Digital Strategy

East London NHS Foundation Trust

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Digital Strategy

Change history

Version	Date	Author	Issued To	Revisions
Draft 0.12	03/07/2021	MR/Digital	Execs/Digital	To senior stakeholders for review
0.14/0.16	09/07/2021	MR/Digital	FBIC	Updates following senior review
0.17	15/07/2021	MR	Dig Strat Bd	Finance table corrected
1.00	23/07/2021	MR	General	Final – version no. updated

1 Executive Summary

Introduction

This document sets out the Trust's Digital Strategy - the drivers, challenges and way forward to develop digital services which meet the organisation's needs over the next three to four years.

The ELFT Board has expressed an ambition to be 'Digital First'. The Digital Strategy is a collaboration between the Trust Senior Management Team, the Digital Team, and a wide range of stakeholders from across the Trust.

Digital Challenges

There are certainly strengths to build on, for example, the recent electronic prescribing programme shows the ability to make large scale digitally enabled changes when the right governance and resources are in place. The scale of response to the Covid19 pressures, particularly enabling remote and mobile working, and setting up the Stratford vaccination centre has been remarkable.

However, there are also significant challenges to address. Digital tools and services have become pervasive in everyday life and are now fundamental to the management and delivery of the Trust's services.

There are increasing needs for seamless information flows to support partnerships and integrated services, also patent and carer expectations that have choice in how they engage with services and contribute to their own care record.

Clinical systems are in place and are becoming the 'electronic patient record', but information is largely siloed within service-based systems; clinicians have to 'find' information outside their main system. Navigation within systems is difficult. Better use needs to made of the core systems, establishing and disseminating best practice use.

Most of the Trust's servers have been moved to cloud services but there are issues with aspects of the IT infrastructure, especially regarding network and Wi-Fi reliability which need to be addressed.

The digital teams are very stretched, although support from Digital Aspirant funding is helping during 2021/22. The lack of a dedicated cyber security team is a significant risk area and is being addressed.

Developing capacity and capability

Much of the focus of the digital strategy is about building the digital capacity and capability needed to meet the Trust's ambitions. The main areas are:

- Optimising digital experience and value
- Developing integration capability
- Growing digital team capacity and capability
- Investing in technical infrastructure

The existing digital services are not able to meet the needs of the organisation and its care partners. ELFT has fallen behind local organisations and does not have the technical capability or skills to address the increasing needs for seamless information flows to support

partnerships and integrated services. Internal challenges include the lack of a single patient centric view for clinicians, insufficient support, skills and training for effective use of the current systems, and unreliable network infrastructure. All of these impact badly on staff experience but also have patient safety implications.

Conclusion

The Trust is committed to investment in digital systems and services to underpin the strategic goals of ELFT and its care partners. It recognises the need for a significant increase in digital funding in order to support staff and patients more effectively and in order to maintain the Trust's role as an anchor institution in the developing integrated care systems.

The required increase in funding can be achieved provided a strong focus is maintained on driving out the benefits being sought. There is potential to significantly improve the experience of patents and staff, and to improve value by increased efficiency and effectiveness across the Trust's service areas.

The picture following gives a visual summary of the Digital Strategy.

Digital Strategy
Executive Summary

Internal Drivers

- Covid19 & new ways of working
- Improving the digital experience of users
- Widespread service transformation
- Greater agility in Digital response
- Financial viability and environmental

External Drivers

- Technology in everyday life
- NHS Long Term Plan
- Integrated Care Systems
- National and ICS expectations
- Growing patient/carer expectations

Digital Vision

Supporting Trust Strategic Outcomes:
- Population Health   - Digital in ICS/partnerships
- Experience of care - Patient enablement
- Staff experience   - Reliable and efficient IT
- Value   - Efficiency across services

Digital infrastructure & services that fully meet patient, Trust, & partner expectations

The Trust

A wide range of MH, community, & primary care
Approx. 130 sites - NE London and Beds & Luton.
Background of significant growth
Strong focus on People Participation and QI
Active development of primary care services
Complex relationships – many partners
About 8,500 digital 'users' & about 9,300 devices

Challenges and Gaps

- Resolve network issues
- Siloed patient information
- Need 'integration' capability
- Optimise use of core systems
- Funding challenge
- Digital skills & capacity
- Governance & programme mgt.

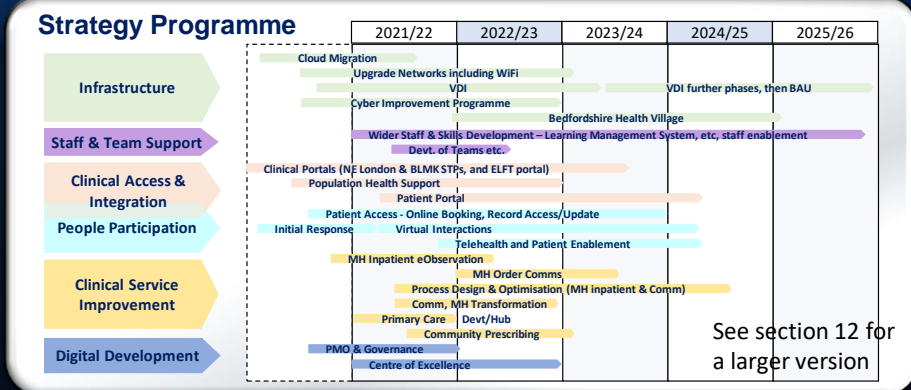### Capacity & Capabilities Needed

- Transformation capability
- Staff Digital Enablement
- Service user & carer enablement
- Robust governance & benefits focus
- Internal/external integration capability
- Digital team scope & skills
- Technical infrastructure investment
- Continue BI & Analytics modernisation

Digital Baseline

- Core systems in place
- But reflect information capture
- Information siloed within systems
- Poor user experience
- Huge number of users/devices
- Digital teams stretched,
- No cyber security team
- Governance not mature

Strengths to build on:
- New focus on Digital First
- Digital Teams valued
- Exec. Director leadership
- Ability to exploit digital

Strategy Programme

	2021/22	2022/23	2023/24	2024/25	2025/26
Infrastructure	Cloud Migration				
	Upgrade Networks including WiFi				
		VDI		VDI further phases, then BAU	
	Cyber Improvement Programme				
			Bedfordshire Health Village		
Staff & Team Support		Wider Staff & Skills Development – Learning Management System, etc, staff enablement			
		Devt. of Teams etc.			
Clinical Access & Integration	Clinical Portals (NE London & BLMK STPs, and ELFT portal)				
	Population Health Support				
		Patient Portal			
People Participation	Patient Access - Online Booking, Record Access/Update				
	Initial Response	Virtual Interactions			
			Telehealth and Patient Enablement		
Clinical Service Improvement	MH Inpatient eObservation				
		MH Order Comms			
		Process Design & Optimisation (MH inpatient & Comm)			
		Comm, MH Transformation			
	Primary Care	Devt/Hub			
		Community Prescribing			
Digital Development	PMO & Governance				
	Centre of Excellence				

See section 12 for a larger version

2 Background & Strategic Context

Strategic Context

The goals and challenges for digital services at ELFT reflect the scope of services provided and the ongoing development of integrated planning and delivery with partner organisations.

- Digital services support a wide range of mental health, community, and primary care services operating from about 130 sites primarily across NE London and Bedfordshire and Luton. There are about 8,500 digital 'users' and about 9,300 devices (PCs, laptops, etc.).

- There is a background of significant growth, and the Trust is actively developing further primary care services.

- Integrated Care System (ICS) developments in East London and Bedfordshire/Luton set the direction for clinical services, including changing service models, partnership/collaborative working, and blended teams. All of these have significant implications for informatics and digital services.

There is a complex range of relationships at play. Internally, working with multiple services, areas and locations. Externally, ELFT is often 'one of many' and in terms of digital solutions this means that the Trust can influence but not mandate how digital plans and solutions are decided.

The Trust also has an important role in the community as an 'Anchor Institution'.

External Drivers for Digital

The digital strategy has been developed at a time when there is pervasiveness of technology across everyday life and increasingly in the NHS. The NHS Long Term Plan places a strong focus on population health, moving to Integrated Care Systems, and on digitally-enabled primary and outpatient care.

There are digital expectations and developments at the national and ICS levels. This includes national standards set out for 'digital Mental Health' and care records (combining patient information from all key agencies) – an 'East London Patient Record' and a BLMK shared care record. Wider regional care records are also developing.

Citizens and patients have increasing expectations of how they interact with health services and are involved in managing their own wellbeing. This is also a strong theme in NHS national priorities. Relevant areas are increasing choice and responsiveness, improving communication, and access to and involvement in personal health records. There is a lot of data and technology in this area to manage, for example, the NHS App, Patient Knows Best, patient portals, wearable technology, etc.

Internal Drivers for Digital

There are long-term impacts resulting from the Covid19 pandemic, affecting Trust staff, services and service users. Digital has been at the forefront in enabling new ways of staff working and supporting interactions with patients.

A strong driver is the need to improve the experience for Trust clinicians, administrative staff and management.

- This includes increasing clinical efficiency by removing frustrations and barriers in day-to-day tasks. Also developing a patient-centric view that overcomes the 'silos' of information in separate systems.

- The clinical transformation needed to respond to changes in clinical processes and changes in service models is dependent on seamless flows of information.

Greater agility and effectiveness is needed in digital services to support changes in working practices, particularly highlighted by the response to Covid19, but also to meet the needs of new or changing service areas.

Continued development of informatics support is essential to effective management of services and for wider population health analytics. This is also dependent on the quality, timeliness, and completeness of underlying data and so needs the operational information systems to be well used and well aligned with services.

The financial viability and environmental agendas are also directly relevant to digital and information services where there is potential to support operational efficiency and effective decision making, and also reduce the Trust's carbon footprint.

3 Digital Vision

Digital First

Our aspiration, to improve the quality of life of all that we serve, can be achieved by becoming a Digital First organisation. There is a very strong and direct link between the Trust's Strategic Outcomes and the changes and benefits that can be realised through a 'digital first' approach. This is summarised in the diagram below.

The recent experience of digital support during the Covid pandemic has highlighted the potential to realise strategic changes and benefits in several areas, for example, more flexible staff working, reduction in travel time and costs, reconfiguration of the built estate to utilise facilities more effectively, reducing carbon footprint, offering choice and convenience to service users, and supporting emerging integrated pathways.

Digital Impact

Digital developments can impact across our key stakeholder groups.

Service Users & Carers

- Service choice & booking management
- Easy communication with services
- Service user activation and enablement to manage self-wellbeing
- Access/contribution to self-owned care record
- Use of apps as part of care support
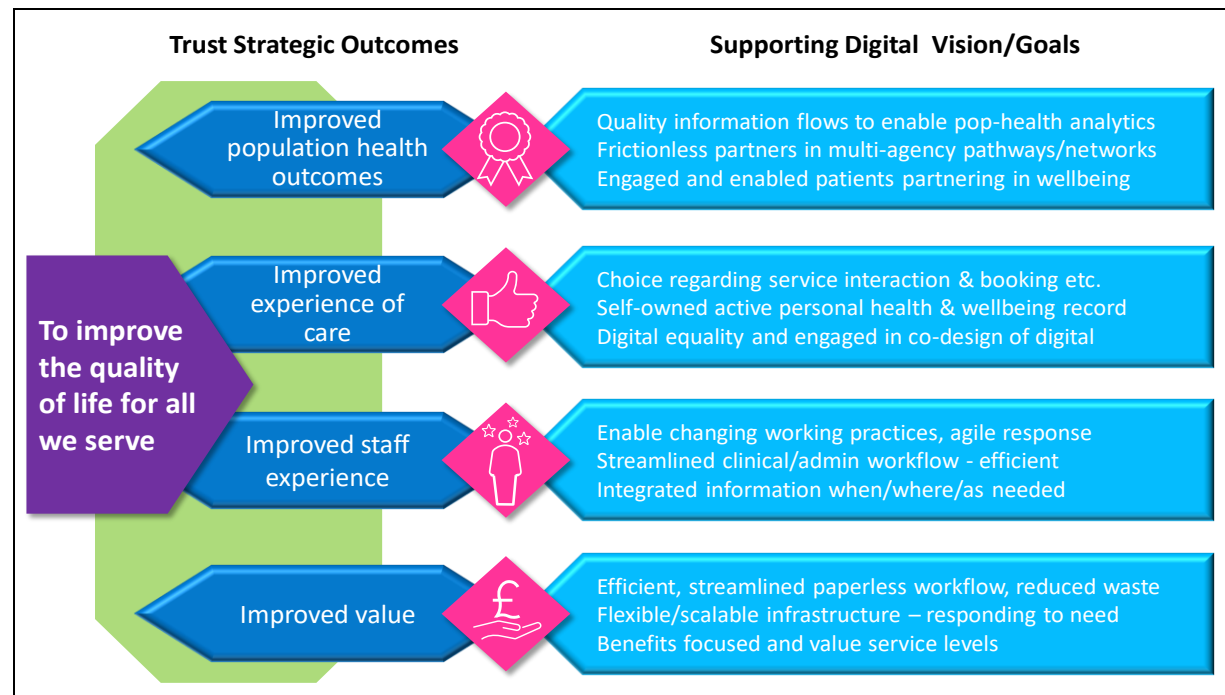- Service user co-directed and designed

Trust Staff

- Improved staff experience as a 'digital user'
- More efficient and streamlined workflows
- Reduced information friction at work
- Information capture and access to support the care/admin process
- Information when and where needed, especially a patient centric view

Partner Organisations

- Digitally enabled collaborative partnerships and integrated care services (e.g. Community Mental Health Transformation)
- Supporting integrated care pathways, including: referral, discharge, shared care plans, alerts and escalations, etc.
- Information to support collaborative planning and decisions across partners

Integrated Care Systems

- East London Health Care Partnership & Bedfordshire Care Partnership
- Information management & exchange enabling Trust and ICS level informatics including risk identification/stratification, population health informatics, etc.
- Information to support strategic service planning and evaluation
- Partake in wider care record services

Trust Strategic Outcomes	Supporting Digital Vision/Goals
Improved population health outcomes	Quality information flows to enable pop-health analytics Frictionless partners in multi-agency pathways/networks Engaged and enabled patients partnering in wellbeing
Improved experience of care	Choice regarding service interaction & booking etc. Self-owned active personal health & wellbeing record Digital equality and engaged in co-design of digital
Improved staff experience	Enable changing working practices, agile response Streamlined clinical/admin workflow - efficient Integrated information when/where/as needed
Improved value	Efficient, streamlined paperless workflow, reduced waste Flexible/scalable infrastructure – responding to need Benefits focused and value service levels

To improve the quality of life for all we serve

Digital Vision – Service Delivery

Mission Statement

The digital service mission statement is:

Underpin our ELFT strategy by continually improving staff and patient experience, and population outcomes through a Digital First collaborative approach, which encourages digital innovation and adoption through transformation to deliver financially viable and sustainable solutions.
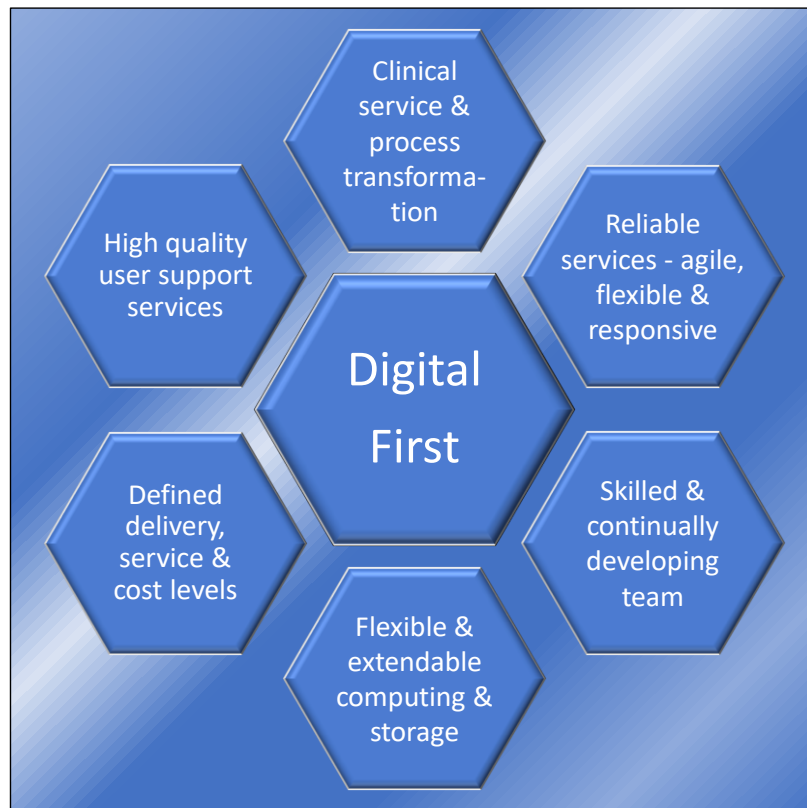
Digital goals

The department's internal goals are summarised below. These focus on developing the capability of digital services so that they are able to fully meet patient, Trust, and wider partner expectations:

- ***Clinical service & process transformation***
  Digital develop the skills, processes, and capacity to support clinical services in designing and implementing digitally enabled transformation. This includes the programme/project management, analysis, technical, commercial and communication resources needed to compliment clinical services in forming collaborative transformational change teams.

- ***High quality user support services***
  Services which match the scope and depth of support needed by our users. This includes improving the response – time to answer and time to fix, extending the support hours, and increasing easy self-service.

- ***Reliable services - agile, flexible & responsive***
  Improved underpinning infrastructure, e.g. networks and devices, which are reliable and matched to user needs, and protected from cyber threats.

- ***Flexible & extendable computing & storage***
  Continuing the migration to cloud services which offer rapid scale up/scale down of capacity and power to respond to changing Trust needs. Optimising the value and economics of data storage and access.

- ***Defined delivery, service & cost levels***
  Development of well-defined service levels coupled with performance and quality measures. Increased transparency regarding digital demands, resource usage and costs. Digital assessment built into service development plans and acquisitions.

- ***Skilled & continually developing team***
  Identification and forward planning to develop and acquire skills and resources in order to meet Trust needs in a rapidly changing technology environment. Staff are mentored and given resource to maintain and develop technical and non-technical skills.

4 Digital Baseline

Baseline Summary

This section gives a brief outline of the digital baseline at ELFT. This influences digital planning as there are areas of weakness that need to addressed urgently but also areas of strength that can be built upon.

Trust User Experience

There are areas of poor user experience, particularly highlighted are difficulties with network reliability and Wi-Fi coverage.

More flexibility in working arrangements has been helped by a rapid increase in the number of laptops provided, but further shift away from fixed PCs is needed for some staff groups.

Gaps in staff knowledge and skills affects use of the existing main information systems and this is an area that needs improving.

Generally, experience of those using the specialised service systems (IAPTUS and Carepath) are better than those using the broader systems (Rio, EMIS and SystmOne).

Clinical Information Systems

There are core information systems in place supporting the range of clinical services. These are increasingly becoming the core 'electronic patient records' replacing paper notes. However, there are gaps in the functionality of systems and localised approaches result in inconsistent usage and data. Spreadsheets and add-ons are used to plug gaps, and there are some key elements which remain on paper, for
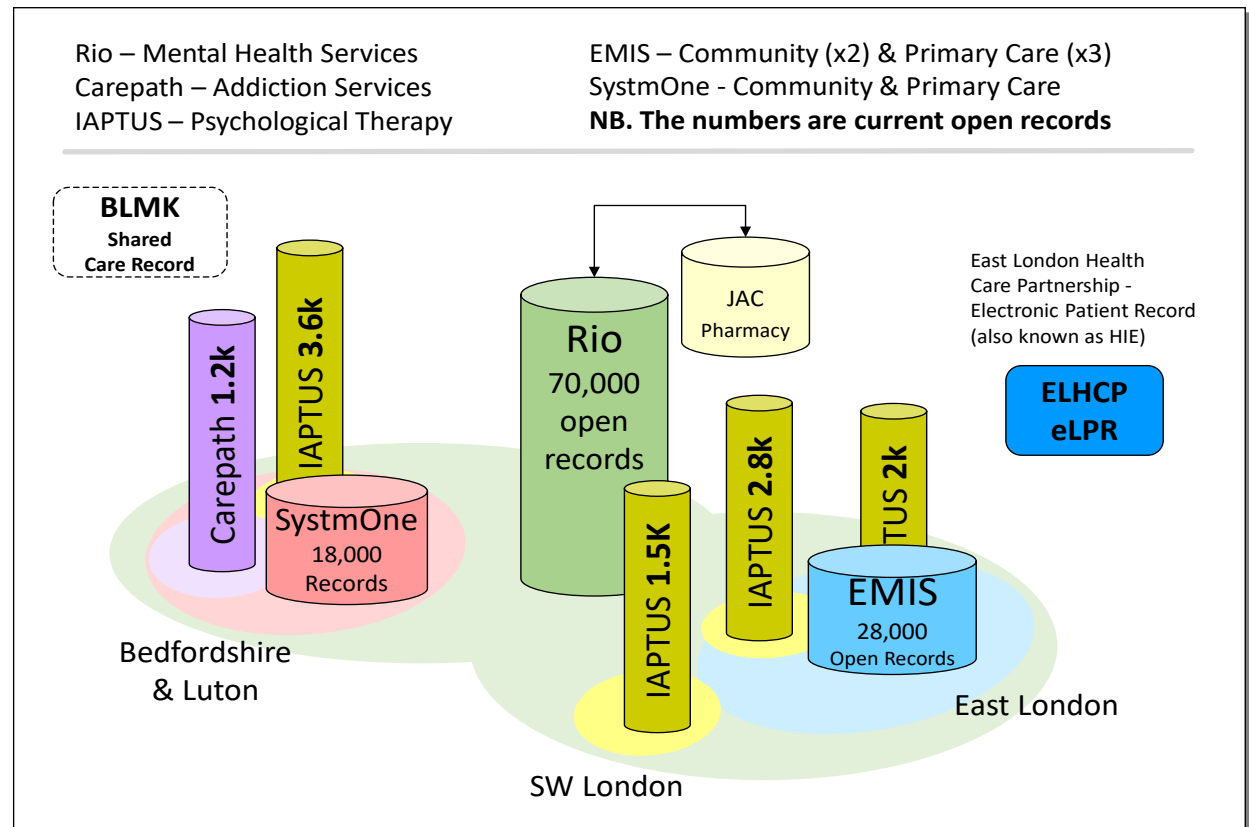
example, Rio facilities for clinical notes and electronic prescribing have been implemented but patient observations and pathology test requests are paper based. The ability to view results in laboratory reporting systems has been valuable.

The underlying design of systems tends to reflect information capture rather than supporting the clinical/patient workflow. As mentioned before, the specialised service

systems are much better aligned to day-to-day service needs.

The largest limitation in the systems baseline is that patient information is siloed within the individual information systems. There is no unified patient view that cuts across service areas.

The diagram below illustrates the main information systems.

Rio – Mental Health Services
Carepath – Addiction Services
IAPTUS – Psychological Therapy

EMIS – Community (x2) & Primary Care (x3)
SystmOne - Community & Primary Care
NB. The numbers are current open records

Infrastructure & Devices

User devices (PCs, Laptops etc.) – the Trust manages about 9,850 devices – roughly 4,200 PCs and 5,150 Laptops. There are also about 2,500 smartphones used. The proportion of laptops has increased rapidly during the Covid19 pandemic. It is a significant challenge to manage and support this number of devices used across the Trust's many locations.

A 'discovery phase' is underway for the use of Virtual Desktop Infrastructure (VDI).

Networks – the Trust manages networks between the sites and wired and Wi-Fi connectivity within sites. There are issues with reliability and coverage and a programme of work has started to assess the remediation needed and deal with priority locations. The aim is also to improve network security and flexibility. The main data links also need additional capacity. An impact of Covid changes has been much greater bandwidth demand, including due to video meetings.

Servers and data storage – the majority of migration from an in-house data centre to cloud hosted servers has been completed.

Cyber Security

Cyber threats are a significant area of risk; an increasing sophistication of threat combines with complex systems and infrastructure. The Trust lacks a dedicated team in this area.

Systems Integration

The Trust has not had the technical capability to interact in an integrated care system, and is lagging behind in trust-level capabilities in this

area. A contract for Integration Engine facilities and services has recently been awarded to start addressing this need.

Digital Skills & Resources

The Trust's digital teams are valued and there is very positive feedback from services/users. However the specialist resources are stretched very thin and this has been exacerbated by the Covid19 response. There is little resilience in service, meaning that there is a lot of firefighting and insufficient capacity to develop services efficiently. There are some significant gaps:

- Development of Programme Office and programme/project management capacity is at very early stages.

- Cyber Security does not have dedicated roles and has to compete for resource with other priorities.

- The clinical systems configuration and training resource cannot keep up with system user needs and the organisation's appetite for transformation.

- The support arrangements for Bedfordshire and Luton are not ideal and lack a dedicated focus.

The Digital Aspirant programme and funding has enabled improvements in some areas during 2020/21 and 2021/22.

Digital Governance and Culture

Governance arrangements to ensure direction and management of digital investment have been recently implemented but will take some

time to mature. The Trust's strong localist approach is at odds with a strategic approach to maximising the benefits of 'digital first', effort is duplicated. A balance will need to be found as currently digital is often an afterthought.

Project and programme management culture and processes are also immature in both technical and wider project areas.

Strengths & Areas of Progress

The Trust's digital teams are a strength and provide the basis for developing greater capacity and capability in meeting the Trust's needs. The appointment of an Executive Director responsible for digital services has raised the profile and focus on digital as a critical enabled of Trust and ICS goals.

There are several areas that demonstrate the ability to exploit digital opportunities:

- Inpatient Electronic Prescribing

- Electronic view of pathology results (ICE access in Bedfordshire and Luton)

- Helpdesk process redesign

- Achievement of 'Digital Aspirant' status

- IAPT Digital Consultations

- Digital response to Covid19 enabling remote working, device rollout, and implementation of the Westfield Vaccination Centre

However, it should be noted that the Digital Aspirant plans have struggled to progress and despite the huge achievement of the Covid19 response some of the changes achieved have not yet been fully exploited to deliver the potential benefits.

5 Challenges & Gap Analysis

The diagram below summarises the main challenges and responses in addressing the digital drivers and the priorities arising from the digital baseline.
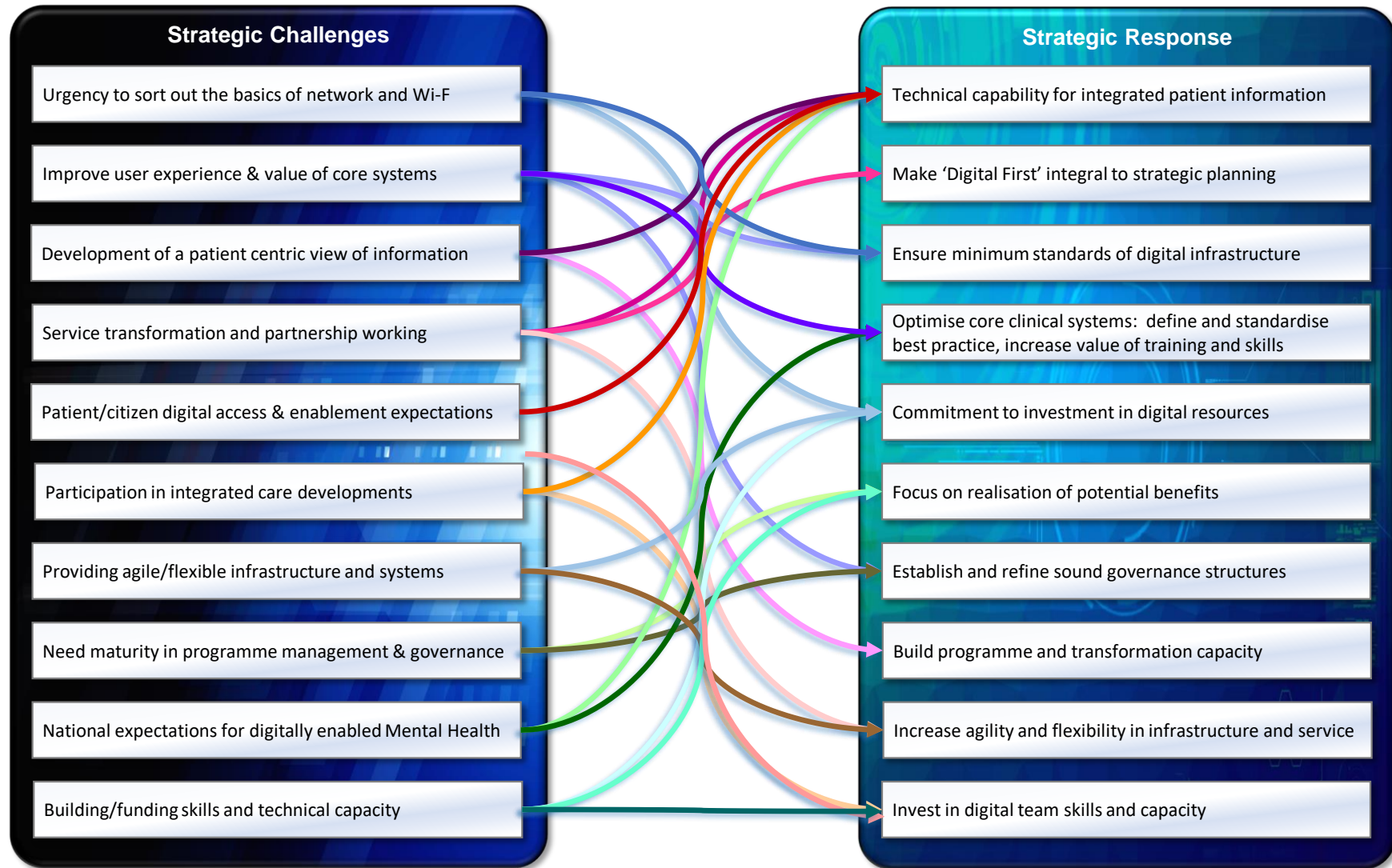
National Expectations

In October 2018 *'The future of healthcare: our vision for digital, data and technology in health and care'* set out the government's vision for the use of technology, digital and data within health and care, to meet the needs of all users. Proposals include a modern technology architecture which will be the foundation for a new generation of digital services to meet the needs of clinicians, patients and managers. Digital services and IT systems in the NHS will have to meet a clear set of open standards to ensure they can talk to each other and can be replaced when better technologies are created. These will be mandatory.

