The Shrewsbury and Telford Hospital Sustainable Services Programme.
A vision for IT – a time for change

The Sustainable Services Programme for Shropshire's Acute hospitals aims to re-engineer our buildings, our workforce and our working practices in order to put the right number of clinicians in the right place for our patients. This change is set against a backdrop of having to ensure all our clinical units are of sufficient size to remain viable, that they can recruit and retain staff to safe levels, that clinical units are proximal to those with which they have the closest working relationship and that for the future our hospital can provide what our population feel is great health care, within our means.

The government in its Five Year Forward View saw the five years leading up to 2020 as being transformational for the NHS. The challenge is one of making changes that demonstrably make a positive difference to health outcomes, that are affordable or require only moderate investment and that together contribute to a reduction in operating costs for the NHS of 20% over that time.

The Five Year Forward View and the subsequent strategic document from the NHS Information Board, Personalised Health and Care 2020 both put great emphasis on using Information Technology to help optimise processes, bring patients and their clinicians closer together and make it easier for patients to take a more engaged and involved role in their healthcare management, before and after hospital.

Our SSP programme will be the catalyst that drives better, more improved, more focused use of IT. In this way IT will not be making do and mending but will be integrated with a movement that is truly all encompassing and transformational for our patients, our workforce, our population and our future.

This document describes what the IT will look like and why it will be necessary.

Creating the vision for IT - What do patients, clinicians and managers want?

Book and change appointments online. Plan for an appointment or operation with confidence that it will not be rearranged	appropriate information across health and social care at my fingertips.	information to support best and most current use of assets and resources
check information on my medication; report side effects and order and pay for prescriptions	capture information electronically and share with other professionals	help in managing the cultural change to a paper-free organisation
nominate a member of my family to access my information and act on my behalf	receive automatic notifications and alerts to help me make the right decisions and manage my workload	collaboration tools to help me work together with colleagues across our health economy and beyond
interact with doctors and the hospital via video, email and online chat, wherever we are	use technology to transfer orders and actions between care settings	help in my new role to manage my new information assets. I want to understand business continuity.
keep in touch with family and my studies online, while I am away	use cohort intelligence to improve my knowledge base and help me make best use of resources	IT that is available, all the time, anywhere it is needed.
	mobile me	

Satisfying national drivers and priorities

	Five year forward view Improving health and well-being, care and quality, funding and efficiency				
Personalised Health and Care 2020 **NHS Information Board setting strategy with CQC, NHS TDA,** **Public Health England, Third Sector and Local government** **agencies**	2016	2017	2018	2019	2020
	Patients with online access to GP records				
	Patients have digital access to all their health records				
	Records will be interactive. All individuals will be able to record their own comments and preferences				
	CQC will regulate the quality of record keeping				
	NHS kite-marks for 'trusted' smartphone apps that help patients access services. NHS GP verification of health apps.				
	Abolish paper in the emergency department				
	Adopt SNOMED standard clinical terminology across systems and documents				
	A paper free NHS				
	Patients have free Wifi in NHS buildings				

Building our IT strategy
- remain focused on three themes

- Collaboration
  - Help and guidance from NHS bodies including the Health and Social Care Information Centre HSCIC
  - Standards and priority setting by the NHS Information Board NIB
  - Working together with our health partners in the LHE via the Digital IT Forum as we build a Digital Roadmap of work-streams that are interconnected, interdependent and that together have a positive impact on health, wellbeing, care, quality, funding and efficiency.

- Integration
  - The number of systems, the number of stake-holders, the accelerated time-frames, the funding constraints, the agreement on risk make the challenge too big for a one size fits all plan.
  - Simon Stevens NHS CEO comments that "neither can we let 1000 flowers bloom – there must be horses for courses."
  - The challenge must be directed at making best use of systems by integration, harnessing the agility of small and medium enterprises SME's and using standards of data and workflow to make systems talk.

