Improving real-time support for clinical decision making at North Tees with Care Scan +

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North East & North Cumbria Integrated Care System

Transforming our services - *Putting patients first* - *Valuing our people* - *Health and wellbeing*

We are an integrated hospital and community services healthcare organisation serving around 400,000 people in Hartlepool, Stockton and parts of County Durham. We also provide bowel and breast screening services as well as community dental services and other community based services to a wider population in Teesside and Durham.

Our turnover is around £275m and we have 5,500 medical, nursing, clinical and non-clinical support staff.

- University Hospital of North Tees (Stockton) provides emergency and planned medical and surgical care, maternity services and a wide range of diagnostic services and outpatient clinics.

- University Hospital of Hartlepool provides patients with a wide range of diagnostic services and outpatient clinics, day case and low risk surgery

- Community - provide services in the community to people living in East Durham, Hartlepool, Stockton on Tees and surrounding areas, including district nursing, podiatry, physiotherapy, health visiting and school nursing.

Background - Our evolution and journey

2004 – 2008
- NPfIT; PACs, A&E, Maternity
- WiFi, CoWs
- Electronic Document Management (EDM)
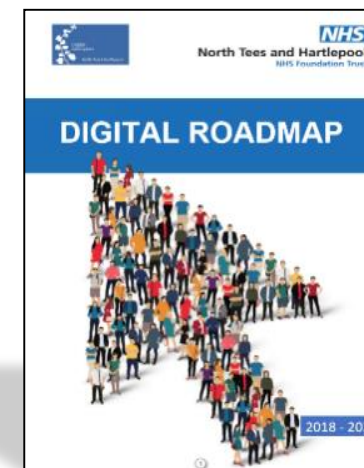- Community Services

2009 – 2015
- OrderComms
- Image Exchange Portal (IEP)
- Summary Care Record (SCR)
- Electronic Patient Record
- GP eDischarges
- (EPR) B/C & go-live 10/2015.
- Key infrastructure
- TrakCare FoT EE Customer

2016 – 2018
- VoIP, Kiosks, VC
- EPR Phase 1 & 2 , PAS, Core Clinicals, EPMA, e-Handovers
- **Scan4Safety DH Pilot**
- BHP/STP/GNCR – Leadership
- ICO – "Significant Assurance"
- Cyber preparedness
- MiG interoperability
- GDE Fast Follower
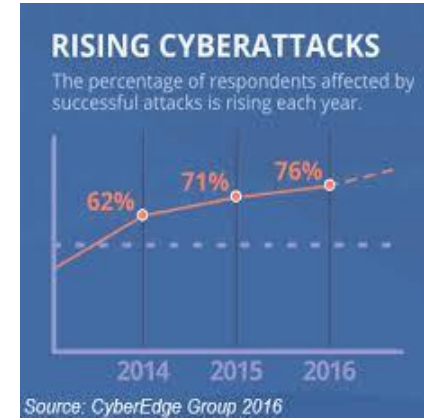- Health Call – Partner

2019 – 2021
- "Digital Hospital of things"
- Paperlite 2020
- **CareScan+ full roll out**
- EPR Phase 3,
- Business Intelligence
- BoTs/Automation of I&T services
- AI capabilities
- Tees Valley & GNCR

NHS
North Tees and Hartlepool
NHS Foundation Trust
DIGITAL ROADMAP
2018 - 2021

History and legacy of "leading"

RISING CYBERATTACKS
The percentage of respondents affected by successful attacks is rising each year.

62%   71%   76%

2014   2015   2016

Source: CyberEdge Group 2016

Increasing digital dependency (and increasing cyber risk to an extent)

Paper Heavy

Paper-Light

Paperless

2016

2018

2020

Digital Strategy - the "Digital Hospital of Things"