Alongside the Future of healthcare policy paper, NHS Digital published a draft NHS digital, data and technology standards framework. This sets out early thinking and expectations for the use of data, interoperability, design and IT commercial standards within the NHS. Some areas relate to the use of existing standards, others are in development and perhaps rather more aspirational.

The NHS has a long standing goal to 'go paperless', first set by Jeremy Hunt, Secretary of State for Health in 2013. The paperless NHS target has since been moved back from 2018, 2020, and 2023 and is now set at 2024. In June 2019 the NHSX CEO, Matt Gould said that the long-term plan commitment to digitise all hospital trusts by 2024 will be "a stretch" and require "sharp progress" by the least advanced providers.

Mental Health Ambitions

The NHS Long Term Plan, 2019, sets digital ambition for Mental Health providers to reach by 2023/24:

- 100% of mental health providers meet required levels of digitisation
- Local systems offer a range of self-management apps, digital consultations and digitally-enabled models of therapy
- Systems are utilising digital clinical decision-making tools
- All mental health providers will achieve Data Quality Maturity Index scores of or above 95%

Ambition (flexible)	Core levels of digitisation	Digitally-enabled transformation across mental health pathways
2019/20	Develop delivery and investment plan to meet …	Local benchmarking to identify areas for targeted investment to achieve LTP …
2020/21	Build digital leadership and digital workforce, identify …	Every person with diagnosed mental health problem will be able to access …
2021/22	100% of STPs/ICSs have effective digital mental health leadership and strategy in place	Digitally-enabled models of therapy are being rolled out in specific mental health pathways
2022/23	Implement strategy drawing on support from national and local digital workstreams and GDE blueprints	Every person with diagnosed mental health problem will be able to access their health care record. All providers have digital processes in place to support clinical monitoring
2023/24	100% of providers meet required levels of digitisation	Local systems offer a range of self-management apps, digital consultations and digitally-enabled models of therapy. Systems are utilising digital clinical decision-making tools

The planning and delivery requirements for digital-enabled Mental Health Care are set out in the NHS Mental Health Implementation Plan 2019/20 – 2023/24 and are expected to be achieved through leadership and digital strategy across each STP/ICS. The requirements are summarised in the diagram above right.

HIMSS & Key Lines of Enquiry

Two externally set expectations for Mental Health Trusts are achievement of Level 5 against the HIMMS assessment of electronic record development and progress against the 'Key Lines of Enquiry matrix'. Both of these expectations align with the Trust's own goals and requirements.
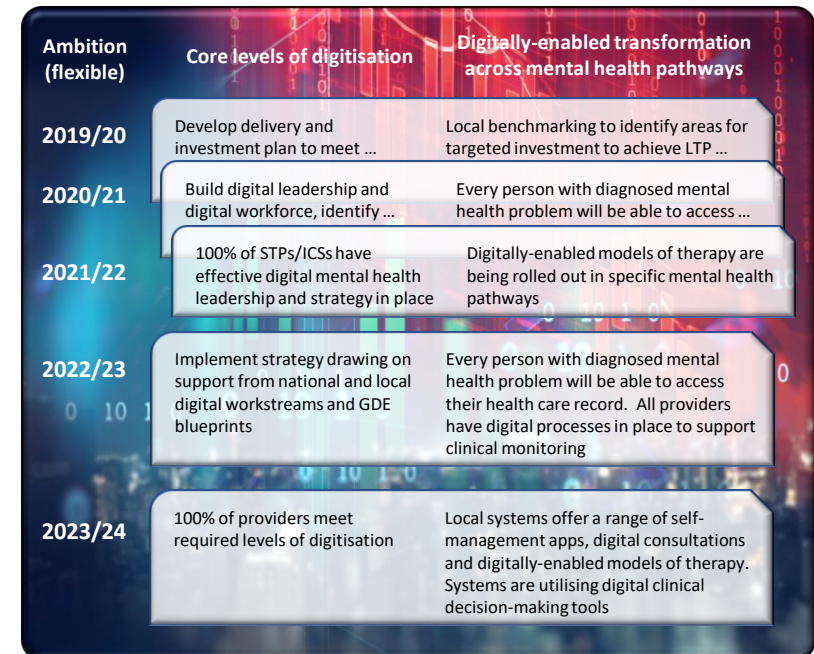
HIMMS are the Healthcare Information and Management Systems Society who have developed the Electronic Medical Record Adoption Model (EMRAM) which is an international standard for assessing health digitisation (measured from level 0 to 7). The NHS requirement is to achieve level 5 by 2024. ELFT's self-assessment identifies elements of level 2 and 3, and a full assessment is needed.

Key Lines of Enquiry (KLOE) has been developed by NHSE/I to improve assurance of digital mental health commitments. KLOE is focussed on the ICS level, and is based on a national matrix to assess and develop digitally enabled mental health. Four key 'capabilities' will be assessed from 'pre-planning' to 'mature'.

Digital Strategy Focus

Review of the goals and pressures for improvements and new developments over the period considered in the digital strategy has resulted in the following areas being the main focus. The aims and plans in each of these areas are explored in the following sections of the strategy report.

Optimise Digital Experience and Value

Digital First Commitment and Culture

Realising the Trust's commitment to 'Digital First' requires making digital integral to strategic planning/developments. Requirements are to improve digital/information engagement at a very early stage and work on integrating 'digital thinking' at all levels, including a culture that recognises digital as an underpinning enabler of service developments.

A commitment is needed to investment in the level of digital resources that match the organisation's scope and needs. This can be supported by focusing on the value that can be achieved by optimising service processes and new ways of working.

A priority, and substantial area of opportunity, is to develop the usage of the current main clinical systems. This should include reviewing processes and defining best practice and usage, aligned with increasing standardisation at a service-wide level on implementing optimised processes and workflows.

This is a challenge in the context of a very localised approach to service management and will need reinforcing and support at executive and DMT levels.

A dependency for improving the value from current and new systems is increasing the levels of digital literacy and staff skills/knowledge regarding use of key information systems.

Enabling service users and carers to interact with services and to engage in their care and wellbeing emerges as a strong local and national priority. The Trust has great strengths in people participation to build upon.

Governance & Benefits

Recently defined governance structures and processes will need to be refined and embedded to ensure sound and timely decision making about priorities and investments, and to ensure management of complex programmes and interdependencies.

A strong focus on realising benefits through digital programmes will need an organisation-wide collaborative approach to plan, implement, and embed positive changes.

Integration Capability

A new capability, including both technology and skills, is needed to meet the clinical needs for patient centric information, such as through a clinical portal, and to interact fully with future integrated care system developments. Lack of efficient clinical communication is frequently cited as a safety issue.

Digital team capacity and capability

Other aims and commitments will not progress without the digital skills and resources to manage increasingly complex operations and implement the new developments. Key areas are:

- Technical capacity to stay in step with user driven needs – more use of more systems in more locations. And to respond to technical developments and risks – rapidly changing technologies, critical dependency on IT, and increasing cyber threats.

- Programme and transformation, for which capacity is building, but from a low and immature base. This also includes creating an integrated approach between digital and clinical/corporate services.

- Continue to develop the broader skills and experience needed to implement the strategy programme, including integration of clinicians within digital, digital patient participation, and procurement and financial capacity.

- Digital leadership depth and capacity to respond to continual external and internal demands (the ICS agenda, Covid responses, etc.), to direct the development of digital staff and skills, and lead engagement with clinical and corporate services.

Technical infrastructure

Ensure minimum standards of digital infrastructure across all services/locations, especially network reliability & connectivity.

Increase agility and flexibility in infrastructure and service delivery, including through cloud services and interoperability standards.

6 Optimising Digital Experience & Value

This section summarises aims and plans in each of the areas that contribute to optimising digital experience of staff, patients and carers, and maximising the value achieved through digital investments. These are areas which need to be owned and engaged in by the whole organisation. The main focus is on the ability of the organisation to fully deliver digital benefits that support the Trust Strategy, and focuses on our ability to:

- Transform services to fully leverage the benefits digital offers by reimagining workflow, pathways, and clinical practice.
- Support staff, develop the digital and clinical skills to adopt and further develop these solutions.
- Support Patients and Carers with co-designed digital services and supporting their adoption.

Digital resources and infrastructure are covered in subsequent sections, but are not isolated from the areas covered here – there are interdependencies between all areas covered in the Digital Strategy.

Digital First Commitment and Culture

Digital and information services are an integral part of all areas of the Trust's work. The recent developments in response to the Covid19 pandemic have highlighted how digital capability can both enable or constrain the operation and development of services and corporate functions. The Trust's commitment to 'Digital

First' involves making digital integral to strategic planning/developments.

Digital and information services need to be engaged at a very early stage, with a recognition that digital thinking may offer new or better solutions. In the worst case, leaving digital planning to a later stage can result in missed opportunities and delays in implementation. Adoption of new services, service expansion, or just option appraisals for taking on new services, would greatly benefit from scoping out the digital requirements before the decision to commit to a new service. This would ensure the right digital solution for the requirements of the service, timely delivery of the platform before service commencement, and budgeting for ongoing support costs.

The Trust recognises that a commitment is needed to invest in digital resources that match the organisation's scope and needs. A key element of the digital strategy development has been assessment of the investment levels required and executive support and prioritisation of the digital agenda. Making the investment required can be supported by focusing on benefits realisation, in particular the value that can be achieved by optimising service processes and new ways of working.

Service Transformation

Optimising Current Systems

Service transformation through process improvement will be largely dependent on

making better use of the current core clinical systems, at least in the immediate strategy period. Particularly with Rio the main mental health system, there are areas of functionality that staff are unaware of or which have not yet been implemented. Also, local use of system varies and there is not a common view of best practice.

Development of Trust-wide best practice processes should look at streamlining workflows and, where possible, improving the interaction with clinical systems. Goals should include removing paper and add-on spreadsheets etc., and getting consistency in the information captured to support clinical decisions and to support management and analytics. This will involve rebalancing the tension between local autonomy and achieving a standardised approach.

The first stages of extending the scope of Rio has been done with the implementation of clinical notes and electronic prescribing. The next steps will include deploying electronic patient observations (eObs) and electronic test requests and results (Order Communications).

Improvements in training and support, covered later, are also a component in improving the clinical and admin value and experience in using current and new systems.

Steps beyond automation and integration of processes should be exploring the opportunities for Clinical Decision Support to improve effectiveness and patient safety.
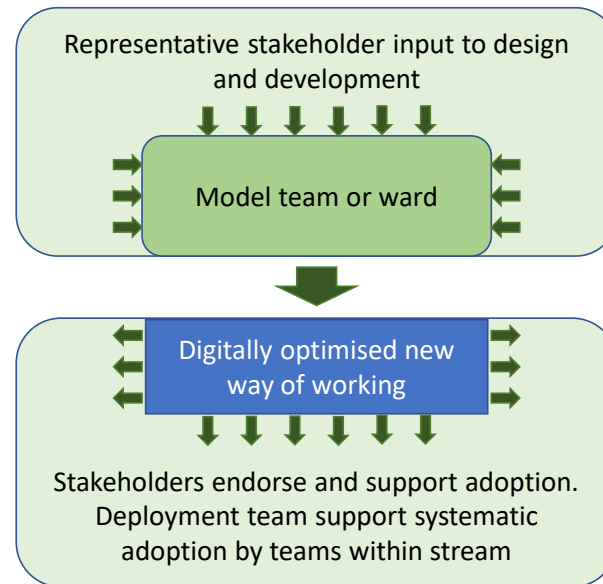
Transformation Approach

The proposed transformation approach involves the digital team taking new (or existing) digital technologies and supporting front line staff to re-imagine their workflows and associated clinical practice to fully leverage the benefits of these solutions. Having optimised this practice, a combined digital and service team can then supports organisation-wide adoption. ELFT has shown the capability to support digital transformation in the recent EPMA implementation, however capacity so far has not met the appetite or needs for wider improvements. Better alignment of digital capacity is set out in the digital strategy as are the governance arrangements needed to direct and manage such change programmes.

The autonomy that DMT's have in ELFT has proved to be a robust and responsive structure for service development and delivery when well supported by central leadership overview and support. This is the model that we are proposing to build on as the structure for our digital function. It was used in the successful EPMA rollout within the Trust, in which digital delivery was centrally overseen, but the delivery was owned by each directorate and supported by a central digital clinical & technical team.

The approach to work with a model team or area and then disseminate and adopt fully across the relevant services is illustrated to the right. While the development of the final model will draw on QI methodology the subsequent adoption will permit some variation between services.

Representative stakeholder input to design and development

Model team or ward

Digitally optimised new way of working

Stakeholders endorse and support adoption. Deployment team support systematic adoption by teams within stream

Staff Digital Enablement

Develop of digital literacy is an important aim of the Trust's digital strategy. This is more than just having skills to use specific information systems; staff need to have broader knowledge and awareness such as, how to avoid cyber risks, the principles of information governance, why getting information right (complete, accurate, timely) makes a difference, etc.

Of course effective use of operational systems and office systems is also important and lack of skills in these areas have been raised consistently as an area that needs to be improved through implementation of the digital strategy. The challenge is increasing as the use of systems is becoming common in new areas, for example, to support remote patient consultations and internal meetings, clinical

dialogue with other services and organisations, etc. The current scope of digital training only covers the use of the main clinical information systems.

As noted earlier, much clinical systems functionality is underused impacting on both service delivery and data flows. Insufficient training and support for staff, to enable the best use of digital systems is a contributing factor. For example, 24% of staff report that they feel the need for "at the elbow" or one-to-one training. Whilst web-based training is available, there is currently only one digital trainer per thousand staff to meet direct training needs. Training for the use of operational systems is stretched and there is no formal support for generic IT skills or office systems.

The intention is to align training needs to the practical needs of staff and expand the Digital training team as well as improving their visibility and engagement with staff through an ELFT Digital Communication Officer. The aim of this will be to ensure that expertise is sufficiently embedded within directorates, and that support is readily available to enable staff to adopt new systems and ways of working swiftly and effectively.

