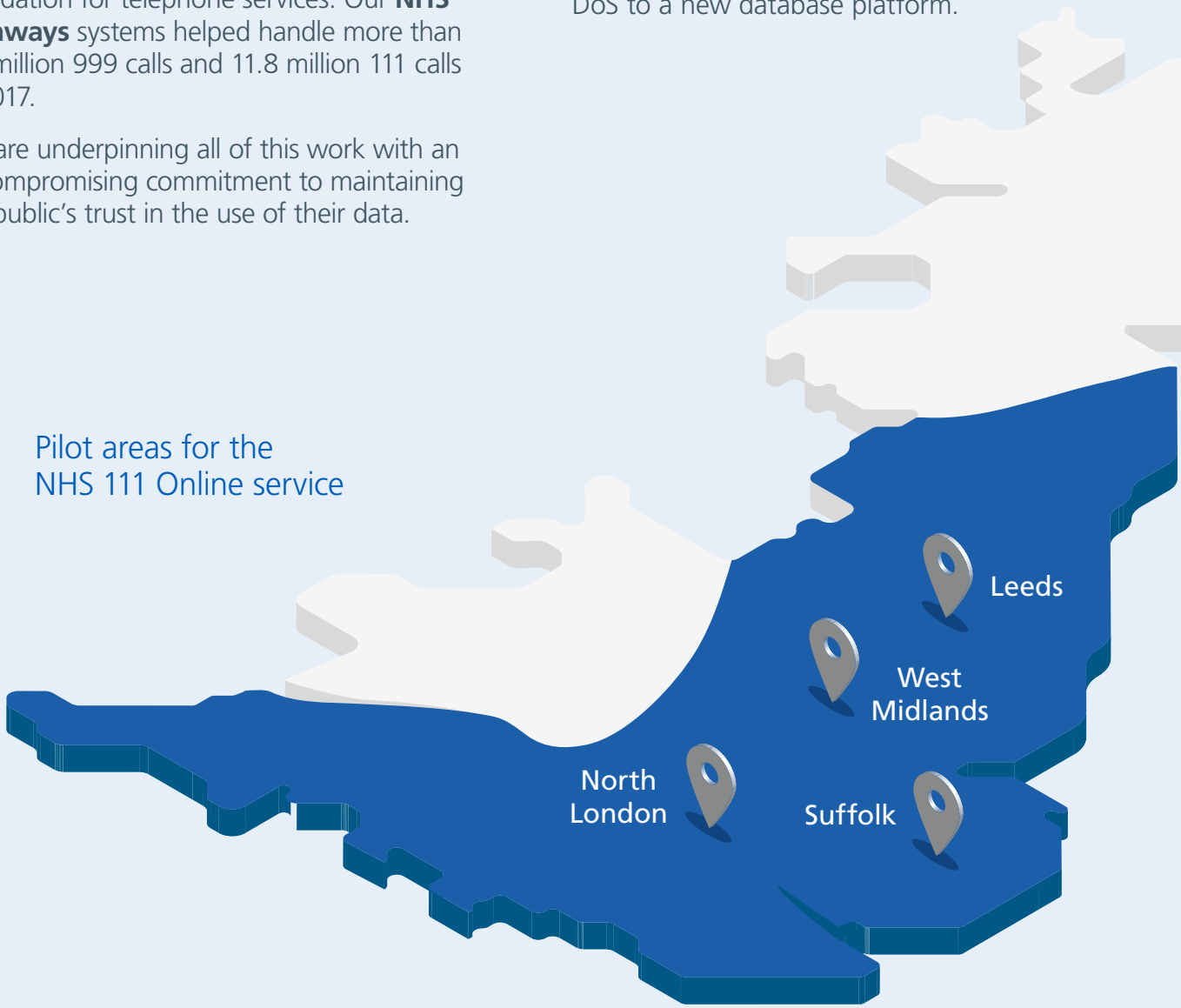
Meanwhile, we continue to provide the solid foundation for telephone services. Our **NHS Pathways** systems helped handle more than 2.7 million 999 calls and 11.8 million 111 calls in 2017.

We are underpinning all of this work with an uncompromising commitment to maintaining the public's trust in the use of their data.

Following the government's response to the National Data Guardian's review in July, we developed a digital service hosted on NHS.UK, as well as an off-line alternative, to allow the public to opt-out of the use of their data for purposes beyond their individual care. This is being rolled out to the public this year.

The **Directory of Services (DoS)** underpins NHS Urgent and Emergency Care and is a key to providing services to 111 and 999 settings. In summer 2017, we successfully migrated DoS to a new database platform.

Pilot areas for the NHS 111 Online service



Case study

NHS Apps Library

A mobile app has transformed the way Melissa Fehr manages her medications.

In 2009, Melissa had a lifesaving bone marrow transplant that also left her needing to take a cocktail of medications every day.

She has drugs to fight infection, drugs to combat the side effects of other drugs and drugs to manage pain and other conditions. Some need to be taken three times a day, while others need to be taken more regularly.

"I would need to fill out forms at my GP, make trips back and forth between my doctor's surgery and the chemist or I'd be using up my entire lunch hour standing in a queue with 50 people who wanted to buy a sandwich, while I was trying to get my medication," she recalls.

Mobile technology has changed this experience. An app called Echo, one of 45 on the NHS Apps Library, allows people to reorder repeat prescriptions using the Electronic Prescription Service. It keeps tabs on consumption and automatically re-orders drugs and sends them by post.

That means more time for life. Nine years after her operation, Melissa is running marathons and was a multiple medal winner at the World Transplant Games in 2015 and 2017.

"It frees up so much mental space. I hadn't realised how much effort I was putting into managing my medication," she says.

"If you look at the NHS Apps Library you know they have gone through quality control and they are going to be good and give you solid information."

Key area

Primary and Social Care

Each year, there are about 360 million patient visits to GP surgeries and about 1.8 million new requests to local councils for adult social care. About 3.5 million children are known to be at risk from avoidable disease and harm.

The pressures on our primary health, social care, children's and community services are immense and growing. Digital technologies have an important role to play in developing the collaborative models of care that will help the system respond positively.

We run the contracts for the provision of clinical systems to every general practice in England. These are essential to the safe and efficient running of the sector and support the safe prescribing of 1.1 billion prescriptions from general practice every year. In 2017-18 these systems were over 99.99% available. Through this contract, we support a range of innovative patient-facing services linked to general practice systems that provide online access for patients to view their records, book appointments and order repeat medications. In 2018, we agreed continuity contracts with all GP system suppliers until the end of 2019, securing continuing service provision for practices and further investment in the development of GP systems.

We have also started to collect appointment data from across practices, which will improve the visibility of appointment capacity and utilisation. This will inform strategy and policy decisions and help with effective planning of services during busy times.

Adoption of digital technologies in general practice has been relatively extensive compared to the hospital sector, but more needs to be done to support collaborative working across care settings through better interoperability.

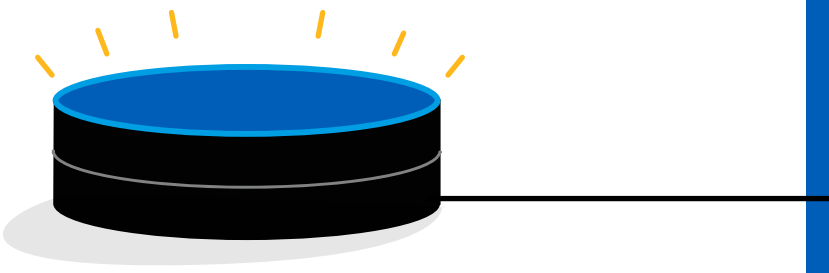
We're leading the adoption of the clinical terminology **SNOMED CT** across primary care. Great progress has been made and we expect to have completed adoption by October 2018. This will be a major step in enabling the flow of accurate, standardised clinical information, which will be built on as other care settings implement SNOMED CT over the next two years.

In May 2017 and February 2018, the **GP Connect project** piloted access to static and html versions of patient records across different IT systems currently in use in general practice. By the end of 2018, we expect to be trialling the sharing of machine-readable information about patients' medications and allergies and the sharing of clinicians' notes between systems.

We have an ambitious programme to streamline and enhance the provision of data from general practice safely and securely to support secondary usage (for example, for research and planning). The information we extract from the General Practice Extraction Service (GPES) on behalf of general practice supports many NHS partners. For example, the diabetic retinopathy screening extract is used to improve the screening process by ensuring patient information is correct and up-to-date, automating processes and allowing faster and easier creation of patient registers for new screening programmes. These early interventions can be critical to protecting sight.

Did you know?

We've funded local projects including trialling use of Amazon Alexa to support people in their homes.



Our **GP IT Futures programme** is preparing a new commercial model that will allow GPs to pick and choose interoperable services and apps from a new buying catalogue when the framework contract for GP systems expires at the end of 2019.

In the wider primary care agenda, our **Digital Maternity programme** is supporting the transformation of maternity services across England. It aims to increase the use of community services by giving mothers more information and control and by improving information sharing among midwives, doctors, and other professionals.

In December, we enhanced the maternity information for pregnant women on the NHS Choices website and began consultation with the royal colleges on a draft maternity record standard, the first step to fully interoperable maternity records. We will have a developed standard published by March 2019 and have begun the discovery process for a pilot of personal health records for pregnant women, to be launched by October 2018. We expect up to 153,000 women to have access to their local digital maternity records by March 2019.

The next step in 'cradle-to-grave' care is looking after our children, an area in which we are currently relying on a two-decade old paper solution – the Red Book – which costs £39 million a year and fails to connect children's health effectively.

Our Digital Child Health programme supports NHS England's Digital Child Health Transformation and is working to give parents and professionals access to fully integrated electronic personal health records.

During 2017, we supported a private 'beta' of an electronic Red Book in London and began development of the national event management system that will underpin comprehensive and secure recording of children's interactions with health and care professionals. In October, the Professional Records Standards Body (PRSB) published a draft digital child health record standard. The developed standard is expected in February 2019. By April 2019, we will have issued 70,000 digital Red Books across London, Bristol and Lancashire.

In **adult social care,** a complex commissioning and delivery environment has contributed to lower levels of maturity among some providers than in the health system. Our Social Care Digital Maturity Self-Assessment scheme is helping local authorities get a better understanding of where they are and we are following this up with practical support.

For instance, we worked with the Care Provider Alliance to develop information governance guidance aimed specifically at care homes.

In 2017-18, we focused on the crucial area of transfers of care between health and social care (for example, an elderly patient moving from acute hospital treatment to care in their own home from their local authority). At the moment, poor information sharing is delaying transfers, blocking hospital beds and depriving social workers of the information they need to get people the right support.

The national information standard that we published in 2016 will allow information to flow in electronic formats and we have developed technology to allow the secure exchange of assessment, discharge and withdrawal (ADW) messages between health and social care settings. Seven areas have been picked to pioneer ADW messaging services in 2018.

We also worked closely with the Local Government Association to set up the Social Care Digital Innovation Programme.

This project provided 19 local authorities across England with funding of up to £50,000 each to trial new uses of digital technology, ranging from mobile working to improving the data available to commissioners.

A pilot in Hampshire is exploring the use of Amazon's voice-controlled smart speakers to help 50 people in their homes. The devices can be used to ensure people are reminded to take their medication or know when their carer is due to visit. Our own team is investigating how predictive analytics and machine learning can be used to provide decision-making support for social workers to allow earlier interventions and long-term prevention.

3 million
more patients got access to online GP appointment booking in 2017-18

Our systems support
£1.2 billion
worth of payments made to general practice each year

25%
of patients registered with a GP can order repeat prescriptions online, compared to 20% in April 2017

Key area

Acutes, Ambulances, Mental Health and Regional Integration

We are collaborating with providers across the acute, emergency and mental health sectors to embed digitally enabled solutions to improve the quality, safety and consistency of care, improve sustainability and empower patients.

The **Global Digital Exemplar (GDE) programme** is central to this effort. We are working directly with 26 GDEs and supporting their work to show how information technology can empower patients, improve outcomes, and eliminate waste. The 16 acute, seven mental health and three ambulance GDEs are grounding innovation in local realities and developing practical approaches for the rest of the system to follow. Each acute and mental health GDE is working with a 'fast follower' trust to work out how best practice can be shared beyond specific local realities and developed into blueprints for the whole system.

We are already starting to see trusts reporting significant improvements in patient care. Salford Royal, for instance, is currently running 37 clinically led projects, including point-of-entry screening for patients with delirium. Evidence has shown that better screening and treatment for delirium and dementia in hospital can reduce the lengths of hospital stays, prevent re-admissions and improve patient experiences.

Salford Royal has implemented an electronic assessment system to reduce hospital-acquired thrombosis cases that will ensure patients with suspected lower-leg blood clots get the treatment they need.

At City Hospitals Sunderland, remote monitoring has improved patient care and reduced bed occupancy by 100 bed days per month. At Royal Liverpool and Broadgreen University Hospitals, a new sepsis screening system is estimated to be avoiding more than 200 deaths a year. University Hospitals Birmingham is using clinical dashboards to improve performance in prescribing enoxaparin, West Suffolk Hospital has increased compliance with reviewing antibiotics at 72-hours from 43% to 92% and Newcastle Upon Tyne Hospital Trusts have achieved a 10% reduction in drug spend in their enhanced medications management pilot.

We are also supporting the Department of Health and Social Care in the management and delivery of local service provider (LSP) contracts, helping NHS organisations get the best value from existing IT contracts. The CSC LSP Programme completed the exit of all 2,966 live IT services from the CSC contract, which covered NHS trusts in the North, Midlands and East of England, and has transferred organisations to locally procured services. The programme is embedding the Lorenzo Electronic Patient Record service into 15 trusts and is driving digital maturity through the Lorenzo Digital Exemplar programme.

The South Local Clinical Systems Programme delivers electronic patient record and clinical systems to nine community and child health providers, two NHS ambulance services and 14 NHS acute trusts in the south of England, accruing £100 million in benefits as of March 2018 and achieving a range of improvements in the quality of care.

From October 2018, all initial referrals from GPs for outpatient consultant appointments will be electronic, a change that is expected to save the NHS over £50 million a year. More than 66 trusts have already made the switch to completely digital referrals and around 60,000 referrals every day are being made using the NHS e-Referral Service (e-RS). In March, 67% of GP to first outpatient appointments were being booked electronically.

We have made a number of improvements to the service in response to patient and professional user feedback. A better 'advice and guidance' function gives GPs improved access to specialist advice.

New referral assessment services allow care providers to receive and assess referral information provided by GPs and find the most appropriate care available in the locality. The new 'Manage Your Referral' application makes it easier for patients to manage their own appointments online and its capacity alerts allow commissioners to highlight good or poor treatment times to GPs.

The National Audit Office estimates that e-referrals save the NHS

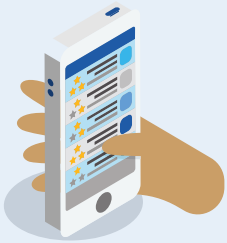
£50 million a year

At the end of May 2018, more than

50%

of all acute trusts

had made the switch to 100% digital referrals



Key area

Medicines and Pharmacies

The overall list cost of medicines in the NHS in 2016-17 was £17.4 billion, an increase of 3.5% from the previous year and up 33.7% from 2010-11.

To get the best value from medicines and pharmacy, the data captured, used and shared must be digital, in a standard format and available to support both direct care and research.

The **Electronic Prescription Service (EPS)** is now used in 92% of England's 7,400 GP practices. More than 61% of their prescriptions are delivered via EPS, improving the patient experience and saving the NHS £136 million in the three years from 2013 to 2016.

We have since developed a number of important EPS enhancements that will drive up utilisation in 2018-19. Once all eight dispensing system suppliers are ready, patients requiring controlled drugs will be able to have these prescribed electronically. In addition, following necessary regulation changes, patients will no longer have to nominate a pharmacy to have their prescription sent through EPS.

Work to specify a new digital system to inform pharmacies when patients are exempt from prescription charges also concluded this year. We will pilot this in community pharmacy from August 2018.

In December, we successfully launched EPS in urgent care settings including NHS 111 call centres.

Patients can now have their emergency acute prescriptions sent directly to a pharmacy of their choice after phone consultations with out-of-hours clinicians.

Two early adopters went live with this service during 2017-18, and their experience will inform a full rollout throughout 2018-19.

In partnership with the NHS Business Services Authority, we have linked prescribing and hospital admissions data to create a new set of safety indicators. These indicators, published in May 2018, are the first of their kind and identify prescribing that could increase the risk of harm and that may be associated with hospital admissions.

We have continued work to integrate pharmacists with the rest of the health and care system. The **Summary Care Record** (containing key information from a patient's GP record) is now available in 98% of community pharmacies. This provides pharmacists with access (with patient consent) to information about the patient's medication, allergies and adverse reactions, avoiding time-consuming calls to GPs.

We have also provided NHSmail to 95% of all community pharmacies, giving pharmacy professionals an integrated, safe mechanism to securely transfer patient data to other health and care professionals.

NHSmail access is an important element of the National Urgent Medication Supply Advanced Service (NUMSAS), which allows services like NHS 111 to quickly refer patients to community pharmacies to get previously prescribed medicines.

Did you know?

The Electronic Prescription Service (EPS) has saved the NHS £136 million over three years

The Electronic Prescription Service is used for

60%

of all prescription items in England

The Summary Care Record is now available in

98%

of all community pharmacies

NHSmail is available in

95%

of community pharmacies

Case study

Summary Care Record in pharmacy

Access to patients' clinical information is allowing pharmacist Shaheen Bhatia to play a more active role in caring for her customers.

She says the Summary Care Record, which includes key information from patients' GP records, has become a "vital tool in our daily work."

"If we get a new patient who doesn't know exactly what medications they are on, we can access their Summary Care Record for that information as well as any allergies they forget to mention," says Shaheen, who runs the P&S Chemist in Ilford, Essex.

She recently helped a diabetic patient from outside the London area who had left his medicines at home.

"He needed his next dose of medication but wasn't even sure what strengths he needed to have. I asked him for consent to view his Summary Care Record and was able to see exactly what he was on. When we looked, we saw there were five or six medications that he needed, including insulin."

She contacted NHS 111 through the National Urgent Medication Supply Advanced Service to get the patient a referral for an emergency medicine supply.

"I was able to give them accurate information on the strengths of medication he needed and they forwarded the referral. I could then dispense the emergency supply for him," she says. "He was so pleased because he had gone from place to place looking for someone to help him."


Shaheen
Pharmacist Manager
P&S Chemist

Key area

Implementation and the Digital Environment

We are working with local and national partners to help them get the most out of our digital products and services.

That central objective informs a broad portfolio of activity, including improving the environment for digital transformation. We do this by building digital skills among the healthcare workforce and the public and strengthening our customer relationships so that people understand our services and we understand their needs.

In 2017-18, our **Implementation and Business Change (IBC)** team changed the way we work with local health organisations. Previously, we supported implementation and uptake at the individual programme level. Now, our people work in regional teams alongside NHS England and NHS Improvement to help organisations access the full range of our products and services. Since the team was created in April 2017, it has delivered a significant increase in the uptake of NHS Digital products and services.

For example, the number of views per week of the Summary Care Record (SCR) increased from 109,631 in April 2017 to 132,470 in March 2018. After extending SCR to practices using systems provided by Microtest, (a supplier of clinical software for GP practices), we now have near universal use by GPs. Only 11 practices had not created SCRs for eligible patients as of March 2018.

The team also played a key role in the successful delivery of the 'paper switch-off' programme for the e-Referral Service, supporting all of the 150 targeted trusts to begin switch-off projects in 2017-18 and completing 32 switch-offs by year end.

Our work led the end-to-end delivery of **Child Protection – Information Sharing (CP-IS)**, a critical project connecting the IT systems of social care teams with emergency departments, minor injury units, maternity units and other unscheduled care settings. CP-IS flags young people on child protection plans or with looked-after child status when they attend health settings. It alerts health workers that they may be dealing with a vulnerable child and informs social care teams that the child has required medical attention.

The number of local authorities live with CP-IS increased from 47 (31%) in April 2017 to 104 (68%) in April 2018. The number of health sites increased from 121 (10%) to 593 (52%) in the same period. There are 3,500 alerts sent every month by the system and more than 120,000 of the most vulnerable children in society are now receiving the additional protection that CP-IS provides. All local authority IT system suppliers and the top seven unscheduled healthcare system suppliers are now accredited.

The **NHS WiFi programme** is helping patients across primary and secondary care access personal health records, manage their conditions online and use digital tools such as health apps while they wait for their GP appointments. By March 2018, 4,855 practices were connected to NHS WiFi and 57% of clinical commissioning groups (CCGs) implemented services across all practices in their area. Thirty-six secondary care trusts delivered NHS WiFi implementation in secondary care.

We continued to support the development of a digitally skilled workforce through the Building a Digital Ready Workforce programme – a collaboration with Health Education England and NHS England.

The new NHS Digital Academy, announced in September 2017 and launched with its first cohort of 100 students in April 2018, is the first fully funded national learning programme to develop the skills needed to lead digital innovation in UK healthcare.

We supported the creation of the Federation of IT Professionals (FedIP) and the Faculty of Clinical Informatics, the professional bodies that will help develop standards and opportunities for clinical and non-clinical informaticians across health and care. Among the wider workforce, we ran a consultation with the Royal College of Nursing to shape future digital literacy training for nurses and we are creating a Leadership and Digital Transformation development and awareness model for board-level leaders in the NHS and social care.

Through our **Widening Digital Participation programme**, we are also creating the infrastructure and knowledge needed to allow widespread access to digital healthcare. Since March 2017, we have supported 100,000 people, including hard-to-reach groups, to access digital services and information. We delivered eight digital inclusion pathfinder projects to better understand the needs of the hardest to reach and to develop and test new approaches to tackling digital exclusion. They included projects with young people with mental health conditions in London, older isolated people in Nailsea and homeless people in Hastings.

120,000
vulnerable children are now included in the CP-IS database

Summary Care Records are viewed once every
4.67 seconds

2. Data, Insights and Statistics

Data, Insights and Statistics fulfils our role as the data custodian for the health and care system and our responsibilities to support healthcare research and improve the information available to clinicians and system leaders.

Key area

Data, Insights and Statistics

Better information means better decisions and that means better care, better health, and a more productive economy.

It's a simple equation and it underpins our work in data, insights and statistics. Good, timely information helps individual members of the public manage their health and conditions. It underpins our democratic society and drives some of our country's most innovative companies. It powers artificial intelligence solutions and helps commissioners target limited resources, so they have maximum impact. It helps clinicians, social workers and researchers improve treatment and care.

The aim of our Data, Insights and Statistics team is to get the right information to the people who need it more quickly, and to make that information more accessible and useful.

Such information only has impact when people trust it, and the independence of our statistics is underpinned by accountability to the Office for Statistics Regulation for their trustworthiness, quality and value. In 2017/18 we produced 275 official statistics publications, covering a wide variety of subjects from obesity, to child health, to detailed information about the performance of health and care services.

Across all of this work, meeting users' needs has been our guiding principle, with reports ranging from monthly summaries highlighting the latest data in a clear and impartial way to detailed reporting bringing together a range of different datasets.

We were at the heart of the effort to join up health and care statistics, co-operating with other national bodies to produce official statistics from disparate data sources on topics of public interest including emergency healthcare, alcohol and smoking.

We collaborated widely outside the health and care sector, too, working with the Office for Standards in Education (Ofsted) on data about early years development, with the Department for Work and Pensions on fit notes issued by GPs, and with the Office for National Statistics, the UK's largest independent producer of statistics, on projects including the development of a joint analytical unit.

An experimental report joining maternity and mental health statistics looked at perinatal mental health and showed that older mothers were generally less likely to be in contact with mental health services than younger mothers during pregnancy and early parenthood.

Our report into detentions under the Mental Health Act (1983), drawing on a detailed data source allowing comparisons by ethnic group, was awarded National Statistics status by the Office for Statistics Regulation, the regulatory arm of the UK Statistics Authority. The analysis is being used in the government's Race Disparity Audit and will inform future policy development.

Did you know?

NHS Digital publishes more than 1.5GB of open data every month

The largest ever analysis of service provision for patients with learning disabilities in England revealed variations in life expectancy and uptake of services such as screening. We also published data covering both adult and child community services for the first time, providing new insight into activity in this critical area.

When appropriate, we responded to evolving public discussion with accurate, impartial and relevant data. For example, we provided additional clarifying statistics in response to the fast-moving debate in 2017-18 about staffing numbers in mental health care.

Of course, accurate and penetrating statistics only make an impact if they are used. In 2017-18, we worked to improve the accessibility of our data.

We set up new data and analytical hubs for primary care, mental health and social care. These bring together all our information on each topic in a dedicated information portal and allow users to produce additional reports and analyses relevant to them.

We also launched a new publication website that greatly improves the searchability of and access to a 19-year history of open data and statistical publications. We are one of the world's largest producers of open health data.

At the end of 2017-18, we became a member and sponsor of the Open Data Institute in Leeds, joining an exciting community of data producers and users with a shared commitment to using open data for the benefit of citizens and the economy. Modern data science has huge potential to support better decision making. During 2017, we worked with partners across 15 government departments and with subject matter experts to create a Virtual Data Science Centre. This provides an online portal and network offering software, skills support, and a forum for collaboration. Our partnership with Health Data Research UK is deepening and we have recruited our first cohort of five PhD data scientists. Areas of research include analysis of 'Did Not Attend' occurrences (DNAs), prediction of medicinal harm, data access and improving NHS 111 algorithms.

Our primary care analysis hub, designed to improve access to data about GP services, was shortlisted for the Health Service Journal's award for enhancing care by sharing data and information and we are currently developing a chat bot to help users of our data and analytics tools. We are also exploring the use of advanced natural language tools to make it easier for non-specialists to analyse data.

Our new web-based analytical tools harnessing modern modelling techniques and interactive visualisation capabilities not only make the statistics we produce more accessible, but also reveal opportunities for improvement. For example, new analytical tools to help understand winter pressures in emergency departments helped highlight patient profiles that were using services disproportionately and were employed by NHS England London Region in its Winter Response Room. Similar tools are being applied to analysing GP caseloads to help clinicians to develop better care pathways for high demand patients. We worked with NHS Improvement on a 'peer-finder' data tool for use in their model hospital tool, allowing benchmarking of services on a like-for-like basis.

Key area

Life Sciences and Research Support

The research sector and the life sciences industries have been indispensable partners in building the enormous improvements in health outcomes and life expectancy we have experienced since the foundation of the NHS in 1948.

As the UK prepares for a future outside the European Union, these sectors – among the commanding heights of our high-growth economy – are now also critical to providing the economic growth to sustain our universal health and care system.

During 2017-18, we established NHS Digital as a key partner in the development and delivery of the UK government's Life Sciences Strategy and we worked hard to fulfil our vital role in providing health and care data for research.

NHS Digital data is central to some of the UK's most important life sciences and medical research projects. Genomics England's 100,000 Genomes project, the UK Biobank, the Million Women Study, the Clinical Practice Research Datalink, the Small Area Health Statistics Unit at Imperial College London, the Children of the '90s longitudinal study at the University of Bristol and clinical trials research at the University of Leeds are among the large number of critical research projects that rely on our datasets. Exciting new partnerships include the ORION-4 phase 3 clinical trial of a new cholesterol-lowering drug at the University of Oxford and the Association of Medical Research Charities' work on disease registers.

