

# The Robert Jones and Agnes Hunt Orthopaedic Hospital



NHS Foundation Trust

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# IM&T Digital Strategy 2018 - 2023



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## Strategic Context

Information Management, Governance and Technology (IM&T) plays a pivotal role in supporting the achievement of strategic change in the way health and social care services are delivered. It is essential that informatics investments are driven by service plans in order that information and technology is successfully exploited. This document outlines the IM&T Strategy for the Robert Jones and Agnes Hunt Orthopaedic Foundation Trust (the Trust) 2018 – 2023. It provides an overview of the Trust's position with a local and national focus, highlighting the organisations IM&T work programme which will facilitate delivery against national and local targets. The strategy describes the range and complexity of the Trust's IM&T work agenda for the next five years and beyond.

This IM&T strategy has been developed in response to local and national policy initiatives and is fully aligned with the Trust Corporate Strategy

This strategy supports and underpins the organisational strategy. These are prioritised into 4 key areas:

- Operational Excellence.
- Local Musculoskeletal Services.
- Specialist Services.
- Culture and Leadership.

The Trust is committed to harnessing information and new technologies to achieve higher quality care and improve outcomes for patients and service users alike.

## Summary

At RJAH the Trust vision is aspiring to deliver World Class Patient Care. The Trust recognise the need to provide the best systems and processes to enable their staff to excel, and for patients to receive the best possible outcomes.

Our IT systems and applications support the Trust and patients together with the wider health economy in driving better healthcare and outcomes for all and must continue to do so.

This strategy focuses on the delivery of optimum services within our hospital and community settings, supporting the development of an integrated musculoskeletal pathway and as such recognises the important role that IM&T will play in driving better care.

It is recognised that there are many challenges in the provisioning of services. We must ensure that data is kept secure, enabling standard driven pathways and integrated systems which are accessible to both clinicians and the public in whichever care setting they choose.

RJAH will ensure that investment is used wisely; developing partnerships with other organisations, procuring systems and technology that will improve and enhance us as a specialist provider of integrated orthopaedic services.

This will enable RJAH to drive safe capture of data, enabling good decision making through the use of business intelligence, improving outcomes for our patients and driving operational efficiencies that ultimately lead to an excellent service.

## Introduction

The Trust is committed to the development of robust and sustainable IM&T to support the delivery of the best possible care for patients.

This strategy supports the long-term goal of developing and implementing integrated care pathways and informatics enabled decision support. Acknowledging that this is best approached incrementally, the medium and short-term goals are to improve information systems functionality along with the underlying infrastructure access, performance and reliability. Fundamental to the success of this strategy is maximum participation by our staff to overcome any barriers that might prevent us from using technology to the full. The strategy will help to establish a modern performance focused environment keeping the Trust at the forefront of the provision of clinical care, education and training.

Our overall IM&T enabled healthcare vision encompasses:

- a. Radically improved informatics solutions to support clinicians and clinical practice including the procurement of a new Patient Administration System and enhanced electronic patients recorded solution.
- b. Provision of a reporting solution to enable real time, cost and activity analysis across a wide spectrum.
- c. Paper-light working across the Trust and community settings with wide scale electronic access to personal records.
- d. Seamless patient care supported by exchange of electronic patient centred information between the Trust and other providers/ partners across the health sector as a whole.
- e. Improved handover arrangements for medical and nursing staff.
- f. Effective knowledge management.

- g. High quality Information Governance owned by the staff operating within the Trust.

This will take a timescale beyond the life of this strategy to achieve, however the steps taken in this strategy will move the Trust significantly nearer this state.

This strategy commits to supporting the Trust, its staff and patients by:

- Developing and maintaining solid, robust and reliable systems infrastructure.
- Placing greater emphasis on information systems improving patient care and supporting clinical processes.
- Facilitating the enhancement of an electronic patient record.
- Providing clinicians with on-line and mobile access to patient records and results, online booking, ordering and administrative services.
- Enhancing management information to facilitate the most effective use of NHS resources.
- Aligning and integrating clinical and business information systems to enable informed organisational decisions to be made.
- Migrating the Trust towards an electronic communications environment to reduce reliance on paper records and documents.
- Ensuring that there is a robust workforce plan which addresses any potential skill mix issues ensuring IM&T staff resources are fit for purpose.
- Establishing operational and security policies enabling staff to work effectively and confidently with person identifiable data including anonymisation and pseudonymisation.
- Providing customer focused service for all aspects of IM&T.

It is recognised that technology changes and expands at a significant rate, resources, over and above those committed at present will be required to deliver this strategy.