More broadly, we also propose to take forward development work to ensure that digital skills and positive attitudes to digital adoption form part of Trust job descriptions and the key skills framework of staff going forward. In support of this, we also propose to include digital awareness and leadership skills in our leadership and organisational development work in the future.
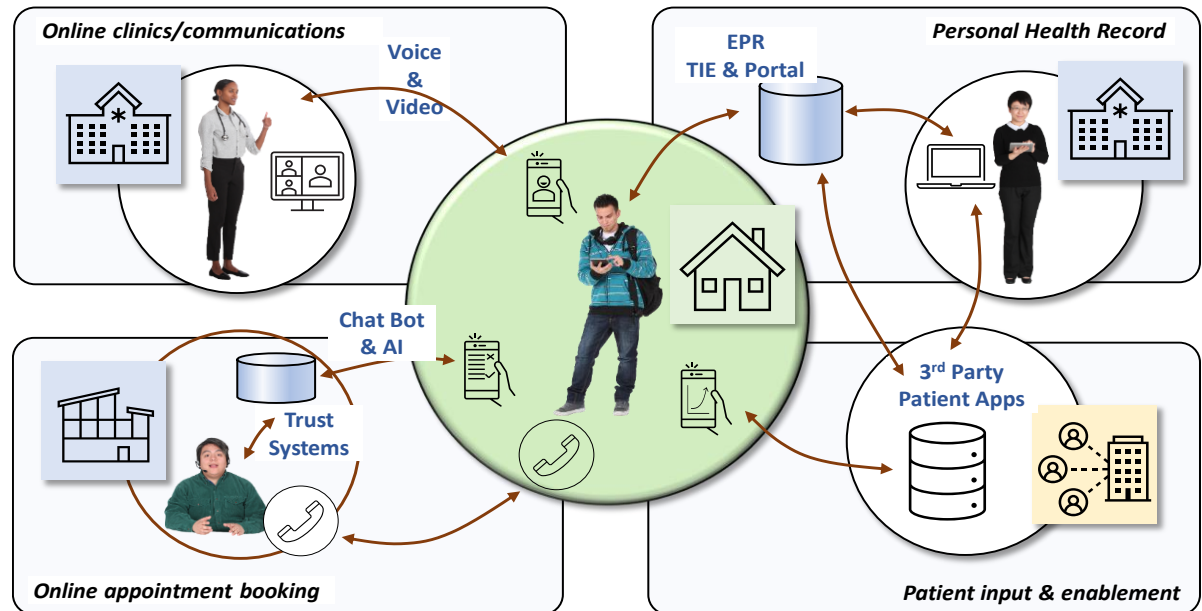
Digital enablement of service users and carers

Currently, the organisation has not formally adopted a digital platform that enables service users and carers to access their records, nor can they engage in bidirectional communication with clinical staff, or do they have the digital support to self-manage their wellbeing. (There is a successful pilot of Patient Knows Best). Whilst there has been widespread adoption of virtual communication and virtual consultations during COVID, there is limited provision of digital resources to support this and no easily accessible training for service users. Development of 'digital pods' to provide patients with access to virtual communications has been a successful initiative.

The area of digital enablement is frequently identified by staff and service users as requiring development to support digital approaches to care. The Trust's approach includes focus on digital empowerment and training of service users and carers through a combination of providing digital platforms and disseminating and supporting the adoption of digital skills. The digital team has appointed a Digital People Participation lead who will coordinate the development of a people participation digital engagement network. The plan is to formally establish the needs and preferences of service users and the carers' community through a survey and focus groups. Then to develop the deployment of digital assets that can meet these aspirations and needs. In due course, we plan to set up a people participation driven Digital training team that can support service users and carers with digital adoption. We expect this to be a source of paid

employment for service users and possibly a resource that we can draw upon for training staff. Implementation of this strategy will enable us to support the development of this approach, and to work with both our service users and staff to integrate digital enablement and training into clinical work in the most effective way, and to shape the development of digital services for the future.

Online clinics/communications

Voice & Video

Chat Bot & AI

Trust Systems

Online appointment booking

EPR TIE & Portal

Personal Health Record

3rd Party Patient Apps

Patient input & enablement

Ensuring 'digital equality of access' for service users should to be considered at each stage; this relates to training, language, equipment, connectivity, etc. Planning needs to avoid assumptions about need and ensure 'whole solutions' are co-designed with service users and carers.

Specific areas to be implemented and supported include patient access to appointments, access to their own electronic record, consolidation of

virtual communication and virtual consultations, and use of 'apps' which support self-care and engagement with care services. This area will become more complex as the scope and range of solutions grows, for example, including multiple patient apps and wearables, as well as the NHS App. It is not clear at this point how the range of systems and data will integrate (or not) with NHS records and services.

There are NE London plans to implement the Patient Knows Best app in a series of phases starting with integration of basic patient information followed by implementation with specific cohorts of patients in turn, each to be decided based on patient benefits. ELFT will have a key role in this development.

Governance & Benefits

Governance Arrangements

Governance arrangements around digital investment and programme management have tended to be limited and not well coordinated, however, this is changing with the development of the Digital Strategy Board and investment in the digital Programme Management Office (PMO). Recently the governance structures and processes shown in the diagram below are being put in place and these will need to be refined and embedded to ensure sound and timely decision making about priorities and investments, and to ensure management of complex programmes and interdependencies.

The governance arrangements need to:

- Set strategic direction and alignment with Trust goals
- Champion and support the digital transformation agenda
- Identify and respond to change and pressures
- Include and engage a wide range of stakeholders
- Balance strategic and operational priorities and resourcing
- Ensure focus on benefits and management of risks and dependencies
- Approve and commission investment (projects & programmes)
- Revise or stop projects/ programmes when required

Further work is needed to refine arrangements and finalise Terms of Reference, etc.
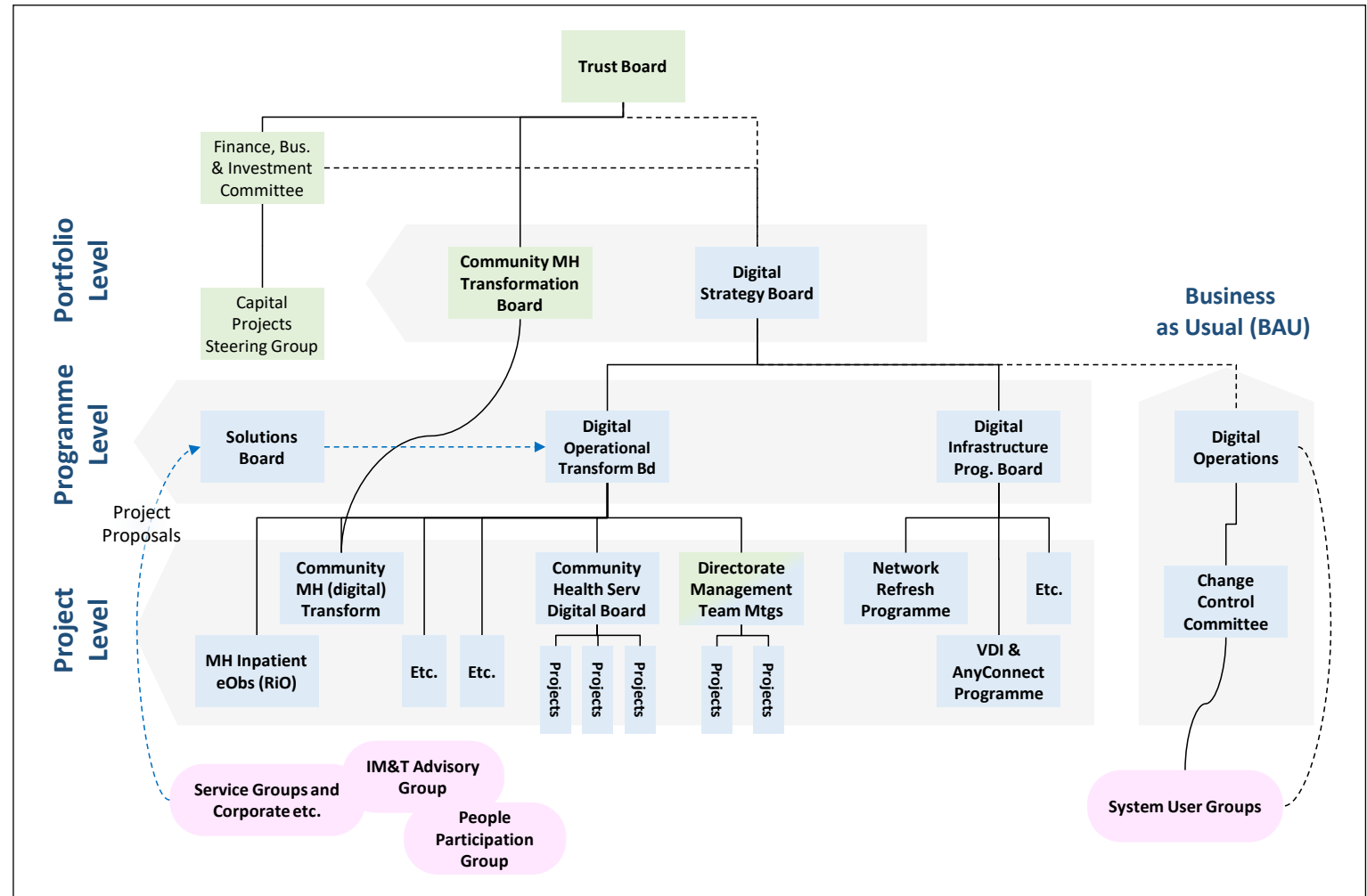
Key components in the governance structure are:

- Digital Strategy Board
  - Approves strategy, sets overall direction, sets alignment of digital with Trust goals
  - Commissions 'Strategic Projects'
  - Oversight of programmes delivery – highlights on key programmes.
  - Champions for Digital at the Trust Board and with FBIC

- Digital Operational Transformation Board
  - Programme management of service and service-user facing projects
  - Oversight of projects and pipeline – balances resources and delivery
  - Oversight of projects delivery – risks, issues, dependencies, etc.
  - Champions for Digital in Trust services and corporate areas.

- Solutions Board
  - Gatekeeper for new digital projects arising from the organisation.
  - Review of project proposals – provides guidance and support to develop robust project outline & brief
  - Redirects and declines proposals where necessary
  - Hands over to the DOTB (or other) to initiate and manage the project

- Digital Infrastructure Programme Board
  - Programme management of 'technical and infrastructure'
  - Oversight of technical projects and pipeline – balances resources and delivery
  - Critical to manage dependencies as infrastructure underpins all other areas

- Project Boards
  - Manage individual projects or groups of related projects
  - Specific Boards established for most projects and for all large or complex projects
  - Existing service groups may manage smaller projects
  - All projects will be under oversight of a Programme Board and formally reported via the PMO

Benefits Realisation

A strong focus on realising benefits through digital programmes is essential to ensure programme goals are achieved and that value is delivered. It is also necessary for a sustainable cycle of investment and transformation. This has not been an area of strength and will need an organisation-wide collaborative approach to plan, implement, and embed positive changes.

Planning for benefits should start at the project brief stage, with an initial benefits register forming a key deliverable at the point of project initiation. Services need to take ownership of the benefits and sign-up to manage and deliver the benefits in their area.

A common approach to benefits management needs to be developed and agreed – this should be rigorous whilst not being overly complex.

A section on the benefits that can be delivered through the digital strategy is included later in this report, and Appendix D gives an example of the benefits work in progress.

Service areas own identification of benefits.

Value & Appraise

Senior stakeholders sign-up to quantified benefit targets.

Identify & Quantify

Services engaged in planning the change process.

Plan

Benefits focus in implementation stages - confirm.

Realise

Review & ensure delivery.

Review

Benefits Register

Benefits (linked to change, functionality, roles, etc.) logged in benefits register, and maintained through the whole programme cycle.

7 Integration Capability

A central theme emerging from the digital strategy is the need to be able to integrate information if Trust and ICS level goals are to be achieved. The Trust's clinical and operational information is almost entirely locked into system-based silos. The Trust does not currently have the technical tools or skills to utilise this essential resource. This needs to be addressed if the Trust is to unlock information for clinicians to enable efficient and safe care, and for ELFT to becomes a major part of both the Bedfordshire & Luton Integrated Care System, as well as the One London, shared care record.

Internal integration

Within the Trust an integrated patient-centric view needs to be developed which overcomes the constraints of service-specific systems which hold data in individual silos. Currently, much time is spent looking into multiple sources to piece together a patient history or status. Work is needed to design and implement a 'clinical portal' which brings together a single view. This may be achieved through interim steps and the best clinical and technical route needs to be determined.

Flows of information, in and out, also need to be integrated where possible to streamline clinical workflows and reduce errors and duplicated information. For example, removing paper and the inevitable transcription/re-entry of data from processes such as: ordering tests and receiving results, making and receiving referrals, etc.

External Integration

ELFT has the opportunity to be an anchor organisation in the local STP/ICS and to collaborate to deliver an integrated care offering through blended teams. A critical ingredient in this process is the ability to effectively share information and support the transformation of clinical practice using shared clinical records. Progress in this area requires the technical capability and the capacity to start engage in the broader developments and collaborate with partner organisations.

The developments needed are feeds out from ELFT to partner organisations via the shared care record developments in London and in BLMK. ICS level goals are broader than direct care and include complex case management, case/risk identification and population health analytic services. Over time the shared records being developed at the ICS level are being joined into sub-region or regional level record systems through extension of the Local Health Care Records Exemplar (LHCRE) programme.

The diagram illustrates the role of an integration capability to move and combine data for partner agencies, clinical users, and information users.