- Safety
  - Electronic will replace paper. The volume of data that supports the best, in-time decision making is simply too great now for it to be any other way. It is safer to have access to the right information. This means that systems must be supported by resilient technology. It must be available, of high integrity and confidential only to those with a need to know. Safety begins with sound design, structured development, testing and training.

We are up there with the best – in some areas

Healthcare systems innovation
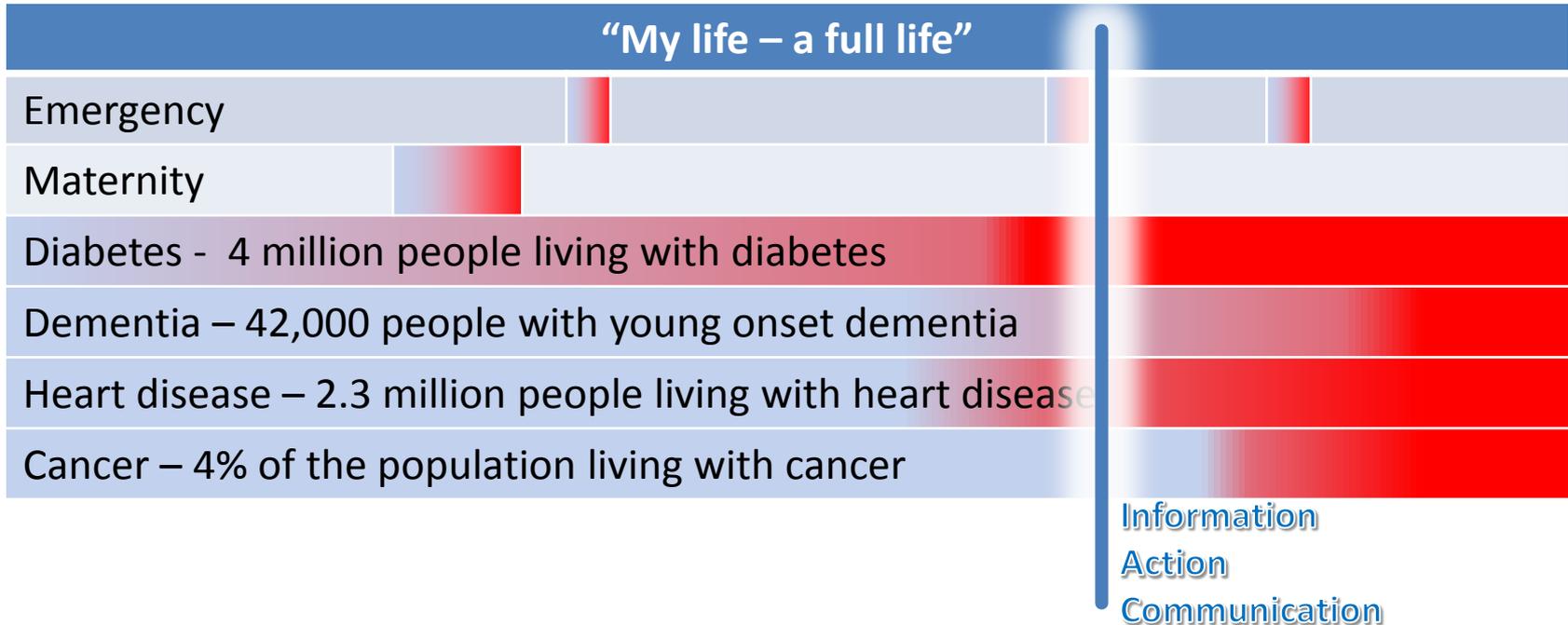## *-Make more room for exciting innovation*