## Baseline, Current position

The Robert Jones and Agnes Hunt (RJAH) has progressed towards an integrated digital record. It has been possible since the late 1990's to record information electronically and to view the record within the hospital environment. As time has moved on the record has developed, however the technology used to develop the record has altered over time, and the need to look at a "whole system approach" needs to be adopted, not just with Trust systems, but wider.

Traditionally the Trust has used a number of differing systems, with partial levels of integration, which whilst this permits a view of the patient record it is not always effective from a user perspective due to the additional complexities of identifying all the relevant information when viewing the patient record in context.

The Trust has commenced removing the traditional paper record ensuring that the historical note has been scanned and available through secure electronic medium. Electronic observation systems have been implemented and now automatically file within the electronic patient record upon discharge of the patient.

Theatre resource and stock management are managed electronically, allowing the utilisation of individual stock items to be recorded and assist in the process of reordering.

Adoption of electronic pre-op techniques has begun, with the next stage seeking to manage low risk patients at home prior to surgery negating the need to attend a site visit and carrying out much of the consultation and data gathering remotely.

The Trust have a large number of end user devices available which compare favourably with its peers, and is a sign of the investment that the Trust has committed to over the last 3 years.

Over the next five years the Trust will continue to invest in staff, systems, application and infrastructure with the main focus dealing with migrating to a new electronic patient record, incorporating improved structure clinical noting, introduction of a full order and reporting communications system with electronic workflow with access and integration to wider health systems for both staff and patients.

## Drivers for IT

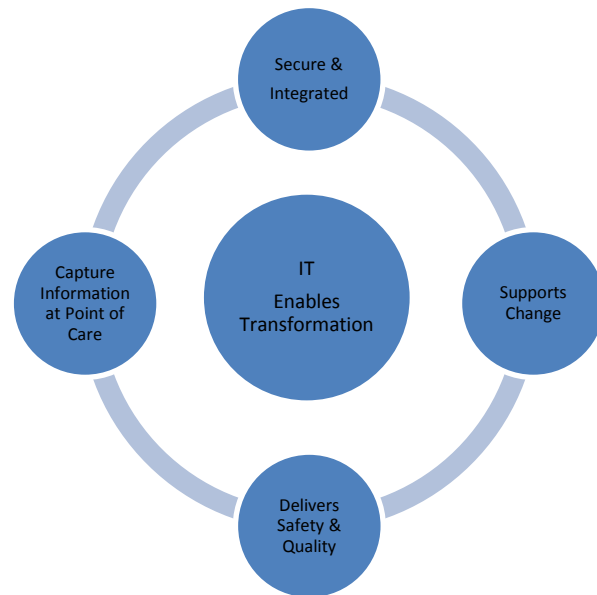
The NHS has had ambitions for many years to create an electronic record, allowing patients to access key information, and for other clinicians, regardless of care setting to also be able to access relevant information to enable them to treat the patient safely and in a timely fashion improving patient outcomes. A change in culture and mind-set will be required, in which our health and care professionals, partners and systems recognise that information in care records is fundamentally about the patient so it becomes normal for patients to access their own records easily.

RJAH have recognised that it needs to enhance and replace some of its systems if it is to continue to flourish and share information safely and



securely across the community as it works with its partners to develop new models of care.

Data must be made available to relevant parties, including citizens and patients enabling them to make informed choices over their care. By publishing and making relevant information available in easily understood formats will maximise benefit to all.



There are a numerous reports that have been published that share a vision for how the NHS needs to change and adapt for the future.

- The “Five Year Forward View” gives insight into new models of care, and starts to close the circle on Health and Social Care so it acts as one united entity.
- Lord Carter of Coles report “Operation Productivity and Performance in English NHS acute hospitals: Unwarranted variations” looks at efficiencies and how organisations can improve.
- Dame Fiona Caldicott published the report “Review of data security, consent and opt-outs” which addresses concerns patients and citizens may have with how their data is handled and used and ensure protocols are in place to enable providers to give the best possible care and ensure patients confidentiality is maintained.
- Professor Wachter and the National Information Board published a report, “Using information technology to improve the NHS” which analysed how the NHS can improve their use of technology and to look at how investment is used to maximise benefit.

RJAH are already working closely with our neighbouring Trusts and GP’s in how we deliver care through the delivery of the Sustainable Transformation Partnerships and the development of a local digital roadmap, ensuring that it is safe and delivers an excellent outcome to the patient.

The IT Digital Strategy supports the Trust aims and vision.

## IT Strategic Objectives

The Trust requires consistent and quality digitised health records that can be made visible to all involved in the delivery of patient care without the need for duplication.

The high level objectives and aims are to support the Trust

1. Remove the need for the citizen, patient or staff member to duplicate information.
2. Provide a single source of information, for both clinical records and performance information, for them to fulfil their role effectively;
3. Ensure data is available in real or very near real time in order to take effective and proactive decisions prior to “crisis” points being reached.
4. Provide access to that information securely and quickly at the point of care for both clinicians and citizens.