Safety and Standardisation

Self Service

Collaboration

Infrastructure

CareScan+

The Hospital of Things

EPR | Clinical | Clinical | Admin

FREE WIFI
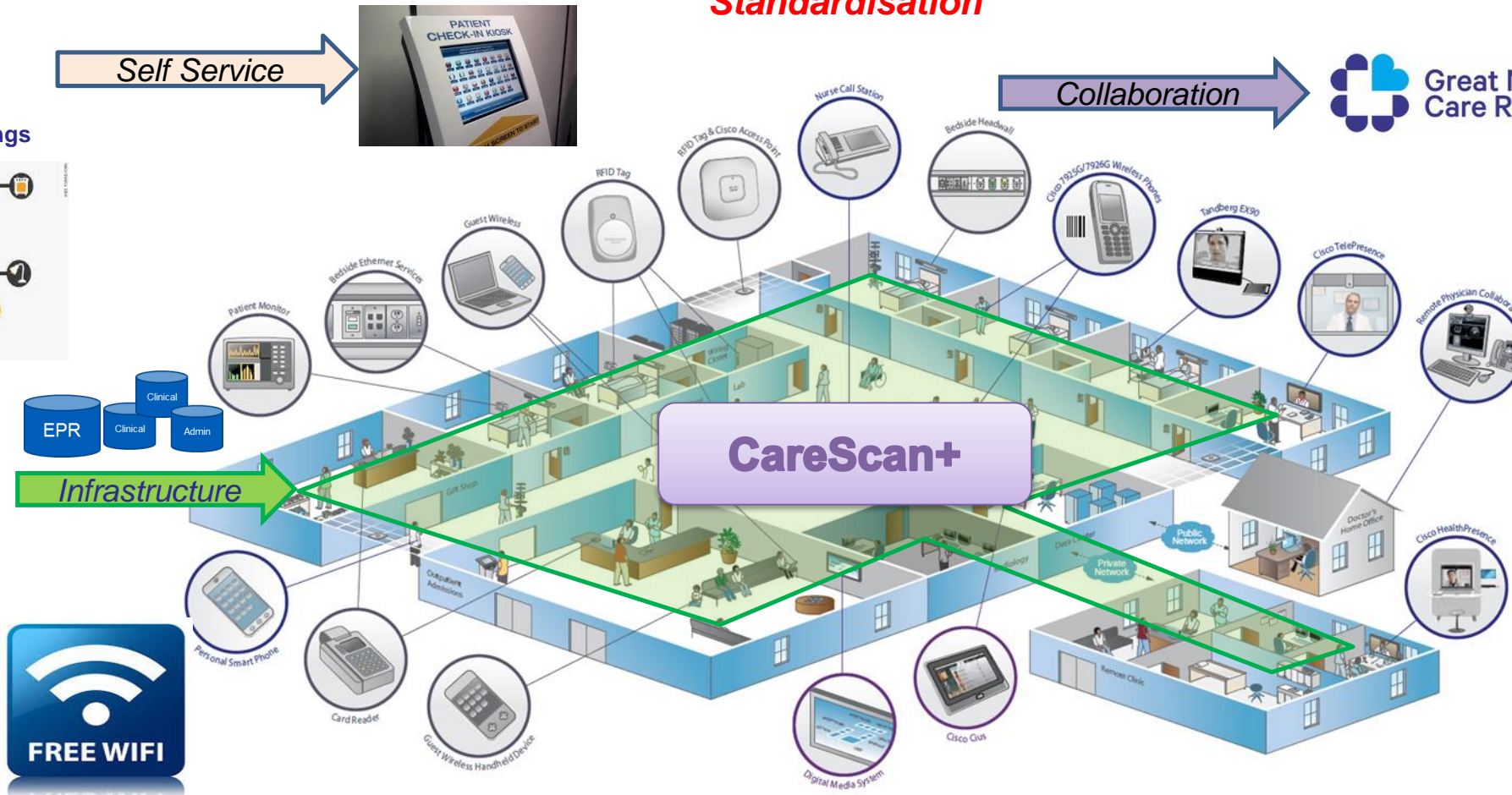
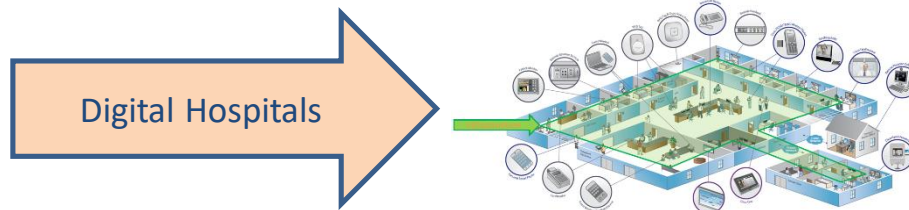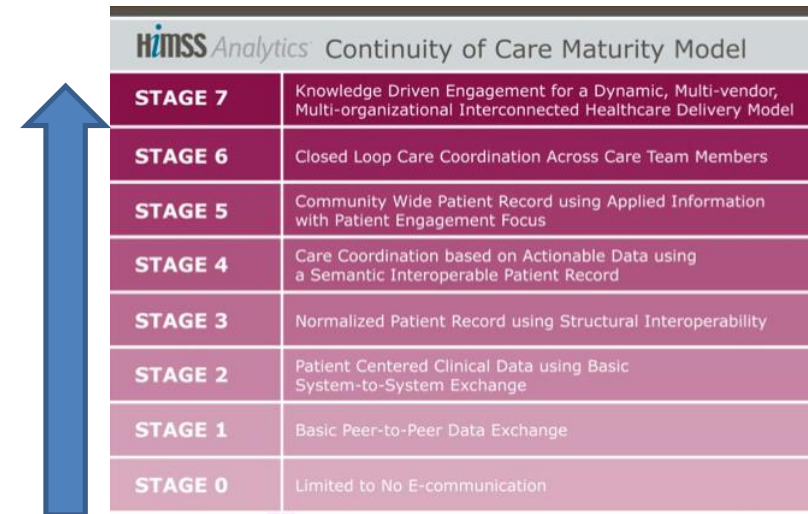*One part of the bigger picture*

