Digitizing the NHS

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#globaldigitalexemplar

Andy Kinnear's 'Engines'

NHS England	'Locals'
- Vision & Strategy	- Design
- Money	- Delivery
- Leadership	- Timetable

Patients Public

NHS Digital	Suppliers
- Standards	- Product
- National systems	- Innovation
- Delivery	- Repeatability

CIO/CCIO Network

INTEROPen

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INTEROPen Board Representatives

Amir Mehrkar (Clinical Joint Chair)	INTEROPen / NHS Digital		Neil Robinson, Chris Bull & Dave Harvey	IHE Integrating the Healthcare Enterprise
Luke Readman (Non-Clinical Joint Chair)	INTEROPen		Indi Singh & Ian Townend	NHS England
Malcolm Senior & Richard Kavanagh	NHS Digital		Lorraine Foley	PRSB
			Phil Koczan	CCIO Network +
Andy Kinnear	bcs The Chartered Institute for IT		Adrian Byrne & Andy Hadley	Health CIO Network +
David Hancock	tech UK / InterSystems		Neil Bartram	North Yorkshire County Council adult social services
David Hay & Anne O'Hanlon	ORION HEALTH		Ian McNicoll & Tony Shannon	openEHR
Andy Cripps & Richard Lowden	Quicksilva		Dunmail Hodkinson & Philip Scott	HL7 UK Health Level Seven UK
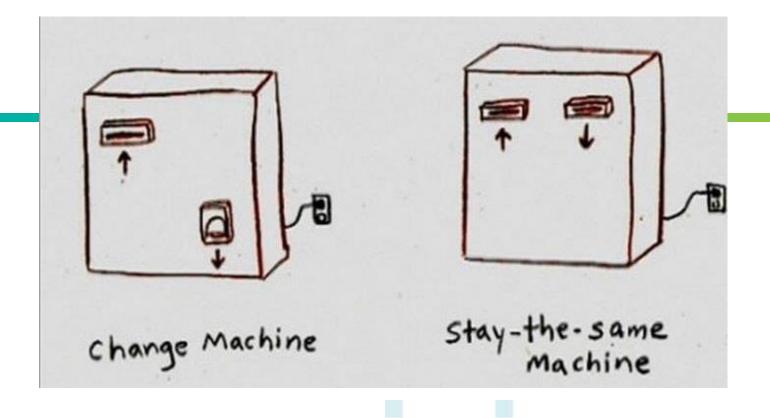
GDE Programmes

Change Machine

Stay-the-same Machine
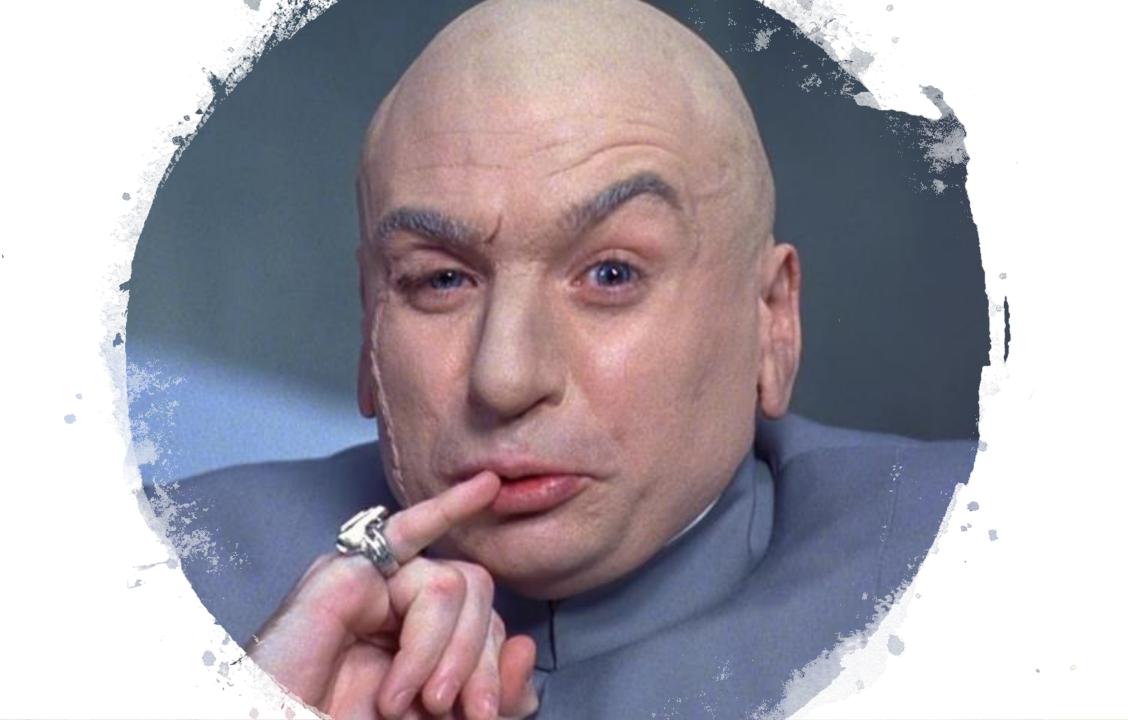
- Acute (x16)
- Mental Health

