Hertfordshire and West Essex Local Digital Roadmap

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Title of Document	Local Digital Roadmap – Hertfordshire and West Essex

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Contents

1. Executive Summary

Hertfordshire and west Essex have a joint Sustainability and Transformation Plan (STP) that outlines how we intend to deliver the step changes needed to underpin delivery of health and social care across our 3 CCGs. This Local Digital Roadmap (LDR) is the underlying digital strategy for that STP. It will show how we will seek to use technology for the benefit of patients, service users, practitioners and commissioners and support the delivery plan of the STP.

West Essex, whilst an integral part of this LDR and the wider STP footprint must also remain mindful to the interactions that they need to support with other Essex CCGs, health providers and local authority organisations. Most West Essex CCG residents interact with Essex Council services and other Essex facing services. The main area of shared interaction is ENHCCG residents who attend Princess Alexandra Hospital NHS Trust (PAH) for acute services but are then supported by Hertfordshire commissioned and delivered services. One of the key interoperability projects underway, currently with ENHCCG and WECCG, provides an excellent opportunity to extend good partnership working to provide more effective data interoperability across both Herts and Essex. Further, common technologies being used, such as tools for Risk Stratification, present an opportunity to benefit from economies of scale.

This LDR will look to maximise opportunities such as that outlined above for co-working and project delivery but also identify those areas that are specific to one or other of the CCGs. This will provide areas of specialism and expertise so we can minimise duplication of work effort. Where possible best practice will be shared and if contracts and projects can deliver economies of scale by joint working then we will look to leverage those savings.

Hertfordshire and West Essex is a large area with a diverse population of 1.5m people with varying health and social care needs. Whilst it has areas of affluence it also has areas of extreme deprivation. All of the organisations involved in commissioning and providing care within the STP area are clear that technology has a vital part to play in ensuring that services are the best they can be and equitable for all; that care professionals have access to the information they need to deliver

West Essex CCG faces the challenge of working across two Sustainability, Transformation Plan footprints, Essex and Hertfordshire. Further, work is underway within the location to set up an Accountable Care Partnership, and a collaborative IT board with members from the CCG, Essex County Council and other providers is in place. These all present challenges as the geographical split means that providers are procured through different governing bodies and many different processes and technologies are being used. However, regardless of these geographical complexities, WECCG is committed to partnership working and is also clear of the importance of technology to enable its best practice vision. The inclusion of WECCG in this roadmap is seen as an opportunity for WECCG to extend its exemplar technology models and also gain further expertise from partnering organisations within the Footprint.

Individual organisations have made progress in using technology to work towards the STP aims. However, we recognise that to move towards our desired outcome of paperless working by 2020 and digital care records we need to align IM&T Strategies and consolidate efforts into a joint approach across the STP footprint where appropriate.

We have identified four strategic priorities across organisations to maximise patient care and have established a governance structure that will allow us to deliver on these priorities. The priorities are:-

- **Interoperability** –the ability for patient data to be available to whoever needs it wherever they are – the shared care record with patient facing functionality to support appointment booking and health record access
- **Collaborative Working Environment** – ability for people to work across the whole health and social care estate such that they can access the systems they need to do their day to day job and the ability for patients to connect to clinicians via remote consultation type facilities
- **Joint Business Intelligence** – using the data that is collected to inform decisions across all organisations whether that is a commissioning decision or a performance monitoring decision or a patient risk stratification decision
- **Urgent Care Dashboard** – ability to manage patient flow and minimise system pressures

We understand the paramount importance of enabling patients to become empowered through the use of technology. To this end we will ensure that **patient empowerment** is a theme running through all the work we do.

Whilst priority areas for every organisation will vary we believe that these four STP wide workstreams will enable delivery of both joint and individual organisational projects for the benefit of patients.

We recognise the need for robust governance and change management and benefits realisation to ensure that projects are fit for purpose, clinically driven and deliver the desired outcomes. We also understand the need for Information Governance to be part of all of our work to ensure appropriate sharing and consent models.

We have established solid foundations for a programme of work that will allow us to build our technology capability to deliver paperless working and a digital shared care record for the benefit of patients and care professionals.

2. The Local Digital Roadmap

2.1. Development of the Local Digital Roadmap

This local digital roadmap covers the STP of Hertfordshire and West Essex. There are three CCGs within the STP and several key providers, many of which have contributed to this document.

They are:-

- Herts Valleys CCG – Lead CCG
- East & North Herts CCG – Partner CCG
- West Essex CCG – Partner CCG
- Hertfordshire Community NHS Trust – key community provider countywide
- Hertfordshire Partnership University Foundation Trust – Mental Health and specialist Learning Disability services provider countywide
- West Herts Hospitals Trust – main acute provider in HVCCG
- East & North Herts Trust – main acute provider in ENHCCG
- Hertfordshire County Council
- Essex County Council
- Essex Community
- Princess Alexandra Hospital NHS Trust – main acute provider in WECCG
- Stellar Health Care – main primary care provider organisation
- Uttlesford Health Care
- SEPT – main community and mental health provider in West Essex CCG
- EEAST Ambulance
- 111/OOH
- Hospices
- Virgin Care

The document has been created as a collaborative effort across all partners organisations.

2.2. Governance

Governance for the LDR is a fundamental part of the STP governance structure and this ensures this document is the digital strategy for the STP delivery. The CEO of West Herts Hospitals Trust is the assigned executive lead for the LDR and chairs the Digital Integrated Care Programme Board. Input has been sought from and alignment maintained with the Sustainability and Transformation Plan (STP) for Hertfordshire and West Essex CCGs through linkages into the STP Programme Board. Technology is an identified enabler workstream within our STP and reports into the wider STP governance structure. This close working relationship has meant that the priorities identified in the STP have been used to guide development of this roadmap.

Whilst technology is a one workstream within the STP the LDR comprises several strands and programmes that then deliver that one workstream. The governance structure for the LDR therefore has to represent alignment with the STP and also a governance structure that allows for local delivery and ownership to support specific and joint workstreams.

The document has been approved in its final version by the Digital Integrated Care Programme Board and the West Essex Health and Wellbeing Board. Prior to this high level approval each CCG approved the document at board level.

The Digital Integrated Care Programme Board has overall responsibility for delivery of the LDR across the STP footprint. This group has representatives for all keys parties as part of it and will ensure that they feed back to relevant partner boards and also feed back into the LDR group key messages from partner boards.

At every point patients and practitioners will be included in decision making to ensure that empowerment and true service improvement is the driving force for the use of technology across the STP.

