

Digital strategy 2022-2026

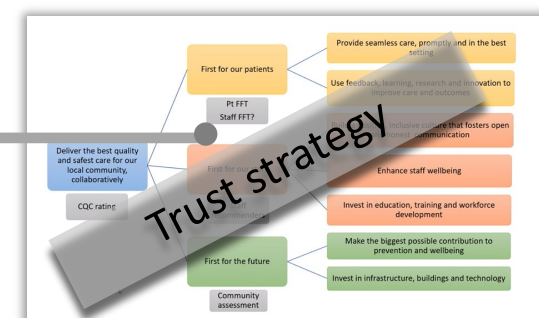
Liam McLaughlin
Chief Information Officer
January 2022

Digital drivers

NHS Providers - Building a digital strategy

Stakeholder Engagement Sessions

Team	Name	Role
Digital / IT	John Galt	CEO
	Sarah Sudge	CCO Community
	Emma Hutton	Application Support Manager
	Gay Hooper - EPR	Head of Digital Projects and Digital Strategy
	Bob Housley - Technical	IT Infrastructure Manager
	Seema Hussain	IT Training Manager
	Andrew Smith	Technical Projects Manager
	Liam McLaughlin	CCO
	Sarah-Jane Raff	Director of Digital Transformation
	Craig Black	Head of Digital Transformation
Executives	John Galt	CEO
	John Galt	CEO
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	John Galt	CEO
	John Galt	CEO



putting people at the heart of digital

NHS Global Digital Exemplar

Global Digital Exemplar

A Global Digital Exemplar is an organisation that has demonstrated excellence in the quality of care, through the use of digital technology. Exemplars will share their experiences and insights with other trusts to follow in their footsteps.

Acute Global Digital Exemplars

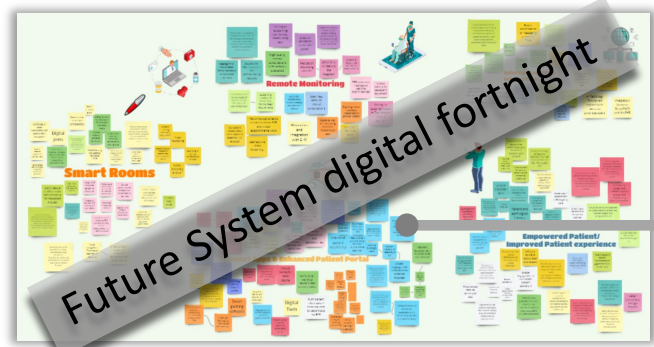
Acute Global Digital Exemplars are trusts that have already achieved significant benefits from employing digital technology in their acute services. These trusts are partnered with international healthcare organisations to share their experiences and insights with other trusts to follow in their footsteps.

All Acute Global Digital Exemplars are now partnered with fast followers – trusts who will support the spread of best practice and innovation. Mental health Global Digital Exemplars will also partner with fast followers.

Suffolk & North East Essex Integrated Care System

Digital

SNEE ICS



NHS X What Good Looks Like

Contents

- The challenge
- What is the West Framework?
- How will we support you?
- What does good look like for Integrated Care Systems?
- What does good look like for your organisation?

The challenge

West Suffolk NHS Foundation Trust

West Suffolk Foundation Trust New Hospital Digital Blueprint

December 2020

NHP Digital blueprint

Atos

Digital principles



Digital first but not digital only

Ensuring that there is an equitable alternative offer for any patients and carers who can't or don't want to engage with technology



Building digital solutions with and for the patient

Ensuring that solutions are intuitive and empower the patient to take ownership of their care should they wish



Digital to promote wellbeing (for patients, relatives, carers and staff)

Rather than adding complexity and uncertainty, digital should alleviate pressures and stress



Technology as an enabler of transformation

Health and business needs should drive transformation, enabled and supported by digital technologies



Digitally safe environments

Giving people the confidence to use technology for their desired purpose and with robust security in place



Implement now but plan for the future

Pro-actively planning for digital advances and implementing technologies with the capacity to adapt



Optimise what we already have

Technologies and systems must be adopted and used correctly by staff and patients to unlock their true value.

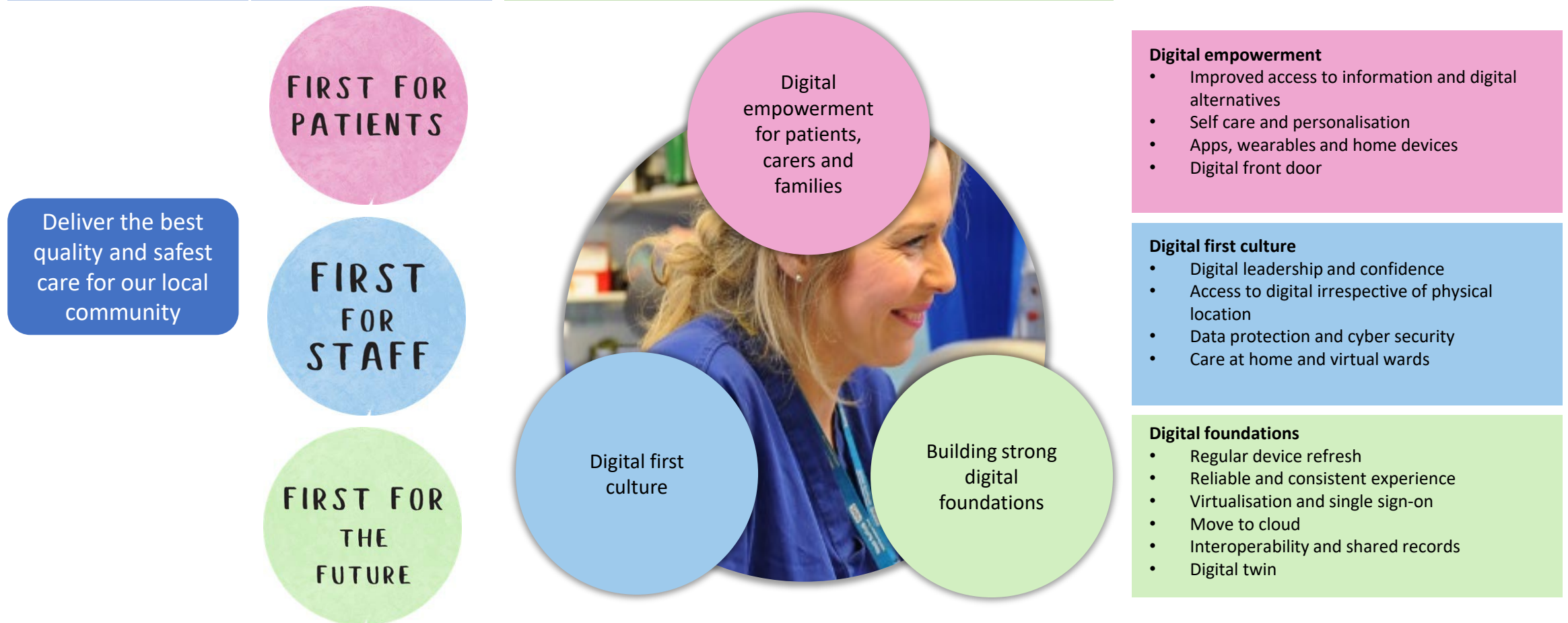


Maintain balance of functionality, security and ease of use

New technologies be easy to use while providing additional secure capabilities

Trust alignment

WSFT Trust Strategy		WSFT Digital Strategy	
Vision and values	Strategic objectives	Digital approach and ambitions	Digital activities



Digital empowerment

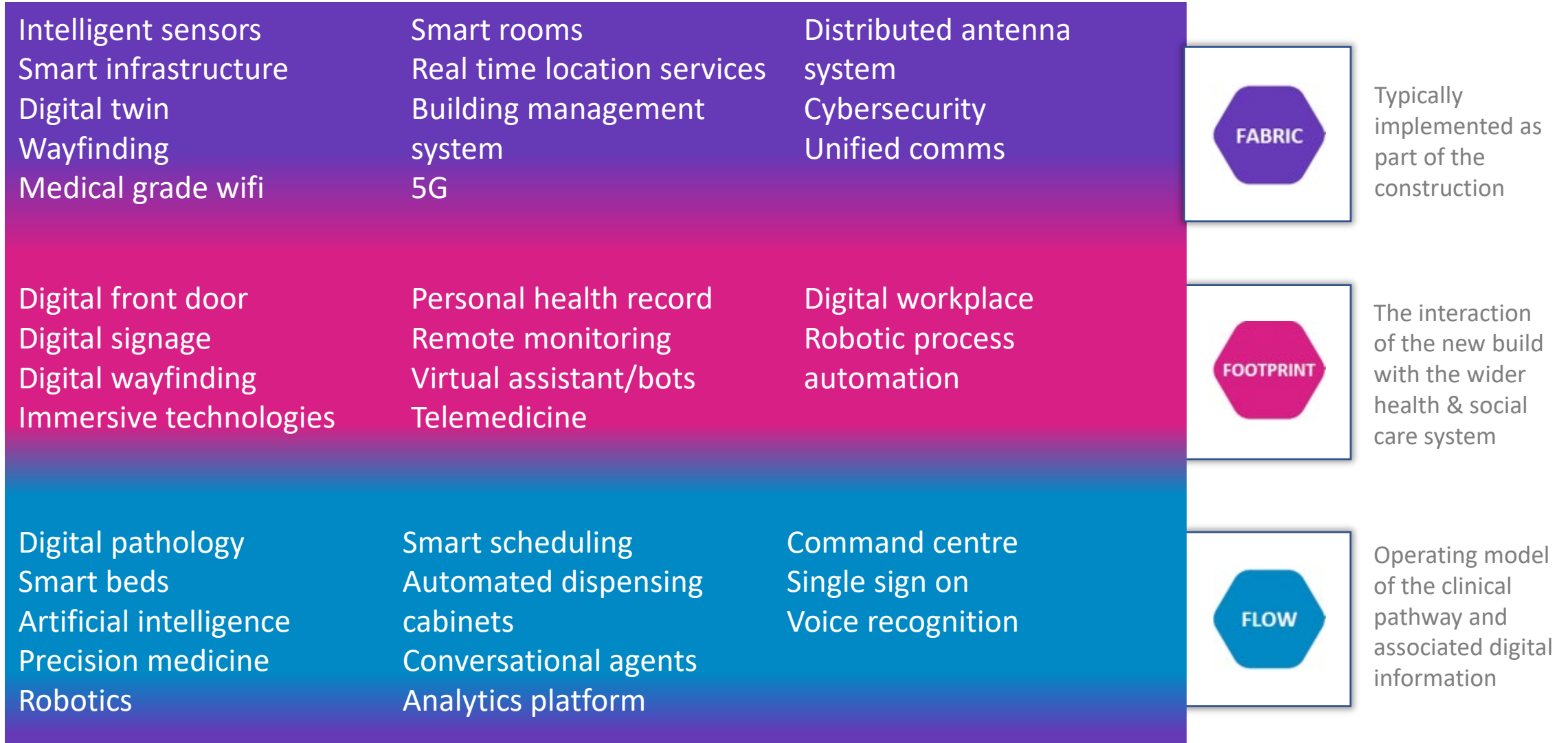
Theme	As a patient, carer or family member....		Digital solutions
Improved access to my information	<ul style="list-style-type: none"> ✓ I have digital options that improve and simplify access to the support I need ✓ I can book and change appointments online ✓ I can access easy to read advice on-line 	<ul style="list-style-type: none"> ✓ I can have online consultations (but still choose face-to-face if preferred) ✓ I can be sign posted to other services and support in my local area 	<ul style="list-style-type: none"> ➤ Telephone and online consultation options ➤ Patient portal accessed via the NHS app
Improved experience of healthcare services	<ul style="list-style-type: none"> ✓ My experience of healthcare is improved through digital options (takes less time, more at home) 	<ul style="list-style-type: none"> ✓ I have improved communication with healthcare staff and can give feedback on my care quality 	<ul style="list-style-type: none"> ➤ Apps, wearables, home devices ➤ Tools to capture and analyse patient experiences / journeys
Self-care and personalisation	<ul style="list-style-type: none"> ✓ I can access online resources and home devices that allow me to manage my care ✓ I can manage and personalised care of someone I care for via digital options 	<ul style="list-style-type: none"> ✓ I will be able to access devices and data that can advise on preventing ill health allowing me to be healthy and independent for longer 	<ul style="list-style-type: none"> ➤ Patient apps including condition specific advice and guidance ➤ Patient information
Tell us once	<ul style="list-style-type: none"> ✓ I only have to tell my story once to a healthcare professional and not have to repeat it to others 	<ul style="list-style-type: none"> ✓ I am confident that information I am happy to be shared will be available to all those involved in my care 	<ul style="list-style-type: none"> ➤ Interoperability of systems ➤ Wide adoption of Shared Care Records (HIE) ➤ Enterprise wide data architecture
Personal health record	<ul style="list-style-type: none"> ✓ I have online access to my health record, or record of someone I care for, and can input into it if I wish 	<ul style="list-style-type: none"> ✓ I have confidence that my personal health information is safe and secure when shared across organisations supporting me 	<ul style="list-style-type: none"> ➤ Patient portal with patient's own data, measurements and feedback
Using data to improve the health of others	<ul style="list-style-type: none"> ✓ I know and trust that only anonymised health information is used to improve care quality 	<ul style="list-style-type: none"> ✓ I know that health data will be used to predict and prevent ill health, address health needs and inform clinical decision-making 	<ul style="list-style-type: none"> ➤ Whole population health data analytics ➤ Clinical data insights ➤ Business intelligence