Following its establishment in 2017-18, we are also working in partnership with Health Data Research UK to develop and apply cutting-edge data science approaches to the most pressing health research challenges facing the public.

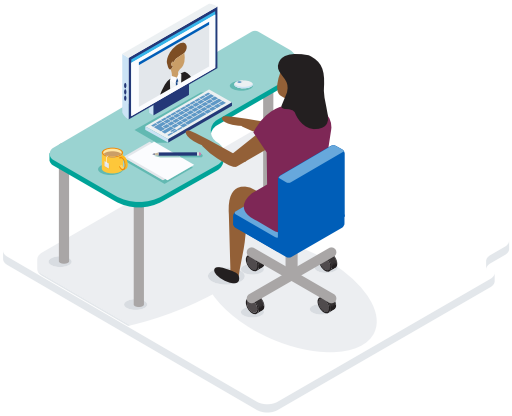
Our **Data Access Request Service** is responsible for helping scientists access data, while ensuring citizens' information is always used appropriately and kept securely. It is processing more applications for data, more rigorously and more quickly than ever before.

In 2017-18, we processed more than 950 applications for person level data through our Data Access Request Service, compared to about 700 in 2016-17. We delivered, and then maintained, an average wait time for data access by December 2017 of 80 days, compared to more than 140 days in May 2016, with half of applications being completed within 40 days.

We have digitised the Data Sharing Agreement renewal process, allowing researchers to seek renewals online and track their status, and we have worked with the Office for National Statistics and with the National Data Guardian for Health and Care's panel to allow longer agreements for access to mortality data for researchers.

Did you know?

Applications to our Data Access Request Service increased by 35% in 2017-18, compared to the previous year



The **Independent Group Advising on the Release of Data (IGARD)**, the body that provides robust and independent scrutiny of NHS Digital data disseminations, is improving the efficiency of the release process by focusing on novel and contentious applications and end-to-end assurance of data access.

Our process is more customer focused, with all data applicants now having a named data access contact point. We have continued to improve our communications by organising researcher roadshows with the Medical Research Council Regulatory Centre, and delivering regular researcher e-bulletins and webinars to help improve understanding of applications for data.

Research operates in a complex regulatory environment, including the Health and Social Care Act 2012, Care Act 2014, Statistics and Registration Act, Data Protection Act, the General Data Protection Regulation (GDPR) and Data Protection Bill, and the national data opt-out. We are working through our external **Research Advisory Group** and the Office of Strategic Coordination for Health Research with partners including Medical Research Council (MRC) and the Health Research Agency. Our aims are to streamline legal and ethical approvals for data access across approval bodies, to address issues relating to historically granted consent, to cut bureaucracy and duplication, and to support a consistent understanding of the rules governing the use of health data in research.

We are also supporting the work led by the MRC Regulatory Centre under the Research Advisory Group to develop the Research Clarity Portal, an online tool to help researchers navigate this complex environment.

At the end of 2017-18, we began designing a new wave of improvements to services for researchers, in consultation with partners including the National Institute for Health Research and the Clinical Practice Research Datalink. Likely enhancements will include: helping researchers identify potential clinical trial participants using clinical and demographic datasets; providing information about major life events for cohorts over time; confirming the current status and latest known addresses of participants to allow contact for follow ups and renewed consent; and introducing clinical trial flagging to help trials identify individuals not participating in other studies.

We expect to conclude consultation and start delivering the improvements in 2018-19.

Key area

Data Transformation and Architecture

The Data Services Platform (DSP) is a £47 million investment in providing the central processing power needed to securely receive, validate, de-identify, and link existing data flowing into NHS Digital from across the health and care system and to make that data available to users according to the legal basis for their data use.

The platform received HM Treasury approval in October 2017 and we are committed to developing national services so that, by September 2018, data can be consistently de-identified and linked. We will phase the deployment of these national services from October 2018 and are internally testing a secure remote access environment for the platform, which will be available to authorised, external users by the end of 2018.

The DSP's master patient service, which is already live, enables person-level data linkage across care settings, allowing much more flexible queries, and we are working to improve existing bespoke data linkages.

We continue to work with partners to meet their needs, expand our datasets, provide richer information and streamline collections.

In 2017-18, we worked with NHS England and the Royal College of Emergency Medicine to produce the Emergency Care Data Set, with NHS Improvement on Patient Level Information and Costing Systems (PLICS), and with NHS England colleagues on the Mental Health Services Data Set and the Community Data Set.

In collaboration with our partners in the Private Healthcare Information Network (PHIN), we began to bring data collection and measurement of private healthcare within the scope of NHS systems and standards for the first time. The result addressed a long-standing concern about the lack of visibility of quality in private care and in improving the completeness of patient records, where care has been received privately.

We also prepared for the migration of data assets currently held by Public Health England to NHS Digital in line with the recommendations of the McNeil Review (November 2017) and started the urgent transfer of collections handled by the Unify online collection system, used by NHS England and hosted by the Department of Health and Social Care. The new **Strategic Data Collection System** will completely replace Unify and is removing at least 13 duplicate collections from the health and care system, reducing burdens on providers and cutting system costs.

In 2018-19, we will continue to work to define and secure agreement for a **National Data Architecture**. This will further reduce duplicate collections and improve quality, availability and integration through standardised definitions, registries and terminology.

The first element of this architecture has been our collaboration with the Government Digital Service (GDS) to develop the **NHS Data Registers Service** – a definitive, maintained list of GP practices, clinical commissioning groups (CCGs), ambulance trusts and other providers.

The list is dynamically maintained in a machine-readable format. Making this data more easily accessible will not only improve the quality and consistency of information, but also reduce burdens for data providers.

Our data supports some of the UK's most important life sciences and medical research projects and facilities, including:

Genomics England

100,000 Genomes Project

The largest national sequencing project of its kind in the world, combining genomic sequence data with medical records.

UK Biobank

An international resource linking the health records and biological samples of 500,000 participants over time.

Clinical Practice Research Datalink

A Government research service supplying primary care and healthcare data for public health research resulting in 2000 peer reviewed publications.

University of Oxford

Million Women Study

A long running study that has profoundly changed treatment for women over 50, including the use of hormone replacement therapy.

Imperial College London

Small Area Health Statistics Unit (SAHSU)

World leading research group researching environmental effects on health at a small area scale.

University of Bristol

Avon Longitudinal Study of Parents and Children

World leading birth cohort study, charting the health of 14,500 families in the Bristol area.

Case study

NHS 111 call data

The NHS Directory of Services gives NHS 111 call handler Jordan Ingham live information about the care his callers need – and helps the wider urgent care system understand and handle changing demand.

"Without it, our job would be extremely difficult, especially in out-of-hours situations," Jordan says.

The NHS Directory of Services is a central directory that integrates with the NHS Pathways system, the software Jordan uses during NHS 111 calls. It is automatically accessed if a patient doesn't require emergency treatment.

"Patients are impressed how quickly we can turn around and give them the information about where they need to go," he says.

Jordan's use of the Directory of Services and the NHS Pathways algorithms is just the start of a flow of information to colleagues across the system.

Data collected during the NHS Pathways triage is automatically transferred to the NHS Digital Intelligent Data Tool. When this is linked with the data analysis available from searches of the Directory of Services following triage, it gives commissioners access to real-time information that allows them to make quick and effective decisions about urgent and emergency care services in their areas.

Cayley Dimelow, a Directory of Services lead in the East Riding of Yorkshire clinical commissioning group, has seen how the Intelligent Data Tool reduces the time commissioners have to wait to gain access to NHS 111 data.

"Previously, the data from 111 was two months out of date. Now, we have access to it in an hour." Cayley says.

"We are able to very quickly make decisions as a CCG about how we increase services as they are needed."

Karen Sellers, Service Development Officer for the Yorkshire Ambulance Service, said the Directory of Services also helped to plan services during busy periods.

"It allows us to establish how many calls we are going to get at busy times and work with CCGs to establish capacity to meet these demands."


NHS
Yorkshire
Ambulance Service
Reserved area
Patient information
Female
White British
Date of birth:
Select a date
Years
NHS number:
Patient Tel No:
Copy incident location
Unknown all patient details
GP details
School details
Next of kin details
Social worker details
Parent details
Guardian details
SAVE
TOUGHBOOK
Panasonic
CF-19
RELEASE

3. Platforms and Infrastructure

Platforms and Infrastructure develops the mission-critical IT infrastructure of the NHS and social care system.

Overview

Platforms and Infrastructure

NHS Digital builds and maintains the national IT infrastructure of the NHS and social care.

Our Digital Delivery Centre applies world-class product design and development skills to the delivery of many of the NHS's major national systems, including the Spine, the Secondary Uses Service, cancer screening and GP Payments. In the past four years, we have saved tens of millions of pounds a year by bringing key infrastructure in-house. We have also provided faster, more capable and more reliable systems to the NHS and care.

The **NHS Spine** connects clinicians and patients to essential national services including the Electronic Prescription Service, Summary Care Record and the e-Referrals Service. It connects over 28,000 healthcare IT systems in over 21,000 organisations and typically supports over 250,000 concurrent users.

In 2017, we went live with the **Spine Mini Services Provider (SMSP)**. This is a free interface that lets health and care providers find demographic patient information on the Spine, facilitating use of the NHS number as a 'consistent identifier' across care settings.

We delivered and developed the **National Data Opt out Service**, which allows the public to express their data sharing preferences and ensures NHS Digital upholds the preferences expressed.

Within the **Care Identity Service (CIS)**, users can now unlock their own Smartcards and renew their own security certificates. This new functionality is used thousands of time every month.

We have launched a pilot that delivers non-smartcard access, which will enable a much wider group of health and care users to access NHS care records service applications. We plan to enhance and fully deliver this capability in 2018.

We redeveloped and replaced the **Secondary Uses Service (SUS)** in 2017. SUS+ receives NHS England hospital and independent healthcare provider activity through Commissioning Datasets (CDS). The service receives about 100 million CDS records per month and delivers data extracts to support NHS planning, commissioning, analysis and research. SUS+ provides a low cost, resilient and responsive service, which is being constantly improved through a weekly release cycle. Since the introduction of the new service we have:

- introduced scanning for Person Confidential Data (PCD) appearing in unexpected parts of the record. This improves the confidentiality of the data that is held on SUS
- accelerated data extract delivery to customers, particularly in busy periods
- allowed users to schedule the execution of extracts in advance
- delivered the capability to receive, process and disseminate the new national data standard for emergency medicine data and provided a daily feed to Public Health England

Improvements planned for 2018-19 include responsive feedback to hospitals submitting data to improve data quality, integrating national Hospital Episode Statistics (HES) into SUS+, and moving SUS+ to the cloud.

We have adopted a cloud-first policy for all new services and have standardised and optimised our approach to deployment. We are using Microsoft Azure and Amazon Web Services (AWS) and are introducing constraints on where data can be stored, what controls are required and what services can be used.

NHS Digital has already delivered several services using the cloud and more key services are set to be migrated to Azure or AWS in the coming year.

This will shorten delivery times and deliver efficiencies. We are constantly assessing our commercial approach to delivering cloud services to ensure that we optimise value for money.

NHS Digital developed the 'Cloud Good Practice Guide' for use by all health and care organisations, and is working with local organisations to migrate legacy infrastructure onto lower cost and often more secure and resilient cloud-based solutions.

We expect to migrate five existing NHS Digital services to cloud and serverless technology in 2018-19, enabling potential savings of £1 million to £2 million per year.

In 2017, we began piloting a new national capability, the **National Record Locator Service (NRLS)**, which allows authorised clinicians, care workers and administrators to find and access patient information held in other care settings to support direct care. The service will be available across the NHS in 2018.

Our **Access to Service Information programme** is improving the information available to urgent and emergency care staff about the services available to patients, so that onward referrals are clinically appropriate, fast and convenient. Every NHS 111 and integrated urgent care (IUC) service can now book out-of-hours GP services direct. We have also provided new functionality to allow pharmacies to easily keep their information up to date. The Summary Care Record has now been provided to more than 90% of urgent care settings.

In October, we launched the NHS Digital API Labs to develop open-source application programme interfaces (APIs) that allow developers to securely and easily integrate their products or services into our national systems.

We continued the roll out of NHSmail, with a major drive to get community pharmacies on board. Skype for Business instant messaging and presence functions are now available to NHSmail users and around 10,000 active accounts are benefiting from video conferencing services.

The **Health and Social Care Network (HSCN)** went live in October and the migration of about 13,000 access connections is underway. We are committed to supporting all local organisations to move from the legacy transition network to HSCN by September 2020.

HSCN will create a competitive marketplace of suppliers, offering local organisations more choice about their network connection package. It will also ensure all services are fully interoperable and support secure local, regional and national information sharing. We have negotiated a new national network contract to maintain continuity of service and have established the central infrastructure and support processes to manage the new system.

Seventeen suppliers are currently compliant with HSCN requirements and we went live in November in the first primary care and third sector settings, connecting Devon Doctors and Earl Mountbatten Hospice on the Isle of Wight. This was followed in December by the first NHS Trust connection at Moorfields Eye Hospital.

Alongside the introduction of HSCN, we have also launched in-built cyber security features to help protect organisations from online threats and to help our Data Security Centre monitor and respond quickly in the event of a cyber incident. The security features monitor the network and track down suspicious behaviour, sending alerts to the Data Security Centre for further investigation. The system focuses on the source, destination and type of traffic, instead of relying on being able to read the content of the traffic, and it draws on early warning information from sources such as the National Cyber Security Centre (NCSC).

The government's strategic direction for digital public services is to make them available over the internet so that citizens have ready access.

To support this, we have adopted an internet-first policy that provides an assessment of NHS Digital services and systems and their readiness to be put on the internet.

The Platforms and Infrastructure and Live Services directorates are aiming to extend graduate and apprentice recruitment, in part drawing on the £700,000 of funding for apprenticeships through the national levy system.

Later this year, we will be launching a four-year apprenticeship in software engineering that will result in a degree. This will include units on artificial intelligence, machine learning and data science and give recruits a debt-free way to achieve a qualification.

It will help us nurture the talent we need to drive the next information revolution in health and care.

NHSmail is one of the largest secure email systems in the world with

1.3 million

registered accounts

processing

168 million

valid incoming emails a month

while blocking

1.1 billion

spam emails a month

Case study

Health and Social Care Network

Specialist end of life nurse Annie Tavener says the new Health and Social Care Network (HSCN) is helping her support patients in their homes.

The Earl Mountbatten Hospice on the Isle of Wight, where Annie works, was one of the earliest adopters of HSCN in the charity sector – and it has significantly improved her ability to link to IT services while on the move.

HSCN is replacing the N3 network. Instead of a single broadband network for health providers, HSCN provides a choice of suppliers offering security enhanced network connectivity and ensures they are completely interoperable with national, regional and local systems.

Mountbatten, like many small organisations, previously relied on an N3 connection from its local hospital trust. The new connection is tailored to Mountbatten's needs, is cheaper and offers better functionality, including allowing nurses in the community to connect using a secure virtual private network (VPN).

"Being able to work remotely and access systems with a patient in their home – or from my own home – does mean I don't waste time travelling to and from the office to collect notes. That is a huge time saver that can be used to spend more time with patients on one-to-one care," Annie says.

The new connection also gives nurses in the hospice better access to hospital information and will improve integration with social care. Greater bandwidth has raised the possibility of introducing video call support for patients.

"We can keep our patient records completely up-to-date as we talk to patients and that information can be shared instantly with GPs and district nurses who need access to these records."

4. Live Services and Cyber Security

The Live Services and Cyber Security directorate is responsible for the reliable, secure and effective operation of all of our key services to the health and care system and fulfils our responsibilities as the lead national partner for cyber security.

Overview

Live Services and Cyber Security

NHS Digital is responsible for ensuring that our critical national services are reliable, fast and secure, so that professionals in health and care can do their jobs and provide the great care the public expects.

We have developed and implemented an industry leading model for managing our live services as we have moved to Agile delivery methodologies. This has driven the performance of our services to new levels and generated great interest from other organisations. In 2017, we won the Special Innovation Award from the IT service management association itSMF UK for this work.

We achieved 99.97% average service availability across all our services through the year. For the most critical services, our performance was even better. The **NHS Spine** handled the secure exchange of around 10 billion messages with 100% reliability and response times were up to four times faster than they were in 2014. The Care Identity Service achieved 99.998% availability, which enabled 1.2 million registered smartcard users to access care record applications quickly and seamlessly. **NHSmail** grew to 1.3 million registered accounts, enabling secure email communication and collaboration with 100% availability.

The Live Services directorate is improving our key services on a more regular basis than ever before. Monthly or weekly releases are delivering continuous and incremental updates and have replaced annual releases that sometimes caused significant user disruption. The improvements being delivered are significant for patients.

For example, we added a Summary Care Record flag to notify clinicians of additional patient information, helping to ensure they don't miss vital information like long-term conditions or a complex medical history.

The **National Service Desk** provides a single point of user contact and works hard to deliver a good customer experience and prompt and thorough responses in line with published service-level targets. It was recently awarded the Customer Service Excellence (CSE) standard for its work.

When things do go wrong, we respond quickly: 290 high severity incidents were logged during 2017-18 and 93% were resolved within service-level targets.

In 2017, we redeveloped the **Secondary Uses Service** (SUS), the comprehensive repository of information about secondary healthcare activity in England. SUS+ receives over three million records a day and delivers data to support NHS planning, commissioning, analysis and research. It has created a faster, cheaper and more adaptable system that supplies commissioners with more comprehensive data.

In response to the growing need for more integrated systems across the health and care system, the Live Services directorate has started a project to synchronise the NHSmail directory with Microsoft Azure Active Directory and to integrate NHSmail with Office 365.

These changes will allow users to seamlessly access Office 365 collaboration tools and other useful applications. By making these new capabilities available using NHSmail user credentials, we deliver efficiencies to NHS staff while maintaining strict patient confidentiality. We will also move this and other NHS Digital services to the cloud in 2018-19, further improving data processing performance and reducing costs.

NHS Digital's Data Security Centre is the lead partner on data security for the health and social care system.

We were at the centre of the system's response to the WannaCry ransomware incident in May 2017. WannaCry did not compromise our national systems and, overall, the NHS responded well to the attack, with no reports of harm to patients or lost patient data. But WannaCry did underline the ever-present and growing threat to the delivery of patient care from cyber attacks. Since future large-scale attacks are inevitable, we need every organisation and individual in the system to understand and fulfil their role in managing this risk.

Our Data Security Centre helps increasingly digitised health and care organisations to meet their responsibilities while using data and technology to improve outcomes. We worked with NHS England, the Department of Health and Social Care, the National Cyber Security Centre and other partners to strengthen cyber resilience in 2017-18.

In July 2017, the Department of Health and Social Care formally accepted the National Data Guardian's data security standards and published an implementation plan for securing data and cyber security.

A system-wide Data and Cyber Security Operations Playbook was developed, clearly setting out the roles and responsibilities of organisations and individuals during an incident. These plans were tested in the first sector-wide, table-top exercise in December.

Our Cyber Security Operations Centre (CSOC) is the central source of cyber-security intelligence and incident support for the system.

Throughout the last year, it has developed its capabilities and the services it to the system. This included:

- the procurement of an advanced data security operations capability to deepen threat intelligence analysis, expand threat monitoring capabilities, and deliver new services such as threat hunting, malware analysis, and vulnerability scanning
- the establishment of a local interventions programme working directly with local organisations to provide specific, targeted, and relevant security services and capabilities. This enables leaders and operational staff to implement and embed good practice and to deliver strategic technical capabilities that will add a significant layer of protection to local networks
- developing a security innovation function to ensure the services provided by CSOC are continuously improved, meet the actual needs of local health and care organisations and address emerging threats and requirements

- the addition of advanced threat protection services into the Windows 10 agreement that provide the CSOC with the ability to monitor specific machines (for example, laptops) for malicious activity and respond in near real-time
- starting work on an enterprise-level security operating model for NHS Digital to ensure security activity is undertaken under one unified structure, removing siloed working and duplicated effort and ensuring clear roles and responsibility for security within our own organisation

Alongside these strategic activities, the CSOC team continuously improved existing services. Some notable examples include:

- adding use cases into our monitoring and analytics engine that help us identify new security threats at pace
- introducing an open source and dark-web search capability that helps to identify the origin of potential threats and threat groups and helps us be proactive in our response to these risks
- introducing a search capability to spot improper NHS domain name registrations, allowing CSOC to stop a variety of attacks including the 'spoofing' of email addresses
- developing an automated search capability that identifies hacked and defaced health and care websites

WannaCry underlined the need for better data security understanding and capability across the NHS and social care. One key issue, for example, was inadequate patching regimes in some local organisations.

We have now implemented CareCERT Collect, which requires all NHS Trusts, clinical commissioning groups (CCGs) and commissioning support units (CSUs) to report within 48-hours on action they have taken on High Severity CareCERT alerts.

We also carried out independent on-site data security assessments in 200 NHS organisations and introduced a text message alert system in November, which gives key contacts access to timely information about high-severity alerts even when internet and email systems are down.

In July 2017, we published guidance to help organisations move off unsupported operating systems and to minimise risks when such machines are still in service. We also finalised a customer support agreement with Microsoft to provide support for Windows 10 migration and for legacy machines running Windows XP, Windows Server 2003 and SQL server 2005.

A new Data Security and Protection Toolkit has replaced the Information Governance Toolkit and is available to all organisations using the NHS Contract. This is an online self-assessment tool that allows health and care organisations to measure and publish their performance against the National Data Guardian's 10 data security standards, providing organisations with an assurance framework to assess their data security capability and track compliance with the General Data Protection Regulation (GDPR) and other requirements.

Data security is now part of the Care Quality Commissions assessments of trusts, GPs and Adult Social Care providers and we are continuing to improve training for specialists and non-specialists in this area. We developed a compulsory e-learning package to help NHS staff understand their data security responsibilities as well as a simulated phishing tool, in collaboration with NHSmail, which provides organisations with the opportunity to raise awareness among their staff about the risk of clicking malicious links in phishing emails.

The NHS network's firewall blocked

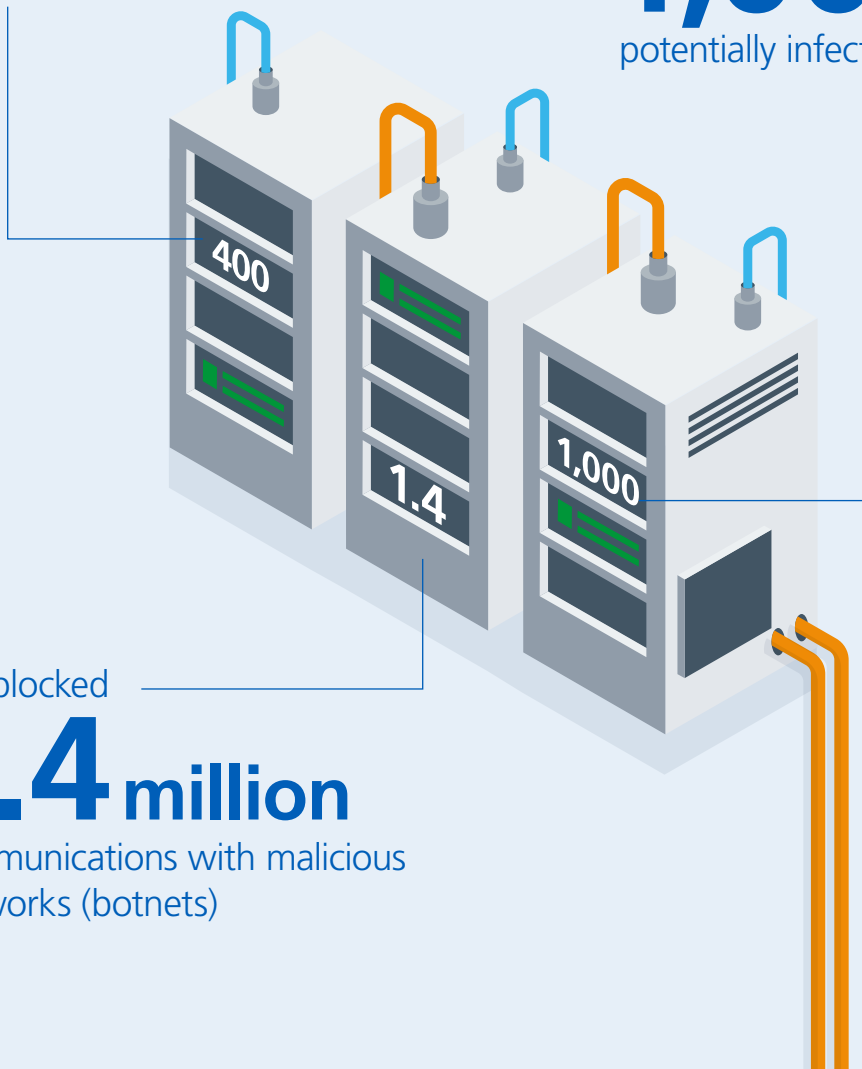
400 million

transactions during 2017-18

Security scanning detects around

1,000

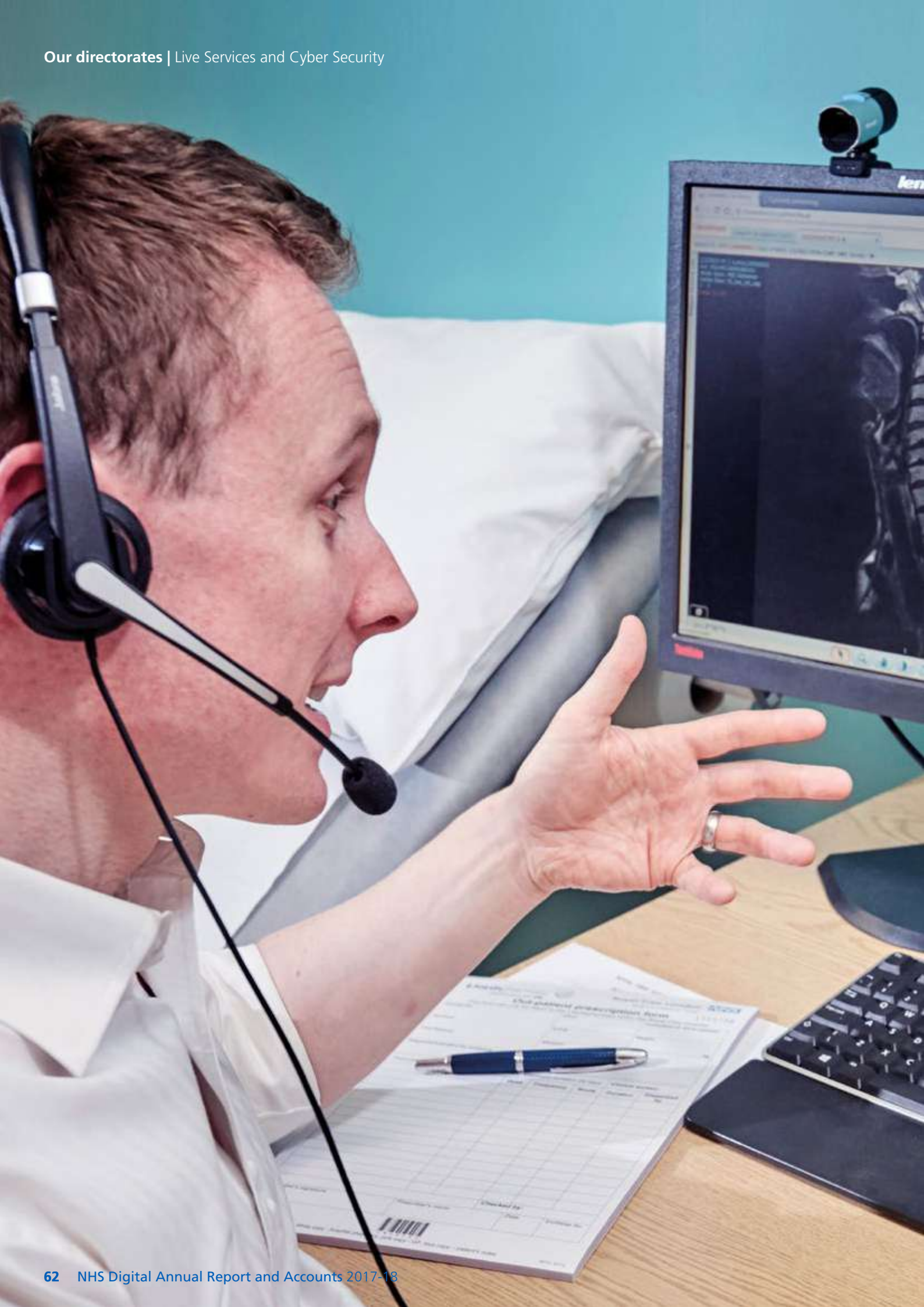
potentially infected devices each week



We blocked

1.4 million

communications with malicious networks (botnets)



Case study

NHSmail

Dr Tim Yates, a registrar in neurology at the Royal Free Hospital, used NHSmail video calls to improve support for colleagues in acute medicine.