- Ambulance Trusts
- LHCREs

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Is it a good thing?
Is it enough?

GDE hyperbole risks hobbling NHS IT plans

HIMSS *Analytics* **STAGE 7**

EMRAM

United States EMR Adoption Model ℠

Stage	Cumulative Capabilities	2014 Q3	2014 Q4
Stage 7	Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP	3.4%	3.6%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS	16.5%	17.9%
Stage 5	Closed loop medication administration	29.5%	32.8%
Stage 4	CPOE, Clinical Decision Support (clinical protocols)	14.5%	14.0%
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	23.9%	21.0%
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable	5.3%	5.1%
Stage 1	Ancillaries - Lab, Rad, Pharmacy - All Installed	2.5%	2.0%
Stage 0	All Three Ancillaries Not Installed	4.4%	3.7%

Data from HIMSS Analytics© Database ©2014

N = 5453   N = 5467

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Locally and Fast Follower Programme

- Similar strategies
- Adoption
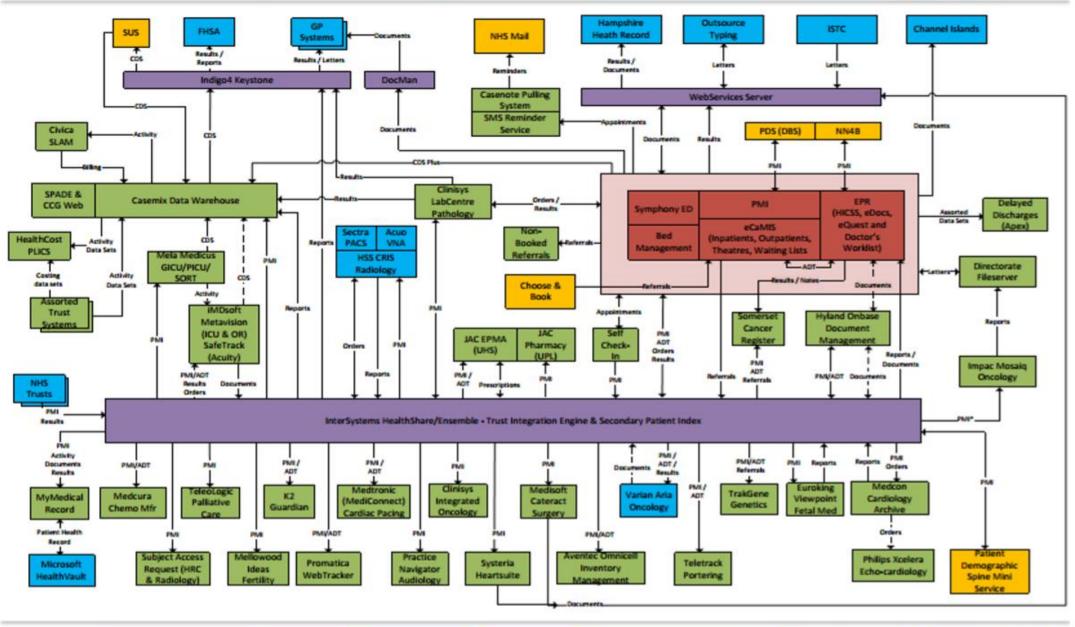 - Both ways
- Blueprint
- Prove and influence

