

Appendix 2: Outputs from our Digital Strategy Development Workshops



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Digital Foundations

Our Digital Foundations Strategy forms part of the overall Digital Strategy. Digital Foundations focusses upon the necessary technical elements required to ensure safe, secure and continued clinical and operational service delivery:

- End user computing
- IT service continuity and recovery
- Networking and Communications
- Security
- Governance & Risk Management

This document sets out our current position and identifies priorities and areas for improvement over the next 5 years.

SWOT – Digital Foundations (February 2021)

STRENGTHS

- Highly skilled, knowledgeable, enthusiastic and responsive workforce
- Digitally mature organisation
- Significant investment in infrastructure over the past 5-6 years
- Reliability of systems
- Good platform to deliver change:
 - Resilient and high performance Server, Storage and Network
 - IT telephony solutions
 - WIFI and VPN
- Robust digital foundations enabled rapid change in response to COVID-19:
 - Remote working and home working
 - Telephone appointments, virtual clinics and attend anywhere
 - Microsoft teams
 - Paperlite, integrated workflows and clinical care system
- GDE deliverables – more advancements and achievements than regional peers
- Good cyber security technology
- 1/3-1/2 systems cloud based: ESR, Microsoft teams, CERNER, NHSMail

OPPORTUNITIES

- Organisation and clinical services to drive, guide and tailor IT functions
- Develop a process for aligning IT projects to organisational objectives
- Integrated care system – system wide working
- Achieve a paperless organisation
- Increased staff awareness of infrastructure functionality
- Investment in automation – switchboard, IT helpdesk, password reset (invest to save)
- Self service- Intranet content to digitally enable staff to solve basic issues and e-learning platform for education while maintaining clinical safety
- Develop a rolling replacement programme for infrastructure

WEAKNESSES

- Workforce can be too responsive – need to consider the wider impact
- Resources and time to roll out new initiatives and educate users
- Operationally digitally immature
- Usage of infrastructure by front end users – failing to utilising all system functionality as staff tend to use what they know
- Lack of business intelligence to quantify and monitor infrastructure usage to inform allocation
- Lack of business intelligence to monitor IT workforce outputs to inform resource allocation and inability to quantify efficiencies leading to a lack of recognition
- Digital imaging
- Lack of collaborative approach - IT deliver a service they think the organisation needs without a sense of direction or feedback
- High volumes of IT helpdesk queries for basic issues
- IT Helpdesk open office hours
- Duplication of effort for on-calls
- Number of clinical systems exist within the organisation that IT do not support
- Business continuity plans

THREATS

- Cyber security needs to be a higher priority on the organisational agenda with increased funding
- Project management – lack of sight to support early enough in the process, leading to IT resources being pulled from other projects or unable to support, leading to potential missed opportunities and unknown impact upon future innovations
- Environment – location of APH data centre poses risk of damages through leaks from surrounding wards and clinical areas
- Partnerships – input into Community Trust preventative measures is a threat to our resource capacity
- Integration – information governance
- Perception of IT functions impacting resourcing

End User Computing

Getting the Basic Right

Infrastructure

- Equip our workforce with devices that are fit for purpose and for the task in hand
- Business intelligence to monitor the quantity of devices across the organisation
- Develop a capital rolling replacement programme

Workforce Requirements

- Understand and map out end user role device requirements to achieve standardisation

Better

Infrastructure

- Absence of failing devices and short notice replacements through preparedness
- Business intelligence knowledge of device usage
- Use of BYOD for defined purposes

Workforce Requirements

- Guidance for role specific device packages
- Device package costing to be included in workforce business cases
- Process for recruitment to trigger the ordering of devices to ensure our new starters are equipped upon arrival

Culture

- Embed a culture that promotes and recognises the importance of our workforce being digitally equipped to undertake their roles in delivering patient care

Best

Infrastructure

- Provide all staff with role specific high-quality equipment to enhance their service delivery

Workforce Requirements

- Slick embedded process for proactive new starter device allocation and systems access

Culture

- Part of everyday culture

IT Service Continuity and Recovery

Getting the Basic Right

Processes

- Systems back up and plan to recover
- Document previous system fixes (interface infrastructure and analyst)

Environment

- Review data centre physical locations as part of the wider organisational estate master plan

Better

Processes

- Detailed business continuity and disaster plans
- Agreed parameters for the prioritisation of systems recovery, what constitutes an urgent fix and recovery that can wait until in hours

Environment

- System wide approach to free up prime locations
- Review system wide governance

Best

Processes

- Regular documented systems testing and audit
- Embedded record of system fixes with clear detailed instructions
- Fault tolerance embedded at all layers of system design and implementation. Ability to upgrade, patch and manage within agreed downtime windows.