- Mobile working
  - Make use of 3&4G networks and smart id badges to support lone workers.
  - Wearable Telemedicine for continuing support for patients post-discharge. In 2014, 150,000 people had not received adequate support after leaving hospital. 15% of >75's readmitted within 30 days. Re-admissions within 30 days cost the NHS £2.2bn
  - The user may be anywhere. The relevant information may be anywhere.
- Pharmacy
  - Support for hospital and community pharmacies. Help patients better manage discharge medication. Build on the research programmes of Liverpool JM University and Royal Liverpool and Broadgreen UH
- GS1 – just-in-time stock control, re-ordering and tracking
  - Hospitals (Leeds, Derby) are now adopting the global data standard bar-coding for stock control from procurement to bedside.
  - Evidence of 60% reduction in stock-holding. 99.9% stock availability. 46% reduction in order-processing staff.
  - The NHS has some catching up to do. 10-15 years behind efficient retail chains.
- Cancer services support
  - Cancer care accounts for 10% of our activity now. 4% of UK citizens are living with cancer now. This will increase to 6% by 2030. 1000 new diagnoses a day. Survival rates are increasing. Demand for treatment is increasing.
  - Out of hospital shared–care data platforms will become more important. This will require agreement on access rights, contribution from patients, clinicians and carers and integration with a range of hospital and community information systems.
  - Living with cancer will become a partnership between clinical team and patients, helped by shared data.
- Collaboration tools
  - Video conferencing across sites and across care settings across networks that can support this.
  - Document sharing and co-authoring/ editing/ approving – improves bid response times and quality.

Healthcare systems innovation
## *- it is happening across the NHS*

- Clinical access to images
  - Vendor Neutral Archiving can bring images from a range of systems, suppliers and modalities into a format to allow them to be easily accessed and viewed by common means.
- Integration
  - Telematics in fleet cars to ensure optimum call-response times and to manage assets more efficiently and responsibly
- Roaming profiles
  - As access to a computer becomes more important along with identification of the user; roaming profiles and follow-me desktop will have to be considered.
- Electronic noting, e-forms and workflow tools
  - Digital pens
  - Digital forms, paper-free or bar-coded for ease of integration with the electronic records. Embedded into workflow.
- Big data analysis
  - Analysis of NHS prescription patterns for statins established that £27m a month was spent on the more expensive proprietary statins with evidence that all drugs in the class are equally safe and effective.
  - Allows us to invest and position out-of-hospital services in the most appropriate way e.g. E&N Herts Homefirst programme as alternative to Hospital ED admission

Produce the right systems for the new challenges to healthcare

"My life – a full life"
Emergency
Maternity
Diabetes - 4 million people living with diabetes
Dementia – 42,000 people with young onset dementia
Heart disease – 2.3 million people living with heart disease
Cancer – 4% of the population living with cancer

Information
Action
Communication

- A population living longer means that doctors will have to treat more patients presenting with multiple co-morbidities.
- Doctors must have access to important relevant information.
- Patients and advocates must make meaningful use of that information to help ease the burden on doctors – patients can become healthcare partners.
- Systems must provide access to data AND knowledge-based expert intelligence based on that data – for both patients and carers.
- Information must travel across conditions, across multiple carers and across organisations – it must move beyond paper.

Putting all this into a roadmap for SaTH systems and infrastructure
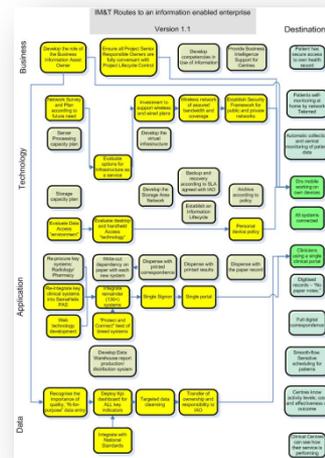
Principles

1. Pursue user engagement for the full life cycle – relentlessly
2. Embrace best of breed – make the best of systems we have and bring early benefits
3. Bring in new systems that users want and that enhance our portfolio
4. Replace systems only when users categorically state they are not fit for purpose
5. Understand the nature of each process re-design (VMI-it)
6. Integrate like mad
7. Make IT resilient, safe, available.