It is essential that the systems we use are secure, enabling citizens, patients and staff to know that information stored is only available to those that are authorised to view. It should be possible to enter data into the systems in a structured format that enables audit and workflow to take place seamlessly.

## Consuming Data

The way that IT and data is consumed by citizens has altered dramatically over the past 20 years. Google had barely been heard of, people would

use a phone to contact companies and had only just begun to use email to contact organisations. Very few people had considered ordering their grocery shop online let alone set up repeat orders.

It is now expected that all organisations will have a website - email is already considered “old” by the under thirties who will use social media to contact friends and organisations. Websites can no longer just be static information; they need to provide a portal to the organisation. Social media routes need to enhance and enable safer two way interaction between RJAH and patients if desired.

Organisations have had to adapt and the NHS is no different. RJAH will ensure that patients and citizens have the opportunity to interact with the Trust via a safe and secure channel of their choosing.

RJAH will enable enhanced communication routes, with video conferencing and messaging facilities made available to enable patients to interact with professional and clinical staff where safe to do so.

## Securing the Data: Empowering the Patient, Enabling the Clinician

Data must be protected ensuring that it is safe and secure from malicious parties that may wish to intercept the data for their own ends.

RJAH recognise the importance of ensuring that data remains protected and puts this at the heart of its strategy - the need to ensure that personal information remains that, personal.

Cyber criminals continue to pose a risk and increased awareness shows that attacks on bodies such as the NHS may become increasingly



common. The fact that networks are under threat and need to be protected is clear, what the NHS and RJAH seek is to be one step ahead and ensure that vulnerabilities are managed and data remains safe.

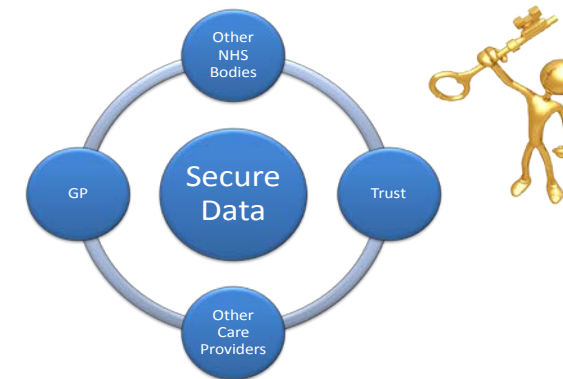
RJAH will continue to invest, ensuring that staff are trained in both the technical ability to protect information, and that all staff understand the need for confidentiality and that they must be trained to be able to interpret human vectors, such as phishing emails, and to respond appropriately.

Dame Fiona Caldicott in her latest report stresses the need to ensure that data is protected and that only authorised staff can access the information.

RJAH are committed to ensuring data remains secure and will ensure it services meet the CyberCERT standards as set out by Dame Fiona Caldicott.

As part of any system replacement RJAH will embed the principals of Caldicott within the terms of the contract with 3<sup>rd</sup> parties ensuring that consent where required can flow from system to system and is fully auditable. Patients will be in control of who can access their record when it crosses organisational boundaries. When they consent, the consent will flow through the system, reducing the need to repeat information gathering and enabling clinicians to make informed decisions based on good quality data and ultimately lead to better outcomes.

## Unlocking the Data



Secure Hosting of Applications: There are a number of accredited data centre suppliers which have the ability to provide or host systems on behalf of RJAH. Some of these service agreements are commonly called “hardware as”, “software as” service contracts. They can be taken out for short durations or longer terms and enables the Trust to migrate from existing hardware on site to a secure facility should the need arise.

There is clear benefit in terms of security in relation to this type of facility. The service providers are dedicated and invest time and money in their facility and staff ensuring that it meets the highest standards. It will be audited on a regular basis ensuring it meets ISO accreditation or other appropriate security standards. It removes single point of failures and can provide access to data securely from multiple locations without the need to reinvest in additional infrastructure.

The facilities are architected to ensure that should elements of the system fail due to the design architecture the system and applications will continue to function, essential when delivering healthcare with further reliance being placed on IT for the delivery of services.

RJAH intend to migrate services to secure cloud based technology where the business case supports the change.

### **Shared Working across organisational boundaries.**

Traditionally data tends to reside within the organisation, but as systems need replacing it is appropriate to review location and also who should manage the data.

Collaboration with other organisations in the future will be key and working with other NHS organisations is essential. Sharing how systems are developed and implemented enables efficiencies at all sites ensuring good models of care and effective use of resources.

Utilising the same systems across organisational boundaries and sharing the infrastructure makes sense from all perspectives; patient, employee, quality, and financial.