"Instead of submitting a paper request, colleagues could video call our neurologist, share brain images and get faster, better advice," says Dr Yates.

"Being able to see your colleague's face and see their body language makes communication a lot more intimate and a lot more friendly. It is easier to see if they are stressed or concerned about a patient."

Dr Yates' team made a specialist available on NHSmail's Skype for Business video call service throughout the day. Colleagues in A&E and other acute specialisms could call and talk through cases.

"That meant that they got a really quick turnaround and they could share the images of the brain and test results on the screen. You get a complete picture straight away and get quicker, better decisions."

"This is especially helpful when clinicians are on the go as they can see the information through their tablet or smartphone."

"It gets us around the antiquated bleep system and we are not tied to a phone because we can get these alerts through our mobile devices, through a safe, secure and reliable platform."

Performance analysis

These accounts have been prepared under a direction issued by the Secretary of State for Health in accordance with the Health and Social Care Act 2012 and the 2017-18 Government Financial Reporting Manual issued by HM Treasury, as interpreted for the health sector by the Department of Health and Social Care Group Accounting Manual.

The accounting policies contained in the Financial Reporting Manual apply the International Financial Reporting Standards (IFRS) as adopted and interpreted for the public sector context. The accounts comprise a statement of financial position, a statement of comprehensive net expenditure, a statement of cash flows and a statement of changes in taxpayers' equity, all with related notes.

There has been a significant increase in our role in recent years, in particular:

- from 1 December 2016, a number of programmes and services previously owned by the Department of Health and Social Care but largely managed by NHS Digital were transferred. These included NHSmail, the Electronic Referral Service, NHS Spine, Secondary Uses Service, NHS Choices and the N3 service. Additional Grant in Aid (GIA) funding in 2017 18 has been provided to meet the running cost of these services. Non current assets with a net book value of £49.5 million were transferred in 2016 17
- additional revenue and capital funding has been received for the development and maintenance of front line informatics systems and services
- £21.8 million has been transferred by the Department of Health and Social Care, NHS England and other organisations during the year into GIA to fund additional management responsibilities for other informatics related activities some of which would have previously been funded by invoicing arrangements

Going concern

These increased responsibilities came at a time of ongoing financial pressures across the public sector and specifically the NHS. However, the funding provided to us has been largely agreed based on our three year business plan submission and whilst it will be challenging, we believe it will be financially manageable. We have therefore prepared the accounts on a going concern basis.

Financial analysis

The table below provides a summary of our results:

	2017–18 £000	2016–17 £000
Grant in Aid (GIA) allocation from the Department of Health and Social Care	354,702	258,500
Other income	35,245	44,338
Total income	**389,947**	**302,838**
Operating expenditure	(378,135)	(287,896)
Underspend	**11,812**	**14,942**

Our core GIA supports, amongst others, the:

- development of new and existing informatics systems used by front line services
- collection, analysis and dissemination of a range of data-related services, including the publication of 275 reports of official or national statistics
- development and maintenance of clinical and information standards and terminologies
- support for front line services in a range of informatics-related services and systems
- IT infrastructure, estates and support functions for the organisation

Overall, we have remained within our financial targets in the year. Operating expenditure was £378.1 million resulting in an underspend of £11.8 million. This underspend is not retained by NHS Digital but is redeployed by the Department of Health and Social Care for use within the wider health service.

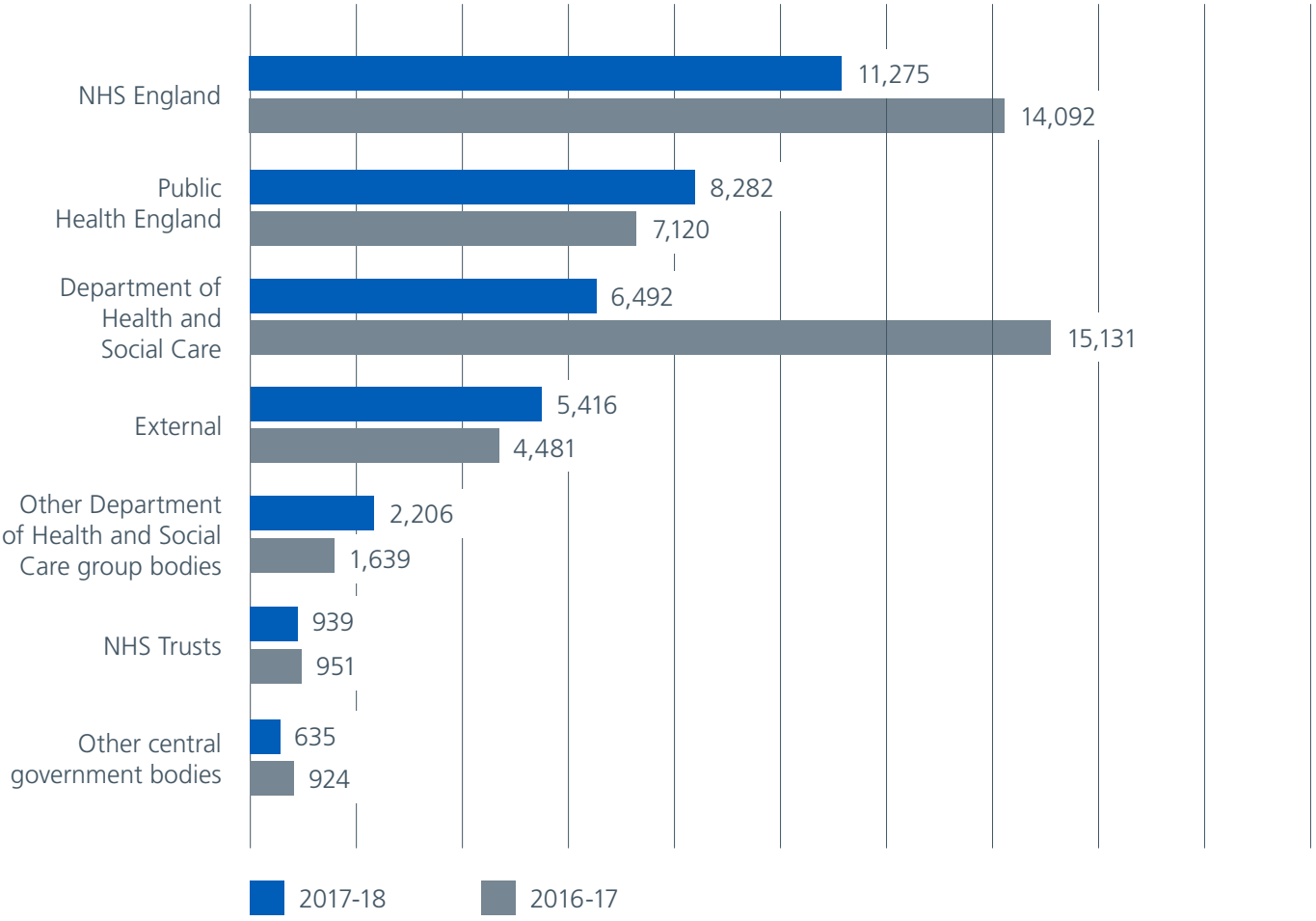
The provision of data-related services and our corporate support activities are classified as 'administration' with all other activities treated as 'programme'. An underspend has been achieved in both.

Income analysis

Income includes the:

- development of informatics related systems
- design and management of clinical audits
- hosting, management and development of a range of key IT systems on behalf of the NHS
- provision of contact centre services
- extraction of data and information and dissemination to customers, both inside and outside of the NHS

The breakdown of income by customer type is as follows:



We generated £35.2 million of other income (2016-17: £44.3 million), the reduction being largely due to a transfer of funding into Grant in Aid to support certain services undertaken for the Department of Health and Social Care and NHS England.

We have considered the implications of the introduction of 'IFRS 15 Contracts with Customers' from April 2018 and, in conclusion, we do not believe that there will be a material effect. Most of our annual invoiced income is in line with financial years and is on a time and material basis. Hence there is not a significant amount where payment is linked to performance obligations.

We have developed a charging policy and a rate card for staff time, with the aim of charging all customers based on full cost recovery. This is now widely used across the business and also forms the basis for costing all business cases.

The fees and charges note below is subject to audit:

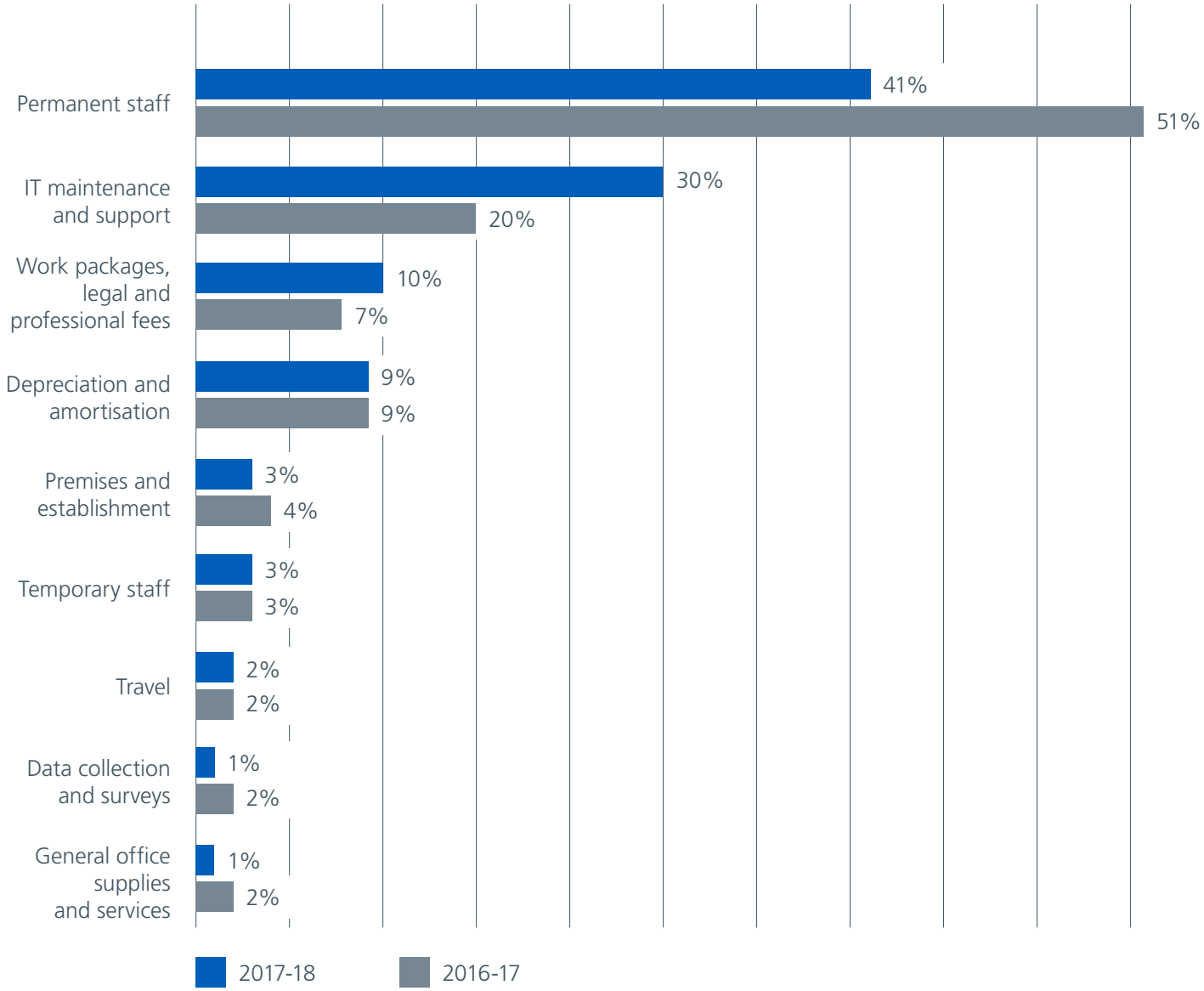
	2017–18 £000	2016–17 £000
Income	2,235	3,772
Expenditure	(2,121)	(3,945)
Surplus / (deficit)	**114**	**(173)**

Income in 2017-18 relates to 'data-related services'. This is the provision of health-related data to customer requirements, data-linkage services and data extracts for research purposes. The financial objective is to recover full cost plus a return on investment, in accordance with HM Treasury guidance 'Managing Public Money'. No charges are made for the actual data, only for the cost of providing the data to the customer in the format and to the specification required, including a fee for ensuring information governance requirements are met.

In 2016-17 the 'clinical audit programme' which relates to the collection, analysis and reporting of data across a range of clinical areas such as diabetes, renal health and various cancer specialisms was also included within fees and charges. However, the funding of this service has changed from being competitively tendered to the majority commissioned directly by NHS England and the Department of Health and Social Care. Consequently we no longer report this under fees and charges.

Operating expenditure

The following chart summarises the main categories of operating expenditure:



The transfer of responsibility for the functions transferred from the Department of Health and Social Care has made a considerable difference to the mix of expenditure. Previously, NHS Digital provided the staff resource but the third-party provider invoices were settled by the Department of Health and Social Care. With the transfer of functions, NHS Digital are responsible for all costs. Hence the mix of permanent staff resource has reduced and our third-party expenditure, notably IT-related, has increased.

Work package costs to provide short term specialist input, outsourced services and software development skills have increased to supplement internal teams. However, the ratio of temporary staff has remained largely consistent at 3%.

Non-current assets

The capital expenditure limit for 2017-18 was £91.9 million.
The actual expenditure is as follows:

	2017-18 £000	2016-17 £000
Internally and externally developed software	24,819	9,664
Development expenditure	19,514	2,270
IT hardware, including desktop and corporate infrastructure	13,792	7,051
Software licences, including desktop and corporate infrastructure licences	4,831	1,659
Refurbishments and fitting out new office space and furniture	1,139	1,256
Net book value of disposals	(624)	(644)
Total	**63,471**	**21,256**

Capital expenditure has increased significantly. The development of the informatics transformation programmes has progressed in earnest and we have undertaken a significant upgrade to our internal technologies including new laptops, tablets and mobiles to improve staff efficiency and working practices.

However, we have underspent when compared to our budget allocation, as certain programmes were not sufficiently advanced through their development cycle to enable capitalisation to occur.

Property expenditure includes increasing capacity through the refurbishment of a new floor within 2 Whitehall in Leeds, together with upgrades to Hexagon House in Exeter and Vantage House in Leeds. In particular, we have invested in improving mobile working facilities and collaboration areas.

A significant proportion of the new software and development expenditure has been created internally, with the value of internal time capitalised increasing from £5.1 million in 2016-17 to £18.0 million. This data is captured by either a time recording system or by information technology management tools, with an average hourly charge rate determined by the employee's grade applied. The rate includes the total direct cost of employment together with an incremental direct overhead cost, comprising mainly of estate and IT costs. General overhead is not capitalised. Project management time is only capitalised where time is directly attributable to the development of the asset.

Other non-current receivables relate to software licences where the subscription period is in excess of a twelve month period.

Current assets and liabilities

Outstanding accounts receivable balances amount to £12.0 million (31 March 2017: £15.8 million). This is a significant reduction and is partly a result of the reduced level of income in 2017-18.

Prepayments amount to £16.7 million (31 March 2017: £11.1 million), the increase largely due to the level of prepaid subscription licences. Accrued income amounts to £0.9 million (31 March 2017: £4.1 million), which represents work completed but not yet invoiced.

The amount more than 60 days overdue was £0.2 million (31 March 2017: £0.2 million). Debts amounting to £1,358 were written off and £1,157 was provided for as irrecoverable. Debts previously provided of £755 were released following recoveries of amounts due.

We had very limited exposure to financial instruments with balances only consisting of cash, trade receivables and payables.

Cash flow was managed to meet operational requirements throughout the year by drawing down sufficient cash from the Grant in Aid allocation.

We seek to comply with the Better Payments Practice Code (BPPC) by paying suppliers within 30 days of receipt of an invoice. The percentage of non-NHS invoices paid within this target increased to 99.5 per cent (31 March 2017: 98.2 per cent), a considerable increase considering the growth in the number of invoices and increase in complexity. The days outstanding at 31 March 2018 also reduced to 11.5 days from 19.9 days at 31 March 2017.

Better Payments Practice Code	Number	£000
Total non-NHS bills paid 2017-18	8,785	259,598
Total non-NHS bills paid within target	8,622	258,354
Percentage of non-NHS bills paid within target	**98.1%**	**99.5%**
Total NHS bills paid 2017-18	213	3,243
Total NHS bills paid within target	205	3,141
Percentage of NHS bills paid within target	**96.2%**	**96.8%**
Total value of invoices processed in 2017-18		262,841
Total value of invoices outstanding at 31 March 2018		8,305
Number of days outstanding		11.5

The calculations on the previous page use the formula agreed by users of NHS Shared Business Services (SBS). SBS stipulate that the number of days outstanding is calculated from the date a validly presented invoice is processed on the SBS system to the date a payment is initiated. We are conscious that this calculation can understate the time taken because it takes a considerable time from the 'invoice' date to processing the invoice on the system. SBS offers a free solution to all suppliers called 'Tradeshift', which allows suppliers to electronically upload invoices to the SBS system in real time.

Government guidance is to pay 80 per cent of all suppliers' invoices that are not disputed within five working days. This target is particularly challenging for NHS Digital given the complexity of many of our transactions. In 2017-18, we paid 40.4 per cent (2016-17: 29.7 per cent) based on volume, and 50.0 per cent based on value (2016-17: 50.0 per cent) within the five-day target.

The following analysis compares NHS Digital performance on certain key transaction processing measures against both SBS expectations and the SBS client base:

	NHS Digital	All SBS ALB clients	SBS target
% of invoices with a purchase order	88%	19%	80%
Days elapsed from requisition creation to approval	2.8	1.7	2.0
Days elapsed from requisition approval to purchase order creation	3.5	3.2	2.0
% of electronic invoices	19%	15%	80%
Days taken to approve processed purchase order invoices	11.0	20.0	7.0
Average time from invoice approval to payment	2.0	5.0	7.0

Overall we compare very well. The increased time taken to convert requisitions to purchase orders is largely due to the 'technical approver' process, whereby Finance check the accounting and VAT treatment at the outset. We believe we are the only SBS client to do this, but the slight delay is more than compensated for by the improved accuracy in ensuring transactions are coded correctly at source.

Another factor is that we purchase very few products through standard catalogues and so the majority of requisitions require review by the central commercial team.

Our strict requirement on the use of purchase orders does result in delays in processing invoices with the average time elapsed between invoice date and processing being 20 days. The cause is a mixture of supplier invoicing errors and our internal teams not always sending suppliers the appropriate purchase order number in a timely manner. However, once an invoice is in the workflow for us to action then the turnaround is very quick.

Political and charitable donations
No political or charitable donations were made in the year.

Sustainable development
Information about our environmental impact and sustainability is included in Appendix A on page 150.

Auditors
These accounts have been audited by the Comptroller and Auditor General, who has been appointed under statute and is responsible to Parliament. The audit fee for 2017-18 was £115,000 (2016-17: £125,000). The audit fee includes only audit work. No additional payments were made.

The Accounting Officer has taken all steps to ensure she is aware of any relevant audit information and to ensure that NHS Digital's auditors are aware of that information. To the best of the Accounting Officer's knowledge, there is no relevant audit information of which the NHS Digital's auditors are unaware.

The internal audit service during the financial year was provided by the Department of Health and Social Care Group Internal Audit Service.

Managing performance and risk

Effective performance management across our organisation ensures we meet our statutory obligations and our commitments to stakeholders. It facilitates the delivery of our strategic and operational goals and minimises risk for NHS Digital and stakeholders. We use financial and non-financial Key Performance Indicators (KPIs) and other management information to continuously monitor performance.

Each KPI is assessed on a Red Amber Green (RAG) threshold model, with detailed analysis when performance issues occur. These indicators are integral to the routine business of the Board and our Executive Management Team and are published regularly on our website as part of the Board papers.

The Board-level KPIs are organised into the following groups:

Group	Description	Responsible director
Programme delivery	Provides a consolidated view of the delivery status of our portfolio of programmes, focussing on the overall delivery confidence, and including aggregated findings from gateway reviews.	Director of Digital Transformation and Engagement
IT service performance	Reports on the performance of information technology services for health and care providers, looking at service availability, incident response times, and high severity service incidents.	Deputy Chief Executive and Managing Director of Platforms, Infrastructure and Live Services
Workforce	Includes workforce planning and recruitment, staff turnover, staff engagement, training and development, personal development reviews, and sickness absence rates.	Executive Director: Chief People Officer
Data security	Provides a composite view of internal and external information security incidents and related cyber issues.	Deputy Chief Executive and Managing Director of Platforms, Infrastructure and Live Services
Data quality	Looks at the quality of data received by NHS Digital from health and care providers and the effectiveness of our data quality processes.	Executive Director: Data, Insights and Statistics
Financial management	Covers the management of our organisational finances and other significant funding streams we manage. The performance reports also include the organisation's management accounts.	Executive Director: Chief Finance Officer

Our high level KPIs used to monitor performance include:

Performance tracker: Rolling 12 months

Performance Indicator	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18
Programme delivery	A	A/G	A	A	A/G	A/G	A/G	A/G	A	A/G	A/G	A/G
IT service performance	R	R	G	A	G	G	A	G	A	R	R	A
Workforce	A	A	A	A	A	A	A	A	A	A	A	A
Data security	A/G	A/G	A	A	A	A	A	A/G	A/G	A/G	A/G	A/G
Data quality (quarterly)					A		A			A		
Financial management		R	R	R	R	R	R	R	A/R	A/R	A/R	A/R

As at the end of March 2018:

Workforce

Is reported as Amber. 2017-18 saw 474 external recruits join and 183 employees leave, giving a net increase of 291 employees. Recruitment activity reduced towards the end of the year as new checks and balances were implemented to ensure that recruitment is necessary, affordable and sustainable. Staff turnover throughout the year was relatively consistent, in the range of 7.0 per cent to 7.5 per cent. Staff sickness remained within the target levels for 2017-18, but both short-term and long-term sickness levels increased compared to the previous year.

Financial management

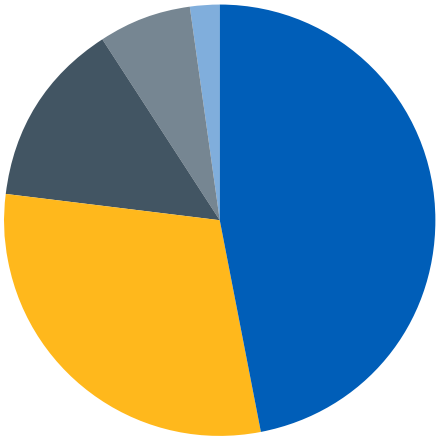
Is reported as Amber-Red as the net revenue cost is more than 5 per cent below budget. Revenue expenditure at month 12 is anticipated to be £10.7 million under budget (excluding depreciation), primarily due to slower than budgeted delivery and delays for business case approvals.

Year-to-date capital expenditure was forecast to be £28.3 million under budget due to lower than anticipated headcount capitalisation, programme scope changes and slower than anticipated ramp-up of programme activity.

Programme delivery
Is reported as Amber-Green. Overall delivery confidence across the NHS Digital portfolio of informatics development programmes was 65 per cent, the strongest level reported at any point during 2017-18. Programme delivery confidence has improved across the portfolio as the outcome of a system-wide reprioritisation exercise has resulted in fewer programmes and clearer plans, scopes, and delivery milestones. Other factors behind improved delivery confidence include system-wide work to streamline programme governance, assurance and approvals processes, stronger engagement with suppliers, and the fact that more programmes are moving into delivery phases in which delivery confidence tends to be greater.

IT service performance
Is reported as Amber. For March 2018, 94 per cent of services for which performance data is confirmed (59 out of 63) achieved their availability target. 100 per cent of high severity service incidents (41 out of 41) were resolved within their target fix time. 100 per cent of services (12 out of 12) achieved their response time target. The main service performance issue experienced in 2017-18 concerned multiple problems affecting the PCTi's Docman 10 system, a new electronic document management and workflow system used by GP practices. There is no clinical risk associated with this system, but GP administrative processes experienced significant disruption. NHS Digital has initiated an action plan with the supplier to resolve these issues.

Programme milestones



Key

- Complete
- On schedule
- Behind schedule
- Missed target date
- No report

Across the informatics development portfolio there are 539 programme delivery milestones which cover the period through to 2020-21.

These milestones include a mix of highly important deliverables such as ministerial commitments and key outcomes for patients and practitioners, a range of other so-called 'significant milestones', plus lower-level milestones relating to internal programme management and governance. Of these 539 milestones, 253 had been completed by the end of 2017-18 and a further 159 are on track to be completed on schedule.

During 2017-18 the portfolio of informatics development programmes underwent a process of review. As a result, many of the programmes have new delivery plans and timescales, with updated milestones.

Managing risk

We have improved the integration of our corporate risk and assurance functions during 2017-18. The use of risk management performance metrics is starting to drive an overall improvement in data quality and risk-management behaviours, although further action is needed. A fuller explanation of our risk management process is on page 105 of this report.

