

### Information Technology Strategy Update

<b>Trust Board</b>	<b>Item:</b> 12
<b>Date:</b> 25th September 2019	<b>Enclosure:</b> H
<b>Purpose of the Report:</b> To update the Board on progress against the I.T. Strategy	
<b>FOR:</b> Information <input checked="" type="checkbox"/> Assurance <input type="checkbox"/> Discussion and input <input type="checkbox"/> Decision/approval <input type="checkbox"/>	
<b>Sponsor (Executive Lead):</b>	Ms Jane Wilson, Medical Director
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<b>Financial/Resource Implications:</b>	
<b>Risk Implications – Link to Assurance Framework or Corporate Risk Register:</b>	
<b>Legal / Regulatory / Reputation Implications:</b>	The 'NHS Long Term Plan' (2019) provides strong support for the Trust's EPR vision.
<b>Link to Relevant CQC Domain:</b> Safe <input checked="" type="checkbox"/> Effective <input type="checkbox"/> Caring <input type="checkbox"/> Responsive <input type="checkbox"/> Well Led <input checked="" type="checkbox"/>	
<b>Link to Relevant Corporate Objective:</b>	
<b>Document Previously Considered By:</b>	IM&T Steering Committee (16/9/19) Executive Management Team (18/9/19)
<b>Recommendation &amp; Action required by the Trust Board:</b>  The Board is asked to : <ul style="list-style-type: none"> <li>▪ Note progress against the strategy.</li> <li>▪ Note the challenges</li> </ul>	

## **Information Technology (I.T.) Strategy Review of Progress**

### **Introduction**

1. This paper outlines progress against the Trust's I.T. strategy which was approved by the Board in January 2017. The NHS Long Term Plan (LTP) was published In January 2019 and aims to '*accelerate the redesign of patient care to future-proof the NHS for the decade ahead*'.
2. The Long Term plan specifically calls out the potential of 'digital' solutions to support the transformation of the NHS that patients have a right to expect. It recognises that the way care is delivered '*remains locked into the service model largely created when the NHS was founded in 1948*', and signals that '*Technology will play a central role in helping clinicians use the full range of their skills, reducing bureaucracy, stimulating research and enabling service transformation.*'

### **Kingston Hospital NHS Foundation Trust I.T. Strategy**

3. This describes the Trust's vision for IM&T:

*"IM&T will enable the delivery of excellent care by providing easy access to systems and data to staff and patients wherever and whenever it is needed to support the patient journey"*

At the heart of the Trust's five year strategy is developing our Care Records Service (CRS) and using this to develop an Electronic Patient Record (EPR). An EPR effectively means all patient data, digitally stored, accessible immediately from anywhere on site. This means, *inter alia*, Information is more likely to be legible, accurate, safe, secure, and available when required.

4. We are striving to reduce the amount of paper that is generated across the Trust and move towards being a 'paper-light' Hospital. A major component of the Trust's EPR will be the provision of an Electronic Document Management (EDM) system.
5. Underpinning the delivery of the strategy is a cyber-secure, robust I.T. infrastructure service that enables the organisation to both keep the day-to-day operations running and support future technology developments. The Trust has made significant progress towards achieving the Cyber Essentials+ certification.
6. To deliver the aim of the 'right information, in the right place, at the right time' work will be undertaken with our stakeholders in the SWL Health and Care Partnership (HCP) to enable information to be accessible in all care settings.

### **Five Pillars**

7. The Trust's IT strategy is built on 'Five Pillars';
  - i. Electronic Patient Record (EPR)  
Completing the delivery of the EPR to deliver clinical benefits
  - ii. Integration  
Extending capability across the local health economy.
  - iii. People  
An effective resource pool delivering real change
  - iv. Technology  
Harnessing technology for staff and patients
  - v. Service Delivery  
Robust, secure and cost-effective service delivery.

## Progress Report

8. Good progress has been achieved against the plan (appendix A provides fuller details, appendix B shows project timelines);

### i. EPR

e-Prescribing is in deployment in the out-patient setting with a view to take Paediatrics live in 2020. Once these remaining areas have gone live, the Trust will have completed the circle of e-Prescribing.

