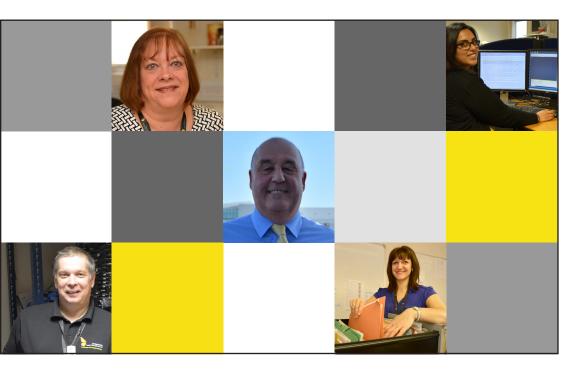


ANNUAL REPORT 2016/17





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Director's Welcome

In this report, we share the successes and challenges of another year providing ICT services across the Nottinghamshire local health community.

Last year I reported that the NHS was facing significant financial challenges. While lots has been done to help our staff working in the NHS we are still seeing significant pressure on the demand for NHS services. Just like in most industries this means that the NHS is turning to technology as an enabler for introducing new care models. It also would like to leverage the benefits technology can bring to improving the patient experience.

On one hand this is good news for the Nottinghamshire Health Informatics Service on the other hand at times we have found the resources to deliver new projects very scarce. This has meant that once again our staff have gone above and beyond their daily activities to deliver projects on time and to budget. Furthermore, our staff have also delivered against best practice industry standard which has been recognised by the achievement of our silver training service accreditation. We have also formally gained another industry standard best practice award for IT support providers which is ISO 27001:2013 certification.

I am so proud of our staff and what they have achieved, not just this year but over the seven years I have been leading the organisation. To this end I would personally like to thank them for all their hard work and commitment.

As an organisation we have also started collaborative work across the health community e.g. we have supported the Connected Nottinghamshire programme which is working to ensure there is improved collaboration between health and social care IT providers. Furthermore, we are committed to supporting the delivery of the Sustainability and Transformation Plan which is the blueprint that sets out how Nottinghamshire can best improve the quality of care, the health and wellbeing of local people and the finances of local services. We are so honoured to be delivering a project that will see better sharing of information between health and social care organisations. In fact, I



am proud to say that our strength has been collaborating and sharing for the greater good of our staff and patients. I can honestly say that I am proud and privileged to have been appointed the Director of the Nottinghamshire Health Informatics Service.

After 14 years within the Nottinghamshire community I have accepted a new challenge with NHS England as the Regional Director of Patient and Information – Midlands and East.

I am sad and excited in equal measures but also delighted to be handing over the reins to a longstanding colleague, Jaki Taylor.

Thank you to all the staff for their loyalty, dedication and fond memories. I will never forget my time with you all and I wish Jaki and all of the staff all the best for the future.



Eddie Olla Director of the Nottinghamshire Health Informatics Service

ABOUTUS transforming care through technology

Who we are

Nottinghamshire Health Informatics Service provides information, communication and technology services (ICT) across the NHS and health community in Nottinghamshire, Derbyshire and Leicestershire totalling an area of 834 square miles.

We are funded by eight partner organisations located across Nottinghamshire and are hosted by Sherwood Forest Hospitals NHS Foundation Trust at their King's Mill site in Sutton in Ashfield.

Our Vision

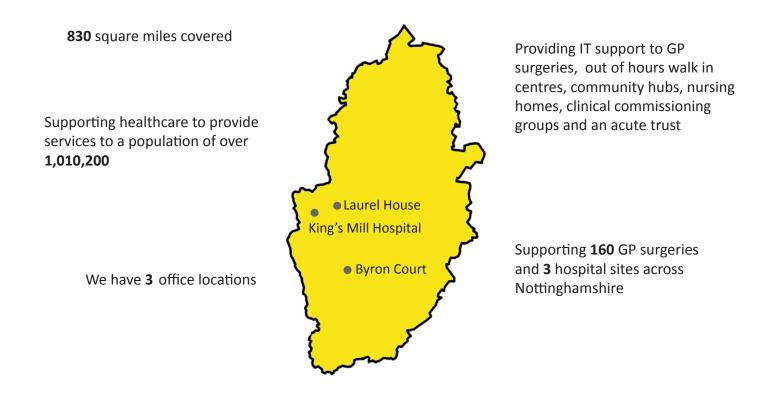
To deliver excellence in innovative technology solutions with the health and wellbeing of the patient and integrated care at the heart of everything we do.