Environment

- Data centres in the most appropriate, safe locations and are fit for purpose
- Robust governance

Networking & Communications

Getting the Basic Right

Capability

- WIFI across all aspects of the organisation
- Established telephone services
- Embed digitally enabled MDTs

Digital Patient

- Accessible digital healthcare advice and services

Communication

- Effective communication of technology initiatives

Rewards and Recognition

- Celebrate and communicate positive achievements

Better

Capability

- Implementation of 5G, usage of mobile data and roaming data
- Capability to provide healthcare services anywhere
- Improved network security

Digital Patient

- Reduced digital exclusion through availability of and accessibility enabled devices

Communication

- Staff and patient awareness of infrastructure functionalities to best use our digital technology

Rewards and Recognition

- Embedded communication and recognition strategy

Best

Capability

- Fully enhanced remote working, enabling the recruitment of skilled staff from fare and wide.
- Policy based adaptive network using Software defined network, enabling flexible deployment and movement of devices with minimal lead time and effort.

Digital Patient

- Fully integrated digital healthcare provision across the Wirral for all

Rewards and Recognition

- Recruitment and retention impact

Security

Getting the Basic Right

Systems and Processes

- Zero usage of generic accounts
- Embed regular secure area audits
- Business intelligence oversight of staff information access permission
- Technical controls for all common threats (Firewalls, AV, Permissions management, Secure config)

Training and Development

- Mandatory training compliance
- Embedded reporting of security risks and processes for learning from incidents
- Communicate security breaches to increase awareness

Better

Systems and Processes

- Improved capability to deal with security
- Develop security monitoring tools and risk prevention
- Threat management automation

Training and Development

- Develop the role of the information champion within each clinical Division

Best

Systems and Processes

- High levels of security
- Evolving solutions as threats evolve
- Security by design embedded in system development
- Use of AI and advanced tools to perform behaviour analysis and assurance testing of system security posture.

Training and Development

- High level security awareness as part of everyday culture

Governance & Risk Management

Getting the Basic Right

Controls

- Develop a guide for access control, describing who has access to our systems and what level of access, based upon their role
- Business intelligence oversight of who has access to our systems
- Mechanism of capture for terminating access

Monitoring and Assurance

- Development of a business intelligence dashboard with detailed KPIs to monitor I.T. workforce outputs

Better

Controls

- Business intelligence of how our systems are being used

Monitoring and Assurance

- Adoption of monitoring and assurance reports for all aspects of IT service delivery
- Capacity modeling and planning current and future state requirements (Network, Storage, Compute, End user devices etc)

Best

Controls

- Embedded controls over access to our systems

Monitoring and Assurance

- Embedded governance framework for progressing digital strategy with set milestones of delivery and monitoring function
- IT as a Strategic Business Partner



Digital Innovations

Our Digital Innovations Strategy forms part of the overall Digital Strategy. We recognise that our Digital Innovations Strategy needs to provide the future direction for our digital transformation projects but also allow us flexibility to take advantage of new opportunities. Therefore, we have developed key principles to guide our digital transformation over the next 5 years.

Our principles will be the foundations to delivering our digital innovations intention; to use digital innovation to streamline processes, increase efficiency & improve quality across clinical & supporting functions within WUTH and as part of the wider health economy:

- Getting Back to Basics
- Efficient Solutions
- Empower Our Patients
- System Wide Working

SWOT – Digital Innovations (May 2021)