Digital Maturity Assessment

The Digital Maturity Assessment (DMA) measures the extent to which healthcare services in England are supported by the effective use of digital technology..

The DMA, will help identify key strengths and gaps in healthcare providers' provision of digital services at the point of care and offer an initial view of the current 'baseline' position across the country. The DMA supports the National Information Board's commitment to achieving a fully interoperable health and care system.

The Digital Maturity programme worked with a number of partners including Academic Health Science Networks (AHSNs) and healthcare providers and CCGs to examine effective use of technology, with particular focus on capabilities such as digital care records, transfers of care and medicines management.

The Healthcare Information and Management Systems Society (HIMSS) standard is likely to become the vehicle for assessment, this is especially important when comparing digital maturity on an international stage.
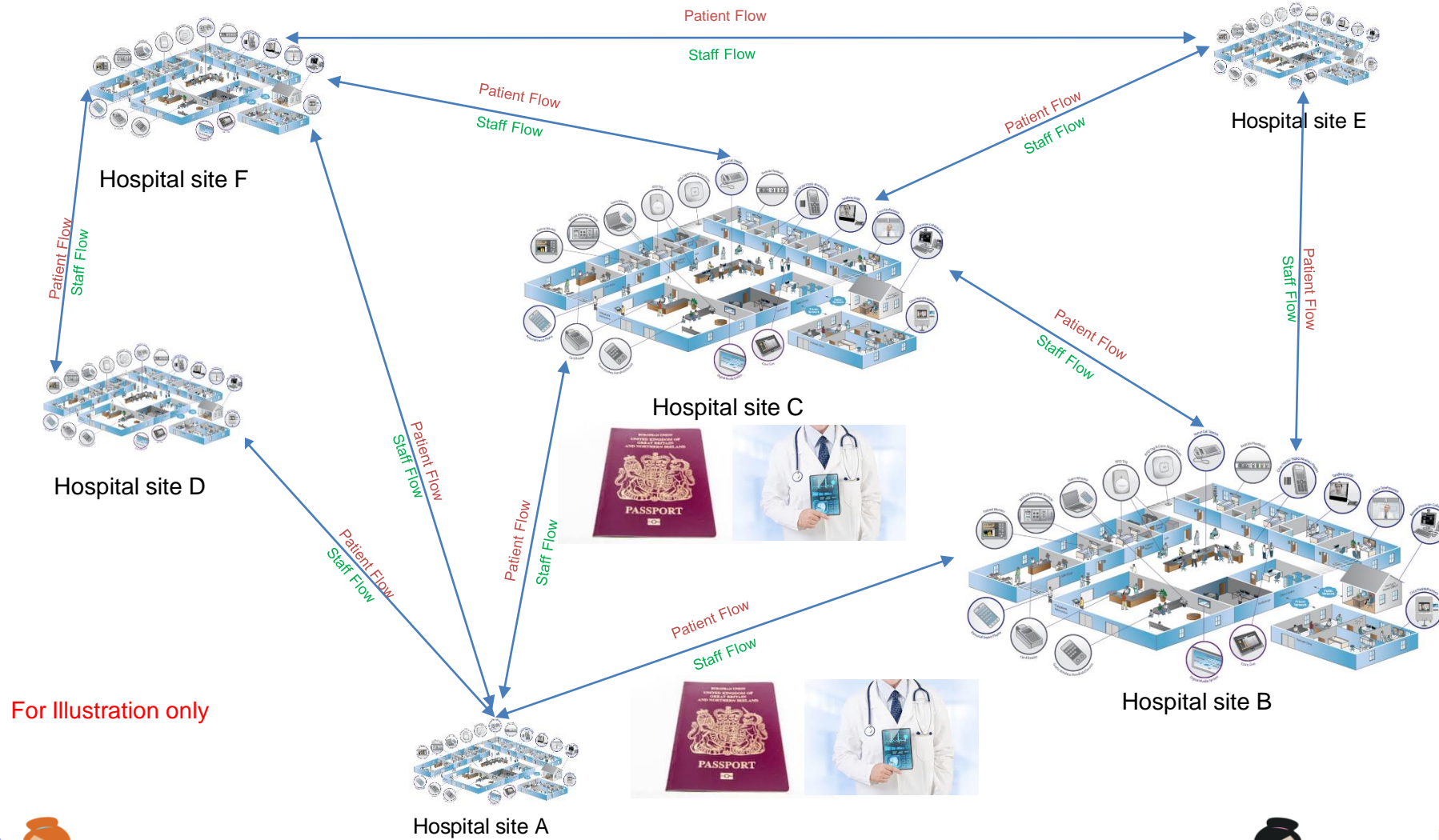

HiMSS Analytics Continuity of Care Maturity Model

STAGE 7	Knowledge Driven Engagement for a Dynamic, Multi-vendor, Multi-organizational Interconnected Healthcare Delivery Model
STAGE 6	Closed Loop Care Coordination Across Care Team Members
STAGE 5	Community Wide Patient Record using Applied Information with Patient Engagement Focus
STAGE 4	Care Coordination based on Actionable Data using a Semantic Interoperable Patient Record
STAGE 3	Normalized Patient Record using Structural Interoperability
STAGE 2	Patient Centered Clinical Data using Basic System-to-System Exchange
STAGE 1	Basic Peer-to-Peer Data Exchange
STAGE 0	Limited to No E-communication

DIGITAL MATURITY SELF-ASSESSMENT

Digital Hospitals

Digital Maturity is highly dependent on appropriate "Digital Investments"

Digital Maturity – enables "system" working

Mobile & agile workforce
"Clinician passport"