What we do

We work with a wide range of NHS and social care organisations to develop, implement, link and support systems across the local health community to support clinicians to deliver high quality care in co-ordinated approach around the needs of the patient.

We are continually researching and innovating, as we are passionate about providing technologies that enable our customers to do things better, or to do better things.

A YEAR IN REVIEW





Our partners are: Sherwood Forest Hospitals NHS Foundation Trust, Mansfield and Ashfield Clinical Commissioning Group, Newark and Sherwood Clinical Commissioning Group, Nottingham North and East Clinical Commissioning Group, Nottingham West Clinical Commissioning Group, Rushcliffe Clinical Commissioning Group, Nottingham City Clinical Commissioning Group and Nottingham CityCare Partnership.

Essential Cyber Security

NHS organisations are becoming a target for cyberattacks so we are pleased to have gained Cyber Essentials certification for a second year in September 2016.

Cyber Essentials is a government-backed, industry supported scheme to help organisations protect themselves against common cyber-attacks.

The scheme defines a set of controls which will provide organisations with basic protection from the most prevalent forms of threats coming from the internet.

By gaining the Cyber Essentials certification we demonstrate that we are taking the necessary precautions to protect ourselves and our customers from general cyberattacks.

Protecting our Networks Against Attack

There has been an increasing focus on cyber security nationally over recent years as UK organisations are under constant attack. Cyberattacks are becoming more sophisticated, increasing the detrimental impact on the organisations involved and the individuals whose data may have been compromised.

We understand the damaging impact a cyber-attack could have on an NHS organisation ranging from theft of patient and employee personal data to impacting on the delivery of health services, negatively affecting patient safety and experience.

Therefore, as an organisation we have adopted the UK Government's '10 steps to cyber security', achieved the Cyber Essentials certification for a second year, undertook a 'Full IT Health Check' as an early adopter of the NHS Digital CareCERT Assure programme and gained ISO 27001:2013 certification this financial year.

In addition to this, we continue to work closely with our partners and customers, highlighting the importance of cyber security and sharing simple steps every user should take to help protect our networks.



What is CareCERT Assure?

CareCERT Assure will provide the health and social care system with assessment against an agreed 'minimum standard' set of Cyber-Related criteria (Cyber Essentials/Plus), in order to proactively identify and act upon cyber security vulnerabilities. This will give greater awareness of organisational cyber defences and weaknesses, allowing organisations to target investment where it would have the most impact. This initiative will proactively improve the level of security across the entire system, at a time when the number of health-specific cyber-attacks is growing.

ISO 27001 Certified

We have formally gained ISO 27001:2013 certification following a successful audit in March 2017.

ISO 27001 is an internationally recognised Information Security Management Standard. Gaining this certification demonstrates our continued commitment to the security of customer, employee and partners' information.

The benefits of ISO 27001 certification include:

- Proving we keep information secure
- Achieving operational excellence
- Minimising the risk of potential data security breaches
- Protecting the organisation's reputation
- Reducing errors and costs
- Increasing business opportunities.

To gain certification we underwent an external assessment which looked at many areas including





our internal audit process, security policies, data backup provision and supplier relationships.

Eddie Olla, Director of the Nottinghamshire Health Informatics Service said: "We have always taken information security very seriously. We are very proud to be able to provide our customers with an internationally recognised certification that visibly demonstrates this commitment.

"The audit process was extremely rigorous and we are pleased that the auditor recognised the good work we carry out daily."

In addition to the ISO certification, we have also gained Cyber Essentials certification in 2015 and 2016 proving the organisation offers a sound foundation to mitigate the risk of a cyber-attack.

To ensure continued compliance all ISO certified organisations are required to undergo annual surveillance audits. This will provide ongoing assurance to customers and further demonstrating the organisation's commitment to information security.