- HIMSS Stage 5+
- Fast Followers
- International partners

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Types of GDE

UHS Systems Integration Map

University Hospital Southampton NHS Foundation Trust

© University Hospital Southampton NHS Foundation Trust IT Development Team

Version 2016.2
05/10/2016

Legend: UHSFT Managed System | EMIS System | External System | National System | Integration/Messaging Engine

Gartner says NHS over-reliant on closed systems

Leading technology analysis firm Gartner has said the NHS IT market is too reliant on closed proprietary systems, and must follow other industries and drive to open platforms and surrounding eco-systems

Department of Health & Social Care
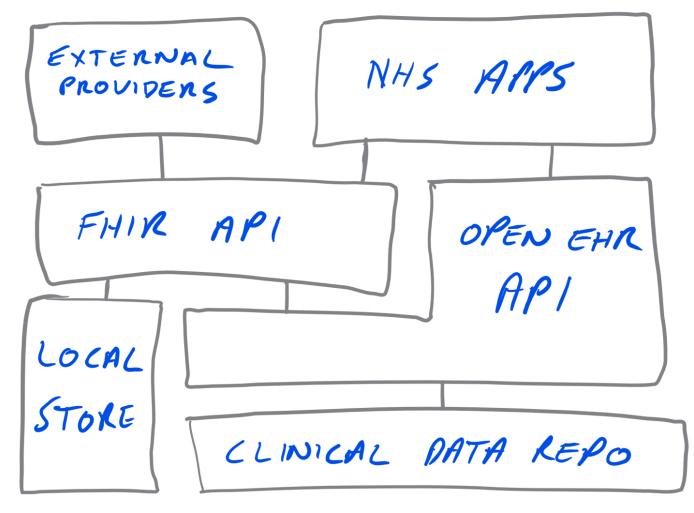
Policy paper
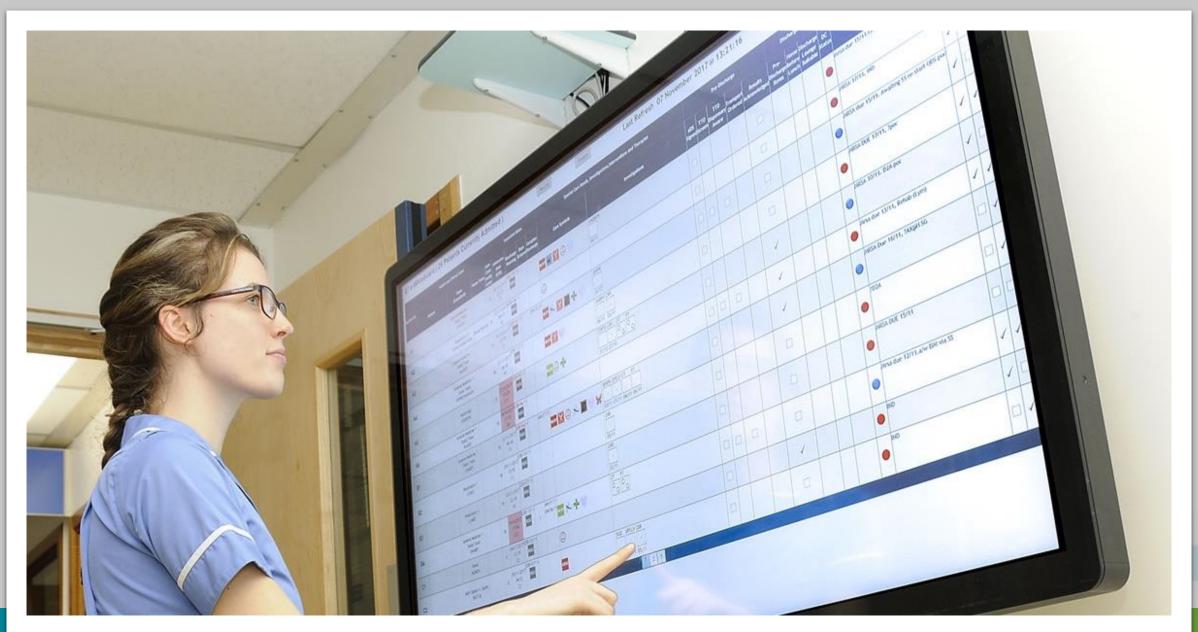
The future of healthcare: our vision for digital, data and technology in health and care
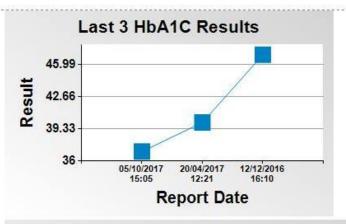
Published 17 October 2018
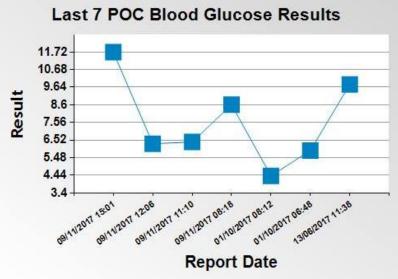
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Patient No: 0158692   Patient Name:

Last 3 HbA1C Results

Test Code	Result	Report Date
A1C3	37	05/10/2017 15:05
A1C3	40	20/04/2017 12:21
A1C3	47	12/12/2016 16:10

Last 7 POC Blood Glucose Results

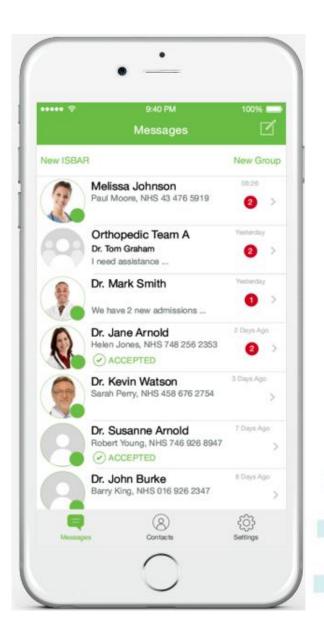| Test Code	Result	Report Date
POC_GLU	11.70	09/11/2017 15:01
POC_GLU	6.30	09/11/2017 12:06
POC_GLU	6.40	09/11/2017 11:10
POC_GLU	8.60	09/11/2017 08:18
POC_GLU	4.40	01/10/2017 08:12
POC_GLU	5.90	01/10/2017 06:48
POC_GLU	9.80	13/06/2017 11:38

Secure Messaging implementation at UHS
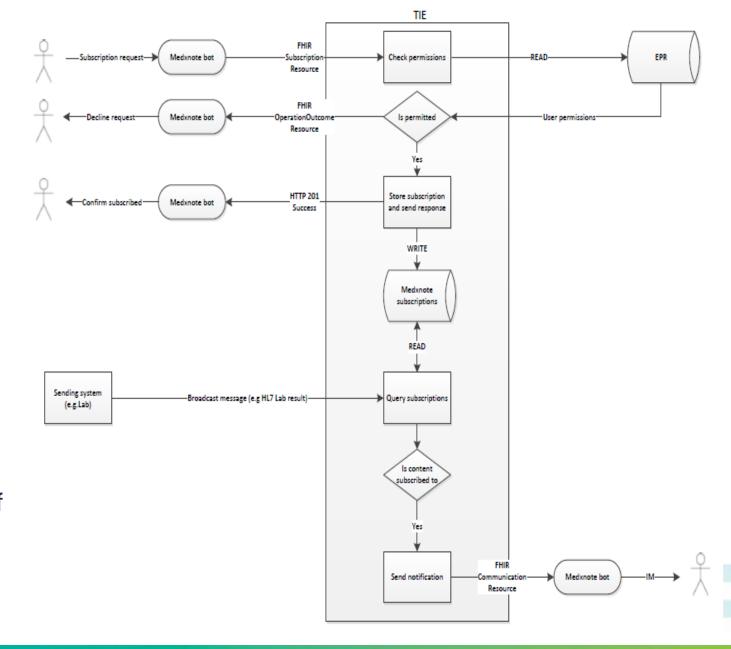
Instant messaging