Hospital site F

Hospital site E

Hospital site D

Hospital site C

Hospital site B

Hospital site A

Patient Flow
Staff Flow

For Illustration only

GS1/S4S & CS+ - our journey So Far
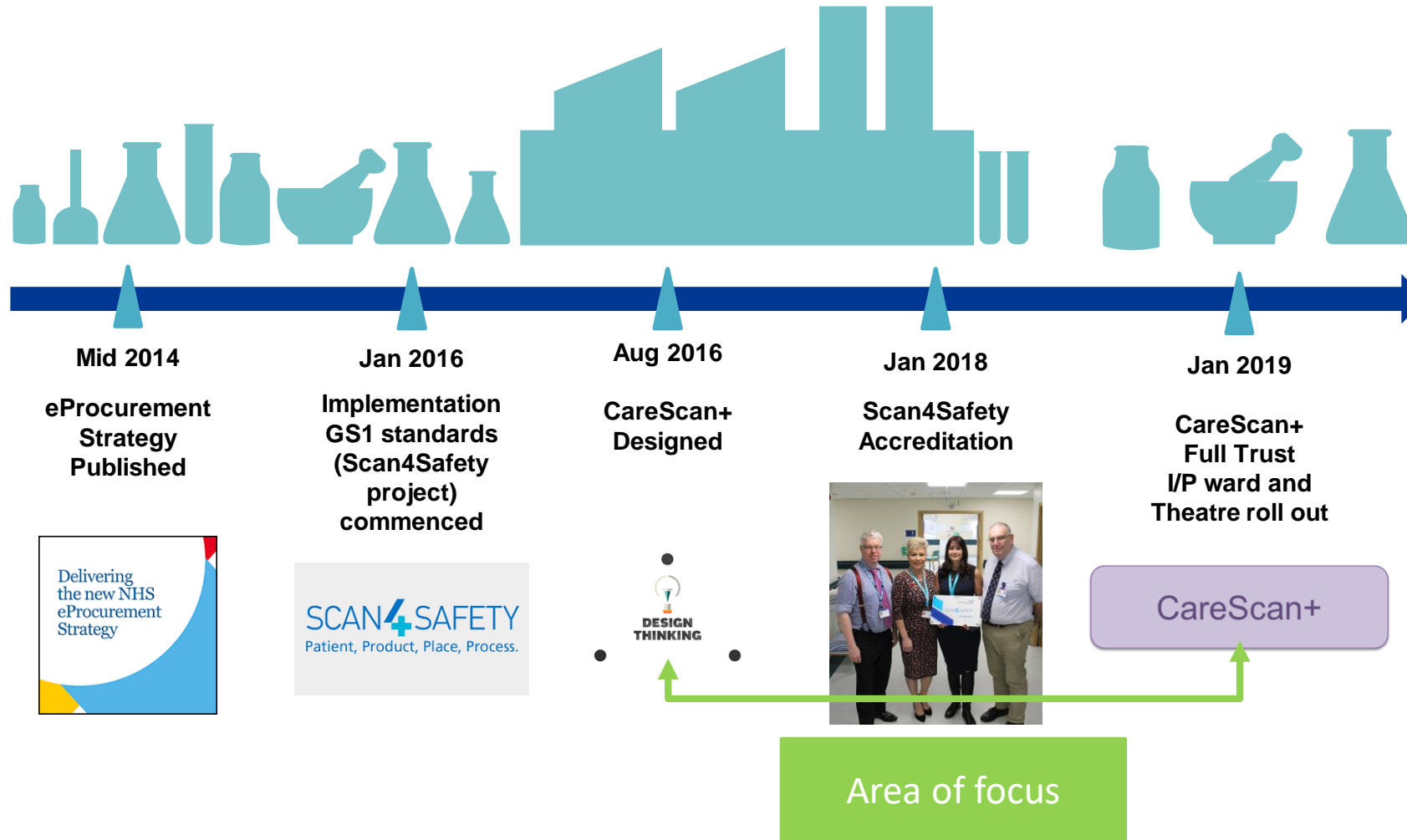
- Non-standard