An independently assured review of our capability was undertaken to assess our ability to meet these commitments, as well as our existing statutory and corporate commitments. It assessed current capacity and capabilities against the emerging requirements for delivery.

As a result, we are acting to improve our delivery model, review our workforce capacity and capabilities, improve engagement with clients and stakeholders and change how we work with national partners. We have established a new team to implement the actions emerging from the review and a new structure.

This team will improve how we understand the requirements of local health and care organisations, whilst ensuring that our programmes meet local needs and are implemented on the ground in local health economies.

During 2017-18 we identified and managed several significant corporate risks.

These risks included:

- the funding and capacity to provide the support required by the system to manage cyber risk and/or respond to incidents
- the delivery of NHS Digital internal organisational restructuring
- the external/internal loss of data or data privacy issue may result in a loss of public trust in data sharing and impact on our ability to collect and disseminate data
- the effective and timely implementation of the national data opt-out model, within a wider public communications approach, by May 2018
- the achievement of General Data Protection Regulations compliance by May 2018 and beyond
- Data Services for Commissioners Regional Offices failure to fully apply data controls/ standards to data releases
- the mobilisation, affordability, capacity and capability to deliver the programme portfolio
- the ability to recover from a disruptive event in an effective and timely manner
- the risk exposures arising from the exit of the UK from the EU, scheduled for March 2019

Sarah Wilkinson
Chief Executive
20 June 2018

Accountability report

Remuneration and staff report
This report for the year ended 31 March 2018 deals with the pay of the Chair, Chief Executive and other senior management.

Remuneration Committee
The pay of the executive Board directors is set by the Talent, Remuneration and Management Committee based on the recommendations of the Senior Salaries Review Board and is reviewed on an annual basis.

NHS Digital operates the NHS Executive and Senior Manager (ESM) pay framework with the approval, where necessary, of the Department of Health and Social Care Remuneration Committee. This includes a job evaluation scheme, administered by the NHS Business Services Authority, and provision for a maximum five per cent bonus for not more than the top 25 per cent of performers within the ESM group. Two bonus payments were made in 2017 18 through this mechanism, reflecting performance during 2016 17, details of which are contained in the Remuneration Report. The scheme also provides for an annual pay award as a flat rate payment based on 1% of the average ESM salary. The award was made to eight ESMs during 2017 18 four of whom are members of the Board or Executive Management Team and are included in the Remuneration report.

The Chief Executive and other executive directors are not present for discussions about their own remuneration and terms of service but are able to attend meetings of the committee, at the Chair's invitation, to discuss other employees' pay and terms of service.

Remuneration policy
The standard remuneration arrangements for NHS Digital are those provided under the national NHS Agenda for Change (AfC) terms and conditions of employment. This includes a job evaluation scheme that has been tested and demonstrated to be equality proofed.

The AfC pay award for 2017 18, as recommended by the NHS Pay Review Body, comprised a one per cent increase to all pay points.

Comparable arrangements were implemented for staff that had transferred into NHS Digital with terms and conditions protected under the Transfer of Undertakings (Protection of Employment) regulations, except where there was a legal entitlement to a protected pay award.

Service contracts
During 2017 18, all executive directors were employed on permanent employment contracts with a six month notice period and worked for NHS Digital full time. If contracts are terminated for reasons other than misconduct, they come under the terms of the NHS compensation schemes.

From 1 April 2014, all non executive directors' contracts in place at that time were reviewed through the Department of Health and Social Care Appointments Team, and its terms and conditions applied to them. Individual contracts are as follows:

	Actual commencement date	Current contract commencement date	End date
Noel Gordon	1 June 2016	1 June 2016	31 May 2020
Sir Ian Andrews	1 April 2013	1 January 2017	31 December 2018
Dr Sarah Blackburn	15 September 2014	15 September 2016	14 September 2018
Marko Balabanovic	1 January 2017	1 January 2017	31 December 2019
Daniel Benton	1 January 2017	1 January 2017	31 December 2020
Professor Soraya Dhillon	1 January 2017	1 January 2017	31 December 2020
Professor Sudhesh Kumar	1 January 2017	1 January 2017	31 December 2019
Rob Tinlin	1 January 2017	1 January 2017	31 December 2019

Non executive directors are not entitled to compensation for loss of office or early termination of appointment.

Salaries and pensions of senior management

The remuneration and pension disclosures relating to senior staff in post during 2017-18 and 2016-17 are detailed in the tables below and are subject to audit. The figures provided consist of basic pay, performance pay, pension benefits and benefits in kind. They do not include employer pension contributions nor the cash equivalent transfer value of pensions.

		Appointment date	Resignation date
Sarah Wilkinson	Chief Executive	14 Aug 17	
Robert Shaw	Deputy Chief Executive		
Carl Vincent	Chief Finance Officer		
Martin Severs[4]	Chief Medical Officer and Caldicott Guardian		
Thomas Denwood	Director of Data and Integration		
James Hawkins[3]	Director of Programmes		31 Dec 17
David Hughes	Director of Information and Analytics	22 Aug 16	20 Jul 17
Sean Walsh	Head of Regions, Professions and Org2	01 Apr 17	
Nic Fox[3]	Director of Provider Digitisation and Programmes	26 Jun 17	31 Dec 17
Eve Roodhouse[3]	Director of Implementation and Programmes	26 Jun 17	31 Dec 17
Ken Baker	Chief People Officer	09 Oct 17	
Rachael Allsop[2]	Director of Workforce		31 Oct 17
Beverley Bryant	Director of Digital Transformation	01 Jun 16	31 Jul 17
Roberta Barker	Interim Director of People and Organisational Development	12 Jun 17	06 Oct 17
Andy Williams[1]	Chief Executive		27 Feb 17
Peter Counter	Chief Technology Officer		30 Apr 16
Isabel Hunt	Director of Customer Relations		05 Jun 16
Linda Whalley	Director of Strategy and Policy		05 Jun 16

There were no benefits in kind. Senior staff are those who are NHS Digital Board members and those who attend the core Executive Management Team.

*All benefits in the year from participating in pension schemes but excluding employee contributions. These are the aggregate amounts, calculated using the method set out in Section 229 of the Finance Act 2004 (i) and using the indices directed by the Department of Health and Social Care. (see https://www.nhsbsa.nhs.uk/sites/default/files/2017-12/Disclosure_of_Snr_Man_Rem_Greenbury2018-20171204-V1.pdf)

2017-18						2016-17				
Salary (bands of £5,000)	Performance pay (bands of £5,00)	Exit package	*Pension benefits (bands of £2,500)	Total (bands of £5,000)	Full year equivalent salary (bands of £5,000)	Salary (bands of £5,000)	Performance pay (bands of £5,000)	*Pension benefits (bands of £2,500)	Total (bands of £5,000)	Full year equivalent salary (bands of £5,000)
120-125	-	-	25-27.5	145-150	190-195	-	-	-	-	-
165-170	5-10	-	110-112.5	280-285	165-170	145-150	5-10	102.5-105	255-260	145-150
130-135	-	-	30-32.5	160-165	130-135	110-115	-	25-27.5	140-145	110-115
150-155	5-10	-	-	155-160	140-145	130-135	-	(45-47.5)	85-90	130-135
125-130	-	-	45-47.5	170-175	125-130	120-125	-	30-32.5	150-155	120-125
90-95	-	-	10-12.5	100-105	120-125	125-130	-	35-37.5	160-165	125-130
45-50	-	-	10-12.5	55-60	145-150	90-95	-	20-22.5	110-115	145-150
120-125	-	-	115-117.5	235-240	120-125	-	-	-	-	-
50-55	-	-	32.5-35	85-90	100-105	-	-	-	-	-
50-55	-	-	85-87.5	140-145	100-105	-	-	-	-	-
50-55	-	-	45-47.5	95-100	105-110	-	-	-	-	-
45-50	-	-	35-37.5	85-90	75-80	135-140	5-10	150-152.5	290-295	135-140
45-50	-	-	2.5-5	50-55	145-150	120-125	-	37.5-40	160-165	145-150
40-45	-	30-35	-	75-80	135-140	-	-	-	-	-
-	-	-	-	-	-	185-190	-	-	185-190	185-190
-	-	-	-	-	-	10-15	-	-	10-15	140-145
-	-	-	-	-	-	20-25	-	-	20-25	125-130
-	-	-	-	-	-	20-25	-	-	20-25	90-95

[1] Andy Williams resigned as Chief Executive on 27 February 2017. He subsequently acted as a special advisor to the interim Chief Executive until 31 March 2017. His salary for the full year has been included.

[2] Rachael Allsop worked on a part time basis from May 2017 until she resigned on 31 October 2017.

[3] Stood down following the restructure of the Executive Management Team membership.

[4] Martin Severs' salary includes back dated pay that relates to 2016-17.

Non-executive director remuneration

				2017-18	2016-17
		Appointment date	Resignation date	Total salary (bands of £5,000)	Total salary (bands of £5,000)
Noel Gordon	Chair	01 Jun 16	-	60-65	50-55
Sir Ian Andrews	Non-executive director	-	-	10-15	15-20
Sarah Blackburn	Non-executive director	-	-	10-15	10-15
Marko Balabanovic	Non-executive director	01 Jan 17	-	5-10	0-5
Daniel Benton	Non-executive director	01 Jan 17	-	5-10	0-5
Professor Soraya Dhillon	Non-executive director	01 Jan 17	-	5-10	0-5
Professor Sudhesh Kumar[1]	Non-executive director	01 Jan 17	-	5-10	0-5
Rob Tinlin	Non-executive director	01 Jan 17	-	5-10	0-5
Kingsley Manning	Chair	-	31 May 16	-	10-15
Sir Nick Partridge	Non-executive director	-	31 Dec 16	-	5-10
Maria Goddard	Non-executive director	-	31 Mar 17	-	5-10
John Chisholm	Non-executive director	-	31 Dec 16	-	-

[1] Sudhesh Kumar is seconded from the University of Warwick and costs relate to the total value of charges nett of irrecoverable VAT.

No performance pay, benefits in kind or pension-related benefits were paid.

The emoluments of the Chair and the non-executive directors do not include employer National Insurance contributions. The total included in note five of the accounts do include such contributions.

Directors' expenses during 2017-18 are detailed on our website at digital.nhs.uk/board-directors-expenses

Pension benefits

Pension benefits were provided through the NHS Pension scheme.

	Accrued benefits				Cash equivalent transfer values		
Pension benefits (subject to audit)	Real increase in pension (bands of £2,500)	Real increase in pension lump sum (bands of £2,500)	Total accrued pension at 31 March 2018 (bands of £5,000)	Lump sum related to accrued pension at 31 March 2018 (bands of £5,000)	CETV at 31 March 2018 (£000)	CETV at 31 March 2017 (£000)	Real increase in CETV (£000)
Sarah Wilkinson	0-2.5	0-2.5	0-5	0-5	22	-	5
Robert Shaw	5-7.5	7.5-10	65-70	175-180	1,237	1,064	138
Carl Vincent	0-2.5	0-2.5	5-10	0-5	74	44	10
Martin Severs	-	-	-	-	-	-	-
Thomas Denwood	2.5-5	0-2.5	20-25	45-50	289	238	30
James Hawkins	0-2.5	(0-2.5)	20-25	40-45	317	277	18
David Hughes	0-2.5	0-2.5	50-55	0-5	724	665	14
Sean Walsh	5-7.5	15-17.5	35-40	105-110	729	588	118
Nic Fox	0-2.5	2.5-5	15-20	45-50	261	223	15
Eve Roodhouse	2.5-5	7.5-10	20-25	50-55	282	175	49
Ken Baker[1]	0.2-5	5-7.5	20-25	60-65	-	-	-
Rachel Allsop	0.2-5	5-7.5	60-65	185-190	1,340	1,194	74
Beverley Bryant	0-2.5	0-2.5	15-20	0-5	175	153	5
Roberta Barker	-	-	-	-	-	-	-

[1] Ken Baker has no CETV at 31 March 2018 as he reached pensionable age during the year.

A Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme, an arrangement to secure pension benefits in another pension scheme or an arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former pension scheme.

The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies.

The CETV figures, and from 2003-04, other pension details including the value of any pension benefit in another scheme or arrangement that the individual transferred to the civil service pension arrangements and for which the civil service vote received a transfer payment commensurate to the additional pension liabilities being assumed. They also include any additional pension benefit accrued to the member as a result of them purchasing additional years of pension service in the scheme at their own cost. CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries and do not take account of any actual or potential reduction to benefits resulting from Lifetime Allowance Tax, which may be due when pension benefits are drawn.

The real increase in CETV reflects the increase effectively funded by the employer. It excludes the increase in accrued pension due to inflation and contributions made by the employee (including the value of any benefits transferred from another pension scheme or arrangements) and uses common market valuation factors for the start and end of the period.

Staff numbers and related costs

The staff costs, average number of whole time equivalent persons employed and the relationship between the highest paid director and the median of the workforce are subject to audit:

Staff costs comprise:	2017-18 £000	2016-17 £000
Permanent staff		
Salaries and wages	134,803	120,634
Social security costs	14,788	13,201
Apprenticeship levy	657	-
Employer superannuation contributions - NHS Pension Scheme	17,192	15,370
Employer superannuation contributions - other	447	354
Staff seconded to other organisations	1,331	704
Termination benefits	659	111
	169,877	**150,374**
Other staff		
Temporary staff	2,388	1,335
Contractors	9,573	8,873
Staff seconded from other organisations	1,147	700
	13,108	**10,908**
Capitalised staff costs	(17,995)	(5,084)
	164,990	**156,198**

The average number of whole term equivalent persons employed during the year was:	2017-18 £000	2016-17 £000
Permanent staff and secondees	2,913	2,665
Temporary and contract staff	131	100
Total	**3,044**	**2,765**
The average number of whole term equivalent persons employed during the year whose time was capitalised	291	92

There were no amounts spent on staff benefits during the year and there was one early retirement on the grounds of ill health. At the time of preparing the accounts the accrued pension benefit information for the individual retired on the grounds of ill health was not available. This will be disclosed in the accounts prepared for the next reporting period.

The relationship between the remuneration of the highest paid director and the median remuneration of the workforce is as follows:

	Highest paid director £000	Range of staff remuneration £000	Median pay of the workforce £000	Ratio to the median of the workforce
2017–18 excluding pension benefit	190-195	13,758 to 218,453	41,787	4.6
2016–17 excluding pension benefit	185-190	13,758 to 195,536	41,373	4.5

There have been no material changes to the range of staff remuneration or the median pay. The median pay increased in line with the pay award.

Four members of staff received full time equivalent remuneration in excess of the highest-paid director. There are eight posts, as of 31 March 2018, that meet the criteria of Board members and/or senior officials with significant financial responsibility.

Pension information

Most NHS Digital staff are covered by the NHS Pensions Schemes (the 1995/2008 Scheme and the 2015 Scheme).

NHS Pension Scheme
Past and present employees are covered by the provisions of the two NHS Pensions Schemes. Details of the benefits payable and rules of the Schemes can be found on the NHS Pensions website at www.nhsbsa.nhs.uk/pensions. Both are unfunded, defined benefit schemes that covers NHS employers, GP practices and other bodies, allowed under the direction of the Secretary of State, in England and Wales. They are not designed to be run in a way that would enable NHS bodies to identify their share of the underlying scheme assets and liabilities. Therefore, each scheme is accounted for as if it were a defined contribution scheme whereby the cost to NHS Digital of participating in each scheme is taken as equal to the contributions payable to that scheme for the accounting period.

In order that the defined benefit obligations recognised in the financial statements do not differ materially from those that would be determined at the reporting date by a formal actuarial valuation, the Financial Reporting Manual (FReM) requires that "the period between formal valuations shall be four years, with approximate assessments in intervening years". An outline of these follows:

a) Accounting valuation
A valuation of scheme liability is carried out annually by the Scheme actuary (currently the Government Actuary's Department) as at the end of the reporting period. This utilises an actuarial assessment for the previous accounting period in conjunction with updated membership and financial data for the current reporting period and is accepted as providing suitably robust figures for financial reporting purposes. The valuation of the Scheme liability as at 31 March 2018, is based on valuation data as 31 March 2017, updated to 31 March 2018 with summary global member and accounting data. In undertaking this actuarial assessment, the methodology prescribed in International Accounting Standard 19, relevant FReM interpretations, and the discount rate prescribed by HM Treasury have also been used.

The latest assessment of the liabilities of the scheme is contained in the Scheme actuary report, which forms part of the annual NHS Pension Scheme (England and Wales) Pension Accounts. These accounts can be viewed on the NHS Pensions website and are published annually. Copies can also be obtained from The Stationery Office.

b) Full actuarial (funding) valuation
The purpose of this valuation is to assess the level of liability in respect of the benefits due under the Schemes (taking into account recent demographic experience), and to recommend contribution rates payable by employees and employers.

The last published actuarial valuation undertaken for the NHS Pension Scheme was completed for the year ending 31 March 2012. The Scheme regulations allow contribution rates to be set by the Secretary of State for Health and Social Care, with the consent of HM Treasury, and consideration of the advice of the Scheme actuary and employee and employer representatives as deemed appropriate.

The next actuarial valuation has been carried out as at 31 March 2016 and is currently being prepared. The direction assumptions are published by HM Treasury which are used to complete the valuation calculations, from which the final valuation report can be signed off by the Scheme actuary.

This will set the employer contribution rate payable from April 2019 and will consider the cost of the Scheme relative to the employer cost cap. There are provisions in the Public Service Pension Act 2013 to adjust member benefits or contribution rates if the cost of the Scheme changes by more than two per cent of pay. Subject to this 'employer cost-cap' assessment, any required revisions to member benefits or contribution rates will be determined by the Secretary of State for Health after consultation with the relevant stakeholders.

Members can purchase additional service in the NHS Pension Scheme and contribute to Money Purchase Additional Voluntary Contributions run by the Scheme's approved providers or by other free standing additional voluntary contributions providers.

Employees who do not wish to join the NHS Occupational Pension Scheme can opt to join the National Employment Savings Trust (NEST) scheme. This is a stakeholder pension scheme based on defined contributions. The minimum combined contribution is current two per cent of qualifying earnings, of which the employer must pay one per cent, rising to eight per cent in 2018, of which the employer must pay three per cent. Employees can choose to pay more into the fund, subject to a current cap of £4,700 per annum. Seventeen NHS Digital employees were members of the NEST Scheme during 2017-18.

The Principal Civil Service Pension Scheme
The Principal Civil Service Pension Scheme (PCSPS) and the Civil Servant and Other Pension Scheme (CSOPS), known as 'alpha', are unfunded multi-employer defined benefit schemes. NHS Digital is unable to identify its share of the underlying assets and liabilities. The Scheme actuary valued the Scheme as at 31 March 2012. Details can be found in the resource accounts of the Cabinet Office at www.civilservice-pensions.gov.uk.

For 2017-18, employer's contributions of £444,610 were payable to the PCSPS (2016-17 £450,675) at one of four rates in the range 20.0 per cent to 24.5 per cent of pensionable earnings, based on salary bands. The Scheme actuary reviews employer contributions usually every four years following a full Scheme valuation. The contribution rates are set to meet the cost of the benefits accruing during 2017-18 to be paid when the member retires and not the benefits paid during this period to existing pensioners.

Employees can opt to open a Partnership Pension Account, a stakeholder pension with an employer contribution. Employer contributions are age-related and range from eight per cent to 14.75 per cent of pensionable earning. Employers also match employee contributions up to three per cent of pensionable earnings. No employees have opted for the Partnership Pension Account.

Sickness absence data
During 2017 12,940 (2016: 12,033) working days were lost due to sickness absence. This represented 4.5 (2016: 4.5) working days per employee. The above figures are based on calendar years, not financial years, and were centrally produced from the Electronic Staff Record. Average sickness absence for 2017 was 2.0 per cent.

Consultancy
The total spend on consultancy, as defined by HMT guidance was £333,000.

Health and safety
We have legal responsibilities in relation to the health, safety and welfare of our employees and for all people using our premises. We comply with the Health and Safety at Work Act (1974) and also operate a Health and Safety Committee under the Safety Representatives and Safety Committee regulations (1977). Training on fire-related health and safety is mandatory and there are online learning packages available for other health and safety topics, including manual handling and work with visual-display equipment.

Exit packages

Total staff termination packages are detailed as follows and are subject to audit:

2017-18						
Cost band	No. of compulsory redundancies	No. of other departures agreed	Total number of exit packages	Cost of compulsory redundancies £	Cost of other departures agreed £	Total cost of exit packages £
£0-£10,000	3	-	**3**	20,413	-	**20,413**
£25,000-£50,000	1	8	**9**	34,021	300,000	**334,021**
£50,000-£100,000	-	4	**4**	-	304,380	**304,380**
Total	**4**	**12**	**16**	**54,434**	**604,380**	**658,814**

Other departures relate to contractual costs under a mutually agreed resignation scheme.

2016-17						
Cost band	No. of compulsory redundancies	No. of other departures agreed	Total number of exit packages	Cost of compulsory redundancies £	Cost of other departures agreed £	Total cost of exit packages £
£25,000-£50,000	1	-	**1**	34,242	-	**34,242**
£50,000-£100,000	1	-	**1**	72,049	-	**72,049**
Total	**2**	**-**	**2**	**106,291**	**-**	**106,291**

Review of tax arrangements of public sector appointees – off-payroll engagements

As part of the Review of Tax Arrangements of Public Sector Appointees, published by the Chief Secretary to the Treasury on 23 May 2012, we are required to publish (via the Department of Health and Social Care) information about the number of off-payroll engagements that are in place and where individual costs exceed £245 per day.

The following is a breakdown of all off-payroll engagements as of 31 March 2018 that were for more than £245 per day and lasted longer than six months:

	Number
Number of existing engagements as of 31 March 2018	64
Of which, the number that have existed:	
for less than one year at the time of reporting	57
for between one and two years at the time of reporting	7
for between 2 and 3 years at the time of reporting	-
for between 3 and 4 years at the time of reporting	-
for 4 or more years at the time of reporting	-

The table below shows all new off-payroll engagements between 1 April 2017 and 31 March 2018 that were for more than £245 per day and lasted for more than six months:

	Number
Number of new engagements, or those that reached six months in duration, between 1 April 2017 and 31 March 2018	109
Of which...	
The number assessed as caught by IR35	2
The number assessed as not caught by IR35	107
Number engaged directly (via a Personal Service Company contracted to NHS Digital) and are on the payroll	-
No. of engagements reassessed for consistency / assurance purposes during the year	109
No. of engagements that saw a change to IR35 status following the consistency review	1

We have implemented an assurance process in line with guidance issued by the Department of Health and Social Care. This includes requesting appropriate assurance from contractors as and when it is clear that their engagement is likely to exceed a six-month period. All contractors have been assessed using the toolkit supplied by HMRC in late February 2017.

We are committed to maintaining an on-payroll workforce to support the delivery of our work. However, it is recognised that with such a significant element of our activity being project based - and thus with peaks and troughs in requirements - making the most beneficial use of temporary labour market is necessary to optimise our ability to deliver. In addition, many of our programmes require specialist input on a temporary basis and it is not always cost-effective to permanently recruit such skills. The total cost of temporary labour has increased in the year at £13.1 million, compared to £10.9 million in 2016-17, but remains 3 per cent of operating expenditure.

Diversity and inclusion

We promote inclusive practices in our day-to-day interactions with our employees, with executive director level accountability for driving diversity and inclusion across the business.

Over the next three years, we aim to:

- deliver appropriate learning and development to ensure that all staff members develop a good level of equality and diversity awareness
- work toward having no difference in the employment outcomes for our staff or potential recruits because of protected characteristics
- develop best practice in workforce equality and diversity by creating internal and external networks and supporting positive action
- deliver clearer, more representative, and more accessible information and guidance to the public and service users, in line with industry best practice
- establish a network of staff to investigate how we can ensure that our products, policies and behaviours reflect the communities we serve and do not disadvantage (or otherwise negatively impact) the public and users of our services
- improve our focus on protected characteristics in the information that we collect and share as the trusted national provider of high-quality information and data about health and social care. By doing this, we will improve knowledge about the health of, and care experienced by, those with protected characteristics

During 2017-18 we continued our membership of the NHS Equality and Diversity Council and reaccredited our use of the 'Disability Confident' symbol, which is externally reviewed and advertises our commitment to the employment, retention, training and career development of disabled people. We were also reaccredited with the Mindful Employer Charter as we continue to work towards removing barriers for our employees with mental health issues and have trained nearly 100 employees as Mental Health First Aiders. The NHS Digital Academy provides graduate programmes and apprenticeships to increase opportunities that include young people and has continued to focus on increasing diversity through inclusive advertising and increasing accessibility.

We are now gathering more information on attitudes to diversity and inclusion through regular staff engagement sessions and an all-staff 'pulse' survey. We have improved the induction of new recruits by providing a position statement within the new employee handbook incorporating diversity and inclusion questions and incorporating a micro-behaviours drama into the induction process. We have included video clips on fair recruitment, understanding bias, and race, gender and age discrimination in our new recruitment toolkit.

We have also rolled out mandatory online learning on understanding bias for all staff.

A pilot of an "Understanding bias – thinking fast and slow" face-to-face training programme complemented this for managers and recruiters.

Our new staff networks, including LGBT and Allies, EMBRACE (Ethnic Minorities Broadening Racial Awareness and Cultural Exchange), Age Aware, Ability Network (disabilities, long term conditions and carers) and Women's Network are all staff-led, with a core group of members, an executive sponsor and a workforce senior management team sponsor. They are critical to nurturing the culture and structures of mutual support that will help NHS Digital drive continuous improvement in this area.

Supporting diversity and inclusion is not only an internal priority – we are working to ensure it informs all of our activity. For example, we have developed easy-read versions of two key publications; the Learning Disability Services Monthly Statistics and the Health and Care of People with Learning Disabilities. These publications were co-produced by consultants with a learning disability and their carers.

The gender distribution in NHS Digital for each Agenda for Change equivalent grade is provided below:

		2017-18		2016-17	
Agenda for Change equivalent grades		**Male**	**Female**	**Male**	**Female**
Directors		7.6	2.3	5.7	3.8
Senior managers	9	52.6	17.7	37.9	12.9
	8d	90.6	42.5	95.9	35.9
Managers	8c	205.6	110.6	184.4	95.4
	8b	340.7	163.4	314.6	143.8
	8a	423.5	269.4	379.7	240.0
Other staff	7	298.2	220.3	274.2	213.0
	6	144.4	198.8	121.1	170.8
	5	103.6	151.6	97.4	156.6
	4	56.0	95.6	45.9	60.4
	3	19.0	22.2	28.5	31.9
	2	7.1	2.4	3.3	1.1
	Secondees	0.1	(1.8)	8.6	2.2
Total		**1,749.0**	**1,295.0**	**1,597.2**	**1,167.8**

There has been no significant change in the gender or grade split of our workforce. 57 per cent of all employees are male (2016-17: 58 per cent).

We are acting to promote digital careers for women, including working with Women in Digital to get more women into digital apprenticeships.