Infrastructure must be capable of delivering data to the end user device with speed. Traditional hardwired devices are already transitioning to wireless connectivity methods placing an increased demand upon the wireless network which will need to be considered for future infrastructure.

Fibre backbones, the roads on which the data travels, must not be a bottleneck with speed between the server and application environments

to the end user device being critical to the successful delivery of clinical data.

Data will need to be stored in such a format that allows systems to easily access but remain secure. Vendor neutral archives will be considered in the future so that data can be stored in standardised formats without the need to migrate to different storage formats when systems are replaced.

Single points of failure within the current infrastructure must be analysed, risk assessed and where appropriate provide alternate methods of connectivity as we migrate to electronic delivery of information for patient care.

### **Systems and Applications**

Currently RJAH have over 200 applications and systems in use. Some of these may range from having over 500 users, to just one. As we migrate to electronic delivery of information from paper based, we need to ensure that systems and applications are fit for purpose and can be supported and are appropriately managed.

RJAH will work to rationalise the list of applications, ensuring that a standard list of supported applications exists for users, enabling a standardised set of support measures to be defined.

Investment in technology enables new models for delivery of care. It enable new models of care to be developed, standardising pathways and facilitating more “remote” access to services, be it the clinical member of staff attending a remote clinic, having full access to the hospital systems, or a patient having access to the hospital via different interfaces, such as video consultation for follow up.

Over the next five years the Trust are seeking to acquire a new fit for purpose integrated Electronic Patient Record, enabling greater cross boundary working to deliver the sustainability and transformation programme within the area, a move to a digital platform is required to allow improved patient flow and access to information.

The Trust requires consistent and accurate digitised health records visible to those involved in the delivery of patient care. This will include the ability to digitally add (and not just scan information) to the clinical record using digital assessments, forms and clinic notes, stopping the paper management life cycle.

1. Provide colleagues with a single “digital” source of information, for both clinical records and performance information, for them to fulfil their role effectively;
2. Ensure digital data is available in real or very near real-time in order to take effective and proactive decisions prior to “crisis” points being reached.
3. Provide access to that information securely and quickly at the point of care for both clinicians and citizens.
4. Remove the need for the citizen, patient or staff member to duplicate information.
5. Improve workflow within the organisation, enhancing the pathway and experience for the staff and patient.

The aim is to allow other service delivery partners to interact with, and share, information within a patient’s journey, where the patient has permitted with more emphasis on access and update to shared care records. Giving a prominent role to the implementation of the shared care record will provide a vehicle to make information more widely

available (such as Child Protection Information Services) and accessible to support frontline care, individual self-management, planning and research.

It is essential that the systems we use are secure, enabling citizens, patients and staff to know that information stored is only available to those that are authorised to view. It should be possible to enter data into the systems in a structured format that enables audit and workflow to take place seamlessly.

In order to enable greater cross working within the STP a move to a digital platform is required to facilitate the capture of information to enable both improved patient flows and enable clinicians at the point of care to have a view of the citizen / patient.

The overarching aim of the will be to provide as solution that enables:

- Single patient record.
- Improved quality and safety within the Trust through enhanced decision support and secure systems.
- Improve the workflow management to speed up the patient pathway, resulting in improved efficiencies in staff time, allowing a single context patient view.
- Improve recording of outcomes and subsequent monitoring in order to demonstrate clinical benefits.
- Interoperability with other providers of care to allow a real-time view of the citizen in different settings in a secure manner.
- Improve the Trusts and the local health economy ability to plan for future demand and growth.

Data from patient monitoring equipment should be enabled to allow the data to feed the patient record without the need to duplicate and re-enter that data, be it from blood pressure to data from anaesthetic monitors.

Secure and adequate bandwidth to provide appropriate speed to cloud based application is essential ensuring that data is readily accessible for clinicians and patients.

Investment in technology enables new models for delivery of care. It enable new models of care to be developed, standardising pathways and facilitating more “remote” access to services, be it the clinical member of staff attending a remote clinic, having full access to the hospital systems, or a patient having access to the hospital via different interfaces, such as video consultation for follow up.

The end user devices already deployed can be reviewed at the appropriate point in the lifecycle and are already capable of working with the integrated systems. Improved interfaces to devices enable new ways of working, such as voice activation / dictation etc.

## **Access to data - Using Business Intelligence (BI)**

The implementation of a new data warehouse and the replacement of legacy systems is key to providing a platform for delivering good quality, timely and relevant information to managers and clinicians. The Trusts data warehouse has been designed to support Business Intelligence (BI).

## **Good Analytics**

The most effective way to deliver BI is to surround the data warehouse (DW) with tools that allow analysis of the data directly, these tools can range from a simple excel spreadsheet linked to a data source to a fully integrated online analytical processing (OLAP) linked through dashboards.