The business case for an EDM system was approved by the Trust Board in January 2019, following a rigorous procurement process to select a supplier. The contract phase is in the final stages and we will move to a deployment model in October. This project together with our drive to increase the recording of patient information directly into our EPR will mean that we generate less and less paper records. This will be a major contributor towards the LTP aim *“by 2024, secondary care providers in England, including acute, community and mental health care settings, will be fully digitised, including clinical and operational processes across all settings, locations and departments.”*

The implementation of the sexual health IT system completed in late 2018 and the order-communication element of the project (requesting Radiology and Pathology tests) is due to go live in September 2019.

A strategic outline case for an ophthalmology system has been produced and the future direction of development for our maternity system is being considered.

The Trust achieved HIMMS level 6 at the end of 2017 which provides assurance that we are developing our EPR in line with international standards.

### ii. Integration

The roll-out of our vital signs devices and the replacement of our ‘workstations on wheels’ and drug trolleys will continue across the next three years. The elongated deployment timescale is primarily due to IT capital constraints.

The Trust went live with the Cerner Health Information Exchange (HIE) across SWL in September 2019. This enables information to be viewed from both primary and secondary care (e.g. a GP using an EMIS system will be able to see data from the Hospital Cerner system) from within their patient’s record. This will also mean that clinicians at Kingston can view data from both St Georges and Croydon (and vice versa). This is particularly helpful for GP’s to be able to see when their patient has attended the Emergency Department and up-to-date details of drugs prescribed.

### iii. People

In previous years, recruitment of technical staff had been challenging, but we have been successful in recruiting to most of our technical posts and have used the Health Innovation Network to source graduates in cyber security and change management. We continue to offer recognised technical training opportunities for staff.

The higher end of IT skill-sets is still of particular concern. There is a widening pay and benefits gap between the NHS and commercial organisations, and recent

changes to Agenda for Change may have a negative impact on attempts to recruit and more importantly retain, good quality staff.

#### iv. Technology

The Trust installed a free Wi-Fi service for staff and patients in January 2019 with funding provided by NHS Digital.

Microsoft Windows 7 operating system runs out of extended support in January 2020 and whilst the NHS will provide support for an additional year, the trust will, subject to approval, move to a Windows 10 system running on a virtual desktop infrastructure. This technology will deliver significant benefits for staff and patients and move us to a mobile way of working, with fast access to information at the point of care.

The partners in SWL Pathology have approved the replacement of the Laboratory Information Management System (LIMS). The project is in the early stages of deployment but go-live is scheduled for August 2020, and provides an opportunity to enhance the way services are delivered.

#### v. Service Delivery

The new Data Warehouse will have a soft go-live in September. The new system will provide improved access to data and the ability to see 'real-time' information in operational areas.

A new automatic password reset tool will be implemented by the end of December 2019.

The 'Mend IT' initiative has been well received by wards and departments and will continue going forward with an aim to be more proactive in dealing with IT issues that delay the delivery of patient care.

9. NHS Digital has mandated that all NHS organisations must meet Cyber essentials+ accreditation by 2021. We have therefore adopted the National Cyber Security Council (NCSC) 4 stage model that encompasses board level training, assessment, remediation and readiness. Through NHSD we have engaged with external resources to ensure that we will meet the standard, have the appropriate policies in place that are backed by robust, repeatable processes and a skilled workforce able to meet cyber-based threats.
10. There is an approved cyber security strategy in place and we invite an external supplier to audit us annually to ensure we are both progressing against our plan and to address any technical deficiencies.
11. We continue to meet our objective to patch the Trust's PC, laptops and servers each month but this is causing an increase in service incidents as the patching cycles are more frequent and the main suppliers, most notably Microsoft, turn their focus on to newer technologies. In addition, it has meant a ramp-up of resources required to deliver the work. Better technical solutions for intelligent monitoring and to automate repetitive tasks need to be considered. Supplier conformance is improving but remains a challenge.