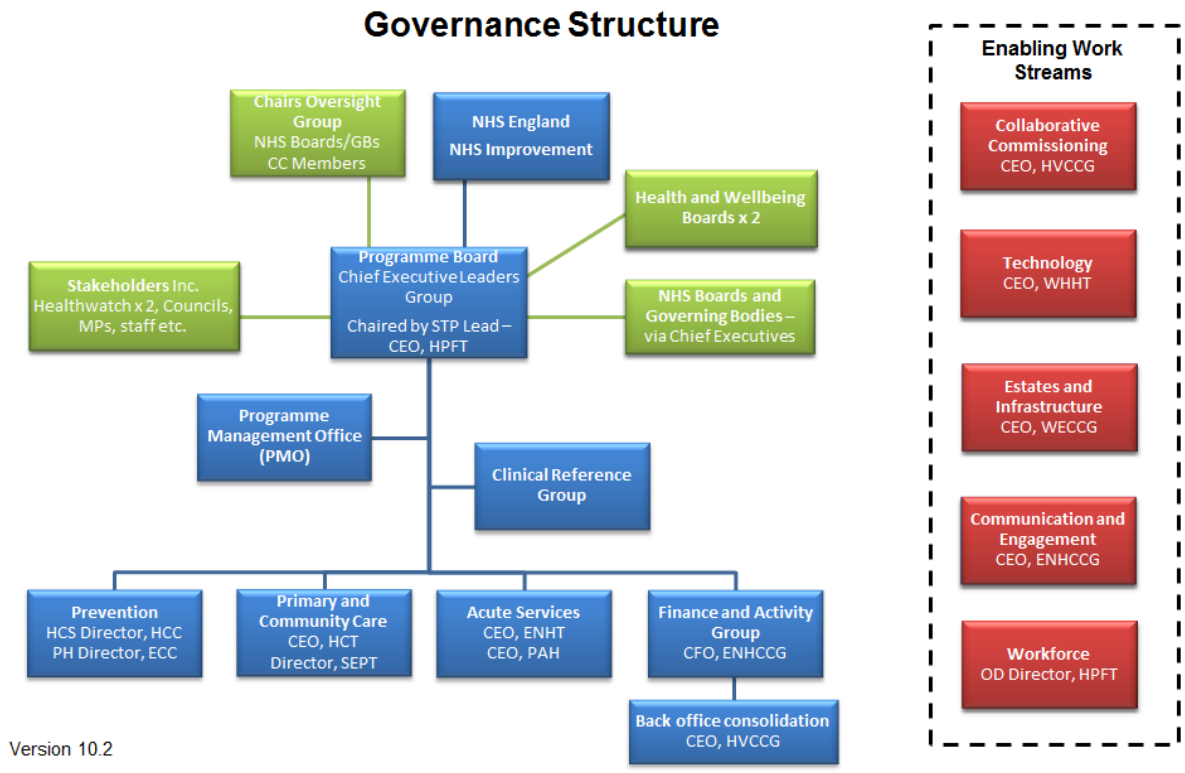

Figure 1 – STP Governance Structure

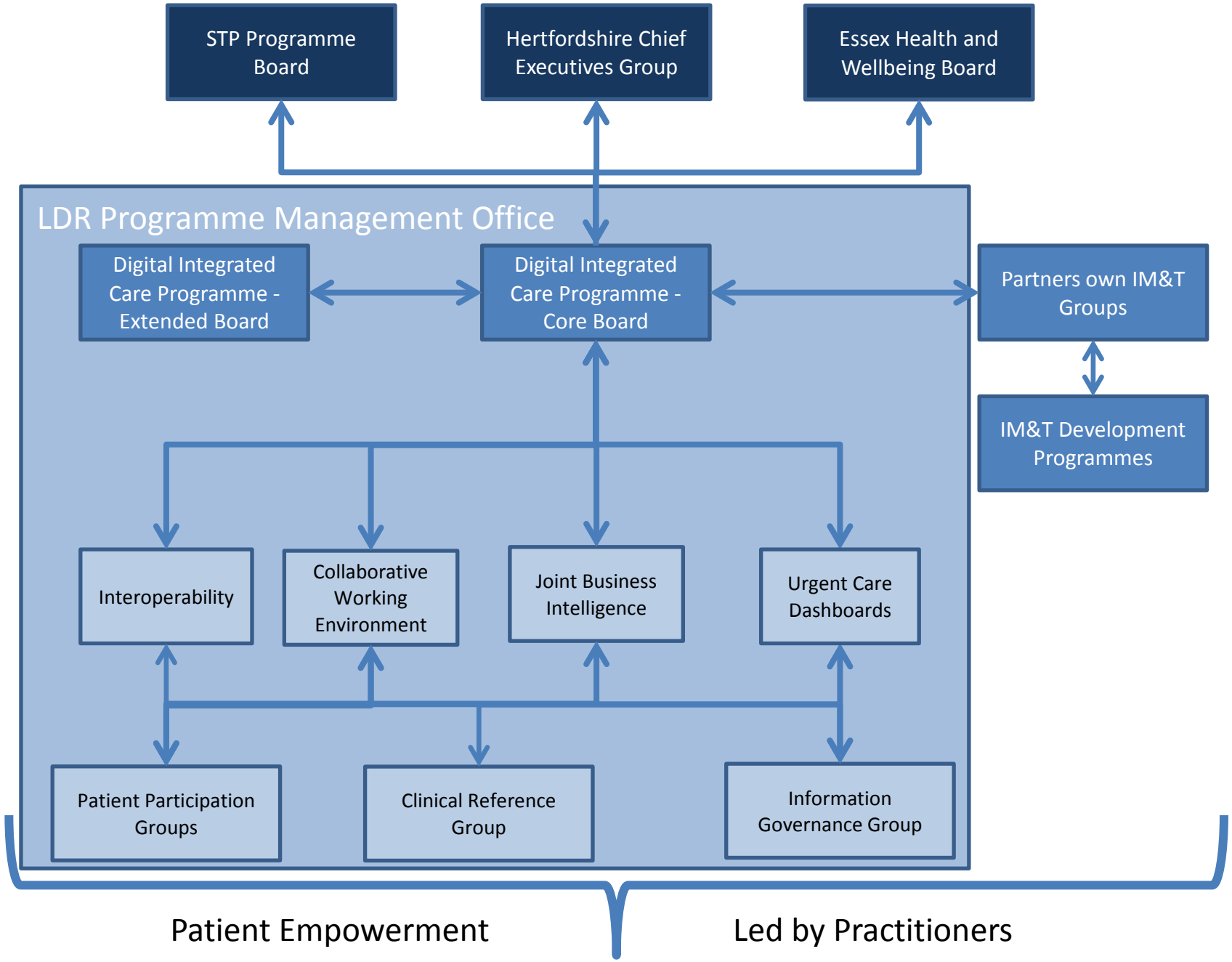
STP Programme Board
Hertfordshire Chief Executives Group
Essex Health and Wellbeing Board
LDR Programme Management Office
Digital Integrated Care Programme - Extended Board
Digital Integrated Care Programme - Core Board
Partners own IM&T Groups
IM&T Development Programmes
Interoperability
Collaborative Working Environment
Joint Business Intelligence
Urgent Care Dashboards
Patient Participation Groups
Clinical Reference Group
Information Governance Group
Patient Empowerment
Led by Practitioners

Figure 2

3. Our Vision for Digitally Enabled Transformation

3.1. Overview of the area and the population

Hertfordshire has a population of approximately 1.2m people and West Essex CCG a population of around 300,000 people. This is a diverse population that faces many challenges. We have areas of affluence and extreme deprivation thus the health and social care needs of our population are varied.

Digital Technology has a key role to ensure that front line staff can deliver services that are the best they can be for patients in all localities and that also support the daily activities of health care professionals. We have a vision that ensures technology is integral to service delivery and delivers patient facing benefits.

All CCGs has a **strong history of integrating services** and delivery of joint initiatives to improve patient services. This is built upon developed senior relationships and a shared vision for the health and social care system, under the Clinical, Political and Officer leadership of the Health and Wellbeing Board.

The Better Care Fund in Hertfordshire for 15/16 comprised a pot of £230m including adults commissioning budgets for learning disabilities, mental health, home care and care homes and this represents the size and scale of the ambition within Hertfordshire to continue to integrate health and social care. Hertfordshire's health and social care economy also benefits from strong leadership and financial stability creating an environment which enables innovation.

To complement the System Resilience Group consideration of the future of the urgent care system, in 2014 the Health and Social Care system created a provider led Integrated Care Programme Board to help enable and deliver the integration agenda. This board allows for system wide discussion and ownership of the integration agenda, and delivery led by providers rather than commissioners. The board has delivered some significant and challenging projects in 15/16, including:

- The roll out of an Integrated and Multi-Disciplinary Rapid Response Service to various localities
- The development of data sharing protocols and pseudonomised data population of the MedeAnalytics system by all NHS providers, primary care and social services patient data.

One significant benefit in Hertfordshire is having a strong, proactive and innovative trade association (Herts Care Providers Association) which allows for collaboration in developing thinking between statutory bodies and care providers in the county. This has and continues to be important in managing relationships with the provider market and embedding change.

Like every health and social care system, we face some significant challenges in developing a new model of care:

- Despite a history of financial stability, the increasing pressures on both health and local authority organisation finances provides a challenging context to ongoing investment in new service developments.

- Managing current recruitment and retention pressures of key workers and the impact of staff shortages on day to day operations across the health, social care and care markets.
- Developing thinking around the fuller integration of core health and social acre services to make best use of and manage resources within the system
- Making progress on the development of shared systems, data and technological interoperability and shared estates which currently limit our ability to integrate services.

The financial, political and leadership stability means that we feel we are well placed to deliver an ambitious plan to enable digital technology to meet the challenges identified across the health and social care economy.

3.2. Our use of IM&T to deliver change

Across the STP footprint we have a strong history of using IM&T to deliver change. Many of these projects support the main workstreams identified in this LDR and give us good foundations for taking those forward.

Past highlights with development potential include:-

3.2.1. Hertfordshire

Hertfordshire Community Trust have been a leading user of TPP SystmOne for all their community services. The programme team responsible for this was led by both a clinician and an Informatics Programme Manager delivering electronic health records to some 3000 clinicians. The deployment was often used as a reference site by NHSE to give others guidance on the challenges such a deployment can bring.

Both Hertfordshire Community Providers have invested in mobile working and used that to bring about culture changes for practitioners. Most staff now use mobile devices to access patient notes at the point of contact. This results in contemporaneous electronic health records being available to all services.

HPFT have invested heavily in Civica PARIS and electronic health records for all their patients. They have also implemented a single point of access where all referrals are triaged and then logged electronically with relevant services.

Within Primary Care we have delivered public Wi-Fi in all GP Practices allowing patients the facility to use the internet in surgeries as well as visiting practitioners. We have also provided Wi-Fi for practitioners to enable the use of mobile devices within surgeries.

Mobile devices have been given to GPs to allow for access to health records at the point of contact with patients wherever that may be. This is particularly useful in the care home environment.

West Herts Hospitals Trust were one of the first in the country to deploy PACS under the Connecting for Health programme.

Hertfordshire and West Essex CCGs are partnering with MedeAnalytics to exploit the potential from linking healthcare data flows across their health systems. This directly supports the development of the New Models of Care and the 5YFV, as well as the exemplar E&N Herts CCG Care Home Vanguard programme, and represents a leading national initiative in the area of data integration and business

intelligence. The data is pseudonymised at source to render it unidentifiable, but linkable with a common key, so that it flows legally from all partner providers to the central Mede repository which is only accessible by secure roles based access. Currently the data being linked includes Acute (SUS), Community Services, Mental Health and Social Care, with Primary Care data just coming on line. Each CCG geographic area can operate independently, however the partners are now progressing an STP linked data view to support their wider strategic plans across this footprint.

3.2.2. West Essex

Over the past 6 months WECCG has made some excellent progress in establishing an IT portfolio of work and initiating a number of key enabling programmes. WECCG have identified through this, many IT needs with regard to programme delivery and technology investment. Excellent working relationships are being established with West Essex providers, with a number of key projects being worked on collaboratively with the CCG, Primary and Secondary Care providers. Many of these projects link well with the rest of Hertfordshire and opportunities are presented in achieving common goals together. Delivery to date provides a strong base on which to build and WECCG are keen to continue these programmes, many of which are investment ready and already achieving benefits for the organisation.

My Care Record (MCR). The first implementation of the MCR programme went live in Princess Alexandra Hospital early October 2016. Investment has been made by WECCG, ENHCCG and PAH in standards, technology, expertise, processes, Communications, security, consent models and programme set up for this Interoperability Programme. The first phase has enabled ED clinicians at PAH the ability to view the full GP record at the point of care. Access is gained to some 36 practice versions of EMIS, Systm1 and Vision. ENHCCG introduce a further 30 practices to the model at the end of this calendar year. This project is achieving excellent benefits including:

- Joined up working, using common solutions, standards and methodologies
- Expected reduction if A and E admissions
- Sound infrastructure for richer data sets
- Improved care and decision making

The LDR now seeks the opportunity to maximise the return on this investment by extending the model to further organisations, providing richer data sets for both West Essex and Hertfordshire. Some funding has been attracted via the ETTF. However this is for 2016/17 and for a small Primary Care data subset only. Further areas being explored within phase 2 include:

- More PAH departments gaining access to the GP data
- Other organisations adding data to the portal, as well as accessing the data. Scoping underway with Community, Mental Health. Standardising and linking technologies is a challenge presented in working with our providers, but good progress is being made
- Social Services link to the Portal. Essex County Council have undertaken some work on their readiness with regard to providing access to records via the NHS number.
- Data being provided to all GP practices. Initial scoping and workshops held highlighted first requirement for outpatient letters and discharge summaries.
- Practitioners and clinicians able to publish, consume and amend data

- More hospitals deploying the model. Communications already underway with Whipps Cross.