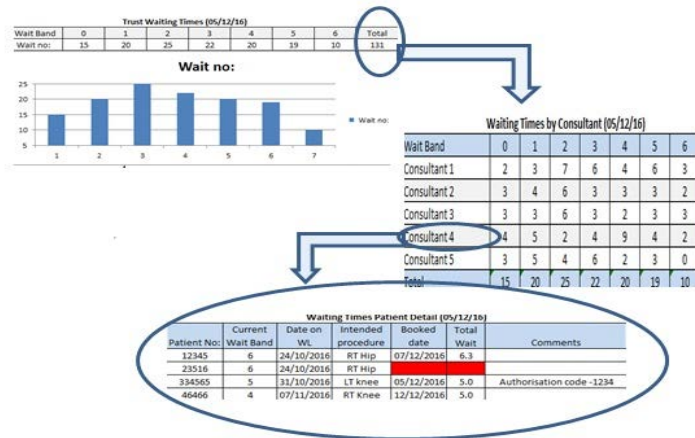
A reporting solution, is currently in the process of being implemented and is scheduled to complete over the next 12 - 24 months to help improve the reporting throughout the Trust. This will provide one place to view reports and consistency for users. It will also help to highlight data quality issues throughout the systems to enable quick resolutions.

## **Empowering the Users**

BI will empower discovery, operational reporting, ad-hoc queries, visualisations (Dashboards), data-mining, and true analytics such as predictive model. The need to understand the requirements from service users will be paramount in the design of the model, enabling users to carry out extensive analysis of data.

The Trust will consider new and emerging trends in the how data is managed, for example data lake as it continues to develop.

The Trust will need to develop properly designed data models for the end-users. We would also want to provide data dictionaries, metadata, and common business definitions. Data will be derived from a variety of sources, including but not limited to systems such as the electronic staff record (ESR), outcome information, pharmacy etc. In addition to internal sources of data information from external sources will need to be reflected without our management data ( e.g. . GIRFT)



Training programs will be created to enable staff to perform and execute reports enabling them to analyse the data and extract meaning.

Self-service users will need to have confidence in the data quality and will need be informed when new data sets/ uploads are available.

Dashboards have become the default performance management applications and are increasingly used to report information to users without the need to request.

Integrated dashboard design that provides discovery, operational reporting, ad-hoc queries, visualisations (dashboards), data-mining, and true analytics are key. There is opportunity to gain greater business insight through the analysis of information provided in a consumable fashion.

The development of the data warehouse will enable the trust to define complex data models which enable the trust to run simulations of different case scenarios.

The data schema to support this requirement is already in place within the DW for some services/teams and will be further developed to support other Trust services.

The Trust are standardising approach to dashboard design based on Microsoft SQL Server Reporting Services (SSRS) .

### Approach to Design

In order to encourage dashboard usability by staff and patients, we need to start with the basics: what they have now, what they would need to shift to a new system, and what they ultimately want. Staff and patients should also participate in the development, testing, deployment and training phases of dashboards.

The dashboard development will require an iterative design approach that involves getting the requirements, prototyping the design (with the data), getting user feedback, refining the design and then possibly doing it all over again. This process will take time but the longer term benefits will include reduced demands on the Information team.

Developing a dashboard that doesn't have the data which the user is looking for is worthless. While the dashboard is being developed it's important to make sure resource is identified to focus on getting the data and data quality issues resolved.

It's important that the Trust define the relevant key performance indicators (KPIs). We must ensure that we get the level of detail needed

to define the KPIs and ensure that those metrics are validated. If the Trusts dashboard is to be relevant, it will need to be a consistent, single version of the truth.

Users will often want to drill into the details beyond the data to determine what action is called for. A report or graph displaying trends should be the focal point within the dashboard supported with drill into the detail functions.

The dashboard will need to help users take action. The dashboard will only be an information source, the action that produces the results that is most important.

## Digital Citizens and Patients

As we move to an integrated system patients will be able to get greater access to their record, either via the GP or through a portal that enables a “wider” view, for example, reducing the need to review medication lists when arriving at hospital.

In the future the patient will be able to grant who has access to the record, keeping them in control and at the same time ensuring that they can get the best possible care and outcome from the system.

Citizens will be able to view data from the Trust that enables them to make informed choices over their care, from viewing a video of what a procedure may encompass, to completing outcome forms that enable a clinician to inform a treatment plan.

Future appointments will be able to be booked or rearranged via a simple to use interface, either via text or from a website.

Remote check in for clinics at RJAH can be improved allowing check in via smart phones.

Access to coded discharge information readily available in the future so that patients know their GP’s have received them without the need to visit.