Further information about the ISO 27001 standard can be found on the British Assessment Bureau's website.

"The audit process was extremely rigorous and we are pleased that the auditor recognised the good work we carry out daily."

Working Together for a Connected Future

To optimise patient outcomes and quality of care, new models of care are emerging and evolving. There is a clear need for information to be shared more effectively between health and social care services to support and enable these new models of care.

We have worked closely with our partners, Connected Nottinghamshire and other health and social care providers across Nottinghamshire to deliver a range of interoperability projects allowing different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged securely across Nottinghamshire.

Our projects have included introducing the TPP SystmOne Care Home Module into Care Homes located in Mansfield, Ashfield, Newark and Sherwood area allowing staff within the care homes to view summary data and medication information for their residents.

We have upgraded a major software application used by Sherwood Forest Hospitals, deployed a new Theatre Management System (TMS) within the Trust to provide one common TMS used across Nottinghamshire, and created an electronic Comprehensive Geriatric Assessment form allowing the information to be easily shared with other health professionals involved in the person's care.

We have also worked closely with Nottinghamshire County Council on an exciting and ground breaking project to connect an acute and social care system together to provide a better and more efficient service to vulnerable patients.

HEALTHCARE TECHNOLOGY - Making a difference in our care homes

Major improvements have been seen from the introduction of access to SystmOne (the GP's clinical information system) into care homes across Mid-Nottinghamshire.

Small steps have resulted in big changes not only for care home staff but for residents too.



BENEFITS

Better use of GP time when visiting the care home

Accurate patient history informs holistic care

Stopping of unnecessary repeat medications

Timely access to pathology test results, speeds management decisions whether to restrict care home access for infection control measures

Access to clinical imagery improves pressure sore management and reduces hospital admissions



"...I don't think I could cope without SystmOne...' Emily - Manager of a Nottinghamshire Care Home

SYSTMONE IN CARE HOMES

There is a growing need to address the needs of the elderly, especially as the population grows bigger and lives for longer. There is an increasing requirement to highlight concerns regarding elderly care and to recognise that the care provided in care homes should be linked with the NHS and should not be isolated from primary care, hospitals, palliative care organisations and hospices.

As part of the 'Better Together' Programme, the CCG initiated a project to deploy SystmOne into 40 care homes across mid-Nottinghamshire.

For more information contact Nick Coulton - Project & Business Change Manager: nick.coulton@notts-his.nhs.uk

Scalpel...Swab...IT Support

In early 2016 Sherwood Forest Hospitals NHS Foundation Trust (SFH) asked us to replace their existing theatre management system used at King's Mill Hospital and Newark Hospital, which they had used for 12 years, with a new system from Bluespier.

The Bluespier Theatre Management System electronically manages the clinical and administrative functions of the Trust's theatres, from theatre scheduling, patient tracking and operation notes and coding. It has revolutionised the way in which the Trust's theatre staff capture and process patient data and has enhanced their working practices and business processes benefitting both staff and patients.

The timescales for this project were very tight, usually a project of this type and scale would be carried out over a period of six to nine months, but the Trust asked us to deliver this in just 12 weeks. As theatre staff at Nottingham University Hospitals (NUH) were already using the Bluespier system we worked collaboratively with NUH and SFH to deliver the project ensuring that it was completed within the agreed 12week timeframe.

Our Project and Business Change

Manager, Martin Tooth, led the project. Speaking about the Bluespier project Martin said: "What was particularly relevant to this implementation was the timescale. As the existing theatre system used by the Trust was being decommissioned, the project had a 12-week window for deployment and training to over 300 end users. Given that a typical deployment usually takes six to nine months, this was a big challenge!

"I think the timescale was actually a benefit to the project. It greatly focused the attention for all involved. The team at Bluespier helped us to meet the very challenging deadline. It was very much all hands on deck to help reach the deployment project's ambitious goal."

"Although work had to be planned and carried out very quickly to meet the deadline, there have been no major issues reported since going live on 4 July 2016. This is testament to the level of detail covered during the project management phase by all stakeholders - SFH, NUH, Bluespier and ourselves. It was very much a collaborative approach throughout the project lifecycle and the final result is one which will ultimately help deliver high quality care to Sherwood Forest Hospitals' patients."