Mobile Practitioner. A project has been initiated, with some ETTF and Capital funding, to provide a technology package for all GPs to work remotely from their surgery. A phase is in delivery, which is providing remote capability at each practice within the location to undertake consultations at all West Essex Care Homes. The first stage completes at the end of this calendar year and will then be rolled out to all GPs. *The STP states that "care will be provided, as far as possible in peoples own homes and community settings, based on a single care plan, delivered by a single integrated multi disciplinary team"*

Further work is required to achieve the STP aspirations. This project provides a good starting point. More work is needed to ensure the best mobile technology is used, all clinical staff have appropriate access and a change management aspect is applied to the programme to ensure new processes and ways of working are adopted across all our practices. Having access to the right information and being able to perform essential tasks and tests to make the right clinical decisions is vital for all healthcare workers whether in the practice, a patients home or any community setting. This project will enable healthcare staff to work to maximum efficiency, agnostic to their location – having real time access to view and update patient information at the point of care. To further enable mobile working, WECCG intend to update its infrastructure, install WiFi capability across all sites, deploy video conferencing capability, along with other tools for efficient working.

Linked projects to this include record digitisation and document management solution as well as digital dictation solution

Joining up Infrastructures. PAH is working with NEL CSU, SEPT and ECC to establish technology, security and design standards for critical infrastructure services that will enable seamless interoperability and connectivity between service provider networks. The objective of this programme is to allow health care workers to operate from any NHS or ECC site within the region with access to remotely hosted systems. Specific elements of this will be implementing Trust relationships across active directories, wireless network standards and mutual publication of organisation specific network ID's, common approach to uptake of NGN services and managing key service providers such as BT. Also in scope will be harmonisation of telephony services to exploit greater use of new digital technologies and the minimisation of line rental and call charges

Risk Stratification. Through the use of Mede Analytics WECCG have started to build intelligence to provide whole population health information. This initiative is similar to that undertaken in Hertfordshire and it is proposed that the organisations work closely to ensure common solutions and economies of scale are achieved. A project is underway in WECCG, working with Ribera Salud, gaining further intelligence on how to set up a model for Risk Stratification for Clinical Care. Some practices are running tools to identify frail patients requiring better care planning. The project is identifying more advanced use of the tools and roll out to all practices.

Technology for Patients. A number of initiatives are underway to encourage our patients to access information and self manage their health and care. In particular, Stellar Healthcare are launching a Health App which enables the patient to access health related information as well as link to their GP practice to gain access to their on line record, or book appointments

Regional Order Communications. PAH is planning to implement the Sunquest ICE – Integrated Clinical Environment to provide an advanced regional Order Communication hub for West Essex which could ultimately be connected to laboratory and diagnostics of neighbouring Acute services or private sector providers. The proposed system will greatly improve the turnaround time for critical patient diagnostic, improve efficiency and provide Primary Care users with a wider scope of services

The ICE system has is already directly integrated into Primary Care systems and will enable GPS to request and receive diagnostic results from within their practice systems. Further enhancements will be the addition of Electronic Discharge Summaries to the ICE infrastructure

IT Contract. The West Essex IT contract is due for renewal within the next year. The organisation is looking to the LDR as an opportunity to fully define its IT requirements, along with partner organisations and identify the best approach and solution to the provision of the IT support and maintenance contract.

Maximise National Systems. WECCG and its providers are working on ensuring the universal capabilities can be met and that effort is put into delivering the National Programmes locally. Additionally that we maximise the benefits from current contracts. At PAH, the Community Unit of TPP System One and EPR core is being deployed to support the transfer of care from patients undergoing an acute episode in hospital back out to their own homes.

It is proposed that this is the early component of a wider strategy to add additional services to System One to support more effective management of long term care pathways such as COPD, Diabetes and Frailty by providing more effective information sharing and care planning across care providers.

Also in scope will be the provision of electronic ADT messaging directly into the EPR core.

3.2.3. Essex County Council (ECC)

ECC is taking a holistic/systematic view of a person or family, including where and how they live, preventing and reducing demand and services they are receiving, and so supporting them to stay independent for longer; effective information governance and technology will be key enablers of this approach. An example of this is the significant investment in 1,800 technology enabled independent living self-contained flats. ECC is also investing in modernising the core technologies to enable effective case management and to enable more structured data sharing. This will be used as an opportunity to systemise and broaden access to appropriate partner professionals; and from there consider the self-management agenda for customers. ECC have a number of key projects underway, and going forward as part of the LDR will work with the CCGs to ensure common approaches and re use of solutions as appropriate. In particular, ECC have made progress on the use of citizen technology in care and are keen to engage health partners in this initiative. With regard to interoperability, workshops have been held with WECCG and other West Essex partners as part of the Accountable Care Partnership to identify data requirements across the whole care pathway. Governance is underway to agree internally the data models for sharing and consuming with health partners.

3.3. Our Vision

Building on our history we have developed a vision that is made up of 10 key items

Figure 2

Data that follows the pathway and perosn and not the provider *– Data needs to be accessible wherever the person is being treated and by whoever is treating them*

Service Users and Patients that are empowered *– people able to use technology to book appointments, see their own health and social care data, use technology to monitor and manage long term conditions*

Locations that are functional for all *– wherever a health or social care professional is located they should be able to connect to their host network and access their systems*

IM&T embedded in all aspects of service design *– ensure that IM&T is considered as part of business processes so that it is embedded in the work pattern of practitioners to ensure uptake is higher*

Workforce that is IT literate *– it is key that health and social care professionals feel comfortable using technology in front of patients and service users and treat technology as a standard part of their toolset*

Aligned IT Strategies across all partners *– whilst every organisation will have its own challenges and priorities it is important that these are complementary and leverage economies of scale*

Workforce that sees the value of IT and data *– ensure transformation work embeds technology within the workforce so it is valued*

Clearly defined information requirements *– if there is a need to collect data then make sure this is as part of the front line use of a system and the need and the data needed are well defined*

Infrastructure that is agile *– create infrastructure that is easily upgraded, adaptable and has a long shelf life*

Outcome focused *–systems that support practitioners in working with patients and service users on outcomes - enabling the recording of and the reporting on outcomes so that the true value of health care services can be analysed*

In support of this vision the Digital Integrated Care Programme Board has identified four priority areas for immediate action. Each has a short term (2016/17), medium term (2018/19) and long term vision (2020/21).

1. **Interoperability**
    - Short Term Vision - the ability for practitioners to view relevant health and social care data on a patient/service user regardless of where that core data resides
    - Medium Term vision - the ability for practitioners to view relevant health and social care data on a patient/service user regardless of where that core data resides and then to click through to the core system if more detail wanted
    - Long Term Vision – the ability for practitioners to view relevant health and social care data on a patient/service regardless of where that core data resides and to write back to that core system if appropriate

    For patients this means the ability to view and contribute to their electronic health and social care record. We will also seek to enable electronic appointment booking for all major health and social care services through a unified system.

2. **Collaborative Working Environment**
    - Short Term Vision - the ability for practitioners to easily connect to their host employer network across the health and social care estate
    - Medium Term vision - the ability for practitioners to easily connect to their host employer network across the health and social care estate and access core clinical systems as their job role dictates
    - Long Term Vision – the ability for practitioners to easily connect to their host employer network across the health and social care estate, access core clinical systems as required and share documents, calendars, patients records in a secure environment

For patients this means the ability to use Wi-Fi in health and social care buildings. We also aim to deliver remote consultations and communications between patients and services.

3. Develop a **Joint Business Intelligence** capacity
   - Short Term Vision - Creation of a virtual team across health and social care organisations delivering integrated insights across multiple services and ensuring effective IG
   - Medium Term Vision - Dedicated, integrated resource with data warehousing and co-ordination delivering integrated insights across systems
   - Long Term Vision – data routinely used from all aspects of health and social care to inform commissioning, service design, performance monitoring and public health agendas

   For patients this means that teams will have the ability to risk stratify effectively and ensure that early intervention with the most at risk patients prevents un-necessary admissions and facilitates early discharge.

4. Develop a real time **Urgent Care Dashboard** function to support systems resilience
   - Short Term Vision - Live, automatic integrated hospital and social care activity dashboard to support whole system flow to reduce delayed transfers of care and increase efficiency
   - Medium Term Vision - Live, automatic integrated hospital, social care and community services activity and capacity dashboard to support system flow to reduce delayed transfers of care and increase efficiency
   - Long Term Vision – visibility of patient flows through the system, live bed states and ability for discharge planning teams to be able to interface electronically to book discharge packages

   For patients this means that the overall system flow will be better managed reducing waiting times in emergency care settings and allowing for better management of the discharge process.

Joint working groups across all key partners will look to drive forward these priorities with the view to business cases being developed during Q2 and Q3 of 2016/17. This will deliver the short term visions from late 2016/17 with medium term visions for 2017 through to 2019 and the longer term 2019 through to 2021.

This overall vision, supported by the priority work areas, will allow technology to support the health and social care system in Hertfordshire and West Essex by addressing the 3 challenges in gaps set by the NHSE Five Year Forward View. It will take us towards paperless working by 2020.

West Essex CCG are already moving forward with the My Care Record programme and ENHCCG form part of the phase 1 delivery. WECCG have joined the STP Integrated Care Board and will share their learnings and experience to date. This will enable Hertfordshire to re-use components of the programme. For example - uniform communications and consent models across the STP footprint to ensure that patients receive consistent messages about information sharing and that practitioners are working to only one model wherever they are working within the area.