- Difficult to use and administer

- Limited functionality

- Poor integration = Inefficiency

- Requires use of multiple devices

- Attracts recurrent supplier costs £££

- Fails to achieve intended benefits

- **Unhappy users = poor adoption**

- **Do solutions even exist?**

Think about workflow – not the systems
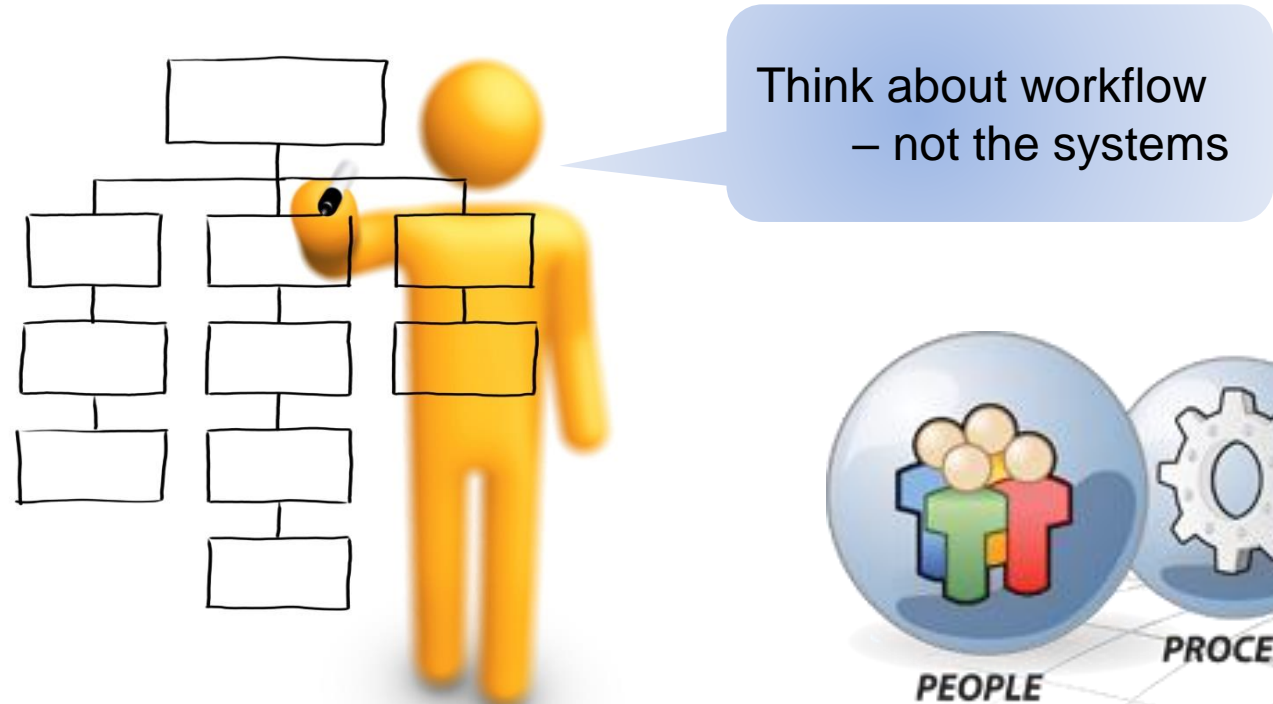
➢ Real time data capture enables:
  ➢ Immediate safety alerting

 ➢ Data distillation and BI Reporting

GDE Foundational Infrastructure

"… the simple truth that if we don't make it compelling for clinicians to use IT systems for their day to day work and enable them to capture accurate, timely clinical information within those systems, then most of the other opportunities within the IT strategy will be unfulfilled."

NHS England

- ✓ Owned and improved by clinical champions
- ✓ Helps to standardise point of care scanning workflow
- ✓ Easy to use practical instant data capture
- ✓ Real time alerting with haptic feedback
- ✓ Comprehensive reporting and audit capability
- ✓ Aids clinical supervision and management of training portfolios
- ✓ Aids acuity assessments

USER EXPERIENCE IS...

LOOK + FEEL + USABILITY
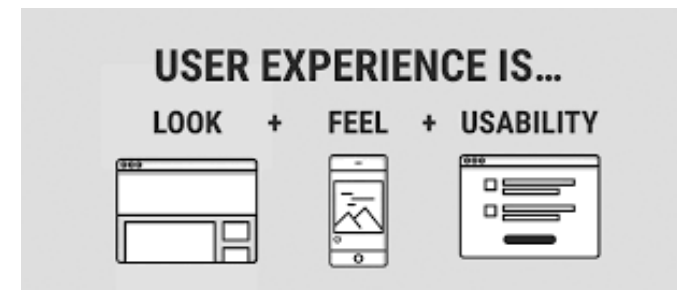
Value for patients, value for staff

Patient Safety Improvements

- Faster product re-call response times
- Identification of expired products
- Faster incident investigations
- Real time alerts

Inventory Management

- Reduced wastage
- Lower stock levels
- Releasing clinical time to care

NHS Efficiencies

- Reporting back on metrics
- Improved data quality
- Sharing learnings with the wider NHS (*Blueprinting*)
- Greater product benchmarking visibility

Mandated by the Department of Health

- Mandated in eProcurement Strategy 2014
- Both providers and suppliers
- NHS Terms and conditions updated

Improved Patient Records

- Product data held on electronic patient record
- Standardised data
- Standardised practices
- Contemporaneous record keeping