Digital Approach

The Trust has started the process of developing the technical capabilities required through procurement of a 'single-sign-on' solution and a Trust Integration Engine (TIE). Scoping, requirements, and design work is needed to start the implementation process. The Trust will rely on an integration development partner but will also build in-house expertise so that it can manage and support the development process.
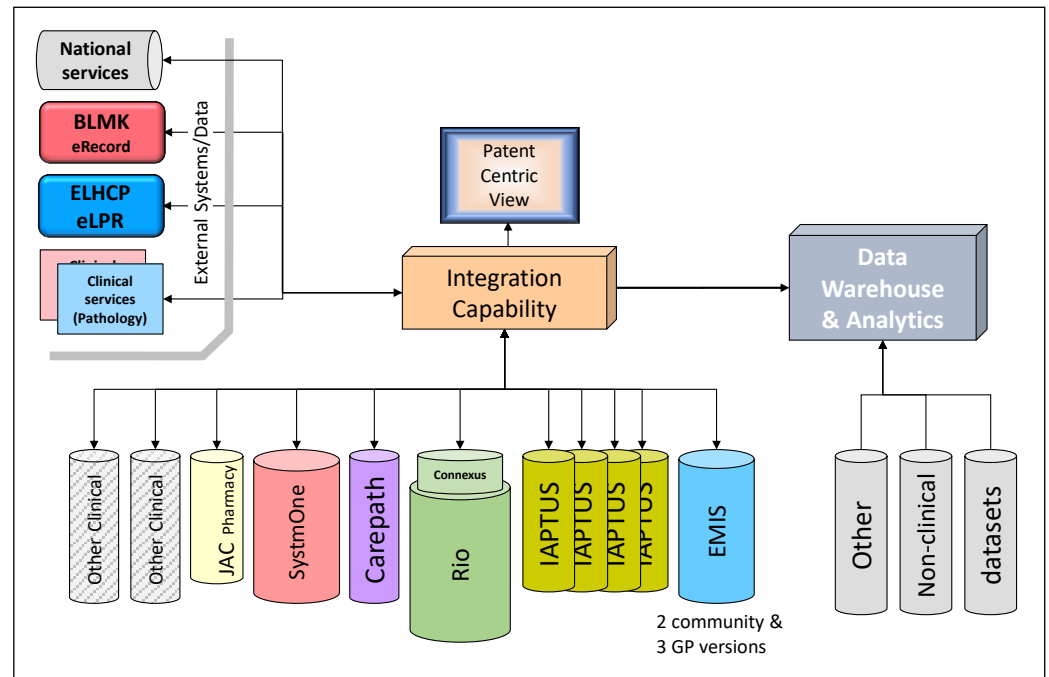
8   Digital team capacity and capability

The digital team covers a broad range from clinicians with digital expertise working within frontline services through to highly specialist technical experts and administrators and project managers. Mature Digital teams should have sufficient capacity to respond to both the day-to-day needs of maintaining systems and processes (an operational team) as well as the developmental aspirations of the organisation (development team). ELF needs a Digital Team with the capacity and capability to support the 8,500 users adequately. An assessment of need and benchmarking activities has shown that the permanent digital staff resourcing needs to be expanded and several areas of skill/capacity deficits addressed.

The advantages to the Trust in having a scaled and skilled digital function is a better ability to support our large geographical footprint, have an integration capability to join our systems together so staff don't need to re-enter data more than once, be more agile in terms of responding to service user's needs, and be seen as a quality service by all that we serve, measured by key performance indicators matched to service need.

Pressures have included relying on capital funding rather than permanent posts to address projects which can result in loss of momentum as skills and knowledge are lost when a project finishes and need to be redeveloped when the next starts. In 2021/22 the Trust has increased its digital investment and the addition of Digital Aspirant funding is also helping to build digital team scope and capacity. The Trust is

committed to meeting the challenge in 2022/23 where further development will be needed and the Digital Aspirant funding will have finished.

The chart below shows the forecast staffing totals (WTE) by service area/team. Each group of columns shows a digital team area, the blue column is the baseline at the start of 2020/21 the next columns then show projected growth over three years. Developing a dedicated Cyber team is within 3rd line support services and is covered further below. Other areas being developed are improving technical support areas, systems configuration, user training, and building new skills in systems integration.

Programme and transformation capacity is also increasing by formalising clinical lead roles and establishing a permanent Programme Management Office (PMO) and team.

The resource plans in the strategy include an expanded team to deliver core services at the level needed by the Trust, plus several 'enhanced service' areas to improve staff experience through user support responsiveness and extend service hours, and a broader training offer.

Re-baselining the digital team will also enable the department to develop an inhouse culture of expertise and ensure accreditation through a coherent professional development programme. It will also assist with the development and tracking of service level agreements that are realistic in terms of resourcing and delivery and mapped to the number of services and users that are supported.
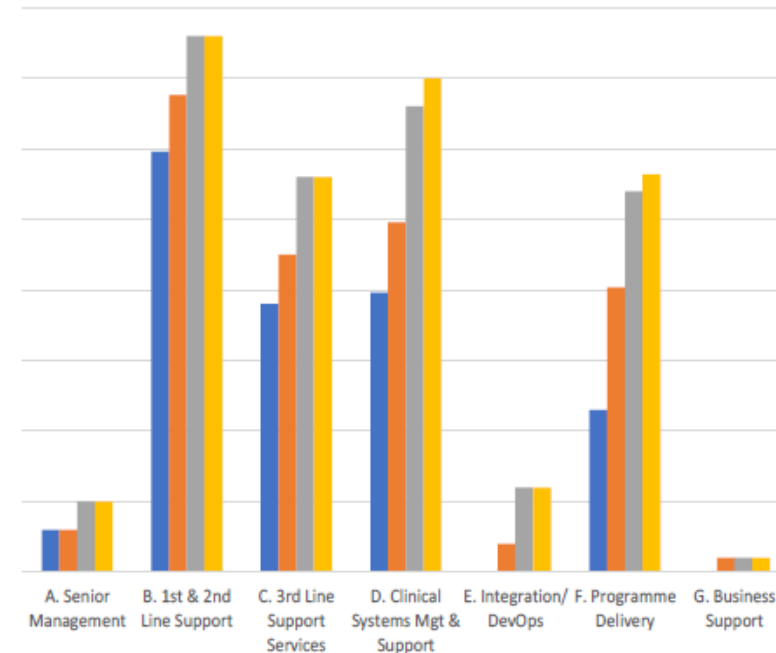
Cyber Security

We will also improve the ability and knowledge of our Digital team to lead the way in Cyber security, protecting the data of our citizens, and safely supporting the large information sharing agenda that will be present as we enter into the Integrated Care System approach to delivering care in a multi-agency future. Cyber is a major clinical risk area, not just a technology issue.

The lack of a dedicated cybersecurity team, including the lack of a Chief Information Security Officer, creates a critical organisational risk to a cybersecurity attack. The Global WannaCry attack had an impact on all organisations, private sector, and NHS. A further cybersecurity attack is a reasonably foreseeable event, and we should support this capability to be fit for purpose, so that we are in the best place possible to respond.

The requirement for all trusts to achieve Cyber Essentials + is currently a significant challenge for the Trust, as the last external assurance report outlined several critical deficiencies, which we have had to reach out to NHS Digital for a one-off allocation of funding to address. This is not a robust way of addressing risk and this strategy identifies the need for the organisation to create a more robust structure and capability to address cyber-security resilience and to mitigate this risk to the lowest possible level.

The diagram above right illustrates the National Institute of Standards and Technology (NIST) framework for cybersecurity.
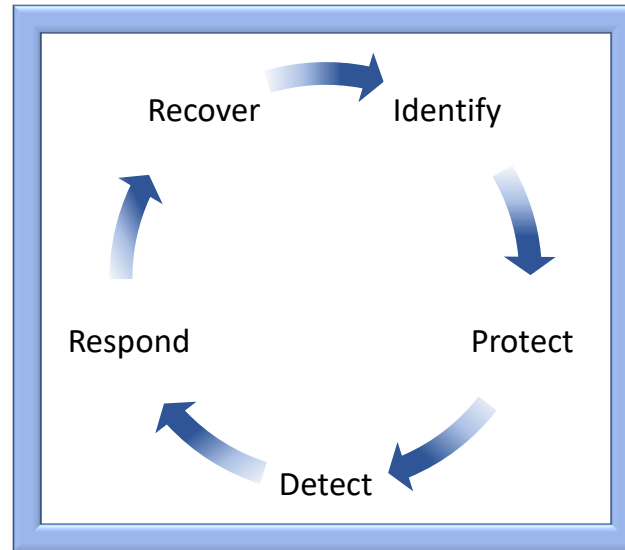
Programme Management Capability

To ensure the robust planning and management of our Digital programmes, we must expand the Programme Management function, develop the key capabilities, and build robust governance and assurance frameworks that are embedded within the Digital function. In Digital First organisations the Digital function has a dedicated Programme Management Office (PMO) – and it employs experts in the delivery of digitally enabled programmes, as well as supporting benefits planning.

This is more than just having resources, our culture and processes in this area are immature and these must be developed and strengthened over time if we are to fully realise the benefits of digital investment. Best practice methodologies are well defined and should be followed.

Developing Partnerships

As the range and scope of digital systems and information flows increases it becomes more important for digital services to take a partnership approach in most, if not all, areas of work. Trust and service user facing developments both need to be multi-disciplinary and collaborative programmes if the underlying needs are to be met and the planned benefits achieved. Many of the ICS led service developments will require coordinated integration of information across networks and this will need digital management capacity to contribute to both design and implementation.

Partnerships with digital suppliers, including with NHS Digital, need to be developed in order to maintain responsive services which provide long term value to the Trust.
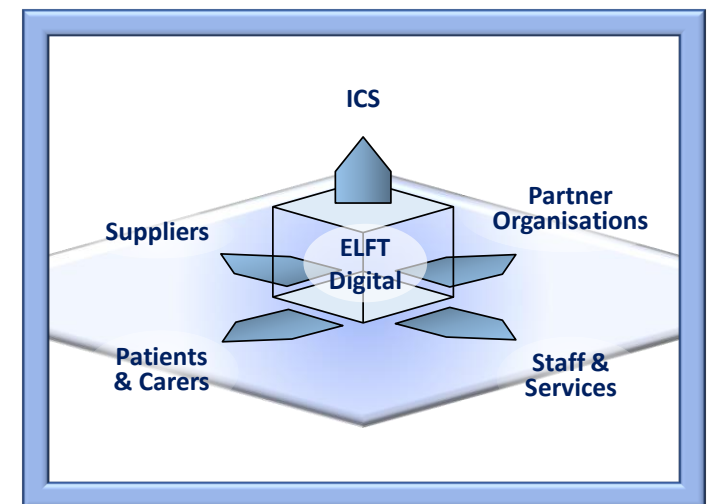
9 Technical infrastructure

This section sets out requirements and plans for the development of the Trust's technical infrastructure. This includes the underlying servers, networks, firewalls, and devices (PCs, laptops, etc.) which support clinical and business applications and enable users to access them.

The Trust reliance on digital platforms has increased greatly, however, the technical architecture is currently not sufficiently scalable, responsive, and resilient, and systems are not optimised for the end-user. The aim is to ensure minimum standards of digital infrastructure across all services and locations, especially network reliability and connectivity. A further goal is to increase agility and flexibility in the way infrastructure is operated and provided so that changing user needs are met more quickly and efficiently.

The diagram below illustrates the 'old' approach on the left which is fairly rigid and inflexible. On the right, the 'new' approach gives device choices to match user needs, an integration capability that gives access to richer information, and much greater flexibility in the underlying data services.
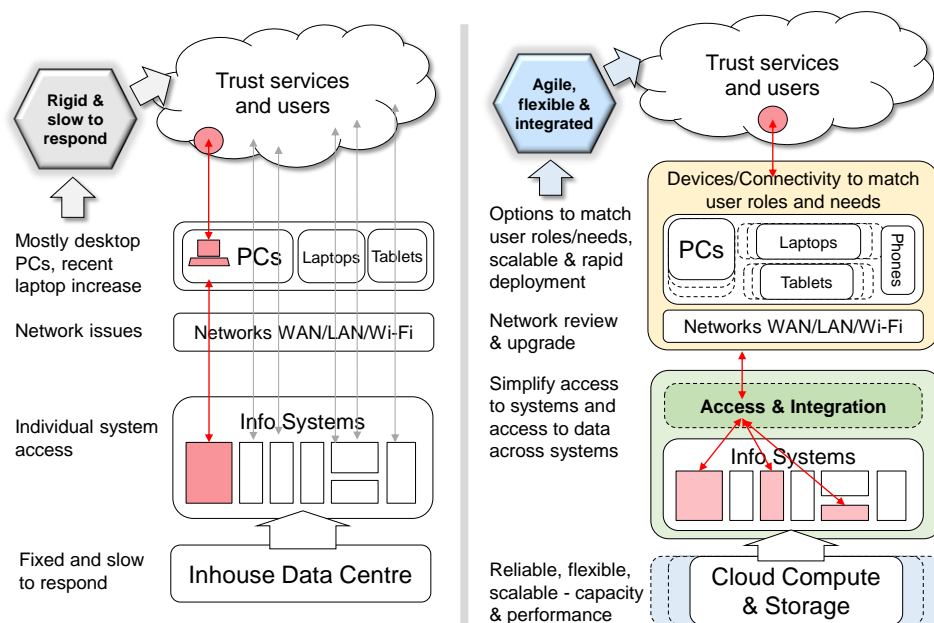
A main element of these changes is moving to cloud-based infrastructure and this is already well underway for the Trust's servers. Further steps include providing many applications as cloud services, rather than running on local devices. These changes will feed into the Trust's work to review the way we deliver services post-COVID19, and this could indicate a rationalisation of estates as staff and services have greater flexibility.

Delivery of the strategy means that we will be able to build on our work to create digital personas which specify the digital requirements of groups of staff, this will enable digital services to be better aligned to staff needs and also improve planning of expenditure and product support.

Networks

Staff at various Trust sites have identified a problem with connectivity to the local Wi-Fi, the speed and reliability of the network and the availably of the appropriate hardware. The Trust has circa. 130 sites and work is ongoing to identify how they compare to a 'Digital Kitemark' standard. A range of components such as networks and Wi-Fi Access Points, data links, and Uninterruptable Power Supply (UPS) need to be appropriately scaled and resilient to avoid a negative impact on users and clinical services.
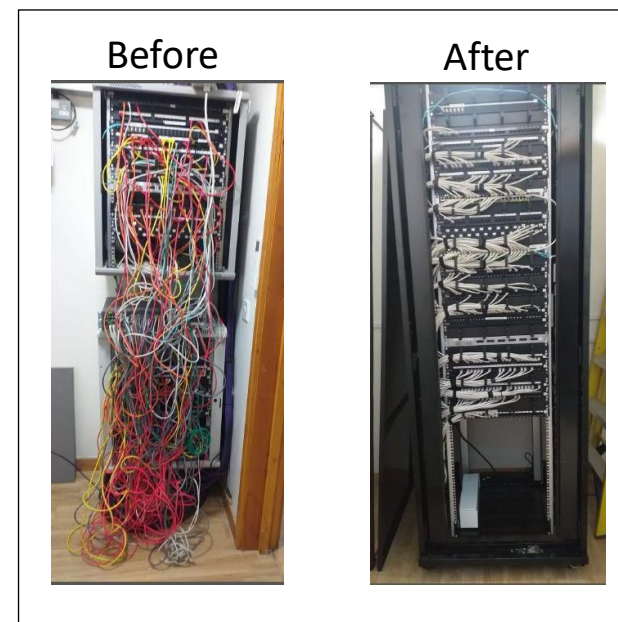
Considerable investment has been made at the John Howard Centre to renew network and infrastructure equipment. The pictures above of 'before and after' show one of the network cabinets. Work is underway at other sites to assess Wi-Fi coverage (heatmapping) and plans to address deficiencies at each relevant site in turn will follow.

2021/22 will address main network links, all priority 1 sites and start priority 2. 2022/23 will finish priority 2 and start priority 3. 2023/24 will complete remaining sites and establish an ongoing maintenance regime.