3.4. The LDR as the Digital Strategy for the STP

3.4.1. Delivery aims

The STP has stated it will deliver

- Reduced demand for acute hospital services, based on work across targeted care pathways
- The next phase of planning to modernise the acute hospital sites in Watford and Harlow
- Deliver against the year one Prevention strategy plan, reducing acute hospital demand for patients with a range of conditions from diabetes to obesity
- Redesigned community-based health and social care services, working more closely together than ever before to improve clinical quality, patient experience and affordability, and give equal priority to physical and mental health needs
- Meet or exceed STP system control totals on a sustainable long term basis
- Meet the national requirements of the Five Year Forward View, NHS Constitution and improvements in services such as Mental Health and Cancer care.

This LDR supports this work in the following ways:-

Reduced demand for acute hospital services, based on work across targeted care pathways	**Interoperability** – access to clinical information to enable MDT care teams to deliver care in settings outside of hospitals. **Collaborative work environment** – the ability for traditional acute services to be delivered from other care settings by allowing access to systems from any suitable location and ability to share information easily with others.
The next phase of planning to modernise the acute hospital sites in Watford and Harlow	**Collaborative work environment** – ensure that any redeveloped buildings are technology ready and are provisioned as part of the collaborative work environment. They must have enough future proofing to allow for technology to be part of any redevelopment.
Deliver against the year one Prevention strategy plan, reducing acute hospital demand for patients with a range of conditions from diabetes to obesity	**Interoperability** – ability for more efficient services through the sharing of clinical data across the whole patient pathway. **Joint Business Intelligence** – the ability to provide robust performance data across all providers to understand service need and demand.
Redesigned community-based health and social care services, working more closely together than ever before to improve clinical quality, patient experience and affordability, and give equal priority to physical and mental health needs	**Interoperability** – ability for more efficient services through the sharing of clinical data across the whole patient pathway. **Joint Business Intelligence** – the ability to provide robust performance data across all providers to understand service need and demand.

Meet or exceed STP system control totals on a sustainable long term basis	**Joint Business Intelligence** – the ability to provide robust performance data across all providers to understand service need and demand. Make informed commissioning decisions. **Urgent Care Dashboard** - ensure systems resilience through accurate real time data on system capacity thus ensuring that the system is always working at its most efficient and therefore cost effective level.
Meet the national requirements of the Five Year Forward View, NHS Constitution and improvements in services such as Mental Health and Cancer care.	All of the workstreams align and support the NHS Five Year Forward View as well as the aspirations of the NIB Personalised Health and Care 2020 documents.

3.4.2. Priority Pathways

Our STP identifies 5 priority pathways

- Frailty
- Diabetes
- Stroke
- COPD
- Admission Prevention

The LDR can support these pathways in many ways. Below are some examples

Frailty	**Interoperability** – visibility of GP information available to acute geriatricians enabling more informed care. Visibility of medication changes issued in the acute setting accessible on discharge by the GP to ensure safer and more effective prescribing. *For patients this means they won't need to repeat information to very practitioner they have contact with instilling a sense of trust and confidence in the practitioners they see.*
Diabetes	**Interoperability** – ability for practitioners from any provider to see all relevant information including latest test results wherever they are. **Collaborative Work Environment** – ability for practitioners to share documents and resource easily across the network in buildings regardless of employer or location. *For patients this means they will have access to their own health records and be able to better manage their own condition*

Stroke	**Interoperability** – ability for practitioners to see information especially past medical history that can inform decision making during the critical first few hours of the stroke. **Urgent Care Dashboards –** ability to plan discharge to appropriate place with visibility of current bed positions across the health and social care area. *For patients this means they will be discharged in a more timely and efficient manner to an appropriate location with the relevant care packages in place at discharge.*
COPD	**Interoperability** – ability for practitioners from any provider to see all relevant information including latest test results wherever they are. **Collaborative Work Environment** – ability for practitioners to share documents and resource easily across the network in buildings regardless of employer or location. *For patients this means they will have access to their own health records and be able to better manage their own condition through access to results but also through the use of telemonitoring devices*
Admission Prevention	**Joint Business Intelligence –** ability to risk stratify patients effectively and prevent admission through prevention and early intervention agendas. *For patients this means that they will be seen by rapid response teams in their own place of residence and not need to be admitted to hospital*

3.5. Health and Wellbeing Gap

'***The health and wellbeing gap****: if the nation fails to get serious about prevention then recent progress in healthy life expectancies will stall, health inequalities will widen, and our ability to fund beneficial new treatments will be crowded-out by the need to spend billions of pounds on wholly avoidable illness.'* – NHSE Five Year Forward View.

The following table shows the key priorities identified in our STP for the Health and Wellbeing gap alongside the vision for technology that supports this.

STP Priority	LDR Vision
Reduce variation in primary care outcomes	Use Referral Pathway and Decision Support tools across all practices to ensure variation minimised. Work with providers and practices to ensure a minimum of 80% of referrals go via e-Referrals Service.
Improving End of Life Care	Develop and deploy an Electronic Palliative Care Co-ordination System that that allows providers to know and follow people's end of life wishes through visibility of a shared end of life advanced care plan.
Increase the role of pharmacy in managing Long Term Conditions	Work with the national programme to support deployment of Summary Care Records in Pharmacies to allow visibility of key medication information.
Transforming Care in care homes	Enabling primary care access to a patient's core GP records in care homes through mobile working. Support triage of patients through e-consultations between care homes and primary care clinicians. ENHCCG work as a vanguard programme in care homes will have strong IM&T elements will develop a replica Airedale model using the 111 service for the clinical support and then provisioning encrypted laptops with a System One Care home module which will link back to their GP Practice WECCG are working on a project which enables consultations to be undertaken in Care Homes, with full data access and update at point of care. HVCCG are doing a similar piece of work.
Support people with LTCs to manage their condition	Use Telehealth and provision of digital information to inform and empower patients to monitor their conditions from home either through wearable technology, monitoring devices, text messaging systems or fully managed Telehealth provision.

Work on the pan-STP **Interoperability** project will also support this agenda through access to real-time patient records across providers and sites.

We are mindful of the national work on a Children's Health Digital Strategy. We will seek to ensure that this is considered in our work and that we use the benefits that brings to support children's services in the county.

For all providers in Hertfordshire and West Essex the NHS number will be the key identifier used, both in adult and children's services. This will ensure that it will be possible to align health and social care records, and provide safe, efficient care across both adult and children's services.

3.6. Care and Quality Gap

*'**The care and quality gap**: unless we reshape care delivery, harness technology, and drive down variations in quality and safety of care, then patients' changing needs will go unmet, people will be*

harmed who should have been cured, and unacceptable variations in outcomes will persist.' – NHSE Five Year Forward View.

There is a drive to deliver more services through hubs and locality working in all areas. Technology is vital to allow that work to happen.

For the hubs a shared care record is a vital element. It will allow patients to use different services within a hub during one visit and for their record to be visible to all providers. Hubs must also have infrastructure that allows professionals to use networks and computers to access their systems and files regardless of which provider they work for. Our **Interoperability** and **Collaborative Working Environment** projects will allow these models of care to become reality.

Risk Stratification is a key enabler to improve care and quality, and all CCGs are looking to leverage maximum benefit from Business Intelligence tools to underpin that. This will take data from as many sources as possible to allow the identification of those patients most at risk and ensure they are cared for appropriately. This allows for proactive care by identifying the at-risk patients and, through early intervention, preventing them from entering hospital. The planned **Joint Business Intelligence** project will be the foundation for this work.

For primary care we are looking to facilitate federated working models to enable 7 day care. This will require the ability to book appointments, exchange basic tasks and read and write to patient records across practices.

Visibility of key health and social care information at point of contact will enable better care planning. For acute patients this will aid with effective discharge planning to ensure patients are discharged safely to the most appropriate place and prevent unnecessary readmissions. Our workstream on a real time **Urgent Care Dashboard** will aid all discharge planning teams to have visibility of the county bed states and to manage that bed flow such that it prevents system pressures.

3.7. Finance and Efficiency Gap

*'The **funding and efficiency gap**: if we fail to match reasonable funding levels with wide-ranging and sometimes controversial system efficiencies, the result will be some combination of worse services, fewer staff, deficits, and restrictions on new treatments'.* – NHSE Five Year Forward View.

One of our priority workstreams is **Joint Business Intelligence**. We are clear that we need to use the large amounts of data we collect to provide meaningful intelligence that supports commissioners and providers to improve services and to help us understand our populations better so that we can provide services that truly meet patient needs. We have already established a project to extract primary care data to feed into our Risk Stratification tool to ensure that it is using the data required to provide accurate identification of those patients most at risk. Services can work with them to prevent admissions and deterioration.

All of our projects will support the development of pathways that deliver care closer to home and bring patients out of expensive acute environments into more appropriate community based services.

We are working with primary care to ensure that patients are aware that they can view their own GP health record and the benefits this brings. We are seeking to ensure that our **Interoperability** project delivers a patient portal so that patients have access to their whole health record on-line. As we deploy Telehealth solutions that allow patients to self monitor long term conditions this will be key in educating patients to understand the impact of their actions on their health.

Further areas where finance and efficiency benefits may be gained are in contracts rationalisation. The WECCG IT contract is shortly due for renewal. There is an opportunity here to benefit from economies of scale by joining services and support structures.

We will also look to leverage efficiencies and savings by ensuring technology is utilised across back office functions of all organisations. This may be to rationalise referral centres, look at collaborative work tools or better use of technology training and development resources. This should enable technology to be a key contributor the STP aim of reducing running costs.

3.8. Empowering the workforce and patients to be part of the Vision

The Government's Digital Inclusion Strategy highlights 4 key areas that we must address to ensure that technology is accessible to all:

- access - the ability to go online and connect to the internet
- skills - to be able to use the internet
- motivation - knowing the reasons why using the internet is a good thing
- trust - a fear of crime, or not knowing where to start to go online

These 4 areas apply to patients but also to the health and social care workforce.

Our vision states that we need a workforce that understands why technology is important but also that can use the technology they have, enabling them to do their job better or easier.

All organisations in the LDR have strong training programmes that ensure IT is part of the 'on the job' training practitioners receive. We are also hoping to engage with our local university to ensure that technology is part of the health care qualifications they deliver. Through appropriate change management processes we ensure that IT is delivered as part of wider transformational change with care professionals understanding the part that technology plays in their day to day work.