"A huge thank you to all of the team who has supported us this week during the Bluespier launch. Their diligence and commitment has been second to none." Denise Guzdz, Department Leader for King's Mill and Newark Hospital Theatres.



weeks

staff

Electronic CGA Brings Benefits

Nottinghamshire hospital clinicians, community clinicians and patients are all benefitting from an electronic Comprehensive Geriatric Assessment (CGA) developed and introduced by ourselves in partnership with Sherwood Forest Hospitals NHS Foundation Trust (SFH).

The CGA is recognised as the gold standard for the management of frailty in older people and extensive research has shown that a hospital CGA increases a patient's independence and reduces mortality.

Traditionally the CGA has been completed on paper and then filed in the patient's notes, making it difficult to share the information across the hospital or with community staff. Geriatricians at the Trust were keen to record this information electronically to enable all of the benefits of the CGA to be realised.

NHIS Project and Business Change Manager, Karen Mellors, led the project to create an electronic CGA form (eCGA) which could be easily shared with everyone involved in the patient's on-going care. A template was developed in TPP SystmOne which is used in the Trust's Emergency Department and is widely used across community and general practice in north Nottinghamshire.

The eCGA information can be found in the Tabbed/New Journal in SystmOne. The name of the clinician who completed the eCGA can also be viewed, allowing queries to be directed to the clinician.

The benefits of the eCGA are:

- continuity of care
- avoidance of lost paper forms from records
- reduction of duplication in some elements of completion (name and other demographics)
- opportunity to add to information in a two/three-way dialogue between primary, secondary and community care
- improved assessment information for A&E attenders
- immediate access to the patient's medical information
- improved discharge there will be the facility to view if any existing care packages are in place. If information is available, it will save time in phone calls and could hasten discharge as information will be to hand.

Karen Mellors, Project and Business Change Manager said: "From the initial meeting it was clear that an electronic version of the CGA would allow information to be shared easily with everyone involved in the patient's care, benefitting all professions.

"We replicated the existing paper form electronically and added drop down options and tick boxes where appropriate to standardise responses and make the form more user friendly.

"By creating the form in SystmOne information can now be shared with GPs and Community Staff, giving them the most up to date information for their patient."

Vulnerable People Benefit From Innovative Project

An innovative new system has been developed in conjunction with Nottinghamshire County Council this year which should cut the number of unnecessary medical admissions at Sherwood Forest Hospitals.

Working closely with both Nottinghamshire County Council and Sherwood Forest Hospitals we developed an innovative communication system that allows clinicians working in the Emergency Department at King's Mill Hospital and Nottinghamshire County Council's Social Service's department to share data electronically.

To reduce potentially unnecessary admissions, a secure connection between the two organisations' IT systems has been developed. This allows Emergency Department staff to receive a message from the patient's social care record, using their NHS number, once consent is obtained, to see if a social care package is in place for a patient. Information about the available social care package is then retrieved over a secure connection allowing health professionals in the Emergency Department to make informed decisions about whether to admit the patient or make a safe discharge.

If a care package is in place, contact details of the care provider are displayed allowing the healthcare professionals to contact the service provider directly. This allows a decision to be made more effectively and efficiently and in most cases without the need to contact onsite Social Care Team.

The system will also highlight if the County Council has any safeguarding concerns relating to an individual so health professionals can work with social workers to ensure that it is safe to discharge the person home.

Mary Whetstone, our Project and Business Change Manager said: "This was a clinically lead project that has supported Emergency Department healthcare professionals at



"It has reduced the amount of time spent discussing 'routine' patients with the Social Care team in the Emergency Department, allowing them to focus on the more complex cases.

"Nottinghamshire County Council, Sherwood Forest Hospitals and, most importantly, local patients are benefitting from this system."

Silver Service From the Training Team

The Project Implementation and Training Team at the Nottinghamshire Health Informatics Service are celebrating after becoming the only NHS training provider in the local area to be awarded Silver Training Service Accreditation by NHS Digital.

An assessor from NHS Digital carried out a thorough review of the department before awarding them the silver accreditation.