STRENGTHS

- CERNER capability and flexibility
- CERNER has a good reputation among the junior doctor staff group
- Responsive IT team – significant digital innovations, particularly during the pandemic
- Engagement from Business Intelligence (BI) team
- BI portal for aiding quick decisions
- COVID-19 regional reporting providing picture of emerging trends
- Population Health software – used to risk stratify surgical patient waiting list, mainly utilised by primary care but functionality provides an opportunity for WUTH
- Patient portal being used by several specialties and patient questionnaire functionality now also launched
- Camera technology in theatre 1 – teaching and communication benefits
- Paper-lite – majority of patient medical records on CERNER
- Video consultation – providing patient convenience

OPPORTUNITIES

- Take stock of innovations and whether they can be rolled out across the organisation
- Robust process for requesting and triaging technology innovation projects with clear mechanism for communicating feedback to the requester and information sharing across the Divisions
- WUTH becomes a paperless organisation – patient has one electronic record
- Standard workflows and industry best practice is adopted rather than WUTH continuing to build bespoke solutions – redirect resources to gain maximum benefits
- Introduction of cameras in theatres for education and advice from surgeons who are based off site
- Set realistic expectations of what IT are going to focus resources on and communicate back to requesters the outcome of request assessment
- Participate within the regional agenda to improve the linkage between systems, to benefit patient care
- Sign patients up to using the patient portal to improve technology awareness and uptake - every time we have a patient contact
- Digital dictation and electronic consent will provide a number of efficiencies and increase patients safety
- Regional single front door for patients to access technology applications

WEAKNESSES

- Too many WUTH bespoke workflows built in CERNER WUTH, rather than adopting national standard, best practice and research based workflows
- Pace of change for adaptations to CERNER due to volume of small requests – need to focus attention upon key priorities that will produce maximum benefits across the organisation
- Historical issues within CERNER – can't make changes (clinic templates)
- Service teams approaching IT too late in the process and then IT are unable to support projects
- Compatibility with system wide systems
- Communication and education – pockets of innovations not fully utilised or rolled out across the organisation
- Silos working within Divisions
- Digital imaging – lack of progress leading to frustrations
- Reluctance by some specialties in using patient portal as patients will have access to medical records and may not understand the terminology in reports – time lag introduced to ensure clinicians can review results first

THREATS

- Allow perfect to get in the way of good - impacting the ability to fully implement and adopt technology
- The amount of existing bespoke CERNER workflows may impact our ability to keep up with the national agenda
- Split patient record – electronic and paper, risk to accessing information when needed
- Backlog of IT work requests
- Internal expectations

Digital Innovations Principles and Priorities

1. Getting Back to Basics

- CERNER first approach
- Standardisation of systems, practise and information to provide safe, quality care for our patients
- We will use business intelligence innovations to drive decision making
- We will become paperless
- Our innovations will support research outputs
- We will invest our IT resources into digital transformation projects that will provide mass benefits and focus upon decreasing inequalities and deprivation

2. Efficient Solutions

- We will streamline our processes in line with blue print industry standards and adopt best practice
- We will provide simple and easy to use work flows
- We will use artificial intelligence to reduce waste, automate processes and eliminate bottlenecks
- New models of care will be developed using digital innovations to provide ease of access to healthcare when our patients need it
- How we interact with our patients will provide patient convenience

3. Empower Our Patients

- Provide our patients with access to patient centred digitised healthcare advice and services
- Support our patients to manage their own healthcare
- Work in collaboration with our regional and local partners to equip our patients with digital education and access to hardware

4. System Wide Working

- Strategic alignment with the region for future digital innovations to prevent silos working
- We will work with our partners to develop integrated care system analytical capabilities, improve access to information and appropriate information sharing
- We will use health information to enable population health management



Digital Education

Our Digital Education Strategy forms part of the overall Digital Strategy. Digital Education focusses upon supporting our workforce to have the required digital skills and knowledge to provide high quality and safe care, within our digitally enabled organisation. Digital Education also encompasses how we provide information to our patients to enable them to access digital healthcare services across the Wirral system. Digital Education is broken down into 3 elements:

- Digital Workforce
- Digital Patient
- Implementation of New Digital Technologies

This document sets out our current position and identifies priorities and areas for improvement over the next 5 years.