For patients we will endeavour to leverage the schemes that county and district councils have to enable internet access for all to empower patients to use technology to access their medical records on-line, book and amend appointments on-line, order repeat medications on-line, to monitor their long term conditions on-line and also to interact with practitioners through e-consultations, for example.

Several organisations have CIO or CCIO roles who sit at board level and for both CCGs there is an IT workstream as part of their transformation strategies. The Digital Maturity returns suggest that some providers, whilst having senior leadership for IM&T, lack leverage at board level to make IM&T a priority item. This is usually due to conflicting demands on funding streams. We recognise this and aim to ensure true board understanding and support for IM&T through the implementation of our LDR.

3.8.1. Patient Empowerment

Technology has a vital role to play in empowering patients. Whilst all of the main workstreams support this agenda in various ways there will be some more distinct projects that take this further. Research has shown that many patients adhere to treatment regimes better if they are involved and feel in control of their care. The Diabetes pathway that is a priority for the STP will look to utilise 'Apps' and telemonitoring solutions to empower patients to have this desired control. Other pathways will look to take lessons from this work and gradually introduce this level of patient empowerment into all services.

One other area we will look to move forward is remote consultations. This could be particularly beneficial in care home scenarios where often patients with complex needs are admitted to hospital. With remote consultations it will be possible for a GP or another practitioner to offer triage advice and prevent admissions,

We have a patient representative on the STP Integrated Care Programme Extended Board to ensure that the patient voice is heard as part of the decision making process and we would seek to have patient involvement in all key technology projects where possible.

All CCGs are already looking at projects that involve Telehealth in various formats. Social Care already has a strong history of using telecare devices and we would look to combine these workstreams if possible.

Representatives from CCGs regularly attend Patient Participation (PPG) networking events. This allows us to understand the patient perspective on projects we may be planning. It also gives us an opportunity to get patients involved. For some projects, such as patient online services, PPGs have agreed to hold awareness sessions at practices and raise awareness through their networks of this functionality. This group has also been used to understand patient views and desires around consent questions.

4. Baseline Position

4.1. Current Digital Maturity

All key providers in the LDR footprint participated in the recent digital maturity exercise, the results are below.

Question	National Average	National Acute Average	National Community Average	National Mental Health Average	ENHT (Acute)	HCT (Community)	WHHT (Acute)	HPFT (Mental Health)	PAH
Strategic Alignment	76%	74%	76%	78%	85%	80%	38%	44%	81%
Leadership	77%	76%	76%	77%	80%	60%	70%	50%	90%
Resourcing	66%	65%	65%	66%	60%	85%	65%	35%	65%
Governance	74%	73%	72%	72%	75%	85%	50%	70%	70%

Information Governance	73%	73%	74%	71%	67%	75%	67%	67%	75%
Records, Assessments & Plans	44%	45%	43%	45%	22%	57%	16%	54%	13%
Transfers Of Care	48%	43%	47%	51%	34%	44%	49%	25%	56%
Orders & Results Management	55%	54%	55%	56%	38%	54%	48%	67%	46%
Medicines Management & Optimisation	30%	31%	29%	26%	19%	12%	8%	17%	15%
Decision Support	36%	35%	36%	35%	28%	38%	6%	20%	42%
Remote & Assistive Care	32%	32%	32%	32%	58%	8%	8%	8%	8%
Asset & Resource Optimisation	42%	42%	42%	42%	40%	10%	15%	15%	25%
Standards	41%	40%	41%	41%	36%	42%	30%	29%	44%
Enabling Infrastructure	68%	67%	69%	68%	52%	68%	43%	27%	66%

HCT - Hertfordshire Community NHS Trust
HPFT - Hertfordshire Partnership University Foundation Trust
WHHT - West Herts Hospitals Trust
ENHT - East & North Herts Trust
PAH – Princess Alexandra Hospitals NHS Trust

Hertfordshire and West Essex are below average (each sector assessed against sector average and not national overall average) on 48 of the 70 return categories. Whilst on the surface this suggests that IM&T in the region is not as advanced as in other areas there has been strong investment in technology as a pre-requisite in some key areas. HCT have an electronic patient record for almost all of their services and mobile working that supports this. HPFT have deployed an EPR over recent years and have a strong roadmap to deliver this in full by 2021. Both Hertfordshire acute trusts have on-going IM&T programmes that moves them towards paperless working by 2020.

The above maturity index was completed by each organisation in isolation so we will continue to assess this return to ensure we have a comparable and objective view across all partners.

Hertfordshire and Essex County Councils has completed the exercise that was run across Social Care and the results from this will be factored into any work moving forward. The GP IT Maturity Index will equally be considered when available.

We recognise there are some areas of challenge and these are strongest in the acute sector. However, all acute trusts have current initiatives that will improve the figures above. With the digital roadmap footprint the initiatives providers are looking to concentrate on in the short term are:

WHHT

- Wi-Fi rollout across all trust sites during 2016/17
- Rollout of order communications for Pathology during 2016/17
- Implementation of electronic medical records tracking during 2016/17
- Chemotherapy ePrescribing during 2016/17
- Workstations on Wheels for mobile dispensing during 2016/17

ENHT

- Deployment of Lorenzo PAS during 2017
- ePrescribing during 2016/17
- eAssesments (Paper-lite) – initial work to plan deployment to support paperless working

PAH and WECCG

- Regional Order Communications solution
- Interoperability portal through My Care Record
- Joining and updating infrastructures with partner organisations. To include identify management, VOIP, federated active directory, managed print, patient and guest WiFi
- Extend use of MIG and Graphnet
- Full mobile technology package for clinicians and staff
- Effective risk stratification system for whole population health and clinical care
- Technology to support Patient at Home
- Continued development of EPRs across all services

HCT

- continued development of EPRs across all services
- scoping of the use of Telehealth to encourage patient self-management during 2016/17
- investigate ways of sharing data via electronic means during 2016/17
- Deployment of an EPR in community hospitals
- Continuation of trials around electronic referrals from GP Practices

HPFT

- HPFT have had an EPR for over 10 years delivering paper free/paper light working with a strong roadmap to leverage further benefits from this including functionality in 2016/17 supporting mobile offline working
- Rollout of Summary Care Record access for key frontline practitioners including medical staff, pharmacy and single point of access
- Further development and roll out of electronic tools to support effective live management of rosters matching demand and capacity
- Strengthen the clinical leadership of the digital agenda at all levels across the organisation

HVCCG

- Deploying EMIS Collaborative to 18 EMIS practices in Watford locality to allow for cross practice appointment booking and consultations to allow support extended hours and winter pressures
- Support for Primary Care Provider services with deployment of clinical systems and ability to share records with relevant primary care practitioners.

All providers also have work ongoing around establishing use of Skype, NHSMail and other productivity tools across both administration and clinical staff.

For all CCGs **Interoperability** is a key deliverable and this will start with development of a business case during 2016/17 as part of the pan-county workstreams discussed in section 'Our Vision'. The final aim of this work stream completed in 2020 will be a Hertfordshire Care Record that allows visibility of patient data throughout the whole care pathway. This will work alongside the West Essex 'My Care' work. To maximise efficiency, a records digitisation programme needs to be also be built into the roadmap where appropriate.

We are keen to learn from other areas and will look to utilise Academic Health Science Networks, Vanguard programmes, NHS Test Bed sites and other industry leaders to understand their work and where appropriate look to leverage technology and learning within our LDR area.

4.2. Limiting factors

The key limiting factor for IM&T within the LDR is funding. Both Hertfordshire acute trusts face many challenges and IM&T has been historically under-invested in meaning the current infrastructure needs significant work before IM&T can be appropriately leveraged. The picture is similar in West Essex.

Resources are also a challenge for partners because it is often difficult to secure funding to bring in project teams to deliver key projects over and above the business as usual teams.

Prioritising IM&T above the many other challenges the NHS faces is another limiting factor. With the continued QIPP pressures on all areas of the NHS money is often diverted to projects perceived as more beneficial.

5. Readiness Assessment

5.1. Leadership and governance driving change

All 3 CCGs areas have, within individual organisations, delivered IM&T projects that underpin clinical services. The Digital Integrated Care Programme Board has facilitated some pragmatic small scale wins on **Interoperability** by giving read only access to systems for practitioners across providers. We recognise that we need to drive IM&T programmes at county level to truly deliver benefits for front line staff and patients. To support this there will be a new board formed of one key individual from all partners who will be tasked with ensuring that work within their organisation fits into Hertfordshire LDR and that the identified priorities are driven forward to support the wider agenda – this group will be the LDR Deployment Group (see Figure 1). This group will ultimately be responsible for ensuring delivery of the LDR.

We recognise, in support of our overall vision that change needs to be clinically led. We will seek to ensure that projects are either led by end users or that practitioners are at least prominent members of project and delivery teams. Technology must be fit for purpose and be endorsed by the practitioners to be successful.

The 2 Hertfordshire CCGs plus HCT and HPFT use the same IM&T provider, HBL ICT (Herts, Beds and Luton ICT) and that partnership has agreed 6 principles that underpin our IM&T Strategy and we will seek to ensure these are used across the wider group when driving transformation. These are set out below:

HBL ICT Vision

To become the ICT provider of choice, by delivering without boundaries, cost effective, cohesive and innovative solutions that improves patient outcomes.

Principles – 'IT just works'

No.	Principles
1.	Patient outcomes at the centre of strategic decisions *All strategic decisions will consider 'How our actions contribute to improved health outcomes'*
2.	Promote a consumer like experience *Creating an environment where technology works effectively, securely and without the need for users to understand what makes the technology work – IT Just Works*
3.	Promote equality throughout the partnership *Offer the same opportunities to all partners and proactively share best practice and beneficial experience.*
4.	Create an environment that encourages innovation *Active listening and proactively seeking better ways of working in support of the most efficient and effective use of technology.* *For example "Take something that works and make it better" "Don't wait for it to happen"*
5.	Be socially aware and mindful of the impact of technology can have on our environment. *Getting the best out of technology throughout its useful life and not replacing equipment unnecessarily.*
6.	Provide an environment that ensures information is easily accessible to meet the demands of healthcare provision *IT is there when you need it with minimal effort*

5.2. The Change Management Model

It is key that once **Interoperability** and the other key projects are delivered they are used by both health and social care to enable transformation. Change management is vital to ensure that technology is part of wider change to work processes and becomes embedded within day to day life. Most organisations have their own change management approaches and business change teams. These teams work with practitioners to ensure that technology projects are fit for purpose and deliver true change. We will seek to engage strongly with patients through existing patient participation groups to canvas opinions on what patients see as important to them and how they feel technology can enhance services they receive.