## Artificial Intelligence

Artificial Intelligence (AI ) is a term used to define machine learning. It is recognised that the power of AI within the NHS can offer immense benefits to patients, potentially assisting in the early identification and diagnosis of ailments.

Whilst the NHS is not at the stage of being able to realise the full benefits at this time and RJAH understands the need to capture the initial data is crucial if we are to leverage the power from this technology.

In order for the NHS to benefit from such progressive use of data it must ensure that it captures data consistently so that when the data is analysed it can be mapped and understood.

There is a high level of scrutiny in this area from both the public and media, and the Trust will ensure it maintains the highest standards.

Whenever RJAH undertakes any sharing of data with 3<sup>rd</sup> parties it will be conducted in a transparent fashion, abiding by the standards set out by the Information Commissioners Office. Consent for the sharing of any personal information must be obtained before sharing can commence, and where data is being shared anonymously be aware of what data is being shared and why, ensuring that trust is maintained.



The true power of AI is in the future but we must start now if we are to realise its benefits.

## Digital Champions – Staff at the Centre

If staff are not effectively engaged in systems and applications the Trust will struggle to implement and get any system to work effectively. The Trust will ensure that we engage and get staff to lead technological developments, with IT assistance, and ensure that technology is not seen as the answer but as the enabler for change.

The Trust has introduced the role of a Chief Clinical Information Officer to work alongside IT. Whilst this is currently fulfilled by one individual, the Trust recognises the need that this position will need to grow and adapt and may require to have more than one and from different disciplines.

A programme will be established to engage with users and encourage their development in order to create “digital champions” within the workforce.

Through participation in events staff will be encouraged to assist in IT style projects to actively help develop and foster new ways of working across the organisation, encouraging their colleagues to develop and adopt new processes to maximise use of systems and applications. Ensure that staff help design the workflows maximises the opportunity of success with new systems and ensures we don’t just replicate what happened on paper.

At RJAH we realise to get the best from applications users need to understand and want to use the system.

RJAH are committed to investing in staff and ensuring that they are fully trained on the applications they use. Whilst we train our staff in the use of the applications, we will also keep them up to date to ensure that they know how to keep the data safe.

As we develop and migrate to an integrated system approach, staff will be able to access the data and manage patients without the need to consult back to paper records – with all relevant data being available through the one interface.

The types of devices made available to staff must be appropriate; it is recognised that “one size” will not fit all and it will be necessary to provide a variety of devices depending upon the setting – laptop, tablet, desktop smartphone. In the future it could be glasses – whilst this technology is new today in five years it could be common place in the future.

Key to the use of all of the systems is the need to keep the data “real time” wherever possible. Staff involvement in the implementation and management of systems is actively encouraged as we move forward to ensure that the best possible workflows for systems can be incorporated.

## Wearable Technology

The use of technology will lead to different care models and this includes patients using technology to either monitor their own conditions, or to assist the clinician in monitoring the effectiveness of a treatment.

Technology already exists to monitor orthotic wearable “supports”, the data can be analysed to ensuring that the patient is getting the best use from the device.

Technology in this area is moving at pace and RJAH seek to be at the forefront and working with patients and suppliers to ensure that data is captured safely and securely and available to the clinician to improve the outcomes for the patient.

Secure follow up video consultations will be available to those patients which may benefit, reducing the need to travel to site, having any tests locally and reviewed by a consultant at RJAH prior to the follow up.

## Local Infrastructure

### Network

As equipment reaches end of life, provision of new infrastructure needs to be planned. Priority areas for investment will be the replacement of the network with a resilient core and edge network including digital voice (voice over internet protocol – VOIP), with a managed service wrapper to ensure the equipment is maintained to the highest standard.

### Security and Malware Protection

These will be reviewed annually and a report submitted to the Audit Committee giving an overview of the current threat to the organisation. This will be in a restricted session to maintain security of patient data.

### Email

Migration to cloud based services will occur in 2018. This will enable the sending of secure personal data to patients where required and the introduction of video conferencing for both internal and external use as standard.

## IM&T Project Management

The procurement and implementation of computerised informatics systems and technology is often complex involving not just the resolution of technical matters but also fundamental changes to business processes and working practises in the departments concerned. It is essential that such projects are properly controlled and that roles and responsibilities within them are appropriately defined in order that implementation is effective and that the expected benefits are achieved.

Key features include:

- Effective change management through integrated planning and implementation.
- A focus on the business change objectives rather than system implementation, with a clear path to move from current to future business operations.
- Effective method of controlling a complex range of activities by clearly defining roles and responsibilities for managing the project portfolio and realising the benefits expected from the project.
- Achievement of business benefits through a formal process of benefit identification, management, realisation and measurement.