Theme	As an employee of West Suffolk FT....		Digital solutions
Freeing up more time for care (reducing admin time, smart tools to capture)	<ul style="list-style-type: none"> ✓ I will have better access to advice and guidance at the point of care ✓ Digital tools will reduce routine tasks giving me more time to deliver care and support my colleagues 	<ul style="list-style-type: none"> ✓ I use digital tools to communicate with the people I care for and can collaborate with colleagues ✓ I can easily capture data at the point of care (improving data quality) 	<ul style="list-style-type: none"> ➤ Clear pathways of care ➤ Efficient data capture ➤ Optimisation of processes
The tools needed to do my job	<ul style="list-style-type: none"> ✓ I have real-time read and write access to patient records anytime, anywhere ✓ Our systems align with those of other health and social care organisations ✓ I will be fully mobile having access to relevant apps such as Microsoft 365 	<ul style="list-style-type: none"> ✓ I can update my team’s information and it is linked and used across other systems ✓ I have access to responsive digital support and new equipment when needed 	<ul style="list-style-type: none"> ➤ Fully integrated patient record system ➤ Tools to enable seamless remote and mobile working ➤ Access to telephony services (unified comms)
Digital leadership and confidence	<ul style="list-style-type: none"> ✓ My induction will give me a good understanding of trust systems ✓ I have opportunities to develop my digital skills and confidence, and the time to identify and test new digital ways of working 	<ul style="list-style-type: none"> ✓ I feel I am part of a ‘digital by default’ organisation where senior leaders place high value on an investing in data, digital and technology and use these to provide better healthcare and improve staff satisfaction 	<ul style="list-style-type: none"> ➤ Regular ongoing training and ‘digital induction’ ➤ Visible digital leadership ➤ Accurate and timely information
Data protection and security	<ul style="list-style-type: none"> ✓ I am confident that the trust has robust cyber security arrangements and high levels of technical resilience to protect patients’ and staff records 	<ul style="list-style-type: none"> ✓ I have data protection training and see it is a key part of patient safety ✓ I can access and share data via the interoperability of our systems 	<ul style="list-style-type: none"> ➤ Cyber security training ➤ Systems to protect staff and patient confidentiality
Sustainability and efficiency	<ul style="list-style-type: none"> ✓ The Trust will be digitally efficient ✓ The trust will use digital options to reduce its CO2 emissions (e.g. Virtual working to reduce travel) 	<ul style="list-style-type: none"> ✓ Procurement standards will include single sign-on and interoperability requirements to improve efficiencies and external collaborations 	<ul style="list-style-type: none"> ➤ Digital care pathways ➤ Virtual consultation and remote working to reduce physical journeys ➤ Cloud based data centres and services