The assessor felt that there are several areas where the training service has particular strengths and highlighted the following:

- A comprehensive training strategy for the service which has been created to align to customer's and organisational objectives and has been shared with a wide range of stakeholders including several at director level.
- A professional training brochure document which outlines the training provided by the service.
- Detailed standard operating procedures
- Training is piloted with representatives from relevant areas to test out processes as well as materials and delivery.
- The service actively focuses on trainer and team development. The trainers are observed and development points given to improve training



Training Quality Improvement NHS Digital

delivery. This ensures training is delivered to a consistently high standard.

- The training team is made up of experienced trainers who have been supported by administrators and an apprentice. The team are given protected learning time for training and to develop knowledge.
- The Training Manager actively supports staff to develop within and outside the team, including funding to complete a digital degree programme and working with staff to develop a digital degree apprenticeship.

The Project Implementation and Training team are now setting their sights on achieveing the Gold accreditation.



Apprentice Programme Continues to Grow

NHIS are continuing to support young people to take their first steps onto the career ladder in the NHS.

For several years we have offered apprenticeships to those studying level 2 NVQs in Business Administration or IT, Web and Telecommunications.

This year we have developed our apprenticeship programme further to incorporate levels 3 and 4 in IT, Web and Telecommunications as well as increasing the number of apprenticeship opportunities from six to eight placements.

The apprenticeship programme is becoming firmly embedded into our organisation and, by the 31 March 2017, 88% of our staff aged under 30 years of age joined us through an apprentice placement.

This year we have also introduced a mentoring

programme ensuring that all apprentices have a dedicated mentor to support them throughout their apprenticeship. All mentors have received training which has allowed our existing staff to learn new skills and become more involved in the apprenticeship programme.

As this year's cohort of apprentices are based in different teams across our sites they organise and chair regular meetings to support each other with their studies and share their learning.

Our retention rate for apprentices is very good. The vast majority of our apprentices take up substantive roles within our teams where they are actively encouraged and supported to continue their studies. We currently have one member of staff studying a level 3 in Business Administration, 1 undertaking the level 4 and three members of staff studying level 3 in IT, Web and Telecommunications.



Awarding Career Progression



Sarah Clark with her award

A member of our team scooped the runner up award for Career Progression in the annual Pro Start Apprentice Awards.

Sarah Clark received the accolade at the award ceremony held in Nottingham in July 2016.

Sarah joined our organisation in 2014 as an apprentice in the Project Implementation and Training team, since then she has progressed to a Junior Trainer, Service Support Officer positions before taking up her current role as Project Implementation and Training Officer. During this time Sarah has gained NVQ level 2 and 3 in Business Administration and is now studying for the level 4 qualification.

Inspiring Tomorrow's Workforce

Three members of the Project Implementation and Training team, one of which joined NHIS as an apprentice in 2014, have become Health Ambassadors this year.

Health Education England run the health ambassador programme to promote the health sector as a career choice for young people, to support the raising of standards and young people's attainment and to encourage young people to aspire to reach their full potential.

Our Health Ambassadors have attended careers events at local secondary schools and colleges, to highlight the vast range of clinical and non-clinical roles available within the NHS and to promote apprentice opportunities.

What is a Health Ambassador?

A Health Ambassador is a qualified and experienced health worker who is willing to inspire and encourage young people in primary and secondary schools to think about a career and educational opportunities in healthcare. *Health Education England*

Where possible our apprentices are also encouraged to attend these events with the ambassadors to share their first-hand experiences of the application, interview and induction process and the on-going support offered to our apprentices. Kira Foster, Business Relations and Data Quality Apprentice said: "I went to a careers event held at my former school in February to speak to the students.

"I attended the event the previous year to look at the options available to me after completing my A-levels. I knew at the time that I didn't want to go to university and attending the event I decided to apply for an apprenticeship with the Nottinghamshire Health Informatics Service.

"It was great to be able to share my experience as an apprentice with the current students and answer their questions about the application process and what they can expect as an apprentice."



NHIS Health Ambassadors L-R, Sarah Clark, Lisa Booth and Claire Garner

Always Helping Others

Our kind hearted staff have raised over £2,000 for different causes throughout the year.