Where no established change management process is in place organisations will be required to use the standard NHS Change Model.

Underpinning the change management approach will be the key ethos that this is not about technology for technology's sake but is about true transformation of organisations and services for the benefit of patients.

As we become more reliant on technology it is vital we have business continuity plans around processes to allow for patients to be treated safely when technology isn't working. This planning will be part of the change management process.

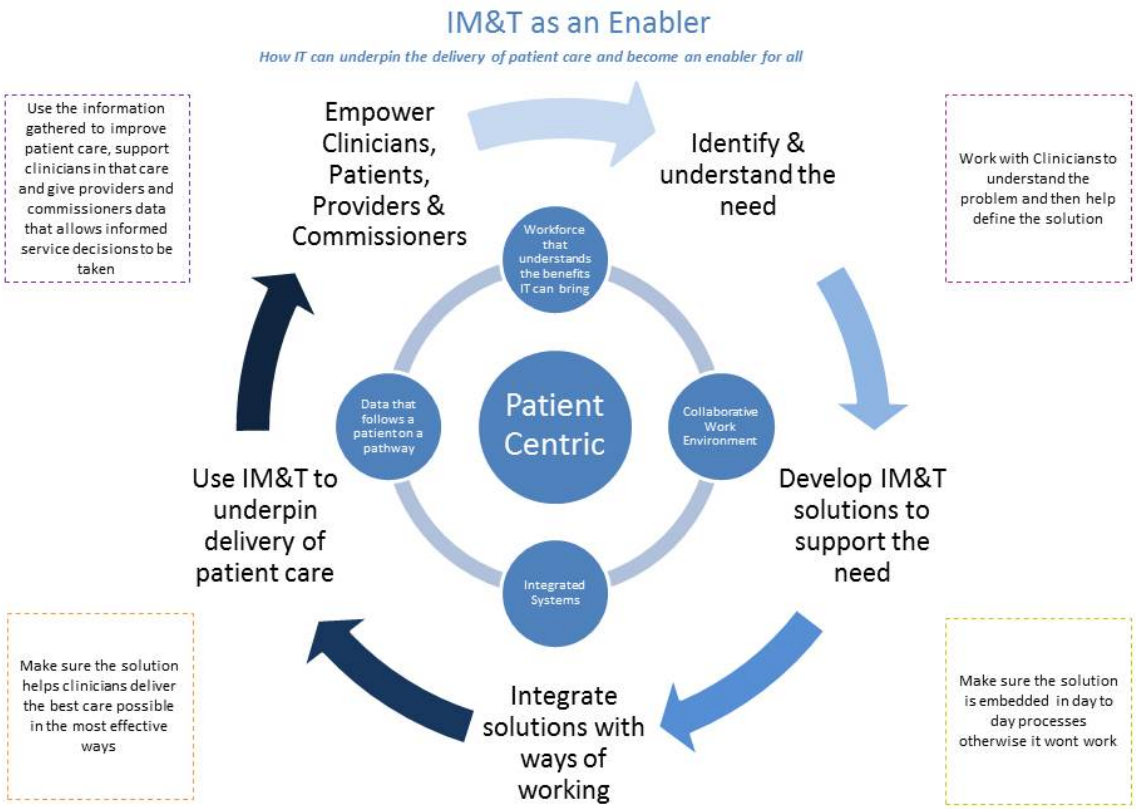

Figure 4

5.3. The Benefits Management Approach

All of the technology business cases developed will need to be clear on the benefits expected in financial terms and the anticipated improvements being delivered for patients and staff. These should address the health and wellbeing gap, the care and quality gap and the finance and efficiency gap. Benefits will be both qualitative and quantitative.

At present we have no robust benefits management approach but as part of the LDR Deployment Group we will see to establish a mechanism that can be used across projects for this work. No technology project should be carried out unless it delivers true benefits or is a pre-requisite to enable a wider programme to be delivered.

Benefits management will include establishing baselines and then measurement at key project milestones both before and after deployment. It is anticipated that end users will own benefits as

they will need to be the ones that make sure work processes change to leverage the benefits anticipated.

5.4. Investment

The overall capital ask for our LDR is £120m across all organisations.

5.5. Paper free at the point of care

All partners are aware of the drive for the NHS to be paper free at the point of care by 2020. Many of the projects currently being undertaken will enable us to move towards that target. However, the majority of these are still in the scoping phase. Whilst IM&T has been utilised to move towards paper free at the point of care we recognise that we need to develop an integrated programme as part of our digital roadmap that allow cross county projects to deliver this.

Our key focus will be the already identified workstreams of:

- Interoperability
- Collaborative Working Environment
- Joint Business Intelligence
- Urgent Care Dashboards

All of these will be expected to deliver some end product by the end of 2016/17 with a full delivery of 2018/19 and 2019/2020

5.6. How LDRs will be resourced

We face issues within health and social care but have a strong integration approach that allows us to make best use of available resources. We will use the Digital Integrated Care Programme Board to ensure that work is done once and shared so that everyone benefits from projects. Where possible we will expect staff to work across organisations to deliver projects. Project teams will be multi-organisational. Many organisations have established IM&T resources and it makes sense to maximise that knowledge and use to best effect within project teams and the PMO.

Key members of all project teams will be front line staff to ensure everything that is delivered is fit for purpose and that projects are value for money.

5.6.1. Central PMO Function

It is proposed that a Delivery PMO is organised that provides a central function to lead and deliver the plans outlined in this document. Currently each CCG undertakes its own Project Management. It has become apparent through the development of this LDR that there would be a real benefit in establishing a centralised office. This local health economy project team would include project management, training and transformation resources. A detailed analysis needs to be undertaken as to what resource is currently available, but it is a general theme that CCGs do not have budget provision to define, shape and deliver projects such as those highlighted in this roadmap. Whilst some support might be available from the support organisations, it is accepted that this is very limited in terms of quantity and relevant project management skill.

It should also be noted that the STP recommends the support of a PMO, and consideration should be given to linking these where possible to minimise duplication.

The following table gives an illustrative structure of a central PMO function for Roadmap delivery. The function would:

- Hold the Portfolio of work to be undertaken.
- Programmes would be managed centrally
- Develop and implement common standards and processes
- Carry out benefits analysis and realisation
- Define scope of project and delivery timelines
- Set up projects and acquire resource to deliver them
- Monitor and report on the portfolio as a whole
- Develop and implement Change Management, based on NHS Change model

Role	**Activity**
Portfolio Director	Oversee and create overall Portfolio for all CCGs. Management of portfolio budget and creation of programmes of work with detailed benefits plans linking with STP Integrated Care Programme Board and other senior groups as appropriate.
PMO staff x 2	Coordination and planning and monitoring/reporting
Business Analyst	High level business needs interpreted technically
Contracts Management	Contracts and procurement specialist
Project manager pool	Manage programmes and projects
IG pool	Provide IG direction/process
Technical resource	Technical direction

5.6.2. Outline of how resources can be utilised more effectively

In Hertfordshire and West Essex, the 3 CCGs procure their IT Support and some strategic management from a CSU or Shared Service. The acute trusts and social care providers each have either their own internal IT department or outsourced dedicated IT function.

For the CCGs, it will be essential to establish an IT Programme Management function that follows the principles of P3M (Project, Programme, Portfolio Management) to own, develop and deliver the project portfolio as outlined above. By working collaboratively with secondary care providers and local authority partners, skills and expertise should be shared throughout the county.

Furthermore the West Essex IT contract is shortly due for renewal and this presents an opportunity for the CCG to combine support requirements with partner CCGs and benefit from improved support and benefits of economies of scale.

6. Capability Deployment

6.1. Current maturity summary

6.1.1. Records, Assessments & Plans

Question	National Average	National Acute Average	National Community Average	National Mental Health Average	ENHT (Acute)	HCT (Community)	WHHT (Acute)	HPFT (Mental Health)	PAH

Records, Assessments & Plans	44%	45%	43%	45%	22%	57%	16%	54%	13%

Hertfordshire: Both community and mental health trusts already have a full Electronic Patient Record (EPR) and have plans to progress these systems with the addition of bed management and offline working.

Both acute trusts have many disparate systems but no overall EPR. Either through deployment of an integration engine or through a full EPR system they have plans to progress this for the 2020 paperless deadline.

West Essex/PAH: The Strategy is based on utilising its Established Cambio Cosmic EPR System which will be interfaced with best of breed clinical systems such Ormis Theatre Management System, Agfa PACs, Sunquest ICE – Integrated Clinical environment to form an integrated EPR solution.

Several strategic develops will complement this starting with the My Care Records Portal which will form the front end to a regional care records environment that will be shared with neighbouring provider services to provide a single point of access to care records systems

6.1.2. Transfers of Care

Question	National Average	National Acute Average	National Community Average	National Mental Health Average	ENHT (Acute)	HCT (Community)	WHHT (Acute)	HPFT (Mental Health)	PAH
Transfers Of Care	48%	43%	47%	51%	34%	44%	49%	25%	56%

Hertfordshire: Where possible discharge information is sent to other healthcare providers via email. This is increasing and the move to NHSMail2 will further enable this information to be sent securely across health.

Both acute trusts are looking at referral management systems either within their EPR or as a system that integrates with key clinical systems.