Before a project can be started a project proposal must be submitted to the IM&T steering group for review. Projects are only considered if they have clear senior stakeholder ownership and are able to demonstrate both criticality and viability as part of a project eligibility and prioritisation assessment in order to deliver the organisational strategy.

## Finance

Typically RJAH have invested around 1.5% of its overall budget on IT through revenue and capital models.

Running the IT services within a small hospital does not necessarily equate to the same ratio as a large hospital as the same backbone infrastructure is still required along with similar systems and therefore 1.5% of £100m will not necessarily equate to being able to deliver a similar proportion. In the future it is essential that investment is targeted and prioritised to ensure that infrastructure is capable of delivering the data to clinicians and patients wherever they need to access it.

Collaborating with partner organisations on infrastructure and systems enables not only economy of scale, but opens up new methods of delivering care.

The Trust are already active within the Sustainable Transformation Partnership for Shropshire and are also linking in with neighbouring NHS organisations in how we deliver care in the future, looking for economies of scale and reducing the need for duplicate purchases of software.

## Risks

The current top 5 risks in the delivery of this strategy have been identified and must be revisited on a regular basis.

- **Risk 1:** Financial – Whilst the Trust has invested in IT the amounts required to move to an integrated system and ensure a successful implementation will be large approx. £1m per year for systems is required, with additional resources required during any transition.
  - Mitigation – Review access to funding via national schemes.

- **Risk 2:** Change Management – The Trust need to ensure clinical ownership of projects and then accept the ongoing business change following implementation and help adapt the systems as we move forward and requirements change.
  - Mitigation – Introduction of the role of Chief Clinical Information Officer/Digital Champions and adopting a standard approach to projects and acknowledging that some projects should be stopped to enable others to succeed.
- **Risk 3:** System Flexibility – Ensuring that systems we procure are capable of flex as future requirements and needs are identified we need to ensure that systems can be modified to reflect changes in a timely and cost effective manner.
  - Mitigation – Ensuring that supplier contracts enable change and that timelines are relevant.
- **Risk 4:** Security – one of the top risks for any organisation and patient. It is essential that the Trust invest and ensure that security meets approved standards.
  - Mitigation – Ensure RJAH has CyberCERT accreditation and all 3<sup>rd</sup> parties hold appropriate security accreditation.
- **Risk 5:** Resources and Prioritisation – Manged conflicts on resources
  - Mitigation – standardised approach to projects and effective programme management.

## Governance & Monitoring Progress

It is essential that as the Trust and the NHS migrate into a true digital age whereby data is held securely at all times, and that adequate risk assessments are carried out and reviewed, and where necessary verified by 3<sup>rd</sup> party audit.

Without patients and staff having confidence that their data remains secure it will be impossible to deliver a useful digital record.

RJAH will build on the current governance model, incorporating the IM&T Steering Group and Information Governance Group that reports and monitors progress which enables the Trust Board to be fully aware and assured of the progress towards a digital record and ensuring that the data remains secure so patients and staff can be assured.

RJAH will continue to invest in staff and ensure that the board receive reports from both the Chief Clinical Information Officer (CCIO) and Chief Information Officer on a regular basis. The two roles will work side by side to ensure that systems are implemented and then managed effectively, maximising the benefits and ensuring that data is managed safely and securely.

Clinical ownership of the delivery is key in successful project implementation and by introducing the role of CCIO this facilitate.

## Timetable

To support the introduction of new application and enhancement of existing infrastructure it is necessary to develop business cases that support the investment; clearly defining the benefits that will be provided, broken into direct cash releasing benefit, efficiency benefits, quality, safety, wider health economy efficiencies and patient benefits.

During the first 12 months various cases will need to be established - work will concentrate on preparation of both outline and detailed models of an integrated approach to the provision of clinical systems, comparing the as is model with different variants.