They have baked, walked, ran, worn denim and looked festive in Christmas jumpers all in the name of charity.

In addition to raising money our staff also organised a 'reverse advent calendar' before Christmas. Staff across our sites donated food, festive treats and cleaning products each day over a period of 24 days. These were then donated to local foodbanks, helping many people in the communities we serve.



Staff at our Byron Court office modeling their festive knits

Enhancing Customer Support

A new Customer Portal was released this year, with a fresh and modern responsive design and many new self-service features allowing our customers to solve minor IT issues more quickly themselves, allowing our service desk team to concentrate on the more complex issues.

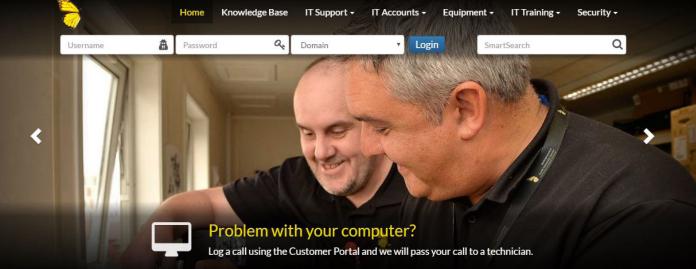
The Customer Portal is a private, secure website that can be accessed by customers logged onto our networks. It allows customers to request help for their IT issues, book training and access training and support information.

The new Customer Portal was launched in February 2017. New features include an improved search function and the ability to request access to blocked websites. Team leaders are now able to quickly and easily request, amend and delete accounts for their team ensuring that only the right people have access to their systems. This reduces the need for them to phone our service desk to amend accounts or mark them for deletion when a member of their team leaves the organisation or NHS.

A dashboard displaying current call waiting times for each of our service desk teams has also been added so customers can see how long they may have to wait in a call queue, allowing them to make an informed decision about how and when they log nonurgent support calls.

To ensure greater transparency with our customers we have also enabled Super Users to see the outstanding service desk calls for their organisation and we are continuing to make improvements to the quote and ordering process.

In addition to the new features we have improved the existing functions available on the Customer Portal. The Knowledge Base has been expanded and now contains a wide range of guides, templates and support documents, the call logging process has been improved to increase efficiency and the online form to book training has been overhauled to display the courses relevant to the user.



Staff Making a Difference

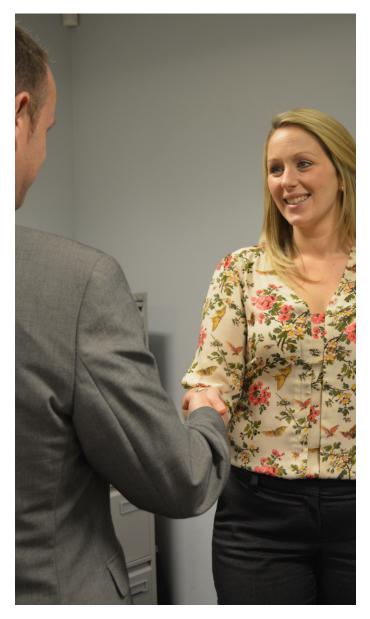
Our staff are our most valuable asset and we want them to be actively involved in our organisation and empowered to make positive changes. A prime example of this is our staff engagement workstream which was introduced by our staff, and people from across the organisation have volunteered to be involved in the workstream.

During the financial year, the workstream has conducted a comprehensive staff survey based on the national NHS staff survey to give a baseline for our staff engagement levels. The results will be used by the Staff Engagement workstream to recommend and implement continual improvement.

Around 60% of the workforce completed the

survey and the results were collated and compared to the 2015 NHS staff survey average. The findings were very positive with the vast majority of the areas outperforming the national average. Staff also made suggestions on how the organisation could improve further and the workstream hope to implement many of these ideas over the next financial year.

The results have been collated into a report with recommendations which has been shared with service line managers and staff and is acting as a catalyst for empowering our staff further to make changes that will benefit both our staff and our customers.



Improving our service further

Our staff are proud of the customer service that they provide but are always looking for ways in which we can improve.