Our gender pay gap for the reporting period to March 2017 is as follows:

Mean gender pay (hourly rate)	
Women	£21.42
Men	£25.54
Gap between the mean salaries of women and men	**16.1%**

Median gender pay (hourly rate)	
Women	£20.47
Men	£23.84
Gap between the median salaries of women and men	**14.1%**

There are several potential reasons for the gap in median salaries of women and men: on average, men occupy more of the senior pay bands than women in NHS Digital. Men also generally, attract more recruitment and retention premiums (applied to certain types of specialist and technical roles for which recruitment is a challenge) and 'on call' premiums. It is noticeable that for management roles, twice as many men applied for every woman. The proportions shortlisted and appointed have a broadly similar ratio with some slight differences between grades.

The Office for National Statistics data for the equivalent period indicates that median average for public sector organisations is 13.1 per cent.

NHS Digital uses the national Agenda for Change Job Evaluation Scheme that provides a clear framework for defining roles within pay bands.

We publish an annual Diversity and Inclusion Workforce Report. The 2016-17 report is available at: https://digital.nhs.uk/Our-workforce-demographics and includes details of our gender pay gap for this period. Our 2017-18 report is scheduled for publication in the autumn (2018).

Community and social responsibility

We have a special leave policy that allows staff to take paid leave for public duties (for example, magistrate, school governor and reserve forces roles). We have also developed work experience and placement programmes that will be extended to schools, colleges and universities near our office locations over the next 12 months.

Anti-fraud, bribery and corruption

We have developed an anti-fraud, bribery and corruption policy during 2017 and will always seek the appropriate disciplinary, regulatory, civil and criminal sanctions against those who commit fraud and, where possible, recover losses.

Public sector facility time publication requirements

We work in partnership with trade union representatives on all matters affecting our employees, to ensure an effective and successful organisation. Regular Joint Negotiation and Consultation Committee meetings are held to allow discussion, consultation and negotiation on employment-related matters.

Staff members are permitted time to engage in appropriate trade union activities. Details are below:

Number of employees who were relevant union officials during the relevant period	19
FTE employee number	3,044

a) Percentage of time spent on facility time:	**Number of employees**
0%	-
1-50%	19
51%-99%	-
100%	-

b) Percentage of pay bill spent on facility time:	**£000**
Total cost of facility time	68
Total pay bill	16,877
Percentage of the total pay bill spent on facility time	0.4%
Time spent on paid TU activities as a percentage of total paid facility time hours	5%

Losses and special payments

Losses and special payments are items that Parliament would not have contemplated when it agreed funds for the health service or passed legislation. By their nature, they are items that ideally should not arise. They are, therefore, subject to special control procedures compared with the generality of payments and are also subject to audit.

During 2017-18 there were 94 losses and special payments (2016-17: 228) amounting to £20,452 (2016-17: £40,860). Losses and special payments include bad debts written off, losses of minor IT equipment and mobile phones, and payment of interest on VAT disallowed.

Interest paid under the Late Payment of Commercial Debt (Interest) Act 1998 amounted to £nil (2016-17: £nil).

Remote contingent liabilities (subject to audit)

We have not identified any significant remote contingent liabilities: liabilities for which the likelihood of a transfer of economic benefit in settlement is too remote to meet the definition of contingent liability within the meaning of IAS 37.

Sarah Wilkinson
Chief Executive
20 June 2018

Corporate governance report

Our constitution is set out in Schedule 18 of the Health and Social Care Act 2012. The formal arrangements are detailed in the Accounting Officer Memorandum sent to our Chief Executive by the Department of Health and Social Care Accounting Officer.

Additionally, a Framework Agreement is in place, which governs the relationship between the Department of Health and Social Care and our organisation. A specific Department of Health and Social Care sponsor team engages with and oversees our activities and provides a support and accountability function.

The Board

We are led by a board consisting, at 31 March 2018, of four executive and eight non-executive members including the Chair and two 'ex-officio' members. The Board is the senior decision-making body. Other senior executives attend the Board as required. The Board supports the Chief Executive, who is the Accounting Officer and is therefore accountable to both the Secretary of State for Health and Social Care and to Parliament.

Board members have a responsibility to ensure that we comply with all statutory and administrative requirements for the use of public funds. Details of the conduct of the Board and the roles and responsibilities of members are set out in the Terms of Reference which are derived from our Corporate Governance Manual, which includes our Standing Orders and Standing Financial Instructions. All these documents are reviewed annually. Board biographies and the Register of Interests are in Appendix B on page 158.

The powers retained by and the responsibilities of the Board include:

- agreeing our vision and values, culture and strategy within the policy and resources framework agreed with the Department of Health and Social Care sponsor
- agreeing appropriate governance and internal assurance controls especially in relation to financial and performance risks
- approving business strategy, business plans, key financial and performance targets and the annual accounts
- ensuring sound financial management and value for money
- supporting the Executive Management Team and holding it to account
- ensuring that we comply with any duties imposed on public bodies by statute, including (without limitation) obligations under health and safety legislation, the Human Rights Act 1998, the Data Protection Act 1998, the Freedom of Information Action 2000, the Equality Act 2010, the Public Bodies Health and Social Care Act 2011, the Health and Social Care Act 2012 and secondary legislation made under relevant acts

Board meetings

During 2017-18, six statutory public meetings were held together with a further eight business meetings.

Statutory meetings consist of:

- a meeting of the Board held in public that other members of the senior management team may attend. Members of the public may attend and observe. Papers and previous minutes are made available via the NHS Digital website (www.digital.nhs.uk/about-nhs-digital) in advance of the meeting
- a meeting of the Board held in private at which items of a commercial or confidential nature are tabled that cannot be discussed in public

In addition to standing agenda items on the governance and performance of our organisation, the statutory meetings discussed a range of topics including:

- clinical governance safety
- outcomes and implementation of the Capability Review
- the consideration of various directions and mandatory requests, particularly relating to data collections, issued by the Department of Health and Social Care and NHS England
- the NHS Digital Strategy
- a broad range of performance indicators aligned with our strategy and business plan, including the development of Key Performance Indicators for data quality and reputation
- progress toward a patient centric digital health and care system

Members of the Board use the business days to undertake an in-depth consideration of strategic issues within the organisation and in the broader digital environment. These meetings include additional senior operational staff. Some key issues discussed during 2017-18 include:

- digital innovation and partnerships
- the Health and Social Care Network
- cyber security
- the emerging use of apps and artificial intelligence in health and care settings

Board committees

The Board has appointed four committees whose delegated responsibilities are as below. Attendance during 2017-18 is detailed in Appendix C on page 166. A standing item on the Board's agenda allows the chairs of committees to report on their deliberations. The minutes of the Board's subcommittees are circulated to Board members after they are ratified.

The Assurance and Risk Committee (ARC)

The ARC oversees the operational effectiveness of NHS Digital policies and procedures. It provides assurance and recommendations to the Board on fraud, corruption and whistleblowing and ensures the provision of an effective internal audit function that meets mandatory internal audit standards. It provides appropriate independent assurance to the Chief Executive and the Board. It also appoints a local counter-fraud specialist who attends ARC meetings when required.

The committee is authorised to investigate any activity within its terms of reference and to seek any information that it requires from any employee. All employees are directed to co-operate with its requests. It is able to seek legal or independent professional advice at NHS Digital's expense and secure the attendance at its meetings of external specialists with relevant experience and expertise.

The key areas reviewed in 2017-18 include:

- oversight of the annual accounts preparation, including the annual governance statement on behalf of the Board
- review of financial update reports
- strategic input into the internal audit strategy and annual plan in the context of the Department of Health and Social Care shared service agenda
- review of internal audit reports and actions arising from these together with the Head of Internal Audit's annual opinion
- review of the internal counter-fraud specialist work plan
- review of whistleblowing arrangements
- review of the reports from internal assurance providers (e.g. Senior Information Risk Owner (SIRO), clinical safety and governance, management systems)
- monitoring of the management of significant strategic and corporate risks and issues
- consideration of the external audit strategy
- development, implementation and monitoring of strategic and corporate risk and assurance arrangements
- data-sharing arrangements
- consideration of the Capability Review outputs relating to risk and assurance

We comply with the government code for corporate governance as far as it is relevant. No material departures have been identified.

The Information Assurance and Cyber Security Committee (IACSC)

The IACSC has representation from across government, including the Department of Health and Social Care. It is responsible for ensuring that there is an effective information assurance function that meets recognised industry and government standards and provides appropriate independent assurance to the Chief Executive and the Board.

The IACSC reviews the work and findings of the Cyber Security Programme and considers the implications of management responses to its work. It also monitors other significant assurance functions, both internal and external to the organisation, and looks at the implications for governance of the organisation. It is authorised to investigate activities within its terms of reference and all employees are directed to co-operate with its requests for information. It can seek legal or independent professional advice at NHS Digital's expense.

The main areas considered in 2017-18 include:

- the funding and implementation of the NHS Digital Cyber Security programme
- the National Cyber Security Centre assessment of threats to health and care and operational relationships with other government departments
- implementation of actions from the Department of Health and Social Care response to the National Data Guardian's report on Data Security, Consent and Opt-outs and from the departmental Data Security Leadership Board
- implications for NHS Digital of the WannaCry incident and subsequent development of joint operational handbook for incident response
- the development of the Information Security and Protection Toolkit
- activities of NHS Digital Data Security Centre

- the risk profile and security of the Citizen Identity programme and Internet of Things across health and care
- information assurance implications for NHS Digital of GDPR
- cyber security awareness training for NHS Digital and other Boards

In 2017-18 the NHS Digital Board resolved to extend the remit of the former Renumeration Commitee and established the Talent, Remuneration and Management Commitee (TRaMCo).
The proposed role of the Talent, Remuneration and Management Committee (TRaMCo) is to:

- make recommendations to the Department of Health and Social Care on the level of the remuneration on packages of the CEO and other executive directors within the provisions of the Pay Framework for Executive and Senior Managers (ESM) or successor arrangements
- monitor and evaluate the performance of ESMs and make recommendations on any proposed annual performance pay awards within the total of VSM pay bill which may be used for performance related pay (as set annually by the Department of Health and Social Care, taking account of the recommendations of the Senior Salaries Review Body)
- determine pay arrangements for medical and other staff groups who are not subject to Agenda for Change, ESM or TUPE protected terms and conditions of employment
- maintain an overview of senior non-medical staff pay to ensure that pay remains consistent with public pay policy
- approve the level of any annual performance related pay awards to NHS Digital staff on ex-Civil Service terms and conditions
- approve the annual performance objectives and targets of executive directors
- ensure that pay arrangements are appropriate in terms of equal pay requirements
- consider and approve redundancy payments and other exceptional matters
- ensure that all matters relating to pay and conditions that require approval from the Department of Health and Social Care Talent, Remuneration and Management Committee or other external authority are submitted for approval and that the decisions of those bodies are appropriately implemented
- review and make recommendations on the size, composition and structure of the Board including assessment and making recommendations to the Department of Health and Social Care of the skills, knowledge and experience required for new Board appointments
- oversee pay related diversity and inclusion matters in respect to protected characteristics within the workforce
- review the expenses and subsistence claims of both executive and non-executive directors
- to provide advice on talent, renumeration and employment matters as may be requested by the Executive Management Team

Investment Committee (IC)
From May 2017, a new sub-committee of the Board, known as the Investment Committee (IC), was created to consider proposals whose value exceeds £10 million. The Committee consists of two non-executive directors plus the Chief Executive and the Chief Finance Officer. One of the non-executive directors acts as chair.

The purpose of the committee is to ensure that NHS Digital takes on an acceptable level of delivery risk and provides assurance to the Digital Delivery Board – a cross-organisational board responsible for informatics – that we are able to meet our delivery commitments. Specifically, the IC ensures that programmes:

- have appropriate management and resourcing arrangements, including agreed commercial strategy and risk management
- are technically robust and clinically safe
- are affordable
- have robust proposals for cyber security and information security
- have acceptable levels of compliance risk, particularly with respect to information governance and procurement

Following IC endorsement, business cases are submitted to the system-wide Technology and Data Investment Board.

Operational governance structure

The Board is assisted in carrying out its duties by an operational governance structure comprising of the Executive Management Team, with the Operations Board and the Workforce and Transformation Board.

The Executive Management Team is responsible for communicating and delivering the strategy agreed by the Board. It is chaired by the Chief Executive and meets regularly. Action points and decisions are disseminated to all staff through the corporate intranet.

The Operations Board is responsible for providing strategic and operational oversight of the portfolio of programmes, projects and services so that executive portfolios achieve their delivery commitments.

The Workforce and Transformation Board is responsible for providing strategic oversight of issues relating to workforce, transformation and resource management.

Data and information governance

A wide-ranging legal, regulatory and compliance framework governs our receipt, processing and dissemination of data and information, and our production of statistics. A schedule covering the key areas is included at Appendix D on page 167.

A key element of our responsibilities is to ensure that all data and information is collected, stored and disseminated appropriately. Information and statistical governance are taken extremely seriously and we have further improved controls and protocols through the Data Access Request Service (DARS) Online. DARS enables data applicants to submit and manage data access requests and sign data sharing agreements through a single, intuitive online portal. This has delivered far greater transparency and a significant reduction in administrative burden.

The service is being continuously improved and there has been a programme of engagement across the health and care community.

We have also developed our Data Collections Service, which continues to make significant progress in consolidating data collections and transitioning them onto a unified suite of collection tools. Improvements made in recent years mean the service has now consolidated collections into the Strategic Data Collection System which has increased efficiency and public benefit. By centralising all data requests and disseminations through DARS and through the introduction of new tools and services we continue to increase efficiency and improve the quality of service for external users. We also provide system-wide advice on operational information governance to the health and social care sectors in England. This is separate from our principal role as guardian of data, set out in the Health and Social Care Act 2012.

Improving governance and assurance processes across the system

We all have an interest in getting the right decision, made by the right people, at the right time and for the right reasons. This is particularly important for the Department of Health and Social Care and NHS England who are fulfilling a number of roles, such as paymaster, budget holder, sponsor, service user, Senior Responsible Owner for a programme and the body holding the system to account.

Our role within the informatics arena and the relationships with our key partners has been clearly set out during the year. We are the main informatics delivery organisation and both contribute to, and are held operationally accountable by, the Digital Delivery Board. Our Chief Executive is a member of this Board and a significant number of our Executive Management Team and senior managers are involved in the development of future plans.

Taken together, this represents a major shift in our delivery responsibility and accountability and in the scale and complexity of our portfolio. Between October 2016 and March 2017, we worked with external advisers to review our capabilities, and identify what steps would be needed to further transform NHS Digital into a modern, agile organisation capable of meeting all of our delivery commitments and maintaining the confidence of key external partners and stakeholders, including HM Treasury.

The review's main objectives were to:

- appraise our current capacity and capabilities against emerging requirements for the delivery of the informatics development strategy and our existing statutory and corporate commitments
- identify the future direction for our delivery model and any changes that are required
- consolidate the work that is currently in progress through the Digital Transformation portfolio to improve the way we engage with and support our clients and stakeholders
- ensure that the relationships and working arrangements with our national partners (notably the Department of Health and Social Care and NHS England) are fit for the governance and assurance of the delivery of the informatics development strategy
- agree plans to enhance our new operating model, both tactically by strengthening our workforce planning capabilities, and strategically through a new workforce strategy

The review was intended to inform the next phase of our organisational transformation, which started in 2015-16 with the objective of empowering our people and our organisation to be "more flexible and agile in order to deliver the right things for our customers with greater efficiency and provide better value for money in line with the urgent needs of the health and care system". This transformation has been further underpinned by an ongoing organisation-wide cultural change programme, delivered through a number of interrelated workstreams, including a structural emphasis around the portfolio of programmes and services, the introduction of workforce planning, time recording, an improved approach to promotion, talent management and a new learning and development strategy.

The review highlighted a number of issues and potential improvement, which are being addressed.

Annual governance statement

for the year ended 31 March 2018

NHS Digital is an executive non-departmental public body responsible for setting up and operating systems for the collection, analysis, dissemination and publication of information relating to health services and adult social care and for ensuring citizens' health data is protected.

We develop and operate information and communications systems for health services and adult social care in England and act as the authority for determining and publishing information standards. We are accountable directly to Parliament for the delivery of the statutory functions described within the Health and Social Care Act 2012.

The Senior Departmental Sponsor for the Department of Health and Social Care is responsible for ensuring our procedures operate effectively, efficiently and in the interest of the public and the health sector.

Corporate governance
Details of our constitution, our operational accountability, our Board and its appointed committees are provided on pages 97 to 100. Information about the conduct of the Board and the roles and responsibilities of members are set out in our Corporate Governance Manual which incorporates the Standing Orders, Standing Financial Instructions and the Scheme of Delegation. This is reviewed and updated annually. We comply with the best practice described in the corporate governance code for central government departments issued by HM Treasury.

Changes to board members during the year included:

- Andy Williams resigned as the Chief Executive on 31 March 2017, after handing over his responsibilities to the Chief Operating Officer with effect from 27 February 2017. A new Chief Executive, Sarah Wilkinson commenced in August 2017
- the Director of Workforce and the Director of Digital Transformation both resigned as board members on 31 May 2017
- the Director of Information and Analytics resigned on 20 July 2017

At the 31 March 2018, of the non-executive directors, six are male and two are female, and of the executive directors, three are male and one is female.

It is normal to undertake a review of board effectiveness and governance annually but given the recent number of changes to the Board composition and the appointment of a new Chief Executive it was decided to delay this until 2018-19. The review undertaken in 2015-16 did not highlight any significant issues that required immediate action or comment in the Annual Governance Statement.

Corporate policies are reviewed on a regular basis and are refined as appropriate.

Internal audit

NHS Digital's internal audit service is provided by the Government Internal Audit Agency. It plays a crucial role in reviewing the effectiveness of management controls, risk management and governance. It focuses audit activity on the key risk areas. This service uses a blend of internal Government Internal Audit Agency staff and resources from the professional firms.

The internal audit service operates in accordance with the Public Sector Internal Audit Standards and to an annual internal audit plan approved by the Assurance and Risk Committee (ARC). Regular reports are submitted on the effectiveness of our systems of internal control and the management of key business risks, together with recommendations for improvement by management. The status of audit recommendations is reported to each ARC meeting, which has placed strong emphasis on reducing overdue actions to acceptable levels during the past year.

There were 18 separate audits undertaken across a range of business areas, of which one was rated as "unsatisfactory" and two were rated as "limited". The unsatisfactory audit related to Employee Security Vetting where the key findings included a lack of adequate control in identifying the most appropriate security clearance requirements for specific role profiles.

The limited audits included:

- "Resource Management / Operating Model" which looked at the quality of management information with respect to resource allocation. There was found to be an adverse impact on organisational culture and employee behaviours and inadequate staff communications in relation to the resource management model
- "Data Services for Commissioners Regional Offices (DSCRO) Governance" which concluded that further work is required to improve the control environment and provide increased clarity over the staffing arrangements in the Clinical Commissioning Groups

Action plans agreed by management arising from internal audits are monitored and reported on regularly to the Executive Management Team and ARC. The Head of Internal Audit provided a moderate rating for 2017-18.

We recently commissioned PricewaterhouseCoopers LLP to undertake an ISAE3402 level review of the GP Payments system we manage on behalf of NHS England. The result was an unqualified report.

In 2016-17 we received a qualified ISAE3402 report covering the external payroll, a service provided by Shared Business Services. Following an assessment of the reasons for qualification and an assessment of our internal controls, we did not believe this to be a significant issue for our level of assurance. The equivalent report covering Finance transaction services was satisfactory. However, we reviewed our internal processes to ensure that we had sufficient controls in place in case there were any similar future qualifications. The updated ISAE3402 reports for 2017-18 were unqualified.

Counter fraud

We are responsible for investigating allegations of fraud related to our functions and work. We have an internally appointed fraud manager who ensures that appropriate anti-fraud arrangements are in place and who undertakes both reactive and proactive counter-fraud work.

The internal policy on tackling fraud, bribery and corruption is communicated to all staff and available on our website and we have republished our management statement on corruption. We work closely with a number of bodies, including the Department of Health and Social Care Anti-Fraud Unit, to establish appropriate and efficient anti-fraud arrangements, and to comply with the standards set out by Cabinet Office and NHS Counter Fraud Authority. We are co-operating fully with the National Fraud Initiative and contributed to a Department of Health and Social Care led audit of bank mandate controls. We also regularly undertake internal fraud risk workshops with key stakeholders, review processes and sample check employee expense claims.

Public interest disclosure

NHS Digital was one of the first 100 organisations to sign up to the Public Concern at Work (PCAW) Whistleblowing Commission code of practice. We attend an annual networking event to discuss progress in implementing whistleblowing procedures and will continue to improve our policy and practice through engagement with PCAW.

The organisation has appointed two nominated officers at Board level to champion whistleblowing arrangements, and to support and encourage staff to openly raise concerns.

There has been one whistleblowing incident in the year with one further under review.

Performance management

Corporate performance management is integrated with business planning and risk management to provide a joined-up view of what we intend to deliver (business planning), what factors that could prevent successful delivery and how they can be mitigated (risk management) and how well we are delivering (performance management).

We continue to use and develop an organisation wide performance management framework to help deliver our statutory obligations and our commitments to stakeholders. It includes the periodic reporting at differing levels of granularity in performance packs to the Digital Delivery Board, our internal Board, the Executive Management Team and business units of:

- Key Performance Indicators which contain financial and non-financial performance information, key risks and issues, and an assessment of delivery against strategic commitments
- business plan delivery at corporate and directorate levels
- other key work such as delivery of specific programmes and organisational development and transformation

The performance framework and individual performance indicators are kept under regular review to ensure they remain meaningful and effective. With the exception of a limited number of confidential indicators, all elements of the performance framework are reported to public meetings of our Board and most of the information is available on our website. Our performance reporting supports open and transparent governance and is an important basis of public accountability. Performance packs and business plan monitoring reports also inform quarterly accountability meetings between the Department of Health and Social Care and ourselves.

Risk and assurance
We have reviewed our corporate risk and assurance framework methodology during 2017-18 which included developing a high level organisational assurance map. Further improvements will be implemented during 2018-19.

Each directorate completed an annual self-assessment statement which includes the following:

- an acknowledgement of their responsibilities and objectives (and how these have changed over 2017-18, reflecting restructures)
- that they have a sound system of internal control and these controls have operated as intended
- confirmation of compliance with statutory obligations and organisational policies
- action plans identifying improvement activity

During December 2017 we undertook an organisational restructure, the main changes included:

- the role of the SIRO was transferred on 13th December 2017 from Sean Walsh to Robert Shaw
- the creation of an independent Risk and Assurance Directorate whose responsibility will be to ensure all our work is assured from a business and technical perspective and to continually evaluate key areas of strategic and operational risk

We have developed the reporting of our most significant risks through the implementation of a new Corporate Risk Information System (CRIS) which:

- enables colleagues across the business to record their risks in one single centralised system
- aligns with industry best practice
- improves our capability to analyse and handle risks, including a simpler workflow for managing the risks and enhanced risk reporting capabilities

We continue to carry out regular quality assurance checks to ensure that the risk information held is current, accurate and of good quality; this will be enhanced by the new system. We have continued to refine the Strategic Risk Dashboard to focus on the outcomes of our risk management effort and these are reported to ARC and the Board. The use of risk management performance metrics is starting to drive an overall improvement in risk data quality and risk management behaviours, although further action is needed.

We have also maintained a risk management forum to act as our risk management community of interest. The forum's main objective is to improve risk management capability, so that risk management becomes embedded throughout our organisation and underpins its sustainability and resilience.

Risks are reported regularly and escalated through the internal governance structure, with the top corporate risks and issues ultimately being considered by the Operations Board, Executive Management Team, ARC and our Board. During 2017-18, we have:

- reviewed our strategic risk themes and the corporate risks aligned to each of them to ensure that these continue to reflect the most significant risks to the delivery of our strategic objectives
- continued delivery of our targeted risk management improvement plan
- focused on risk maturity, competency and awareness, including improved tools, metrics, reporting and collection methods and enhanced visibility of, and confidence in, our risk management capability

- reviewed our governance and accountabilities for managing and reporting risks, especially where these cross organisational boundaries
- commenced development of a set of key risk indicators to give early warning and triggers for risk interventions
- sought opportunities to leverage the use of risk information in decision-making

In 2018-19, we will emphasise integrating risk, performance, control and assurance effort; the review and refresh of our strategic risks and the associated strategic risk appetite model; and the development of assurance frameworks for each strategic risk.

Information governance
We have developed an internal facing information governance strategy led by executive directors. Our vision is to maintain the public's trust by ensuring that all our staff are committed to the safe and efficient handling of information. We have committed to:

- clearly communicate what we do with information and how we keep it safe
- continuously improve our information services for the benefit of health and care
- foster an environment of continuous learning
- shape the highest standards of behaviour and integrity

Our strategy's work plan is underway and includes:

- training for key information asset owners, who are responsible for assets containing personal confidential data certified by Communications-Electronics Security Group (CESG), the government's national technical authority for information assurance
- the implementation and maintenance of the online access to a personal confidential data tool for staff to replace manual processes
- the publication of a consolidated policy for information governance and security
- the implementation of the Independent Group Advising on the Release of Data (IGARD), which reviews applications for sensitive NHS Digital data and has expert members and an enhanced transparency remit
- a review of data sharing framework contracts and agreements
- the implementation of enhanced internal physical security measures
- the development of systems including a decision tree to support identification of roles requiring security vetting, a unified register to provide a single view of NHS Digital's data model and a new system to uphold patient objections to the sharing of personal data

Additional information governance activities for the year included the completion of staff training in line with requirements of the NHS Information Governance Toolkit (IG Toolkit). 97 per cent of staff were trained by 31 March 2018 as part of the rolling IG training programme.

Additional specialist training is undertaken by staff responsible for the management and control of data assets and information. Compliance with mandatory training is monitored and failure to comply may result in the revocation of individuals' system access. We also completed the annual IG Toolkit assessment. We were compliant for 2017-18, exceeding the required 'satisfactory' level with an overall score of 90 per cent.

As a response to legislative change being brought in by the Data Protection Act 2018 and the implementation of the General Data Protection Regulations (GDPR) we:

- have appointed a Data Protection officer to ensure and assure that we are compliant and managing risk with respect to patient data and information
- are building a Data Protection office to provide support to the Data Protection Officer
- have implemented and are developing a unified register to capture all NHS Digital assets that contain personal information
- are developing mandatory training to enhance training that exists for our Information Asset Owners
- are developing training to raise the profile of and increase awareness regarding responsibilities for data and information

We logged nine incidents on the Serious Incident Requiring Investigation (SIRI) reporting tool: four near misses and five breaches reported to the Information Commisioner's Office (ICO). We investigated and managed these internally in accordance with the ICO and SIRI reporting guidelines. For the four near misses, it was determined that ICO notification was not required. For two of the breaches the ICO decided no further action was required whilst the remaining three are still being considered.

We filed the appropriate notifications with the ICO in relation to the Data Protection Act 1998. During 2017-18, we received 1,018 Freedom of Information requests and 85 Subject Access Requests. There were ten breaches of the timescales for handling a Freedom of Information request and two for Subject Access Requests. There were three complaints made to the ICO by applicants dissatisfied with our responses under the Freedom of Information Act or Data Protection Act.