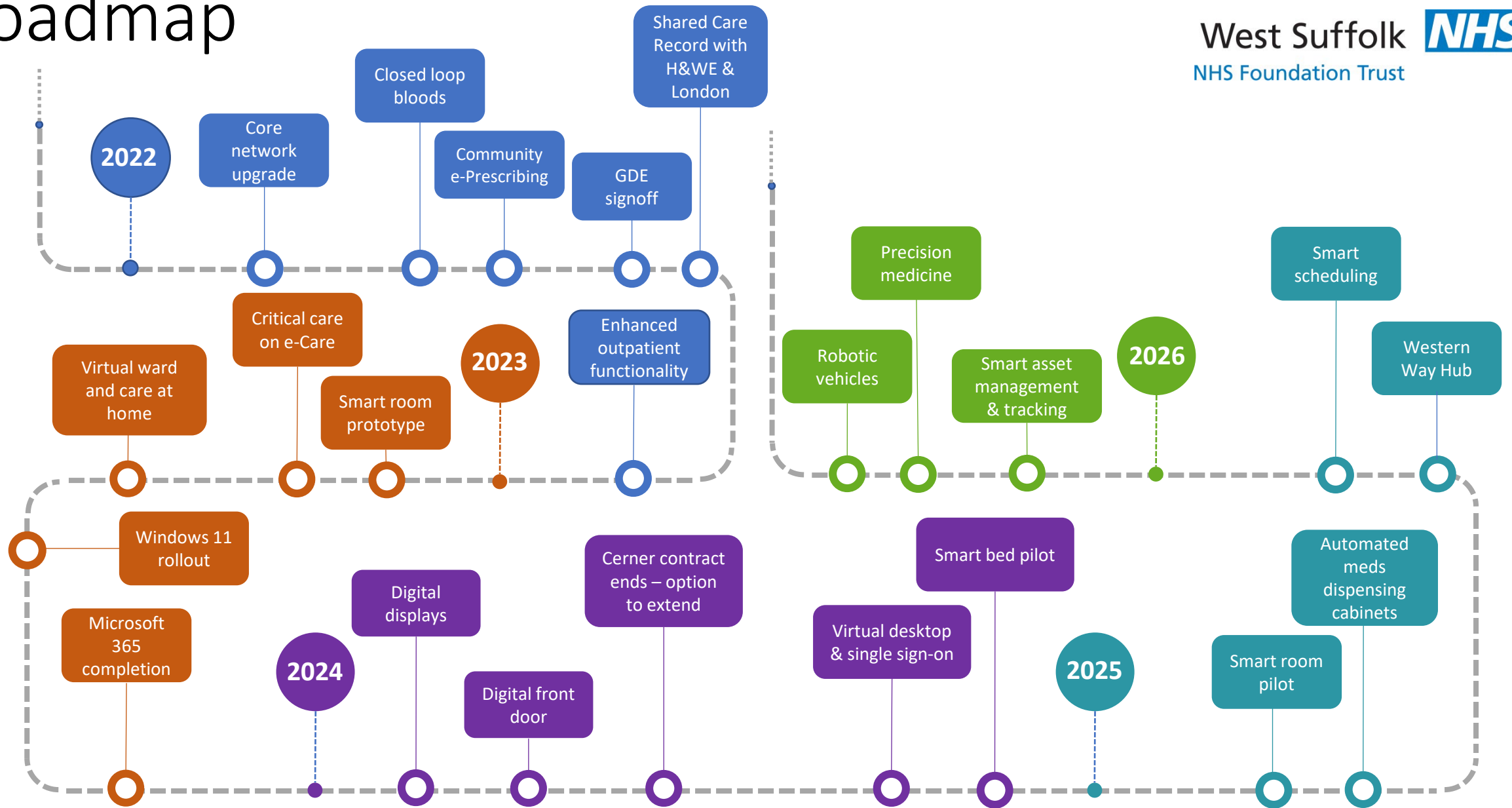
Digital foundations

Theme	West Suffolk FT will....		Digital solutions
Core EPR platform	<ul style="list-style-type: none"> ✓ Ensure the core EPR systems and domains are current and fit for purpose ✓ Extend the scope of the EPR where feasible ✓ Review the EPR contract 	<ul style="list-style-type: none"> ✓ Continually optimise functionality in the EPRs to enhance and improve usability and reflect changes to clinical pathways 	<ul style="list-style-type: none"> ➤ EPRs as the integration platform ➤ Bring Critical care and medical specialties onto e-Care and revised outpatient functionality
Cloud, data centre servers and storage	<ul style="list-style-type: none"> ✓ Implement the best of cloud technologies using a blend of private cloud, platform as a service (PaaS), infrastructure as a service (IaaS) and serverless solutions 	<ul style="list-style-type: none"> ✓ Move server solutions to the cloud in a phased way and as the opportunity allows ✓ Ensure that cyber defences are fully implemented and maintained throughout 	<ul style="list-style-type: none"> ➤ Cloud first solutions ➤ Wide range of tools to monitor cyber threats that are current and responsive ➤ Adopt a zero-trust security model
Mobile and flexible working	<ul style="list-style-type: none"> ✓ Implement a five year rolling refresh for Trust digital devices, refreshing 20% per annum of the current estate, providing staff with equipment capable of dealing with the demands of modern applications and systems 	<ul style="list-style-type: none"> ✓ Replace desktop devices with a laptop or a mobile devices wherever possible to enable a more mobile workforce, better equipped to take full advantage of digital ways of working 	<ul style="list-style-type: none"> ➤ Device and operating system upgrades to supported releases ➤ Implement Microsoft 365 to enable new ways of collaborating and sharing ➤ Device integration with core systems
Networking	<ul style="list-style-type: none"> ✓ Continue to invest in core, edge and Wi-Fi network capabilities across all Trust, hub and community sites 	<ul style="list-style-type: none"> ✓ Provide resilient and diversely routed connections into the public internet network 	<ul style="list-style-type: none"> ➤ Core, edge and wifi network upgrades ➤ Develop the digital anchor tenancy model for all remote sites
Interoperability – access to information, systems and applications	<ul style="list-style-type: none"> ✓ Develop a coordinated architecture for data repositories ensuring data is accessible, interoperable and transparent ✓ Enable single sign-on across all clinical areas 	<ul style="list-style-type: none"> ✓ Support wide access to business intelligence and clinical informatics tools ✓ Explore opportunities from machine learning (ML) and artificial intelligence (AI) 	<ul style="list-style-type: none"> ➤ Implement OpenEHR to provide separation of data and application ➤ Provide tools for self service access to data ➤ Build a robust, resilient and cost effective virtual desktop capability

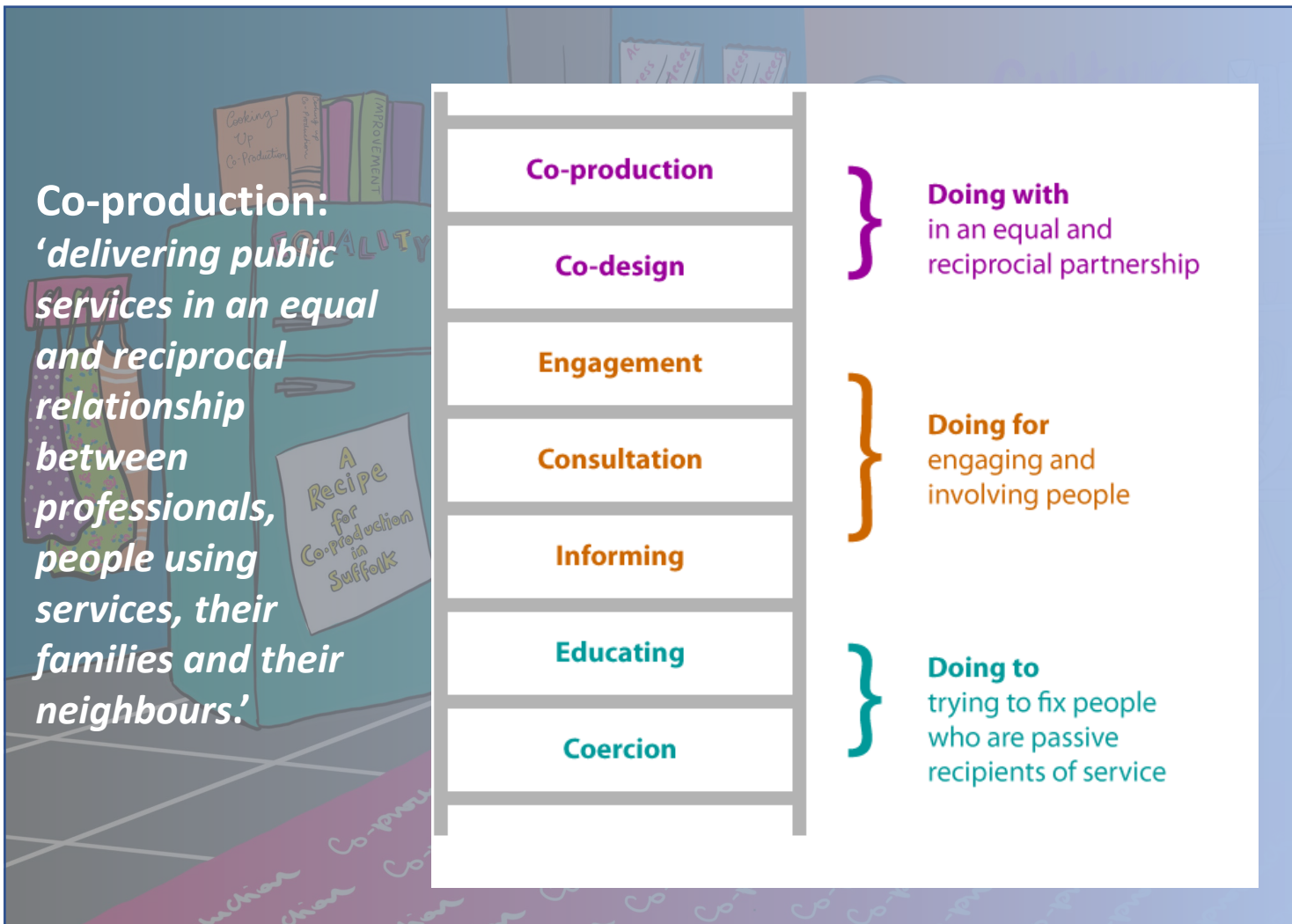
Future system



Roadmap



The how...



Digital Services

“
EFFICIENCY IS DOING THINGS RIGHT;
EFFECTIVENESS IS DOING THE RIGHT THINGS.
”

PETER DRUCKER

Integrity is doing the right thing when no one is watching.

C.S.Lewis

“Transparency is the currency of trust.”

—Freda Lewis-Hall, MD
EVP and Chief Medical Officer,
Pfizer Inc.

Appendix 1

Future profiles

“Patients wait too long for appointments and are too long in the department”



Diagnostics & Pathology Future Profile

Name: Deborah
Age: 45
Role: Nurse Endoscopist

Bio: Deborah is part of an incredible team whose ability to be flexible and support one another is invaluable. It is important for this service to be connected to other services in the hospital and across the wider community

Key goal: Make manual & administrative processes more efficient, speed up the turn around time of biopsy results

Journey Steps

- Patients use their patient portal app on their smart devices to book their endoscopy appointments at times that are convenient for them – educational material in the portal prepares patients for the procedure
- When Deborah arrives at work, she checks her endoscopy list for the day through the EHR where she can see all the bookings and e-referrals in one place
- All patients can self check in at the endoscopy reception upon arrival and get real time stats on the running of the department to inform them of any delays to the service. After checking in, the health care assistant performs Hb checks on specific patients that are sent directly to the patient record
- During one of the procedures, Deborah encounters some unusual findings and uses digital workplace tools to share a live video of the endoscopy with the Gastroenterology Consultant for advice using voice recognition software to control the interaction and take notes
- Deborah sends a biopsy to the lab which is processed by the digital pathology service. The service is supported by AI for rapid interpretation and is validated by 2 consultants remotely. This significantly reduces the time taken to manually process pathology samples
- The images, voice to text clinical notes and the Consultants advice are automatically curated into a procedure note, patient letter and discharge letter for Deborah to validate and send out. Once the pathology report is complete patients with benign conditions are automatically informed and those with more serious conditions are booked into a follow up clinic

Technology

- Fabric**
- Footprint**
- Flow**
- Digital Front Door**
A patient portal for accessing health services and tools
- e-Referrals**
Electronic referral management between care settings and specialties
- Self Check-In Kiosks**
Digital check-in performed by patients
- Point of Care Testing**
Tests rapidly processed at the location of the patient
- Digital Workplace**
A tool for collaborative communication and working
- Voice Recognition**
Voice to text recording
- Digital Pathology**
High-resolution digital images of pathology specimens that can be enhanced with AI analysis
- AI W/ Robotic Process Automation**
The intelligent automation of manual administrative tasks

Benefits

- Patients**
 - Increased autonomy and ownership over health
 - Knowing the running time of the department manages patient expectations
 - Right management plan for the patient, first time, with no delay
- Staff**
 - Time saved in logging onto multiple systems and eliminating duplicative work
 - More efficient processing of patients, freeing up reception staff to do other work
 - Reassurance and hands-on learning for the Nurse Endoscopist
- Service**
 - Reduced DNA rates optimise service efficiency and clear the waiting list more quickly
 - Improved risk profile and better quality care
 - Digital pathology significantly reduces waiting times for results and increases their accuracy. Digital images can be easily shared with specialists, without needed to physically send glass slides to different places for review
 - Rapid pathology results and follow up help to alleviate anxiety waiting for results
 - The automatic curation of notes and letters is a huge time saver
 - Significant time savings improving service efficiency, staff morale and patient satisfaction

“would love complete service wrapped around the patient in their own home wherever possible”



Therapies & Community Services Future Profile

<p>Name: James Age: 27 Role: Physiotherapist</p>	<p>Bio: James works in an incredibly adaptive team who work across different communities (e.g. mental health services). The team work proactively to ensure that patients receive the best quality care, whether that be in the hospital or at home.</p>
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Key goal: service to be ‘home first’, empowering patients to be pro-active with their healthcare

Journey Steps

<p>James starts his day by attending the Orthopaedic MDT remotely as he is running a community rehab clinic straight after. The excellent 5G connectivity never lets him down. Using the virtual ward, James can review his patients’ remotely collected data to see how everyone is doing</p>	<p>James can see patient’s vital signs and exercise sensor data giving him insight into their compliance and the cardiovascular effort allowing him to adjust and personalise rehabilitation plans for each patient. He can also see care plans from other services to inform his decision making</p>	<p>James uses voice recognition technology with his first patient who doesn’t speak English. The conversation is effortless, and James doesn’t need to make any notes as voice recognition software is used to capture and record information directly into the patient record which patients can access via the DFD</p>	<p>During the clinic James uses a gamified augmented reality device to encourage some of the patients who are struggling with their exercises for motivation</p>	<p>One of James’ patient’s is recovering from major trauma and needs a lot of physical support. New robots that can perform this task have really helped reduce the physical burden on James and the need for bulky equipment like hoists</p>	<p>James uses the voice recognition tool on his work laptop to record the notes for his consultations which are automatically turned into clinic letters ready to be sent out</p>
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Technology