West Essex/PAH: The Trust is currently engaged in development plans to utilise the My Care Portal and System One Community to provide more effective management of patient care across provider boundaries with rich record sharing and care planning functionality

6.1.3. Orders & Results Management

Question	National Average	National Acute Average	National Community Average	National Mental Health Average	ENHT (Acute)	HCT (Community)	WHHT (Acute)	HPFT (Mental Health)	PAH
Orders & Results Management	55%	54%	55%	56%	38%	54%	48%	67%	46%

Hertfordshire: Clinicians have access to order tests electronically in many instances. We are looking to ensure that those results are visible to all.

West Essex/PAH: The Sunquest ICE system which is schedule for deployment early in 2017 will provide a versatile and feature rich solution for electronic ordering and results reporting across provider boundaries

6.1.4. Medicines Management & optimisation

Question	National Average	National Acute Average	National Community Average	National Mental Health Average	ENHT (Acute)	HCT (Community)	WHHT (Acute)	HPFT (Mental Health)	PAH
Medicines Management & Optimisation	30%	31%	29%	26%	19%	12%	8%	17%	15%

Hertfordshire: We recognise that this is an area where we need to do much more work to ensure IM&T allows better management and decision making.

West Essex/PAH: The Trust is fully engaged in implementing a full suite of electronic medicines management systems from leading provider JAC, Stock control is already deployed with chemo care management and meds management underway and scheduled for completion in 2017

6.1.5. Decision Support

Question	National Average	National Acute Average	National Community Average	National Mental Health Average	ENHT (Acute)	HCT (Community)	WHHT (Acute)	HPFT (Mental Health)	PAH
Decision Support	36%	35%	36%	35%	28%	38%	6%	20%	42%

Hertfordshire: Both CCGs are deploying Referral management software to practices to support better referral decision making. We recognise we need to ensure this is also taken forward with all providers.

West Essex/PAH: The Trust is currently implementing the established Nerve Center E Obs solution which it will be seeking to further exploit to provide more effective management and intervention for Sepsis and AKI

6.1.6. Remote & Assistive Care

Question	National Average	National Acute Average	National Community Average	National Mental Health Average	ENHT (Acute)	HCT (Community)	WHHT (Acute)	HPFT (Mental Health)	PAH
Remote & Assistive Care	32%	32%	32%	32%	58%	8%	8%	8%	8%

Hertfordshire: Whilst this is currently a low score we have plans to move forward with Telehealth trials in several areas.

West Essex/PAH: The Patient at Home initiative will be utilising new and innovative wearable monitoring technologies as well as remote drugs administration systems to support more effective

remote assistive care. This area is generally weak, and often duplicated by partners. Further work is proposed on joining partners to provision technology for care.

6.1.7. Asset & Resource Optimisation

Question	National Average	National Acute Average	National Community Average	National Mental Health Average	ENHT (Acute)	HCT (Community)	WHHT (Acute)	HPFT (Mental Health)	PAH
Remote & Assistive Care	32%	32%	32%	32%	58%	8%	8%	8%	8%

Hertfordshire: Both our community and mental health provider are deploying bed-management systems over the next 2-3 years. The acute trusts are either deploying full EPR solutions or looking to enhance their current bed management software.

West Essex/PAH: The Trust has an established in house IT Service which provides a full range of support services necessary to maintain and continuously develop its application architecture and infrastructure. Further partnership working on a number of programmes is proposed to improve optimisation

All of the above capabilities will be further enabled by the 4 key priorities that underpin our local digital roadmap.

6.2. Capability deployment schedule

Below are key tasks that health and social care organisations will be undertaking over the short term to move our capability levels forward:

Footprint:	Hertfordshire and West Essex

Capability				**Locally defined attributes ->**		
Who	**What**	**Year**	**Capability group**			
HPFT	Ability to view core GP information via summary care records	16/17	Records, assessments and plans			
HPFT	Ability to view medication information via SCR	16/17	Medicines management and optimisation			
HPFT	Ability to view GP records via SCR with Additional Information for those most at risk patients	16/17	Records, assessments and plans			
HPFT	Ability to use SystmOne core record viewer to see community record across MDTs	16/17	Records, assessments and plans			
HPFT	Mobile Offline working	17/18	Records, assessments and plans			
HPFT	Electronic prescribing including decision support around medications	18/19	Medicines management and optimisation			
HPFT	Skype pilot for Wellbeing Teams pilot	16/17		wider rollout 18/19		
HPFT	Deploy software to allow view of staffing levels/acuity on ward	16/17	Asset and resource optimisation			

ENHT and WHHT Acute clinicians in ED setting and other key pathway areas (e.g. Elderly Frail pathway)	Ability to see core GP record via record viewers such as MIG and SystmOne Core Viewer	16/17	Records, assessments and plans	identified teams 16/17	wider use 17/18	
Various – STP wide	Establish countywide EDT hub to allow electronic flow of documents across providers including discharge summaries	16/17	Transfers of care			
Pharmacists – STP Wide	View of primary care medication via SCR viewing via national rollout programme	16/17	Medicines management and optimisation			
HCT	Deployment of EPR in community hospitals	16/17	Records, assessments and plans			
HCT	Deployment of bed management as part of EPR in community hospitals	16/17	Asset and resource optimisation			
Primary Care – STP Wide	e-consultations in care homes	16/17	Remote care			
Primary Care – STP Wide	Deployment of referral pathway tools	16/17	Decision support			
Primary Care – STP Wide	Able to view community held EPR for patients identified at risk via read only access to community system	16/17	Records, assessments and plans	one out of four localities by 16/17	all localities by 17/18	
Primary Care – STP Wide	Access to all relevant pathology and radiology systems to enable electronic ordering and result viewing	17/18	Orders and results management			
Primary Care – STP Wide	Ability to work across clinical systems to support federated working	17/18	Records, assessments and plans	pilots in 16/17		

These will be monitored by the LDR Deployment Group to ensure that they are driven forward to support technology use in the area.

6.3. Future envisioned capabilities

All of the pan-county initiatives will assist all partners in moving their capability trajectory upwards.

Interoperability will be a key factor in moving many of the capability areas forward. This will facilitate visibility of patient data at key times to all health care professionals. Any chosen solution would facilitate a patient portal giving access to personal health records. The business case for this work will define the solution, but we are clear this will be the most important programme of work we undertake as part of our digital roadmap.

Collaborative Working Environments will enable the barriers between providers to diminish meaning we have a workforce that is truly pathway based and not limited by technological issues.

Joint Business Intelligence will allow us to make more informed decisions, understand our population and their needs, and design and deliver services that are fit for purpose.

Urgent Care Dashboards allow us to manage patient flow and pressures on the system.

We envisage business cases for all of the above to be delivered in 2016/17 with some functionality in that time but believe most functionality and benefits will be delivered in stages through to 2019.

These business cases will define the milestones and solutions we believe best fit our need and thus define our roadmap deployment plans.

6.4. Secondary Care - current and future digital maturity scores

All of our Acute Trusts acknowledge that their current maturity scores are low and have plans in place to achieve the trajectories below.

	Average scores across providers			
Capability group	**Baseline score (Feb 16)**	**Target (end 16/17)**	**Target (end 17/18)**	**Target (end 18/19)**
Records, assessments and plans	17.0	26.0	42.0	66.5
Transfers of care	46.3	47.0	59.5	67.5
Orders and results management	44.0	46.5	69.0	79.5
Medicines management and optimisation	27.3	36.5	64.0	79.5
Decision support	25.3	23.5	46.5	66.5
Remote care	24.7	42.5	57.5	60.0
Asset and resource optimisation	26.7	32.5	49.5	64.5

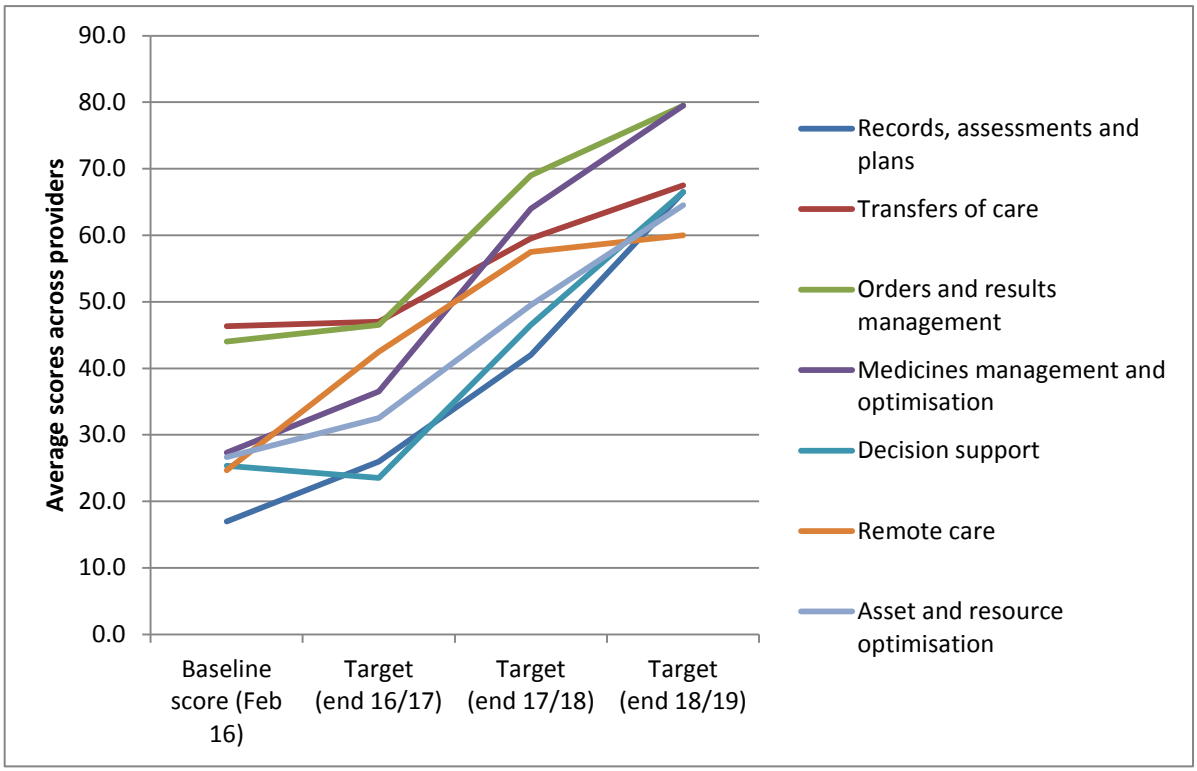

Figure 5 – Secondary Care Trajectory Proposal

7. Universal capabilities

7.1. Delivery plan for each capability

These are available in a separate document

8. Information Sharing

8.1. Information Sharing Agreement

All partners within the LDR have signed a countywide data sharing agreement with the exception of GP Practices. Work is currently underway to get GP Practices signed up to this agreement. This agreement is used as a basis for projects with specific Privacy Impact Assessments and IG considerations undertaken on a project by project basis.