Data sharing arrangements

NHS Digital has implemented a series of improvements over the governance and management of the dissemination of data to external customers. We recognise that the use of health-related data remains sensitive with the recent media attention and our attendance at the Health Select Committee with respect to tracing services bringing this into sharp focus.

The Data Access Request Service (DARS) has been established to handle all requests for data which are identifiable or potentially identifiable. Before any data is shared, a series of strict processes and controls are followed which includes:

- ensuring a legal basis exists which may include taking specific advice and consulting with other stakeholders
- ensuring particularly sensitive releases follow a full governance and approval process
- the customer has an appropriate level of security to safeguard the data
- the customer successfully meets the full assessment process
- receiving independent advice from IGARD for specific applications as appropriate
- being covered by a signed data sharing agreement and data sharing framework contract

We will continue to ensure that the governance around the dissemination of such data remains a high priority.

Audits are carried out to ensure that organisations meet the terms of the data sharing agreement and framework contract. During 2017-18 we undertook 18 audits of separate organisations and made recommendations to improve their processes and procedures. These recommendations are subsequently followed up with a post audit review to ensure they have been addresssed. Of the 18 audits in 2017-18, 17 are being followed up although only one audit was deemed to contain a serious issue, and in this case, it has been agreed to destroy the data. The outcome of audits and post audit reviews are published on our website at: https://digital.nhs.uk/services/data-access-request-service-dars/data-sharing-audits

Data quality assurance

We understand the importance of good quality data and our role in ensuring that the data we collect, process and share is subject to the most rigorous levels of quality assurance.

Given our unique position as a processor, user and sharer of national health and social care data, we also have a duty to promote understanding of the importance of data quality across the health and social care sector.

We continue to seek ways for improving our data quality assurance and during 2017-18 we:

- monitored the implementation of our secondary uses data quality assurance policy
- worked collaboratively with our partners to develop requirements-based data quality assurance products, processes and tools
- ensured new and existing data collections and extractions go through the data quality assurance assessment process

Data security

The Data Security Centre (DSC) aims to build public trust and support safe patient care by enabling the secure and safe use of information within the health and care system. The DSC provides a robust 'defence in depth' security service to NHS Digital and the wider health and care system, providing proactive threat information and remediation advice to more than 10,000 contacts across health and social care.

During the 2017-18 financial year, the DSC has delivered 9,146 notifications to infected sites through the targeted CareCERT bulletins.

Following on from the success of on-site assessments in 2016-17, the DSC has provided a further 138 assessments, with the total completed now at 252. Assessments this year have provided Major Trauma Centres and Ambulance Trusts with the opportunity to receive capital funding to address vulnerable and outdated infrastructure and technology, with £21 million allocated to these organisations by NHS England following assessment. Further on-site assessments and consultancy will be provided throughout 2018-19.

National data security e-learning is now live on e-Learning for Healthcare and will be mandated for all 1.2 million staff across the system from 2018-19. The current training has a satisfaction rating of 88 per cent from early adopters who have taken the course this year.

The importance of the work of the DSC was highlighted by the recent WannaCry ransomware attack in May 2017. Our CareCERT service had issued security patches in April that kept thousands of properly updated NHS devices immune from this threat. We subsequently supported affected sites to remediate and recover from infection, providing direct guidance and on-the-ground support. More than 50 NHS Digital staff were deployed to local organisations to support recovery.

In 2018-19, the DSC will further expand the scope and functionality of its services. We will develop near-real-time monitoring and intelligence services on threats faced by high-risk health organisations. We will provide a refreshed assurance framework to ensure health and care are able to measure and improve on their security preparedness and control. We will continue to provide assurance and subject matter expertise across our portfolio of programmes to ensure the benefits of new technology to support care are maximised, and risks are minimised.

We will also provide underpinning tools, guidance, assessment, consultancy and education services to help system leaders embed better local data security culture and to improve local capability, to maximise the effectiveness of DSC services and to ensure organisations have robust controls and measures in place for minimising the risk of incidents occurring and the impact of incidents when they do occur.

Business continuity

NHS Digital manages a range of essential IT systems on behalf of the wider NHS. Ensuring that these systems operate efficiently and we are able to support the NHS in event of any outage is critical. We undertake a range of key controls and support services for this including stress testing, a fully manned service bridge and a new Business Continuity Management System (BCMS).

The BCMS was successfully implemented in 2017 aligned to the requirements of ISO 22301 and related standards. The capability of the BCMS includes:

- a crisis management plan
- operational level plans
- a range of IT service continuity (disaster recovery) plans whether managed in-house or by external suppliers
- facility/site emergency arrangements to manage NHS Digital facility related health and safety incidents
- supply chain continuity management, to confirm that critical suppliers and other delivery partners have suitable business continuity arrangements in place to protect delivery of service to NHS Digital and its customers
- professional and qualified colleagues, who actively provide subject matter expertise in line with best practice across government and relevant industry standards

An ongoing work programme is focused on: crisis management and corporate threat tier plans, exercising Business Continuity Plans, Facility/Site Emergency Plans, Supply Chain Continuity Management and people aspects of business continuity planning.

Clinical governance

As we move toward providing digital programmes and services that impact more closely on the lives of patients and citizens there is a requirement to raise the profile of clinical governance at all levels of the organisation. This year, we have approved a clinical governance framework and have appointed two very senior clinicians to non-executive positions and allocated one with special responsibility for this area. We also appointed nine senior clinicians with strong informatics competencies to lead on our major domains of activity and have for the first time produced annual clinical governance and patient safety reports with associated improvement plans for scrutiny by the ARC. We have also established processes to ensure that all our staff with clinical roles are validated for practice by their regulators.

We re-invigorated our patient safety approach to ensure it keeps pace with new digital technologies and advances in the use of digital technologies. This work is ongoing but includes decision-support algorithms, apps and machine learning. Clinician time will be allocated according to clinical risk in each programme and, in the next year, the ARC will undertake detailed clinical governance and patient safety 'deep dives' in at least three specific domain areas.

Chief Executive's review of effectiveness

As Accounting Officer, I have responsibility for the system of internal controls supporting and enabling the achievement of NHS Digital's aims and objectives, whilst safeguarding the public funds and assets for which I am personally responsible in accordance with Managing Public Money and as set out in my Accounting Officer appointment letter.

I have undertaken this responsibility by seeking a range of assurances, which in 2017-18 was primarily informed by:

- my attendance at the ARC and review of its minutes, papers and annual report to the Board, as well as my attendance at the IACSC
- work undertaken by the National Audit Office
- the work of internal audit who have completed an agreed, comprehensive range of assessments. The head of internal audit provided an opinion on the overall arrangements for assurance and on the controls reviewed and concluded on a moderate rating
- monitoring of audit and gateway actions reviewed regularly
- the completion of the self-assessment assurance statement from each Directorate which contain detailed action plans on improving controls
- assurance provided to me by senior NHS Digital managers with responsibility for the development and maintenance of the system of internal control
- clear performance management arrangements for executive directors and senior managers

- the assurance framework itself, which provided evidence on the effectiveness of the controls that manage the risks to the organisation
- by review of and acceptance of a report from Rob Shaw dated 3 August 2017 confirming that appropriate governance was in place until this date
- the effectiveness of the system of internal control provided by the Board, IACSC and ARC and am accordingly aware of any significant issues that have been raised

Significant internal control issues
The past year has been challenging, with an acceleration of the technology transformation programme, increasing external risks to our technology services and continued internal transformation activities. Despite this period of change I am confident that the level of governance, assurance and control has improved and are now progressing towards achieving the standards of control I expect of the organisation. I am particularly encouraged by the organisations' response to the WannaCry cyber-attack in May 2017 which ensured the NHS overcame the problems as quickly as possible and the concerted efforts to support the NHS with the winter pressures campaign.

There are still areas to work on and the main areas of focus in the coming year are to:

- ensure that our approach to data sharing agreements continue to be robust and justified
- improve the governance of, and clarity of processes around, the arrangements of working with the Data Services for Commissioners Regional Offices
- further improve the cross-organisational joint working in the management of major programmes and portfolios
- further refine our risk and assurance processes including improving the data quality contained in the Corporate Risk Information System
- review the internal resource management operating model introduced during 2016-17 which has brought a number of challenges

The delivery of these priorities will be an immediate requirement of the newly established Assurance and Risk Directorate and the appointment of a new director to lead the function.

Supporting peer ALBs with control issues
In May 2018 it was announced that an issue has been identified with Public Health England's Breast Cancer Screening Service, that resulted in thousands of women aged between 68 and 71 not being invited to their final breast screening between 2009 and May 2018. NHS Digital have provided extensive support to Public Health England and other system partners on the response to and resolution of this critical issue.

I accept the observations by both the internal auditors and the National Audit Office and I believe them to be a fair and accurate view of the organisation.

We will continue to embed rigorous and sound assurance as a priority for NHS Digital in 2018-19.

Sarah Wilkinson
Chief Executive
20 June 2018

Statement of the Board and Chief Executive's responsibilities

Under the Health and Social Care Act 2012 and directions made thereunder by the Secretary of State with the approval of HM Treasury, we are required to prepare a Statement of Accounts for each financial year in the form and on the basis determined by the Secretary of State. The Accounts are prepared on an accruals basis and must give a true and fair view of our state of affairs and of our net resource outturn, application of resources, changes in taxpayers' equity and cashflows for the financial year.

In preparing the Accounts, the Board and Accounting Officer are required to comply with the requirements of the Government Financial Reporting Manual and, in particular, to:

- observe the accounts direction issued by the Secretary of State for Health and Social Care, including the relevant accounting and disclosure requirements and apply suitable accounting policies on a consistent basis
- make judgements and estimates on a reasonable basis
- state whether applicable accounting standards – as set out in the Government Financial Reporting Manual - have been followed and disclosed and explain any material departures in the financial statements
- prepare the financial statements on a going concern basis, unless it is inappropriate to presume that the NHS Digital will continue in operation

The Accounting Officer for the Department of Health and Social Care has appointed our Chief Executive as the Accounting Officer who has responsibility for preparing our accounts and transmitting them to the Comptroller and Auditor General. Specific responsibilities include the propriety and regularity of the public finances for which the Accounting Officer is answerable, for keeping proper records and for safeguarding our assets, as set out in Managing Public Money published by the HM Treasury. The Accounting Officer is also able to confirm that:

- as far as she is aware, there is no relevant audit information of which the auditors are unaware
- she has made herself aware of any relevant audit information and established that the entity's auditors are aware of that information
- the Annual Report and Accounts as a whole are fair, balanced and understandable
- she takes personal responsibility for the Annual Report and Accounts and the judgment required for determining that they are fair, balanced and understandable

The certificate and report of the Comptroller and Auditor General to the Houses of Parliament

Opinion on financial statements
I certify that I have audited the financial statements of Health and Social Care Information Centre for the year ended 31 March 2018 under the Health and Social Care Act 2012. The financial statements comprise: the statements of comprehensive net expenditure, financial position, cash flows, changes in taxpayers' equity; and the related notes, including the significant accounting policies. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the accountability report that is described in that report as having been audited.

In my opinion:

- the financial statements give a true and fair view of the state of Health and Social Care Information Centre's affairs as at 31 March 2018 and of net expenditure for the year then ended; and
- the financial statements have been properly prepared in accordance with the Health and Social Care Act 2012 and Secretary of State directions issued thereunder

Opinion on regularity
In my opinion, in all material respects the income and expenditure recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

Basis of opinions
I conducted my audit in accordance with International Standards on Auditing (ISAs) (UK) and Practice Note 10 'Audit of Financial Statements of Public Sector Entities in the United Kingdom'. My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of my certificate. Those standards require me and my staff to comply with the Financial Reporting Council's Revised Ethical Standard 2016. I am independent of the Health and Social Care Information Centre in accordance with the ethical requirements that are relevant to my audit and the financial statements in the UK. My staff and I have fulfilled our other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Responsibilities of the Board and Accounting Officer for the financial statements
As explained more fully in the statement of Accounting Officer's responsibilities, the Board and the Accounting Officer are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view.

Auditor's responsibilities for the audit of the financial statements

My responsibility is to audit, certify and report on the financial statements in accordance with the Health and Social Care Act 2012.

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs (UK), I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Health and Social Care Information Centre's internal control
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management
- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Health and Social Care Information Centre's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

In addition, I am required to obtain evidence sufficient to give reasonable assurance that the income and expenditure reported in the financial statements have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

Other Information

The Board and the Accounting Officer are responsible for the other information. The other information comprises information included in the annual report, other than the parts of the accountability report described in that report as having been audited, the financial statements and my auditor's report thereon. My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon. In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact. I have nothing to report in this regard.

Opinion on other matters

In my opinion:

- the parts of the accountability report to be audited have been properly prepared in accordance with Secretary of State directions made under the Health and Social Care Act 2012;
- in the light of the knowledge and understanding of the Health and Social Care Information Centre and its environment obtained in the course of the audit, I have not identified any material misstatements in the Performance report or the accountability report; and
- the information given in e.g. performance report and accountability report for the financial year for which the financial statements are prepared is consistent with the financial statements

Matters on which I report by exception

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- adequate accounting records have not been kept or returns adequate for my audit have not been received from branches not visited by my staff; or
- the financial statements and the parts of the accountability report to be audited are not in agreement with the accounting records and returns; or
- I have not received all of the information and explanations I require for my audit; or
- the governance statement does not reflect compliance with HM Treasury's guidance

Report

I have no observations to make on these financial statements.

Sir Amyas C E Morse
Comptroller and Auditor General
26 June 2018

National Audit Office
157-197 Buckingham Palace Road
Victoria
London
SW1W 9SP

Statement of comprehensive net expenditure for the year ended 31 March 2018

	Note	2017-18 £000	2016-17 £000
Expenditure			
Staff costs	3	164,990	156,198
Operating expenditure	5	179,709	106,103
Depreciation and amortisation	5	32,756	24,950
Impairment of property, plant and equipment	5	56	-
Loss on disposal of non-current assets	5	624	645
Total expenditure		**378,135**	**287,896**
Less income	4	(35,245)	(44,338)
Net operating expenditure for the financial year		**342,890**	**243,558**
Net gain on assets and liabilities transferred under absorption accounting	15	-	(35,936)
Net loss on reconciliation of transferred assets	6	-	218
Net expenditure for the financial year		**342,890**	**207,840**

All income and expenditure derives from continuing operations.

Notes 1 to 23 form part of these financial statements

Statement of financial position at 31 March 2018

	Note	31 March 2018 £000	31 March 2017 £000
Non-current assets			
Property, plant and equipment	7	28,252	22,329
Intangible assets	8	89,445	64,711
Other non-current receivables	9	3,045	4,235
Total non-current assets		**120,742**	**91,275**
Current assets			
Trade and other receivables	10	31,149	33,926
Cash and cash equivalents	11	23,929	15,434
Total current assets		**55,078**	**49,360**
Total assets		**175,820**	**140,635**
Current liabilities			
Trade and other payables	12	(42,376)	(30,823)
Provisions	13	(64)	(39)
Total current liabilities		**(42,440)**	**(30,862)**
Total assets less current liabilities		**133,380**	**109,773**
Non-current liabilities			
Provisions	13	(2,546)	(2,049)
Total assets less total liabilities		**130,834**	**107,724**
Taxpayers' equity and other reserves			
General reserve		130,834	107,724
Revaluation reserve		-	-
Total taxpayers' equity and other reserves		**130,834**	**107,724**

Notes 1 to 23 form part of these financial statements

The financial statements on pages 116 to 149 were approved by the Board on 6 June 2018 and signed on its behalf by:

Sarah Wilkinson,
Chief Executive
20 June 2018

Statement of cash flows for the year ended 31 March 2018

	Note	2017-18 £000	2016-17 £000
Cash flows from operating activities			
Net operating expenditure for the financial year		(342,890)	(243,558)
Adjustment for non-cash transactions:			
- depreciation and amortisation	5	32,756	24,950
- impairments of property, plant and equipment	5	56	-
- loss on disposal of non-current assets	5	624	645
- provisions arising during the year	13	548	(5)
Decrease / (increase) in non-current receivables	9	1,190	(2,726)
Decrease / (increase) in trade and other receivables	14	2,777	(334)
Increase / (decrease) in trade and other payables	14	11,553	(8,851)
Increase in capital accruals		(2,749)	(2,098)
Provisions utilised	13	(26)	(420)
Net cash outflow from operating activities		**(296,161)**	**(232,397)**
Cash flows from investing activities			
Purchase of property, plant and equipment		(15,054)	(7,003)
Purchase of intangible assets		(46,290)	(12,799)
Net cash outflow from investing activities		**(61,344)**	**(19,802)**
Cash flows from financing activities			
Grant in Aid from the Department of Health and Social Care: cash drawn down in year		366,000	257,481
Net financing		**366,000**	**257,481**
Net increase in cash in the period	11	**8,495**	**5,282**
Cash and cash equivalents at the beginning of the period	11	15,434	10,152
Cash and cash equivalents at the end of the period	11	23,929	15,434
Net increase in cash in the period	11	**8,495**	**5,282**

All cash flow relates to continuing activities.

Statement of changes in taxpayers' equity for the year ended 31 March 2018

	General reserve £000	Revaluation reserve £000	Total reserves £000
Balance at 31 March 2016	**61,076**	-	**61,076**
Changes in taxpayers' equity			
Net expenditure for the financial year	(207,840)	-	(207,840)
Transfers between reserves	(2,993)	2,993	-
Align transferred assets with NHS Digital policy	**-**	(2,993)	(2,993)
Total recognised income and expense	**(210,833)**	**-**	**(210,833)**
Grant in Aid from the Department of Health and Social Care: cash drawn down in year	257,481	-	257,481
Total Grant in Aid funding	**257,481**	**-**	**257,481**
Balance at 31 March 2017	**107,724**	**-**	**107,724**

Balance at 31 March 2017	**107,724**	**-**	**107,724**
Changes in taxpayers' equity			
Net expenditure for the financial year	(342,890)	-	(342,890)
Total recognised income and expense	**(342,890)**	**-**	**(342,890)**
Grant in Aid from the Department of Health and Social Care:cash drawn down in year	366,000	-	366,000
Total Grant in Aid funding	**366,000**	**-**	**366,000**
Balance at 31 March 2018	**130,834**	**-**	**130,834**

Notes to the accounts

Note 1

1.1 General information

The Health and Social Care Information Centre (NHS Digital) is an executive non-departmental public body established under the Health and Social Care Act 2012. The address of its registered office and principal place of business are disclosed in the introduction to the annual report. The principal activities of NHS Digital is to improve health and care by providing national information, data and IT services for patients, clinicians, commissioners and researchers. It is accountable to the Secretary of State for Health and Social Care for discharging its functions, duties and powers effectively, efficiently and economically. The Department of Health and Social Care actively undertakes this role on his behalf on a day to day basis.

1.2 Basis of accounting

The financial statements have been prepared in accordance with the 2017-18 Government Financial Reporting Manual (FReM) issued by HM Treasury as interpreted for the health sector in the Department of Health and Social Care Group Accounting Manual (GAM). The accounting policies contained in the FReM apply International Financial Reporting Standards (IFRS) as adopted and interpreted for the public sector context. Where the FReM permits a choice of accounting policy, the accounting policy which is judged to be most appropriate to the particular circumstances for the purpose of giving a true and fair view has been selected. The particular policies adopted by NHS Digital are described below. They have been applied consistently in dealing with items that are considered material to the accounts.

These accounts have been prepared under the historical cost convention, modified to account for the revaluation of tangible fixed assets. This is in accordance with directions issued by the Secretary of State for Health and Social Care and approved by HM Treasury.

The presentational currency is pounds sterling and, unless otherwise stated, the accounts have been prepared to the nearest pounds thousands (£000) unless expressly stated.

'Transfers from the Department of Health' relates to the transfer of certain national infrastructure systems from 1 December 2016. The transfer was accounted for using standard absorption accounting in accordance with the FReM. Transfers under standard absorption accounting are recorded against assets or liabilities as appropriate, with the net gain or loss recorded through the statement of comprehensive net expenditure, and is disclosed separately from operating costs. Standard absorption accounting requires that entities account for their transactions in the period in which they took place, with no restatement of performance required when functions transfer within the public sector.

- **Early adoption of accounting standards amendments and interpretations**
  No accounting standard changes were adopted early in 2017-18.
- **Accounting standards amendments and interpretations in issue but not yet effective, or adopted**
  The FReM does not require the following standards and interpretations to be applied in 2017-18.

IFRS 9 Financial Instruments effective for accounting periods starting on or after 1 January 2018, but not adopted by the 2017-18 FReM. The majority of NHS Digital's material financial assets comprise receivables balances due from other Department of Health and Social Care group bodies. Similarly, the majority of material financial liabilities comprise payables balances and accruals. The material financial assets and liabilities of the organisation are currently held at amortised cost, and no material impact is expected under IFRS 9. Given the nature of NHS Digital's financial assets and liabilities, expected lifetime credit losses are anticipated to continue to be immaterial, as evidenced by Note 21(b).

IFRS 15 Contracts with Customers effective for accounting periods starting on or after 1 January 2018, but not adopted by the 2017-18 FReM. An assessment of income streams over £100,000 confirmed that the majority of NHS Digital's income contracts are coterminous with the financial year, and are for delivery of services over time, either at a pre-agreed price, or on a time and materials basis. The implementation of IFRS 15 in 2018-19 is therefore not anticipated to have a material impact on the year end position.

IFRS 16 Leases effective for accounting periods beginning on or after 1 January 2019, but not adopted by the 2017-18 FReM. NHS Digital recognises that the application of this standard is likely to have a material impact to the accounts, but with most material property leases currently expiring prior, or in close proximity, to this date its impact cannot currently be accurately assessed.

1.3 Income

Income is recognised to the extent that it is probable that the economic benefits will flow to NHS Digital and the income can be readily measured.

The main source of funding is a parliamentary grant from the Department of Health and Social Care within an approved cash limit, which is credited to the general reserve. The grant is recognised in the financial period in which it is received.

Operating income is accounted for by applying the accruals convention and primarily comprises of services provided on a full cost basis to the Department of Health and Social Care, NHS England, Public Health England, other health related bodies and external customers. Charges comply with HM Treasury and Office of Public Sector Information guidance.

Deferred income refers to income received or credited in the year for which the related costs have not yet been incurred. The stage of completion of programmes is determined by an estimation of labour and services by third party suppliers and recharges of internal labour costs.

1.4 Administration, programme and annually managed expenditure

The analysis of income and expenditure for non-departmental public bodies between administration and programme is only required to be consistent with returns made for the purposes of the Department of Health and Social Care Group consolidation. The net operating expenditure for the financial year in the consolidation return submitted to the Department of Health and Social Care was split between net administration expenditure of £119.6 million and net programme expenditure of £221.3 million.

The difference between the total of the administration and programme expenditure and the net operating expenditure for the year reported in the statement of comprehensive net expenditure is attributable to expenditure falling under the annually managed expenditure (AME) heading, which relates to the creation and usage of provisions and certain impairments.

1.5 Taxation

NHS Digital is not liable to pay corporation tax. Expenditure is shown net of recoverable VAT. Irrecoverable VAT is charged to the most appropriate expenditure heading or capitalised if it relates to a non-current asset.

1.6 Losses and special payments

Losses and special payments are items that Parliament would not have contemplated when it agreed funds for the health service or passed legislation. By their nature they are items that ideally should not arise. They are therefore subject to special control procedures compared with the generality of payments. They are divided into different categories, which govern the way each individual case is handled.

Losses and special payments are charged to the relevant functional headings in the statement of comprehensive net expenditure.

1.7 Employee benefits

Salaries, wages and employment-related payments are recognised in the period in which the service is received from employees. The cost of leave earned but not taken by employees at the end of the period is recognised in the financial statements to the extent that employees are permitted to carry forward leave into the following period.

1.8 Non-current assets

A. Capitalisation

All assets falling into the following categories are capitalised:

1) Intangible assets include software development expenditure and the purchase of computer software licences, where they are capable of being used for more than one year and:

- individually have a cost equal to or greater than £5,000; or
- collectively have a cost of at least £5,000 and, the assets are functionally interdependent, they had broadly simultaneous purchase dates, are anticipated to have simultaneous disposal dates and are under single managerial control

Development expenditure is transferred to other categories of non-current assets when the development is sufficiently complete to enable the asset as a whole to be fully deployed and effective for the management's intended purpose.

2) Tangible assets which are capable of being used for more than one year, and:

- individually have a cost equal to or greater than £5,000; or
- collectively have a cost of at least £5,000 and, the assets are functionally interdependent, they had broadly simultaneous purchase dates, are anticipated to have simultaneous disposal dates and are under single managerial control; or
- form part of the initial equipping and set up cost of a new asset irrespective of their individual cost

Internally-generated assets are recognised if, and only if, all of the following have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use
- the intention to complete the intangible asset and use it
- the ability to use the intangible asset
- how the intangible asset will generate probable future economic benefits
- the availability of adequate technical, financial and other resources to complete the intangible asset and use it
- the ability to measure reliably the expenditure attributable to the intangible asset during its development

Expenditure on research activities and project management costs are recognised as an expense in the period in which it is incurred.

B. Carrying gross cost

Non-current assets are initially recognised at cost, including expenditure such as installation directly attributable to bringing them into working condition. Subsequently non-current assets are held at current value in existing use. Any increase in value is credited to the revaluation reserve, except to the extent that it reverses a revaluation decrease for the same asset previously recognised as an expense, in which case the increase is credited to the statement of comprehensive net expenditure to the extent of the decrease previously expensed.

A decrease in carrying amount arising on the restatement in value of the asset is charged as an expense to the extent that it exceeds the balance, if any, held in the revaluation reserve relating to a previous revaluation of that asset.

Assets are assessed either using appropriate indices provided by the Office for National Statistics or, in the case of internal software developments, by considering the inflation rates of staff and other resources and potential other efficiency factors. The current value in existing use at March 2018 was not materially different to the original historic cost and thus no adjustment has been incorporated, except for land and buildings which are subject to a professional valuation. The carrying values of all assets are reviewed for impairment if events or changes in circumstances indicate the carrying value may not be appropriate.

C. Depreciation
Development expenditure is not depreciated until such time the asset is available for use. Otherwise, depreciation and amortisation is charged on a straight line basis to write off the costs or valuation of tangible and intangible non-current assets, less any residual value, over their estimated useful lives as follows:

1) intangible software development assets are amortised, on a straight line basis, over the estimated life of the asset or 10 years whichever is less. The asset lives are reviewed on an annual basis considering the degree of evolution of the asset and what plans, if any, are being made for its replacement.

2) purchased computer software licences are amortised over the term of the licence or 5 years whichever is less

3) property, plant and equipment is depreciated on a straight line basis over its expected useful life as follows:

- buildings 27 years
- fixtures and fittings 1 - 12 years
- office, information technology, short life equipment 1 - 5 years

The estimated useful lives and residual values are reviewed annually.

1.9 Research and development
Expenditure incurred on pure and applied research is treated as an operating charge in the year in which it is incurred. Development expenditure is for the development of specific business systems. Expenditure which does not meet the criteria for capitalisation is treated as an operating cost in the year in which it is incurred. Development expenditure meeting the criteria for capitalisation is treated as an intangible non-current asset until such time the asset is brought into use.