Fabric	<p>Digital Workplace A tool for collaborative communication and working</p>	<p>Remote Monitoring Real time patient data from connected devices</p>	<p>Voice Recognition Voice to text recording & translation</p>	<p>Immersive Technology Virtual and augmented reality to support staff and patient education</p>	<p>Robotics Physical robots that can perform manual, care related tasks</p>	<p>Robotic Process Automation The automation of manual administrative tasks</p>
Footprint	<p>Virtual Ward Review of remote data from connected devices</p>	<p>Longitudinal Care Record System End to end patient record</p>	<p>Digital Front Door A patient portal for accessing health services and tools</p>			
Flow						

Benefits

<p> Patients</p>	<p>More effective time management and improved staff morale not needing to rush to clinic from the MDT in morning traffic</p> <p>A single view of the information needed in the virtual ward reduces preparation time</p>	<p>Personalised care based on data driven insights</p>	<p>Reassured that they are being understood and have detailed information to look back on</p>	<p>Different tools work to motivate different people, it’s good to have variety</p>	<p>Improved sense of dignity not having to be supported by the hoist</p>	
<p> Staff</p>		<p>A good understanding of patient progress and areas to focus on</p>	<p>Fully engaged in discussion and not distracted by taking notes</p>		<p>Improved personal health and safety, can assess patient more easily not having to physically support them</p>	
<p> Service</p>		<p>The longitudinal record informs decision making across care settings</p>	<p>Cost savings by using technology to replace expensive translation services</p>		<p>Risks associated with manual handling reduced</p>	<p>Productivity gains by reducing administrative tasks</p>

“we need simulated experiences to replicate some teaching of content and practical skills for staff members or students”



Education and Research Future Profile

Name: Hannah
Age: 56
Role: Clinical Research Nurse & Lead for Undergraduate Nursing at University of Suffolk

Bio: Hannah works in the research team, leading undergraduate nursing at the local university. Hannah works with a great team, getting involved in a variety of really interesting studies, ensuring that she is always close to the action, to learn as much as possible.

Key goal: Utilise both the physical and virtual world to result in the richest learning experiences.

Journey Steps

- Hannah starts her day with a remote clinic aiming to recruit patients to a clinical study in oncology. She uses a digital twin model to demonstrate how different medications affect different patients and that the study hopes to find more specific and effective treatments
- Hannah books a clinic room to see the recruited patients for their pre-trial tests a week later. The patients who agree to take part can fill in the necessary paperwork online to save time at the face-to-face appointment
- At the face-to-face appointment Hannah provides a remote monitoring kit to the trial recruits which allows the trial team to monitor patient vital signs and symptoms in response to the trial drug. This enables them to collect more granular data for secondary use, but more importantly respond rapidly to anyone who has adverse effects to the drug
- Later in the week Hannah needs to arrange for all her first-year nursing students to gain some experience in A&E. Speaking to the CCC she can identify the most appropriate times to arrange a series of student visits when there will be plenty for them to do and see but with adequate supervision
- Prior to the students going to A&E they practice triaging patients in the clinical skills lab using augmented reality enhanced simulated patients. Students sign into the lab with their smartcard and are sent a digital feedback form automatically. Once complete, they receive their training certificate
- Several feedback forms mention that the temperature in the clinical skills lab is uncomfortably low. Hannah speaks to the Estates team who inform her that they have already ordered a new radiator as the building sensors flagged the issue a few days before

Technology

- Fabric**
- Footprint**
- Flow**
- Digital Twin**
An exact digital replica of an individual's body to model and predict the response to different treatments
- Smart Scheduling**
Intelligent scheduling taking into account service needs and changes
- Remote Monitoring**
The ability to collect real time patient data through connected devices
- Command Control Centre**
One platform drawing together data from the hospital environment and delivering data driven insights
- Immersive Technology**
Virtual and augmented reality ± simulation to support staff and patient education
- Environmental Sensors**
Sensors located around the building to control the environment for maximum comfort and energy efficiency

Benefits

- Patients**
Precision medicine means care is specific to me and will lead to more effective treatment
Less time spent waiting in the clinic, filling in paperwork
Being able to stay at home to be monitored is more convenient
- Staff**
Visual aids help to get the point of research across to patients and increases recruitment
Trials don't run on a regular schedule so it's great to be able to get a room when needed
Closer monitoring helps to identify patients who need clinical input sooner
Identifying the best time for students to visit A&E will maximise their learning and experience whilst not overwhelming the department when it is busy
- Service**
Developing a precision medicine practice
Flexible use of rooms reduces the overall space requirement for the hospital
More data for secondary use and actionable insights
Automated feedback/certification increases the return rate and identifies service improvements
- Training in simulated environments improves learning and is safer for patients when students are less experienced
- Environmental sensors keep the hospital comfortable for patients and staff and allow analysis to identify cost savings

"High volume of patients arriving in a short time"



Emergency Care Future Profile

Name: Jack
Age: 58
Role: Emergency Care Nurse Practitioner

Bio: Jack works within WSFTs emergency department and loves being part of a service which is so connected to the wider hospital. Jack finds his job very rewarding as he gets to help so many different patients, for a variety of different reasons.

Key goal: Manage the hospital flow more effectively, resulting in shorter patient waiting times.

Journey Steps

Jack takes a call with a paramedic who is assessing a patient in a nursing home with a deep cut on their leg. Using video and images of the wound Jack gives the paramedic instructions on how to manage the patient in the community, avoiding a trip to A&E

A&E is starting to get very busy, there are only a few beds free, so Jack calls the Command Control Centre to identify the bed status around the hospital and how long it might take to transfer patients out of A&E

While CCC are working on freeing up some beds around the hospital, Jack checks the number of patients who are currently in the waiting room. He can see that 10 new patients have self-checked in in the last 25 minutes. Thermal cameras detect that 3 of these are febrile.

Most patients have completed their self-triage documentation via mobile app which gives Jack recommendations on who to see next. One patient doesn't have a mobile so the receptionist takes them through the self-triage on one of the department tablets

Some patients in the queue are walk-ins and others have been referred. Jack can see the referral details in the EHR saving him time accessing multiple systems. The e-referrals are automatically processed and analysed and incorporated into the triage documentation started by the patient

The next patient Jack sees has severe tonsillitis and is unable to swallow fluids. Jack refers to ENT using the e-referral tool in the EHR and in the meantime places a cannula, prescribes fluids, analgesia and a stat dose of steroid. The medication & fluid is checked against the patient details and retrieved from the ADC using biometrics

Technology

- Fabric
- Footprint
- Flow

<p>Digital Workplace A tool for collaborative communication and working</p>	<p>Command Control Centre One platform drawing together data from the hospital environment and delivering data driven insights</p>	<p>Self Check-In Kiosks Digital check-in performed by patients</p>	<p>Digital Front Door A patient portal for accessing health services and tools</p>	<p>AI W/ Robotic Process Automation The intelligent automation of manual administrative tasks</p>	<p>Automated Dispensing Cabinets Computerised drug & equipment storage devices at the point of care</p>
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Benefits

- Patients
- Staff
- Service

Right management plan for the patient, first time, with no delay	CCC reduces the administrative burden of bed management on clinical staff freeing them up for patient care. The CCC has oversight across all the beds and events in the hospital making them much more efficient at managing beds	Patients have greater involvement in their care journey and there is greater confidentiality & privacy compared to speaking to a receptionist across a desk	Reduction in the need to repeat information & awareness of waiting times helps manage expectations	Less repetition of information	Right treatment, right time
Reassurance and hands-on learning for the Paramedic		Receptionists are freed up for other work	As the patient has already started the documentation there is less to write and more time with the patient	The automatic curation of notes and letters is a huge time saver	Frequently used medication is always in stock
Avoided unnecessary review in A&E		Intelligent prioritization of patients means that the most unwell are seen sooner, reducing the risk of deterioration	Significant time savings improving service efficiency, staff morale and patient satisfaction	Improved safety profile & audit trail	

Paediatrics & Outpatient Clinic Future Profile

“Would be amazing to have quicker test results for bloods, urine MCS and flu etc.”



<p>Name: Helen Age: 45 Role: Paediatrician</p>	<p>Bio: Helen loves working in paediatrics as no two days are the same. The service has rapid turnover compared to other departments, and Helen loves this fast-paced environment.</p>	<p>Key goal: Quicker and more accurate test results, so that turnover can be faster</p>
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Journey Steps

<p>Helen starts the day in a Complex Care Clinic where she collaborates with colleagues across several disciplines to manage children with complex care needs. The team start with an MDT, dialing in specialists from Addenbrooke's, to agree on management plans for the patients</p>	<p>As patients arrive for clinic, they are seen by the nurse who performs a series of baseline tests such as observations, urine dip and finger prick blood tests that are all automatically stored in the EHR for review by Helen to inform her care plan</p>	<p>One of Helen's patients, Abby, is a toddler with developmental delay and low weight. The MDT agrees she should be trialed on NG tube assisted feeding and this is explained to Mum and Dad using an educational video created in house. The video is also available through DFD mobile app</p>	<p>Helen explains that the NG tube will be placed and checked in the hospital and after that will be managed by the Community Children's Nursing Team so that Abby can spend as much time as possible at home. Helen books the NG placement and makes the e-referral via the EHR to community services</p>	<p>Abby is admitted to the Paediatric Ward to have her NG tube placed and checked. Dad finds the interactive bedside terminal very helpful for distracting Abby from the unfamiliar environment and keeping her calm. Abby and Dad face-time Mum through the terminal while she is on her lunch break</p>	<p>Once Abby has had her NG tube placed and is being managed in the community, her care team made up of the Hospital Paediatric Team, Community Nurses, Community Dietitian and her School Nurse all have access to the care plan to inform their decision making</p>
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Technology

<p>Fabric Footprint Flow</p>	<p>Digital Workplace A tool for collaborative communication and working</p>	<p>Point of Care Testing Investigations performed, processed and reported in real time, at the point of care</p>	<p>Digital Front Door A patient portal for accessing health services and tools</p>	<p>e-Referrals Electronic referral management between care settings and specialties</p>	<p>Integrated Bedside Terminals Devices that provide information and entertainment during inpatient stay</p>	<p>Longitudinal Care Record System End to end patient record combining all records from all providers</p>
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Benefits

<p> Patients</p>	<p>Right management plan for the patient, first time, with no delay</p>	<p>Minimally invasive tests are better tolerated by patients and there is no delay for results</p>	<p>Readily available educational tools and support services with care givers that Mum & Dad recognise</p>	<p>Reduces boredom and makes patients feel more at home</p>	<p>Integrated care with clinical records being available across care settings increases efficiency and care quality through the transparent sharing of information</p>
<p> Staff</p>	<p>Consensus agreement on management plans provides reassurance</p>	<p>Results are available to immediately inform treatment plans</p>	<p>Visual aids help patient understanding and can be re-watched after the consultation</p>	<p>Time saved in logging onto multiple systems and eliminating duplicative work & inefficient paper-based referrals</p>	
<p> Service</p>	<p>Reduces the risk of litigation through consensus agreement of specialists</p>	<p>Increased service efficiency and care quality</p>			

“Important to provide patients with an overview of what to expect”



Elective Care & Theatres Future Profile

Name: Paul
Age: 30
Role: Trainee Anaesthetist

Bio: The elective care service is a great place to be as it is a very cohesive team, who have the ability to adapt, flex and work together. The service is key to a patients journey, and is well connected with the patients themselves, and their families.