SWOT – Digital Education (March 2021)

STRENGTHS

- Extensive documentation detailing functions within CERNER is available for staff
- Useful user guides and crib sheets are available on our intranet
- We are ahead of other Trusts in terms of using an electronic medical record
- Amount of information that can be pulled from CERNER to learn from incidents
- Experienced training team who were responsive during the COVID-19 pandemic and adapted how training is delivered
- Trust induction for new starters is now online (CPR only element face to face)
- Mandatory training transferred onto ESR
- Areas of collaboration – Allied Health Professionals and Critical Care deliver clinically based training programmes which has: prevented delays in new starters gaining access to CERNER, enabled staff to carry out their duties from the start of their employment and increased the quality of clinical notes
- Clear interest, engagement and drive to make improvements in digital education

WEAKNESSES

- Managers do not have oversight of their staff IT training level of competence at the point of completion and have no way of monitoring when further training is required
- Staff don't know where to find user guides and crib sheets
- User guides and crib sheets on intranet need to be reviewed and organised into a better structure
- Crib sheets reportedly complex and confusing – need to be simplified
- Access to ESR training; search catalogue and enrolling onto a course
- Delays in training completion when staff have been locked out of ESR – quick fixes for common issues required to digitally empower our staff
- Delayed password access for new starters
- Lack of refresher training - once trained, staff are not trained again no matter how long they have been in post. Refresher training should be offered on a timed basis
- Unknown baseline of our workforce digital competence, making it difficult to support staff to build upon gaps in their knowledge
- Digital competence not considered during recruitment even though we are a digitally enabled organisation and our workforce require digital skills to complete their duties
- Require the relevant resources to be able to meet the Trusts training demands
- We often make changes that are specific to one area when a more global approach would potentially streamline training and build, for example standard naming conventions and iView DTAs etc

SWOT – Digital Education (March 2021)

OPPORTUNITIES

- To remove the barriers and silos that stand in the way of a streamlined training processes that allows users to access alternative learning methods
- Set digital standards and expectations for our new starters
- New starter process – induction completed on-line in advance, on the first day staff have access to all required systems and required tools such as smart card
- The way we deliver training – available when staff want to complete training, online pre-recorded IT training with option for small group or 1:1 training
- Explore alternative training platforms to ESR
- Develop an IT training programme with training profiles, incorporating a proactive approach to refresher training and alerts sent to managers when training is due for completion, to create role specific expected level of competence
- Training booked and recorded on same system as not to duplicate workload. (currently booked via online booking system and details recorded on ESR)
- Incorporate IT training within mandatory/clinical training reports to enable managers to monitor compliance and competency completion, with reviews incorporated in appraisals
- To incorporate follow up training at regular intervals
- To recognise where users may be struggling using the system(s) and intervene at an early stage to correct/advise
- To facilitate rollout of new functionality – users can learn online and this can be monitored to ensure compliance
- Bespoke Nurse training delivered by Nurse Educators/IT Champions
- Streamlining of standard operating procedures, pocket size guides
- Staff training and communication app
- Close the loop on clinical incidents – provide opportunities for retraining
- We are recognised as a top healthcare organisation using innovation and technology. We should aim for our training to be equal to this.

THREATS

- Lack of resource to undertake this project – this is a major piece of work that will benefit the whole Trust and our healthcare partners, this project should be resourced and prioritised accordingly
- Lack of dedicated time for staff to undertake digital training away from their duties
- Culture of staff not wanting to admit they require additional digital support/training, resulting in lack of clinical engagement when digital innovations are launched
- Culture of staff undergoing formal training and then when integrating within their team, copying “short cuts” and “work arounds” from colleagues, leading to data quality risks
- Potential to lose quality of training currently delivered face to face when moving to online learning, watching a video with no interaction

Digital Workforce

Getting the Basic Right

Digital Workforce Intelligence

- Evidenced baseline of our workforce digital abilities
- Profile of role specific technical requirements

Digital Training Programme

- Online overview of millennium to be included in induction programme
- User friendly training platform interface that is accessible at any time and delivered remotely
- The development of a standardised role specific competency and refresher IT training framework
- Joint approach to training (IT and department)
- Online assessments to be undertaken
- Process for managers to monitor IT training competencies and refresher training
- Simplified and accessible training supplements

Training Governance

- Governance process for the new development and delivery of IT training, including approvals process

Better

Digital Workforce Intelligence

- Digital capabilities assessed through our recruitment processes to ensure we recruit people with the required skills to undertake the job role