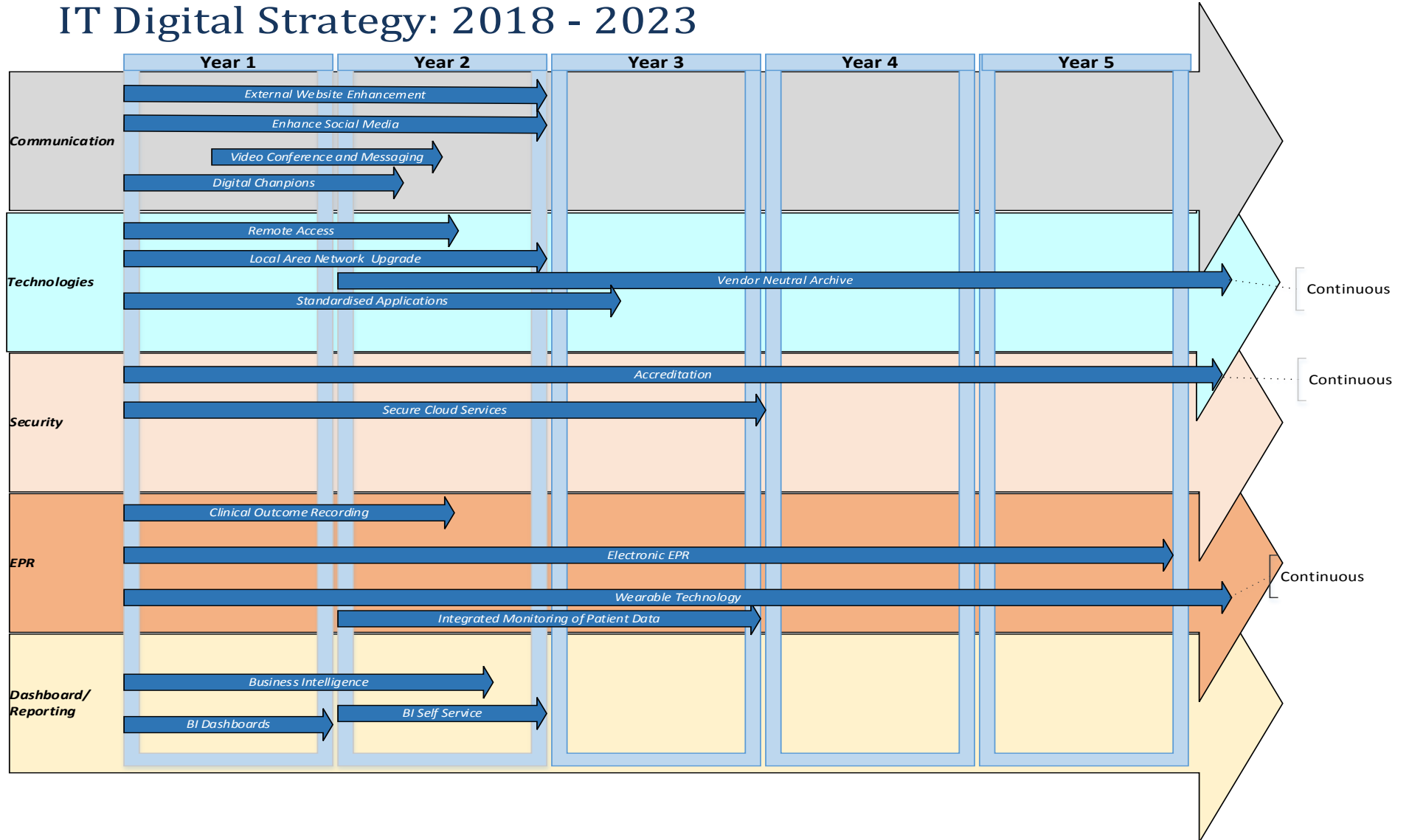
Alongside this work will continue with our STP and other interested parties, as to how we collaborate in delivering systems and provide benefits across the whole economy.

Detailed planning will need to be undertaken in which system to transition and when, however one possible scenario will be to look at replacing system which give greatest benefit, either from a cash or quality/efficiency perspective.

Typically it would be expected to replace the Patient Administration System initially, and bring online and order communications systems at the early phase of implementation, and would envisage this being complete within the first two years.

As plans develop in month 6 of the year a more detailed plan for the next 18 month will be updated and presented.

# IT Digital Strategy: 2018 - 2023



## Conclusion

The strategy concentrates on the need to deliver an effective IM&T service that meets the needs of the Trust. The Trust regards IM&T as a key enabler of change, it should be exploited to deliver and perpetuate efficiency initiatives through re-investment of resources. This will serve both the immediate future and longer-term processes redesign required for the changing health and social care models.

The changes to the National Programme for Information Technology offerings has brought the Trust to a position where open market solutions need to be considered, this will have a bearing on both functionality and cost perspectives. Whilst the Trust works actively to highlight an appropriate solution set, it is essential to ensure that the existing solutions and infrastructures are as robust as they possibly can be in order to form a solid foundation on which to build.

Given the ambitions, new systems must be implemented during the lifetime of this strategy. We will take an incremental approach towards implementing an enhanced integrated electronic patient record. This will include the deployment of a modern PAS with full clinical noting. The clinical systems interfacing will be re-engineered in order to make systems more tightly coupled with seamless integration. The Trust will become much more 'paper light' and the vast majority of clinical information will start to be available electronically. The services that are to be established and run in community settings will have far superior access to informatics systems making for far greater service potential.

The delivery of these key systems and the improvements they will enable, are important factors in ensuring that the Trust is able to continually

improve the efficiency and quality of the services it delivers to patients and enhance the working environment for staff.