Key goal: Improved patient education so that they know what to expect

Journey Steps

Paul reviews the 5 patients on the morning General Surgery list. He can see all the information he needs in the EHR and through the longitudinal care record he can also review information from previous procedures outside of the hospital

Paul visits each patient to explain the anesthetic procedure. During his conversations Paul activates the environmental controls that turn the cubicle windows opaque and activates sound isolation for privacy and confidentiality. He also shows the patients how to change the lights and temperature which they might find useful when they are recovering post-operatively

Before leaving the patients, Paul shows them where to find educational material on the bedside terminal about their anesthetic procedure so that they can review material and ask any questions when they arrive in the anaesthetic room

Whilst the automated cleaning robots work in the main theatre between cases, Paul prepare the drugs and fluids using the ADC

One of Paul’s patients has a severe phobia of needles and he uses a VR experience to help relieve the patient’s anxiety and distress.

After the procedure, all documentation is stored on the EHR and in the longitudinal care record for instant access by other care providers such as the GP. Patients have access to their discharge information through the DFD app which is supplemented with patient educational tools such as wound care and pain management

Technology

- Fabric
- Footprint
- Flow

<p>Longitudinal Care Record System End to end patient record combining all records from all providers</p>	<p>Environmental Control The ability to alter the environment to suit the needs of the space</p>	<p>Integrated Bedside Terminals Devices that provide information and entertainment during inpatient stay</p>	<p>Automated Dispensing Cabinets Computerised drug storage at the point of care</p>	<p>Immersive Technology Virtual and augmented reality to relieve anxiety</p>	<p>Digital Front Door A patient portal for accessing health services and tools</p>
			<p>Robotics Physical robots performing manual tasks</p>		

Benefits

- Patients
- Staff
- Service

<p>Integrated care with clinical records being available across care settings increases efficiency and care quality through the transparent availability of information</p>	<p>No need to worry that others can overhear personal information. Environmental controls maximise comfort</p>	<p>Reassurance and time to review information that is unfamiliar so any additional questions can be answered</p>	<p>Right treatment, right time</p>	<p>Calmer and more relaxed during a procedure that would usually cause great distress</p>	<p>Readily available educational tools and personalised discharge advice</p>
	<p>The opaque windows signal to staff outside the cubicle that they shouldn’t enter at this point, reducing interruptions</p>	<p>Ensures patients have all the information they need</p>	<p>Frequently used medication is always in stock Theatre staff are free to do other work instead of cleaning</p>	<p>Theatre list runs to time</p>	<p>Visual aids help patient understanding and reduce patient anxiety and queries</p>
	<p>Predicting patient needs and optimising the environment improves patient satisfaction</p>	<p>Improved safety profile & audit trail</p>	<p>Reduced follow up questions from patients improves time management for staff and improves patient satisfaction</p>		

Women's Services & Pharmacy

"ideal if we could streamline the process and shorten the turnaround time."

"we need less admin for midwives"



Name: Tim
Age: 42
Role: Pharmacist

Bio: Tim works in the pharmacy at WSFT and his main aim is to ensure that patients and staff receive the correct medicine at the right time, improving the wider hospital flow.

Key goal: Utilise technology to speed up monotonous tasks



Name: Emma
Age: 36
Role: Midwife

Bio: Emma is a Midwife at WSFT and her main priority is to spend as much time with her patients as possible during their labour

Key goal: minimise manual administrative tasks and harness technology to keep Mum and baby connected

Journey Steps

Tim receives a medication request through the EPMA system for an anti-hypertensive for a pregnant woman, Maria, admitted with pre-eclampsia who has multiple co-morbidities. He checks all the information and validates the drug ready for dispensing to the patient

Tim is notified by the ADC system that the incorrect anti-hypertensive has been taken from the ADC by Emma, tracked by her biometric login, and calls the ward. Emma realises her mistake when the barcode scanning at the bedside didn't match up. She replaces the medication in the ADC and takes the correct one

Tim informs Emma that he is sending a requested medication up to the ward for another patient that isn't routinely stocked in the ADC. It will arrive shortly by AGV

Several hours later Maria's BP is still rising, and the baby is showing signs of distress. The Consultant plans an emergency c-section and can see that theatres are currently free. Emma prepares Maria's documentation for theatre which is much quicker as it can be automatically pre-populated using the admission notes. Emma double checks the information and enters any missing parts

After the emergency c-section Emma shows Maria how to live stream to her baby in SCBU, alongside Dad who is at home, using the bedside terminal

When Maria and baby are ready to go home, Emma gives her a remote BP device to monitor her BP over the next few weeks. Emma also informs Maria that she can directly message through the DFD app which also has access to educational resources and support groups with other Mums

Technology

- Fabric
- Footprint
- Flow

<p>Electronic Prescribing & Medicines Administration Digital medicine management</p>	<p>Single Sign On w/ Biometrics Access multiple services with one credential</p>	<p>Automated Guided Vehicles Robots that can perform manual tasks</p>	<p>Smart Scheduling Intelligent theatre management</p>	<p>Integrated Bedside Terminals Devices that provide information and entertainment during inpatient stay</p>	<p>Remote Monitoring Real time patient data from connected devices</p>
<p>Automated Dispensing Cabinets Computerised drug storage</p>	<p>Barcode Scanning Barcoded wristbands map medications to patients</p>		<p>AI W/ Robotic Process Automation The intelligent automation of manual administrative tasks</p>		<p>Digital Front Door A patient portal for accessing health services and tools</p>

Benefits

- Patients
- Staff
- Service

Improved drug safety	Right dose, right time	Reduced waiting time for medication delivery, freeing up staff to work on other tasks	Midwives can spend more time providing patients with reassurance at a stressful time in the delivery instead of filling in paperwork	Mum remains connected to her partner and baby even if they aren't in the same room, helping the bonding experience	Convenience of being able to stay at home with a new baby rather than coming to the hospital for check ups & support
	Convenient point of care access to medications and safety measures to prevent errors		Improved documentation accuracy and detail through automation and streamlined efficiency with smart scheduling	Patients have a positive experience in the department	Follow up appointments are freed up, only those who aren't improving need to be seen again or managed face to face
					Freed up appointments reduce waiting list times

Appendix 2

Digital technology themes

Digitally empowered patients

Build new services that empower patients to take charge of their own health.

Digital services and technologies will not and should not replace the care provided by our dedicated team of staff. Instead, it should facilitate and enable care to be tailored around the needs and preferences of each and every patient, giving them the confidence to engage as much as they wish.



Our Desired Outcomes

- **Enhanced Patient Portal** with access to electronic patient records.
- **Easier access to health information**, supplemented by patient education and healthcare community platforms, national support groups etc.
- Self monitoring of health through wearables and other smart devices.
- **Patients managing their care before, during and after**, through appointment booking and management tool, Digital Consent Form, Virtual pre-op consultation, Digital Feedback form.
- **Patient self administration** with digital hospital systems such as Self Check In, Smart Parking, Integrated Bedside Terminals, Customised Voice Assistant.
- Patient engagement at point of care, with interactive immersive experiences and gamification of systems.

Benefits

- Reduced unnecessary admissions
- Improved patient experience
- Improved general standard of health of patients

Risks & Challenges

- Security of sensitive patient data
- Varying levels of patient digital competency, with potential to exclude those patients who are unwilling or unable to adopt a more digital way of interacting with care.

Access anywhere quality care

Easy access to quality care, delivered physically or virtually depending on patient preferences, where possible.

The trend towards providing care across numerous channels, both physically and virtually, has been accelerated by the global Covid-19 Pandemic. There are significant benefits for patients, their families, and staff, that can be realised through establishing capability in both.



Our Desired Outcomes

- Access to healthcare **virtually** in the comfort of their own home, or at a care provider closer to home, enabled by advanced video consultations.
- **Remote monitoring** to gather patient information outside of traditional healthcare settings, and integrated to EHR.
- Access to health supplies and prescriptions through Automated Dispensing Cabinets.
- Virtual appointments allow for **specialists** to see more patients and provide patients with the **flexibility** to manage their schedule without having to travel to a care setting, opening up more care options to less mobile patients.
- **Preparation for planned admissions** can begin virtually so that patients are engaged and informed before they step foot in the hospital / care setting.

Benefits

- Enhanced Patient Experience through quicker and easier access to the right care.
- Increased patient throughput.
- Reduced unnecessary admissions.

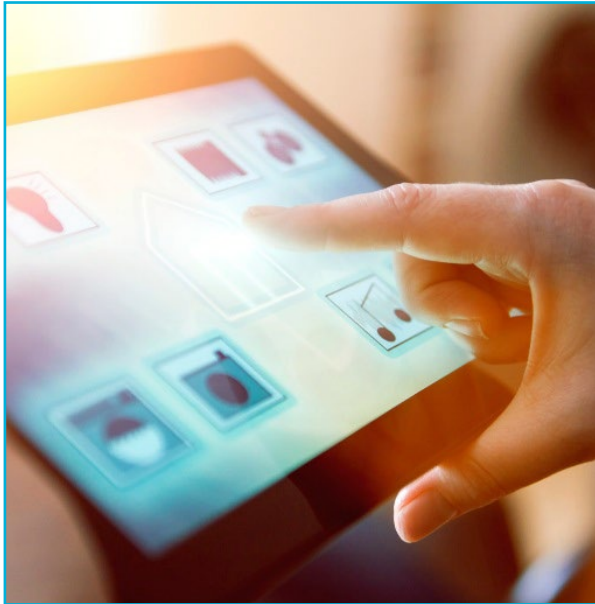
Risks & Challenges

- Installing suitable infrastructure and technology in remote care settings.
- Patients having the requisite technology in their own home.
- Varying levels of patient digital competency.
- Virtual care to supplement and compliment F2F care but not replace it.

Interoperable and Intelligent Systems

Digital tools and platforms that empower our workforce.