Hertfordshire has registered interest in the 'GP Connect' initiative to enable us to support federated working across GP clinical systems. We are also pursuing other tools, such as Vision 360, that facilitate this cross practice working as we understand the importance of this in supporting 7 day working.

Herts Valleys CCG have installed EMIS collaborative allowing GP practices in Watford to book appointments across the participating 18 practices and also read and write to patient records across the federation.

Our **Interoperability** project will deliver a shared care record that will need robust IG and data sharing agreements. Part of that project will include a tie in to the IG Group (see figure 1). Where at all possible solutions will be countywide as we share many key providers including our community, mental health and out of hours providers, and we are clear that we cannot impose technology solutions that make life harder rather than easier for all.

Information Governance is a key element of any data sharing work. We have established an IG group that will support the four LDR programmes of work. One vital area of this will be to define an approach to role based access which will ensure that staff see information relevant to them and that is appropriate to their role. This will be in line with Caldicott recommendations and also be based on nationally defined tiered access system. This group will also define the county approach to consent to share so that service users receive a consistent message on what information is shared with whom and why. Processes and standards used by West Essex in their information governance campaign for My Care Record will be reused where possible.

8.2. Information Sharing Approach

We understand that the flow of date throughout the health and social care system is vital in supporting both practitioners and patients. Our **interoperability** workstream will look at how we move this forward. Key elements of this will be the provision of a mechanism that facilitates the sharing of information through open interfaces. Where at all possible systems with open APIs will be utilised (e.g. Primary Care Clinical Systems). Where this is not possible – for example a small provider such as a Drug and Alcohol abuse provider who use non industry standard systems - there will be an expectation that data will be still accessible to other providers. To support this, the solution that the interoperability workstream identifies will provide a facility for data feeds from systems outside of open APIs and an integration engine capability. A view on how this might work is represented below.

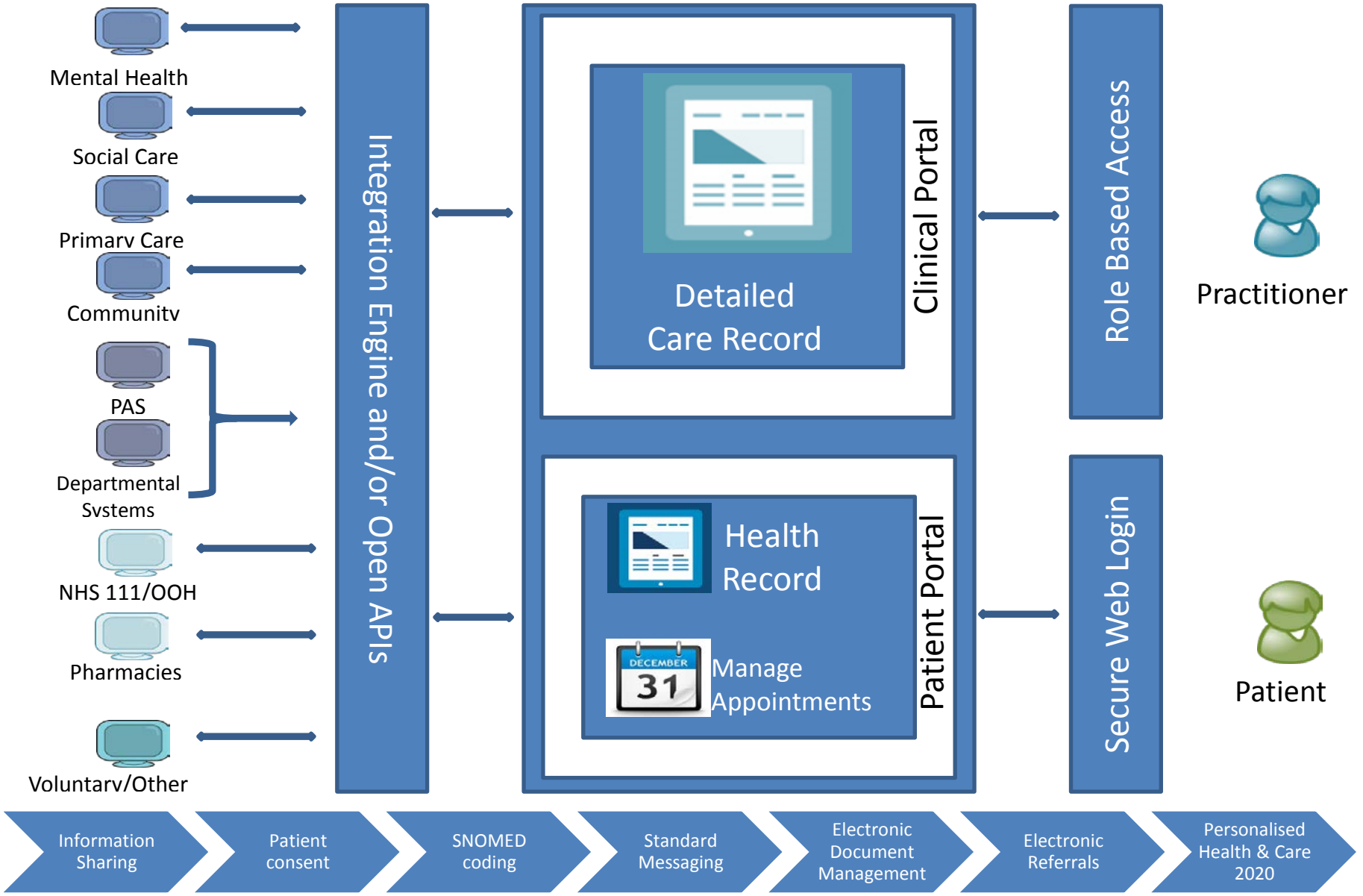

Figure 6 – Overall vision of Interoperability (not solution specific)

8.3. SNOMED and the Dictionary of Medicines and Devices (dm+d)

All providers will perform gap analyses on their current systems to understand the impact of moving to SNOMED and dm+d. These are both nationally mandated standards by National Information Board. In all instances providers will work with clinical system providers to understand the work required to move to SNOMED and dm+d and then create deployment projects to manage that work. The majority of key systems within Hertfordshire are provided by major software vendors and so it is anticipated this work will not be a major issue.

9. Infrastructure

9.1. Mobile working current status

To allow technology to support fully new ways of working and to help drive the desire to deliver care closer to home we need a robust mobile working approach. Our main community provider has enabled the majority of clinicians with mobile laptops to allow them access to the patient EPR at point of contact. Within Primary Care we are proving similar devices to allow GP access to records in patient homes, care homes and other sites.

Both acute trusts either have or are looking to utilise their Wi-Fi capability to allow Workstations on Wheels to be used around the hospital – initially this will support on ward prescribing but can be used for access to patient records where appropriate.

Community midwives are a very important group of clinicians that need access to both mother and child records in many different settings and we will look to ensure these staff can connect remotely as required.

As part of our overall **Collaborative Working Environment** workstream mobile working will be considered. We will utilise the expertise gained from the trial underway with the use of mobile technology for Care Home consultations in West Essex.

9.2. Collaboration enablement

Other challenges that our **Collaborative Working Environment** will help to meet are being able to share documents, calendars and secure emails across providers. Video Conferencing and other collaboration tools will be part of the national NHSMail2 migration programme and we will ensure that staff understand the benefits this brings.

We already have a network infrastructure that is shared across the 2 CCGs and also the main community and mental health provider so sharing of calendars and documents is commonplace already. We will look to extending this so there is better collaboration with our partners in West Essex.

9.3. Shared Infrastructure

The C**ollaborative Working Environment** workstream will also consider the advantages of shared infrastructures with particular reference to the HSCN programme to understand how this might underpin other projects and create the collaborative environment we aspire to.

Locally there has been significant work on the core network and The HBL COIN (Community of Interest Network) provides physical links to all parties within the LDR footprint. Much work is needed on analysing the infrastructures in place across the location of Hertfordshire and West Essex and re designing to maximise common solutions.

The **Joint Business Intelligence programme** will consider data warehousing and if there are any benefits to creating a shared approach in this area.

10. Risks

10.1. Plans, policies in place to minimise risk in the use of technology

All organisations have appropriate IG Toolkit compliance and established Information Governance policies. As part of the ongoing work across Health and Social Care we are looking to have an IG Group that supports all the workstreams to ensure this is an integral part of all the work we do.

All IT Departments have robust policies and procedures to ensure data security is managed, that business continuity plans exist and that cybercrime is managed appropriately.

10.2. Confirmation of GS1 standard adoption

All provider organisations have plans for adoption of GS1 standards over the next year.

11. Summary

We have a strong history of using technology to underpin delivery of patient facing services. We recognise that we need to be more collaborative across health and social care to ensure we maximise the benefits technology can bring.

By delivering the four priority areas we will establish an environment to allow care professionals to:

- work wherever they are within the health and social care estate, and access the systems they need
- see the patient information they need to inform their role
- use the data we gather to inform decisions for providers and commissioners
- manage patient flows such that we minimise pressures on the system and enable patients to move throughout the health and social care system in a way that best fits their need

We have the foundations of a delivery mechanism to allow us to take forward technology that is transformational underpinned by clinical expertise and patient demands. In conjunction with our robust governance structure we will deliver the digital changes needed for the benefit of patients and the services they receive.