#### **SWL Health and Care Partnership**

12. Kingston Hospital's Director of IM&T provides CIO level support to the SWL HCP. This has helped to shape the technology strategy and drive collaboration in the system. SWL has been successful in securing significant funding for sharing records and has two exemplar projects to support the 'One London' Local Health and Care Record Exemplar (LHCRE), which aims to connect information, engage the citizen and works towards a 'population health' system.

13. The SWL HCP recently delivered phase 1 of the HIE and plans are being developed to connect the remaining healthcare providers in SWL (including social care).
14. The Director of IM&T also has a place on the London Digital Transformation Programme Board which identifies London-wide initiatives that are best delivered at scale rather than on an individual STP basis.

### **Challenges**

15. The Trust's annual business plan requires I.T. technical resources from within the Department and this creates a tension between project delivery and 'business as usual' (BAU) activities. Combined with the cluster requirements for IT support means that we have to balance competing priorities across 3 key areas. The IM&T steering committee oversees the plan and tries to ensure that the prioritisation is effective and BAU and developments are intertwined. The upcoming corporate performance review meetings will help to ensure we understand cluster priorities and they understand ours so we can work collaboratively to deliver the organisational needs.
16. Ongoing threats such as cyber security which will require new knowledge and skills to manage have stretched resources further. The I.T. infrastructure is growing and technology is developing at a rapid rate, and over the coming years difficult decisions will need to be taken to balance business as usual and development.
17. Capital funding remains at a good level for 19/20 (circa £5m) but around 50% of the budget is required to replace aging equipment or upgrade software just to remain compliant. The deployment of IT equipment (e.g. WoWs and drug trolleys) is phased over a number of years to meet financial requirements, at a time when the user need is now. Future year's capital will be at a lower level and will require difficult choices on which schemes to fund. At a recent IM&T Steering Committee meeting it was felt that the Department had reached a 'tipping point' in terms of demand, resources and the finance required to meet the needs of the Organisation. The Trust's transformation projects (out-patients, theatres and flow) will require new technology which will challenge current knowledge and skills and require a different way of thinking.
18. 'Shadow IT' continues to be a challenge to ensure that all IT systems have appropriate processes in place to meet the requirements of the Data Security and Protection Toolkit (formerly IG Toolkit). The Trust had to submit an improvement plan as part of our 18/19 assurance return. The improvement plan has been delivered but requires ongoing monitoring and assessment of all IT systems in the organisation.
19. The IT Department have a good track record of service delivery and programme and project management, but continuous quality improvement needs to be part of 'what we do' and that will require agility and a cultural shift to 'what we are'.
20. Finally, healthcare systems need to embrace the 'Population Health' approach to manage cohorts of patients and adopt a preventive, intervention based approach to health and social care. Social factors influence a person's health and wellbeing and all systems need to support patients in that continuum. Separation at a service level of housing, education, health and wellbeing is no longer acceptable. Early intervention may lead to less and more costly intervention later, and be associated with better patient outcomes and will only be achieved by a technologically supported integrated system.