WSFT and the wider healthcare community is made up of a range of digital tools, platforms and systems. In order for them to provide efficiencies, break down silos and be willingly adopted across the board, they must connect in a seamless manner and be intuitive for users.



Our Desired Outcomes

- **Easy access to actionable data** extracted from different clinical and non-clinical systems to drive the notion of data-driven care across the trust.
- **Use of predictive analytics** (eg: Machine Learning to predict patient length of stay) for better care planning and improving patient experience.
- **Platform Architecture** that facilitates efficient usage and enables core activity, through intuitive user workflows, standardised functionality, adequate licencing and regular updates.
- **IT Support** function that is easily accessible and responds quickly to bugs and errors with systems.
- **Data** processes in place to extract, store and analyse data from multiple systems. Capability to turn data into **Management Information, Reporting** and actionable **Insights**.
- **AR/VR** based education systems to train staff and patients using immersive technology
- **Ease of access** to multiple systems, such as through Single Sign On and Biometrics, giving staff significant time savings.

Benefits

- Better-informed decision making in both clinical and non-clinical settings.
- Improved Digital wellbeing of Staff
- Staff time saving and efficiency
- Enhanced Patient Experience

Risks & Challenges

- Different systems required for different departments.
- Keeping sensitive data secure, for instance Paediatrics.

Digital foundations

Community integration

Build integrated digital services with social care, mental health and other healthcare providers to deliver quality community care.

One of the key strengths of WSFT is its network of healthcare providers, both in an acute setting and in the community. Digital services must transcend all settings, in order to create a seamless experience for patients and staff. Community Integration also allows patients to be treated closer to or in their home, which significantly increases patient experience and relieves pressure on major centres such as West Suffolk Hospital.



Our Desired Outcomes

- Integration between care providers to enable **information transfer**, creating efficiencies for staff receiving patients from a different care provider.
- Leveraging the strengths of each healthcare provider to provide a complete **end to end patient pathway**.
- **Patient Experience** – treated in their community by clinicians who they are familiar with.
- Use of **Mobile Devices** to provide immersive patient experience in the community, through **AR and VR**.
- Collaboration within the Alliance to facilitate collective progress.

Benefits

- Patients have easier and quicker access to the specific care they need, improving patient experience and quality of health.
- Reduced unnecessary admissions.
- Reduced average length of stay.
- More informed decision making based on collective data and information.

Risks & Challenges

- Installing enabling infrastructure and technology in care settings.
- Patients having the requisite technology in their own home.
- Varying levels of patient digital competency.

Smart and robust infrastructure

Make our infrastructure and systems modern, secure and interoperable.

The success of digital and IT projects often hinges on existing networks, infrastructure and hardware. Just as important as delivering leading technologies is ensuring that the enabling core infrastructures are fit for purpose, particularly for staff who use them every day.



Our Desired Outcomes

- **Platform Architecture** that provides essential functionality for all staff to perform tasks efficiently.
- **Network Infrastructure** that not only supports the introduction of new digital systems, but provides connectivity and functionality as BAU for all staff in all locations.
- **Digital systems to enhance patient care** such as Smart Rooms, Digital Wayfinding, and Patient RFID Tracking.
- **Digital systems to enhance staff efficiency** such as Tap and Go / Biometric Log on, Digital Pens, Smart asset management and tracking.
- Regular appraisal and horizon scanning to ensure infrastructure is in place to facilitate digital advances, and that **infrastructure is futureproof**.
- **Hardware** that is role specific to meet needs of remote working, such as dual screen.

Benefits

- Patient Experience and increased digital competency.
- Staff time saving and efficiency.
- The ability to capitalize and benefit from new digital systems as an early adopter.

Risks & Challenges

- Ensuring infrastructure is futureproof in a rapidly changing and developing market.
- Maintaining security, particularly with remote working.

Digital culture

Building a supportive culture that strengthens the way we behave, think and communicate using digital.

Simply implementing digital services and new technologies will not guarantee adoption and benefit realisation. Sufficient L&D, support and communication must be provided in order to embed change and ensure that staff, patients and all users have a positive perception of digital.



Our Desired Outcomes

- Clearly defined **Communication channels** and **collaboration tools**.
- **Digital Inclusion**, creating a 'Digital First not Digital Only' culture.
- **L&D** provided as part of new system rollouts but also available to support staff with BAU activity to support the collective development of digital competency of the work force and patients.
- Network of early adopters able to develop, test and trial digital systems and technologies.

Benefits

- Enhanced digital wellbeing of staff.
- Readiness and willingness to adopt future new digital services and technologies seamlessly.

Risks & Challenges

- Varying levels of digital competency across staff, patient and community groups.
- To build up confidence in digital systems takes time, and can be quickly undermined by any issues that staff and patients experience with the technology or systems.

definition: **Open source** software is software with source code that anyone can inspect, modify, and enhance.

"Source code" is the part of software that most computer users don't ever see; it's the code computer programmers can manipulate to change how a piece of software—a "program" or "application"—works. Programmers who have access to a computer program's source code can improve that program by adding features to it or fixing parts that don't always work correctly.



Our approach

- We will consider open source software when available and wherever the functionality matches or approaches the best of products available
- Open source projects, products, or initiatives embrace and celebrate principles of open exchange, collaborative participation, rapid prototyping, transparency, meritocracy, and community-oriented development
- Rich functionality has been developed by dedicated resource with deep knowledge of the subject matter area frequently with close clinical engagement making solutions relevant and appropriate

Benefits

- Rich functionality typically at a much lower cost

Risks & Challenges

- The development timescales can be unpredictable due to wide variations in priorities and availability of knowledgeable development resources
- Whilst the software is sometimes considered "free" it usually required expertise in configuration and optimisation of the product carried out and charge for by commercial companies

Use case

We have implemented Open Eyes which is open source software to support the Ophthalmology department.

Likewise, the ICS wide End of Life solution (ROSI) is based on OpenEHR which is the leading open source platform as a repository for clinical data

definition: Telephony within the Trust has many facets that include basic telephone services. However, there are a number of other key components that are also utilised including; Call Centre Services, Branch and Cloud hosted services, as well as integrating call features in to other clinical or administrative systems. The integration with other communication systems such as bleep and paging services, SMS or mobile technologies are also key within a modern technically advanced system.



Our approach

- Single person, Single number through the use of soft phones and mobile Apps that enable a users Office number to be presented on any device therefore reducing the need for additional mobile phones for work
- Integration with other core systems such as e-Care and TEAMS for Patient consultation services
- Moving towards a true Branch and Cloud Hosted Solution through the Trusts investment of its current on premise solution which enables this migration through being cloud ready
- Consolidation of systems to improve end user experience and potentially reduce cost and complexity
- Transformation from BT ISDN Services to VoIP over SIP services between sites and remote clinics

Benefits

- Single platform to provide the highest level of service
- Reduced complexity by reducing the need for on premise equipment
- Cloud Hosted services that integrate into other open source or open platform solutions to deliver improved patient care

Risks & Challenges

- Balancing the need to provide a rich telephone solutions while maintaining a simple user experience.
- Costs

Use case

The IT Department has been working with Cerner and Unify to develop direct from patient record calling. This is the ability to open a patients record, and click their telephone number and dial the patient directly, thereby reducing time and dialing errors during busy periods.

Endpoint

definition: Endpoints are the devices used by staff to aid in the giving of care. Endpoints can include, mobile phones, tablets, laptops, desktops, specialist devices and monitoring. Through the use of IoT, endpoints are capable of providing Realtime monitoring, analysis and diagnostic capabilities. By providing the right endpoint device or collection of devices to the right person it is possible to improve patient care and provide the tools needed to save lives.



Our approach

- Mobility First, through high performance devices that provide real time information to care givers throughout the Trust
- Maximise device perform, minimise the number of devices required
- Reduce complexity
- Data rich through the use of IoT, providing real time data centrally collated and easily assessable through appropriate tools
- Virtualised infrastructure, further reducing the need for workstations through the use of Thin Client technologies.
- Tap and Go, Follow me Printing and following me Desktops
- Password-less user access, through the use of biometric technology

Benefits

- Access to systems where ever there is suitable connectivity.
- Capable of working from home or remote locations
- Standardised docking solutions
- Dual screen capable without the need to purchase additional monitors

Risks & Challenges

- Mobile Endpoint devices are typically more expensive than their desktop based counterparts
- Mobile endpoints are more at risk of loss or damager
- The speed to which endpoint devices are updated, leaves the Trust with a shorter life cycle than previously considered.

Use case

Due to the pandemic, we took the decision to move to a mobile first workforce, replacing existing desktop devices where appropriate and deploying standard docking stations to enable staff to work from multiple locations, including from home. Our Community staff are entirely mobile first enabling them to access systems from anywhere there is public internet connection.

Cyber Security

definition: Cyber security is how individuals and organisations reduce the risk of cyber attack.

It's core function is to protect the devices we all use (smartphones, laptops, tablets and computers), and the services we access both online and at work from theft or damage.

It's also about preventing unauthorised access to the vast amounts of Personal Identifiable Data we store on these devices, and online.



Our approach

- To move away from the old Maturity Based approach for Cyber Security to a Risk based model.
- The IT Department will identify key Trust assets such as Critical systems, functions, people, data and applications, once identified we will prioritise and focus on those elements that create the highest cyber risk. Focusing on the highest risks enables to the department to apply the appropriate level of control without excessive costs or technology controls to manage them

Benefits

- Reduced complexity
- Reduced cost of monitoring and managing the infrastructure to mitigate potential risks
- More streamlined focused monitoring and responsiveness to threat detection and resolution

Risks & Challenges

- Old habits die hard
- Identifying high risk elements is not just an IT Task
- User awareness and training

Use case

The Trust was the first hospital to implement Darktrace, the global leading tool for cyber security, that uses AI to detect and autonomously respond to cyber attacks in real time. It is modeled on the human immune system and learns and understands 'self' for everyone and everything in the system. It can then spot subtle signals of an advanced attack whether it come from the network, cloud or endpoint devices

Cloud computing

definition: **Cloud computing** is the on-demand availability of computer system resources, especially data storage (cloud storage) and computing power, without direct active management by the user. The term is generally used to describe data centres available to many users over the Internet. Large clouds, predominant today, often have functions distributed over multiple locations from central servers. If the connection to the user is relatively close, it may be designated an edge server.



Our approach

- The government strategy is to follow a **Cloud First** approach using public cloud offerings wherever possible
- We will move to cloud provision by developing strategic partnerships with cloud providers that enable the Trust to deliver its objectives in technology as an enabling service.
- Consumers of cloud services should be able to unilaterally provision computing capabilities, like server time and network storage, as needed without requiring human interaction with each service provider.
- It's highly likely the Trust will utilise many cloud servers in the future, including but no limited to PaaS, SaaS, IaaS and many more. As offerings from cloud providers become ever wider the IT Department will look to harness these technologies to enable faster, more robust and scalable solutions.