1.10 Leases
Leases are classified as finance leases when substantially all the risks and rewards of ownership are transferred to the lessee. All other leases are classified as operating leases.

Amounts held under finance leases are initially recognised, at the inception of the lease, at fair value or, if lower, at the present value of the minimum lease payments, with a matching liability for the lease obligation to the lessor. Lease payments are apportioned between finance charges and reduction of the lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are charged directly to the statement of comprehensive net expenditure.

Operating lease payments are recognised as an expense on a straight-line basis over the lease term. Lease incentives are recognised initially as a liability and subsequently as a reduction of rentals on a straight-line basis over the lease term. Contingent rentals are recognised as an expense in the period in which they are incurred.

1.11 Provisions

Provisions are recognised when a present obligation exists as a result of a past event, and it is probable that NHS Digital will be required to settle that obligation. Provisions are measured at the directors' best estimate of the expenditure required to settle the obligation at the reporting date, and are discounted to present value where the effect is material.

1.12 Contingent liabilities

In addition to contingent liabilities disclosed in accordance with IAS 37, NHS Digital discloses for parliamentary reporting and accountability purposes certain statutory and non-statutory contingent liabilities where the likelihood of a transfer of economic benefit is remote, but which have been reported to Parliament in accordance with the requirements of the GAM. Where the time value of money is material, contingent liabilities which are required to be disclosed under IAS 37 are stated at discounted amounts and the amount reported to Parliament separately noted. Contingent liabilities that are not required to be disclosed by IAS 37 are stated at the amounts reported to Parliament.

1.13 Pensions

Past and present employees are covered by a number of pension schemes including the NHS Pension Scheme and the Principal Civil Service Pension Scheme. These schemes are unfunded, defined benefit schemes. They are not designed to be run in a way that would enable NHS bodies to identify their share of the underlying scheme's assets and liabilities. Therefore, the schemes are accounted for as if they were defined contribution schemes with the cost to the body participating in the scheme taken as equal to the contributions payable to the scheme for the accounting period.

Early retirements, other than those due to ill health, are not funded by the schemes. The full amount of the liability for the additional costs is charged to expenditure at the time the retirement agreement is committed, regardless of the method of payment.

1.14 Critical accounting judgements and key sources of estimation uncertainty

In the application of the accounting policies, the directors are required to make judgements, estimates and assumptions about the carrying value of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

The following are the critical judgements and estimations that the directors have made in the process of applying the accounting policies and that have the most significant effect on the amounts recognised in financial statements:

- **Revenue recognition**
  NHS Digital receives income from various sources to cover the cost of expenditure on project related and other activities. Expenditure is regularly incurred over several financial years and income is released to the statement of comprehensive net expenditure in order to reflect as closely as possible the phasing of the expenditure incurred.

- **Dilapidation provision**
  NHS Digital has provided £2.0 million as a provision against dilapidation costs of its leased accommodation across its estate where required. In order to assess an estimate of the likely liabilities at the end of the leases, management has used property advisors' reports and also assessments from suitably qualified internal staff.
- **Developed systems**
  NHS Digital manage a suite of national infrastructure systems as well as a number of large internal data collection systems and databases. Much of the development of such systems are undertaken inhouse and a detailed assessment is required to determine the level of capitalisation of such work. In addition, management undertake an annual review of the likely asset life that these systems should be amortised over.
- **Non-current assets**
  During 2016-17 a substantial number of non-current assets were transferred from the Department of Health and Social Care. Management undertook a physical evidence check on computer hardware and software licences together with a review of developed software assets and have accepted that accounting decisions in the past were made on a fair and reasonable basis. Management also reviewed the future asset lives of certain assets to reflect their best view of remaining life, amended the depreciation policy and revaluation approach in line with that of NHS Digital's' standard policies.
- **Valuation of non-current assets**
  NHS Digital use a mixture of appropriate Office for National Statistics indices and estimates of other inflation factors to assess the value of non-current assets.

1.15 Business and geographical segments

NHS Digital has adopted IFRS 8 Operating Segments. IFRS 8 requires operating segments to be identified on the basis of internal reports about components of the business that are regularly reviewed by the Chief Executive to allocate resources to the segments and to assess their performance.

1.16 Financial instruments

NHS Digital operates largely in a non-trading environment and the majority of its income is from other government or NHS bodies. Consequently NHS Digital is not exposed to the significant degree of financial risk that is faced by most other business entities. NHS Digital has no borrowings and relies largely on grant in aid from the Department of Health and Social Care for its cash requirements. NHS Digital is therefore not exposed to liquidity risks. All cash balances are held within the Government Banking Service and all material assets and liabilities are denominated in sterling, so it is not exposed to interest rate risk or currency risk.

Financial assets are recognised on the statement of financial position when NHS Digital becomes party to the financial instrument contract or, in the case of trade receivables, when the goods or services have been delivered. Financial assets are derecognised when the contractual rights have expired or the asset has been transferred. NHS Digital has no financial assets other than trade receivables. Trade receivables do not carry any interest and are stated at their nominal value less any provision for impairment.

Financial liabilities are recognised on the statement of financial position when NHS Digital becomes party to the contractual provisions of the financial instrument or, in the case of trade payables, when the goods or services have been received. Financial liabilities are derecognised when the liability has been discharged, that is, the liability has been paid or has expired.

NHS Digital has no financial liabilities other than trade payables. Trade payables are not interest bearing and are stated at their nominal value.

1.17 Going concern

The NHS Digital financial statements have been produced on a going concern basis. Confirmation has been received of the main Grant in Aid budget allocation for the 2018-19 financial year in line with the business plan submitted and funding flows have already commenced.

Note 2

Statement of operating costs by activity

IFRS 8 requires operating segments to be identified on the basis of internal reports that are regularly reviewed by the Chief Executive.

The NHS Digital's Board monitor the performance and resources of the organisation by directorate.

The statement of financial position is reported internally as a single segment. Accordingly no segmental analysis of assets and liabilities is reported.

For the year ended 31 March 2018	Care Services	Data and Integration	Digital Transformation and Engagement	Finance and Corporate Services
Income	(1,067)	(9,960)	(3,280)	(611)
Staff costs	10,505	33,025	29,661	14,516
Professional fees	2,615	10,954	17,734	2,076
Information technology	723	3,600	63,106	548
Accommodation	52	79	210	10,745
Travel and subsistence	342	761	1,717	598
Marketing, training and events	97	164	1,256	89
Office services	12	109	211	1,439
Other	1	2	12	225
Depreciation / amortisation	1	2,412	102	1,009
Reallocation of central costs	3,076	11,610	10,920	(30,634)
Non staff costs	**6,919**	**29,691**	**95,268**	**(13,905)**
Net expenditure	**16,357**	**52,756**	**121,649**	**-**

The reallocation of central costs attributes central overheads to programmes and services. The composition of directorates has changed during the year and the figures for 2016-17 are not directly comparable.

Implementation and Programmes	Operations and Assurance Services	Provider Digitisation and Programmes	Workforce	Total
(109)	(12,267)	(7,951)	-	**(35,245)**
15,573	36,372	18,255	7,083	**164,990**
1,376	5,634	4,024	308	**44,721**
12,435	28,565	3,246	7	**112,230**
80	104	57	102	**11,429**
933	735	588	201	**5,875**
265	587	149	236	**2,843**
13	259	2	227	**2,272**
5	9	1	84	**339**
4,759	20,311	4,842	-	**33,436**
5,248	(6,910)	5,860	830	**-**
25,114	**49,294**	**18,769**	**1,995**	**213,145**
40,578	**73,399**	**29,073**	**9,078**	**342,890**

Care Services
Provides clinical, information governance, standards, burden and audit governance, appraisal, audit and advice to all programmes, projects and services within NHS Digital and wider to the whole health sector when required or permitted by statute.

Data and Integration
Collects and analyses data and provides useful, trusted and accessible information to a wide range of users across the NHS and social care services, government, researchers, interest groups, patients and the public, to support scientific investigation, patient choice and public debate.

Digital Transformation and Engagement
Delivers digitally enabled improvements and outcomes to achieve better health and wellbeing, improved quality of care and increased efficiency across the health and social care sector and allows information to move securely across all care settings. This includes empowering the public to take more control of their health, ensuring they have access to the right care when they need it.

Finance and Corporate Services
Provides key corporate services, infrastructure and expertise that secure the probity, financial health and reputation of the organisation, enabling the delivery of high quality information, data and IT systems.

For the year ended 31 March 2017	Health Digital Services	Clinical Services	Digital Transformation	Information and Analytics
Income	(11,797)	(319)	(60)	(10,105)
Staff costs	36,640	6,454	5,409	27,504
Professional fees	2,108	1,334	61	6,669
Information technology	13,293	33	415	1,754
Accommodation	(1)	1	19	8
Travel and subsistence	1,233	204	218	358
Marketing, training and events	252	112	555	51
Office services	96	62	180	20
Other	-	-	-	-
Depreciation / amortisation	5,710	-	-	1,962
Reallocation of central costs	10,855	1,782	1,027	9,303
Non staff costs	**33,546**	**3,528**	**2,475**	**20,125**
Net expenditure	**58,389**	**9,663**	**7,824**	**37,524**

Implementation and Programmes
Works with our partners at a local and national level to support them to make the most of NHS Digital products and services and coordinate new requirements and opportunities. The directorate also delivers key programmes, such as Digital Medicines and Elective Care, and Child Protection – Information Sharing.

Operations and Assurance Services
Responsible for ensuring systems and programmes are delivered in a technically and clinically safe and secure manner. Once systems are in the live environment, the directorate is responsible for ensuring they maintain high availability and provide a fully resilient service. Also responsible for the ongoing development of critical national infrastructure components like Spine, e-Referrals, and API development for interoperability.

Provider Digitisation and Programmes
Works with health and social care providers to help them deploy and utilise digital systems in care settings and to support front-line staff and citizens exploit the use of information technology. We support this aim through the delivery of a suite of programmes and services which are aligned to the delivery of our portfolio of programmes.

Workforce
Delivers a high performing organisation that is recognised as an outstanding place to work, through the provision of optimal HR services and development of the capability and capacity of the workforce.

Operations and Assurance Services	Provider Support and Integration	Workforce	Finance and Corporate Services	Total
(15,065)	(5,648)	-	(1,344)	**(44,338)**
31,447	28,379	7,571	12,794	**156,198**
6,878	6,140	909	850	**24,949**
16,610	27,207	12	190	**59,514**
260	2	3	10,591	**10,883**
596	818	142	1,566	**5,135**
434	132	52	1,422	**3,010**
443	60	112	932	**1,905**
-	-	-	707	**707**
16,577	225	12	1,109	**25,595**
(3,136)	8,278	708	(28,817)	**-**
38,662	**42,862**	**1,950**	**(11,450)**	**131,698**
55,044	**65,593**	**9,521**	**-**	**243,558**

Note 3

Staff costs

	2017-18 £000	2016-17 £000
Staff costs comprise:		
Permanent staff		
Salaries and wages	134,803	120,634
Social security costs	14,788	13,201
Apprenticeship levy	657	-
Employer superannuation contributions – NHS Pension Scheme	17,192	15,370
Employer superannuation contributions – other	447	354
Staff seconded to other organisations	1,331	704
Termination benefits	659	111
	169,877	**150,374**
Other staff		
Temporary staff	2,388	1,335
Contractors	9,573	8,873
Staff seconded from other organisations	1,147	700
	13,108	**10,908**
Capitalised staff costs	(17,995)	(5,084)
	164,990	**156,198**

Note 4

Income

	2017-18 £000	2016-17 £000
Income analysed by classification and activity is as follows:		
Income from activities		
Programme and project management	6,082	8,676
Service delivery	23,166	28,708
Surveys and data collection	2,211	1,884
Fees and charges	2,235	3,772
Other income	-	535
	33,694	**43,575**
Other income		
Other non-trading income	1,551	763
	35,245	**44,338**

Income from programme and project management relates to workstreams primarily for the Department of Health and Social Care, NHS England and Public Health England, together with staff time recharged to the Department of Health and Social Care national programmes.

Income from service delivery covers a range of data management, system support and hosting, training and helpdesk services.

Income from surveys and data collection relates to the cost of running health surveys and other data collection activities.

Fees and charges relate to data services and are detailed on page 68.

Note 5

Expenditure

	2017-18 £000	2016-17 £000
Expenditure		
Workpackages and professional fees	36,978	17,758
Data collection and surveys	5,831	5,583
Legal fees	1,613	1,608
Chair and non-executive directors emoluments	131	122
Marketing, training and events	2,590	2,773
Travel	5,875	5,135
Premises and establishment	11,505	10,883
IT maintenance and support	31,091	15,496
IT managed services	81,139	44,018
General office supplies and services	2,026	1,895
Communications	419	237
Insurance	205	200
External audit fees	115	125
Internal audit fees	184	259
Provision for impairment of receivables	-	(1)
Other	7	12
Operating expenditure	**179,709**	**106,103**
Depreciation - property, plant and equipment	8,543	7,227
Amortisation - intangible assets	24,213	17,723
Impairments - property, plant, and equipment	56	-
Loss on disposal of non-current assets	624	645
Non-cash transactions	**33,436**	**25,595**
Total expenditure	**213,145**	**131,698**

Note 6

Aligning accounting treatment of transfers

	2017-18 £000	2016-17 £000
Adjustment to asset values following transfer	-	2,219
Alignment of depreciation and amortisation policies	-	(2,001)
Net loss	**-**	**218**

On 1 December 2016, assets were transferred to NHS Digital from the Department of Health and Social Care. The value of certain assets were adjusted in order to align the accounting treatment with NHS Digital policies. In addition some assets, following a physical asset verification exercise, were disposed of.

The adjustments were presented separately on the statement of comprehensive net expenditure to reflect standard absorption accounting treatment.

Note 7

Non-current assets – property, plant and equipment

2017-18	Land £000	Buildings £000	Computer hardware £000	Fixtures and fittings £000	Total £000
Cost or valuation					
At 1 April 2017	310	1,170	38,803	8,783	**49,066**
Additions	-	-	13,792	1,139	**14,931**
Disposals	-	-	(4,256)	-	**(4,256)**
At 31 March 2018	**310**	**1,170**	**48,339**	**9,922**	**59,741**
Depreciation					
At 1 April 2017	-	393	21,828	4,516	**26,737**
Provided during the year	-	42	7,563	938	**8,543**
Impairments	-	-	56	-	**56**
Disposals	-	-	(3,847)	-	**(3,847)**
At 31 March 2018	**-**	**435**	**25,600**	**5,454**	**31,489**
Net book value at 1 April 2017	310	777	16,975	4,267	22,329
Net book value at 31 March 2018	**310**	**735**	**22,739**	**4,468**	**28,252**

The total depreciation charged in the statement of comprehensive net expenditure in respect of assets held under finance leases and hire purchase contracts was £nil.

The gross cost of property, plant and equipment that has been fully depreciated but is still in use is £14,277,505.

The freehold building was valued in March 2014 at existing use by the local Valuation Office. We consulted with the local Valuation Office in December 2016, who clarified that the market for this type of property has not materially changed since 2014, and a further valuation report has therefore not been commissioned.

All tangible assets are owned by NHS Digital.

2016-17	Land £000	Buildings £000	Computer hardware £000	Fixtures & fittings £000	Total £000
Cost or valuation					
At 1 April 2016	310	1,170	31,829	7,768	**41,077**
Additions	-	-	7,051	1,256	**8,307**
Transfers from the Department of Health and Social Care	-	-	4,223	-	**4,223**
Reclassifications	-	-	2,128	-	**2,128**
Accounting policy alignment	-	-	(985)	-	**(985)**
Disposals	-	-	(5,443)	(241)	**(5,684)**
At 31 March 2017	**310**	**1,170**	**38,803**	**8,783**	**49,066**
Depreciation					
At 1 April 2016	-	351	17,946	3,728	**22,025**
Additions	-	42	6,212	973	**7,227**
Transfers from the Department of Health and Social Care	-	-	2,206	-	**2,206**
Reclassifications	-	-	903	-	**903**
Accounting policy alignment	-	-	(507)	-	**(507)**
Disposals	-	-	(4,932)	(185)	**(5,117)**
At 31 March 2017	**-**	**393**	**21,828**	**4,516**	**26,737**
Net book value at 1 April 2016	310	819	13,883	4,040	19,052
Net book value at 31 March 2017	**310**	**777**	**16,975**	**4,267**	**22,329**

The total depreciation charged in the statement of comprehensive net expenditure in respect of assets held under finance leases and hire purchase contracts was £nil.

Transfers from the Department of Health and Social Care represent the assets transferred on 1 December 2016 being largely hardware assets for the Spine and Secondary Uses programmes. The transfer was accounted for using standard absorption accounting rules in accordance with the Department of Health and Social Care's accounting policies as set out in the Group Accounting Manual.

Accounting policy alignment refers to amending the accounting treatment of assets transferred from other bodies to those policies adopted by NHS Digital. This includes certain expenditure that was formerly capital now being written to revenue, and aligning the depreciation policy.

The gross cost of property, plant and equipment that has been fully depreciated but is still in use is £9,269,860.

The freehold building was valued in March 2014 at existing use by the local Valuation Office. We consulted with the local Valuation Office who have clarified that the market for this type of property has not materially changed since 2014 and thus we have not commissioned a further valuation report.

All tangible assets are owned by NHS Digital.

Note 8

Non-current assets – intangible assets

2017-18	Software licences £000	Information technology £000	Development expenditure £000	Websites £000	Total £000
Cost or valuation					
At 1 April 2017	23,386	152,686	3,222	1,165	**180,459**
Additions	4,831	24,292	19,514	527	**49,164**
Reclassifications	-	2,654	(2,654)	-	**-**
Disposals	(4,753)	(58,853)	-	-	**(63,606)**
At 31 March 2018	**23,464**	**120,779**	**20,082**	**1,692**	**166,017**
Amortisation					
At 1 April 2017	16,902	97,681	-	1,165	**115,748**
Provided during the year	3,101	21,083	-	29	**24,213**
Disposals	(4,749)	(58,640)	-	-	**(63,389)**
At 31 March 2018	**15,254**	**60,124**	**-**	**1,194**	**76,572**
Net book value at 1 April 2017	6,484	55,005	3,222	-	64,711
Net book value at 31 March 2018	**8,210**	**60,655**	**20,082**	**498**	**89,445**

The total amortisation charged in the statement of comprehensive net expenditure in respect of assets held under finance leases and hire purchase agreements was £nil.

Internally generated assets have a carrying value at 31 March 2018 of £22,051,169 and the additions in the year amounted to £17,995,504. They are amortised in line with our amortisation policy, with the charge in the year amounting to £3,217,249.

Research and development expenditure associated with intangible asset development has been recognised as an expense in note 5 and is categorised by the nature of the spend incurred.

The value of staff capitalised within intangible assets additions amounts to £17,995,504.

All intangible assets are owned by NHS Digital.

2016-17	Software licences £000	Information technology £000	Development expenditure £000	Websites £000	Total £000
Cost or valuation					
At 1 April 2016	17,717	33,402	60	1,685	**52,864**
Transfers from the Department of Health and Social Care	10,666	119,654	-	-	**130,320**
Reclassifications	(2,036)	(984)	892	-	**(2,128)**
Additions	1,659	9,664	2,270	-	**13,593**
Reversal of revaluation transferred to reserves	(147)	(5,880)	-	-	**(6,027)**
Accounting policy alignment	(1,311)	(2,977)	-	-	**(4,288)**
Disposals	(3,162)	(193)	-	(520)	**(3,875)**
At 31 March 2017	**23,386**	**152,686**	**3,222**	**1,165**	**180,459**
Amortisation					
At 1 April 2016	10,862	15,019	-	1,603	**27,484**
Transfers from the Department of Health and Social Care	7,220	75,603	-	-	**82,823**
Reclassification	(900)	(3)	-	-	**(903)**
Provided during the year	3,712	13,929	-	82	**17,723**
Reversal of revaluation transferred to reserves	(91)	(2,943)	-	-	**(3,034)**
Accounting policy alignment	(812)	(3,736)	-	-	**(4,548)**
Disposals	(3,089)	(188)	-	(520)	**(3,797)**
At 31 March 2017	**16,902**	**97,681**	**-**	**1,165**	**115,748**
Net book value at 1 April 2016	6,855	18,383	60	82	25,380
Net book value at 31 March 2017	**6,484**	**55,005**	**3,222**	**-**	**64,711**

The total amortisation charged in the statement of comprehensive net expenditure in respect of assets held under finance leases and hire purchase agreements was £nil.

Transfers from the Department of Health and Social Care represent the assets transferred on 1 December 2016 being software licences and software development assets for the Electronic Referral System (e-RS), Spine and Secondary Uses programmes. The transfer was accounted for using standard absorption accounting rules in accordance with the Department of Health and Social Care's accounting policies as set out in the Group Accounting Manual.

In accordance with standard absorption accounting the revaluation reserve of £3.0 million associated with the transfer of assets from the Department of Health and Social Care was established. Following a revaluation of all assets using the NHS Digital methodology this was subsequently reversed.

Accounting policy alignment refers to amending the accounting treatment of assets transferred from other bodies to those policies adopted by NHS Digital. This includes certain expenditure that was formerly capital now being written to revenue, and aligning the amortisation policy.

The gross cost of intangible assets that were fully depreciated but still in use are £46,799,266. This includes £38,184,219 for the SUS system transferred from the Department of Health and Social Care during the year. This system was decommissioned in July 2017.

Included within intangible assets are major programmes including Spine with a net book value of £15.4 million, the electronic referral service (e-RS) with a net book value £18.1 million and the Secondary Uses Services with a net book value of £5.3 million. These programmes are amortised over the anticipated life of the programme and at 31 March 2017 with Spine and e-RS having approximately five years remaining. The existing Secondary Uses Services ended in July 2017 with the replacement "SUS+" commencing amortisation in April 2017.

The value of own staff capitalised within intangible assets additions amounted to £5,084,248.

All intangible assets are owned by NHS Digital.

Note 9

Other non-current receivables

	31 March 2018 £000	31 March 2017 £000
Prepayments	3,045	4,235

Prepayments relate primarily to software licences purchased on a subscription basis for more than one year.

Note 10

Trade receivables and other current assets

Amounts falling due within one year	31 March 2018 £000	31 March 2017 £000
Trade receivables	11,995	15,827
Value added tax	4,588	6,711
Deposits and advances	16	443
Prepayments and other receivables	13,623	6,871
Accrued income	927	4,074
	31,149	**33,926**

Note 11

Cash and cash equivalents

	31 March 2018 £000	31 March 2017 £000
Balance at 1 April 2017	15,434	10,152
Net changes in cash and cash equivalents	8,495	5,282
Balance at 31 March 2018	**23,929**	**15,434**

Bank balances were held during the year with Royal Bank of Scotland under the Government Banking Service. As this arrangement includes regular clearing down of balances, the Government Banking Service is deemed to operate as one account for reporting purposes.

At 31 March 2018, £5,539,200 of the balance reported above was held in a solicitor's client account pending a contract completion.

Note 12

Trade and other payables

Amounts payable within one year	31 March 2018 £000	31 March 2017 £000
Trade and other payables	8,305	8,754
Income tax, National Insurance and superannuation	6,834	6,088
Deferred income	503	309
Accruals	26,734	15,672
	42,376	**30,823**

Note 13

Provisions for liabilities and charges

	Dilapidations £000	Injury benefit £000	Total £000
Balance at 1 April 2017	1,889	199	**2,088**
Arising during the year	139	409	**548**
Utilised during the year	-	(26)	**(26)**
Balance at 31 March 2018	**2,028**	**582**	**2,610**
Expected timing of cash flows			
Within one year	37	27	64
One to five years	1,643	106	1,749
Over five years	348	449	797

The dilapidation provision refers to the anticipated costs for remedial works at the end of property leases and is based on an assessment made by an external property advisor, or an internal assessment using industry standard estimates.

The injury benefit costs refer to an award where monthly payments are made to the NHS Pension Scheme.

Note 14

Working capital movements

	2017-18 £000	2016-17 £000
Receivables		
Opening balance	33,926	33,322
Balances transferred from the Department of Health and Social Care	-	270
Total opening trade receivables and other current assets plus balances transferred in	**33,926**	**33,592**
Closing trade receivables and other current assets	31,149	33,926
Decrease/(increase) in trade receivables and other current assets	**2,777**	**(334)**
Payables		
Opening balance	30,823	25,826
Balances transferred from the Department of Health and Social Care	-	13,848
Total opening trade and other payables plus balances transferred in	**30,823**	**39,674**
Closing current trade and other payables	42,376	30,823
Increase/(decrease) in trade and other payables	**11,553**	**(8,851)**

Balances transferred from the Department of Health and Social Care represent the payables and receivables balances on the programmes and services transferred on 1 December 2016. The transfer was accounted for using standard absorption accounting in accordance with the Department of Health and Social Care accounting policies set out in the Group Accounting Manual.

Note 15

Transfers from other bodies

Transfers under absorption accounting taken through the statement of comprehensive net expenditure	2017-18 £000	2016-17 £000
Property plant and equipment	-	2,017
Intangible assets	-	47,497
Accruals and prepayments	-	(13,578)
Net assets transferred	**-**	**35,936**

Note 16

Capital commitments

Capital commitments amount to £7,811,429 (31 March 2017: £2,533,614). Of this, £2,836,853 relates to ordered IT equipment and office furniture and £4,974,576 relates to software licences and development work.

Note 17

Other financial commitments

NHS Digital has not entered into any non-cancellable contracts (which are not operating leases) for the provision of services as at 31 March 2018 (31 March 2017 £nil).

Note 18

Contingent assets and liabilities

Contingent liabilities amount to £nil (31 March 2017 £1,000,000).

Remote contingent liabilities amount to £nil (31 March 2017 £380,000).

Note 19

Commitments under operating leases

Expenditure includes the following in respect of operating leases	2017-18 £000	2016-17 £000
Accommodation	5,000	5,503
Other operating leases	95	101
	5,095	**5,604**

At the reporting date non-cancellable operating lease commitments were:	31 March 2018 £000	31 March 2017 £000
Land and Buildings		
Not later than one year	4,643	5,277
Between one and five years	11,232	10,544
Later than five years	122	82
	15,997	**15,903**
Other Leases		
Not later than one year	53	84
Between one and five years	38	31
Later than five years	-	-
	91	**115**
Total	**16,088**	**16,018**

Note 20

Related parties

The Health and Social Care Information Centre, also known as NHS Digital, is an executive non-departmental public body created by the Health and Social Care Act 2012. It is sponsored by the Department of Health and Social Care, and the Department together with its arms-length bodies are therefore regarded as related parties. In addition, NHS Digital has had a number of transactions with other government departments and other central and local government bodies. In order to reduce the volume of detailed disclosures, IAS 24 does not require the disclosure of transactions between bodies under the control of the same government.

During the year NHS Digital received invoices from Accenture (UK) Limited totalling £18,390,079 excluding VAT. The chair and another non-executive director of NHS Digital hold shares in Accenture (UK) Limited. £17,672,005 of this related to the NHSmail contract, which was novated from the Department of Health and Social Care to NHS Digital as part of the transfer of informatics programmes on 1 December 2016.