Digital Training Programme

- Efficient process for new starters
- User groups for specific areas (IT and department)
- Ward/department level specific training delivered by the most appropriate person
- Ongoing assessment of digital skills and abilities to determine training needs, with details of further training requirements sent to managers to enable us to support our workforce
- IT competency compliance monitoring integrated within existing training reports
- Embedded IT training monitoring through individual appraisals to enable us to develop a digital workforce

Best

Digital Workforce Intelligence

- Full integration of our digital workforce standards and expectations

Digital Training Programme

- Online training provided before new starters commence in post, to bring knowledge and skills up to the required level to undertake the job role
- Embedded tailored and relevant modular training that is fully accessible at any time
- Culture of continuous learning to provide high quality and safe care within our digitally enabled organisation

Digital Patient

Getting the Basic Right

Education

- Communication and marketing of our digital healthcare services to demonstrate benefits to staff and patients
- Staff awareness of digital healthcare services within WUTH
- Organisational approach to educating patients
- Engage with our community partners/volunteers to establish "train the trainers" and advocates for patients who may struggle with technology

Better

Education

- Digitally enable nursing/residential homes to support virtual attendance during patient consultations, when appropriate and with patient consent

Communication

- Staff are able to advise patients how to access information and support relating to digital healthcare services
- Staff awareness of digital healthcare services across the Wirral system

Best

Education

- Provide the public with access to online digital resources and workshops

Working with our Partners

- Aggregated digital healthcare information for the Wirral system
- WUTH working with our partners to support patients in accessing digital healthcare services to reduce digital inequalities and improve digital inclusion

Implementation of New Digital Technologies

Getting the Basic Right

Existing Technology

- Full capture of systems we have within the organisation to enable the assessment of new requests and avoid duplication and variation
- Streamline systems within the organisation

Process

- Clinical approach with Divisions directing technology requirements and IT advising available solutions/options
- All new technology hardware procurement to be signed off by Informatics to ensure compatibility, future-proofing and resource availability for associated works
- Suitable software and hardware to be purchased to achieve best e-learning experience

Governance

- Standardised documented process to follow when introducing new digital technologies within the organisation to ensure: engagement, education, clearly defined objectives and benefits to subsequently ensure acceptance, adoption and value

Better

Process

- Divisional annual operational plans to include IT priorities to enable a structured approach to the implementation of new digital technologies

Governance

- Process of reviewing and refining implemented technology

Best

Process

- Digital technology operational forward plan for the next five years aligned our Trust strategic objectives, to direct IT resources and projects
- Structured, planned and communicated releases for new technology

Culture, Values and Behaviours

- Culture that supports the implementation of new digital technologies and realises the benefits



Digital Intelligence

Our Digital Intelligence Strategy forms part of the overall Digital Strategy. Our Digital Intelligence Strategy is broken down into the following elements and focusses upon embedding Business Intelligence (BI) to drive clinical decision making at WUTH and across the wider health economy through collaboration with our healthcare partners:

- Operational and Performance
- Benchmarking
- Predictive Analytics

This document sets out our current position and identifies priorities and areas for improvement over the next 5 years.

SWOT – Digital Intelligence (April 2021)

STRENGTHS

- Highly skilled, experienced, responsive and adaptable team
- Team are knowledgeable about their area of expertise and also our clinical services, leading to good rapport and dialogue with information requesters
- CERNER records an extensive amount of information - good starting point for digital intelligence
- Existing self service BI portal and dashboards
- BI team will continue to work with users following launch of reports to review and refine

OPPORTUNITIES

- Automation - non-clinical functions becoming paperless, for example workforce
- One self service platform for all BI reports which is compatible with technology, to enable ease of access and knowledge of reports available
- Create the ability and empower our staff to manipulate, examine and analyse the data
- Review existing report usage with under utilised reports removed to ensure reports remain current
- Create a governance process for data requests, to streamline and prioritise requests and ascertain what the end user action is to come out of the request
- Develop a process to review current data quality reports, see what is being used and for what purpose to support data quality and reduce validation requirements
- Embed the BI team within Divisions - the team need to be included at the beginning of any change request
- Create rules within CERNER to prevent incorrect data entry and data quality issues
- Dashboard measuring KPIs for data quality by Division and opportunity to link Divisional performance reviews KPIs, Clinical Service Strategy to IT/BI priorities
- Close the data quality loop by providing education to those who are incorrectly entering data into CERNER
- Opportunity to broaden data warehouse – increase access to data outside of our organisation
- Cerner's decision to "sunset" PIEDW has facilitated review of DW needs/requirements