Benefits

- Offers the ability to scale services to match demand
- Collaboration with other organization's become easier
- Revenue based financial modelling enables the organization to better manage costs without the impact of capital budgeting
- Reduced physical presence of a Data Centre within the Trust building

Risks & Challenges

- The costs of cloud computing need to be managed carefully
- There is a proliferation of suppliers and hosting services that need careful evaluation
- Connectivity to the internet becomes critical and so demands high bandwidth and resilient connections

Use case

We developed the staff vaccination system in Microsoft Azure public cloud with links to on-premise database servers. It allowed staff to book their vaccinations from any location and allowed them to amend their appointments through links into confirmation e-mails

Networking

*definition: **Network**, The hardware layer that underpins how devices connect and communicate with each other. The protocols used to provide fast, safe and secure transmission of data across a wide range of devices. Modern networks have evolved to be more than just switches in a rack delivering services to devices within a building or campus to enable integration between sites and the cloud. Through being Software defined, cloud ready and highly secure a network underpins the requirements of a modern Hospital.*



Our approach

- WIFI First, using the latest WIFI 6 technology to deliver greater performance, resilience and security throughout the Campus and beyond.
- 5G/+ Mobile Technology built-in to the Core network and vendor agnostic, delivering highspeed services to expand the Enterprise network using secure public services
- Built using the latest Fabric Technology at the network Core providing scalability to deliver services that grow as required ensuring performance is always appropriate for demand
- Cloud ready ensures integration with the latest management platforms to seamlessly expand the enterprise into the Cloud whilst still maintaining complete control and security of the Trusts information assets.
- Software Defined to enable greater flexibility, prevent vendor lock-in and provide new services as they become available

Benefits

- Flexibility to deliver services over a wide range of devices and sites
- Highspeed reliable fixed and mobile connectivity enabling care from any care giving location
- Enabling Enhanced Building intelligence Management Systems

Risks & Challenges

- Poor connectivity options available within the region
- Limited or no diverse routing into the main site
- Poor mobile signals within the area

Use case

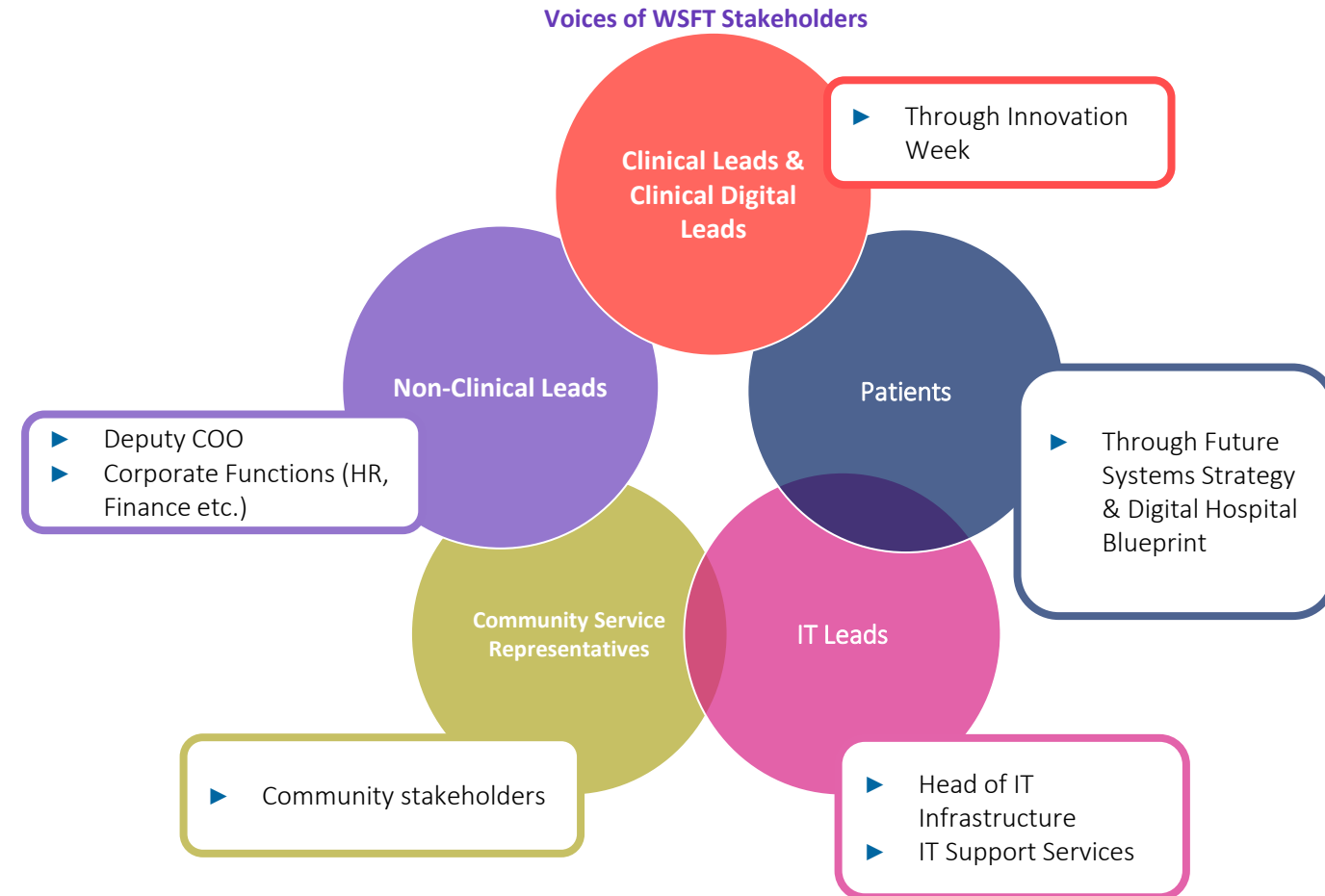
We have recently purchased the latest Fabric network Core technology from Extreme Networks to develop our network infrastructure enabling the Trust to expand out capacity and throughput and utilize the latest cloud servers whilst maintaining a secure virtual boundary

Appendix 3

Stakeholder engagement

Engagement approach

- ✓ Incorporate inputs from business priorities, IT priorities, dependencies, financial constraints, and current IT state
- ✓ **Conduct current state analysis**
- ✓ Identify digital demand by considering Voices of WSFT stakeholders
- ✓ Assist WSFT to balance business priority vs costs
- ✓ Create 5-year strategic roadmap



We will adopt a 'use existing' approach to draw inspirations from what's present and then engage with additional stakeholders (as required) to ensure 'no voice is left unheard'

Stakeholder Engagement Sessions

Team	Name	Role
Digital / IT	Ian Coe	CNIO
	Sarah Judge	CCIO Community
	Emma Hatton	Application Support Manager
	Guy Hooper - EPR	Head of Digital Projects and Programmes
	Rob Howorth - Technical	IT Infrastructure Manager
	Seema Moss	IT Training Manager
	Andrew Smith	Technical Projects Manager
	Liam McLaughlin	CIO
	Sarah-Jane Relf	Head of Digital Transformation
Executives	Craig Black	Director of Resources and Deputy CEO (responsible for IT)
	Helen Beck	COO
	Nick Jenkins	MD
	Sue Wilkinson	Chief Nurse
	Dermot O'Riordan	CCIO and Consultant Surgeon
HR	Claire Sorenson	HR
Clinical Directors		
Medical Secretaries		

Team	Name	Role
Operations	Alex Baldwin	Deputy COO
	Simon Taylor	Associate Director of Operations - Surgery
	Michelle Glass	Associate Director of Operations - Community
	Sarah Watson	Associate Director of Operations - Medicine
	Michelle O'Donnell	Associate Director of Operations - Women & Children & Clinical Services
	Jo Raynor	Performance/Quality Improvement
	Quality Improvement	James McFarlane
Natasha Rivers		QI Lead
Denise Pora		Deputy Director of Workforce (Development)
Sue Deakin		Consultant and Human Factors
Dan Spooner		Deputy Chief Nurse
Community	Kevin McGinness	Local Area Manager and Co-production Lead
	Sandra Webb	Local Area Manager and Co-production Lead
	Michelle Glass	Associate Director for Community and Integrated Services
	Nic Smith-Howell	Associate Director of Integrated Community Paediatric Services
	Gylnda Nunn	Integrated Therapies Manager, co-production lead for Therapies Workstream
Communications	Helen Davies	Head of Communications




Digital Fortnight

We engaged with 41 attendees across 11 clinical workstreams over the 2 weeks

Name	Role
Emma Cameron	Clinical Innovation Lead and GP trainee
Diogo Silva	Clinical Information Fellow and junior doctor
Liam McLaughlin	Chief Information Officer
Dermot O’Riordan	Chief Clinical Information Officer (CCIO) and consultant surgeon
Ian Coe	Chief Nursing Information Officer
David Ross	Consultant in O&G and deputy CCIO
Tom Houghton	Consultant in Paediatrics and deputy CCIO
Chris Barlow	Digital Business Analyst in community and therapist
Sarah Judge	CCIO for community and therapist
Maryam Jadidi	Consultant anaesthetist and deputy CCIO
Simon Whitworth	Chief Pharmacist
Guy Hooper	Head of Digital Programmes and Projects
Nicola Yates	Head of Information and Contracting
Anne Swift	Consultant in Public Health
Helena Jopling	Associate Medical Director for future system (and public health consultant)
James Butcher	Future Systems Operations Lead
Mark Manning	Head of Nursing Future Systems
Tracy Morgan	Programme Manager Future Systems Clinical workstreams
Sarah Jane Relf	Head of Digital Transformation

Name	Role
Lorraine Weaversmith	Emergency Services clinical lead
Bethany Barrett	Emergency Services clinical lead
Victoria Wilson	Women’s Services clinical lead
Matthew Larkin	Women’s Services clinical lead
Jon Nicolson	Theatres/Critical care clinical lead
David Higgins	Theatres/Critical care clinical lead
Trish Bivins	Theatres/Critical care clinical lead
Marcos Martinez	Planned care clinical lead
Bethany Barrett	Planned care clinical lead
James Whatling	Education and research clinical lead
Mark Hunter	GP lead
Katherine Picinelli	Paediatrics clinical lead
Clare Harrison	Paediatrics clinical lead
Kirsty Rawlings	Outpatients clinical lead
Linda Johnston	Pathology/Mortuary clinical lead
Tracey Green	Pathology/Mortuary clinical lead
Craig Vickery	Diagnostics & Endoscopy clinical lead
Annie Kelling	Diagnostics & Endoscopy clinical lead
Sandra Webb	Community and Therapies clinical lead
Liza Asti	Community and Therapies clinical lead
Rosie Finch	Community and Therapies clinical lead
Gylda Nunn	Community and Therapies clinical lead