Servers and data storage

The Trust has started moving servers to 'the cloud' to replace the in-house data centre approach. Much of the transfer is completed, and it offers greater control, flexibility and security. This process will continue, with new applications starting as cloud services. It is also planned to move many of the applications which run on individual PCs or laptops to cloud services, this is discussed below.

PCs, Laptops, Tablets, etc.

ELFT are utilising conventional Laptops, Desktops, and some iPads. Delivering and maintaining these is slow, time-consuming, and expensive. Lifecycle replacement costs are also high. About 9,300 devices are managed for about 8,500 users.

An alternative approach is to have the 'computing' done remotely as a cloud service with access to the various systems and apps provided through a much simpler device. The new simpler device is

known as a 'thin client' and the traditional PC or laptop as a 'thick client' or 'fat PC'. The diagram summarises the two approaches.

The new approach is called Virtual Desktop Infrastructure (VDI) because the desktop (applications etc.) that the user sees on their local device are really provided from a remote server. Other components being explored that will help users are a 'single-sign-on' approach and virtual smartcards both of which will make access to IT systems quicker and easier for many users.

A VDI pilot has been funded by the Digital Aspirant programme and has had excellent feedback from the 150 early adopters. More evaluation is now needed to confirm technical approaches for a wider range of applications, devices, and users. Also to assess potential benefits and costs. There is dependency on having a reliable network connection and so rollout will be linked to network improvements.

Implementing VDI will help considerably with all elements of agility, safety, scalability, sustainability and futureproofing our services. The impact on cyber risk management is considerable as upgrades and controls can all be applied centrally.

VDI also allow us to stand up new services in new locations with relative ease, unlike the current situation where we need to install dedicated networks inside buildings to allow ELFT staff to connect to our systems.

Thick Client Computing

Local interaction, processing & storage

Servers provide optional storage

A 'Fat' PC (personal computer) stores and runs applications directly for the PC user. A remote server may be used for storage (e.g. 'shared drives'). Each PC is a separate 'desktop'.

- ✓ Less dependency on network & servers
- ✓ More familiar to most users
- ✓ Local configuration and more user choice
- ✗ More expensive deployment and support
- ✗ Less control over system & network security
- ✗ More frequent replacement/upgrade cycle
- ✗ Slower deployment process

Thin Client Computing (Virtual Desktop Infrastructure)

Local interaction only

Servers provide all storage and all processing

A 'Thin' device provides little more than a screen and keyboard. All the processing and storage is provided by remote servers. The user sees a 'Virtual Desktop' on all devices.

- ✓ Users can stop & resume from any device
- ✓ More efficient to maintain & support.
- ✓ Centralised updates & security management – mitigates cyber risks
- ✓ Simpler device deployment (but more complex server technology)
- ✗ Possible issues with application compatibly
- ✗ Dependency on network & server resilience

10   Business Intelligence and Analytics

The business intelligence and informatics function at ELFT sits separate from the digital department, within the Chief Quality Officer portfolio, but with strong links and interdependencies with the digital plan. ELFT aspires to become a leader in providing visual self-service analytics to its staff and stakeholders, to ensure that high-quality data supports decision-making and quality improvement. The foundation of providing visual analytics at scale is a modern data warehouse able to blend and integrate data from previously independent systems and this strategy identifies the creation of integration capacity and capability as a key area for development.

ELFT has recently begun its journey in creating the first integrated dashboard app combining clinical and non-clinical data in one place and is currently developing the next six systems. These new analytics in PowerBI make data available from mobile (for the first time, no longer needing to be on the Trust network) and incorporate innovative technology. However, ELFT's current data architecture operates in silos without a structured method to join data between both clinical and non-clinical systems. This operates from a single data warehouse server, meaning there is no opportunity to develop, test and quality-assure analytical reports outside the live server. This has resulted in an unmanaged growth of reports and objects with considerable duplication and risk of inconsistency in analytical outputs. Having a single server provides us with no redundancy and routine maintenance results in the unavailability of data for teams at least one day each month.

A modern data warehouse working with integrated data feeds will also allow ELFT the opportunity to start using our wealth of data, going back decades, leveraging machine learning and predictive analytics. The delivery of a modern data warehouse will future proof integrated business intelligence and analytics at ELFT. The trust will be able to use its vast amount of data regardless of the system the data is recorded in now and in future. The first step towards this new data warehouse was the move of our data into the cloud in 2020, which increases our resilience and efficiency.

To deliver self-service integrated analytics for our staff and stakeholders, and to develop a modern data warehouse that integrates all data to better understand the patient journey, we need to focus on developing a range of skills within the informatics and business intelligence department and freeing up capacity for development work. This work has begun over the last year, with development programmes and QI initiatives in place that aim to ensure that we have the capacity and capability in place to maximise the use of a modern, integrated data warehouse as this is developed.

2021-22 plan

Self-service integrated analytics
- Development of further integrated apps for self-service analytics.
- CAMHS, CMHT, Peri-natal, SCYPS & Forensics ready for Summer 2021

Modernisation of the Data Warehouse
- Structured devt. environment (phase 1) and a master patient index (phase 2)
- Build an enterprise data warehouse system (phase 3 and 4)

Departmental training plan 2021/2
- Build technical, project, leadership and communication skills.

Self service integrated analytics
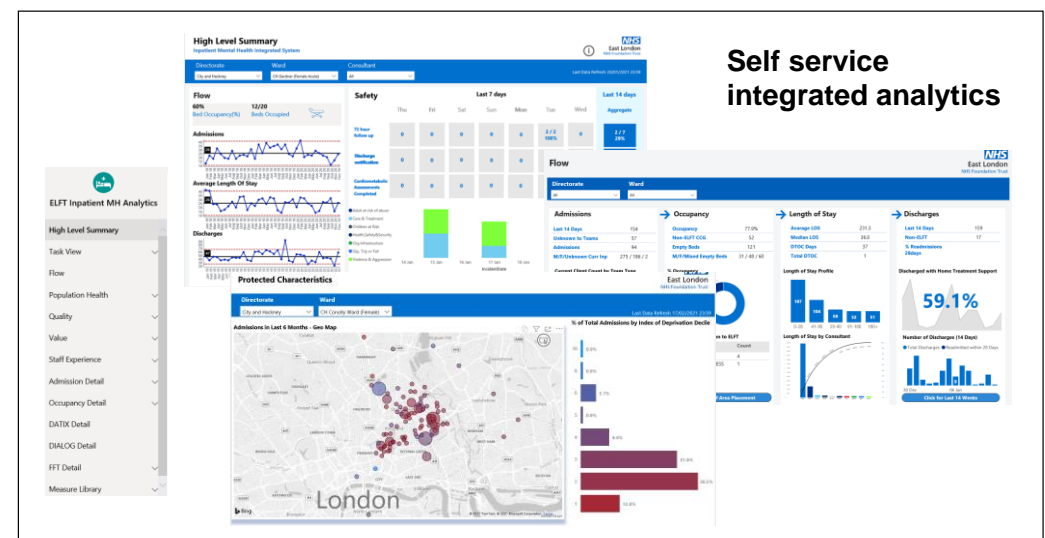
11   Benefit Realisation

The recent experience of digital support during the Covid pandemic has highlighted the potential to realise strategic changes and benefits in several areas, for example, more flexible staff working, reduction in travel time and costs, reconfiguration of the built estate to utilise facilities more effectively, reducing carbon footprint, offering choice and convenience to service users, and supporting emerging integrated pathways. Realising these benefits will require a strategic approach to ensure that changes are planned and sustainable and that the needs of staff and service users, carers and the wider community are understood and met, for example, that new opportunities for some are not barriers for others.

The importance of a rigorous approach to benefits management has been discussed earlier in the strategy document. This section highlights the benefits that can be delivered to the Trust, patients, and wider stakeholders through the digital investment and associated work programme.

This page and the next illustrates '*What is in it for me?*' – how a digital first approach provides a direct impact on the experience of different users of the Trust's digital systems and infrastructure.

The following page then provides a summary benefits map which shows how key benefits support the Trust's strategic goals and are delivered through the digital programmes.

These views are a high-level picture, and detailed benefits planning should be completed at the individual programme or project level.

Appendix D also gives an example of the benefits work in progress.

With new digital solutions I can …

Track how I feel on my App

Set and track personal goals for my recovery

Start a discussion with my team to say I'm not well

Find out about and engage with community resources

Easily access my appointment details

Get digital training from other Service Users helping me feel empowered and included

Record and listen to the content of my appointment

Aisha, Patient

Organise my Personal Health Budget to buy a new laptop to enable digital access

Read the medication information and health advice suggested by my team

What is in it for me?

With new digital solutions I can …

Safely receive hand over tasks from colleagues

Safely track and hand over tasks at the end of the day and show I am not at work

Instantly pick up where I left off on any ward device

● Save over half an hour a day with personal digital dictation templates

See a summary health record in a format that suits me

Alex, Ward Doctor

Order investigations digitally and see the results in system

Have instant access to the entire current health record and avoid duplication

● Live collaboration on clinical documents

● current partial deployment

Mary, Team Manager

With new digital solutions I can …

- Use knowledge management solutions for team development
- Use virtual collaboration tools for team real time working and productivity
- Gain rapid access to digital support to set up new forms and automated processes in clinical systems and MS 365

- Access full ELFT system on any device from home
- Achieve rapid digital onboarding of new team members
- Gain rapid access to digital training and support for team
- See real time dashboard for quality and safety objectives

Jo, Consultant

With new digital solutions I can …

- Access digital training and support when I need it
- Set up systematic processes for patient care
- Work with patients to track symptoms and side effects
- Have virtual meetings with family and community team

- Use my own device to access ELFT systems wherever I am
- Access my patient's health record on every system
- See a summary of the record in a format that suits me
- Dictate into my work phone with a secure workflow
- Recommend condition and medication information from a curated digital library

- current partial deployment

What is in it for me?

Frank, community clinician

With new digital solutions I can …

- Manage and safely hand over tasks to team members
- Make one update at the point of care for multiple systems
- Collaborate in real time on projects and documents
- See a summary health record in a format that suits me

- Receive and respond to messages from patients and track their progress
- Use any mobile device to access the full ELFT system
- Carry out remote monitoring of physical health
- Carry out full physical health checks at point of care

Digital Benefits Map

Strategic Objectives	Outcomes/Benefits	Impact on Practice	Enablers/Projects

Strategic Objectives
- Improved Population Health Outcomes
- Improved Experience of Care
- Improved Staff Experience
- Improved Value

Outcomes/Benefits
- Reduced patient risk and rapid interventions
- Clinical analytics directs care (case identification) and Improved service planning
- Improved clinical care – better outcomes
- Patients experience more responsive service , reduced hassle and worry
- More convenience for patients, save time
- Better use of health resources, some cash savings
- Reduced staff frustration with use of digital systems
- Reduced patients failing to attend appointments
- Clinical time released for care
- Staff time used more effectively and cost of staff travel reduced
- Mitigated cyber risks of end-point devices, reduced capital replacement costs
- Reduce estate footprint – and cost saving
- Reduce Trust's carbon footprint

Impact on Practice
- Inpatient observations compliance improved, info. available for electronic review etc.
- Streamlined request results process and integrated in record - improved access/action
- Reduce duplication of tests and inappropriate tests
- Integrated teams work efficiently with shared info
- Coordinated care/pathways across organisations
- Integrated view of patient record – Trust & ICS
- Improved capture of clinical information – timely & more complete – to support direct care
- Patients able to manage appointments
- Patients engaged in care and contribute to wellbeing
- Remote appointments offered to all groups
- Easier patient communication
- Staff prescribe 'on the move' – reduce travel and delays for patients
- Staff have skills and confidence to use systems effectively
- Reliable access to systems – optimise usage
- Central management of thin client devices
- Quicker logon & access to multiple systems
- Staff can meet remotely and can work effectively from home or any Trust location
- Staff adopt hot desk approach to optimise time

Enablers/Projects
- Mental Health Transformation Programmes
  - MH Inpatient e-Observations
  - MH Order Communications
  - Process design and optimisation
  - Community Mental Health Transformation
- Integrated records development
  - Digital engagement in ICS shared care records
  - Clinical Portal for ELFT care records
- Patient Access and Enablement
  - Online booking/chat bots, etc
  - Patent Apps – Patient Knows Best E-Record access and ownership
  - Virtual interactions/Telehealth
- Primary & Community Programmes
  - Primary Care Hub Support
  - Community e-Prescribing
  - Bedfordshire Health Village
- Staff & skills development – Learning management, etc.
- Teams & collaborative working consolidation
- Infrastructure Improvements
  - Networks/Wi-Fi upgrades
  - Server Cloud Migration
  - Remote access – VDI/AnyConnect etc.

12   Investment & Programme Plans

Programme Approach

The main component areas of the Trust's digital strategy programme are shown in the diagram to the right. There are many areas to address and lots of interdependencies, hence a balanced view is needed that is realistic about the pace of progress and the resources required. Developing the Trust's programme management capacity and skills is needed in order to manage the strategy programme successfully. Improving internal resource planning needs to be part of that development.

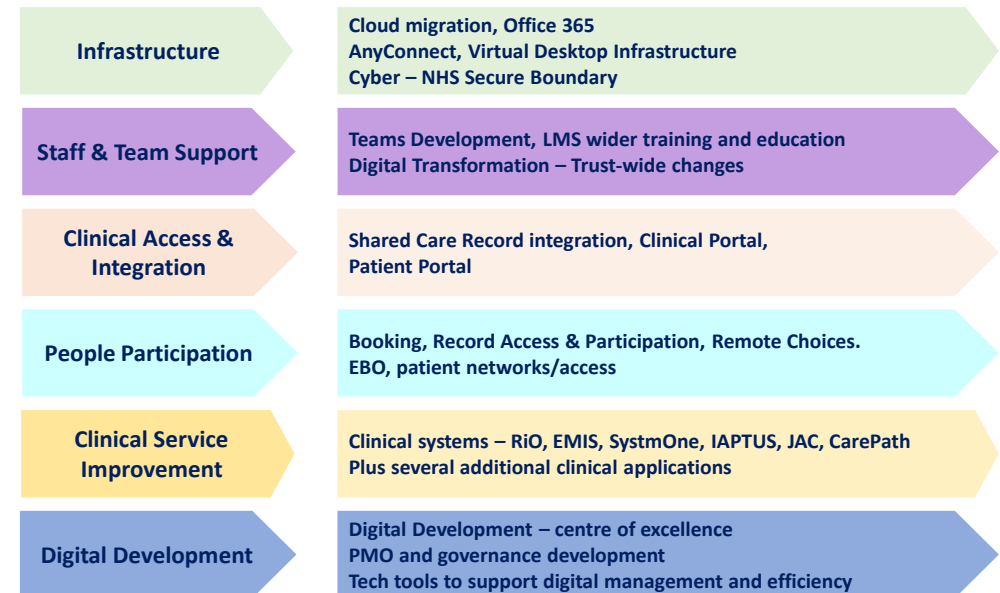Key elements needed in the programme approach are:

- Development planning and design needs to be collaborative with the relevant service/user areas

- Balanced teams are needed which combine clinical leadership with technical, project and change management skills.