	Related to roles within NHS Digital	Amounts payable at 31 March 2018 £000	Amounts receivable at 31 March 2018 £000	Income in 2017-18 £000	Expenditure in 2017-18 £000
Accenture (UK) Ltd	Non-executive directors	82	-	1	18,390
BCS The Chartered Institute For IT	Director of Data and Integration	-	-	-	11
Home Office	Chief Executive Officer	-	-	-	207
Imperial College London	Chief Executive Officer	-	-	49	11
Kings College London	Non-executive director	-	-	-	5
Queen Mary University Of London	Non-executive director	-	4	6	-
University Hospitals Coventry And Warwickshire NHS Trust	Non-executive director	-	-	6	-
University Of Hertfordshire	Chief Executive Officer	-	-	-	1
University Of Oxford	Non-executive director	-	51	150	-
University Of Warwick	Chief Executive Officer	-	-	-	1
		82	**55**	**212**	**18,626**

No other related party transactions were noted with key management other than remuneration and expenses as disclosed in the remuneration report.

Note 21

Financial instruments

As the cash requirements of NHS Digital are met through Grant in Aid by the Department of Health and Social Care, and invoiced income largely received from the Department of Health and Social Care, NHS England and Public Health England, financial instruments play a more limited role in creating and managing risk than would apply to a non-public sector body. The majority of financial instruments relate to contracts to buy non-financial items in line with NHS Digital's expected purchase and usage requirements and NHS Digital is therefore exposed to little credit, liquidity or market risk.

a) Market risk
NHS Digital was not exposed to material currency risk or commodity risk. All material assets and liabilities were denominated in sterling. NHS Digital had no significant interest bearing assets or borrowings subject to variable interest rates, hence income and cash flows were largely independent of changes in market interest rates.

b) Credit risk
Credit risk arises from invoices raised to customers for services provided. Most high value receivables relate to balances with the Department of Health and Social Care, NHS England, Public Health England and other related bodies against purchase orders and thus do not represent a significant credit risk. NHS Digital had a comparatively small value of external receivables and therefore disclosure of the largest individual debt balances were not considered in the evaluation of overall credit risk.

Movement in the allowance for doubtful debts	2017-18 £000	2016-17 £000
Balance at 1 April	2	3
Provided for in year	1	2
Reversed unutilised	(1)	(3)
Amounts written off during the year as uncollectible	(1)	-
Balance at 31 March	**1**	**2**

The provision for doubtful debts is assessed on an individual debt basis. The expense in the year relating to related parties amounted to: £nil (2016-17: £217)

The table below shows the ageing analysis of trade receivables at the reporting date:

	Current £000	< 30 days overdue £000	31-60 days overdue £000	> 61 days overdue £000	Total £000
Balance at 31 March 2018	**9,018**	**2,649**	**133**	**195**	**11,995**
Balance at 31 March 2017	8,819	6,771	45	192	15,827

NHS Digital's standard payment terms are 14 days from date of invoice. The maximum exposure to credit risk at the reporting date is the fair value of each class of receivables mentioned above. NHS Digital did not hold any collateral as security.

c) Liquidity risk
Management manage liquidity risk through regular cash flow forecasting. NHS Digital had no external borrowings and relies on Grant in Aid from the Department of Health and Social Care for its cash requirements and was therefore not significantly exposed to liquidity risks.

The table below analyses NHS Digital's financial liabilities which will be settled on a net basis in the period of less than one year. The carrying value of financial liabilities was not considered to differ significantly from the contractual undiscounted cash flows:

	31 March 2018 £000	31 March 2017 £000
Current liabilities	42,376	30,823

Note 22

Events after the reporting period ended

In accordance with IAS 10, events after the reporting period are considered up to the date on which the accounts are authorised for issue.

There are no post statement of financial position events that would require to be adjusted.

Note 23

Authorised date for issue

NHS Digital's Annual Report and Accounts are laid before Parliament by NHS Digital. IAS 10 requires NHS Digital to disclose the date on which the Annual Report and Accounts are authorised for issue.

The Accounting Officer authorised these financial statements for issue on 26 June 2018.

Appendix A

Sustainability report

NHS Digital is committed to sustainable development in all our activities.

Our aims are to:

- deliver sustainable operations and services that help our stakeholder organisations meet their business objectives
- contribute to a low carbon economy
- support the goals of the sustainable development strategy for the NHS and the public health and social care system
- embed sustainability within the core business thinking
- contribute to the Greening Government commitments

2017 18 has seen significant progress. We have produced our first Sustainable Development Management Plan (SDMP), employed our first full time Sustainability Manager and won a highly commended award in the NHS sustainability awards for staff engagement.

Core service provision
It is recognised that the biggest change we can make around sustainability improvements is to design our products and services to have a minimal environmental footprint. We have commenced analysing our product development processes to ensure that sustainability is an active consideration through the design stage.

Estate footprint
We operate over a dispersed estate of mainly leased properties. Two thirds of staff are located in Leeds with Exeter, London and Southport being the other larger locations. Improvements have been undertaken in order to modernise, make more efficient and enhance space utilisation focusing on Hexagon House (Exeter), Whitehall 2 (Leeds) and Vantage House (Leeds).

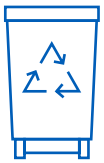
Moving into the future, the estate will be significantly rationalised with the major project being the occupation of the BREEAM Excellent Leeds Hub in 2020. Allied to this, the 'Smart' working project will bring down space requirements and deliver significant savings.

Quantitative sustainability performance
The following tables summarise progress around areas we are currently monitoring. In general, when normalised by full time equivalent (FTE) employees, the performance has been very encouraging since 2014 15. The main areas of concern are the rising trends in water use and business travel.

We have aligned our reporting to the UN Sustainable Development Goals (SDGs).
The SDGs are a collection of 17 global goals set by the United Nations. The broad goals are interrelated though each has its own targets to achieve. The SDGs cover a broad range of social and economic development issues. These include poverty, hunger, health, education, climate change, gender equality, water, sanitation, energy, urbanization, environment and social justice.

Trends, key achievements and challenges

Relevant UN strategic development goal	So how much is that?	Key initiatives 2017-18	Key challenges -19
Paper usage – **47% reduction**	**915** sheets less per year per person	Pull printing, ICT improvements	Work with high print users to find out how they can be supported to reduce paper use
Carbon footprint – **32% reduction**	**640kg** CO2e less per person. Equivalent to a return economy flight from Leeds-Bradford to Madrid	Rationalisation and usage optimisation of estate	The scope needs to be increased from current mandatory reporting. Smart working and estate footprint reductions could provide step change
Waste diverted from landfill – **32% increase**	**86%** of our waste is diverted from landfill, close to our 90% target for 2020	Improved recycling facilities	Further improve recycling bin infrastructure and improve range of waste streams
Gas – **25% reduction**	Saved enough gas per person to heat up 7 baths each (**280 kWh**)	Building Management Systems (BMS) monitoring, insulation	Improve efficiencies of poorly performing estate e.g. Whitehall 2 and Vantage House through BMS improvements
Electricity – **18% reduction**	Our employees now each consume around 60% of the average UK household electricity annually – **so more at work per person than at home**	LED lighting and 'Switch off' campaigns	'Invest to save' schemes on lighting/energy improvements. Staff engagement through Green Digits to help 'switch off' behaviours. Data Centre energy use is rising and needs attention

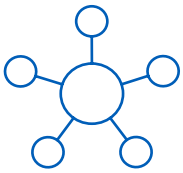
Relevant UN strategic development goal	So how much is that?	Key initiatives 2017-18	Key challenges for 2018-19
Waste production – **6% reduction** 	**2.1kg** per person reduction annually. We produce 155 grams of waste per day each which is mainly lunchtime food packaging	Waste reduction challenge	Keep up engagement through Green Digits to encourage people to move towards reusable food and drinks containers
Business travel (mileage) – **16% increase** 	**395 miles** per person increase – further than an extra return trip from London to Leeds each	Virtual meetings, technology improvements and training	Opportunity for cross organisational campaign to improve efficiency, reduce expenditure and improve working practices through virtual meetings
Water – **23% increase**	Extra **1.3m³** per person which is the same as 20 showers each	Low flow washroom installations	Upgrade washrooms to prevent leaks and use low flow fittings

GHG emissions – non-financial indicators		2017-18	2016-17	2015-16	2014-15
Non-financial indicators (000kwh)	**Scope 1**				
	Natural gas	2,607	2,310	2,311	2,695
	Scope 2 and 3				
	Mains electricity (properties)	4,712	4,975	4,414	4,525
	Mains electricity (data centres)	1,446	1,837	1,915	1,953
Non-financial indicators (000km travelled)	Travel – air	1,360	999	766	713
	Travel – rail	10,780	9,425	8,062	6,816
	Travel – private cars	1,293	1,350	1,562	1,512
	Travel – leased vehicles	323	287	261	179
Non-financial indicators (tCO^2)	**Scope 1**				
	Natural gas	480	425	406	499
	Scope 2				
	Mains electricity (properties)	1,591	1,819	2,297	2,291
	Mains electricity (data centres)	686	789	849	715
	Scope 3				
	Mains electricity (properties)	149	165	190	204
	Mains electricity (data centres)	64	71	70	62
	Travel – air	145	118	103	87
	Travel – rail	504	460	363	323
	Travel – private cars	236	252	291	287
	Travel – leased vehicles	59	54	49	34
	Water	22	16	14	14
	Waste	6	8	8	11
Total emissions		**3,942**	**4,177**	**4,640**	**4,527**
Total tCO^2 per FTE employee		**1.30**	**1.51**	**1.72**	**1.91**

GHG emissions – financial indicators (£000)	2017-18	2016-17	2015-16	2014-15
Natural gas	74	65	70	96
Mains electricity (properties)	481	431	497	472
Mains electricity (data centres)	145	188	176	128
Travel – air	309	255	192	138
Travel – rail	3,110	2,567	2,285	1,862
Travel – private cars	427	446	516	508
Travel – leased vehicles	30	24	24	17
Waste	66	42	44	41
Water	48	54	99	Not known
Total costs	**4,690**	**4,072**	**3,903**	**3,262**
Total energy cost per FTE employee	**1.54**	**1.47**	**1.45**	**1.42**

Travel

The increase in travel is due to a number of factors. We have increased funding to accelerate the delivery of change programmes, but we are also seeking to ensure that many of our delivery teams are increasingly engaged with NHS front line systems, and specifically to support deployment and implementation of our technology. As a technology organisation we also need to ensure our staff are trained and well informed of up-to-date developments, which involved national and occasionally international travel. Alongside these legitimate reasons for travel we recognise the need to avoid unnecessary travel, including raising awareness with our staff and investing in technology to enable virtual communication.



Green ICT and data storage

A Corporate Information Systems Strategy for 2017-18, together with a Greening ICT positioning statement, has been developed as we have moved towards a more financially efficient and environmentally sustainable IT infrastructure. This includes the:

- consolidation of data centres and increasing the use of the Crown facilities
- better use of the core infrastructure across programmes to maximise efficiency
- greater use of cloud services
- use of procurement frameworks that include sustainability and environmental requirements
- disposal of infrastructure to Waste Electrical and Electronic Equipment standards
- increased use of web and video conferencing and other collaboration tools

Connections have been made with the national government green ICT steering group. NHS Digital with the Sustainable Development Unit are working to support the NHS to make step changes in this area too.

Biodiversity
2018-19 shall see the investigation of potential biodiversity improvements to our site with indoor planting, food growing and landscaping to be reviewed. This is recognised as a significant wellbeing improvement for staff also.

Engagement
2017-18 has seen a major push on sustainability engagement with development of our Green Digits sustainability champions, blogs, discussion groups, poster campaigns and websites.

Visibility of the sustainability agenda has been raised significantly and this will be built on in 2018-19 through focussed campaigns on recycling, energy and business travel. This work has been recognised at national level through the 'Highly Commended' certificate at the NHS Sustainability Awards.

Procurement
We procure the majority of our goods and services from nationally agreed frameworks and contracts. These are all fully in line with Government Buying Standards (GBS) and incorporate sustainability considerations by commodity type. All IT hardware procured is in line with the GBS minimum mandatory standards and, in most cases, the best-practice standards. Sustainability considerations are embedded in our procurement activity and, during this year, we have included sustainability more visibly in our proposed commercial policy. Our sustainable procurement lead is working to further develop commercial processes to ensure environmental and sustainability considerations are continually integrated into sourcing and contract-management cycles. This will establish appropriate coaching and support and to monitor and report on progress through the following activities:

- ensuring that staff involved in procurement activity receive appropriate training in sustainable procurement
- the introduction of a whole-life costing approach to procurement activity, rather than just the purchase price
- developing the evidence base on sustainable procurement by identifying priority areas with specific targets and through Key Performance Indicators

Appendix B

Board members' biographies and Register of Interests

All directors have confirmed that they know of no relevant audit information of which the auditors are unaware. They have also confirmed that they have taken all the steps that they ought to have taken as directors to find out relevant information and to establish that auditors are aware of it.

Executive directors

Sarah Wilkinson, Chief Executive (appointed 17 August 2017)

Sarah Wilkinson became NHS Digital's Chief Executive in August 2017.

She previously worked as Chief Digital, Data and Technology Officer at the Home Office. Prior to joining the Home Office, Sarah spent 23 years in financial services and held chief information officer roles at Credit Suisse, UBS, Deutsche Bank and Lehman Brothers.

Sarah is a non-executive director of NatWest Markets, a member of the Audit, Risk and Compliance Committee of Kings College London, a member of the Tech Partnership and a member of the advisory boards of the Department of Computing at Imperial College London and the Institute of Mathematics at the University of Oxford.

Noel Gordon, Chair

Noel chairs the NHS Digital Board, as well as our Investment Committee and our Talent, Remuneration and Management Committee (TRaMCo).

He is a non-executive director of NHS England, chair of NHS England's Specialised Commissioning Committee and chair of the Healthcare UK Advisory Board. He also serves as a non-executive director of the Payments Systems Regulator, a member of council of the University of Warwick, a member of the development board of Age UK and chair of the board of trustees of UserVoice.org. He was formerly a member of the Life Sciences Industrial Strategy Board and the Accelerated Access Review.

Previously an economist and a banker, Noel spent most of his career in consultancy. He was Global Managing Director of Banking Industry Practice at Accenture between 1996 and 2012. He has extensive practical experience of driving fundamental innovations in transforming industries and of big data, analytics, mobile and digital technologies.

Executive directors

Rob Shaw, Deputy Chief Executive

Rob was appointed as NHS Digital's Deputy Chief Executive in August 2017, after serving as Interim Chief Executive in early 2017 and Chief Operating Officer since April 2016.

He has helped lead the transformation of the health and care system's IT infrastructure since 2014, delivering more efficient, flexible and secure services.

He is currently leading, with the Department of Health and Social Care, the UK input to the Global Digital Health Partnership.

Rob became Director of Operations and Assurance Services in April 2014 and managed the insourcing of three critical infrastructure services: the core NHS Spine systems, the Care Identity Service and the Secondary Uses Service. He was also responsible for overseeing the provision of more than 60 essential live services to NHS and social care organisations.

After taking over as Chief Operating Officer, he worked as Senior Responsible Officer for the cyber security programme. In 2009, he became Director of the then Technical Assurance Group and in 2012 he also took over management of Technical Architecture and Infrastructure.

Carl Vincent, Executive Director: Chief Finance Officer

Carl heads NHS Digital's Finance and Improvement directorate and, on an interim basis, leads the Assurance and Risk Management directorate.

He joined NHS Digital in June 2013 on secondment from the Department of Health and Social Care. In addition to his current responsibilities, he has had periods leading NHS Digital's commercial, human resources and data and information functions.

Carl joined the Department of Health and Social Care as an economist in 1996 and had a number of roles in analytical services, commercial and finance. He also spent a year on secondment at Ernst and Young.

Professor Martin Severs, Executive Director Chief Medical Officer, Caldicott Guardian

Martin is Medical Director and Caldicott Guardian and headed our information governance function in 2017-18.

He has had a number of national and international roles in health informatics, including chair of the management board of the International Health Terminology Standards Development Organisation, chair of the Information Standards Board and clinical lead for the Caldicott Information Governance Review.

He was a consultant geriatrician for 30 years, a professor of health care for older people for 25 years at the University of Portsmouth and has extensive experience in general management at service, medical director, and non-executive board roles in health and research.

Non-executive directors

Sir Ian Andrews

Sir Ian has been a non-executive director of NHS Digital since 2013.

A former Second Permanent Secretary of the Ministry of Defence who retired from the civil service in 2009, he was Non-Executive Chairman of the UK Serious Organised Crime Agency (SOCA) – now part of the National Crime Agency – from 2009 to 2013.

For much of the last 20 years, he has been closely involved in the management of transformational change in large and complex organisations in the national security space. He was a managing director of the Defence Evaluation and Research Agency and chief executive of the Defence Estates Agency.

As the Second Permanent Secretary of the Ministry of Defence, Sir Ian was a member of the Defence Board, where his responsibilities included information assurance and security. He continues to pursue a range of national security interests, including raising public and private sector awareness of cyber security threats and providing support to defence engagement.

Non-executive directors

Dr Sarah Blackburn

Sarah chairs the NHS Digital Assurance and Risk Committee.

She has been the chief executive of the Wayside Network, a group of consultants specialising in governance, since 2002. She has worked as a director of assurance and risk management for Argos, Kingfisher, RAC and Exel, and Hanover Housing Group. Sarah was a founding member of the Healthcare Commission Board and a member of the editorial board of the first NHS Integrated Governance Handbook. Since 2005, she has been a director of a private company supplying primary care and addiction services to secure environments in the NHS.

Sarah's other non-executive director roles have included the Identity and Passport Service, the Open University and the Royal Institution of Chartered Surveyors. She is a fellow of the Institute of Chartered Accountants in England and Wales, and a past president and chartered fellow of the Chartered Institute of Internal Auditors.

Professor Soraya Dhillon

Soraya leads on clinical safety and governance, e-channels and diversity and inclusion on the NHS Digital Board.

She is a former clinical academic with over 35 years of experience in academia and clinical practice. She retired as Dean of School of Life and Medical Sciences at the University of Hertfordshire in November 2016 and has held several non-executive posts in the NHS since 1991. She is the former chair of Luton and Dunstable Hospital NHS Foundation Trust (1999-2010), a former member of the General Pharmaceutical Council and a former board director for the Eastern Academic Health Science Network. She is a non-executive director and vice chairman at The Hillingdon Hospital NHS Foundation Trust and an academic manager at the University of Hertfordshire.

Soraya was awarded an MBE for her contribution to health services in Bedfordshire. She is a fellow of UCL and the Royal Pharmaceutical Society (RPS) as well as a recipient of the Society's Charter Gold Medal for Science and Practice.

Dr Marko Balabanovic

Marko leads on innovation, emerging technologies, partnerships and technology transfer on the NHS Digital Board.

He has over 20 years of experience developing innovations in academia, corporations and start-ups in both the UK and US. As Chief Technology Officer at Digital Catapult his role is to drive innovation by bringing together expertise from the creative, research and development fields and to ensure the organisation remains at the forefront of key trends and emerging technologies.

Marko has been instrumental in bringing several new technologies to market. Most recently, he worked at the start-up State to launch a digital global opinion network.

Formerly, Marko was head of innovation at lastminute.com, where his team launched an array of award winning mobile apps. He studied computer science at the University of Cambridge and has a PhD in Computer Science (Artificial Intelligence) from Stanford University, where he led foundational work on recommender systems.

Daniel Benton

Daniel leads on IT delivery excellence, operational transformation and technology strategy on the NHS Digital board.

He spent most of his career at Accenture, where he was global head of the Technology Strategy and Digital Strategy practices. He has extensive experience both of setting and implementing the technology agendas for large organisations through periods of transformational change, including the implementation of advanced consumer-facing technologies. He led much of Accenture's thinking around the impact of technology on business and on transforming IT organisations. He was also seconded twice as Chief Information Officer to an international bank and a large global insurer.

Daniel is a trustee of The Grange Festival.

Non-executive directors

Professor Sudhesh Kumar

Sudhesh leads on big data, the research sector, clinical informatics and medical technology and life sciences strategy on the NHS Digital Board.

He is Dean of the Warwick Medical School and Director of the Institute of Digital Healthcare at the University of Warwick. He is also a non-executive director on board of University Hospital Coventry and Warwickshire NHS Trust.

He is a clinical endocrinologist with 22 years of experience as a consultant physician in the NHS. His research has included developing novel approaches and medical technology to manage obesity and diabetes.

Rob Tinlin

Rob leads on integrated care, digitising social care, change management and organisational development on the NHS Digital Board.

He is a non-executive director on the board of the Crown Office and Procurator Fiscal Service and chairs its Audit and Risk Committee.

He was chief executive of Southend-on-Sea Council from 2005 to 2017. He previously served as chief executive of South Northamptonshire Council for seven years. Under Rob's leadership, Southend council was awarded LGC Council of the Year (2012) and MJ Senior Leadership Team of the Year (2016). He was awarded an MBE in 2017 for services to local government.

Rob was the chief executive leading on health and social care for the East of England and a founding member of the Southend Health and Well Being Board. He has been a member of the National Information Board, the Anglia Ruskin MedTech Campus board, and the Advisory Board for the Queen Mary University of London Business School.

Ex-officio non-executive directors

Dr Simon Eccles

Simon is the Chief Clinical Information Officer (CCIO) for Health and Care and an ex officio member of the NHS Digital Board.

His role as chief CCIO spans the Department of Health and Social Care, NHS England, NHS Improvement and the arms-length bodies. He is accountable for delivery of the Digital Transformation Portfolio and the whole of the central NHS IT expenditure.

Simon still practices one day a week as a consultant in emergency medicine at St Thomas' Hospital. Former roles have included: Programme Director for Emergency Care Pathways Transformation at Guy's and St Thomas' NHS Foundation Trust, including overseeing the building of a new emergency floor on the St Thomas' site; joint Clinical Director for Urgent and Emergency Care (London) for NHS England; and joint Senior Responsible Owner (SRO) for Urgent and Emergency Care in South East London. He has been SRO for interoperability and for NHSmail within the Digital Transformation Portfolio.

Jonathan Marron

Jonathan is acting Director General of Community and Social Care at the Department of Health and Social Care (DHSC) and an ex officio member of the NHS Digital Board.

Jonathan is responsible for the following policy areas at DHSC: care and transformation; mental health, dementia and disabilities; medicines and pharmacy; digital data and primary care; and the office of the Chief Social Worker.

Jonathan has worked in a range of roles across the health service including Director for Primary, Community, Mental Health and 7 Day Services at the Department of Health and Social Care, Director of Strategy at Public Health England, transition director at Public Health England. He was Director of Strategy and Planning at NHS South West Essex Primary Care Trust, Policy Director at Monitor and System Reform and Commissioning Lead at Department of Health and Social Care.

Appendix C

Attendance at the Board and committees

Attendance at the Board and committees during 2017-18 was as follows:

	Public Board	Board Development	ARC	IACSC	TRaMCo	IC
Number of meetings	**6**	**8**	**6**	**3**	**5**	**9**
Executive directors						
Sarah Wilkinson	4/4	5/5	2/4	1/3*	3/3	2/5
Rob Shaw	4/6	8/8	5/6	2/3	3/5	6/9
Carl Vincent	6/6	6/8	6/6	-	-	8/9
Prof Martin Severs	2/2	2/2	-	1/1	-	-
Tom Denwood	2/2	0/2	-	-	-	-
Sean Walsh	2/2	2/2	4/4	2/2	1/1	-
Rachael Allsop	1/2	1/3	-	-	1/3	-
Prof David Hughes	1/2	3/3	-	-	-	-
Beverley Bryant	2/2	3/3	-	-	-	-
Non-executive directors						
Noel Gordon	5/6	8/8	-	-	5/5	9/9
Sir Ian Andrews	6/6	8/8	6/6	3/3	1/1	-
Dr Sarah Blackburn	4/6	8/8	6/6	3/3	1/1	-
Prof Soraya Dhillon	6/6	7/8	-	-	5/5	-
Dr Marko Balabanovic	6/6	7/8	-	3/3	-	-
Daniel Benton	5/6	6/8	6/6	-	-	9/9
Prof Sudhesh Kumar	5/6	6/8	-	-	5/5	-
Rob Tinlin	6/6	6/8	5/6	-	-	-

The above table reflects those non-executive and executive directors who attended meetings and the number of meetings entitled to attend in their relative capacities. Representatives from our main sponsors, Jonathan Marron (and previously Tamara Finkelstein) - Director General for Community and Social Care, Department of Health and Social Care and Dr Simon Eccles (and previously Professor Keith McNeil) - Chief Clinical Information Officer for health and social care attend the Board. They fully contribute to the discussions but have no voting rights. They are not paid by NHS Digital for their attendance.

*By agreement with the IACSC Chair, Sarah Wilkinson withdrew from membership of IACSC at the start of 2018. Rob Shaw, Deputy CEO, is the lead executive on this committee.

Appendix D

Our regulatory and compliance framework

Our regulatory and compliance framework includes (but is not limited to) the following statutes and statutory instruments:

- Caldicott Report – Review of Patient-Identifiable Information (1997)
- Caldicott 2 Report – Information: To Share or Not To Share? The Information Governance Review (2013)
- Caldicott 3 Report – Review of Data Security, Consent and Opt-Outs (2016)
- Caldicott Report – Impact and Influence for patients and service users (2017)
- Care Quality Commission – Safe Data, Safe Care: Data Security Review (2016)
- Code of Practice on Confidential Information, NHS Digital
- common law duty of confidentiality
- Confidentiality: NHS Code of Practice (2003)
- Copyright, Designs and Patents Act (1998)
- Copyright and Rights of Databases Regulations (1997/3032)
- Data Protection (Processing of Sensitive Personal Data) Order (2000)
- Environmental Information Regulations (2004)
- Freedom of Information Act (2000)
- Public Record Act (1958)
- General Data Protection Regulation (GDPR) and the Data Protection Act 2018
- Health and Social Care Act (2001)
- Health and Social Care Act (2012)
- Information Security Management: NHS Code of Practice (2007)
- International Information Security Standard: ISO/IEC 27001:2013 and ISO/IEC 27002:2013
- International Standard on Records Management ISO 15489:2015
- BS 10008 Evidential Weight and Legal Admissibility of Electronic Information
- Human Rights Act (1998) Article 8
- Network and Information Systems Regulations 2018
- NHS Act (2006)
- NHS Care Record Guarantee for England (2011)
- NHS Constitution
- Privacy and Electronic Communication Regulations
- Records Management Code of Practice for Health and Social Care (2016)
- Re-Use of Public Sector Information Regulations (2005)
- Social Care Record Guarantee for England (2009)
- ICO Code of Practice
- Anonymisation Standard

The UK Statistics Authority, established under the Statistics and Registration Service Act (2007), guides our statistical work through its Code of Practice for Official Statistics. The authority monitors and can comment publicly on compliance with the code. It also formally assesses compliant statistics for designation as National Statistics.

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