- Sent, delivered and read receipts

- Group messaging

- Send images, videos or documents

- Directory function

- Archive and delete messages

- All messages are private

EPR integration

- Achieved through the use of bots

- Bots developed in-house using FHIR

- Easily integrated into
  existing systems

- Current bot development – subscribing
  to a patient in order to receive a result of
  a test or procedure directly to the user's
  phone

Bleep

MedxQ functionality

- Subscribe to a Q and receive notifications

- UHS to define Qs required @cardiacSpR, @site, @discharge_team

- Qs can be anything for example a ward, a patient, a device

- No limit to number of Qs

- Subscribe and unsubscribe to multiple Qs

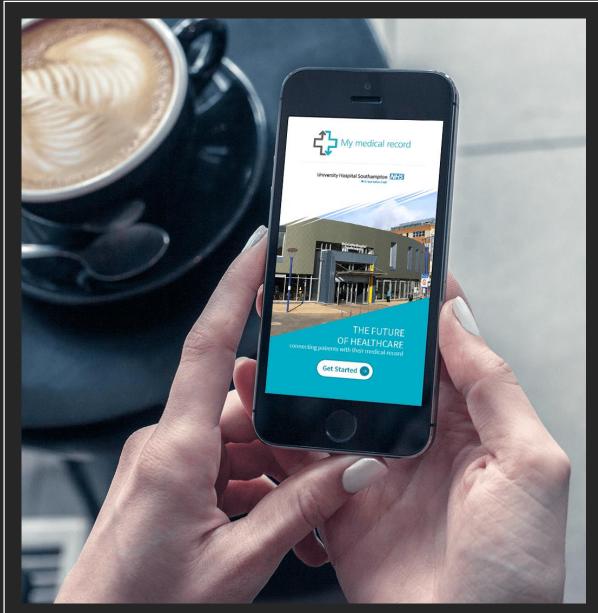- All interactions are logged and auditable

Clinical benefits

1. Improved communication within teams

2. Ability to prioritise workload and thus reducing disruption to user's work

3. Reduction in use of unsecured messaging apps

4. No confusion with patient identity

5. On average 16 minutes saved per clinician per day by receiving result notifications directly to their phone (45 days saved by pilot users over 10 weeks)
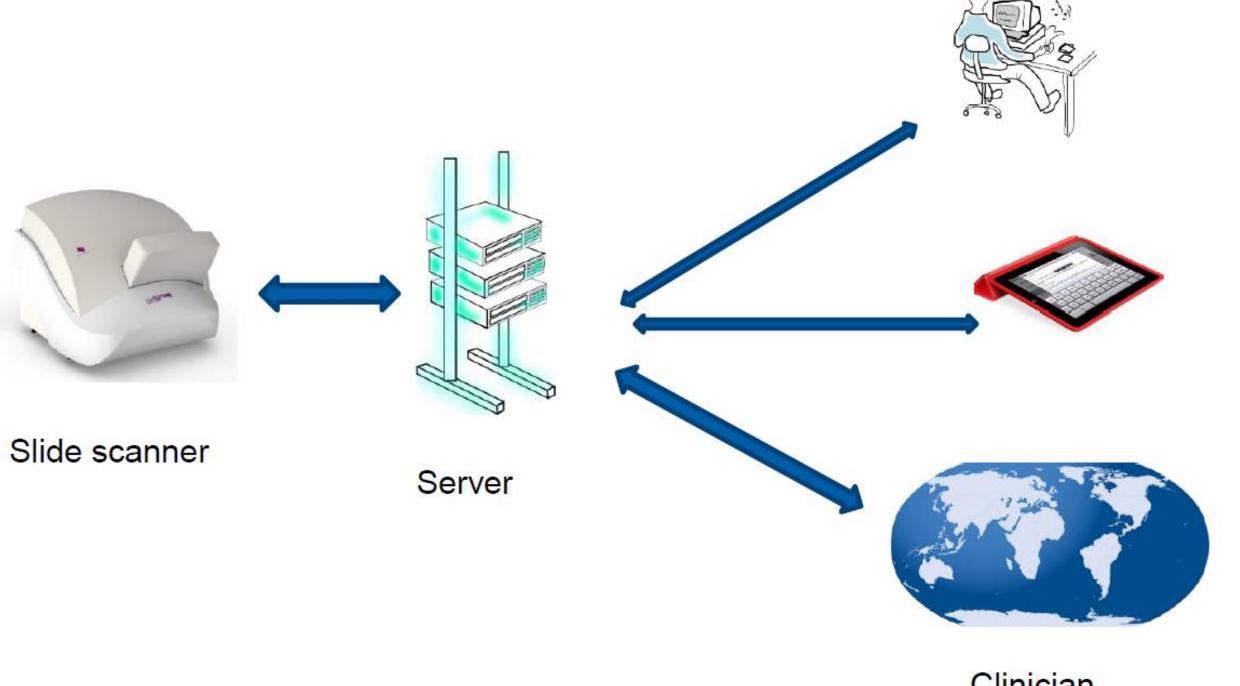
Open platform