### **Recommendations**

21. The Board is asked to:
  - Note progress against the strategy
  - Note the challenges

Appendix A – Progress against our pillars

<p><b>Goal: EPR</b> Complete delivery of EPR to deliver clinical benefit</p>	<p><b>Goal: Integration</b> Extend capability across the local Health Economy</p>	<p><b>Goal: People</b> Effective IT resource pool delivering real change</p>	<p><b>Goal: Technology</b> Harness technology for staff and patients</p>	<p><b>Goal: Service Delivery</b> Robust, secure and cost-effective service delivery</p>
<p><b>Objectives:</b></p> <ol style="list-style-type: none"> <li><b>1. Complete Electronic Prescribing</b> Outpatients in progress, Paediatrics plan in development for delivery in 2020</li> <li><b>2. Clinical documentation</b> Development of power forms</li> <li><b>3. Electronic Document Management (EDM)</b> Business case approved, contract negotiations in final stage</li> <li><b>4. Continuous programme of Millennium optimisation</b> ED, Pharmacy, discharge summaries</li> <li><b>5. Champion User Programme</b> Under development</li> </ol>	<p><b>Objectives:</b></p> <ol style="list-style-type: none"> <li><b>1. Share data across Acute Corner sites</b> Phase 1 live in September 2019</li> <li><b>2. Acute access to GP records for continuity of care</b> Phase 1 live in September 2019</li> <li><b>3. Align to and implement pan-London integration (HLP)</b> Now known as the 'One London' Programme</li> <li><b>4. Support the delivery of patient access to health records</b> Business case for 'Zesty' developed.</li> <li><b>5. Enable population health capability</b> HCP objective, described in response to Long Term Plan</li> </ol>	<p><b>Objectives:</b></p> <ol style="list-style-type: none"> <li><b>1. Attract, Develop and maximise retention, through inclusive, effective leadership</b> Full Establishment including graduate placements via the HIN</li> <li><b>2. Increase Organisational awareness to deliver a focused service</b> 'MendIT' initiative and support for silver command. Performance review meetings to begin in October</li> <li><b>3. Support Organisational development through targeted training programmes.</b> Technical training programmes established</li> </ol>	<p><b>Objectives:</b></p> <ol style="list-style-type: none"> <li><b>1. Technology for virtual and remote working</b> Flexible working for staff project established, Windows 10/VDI will provide greater opportunities</li> <li><b>2. Wi-Fi for staff and patients</b> Live in January 2019. Project established to look at the future of 'patient entertainment'</li> <li><b>3. Progress against "Universal Capabilities"</b> Replaced by Digital maturity at STP level.</li> <li><b>4. Innovative Technology to support developments and efficiencies</b> Outpatients transformation in early stages</li> </ol>	<p><b>Objectives:</b></p> <ol style="list-style-type: none"> <li><b>1. Cyber Secure</b> Cyber Security Strategy, Security Patching Strategy, External Audit, Alignment to NCSC model</li> <li><b>2. Upgrade the core network</b> Switch replacement project in progress</li> <li><b>3. Excellent user experience</b> Service Desk feedback has been excellent.</li> <li><b>4. Pro-active Legacy retirement</b> Assets identified, plan in place.</li> <li><b>5. Collaboration opportunities for services</b> Exploring back office services and supplier contracts</li> </ol>

Appendix B – project timelines  
(quarters are calendar based, not financial)

	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022
e-Prescribing out-patients	<i>Deploy</i>		<i>Live</i>								
e-Prescribing paediatrics (+clinical docs)	<i>Planning</i>		<i>Deploy</i>		<i>Live</i>						
VDI/Windows 10	<i>Planning</i>	<i>Deploy</i>		<i>Live</i>							
EDM	<i>Early Live Deploy</i>			<i>Live</i>	<i>Full Deploy</i>	<i>Live</i>					
HIE phase 2	<i>Planning</i>		<i>Deploy</i>				<i>Live</i>				
PACS hardware refresh		<i>Planning</i>	<i>Deploy</i>	<i>Live</i>							
SWLP LIMS	<i>Planning</i>	<i>Deploy</i>			<i>Live</i>						
Ophthalmology	<i>Planning</i>										
Maternity	<i>Planning</i>										
DSPT	<i>Assure</i>		<i>Live</i>	<i>Planning</i>	<i>Assure</i>		<i>Live</i>	<i>Planning</i>	<i>Assure</i>		<i>Live</i>
Site re-development (including mobility)	<i>Planning</i>	<i>Deploy</i>									
Clinical Systems Programme		<i>Planning</i>									
Cyber Essentials+	<i>Assure</i>				<i>Live</i>						
Microsoft Server 2016 u/g	<i>Deploy</i>	<i>Live</i>									
Network Upgrades	<i>Planning</i>	<i>Deploy</i>	<i>Live</i>	<i>Planning</i>	<i>Deploy</i>	<i>Live</i>					
Microsoft Office 365			<i>Planning</i>		<i>Deploy</i>	<i>Deploy</i>	<i>Live</i>				
Wireless Network Upgrade			<i>Planning</i>	<i>Deploy</i>		<i>Live</i>					
Windows 10 upgrade						<i>Planning</i>	<i>Deploy</i>	<i>Live</i>			