Clinical Practice Standardisation

- Patient level costing capability
- Enables meaningful dialogue between clinicians, procurement and finance
- Improved patient outcomes at a lower cost

CareScan+ - Safety and Quality

CareScan+

- ➤ Positive patient identification

- ➤ Positive staff identification

- ➤ Obtain patient consent

- ➤ Match role with competency

- ➤ Prevent use of expired products

- ➤ Prevent use of recalled products

- ➤ Alert when a medical devices has an abnormal status

- ➢ Utilisation products

- ➢ Utilisation locations

- ➢ Procedure costs

- ➢ Training records

- ➢ Alerts triggered

- ➢ Incident management

- ➢ Products recalled

- ➢ (Plus, anything and everything else captured)

- ✓ Retains NHS Intellectual property
- ✓ Built with Open Source components
- ✓ Pushing Open Standards
- ✓ Utilise GS1 (EAN, HBIC) core standards
- ✓ Runs alongside other systems
- ✓ Sustainable
- ✓ Scalable
- ✓ Extensible

## Built by the NHS for the NHS

- IT enabled projects often fail as they focus on "Technology" not the business;
  - ➤ We must learn from the past to shape the future.

- Our business is Health and Care so our approach needs to be;
  - ➤ Business (and/or Clinically) owned and driven, but Digitally enabled.

- Clinicians (including Nursing) need to articulate and help shape the future;
  - ➤ Visionary clinicians will drive the change and commitment needed, we just need to know who they are (and clone them).
  - ➤ The role of Chief Clinical Informatics Officer (CCIO), is both symbolic and essential to creating the environment and commitment for change.
  - ➤ The CCIO, CIO (CITO) and CEO all need to be driving the agenda, supported by other key stakeholders; i.e. Medical Directors, CNO, CFO.
 - ➤ The vision and method needs to be underpinned by a "compact" with supporting governance.

Vision

Approach

Method   Compact
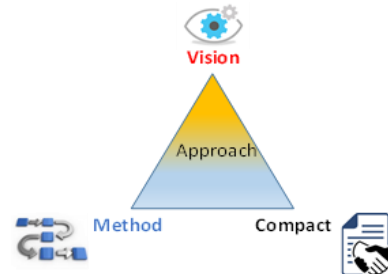
WWW. **W**ork **W**ith the **W**illing.
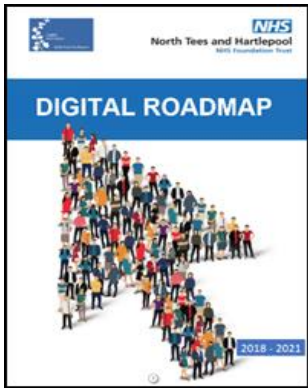
Benefits of GDE FF and GS1/S4S/ CareScan+

- Integral to our Digital Roadmap and Paperlite ambitions.

- Patient Centred (Safety, Quality and Efficiency)

- Integrated programmes with clear synergies.
  – **Share, learn spread**

- Transformation focus and considers;
  – **People, Process and Technology**
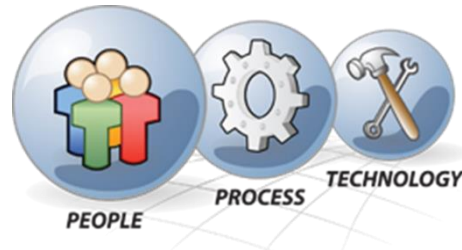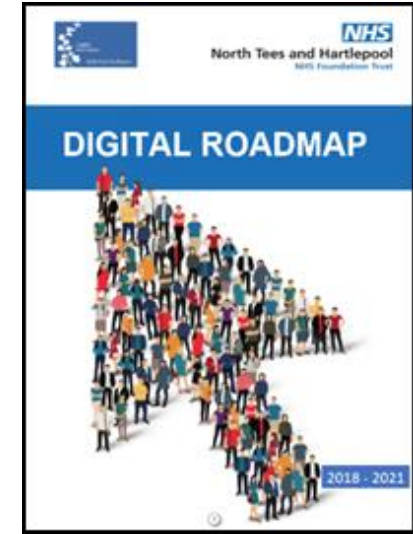
Thank you

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