WEAKNESSES

- CERNER does not control the quality of data going into the system at source
- There are multiple pathways in CERNER to complete the same task and too many ways to input data into CERNER which contributes to data quality issues
- Data quality issues are leading to the requirement of repeated validation of data leading to feelings of frustration – education and feedback for those inputting the data is required to close the loop and improve data quality
- There are a variety of ways to access different data reports including email and the BI portal, leading to a lack of knowledge of what is available and repeat requests for the same data reports
- No triage or co-ordination of data requests – inefficiencies
- There is lots of information in the organisation but it is spread far and wide, does not communicate or reconcile – difficult to collate
- There are also different sources for the same data sets of information that do not correlate
- Users are unable to manipulate and analyse data reports leading to high number of data requests
- End users are unable to pull data directly from CERNER – requests for digital intelligence data need to go through the BI team
- BI and IT function as separate entities
- Currently working across three data warehouses – PIEDW, SQLPI & InfoWH
- Data warehouse only provides access to data within our organisation

THREATS

- CERNER capability regionally – Integrated Care Systems (ICS)
- BI team time and resources
- Data quality – can only pull out of CERNER what is entered
- Resources/skills/training required to move to one DW solution – InfoWH

Operational and Performance

Getting the Basic Right

Data Quality

- Our data is accurate and reliable
- We have standardised processes for data entry and CERNER prevents data being entered incorrectly
- Data entry errors are reviewed and education is provided to end users
- We will develop Divisional dashboards measuring KPIs for data quality

Data Access

- We have a suite of automated self service data reports available through one platform
- Data is easy to retrieve from CERNER and is meaningful
- We have a robust governance process in place for requesting new data reports

Better

Data Quality

- Data to review own clinical performance and patient outcomes is proactively reviewed to identify and learn from coding errors

Data Access

- Our staff are aware of the data reports available and how to use them through BI communications
- Automated data reports are also available for non-clinical functions, including finance and HR
- End users have the ability to manipulate and analyse data through basic parameter drop down options and filters

Best

Data Access

- End users have the ability to add in their own components to reports to enable self service bespoke analysis of data reports

Digital Workforce

- Embedded data literacy – end users have the skills and knowledge to understand, manipulate and analyse data
- Embedded culture of digital intelligence data driving clinical decision making and operational and strategic planning
- BI team are utilised for sophisticated Trust Board reports

Benchmarking

Getting the Basic Right

Communication & Education

- Our staff are aware of the benchmarking tools and systems available, how to use benchmarking systems and have the ability to interpret data

Data Access

- We are able to drill down into the granular level of detail to understand the components that make up high level peer reviews and establish opportunities for efficiencies

Better

Data Access

- Raw data from benchmarking tools and systems feed into our Trust data reports platform for ease of access
- We recognise the value of Get it Right First Time (GIRFT) reviews providing a clinically closer relationship with our patients than traditional benchmarking data reports
- We use GIRFT reviews to promote shared learning and good practise across the wider health economy

Best

Data Access

- Embedded proactive culture for reviewing how we are performing against our peers to highlight areas for improvement
- We use our benchmarking data to collaborate with our healthcare partners across the wider health economy

Predictive Analytics

Getting the Basic Right

Capability

- We use predictive analytics to support business planning, including: demand trends, workforce requirements and risk stratification

Communication & Education

- The BI team will demonstrate predictive analytics and educate our staff in regards to the opportunities this technology provides

Better

Capability

- We use population health data to guide our healthcare models to best serve our patients

Data Access

- There is a shared BI portal across the Cheshire & Merseyside healthcare system with standardised data collection to support collaborative working

Best

Capability

- We support patients to manage their own healthcare
- We will work with our healthcare partners to use predictive analytics to aid preventative healthcare and reduce healthcare inequalities

Digital Workforce

- We have a proactive culture to service improvements, healthcare modelling and service provision, informed by predictive analytics