So during the second half of the financial year, the Staff Engagement workstream has been investigating ways in which we can further strengthen our customer service levels.

The workstream were keen to identify ways in which best practice can be shared across the organisation effectively and become a central focus to all staff.

As part of this work they are keen to ensure that all of our policies and processes support our staff to provide a consistently high customer service level.

The workstream has idenitified a Government backed customer service accreditation framework that would act as an enabler to progress this work in a cohesive and comprehensive manner. Initial work has taken place to informally assess the organisation against this framework and we are hoping to work towards the accreditation during the next financial year.



The NHS is currently facing the biggest financial challenge since it was created. This is due to an increased demand for services, an ageing population and lifestyle factors that are affecting our health and wellbeing.

Our host and customer organisations need to continue to deliver efficiency savings year on year.

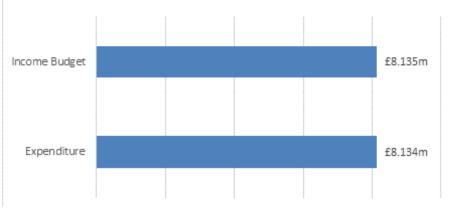
It is against this context of considerable financial challenges that we are pleased to report a breakeven financial position for the seventh year in a row.

In addition to this we have achieved our cost improvement plan to deliver a saving of 4% throughout the financial year.

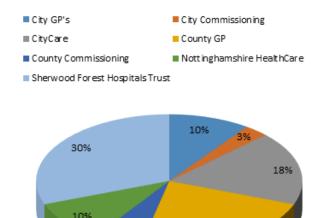
A breakdown of our income budget and expenditure for 2016/17 is provided to the right.

Meeting our Financial Challenges 2016/17

NHIS Income Budget & Expenditure 2016/17



NHIS Income Budget 2016/17



NHIS Expenditure 2016/17

SFH System Maintenance

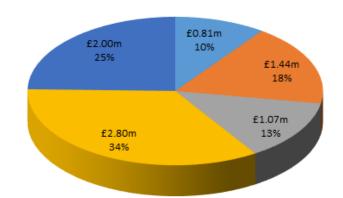
Networking & Telephony

Recurrent Projects



Technical Solutions

23%



What You Can Expect from our Team in 2017/18

The next financial year promises to be another busy and rewarding year for us, as we continue to implement innovative projects that will support health care professionals to deliver quality care in more efficient, cohesive and cost effective ways.

We will continue to work closely with other health and social care IT providers across Nottinghamshire to support the delivery of the Nottingham and Nottinghamshire Sustainability and Transformation Plan.





Dedicated

We don't see ourselves as just an IT provider, our staff care about your patients and work hard to ensure our services help you deliver great care.

Passionate

We are passionate about transforming care through technology.

Determined

No matter how big or how complex, we don't give up until we have found a way to deliver your goal.

Continually Improving

We are always looking for ways to improve to ensure our customers receive the best service. Innovative

We love the challenge of introducing new and innovative ideas that benefit health care professionals and their patients.

Communication We keep IT simple and

won't blind you with technical jargon.

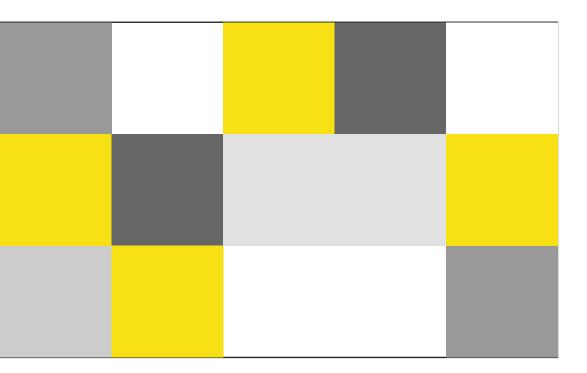
Supportive

Whether it's training, technical support or tips on cyber security, our staff are always there to support you.

Security Conscious

We constantly update encryption software, scan our networks and carry out technical healthchecks to keep our networks secure.

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Nottinghamshire Health Informatics Service King's Mill Hospital Mansfield Road Sutton in Ashfield Nottinghamshire NG17 4JL

www.notts-his.nhs.uk