Key challenges, demands and opportunities extracted from the stakeholder engagement sessions

 Challenges	<p>Large number of IT & Digital Projects in the backlog, with changing and competing priorities.</p>	<p>Increasing number of digital services and platforms for staff and patients to use. 'Digital Pile On' preventing time savings and efficiencies.</p>	<p>Pressure to reduce unnecessary admissions, reduce length of stay and treat patients in the community / at home</p>	<p>No easy access to data or reports across systems. Lack of translation from data to information.</p>	<p>Effectiveness and perception of Digital and IT is dependent on Network, Infrastructure, Hardware and Devices.</p>
 Digital Demands	<ul style="list-style-type: none"> ✓ Earlier engagement with stakeholders when developing systems and tools ✓ Smaller, incremental improvements through dynamic projects ✓ Quicker procurement ✓ Establish a formal prioritisation process 	<ul style="list-style-type: none"> ✓ Remove duplication of work with integrated and interoperable systems ✓ Benefits realization ✓ Streamline workflows to break down silos ✓ Training and support to ensure all staff know how to use systems correctly ✓ Decommission legacy platforms ✓ Network Infrastructure must be robust 	<ul style="list-style-type: none"> ✓ Empower patients to own their care ✓ Smart infrastructure and clinical systems ✓ Equip staff with secure hardware to deliver care from anywhere ✓ Consistency across care settings ✓ Easy access to information ✓ Interoperable systems to remove silos between health care settings ✓ Coordinated progression across Alliance 	<ul style="list-style-type: none"> ✓ Centralised Data Warehouse ✓ Data accessible to those who require it ✓ Interoperable systems that enable data to be collected and transferred. ✓ Data-driven decision making ✓ Data and reports translated into usable Management Information ✓ Reports, Management Information and Insights communicated. 	<ul style="list-style-type: none"> ✓ Systems must be fit for purpose for all users ✓ Licenses up to date ✓ Futureproof infrastructure and hardware to accommodate growth ✓ Suitable devices and security to enable effective and safe remote working ✓ Accessible and responsive IT Helpdesk
 Opportunities	<ul style="list-style-type: none"> ● Digital Delivery ● Communications ● Procurement ● Digital Principles to inform prioritisation ● Wider promotion of and accurate use of Change Request Process ● Change Management 	<ul style="list-style-type: none"> ● L&D ● Platform Architecture ● Digital Culture ● Benefits Realisation 	<ul style="list-style-type: none"> ● Patient Empowerment ● Community Integration ● Security ● Communications ● Platform Architecture ● Change Management 	<ul style="list-style-type: none"> ● Data Management ● Platform Architecture ● Communications 	<ul style="list-style-type: none"> ● Security ● Platform Architecture ● IT Support ● Procurement

Stakeholder Voices

Digital / IT Department

- Lack of formal process or matrix for prioritising digital projects.
- Digital ambitions and principles should inform prioritisation.
- There needs to be a long-term strategy that is flexible enough to accommodate changes in short term priorities.
- Strategy should include some specific, measurable objectives.
- Improved accuracy is needed around estimation of time and resource needed to deliver projects.
- Projects should be broken down into smaller, dynamic projects that can deliver incremental value.
- Give the patients the tools to take responsibility for their own care where possible.
- Need to improve the identification, realization and measurement of benefits.
- Technologies should be implemented to achieve specific benefits, not just 'because we can'.
- Invest sufficient time to shifting culture.

Medical Secretaries

- Helpdesk – Lack of communication, unclear escalation routes. Known issues, faults, maintenance etc should be communicated centrally. Allocated point of contact per department would be useful.
- Training – often done by respective teams. More resource allocation to training required
- Appropriate engagement with staff early in the project journey. Address concerns.
- Ownership – clarity needed around which team is responsible for which digital project / platform.
- Siloes between departments and ownership of issues.
- Programmes and Platforms must be fit for purpose and include all features that are required for each job role, including whilst WFH.

Nursing

- More effective use of the technology we already have.
- Virtual consultation / remote monitoring – learn from Covid-19.
- Digital inclusivity.
- Digital often adds layers and time for staff rather than removing it.
- Technology shouldn't replace F2F, but enable staff to better target patients who need assistance.
- Don't lose the 'art of nursing' to technology and 'ticking a box but missing the point'.
- Security required on personal devices.

Stakeholder Voices

Digital Board

- Digital and Technology often enables us to do things better but not quicker
- Digital shouldn't just replicate the processes we already have. It should innovate and improve.
- Reduced variation in care delivery should equal better care, but it's not necessarily one size fits all.
- Tackle resistance to change through education of the short and long term benefits, for staff and patients
- Key improvements: Tap 'n' Go, Patient Portal, Interoperability.
- Ensure we consider what neighbouring trusts are doing when we make decisions around platforms / providers. Don't become an 'island'.
- Don't just target specific constraints.

Clinical Directors

- Patients should be given the tools and ability to take ownership of their own care.
- Several specialist systems to provide specific functionality is often better than a one size fits all system, as long as they are interoperable.
- Workload is high as a result of Covid-19 disruption. Digital systems and technology must contribute to reducing this.
- We must guide stakeholders through the full journey of digital and tech – understand it, use it, realise benefits from it.
- Better integration of primary care notes
- Two-way communication with patients is an opportunity to empower and generate efficiencies. E.G whilst they are on a waiting list, pre-assessment forms and consultations etc.
- Last IT Survey found that digital reduces f2f engagement. We need to improve patient safety and also engagement and wellbeing.
- eConsent

Quality Improvement

- Patient Empowerment is key. Owning their own patient journey.
- Interactive tools and platforms that can help visualize pathways would be beneficial for staff and patients.
- L&D is required to ensure that staff know how to use systems effectively.
- Data Management could be improved – access to data and transfer of data between departments and systems. Better visualization of data and trends.
- Systems must integrate better, to remove boundaries between departments.
- Consistency of interaction with tools and systems across departments is crucial.
- Remote working has been adopted well and must continue to be enhanced and embedded in our culture.

Stakeholder Voices

Clinical & Human Factors

- If technology helps us to do our jobs then Patient Safety will naturally increase. Efficiencies must be gained, such as with SSO / Tap n Go.
- Hardware should have multiple functions and be intuitive for a human being to use.
- New systems are often introduced but we need to make sure we are using existing systems correctly too.
- L&D to enable correct usage. Work as Imagined vs. Work as done
- Marginal Gains – small improvements = significant impact.
- Communication is key – provide people with a channel to collaborate and influence.

HR

- Transition to remote working has been managed well and must continue to be embedded.
- Data extraction, transfer and analysis could be improved.
- Systems must integrate better to remove boundaries.
- Security measures must be reviewed. E.g emails.
- Prioritisation of Digital Projects must be more dynamic and collaborative.
- Procurement must ensure hardware is fit for purpose and essential functionality met before cost considered.
- Resistance to change exists. L&D and communications would help to better embed digital and technology into WSFT's culture.
- Efficiency would be achieved if new joiners could begin their onboarding process virtually before they start.

Projects Portfolio

- Prioritisation process should begin earlier (previous October) to ensure we are prepared and changes can be made ahead of the budget.
- Change Control Process is robust.
- Communication and engagement – giving stakeholders visibility of projects early will increase successfully deliveries.
- Increase the input from clinicians in development phase.
- Remote working must be carefully considered at a specific level, to suit individual needs.
- Community Integration and treating people in their own homes is a key element of the strategy.
- Integration of platforms and systems is advanced.

Stakeholder Voices

Community Services

- Hardware rollout has successfully enabled culture shift to remote working.
- Lack of Data Warehouse – reporting process is based on workarounds.
- Integration between systems such as eCare and System One needs to be improved.
- Geographical proximity between care settings must be considered.
- Hardware and technology must be futureproof.
- Rollouts of technology and services must be supported by sufficient training, which must remain accessible as BAU.
- Communication within the Alliance must be regular, with effective change management in place to ensure coordinated progress.
- Pro-active horizon scanning to ensure we anticipate digital advances.

Associate Directors of Operations

- To unlock full benefits from systems such as eCare, we must set out roadmaps and plans as to ‘how’ we are going to optimize their use.
- This must include how we are going to empower patients and staff in order to drive successful adoption of new systems.
- We aren’t effective at turning Data into operational information. ‘Data rich but information poor’.
- Network infrastructure must be improved to support adoption of systems.

Paediatrics and Community

- Shift to remote working has been managed well.
- Specific challenges around safeguarding mean that System One and other key platforms require tailored approach.
- The number of new features, systems and projects that are delivered is limited by Developer / IT Resource available.
- Smart technologies are applicable in both acute and community settings, particularly around ‘play’ based activities – e.g. toys being replaced with Tablets. Virtual/Augmented Reality and Gamification.
- Audio integration and Digital Pens to provide richness of records.
- Collaboration tools such as Sharepoint could be improved, to improve security and enable easier transfer of large files.
- Single Sign On and Biometric Log in should be implemented as standard, for security and time saving benefits.
- Virtually connect with patients before a visit – good for putting elderly or children’s minds at ease and becoming familiar pre-visit.
- Remove duplication of effort. For instance, capture patient experience at point of care through ambient listening, not in a later survey.

Stakeholder Voices

Communications

- Good public website that is focussed on patient accessibility.
- System to manage website.
- Looking to update the intranet.
- Digital Newsletter via Outlook.
- How you communicate with staff in clinical roles and community roles.
- Digital solutions that can help engage with staff.
- Nothing is centralised – different digital systems.
- Time to look at ‘digital’ is a challenge.
- Anything the department does needs to be accessible.
- Some people don’t want to engage digitally.
- Digital Signposting via digital screens etc.
- Patient portal for messaging etc.
- Digital forms.
- E-learning.

CCIO

- WSFT buy-in to the importance and value of digital.
- Resourcing the delivery of project backlog is a challenge.
- Interoperability of systems must be improved.
- Need to store, access and use data more effectively. The right data to the right staff at the right time.
- Better use of the cloud and data visualization tools in the front end.
- Machine Learning and Predictive Analytics big opportunities.
- More methodical approach to prioritisation of IT Projects Required.
- Communication channels must be clearly defined and consolidated.
- Ensure patient preferences are at the heart of ways of working.
- Empower patients and integrate wearables and data into EHR.