- The people participation approach will need to be at the fore in many areas

- A strong focus on transformation and benefits realisation must be set from the very beginning

- The value of QI skills/experience should be maximised

- Best practice governance and Programme Management must be in place

- A balance between structure and agility is needed

- Communications is an important element at programme and project levels

Board level endorsement and commitment needs to be maintained for:

- Programme resourcing for a multi-year rolling programme

- Digital resourcing for BAU (business as usual) and transformation

- Design of, and adherence to, Trust-wide best practice processes
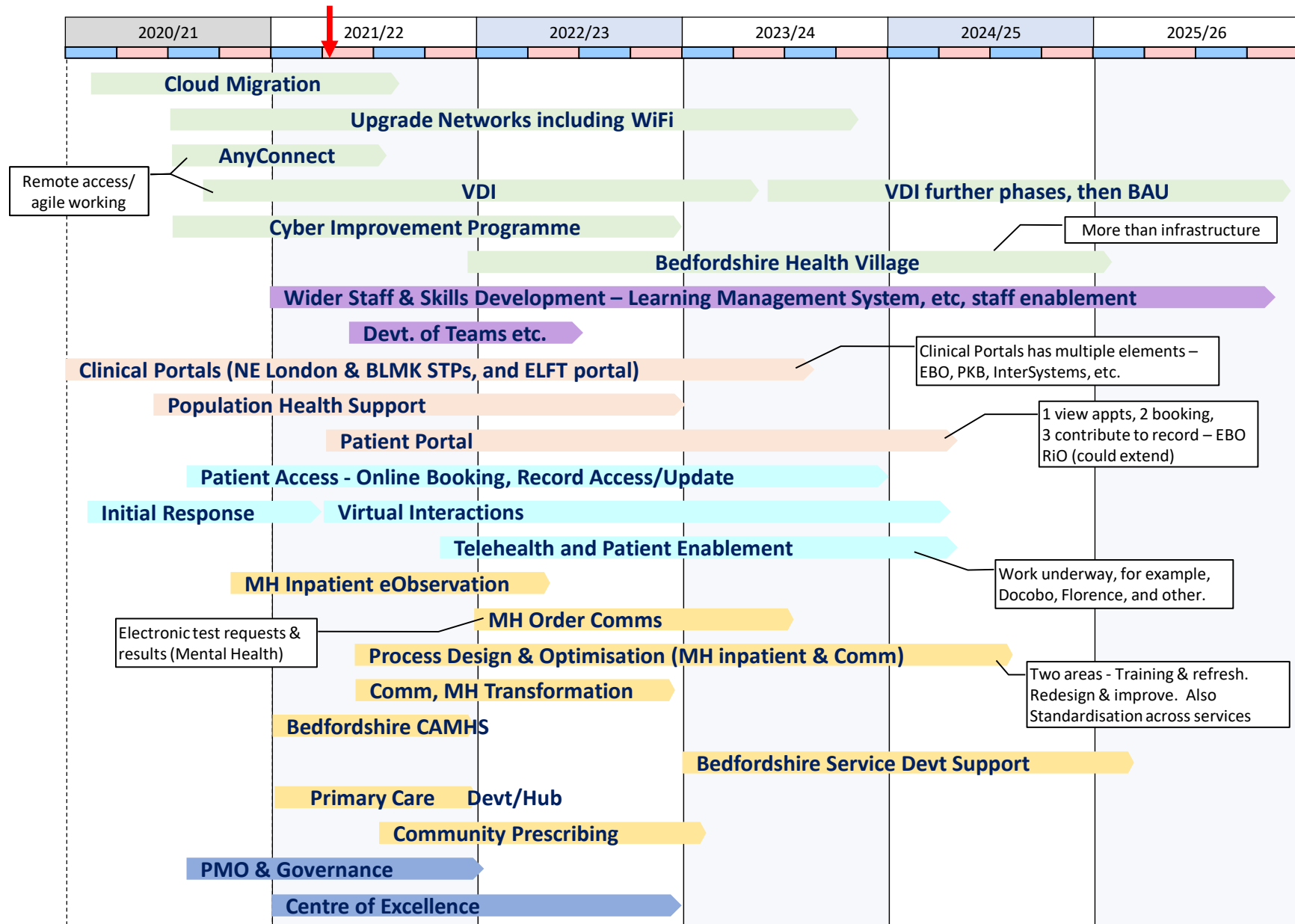
Digital Strategy Programme

The following page gives a summary of the digital strategy implementation programme.

Infrastructure	Cloud migration, Office 365 AnyConnect, Virtual Desktop Infrastructure Cyber – NHS Secure Boundary
Staff & Team Support	Teams Development, LMS wider training and education Digital Transformation – Trust-wide changes
Clinical Access & Integration	Shared Care Record integration, Clinical Portal, Patient Portal
People Participation	Booking, Record Access & Participation, Remote Choices. EBO, patient networks/access
Clinical Service Improvement	Clinical systems – RiO, EMIS, SystmOne, IAPTUS, JAC, CarePath Plus several additional clinical applications
Digital Development	Digital Development – centre of excellence PMO and governance development Tech tools to support digital management and efficiency

Digital Investment

The Trust is committed to investment in digital systems and services to underpin the strategic goals of ELFT and its care partners, and it recognises the need for a significant increase in digital funding. The funding required in 2021/22 will be met by an increased recurrent budget allocation and the additional Digital Aspirant funding. However, there is a sizable funding gap to be met in 2022/23 and subsequent years.

The required increase in funding can be achieved provided a strong focus is maintained on driving out the benefits being sought. There is potential to significantly improve the experience of patents and staff, and to improve value by increased efficiency and effectiveness across the Trust's service areas. There should be annual review of the strategy programme, under oversight of the Digital Strategy Board, to ensure progress and new requirements are reflected.

Digital Strategy
Investment & Programme Plans

2020/21	2021/22	2022/23	2023/24	2024/25	2025/26

Cloud Migration

Upgrade Networks including WiFi

AnyConnect

Remote access/ agile working

VDI

VDI further phases, then BAU

Cyber Improvement Programme

More than infrastructure

Bedfordshire Health Village

Wider Staff & Skills Development – Learning Management System, etc, staff enablement

Devt. of Teams etc.

Clinical Portals (NE London & BLMK STPs, and ELFT portal)

Clinical Portals has multiple elements – EBO, PKB, InterSystems, etc.

Population Health Support

Patient Portal

1 view appts, 2 booking, 3 contribute to record – EBO RiO (could extend)

Patient Access - Online Booking, Record Access/Update

Initial Response   Virtual Interactions

Telehealth and Patient Enablement

MH Inpatient eObservation

Work underway, for example, Docobo, Florence, and other.

MH Order Comms

Electronic test requests & results (Mental Health)

Process Design & Optimisation (MH inpatient & Comm)

Comm, MH Transformation

Two areas - Training & refresh. Redesign & improve. Also Standardisation across services

Bedfordshire CAMHS

Bedfordshire Service Devt Support

Primary Care   Devt/Hub

Community Prescribing

PMO & Governance

Centre of Excellence

Appendix A   Glossary

BLMK   Bedford, Luton & Milton Keynes Strategic Transformation Partnership

CPSG   Capital Projects Steering Group

Carepath   IT system used by the Path to Recovery (P2R) drug and alcohol service in Central Bedfordshire

Cloud Services   computer services delivered on demand to customers over the internet

Cyber Essentials+   Scheme recognising achievement of govt.-endorsed standards of cyber hygiene. An NHS Digital requirement to allow connectivity to shared networks.

Digital Aspirant   a national NHS programme to helps approved NHS trusts raise their digital maturity by supporting delivery of a set of core capabilities

EMIS   clinical system providing primary care and community service support. Used by many E London GPs and by ELFT community services in E London

eObs   Electronic patient observations

EPMA   Electronic Prescribing and Medicines Administration

FBIC   Finance, Business & Investment Committee

FTE   Full Time Equivalent – measure of staffing levels

HIMSS   Healthcare Information and Management Systems Society

IAAS & DAAS   Infrastructure & Desktop as a Service – also known as Cloud-Based Computing.

IAPTUS   system used by ELFT to support psychological therapy services

ICE   System widely used in hospitals/pathology services to order diagnostics and to make test results available to clinicians

ICS   Integrated Care System

Integration Engine – see TIE

IT   Information Technology

JAC WellSky   The EPMA system supplier to ELFT

Key Lines of Enquiry (KLOE)   a national matrix to assess and develop digitally enabled mental health

LHCRE - Local Health and Care Record Exemplar. National programme to accelerate secure exchange of health & care information between NHS & social care.

NEL   North East London Strategic Transformation Partnership

NHS App   NHS owned and run, it is a simple and secure way to access a range of NHS services via smartphone or tablet

NIST - National Institute of Standards and Technology (Cybersecurity Framework)

Order Comms – (Order Communications) electronic test request and results system

Patient Knows Best   system that enables patients to share clinical information with clinicians and carers etc. Adopted to support patient owned records by East London.

PMO   Programme Management Office – provides infrastructure and resources to manage the delivery of change programmes and projects

PowerBI   A suite of business intelligence analysis and presentation tools provided by Microsoft

Rio   main MH system used by ELFT. Rio includes community, mental and child health functionality

ROI   Return on Investment

SystmOne   clinical system providing primary care and community service support. Used by used by almost all Beds and Luton GPs and by ELFT community services in B&L

TIE   Trust Integration Engine – software that manages the translation and routing of 'messages' from one system to another, for example messages holding patient demographics or admissions, discharges & transfers (ADT)

UPS   Uninterrupted Power Supply

VDI   Virtual Desktop Infrastructure. Centralises processing that would otherwise happen on a PC.

Wannacry   A global zero-day ransomware attack in 2017 had a global impact that included the NHS

Wi-Fi   wireless networking technology that that allows computers and desktops), mobile devices to communicate with or via the Internet
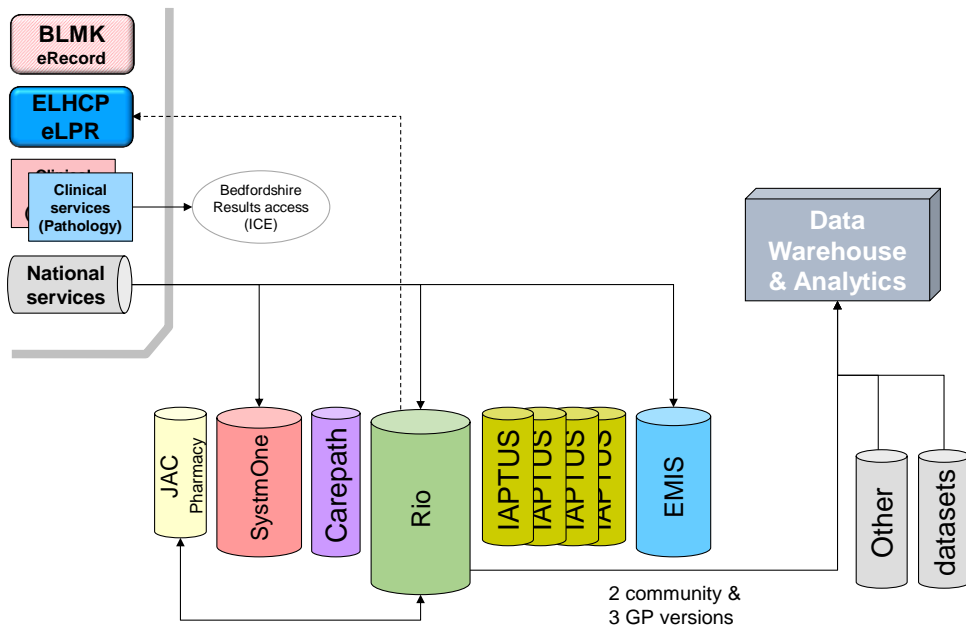
Appendix B   **Integration Capability**

This appendix adds a little more description regarding the internal and external integration capability needed in order to meet the strategic goals of the Trust and it's partner organisations.

Internal Integration

The diagram below to the left shows the current position regarding the integration of information between clinical systems. In summary:

- There are links between several systems and national services, for example spine services which manage patient identity.

- Rio links with the JAC Pharmacy system to enable the flow of ePrescribing information.

There are data feeds from Rio (others being developed) to the Trust's data warehouse. This is a batch transfer rather than real-time clinical messaging.

The diagram below to the right shows the target position for internal integration.

- The integration capability will include a Trust Integration Engine (TIE) and portal facilities to enable a single clinical view of patient information that comes from multiple clinical systems. It will also include batch transfer for 'extract and transform' into the data warehouse.

- The TIE will provide real-time message transfer and translation between systems, for example, synchronising admission and discharge between systems via ADT messages.