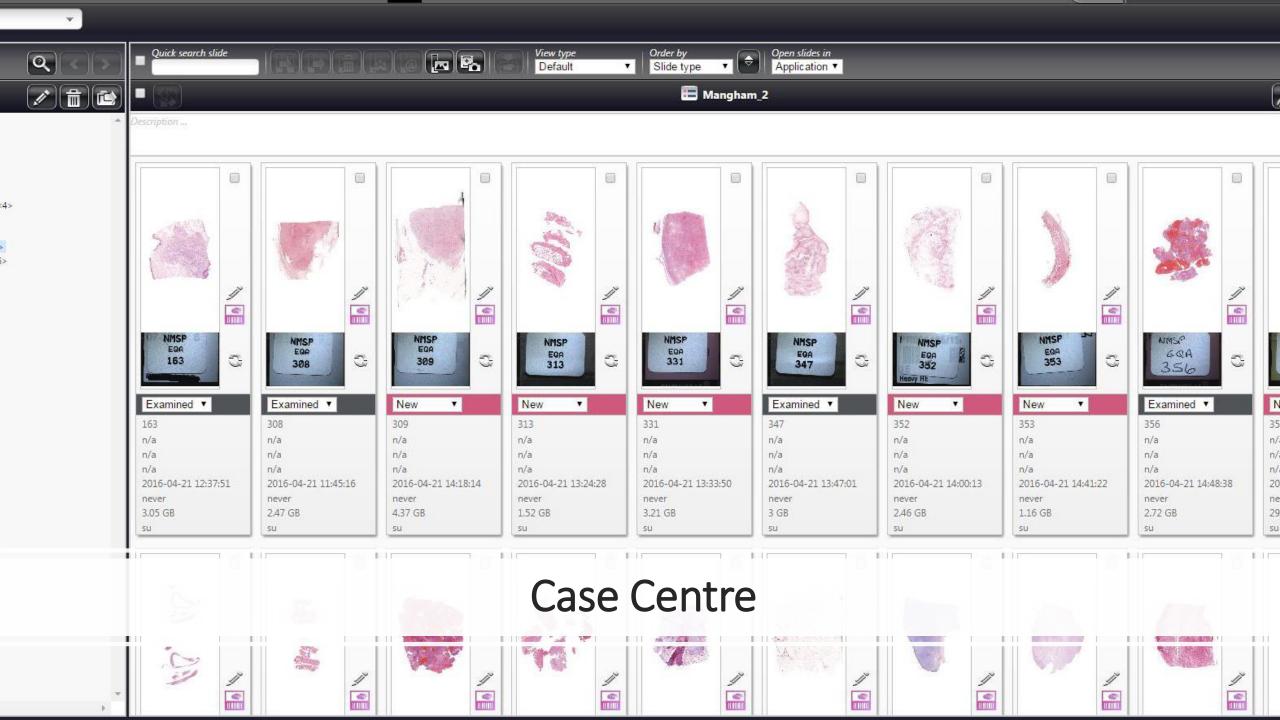The future of healthcare:

Digital Pathology

- VNA Storage
  - 15Gb per slide
- Associated data
- Workflow
  - MDT prep

Slide scanner

Server

Clinician

Case Centre

Good PR ☺