The portal will take defined clinical views from systems, and may provide context click-throughs into individual clinical systems. Updates from live messages might also be used in the portal.
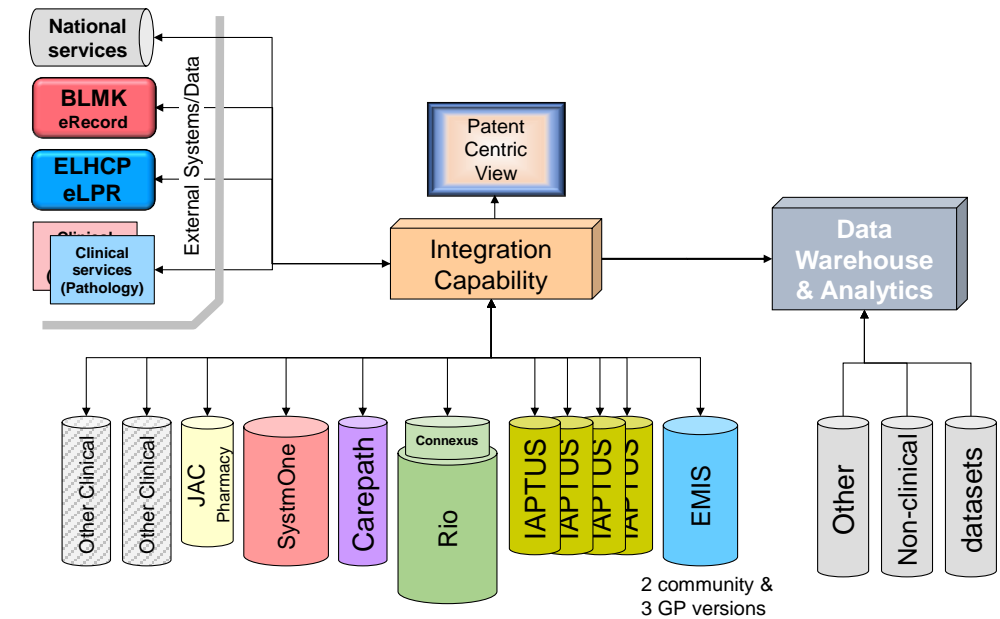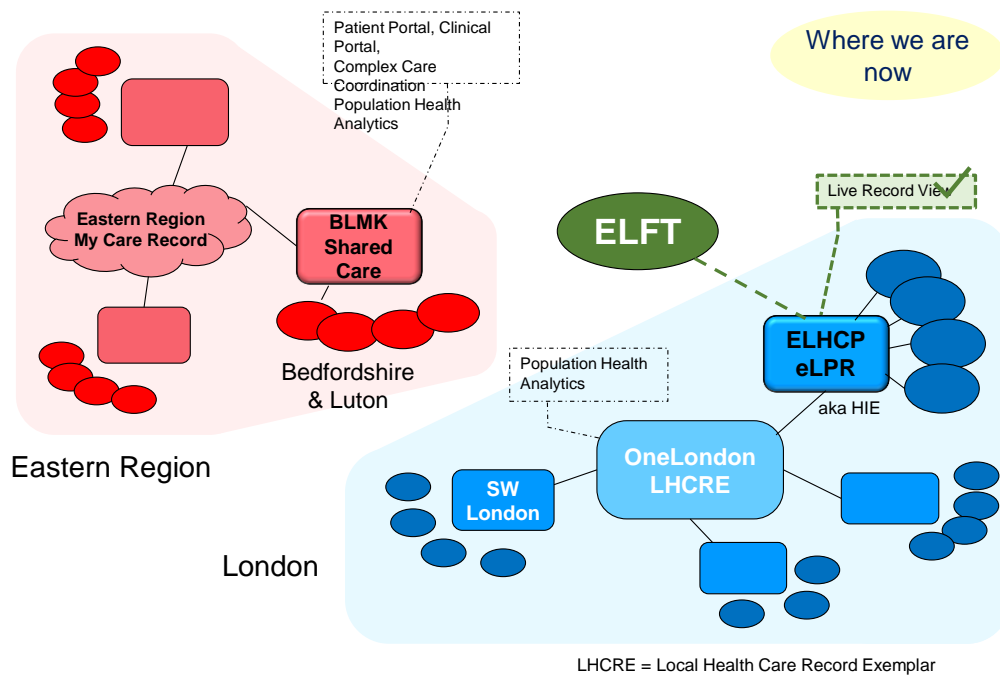
External Integration

The diagram below to the left shows the current position regarding integration with ICS shared care records and wider regional or LHCRE systems.. In summary:

- The Trust provides Rio data to the East London health record. This is provided as a web page rendered view of screen views within Rio.

- The BLMK shared record plans have two components, in Milton Keynes a Cerner Health Information Exchange (HIE) based solution is used, in Luton and Bedfordshire an Intersystems based solution is being developed by Bedfordshire Hospitals.

- ELFT plans to be one of the first external organisations to link to the Luton and Bedfordshire Shared Care Record.

Population health analytics is supported through data set transfer rather than by real-time data integration.
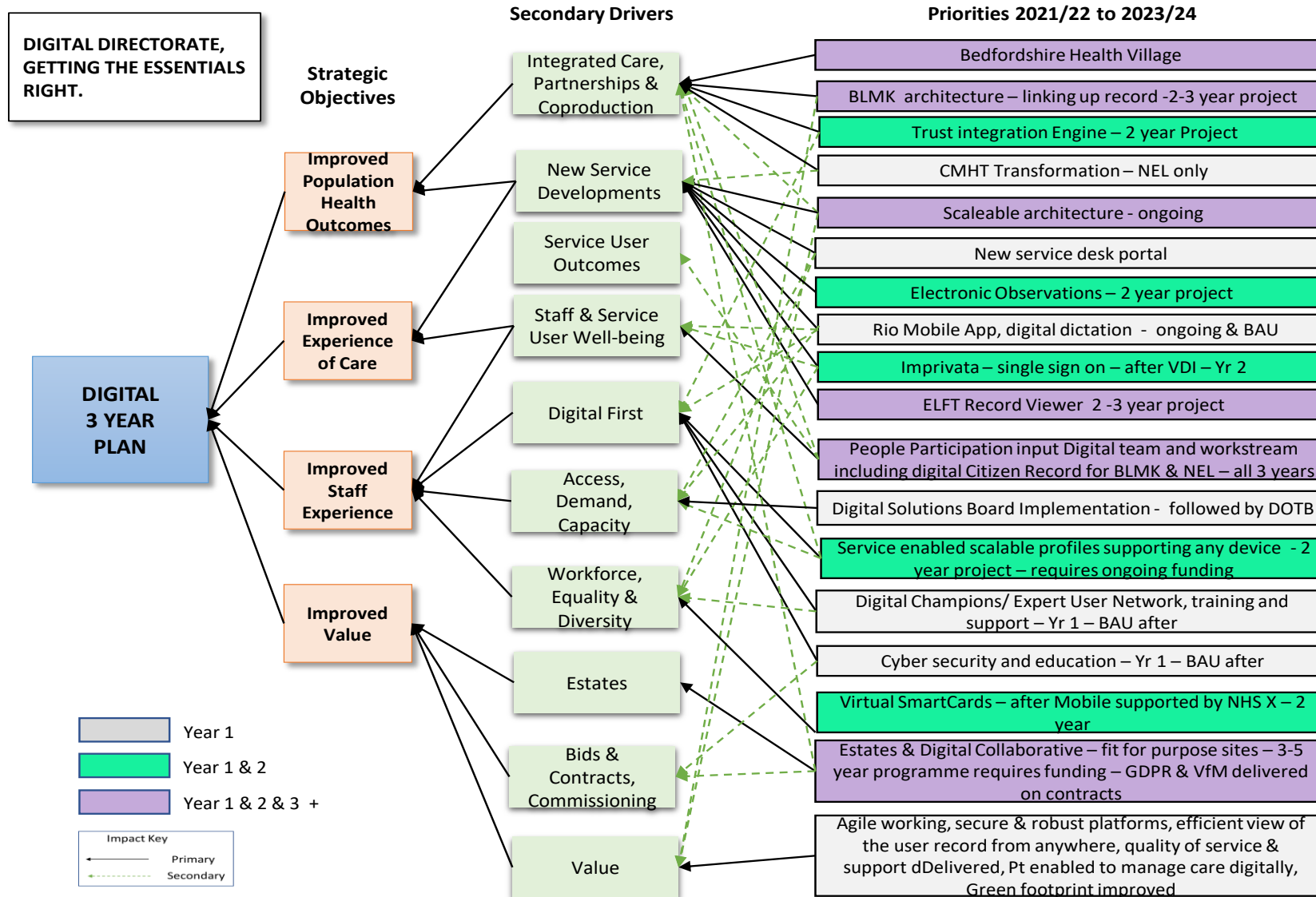
The diagram below to the right shows the target position for external integration.

- ELFT will need to integrate with both the East London and the BLMK shared care record developments. These include live access to shared care records and also potentially facilities to support complex care coordination and risk stratification/case identification.

- The Trust also needs to support ICS level population health analytic work through provision of relevant data sets. Population health analytics is expected to continue to be primarily supported through data set transfer rather than by real-time data integration (message based integration).

Wider care records at a regional or LHCRE level are also being developed and may have implications for the Trust, but will primarily consolidate information from the ICS level systems.
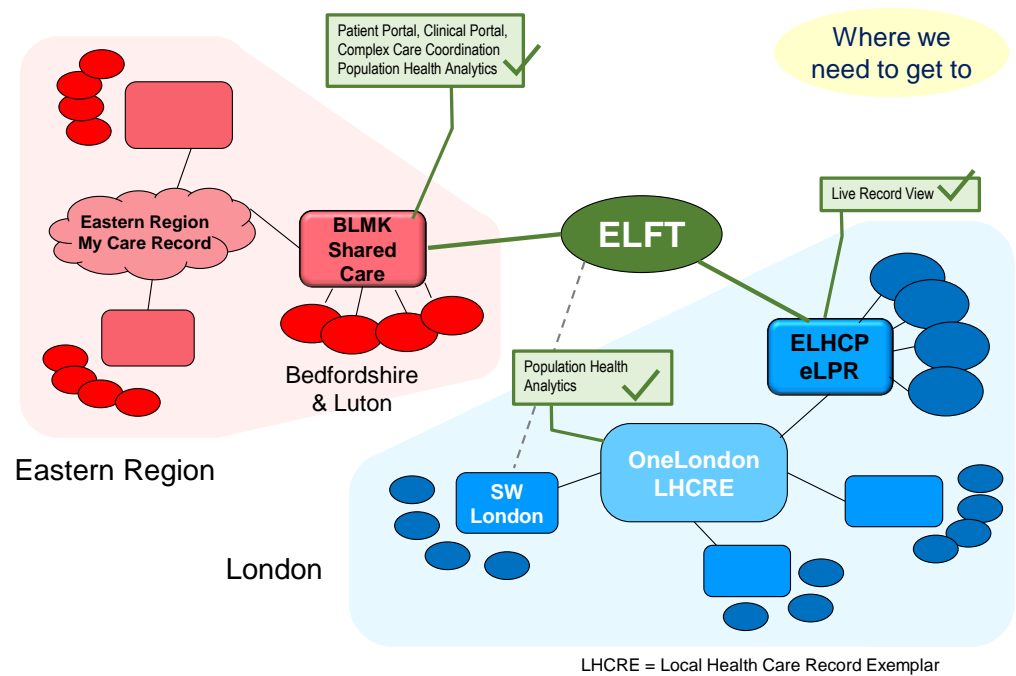
Appendix C   **Digital Directorate Annual Plan 2021/22**

Appendix D   **Benefits in Progress**

Benefit	Category	Inpatient Care - E-Obs	Integration & ELFT Record	VDI & Cloud	BLMK & SHCR - ICS	ELFT Record	People Partic - PKB	Infrastructure	Estimate Confidence	Year 1	Year 2	Year 3	Year 4	Year 5
Reduction in harm due to sub-optimal e-observation system	Patient Safety	✓				✓	✓	✓	Medium	80	100	100	100	100
Reputational Impact	Cost Avoidance	✓							Medium	14	28	42	56	56
Litigation costs related to delayed diagnosis/lost records/patient harm	Cash Releas.Cost Avoid	✓	✓				✓		Medium	69	70	70	70	70
Releasing time to care - Nurses	Time Releasing	✓	✓	✓	✓	✓	✓	✓	Medium	20				
Releasing time to care - Doctors	Time Releasing	✓							Medium	20				
Better Management of at Risk Patients	Patient Safety	✓	✓	✓		✓	✓		Medium	10				
Admin Staff Saving	Cash Releasing		✓						Medium	10				
Reduced Scanning Costs - Digitising at source	Cash Releasing		✓						Medium	10				
Reduced storage costs	Cost Avoidance		✓						Medium	15				
Reduction in Face to face consults	Clinical Effectiv.		✓		✓	✓	✓	✓	Medium	5				
Better Management of Inpatient Alerts/Clinical Safety	Clinical Effectiv.	✓	✓	✓	✓	✓	✓	✓	Medium	10				
Improved utilisation of clinic slot	Cash Releasing	✓	✓	✓	✓	✓	✓	✓	Medium	0				
Improvement in Bed Visualisation across NEL	Patient Experience		✓	✓	✓	✓	✓	✓	Low	0				
Improved Indexation of notes to release time to care	Time Releasing	✓	✓	✓		✓	✓	✓	Medium	20				
Reduction in doctors time searching for the patient	Time Releasing	✓	✓	✓	✓	✓	✓	✓	High					
Reduction in users time logging in	Time Releasing	✓	✓	✓		✓		✓	High					
Reduction in Nurse time checking the patient identity	Time Releasing	✓	✓	✓	✓	✓	✓	✓	High					
Improved Section based documentation and digital sharing	Time Releasing	✓	✓	✓	✓	✓	✓	✓	High					
Improved mobile functionality	Time Releasing		✓						High					
Better monitoring of seclusion rooms.	Patient Safety		✓						High					
Improved visibility of interactions between drugs & improved safety	Patient Safety		✓						High					
Reduction of readmissions in the community	Cash Releasing	✓	✓	✓	✓	✓	✓	✓	High	0				
Improved response to COVID created clinic backlog - e clinic	Patient Experience	✓	✓	✓	✓	✓	✓	✓	Medium	20				
Reduced costs / improved coding	Cash Releasing			✓					Medium	10				
Reduced tests	Cash Releasing	✓			✓	✓	✓	✓	Medium	10				
More effective & safer Discharge	Cash Releasing	✓	✓	✓	✓	✓	✓	✓	Medium	0				
Continuous Improvement driven by Clinical Analytics - Clinithink	Clinical Effectiv.	✓	✓	✓	✓	✓	✓	✓	Medium	0				
Reduce Avoidable admissions - PKB & monitoring	Greater Good	✓	✓	✓		✓	✓	✓	Low	0				
Patient directed self care - all conditions - Community/MH/GP	Greater Good	✓		✓		✓	✓	✓	Medium	0				
Single Point of Access (SPOA)	Patient Experience	✓	✓	✓		✓	✓	✓	Medium	0				
Quick response times	Patient Experience	✓	✓	✓	✓	✓	✓	✓	Medium	0				
Collaboration with GP, Ambulance, Acutes, SS & Community and Patient	Clinical Effectiv.	✓	✓	✓		✓	✓	✓	Medium	0				
Reduced travel costs through the use of virtual clinics	Cash Releasing	✓	✓	✓		✓	✓	✓	Medium	0				
Better quality discharge documentation in real time	Cash Releasing	✓	✓	✓		✓	✓	✓	Medium	0				
E-patient engagement centre (prevention & improved communication)	Greater Good	✓	✓	✓		✓	✓	✓	Medium					
Improved stability of IT Infrastructure	Clinical Effectiv.							✓	High					
Improved uptime for Clinical Systems	Clinical Effectiv.							✓	High					
Less Capital Costs for System Implemetation & Ugrades	Cost Avoidance							✓	High					
Increase Speed of Clinical System	Clinical Effectiv.							✓	High					
Reduced Interface costs for system deployment	Cost Avoidance							✓	High					
Access to clinical systems across large geograpical area	Clinical Effectiv.							✓	High					
Provision of IT services to wider healthcare community	Income Generating							✓	Medium					
Improved scalability to meet new demands	Clinical Effectiv.							✓	High					
Quicker time to provision application services	Clinical Effectiv.							✓	High					
Improved Reliability via Reduced System Failure	Clinical Effectiv.							✓	High					
Total										**512**	**1,118**	**1,523**	**1,856**	**1,924**

Example benefits identification work

This table is taken from work in progress on benefits identification. At this stage it gives an indication of how potential benefits relate to the main areas in the strategy programme. More work is needed with senior stakeholders to validate, categorise, and quantify the benefit areas.

It is noted in the body of the digital strategy document that a strong focus on realising benefits through digital programmes is essential to ensure programme goals are achieved and that value is delivered. It is also necessary for a sustainable cycle of investment and transformation.

The digital strategy programme will develop an overview of the potential benefits across the programme and this will be underpinned by detailed benefits planning at the individual programme and project level.