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- Head of Service, Medical Equipment Management (MEM)
- NHS Greater Glasgow and Clyde

Today

- Technology Then
- Technology Now
- What's on the Horizon?
- What we know and can share
- How we need to adapt
- Low Tech and Risk

The Bar at the Booths

Until the 13th century Bootham Bar was known as Galmanlith, or gate of Galmou, the name of the hill on which St Mary's Abbey was built. The present name originates from the 12th century when it came to be known as 'the bar at the booths', meaning market booths, referring to the weekly market held here by St Mary's Abbey.

Knock Knock!

In 1501 the city corporation ordered that a huge knocker be attached to Bootham Bar. Any Scot who wished to enter the city had to knock first and was only admitted on approval by the Lord Mayor, the Warden or the Constable.



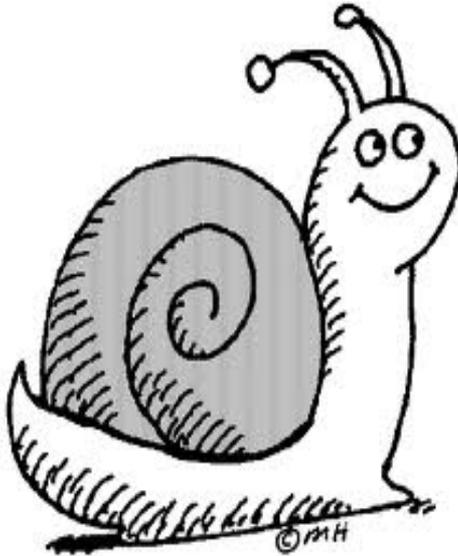
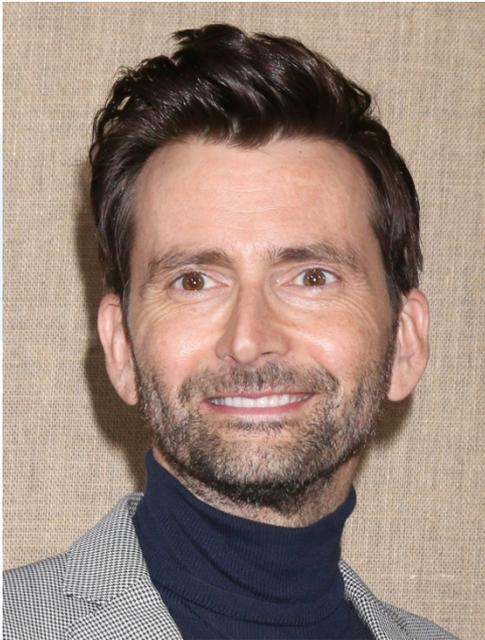
The West End of York Minster in 1730.

YORK MUSEUMS TRUST (YORK ART GALLERY)

- Head of Service for MEM since 2011
- Working in Medical Equipment for 36 years
- Work in NHS Greater Glasgow and Clyde
- Population served 1.2 million
- Employs 38,000 staff
- 6 acute hospital sites
- 2 Ambulatory Care Hospitals
- 4,987 beds in total
- Over 50,000 Medical Equipment Assets

Paisley





- Donoghue v Stevenson 1932
- Damnum Injuria datum
- Damage unlawfully inflicted
- Neighbour Principle
- Duty of Care



QEIH - £842m, 14 Floors, 1100 adult beds, 256 children's beds

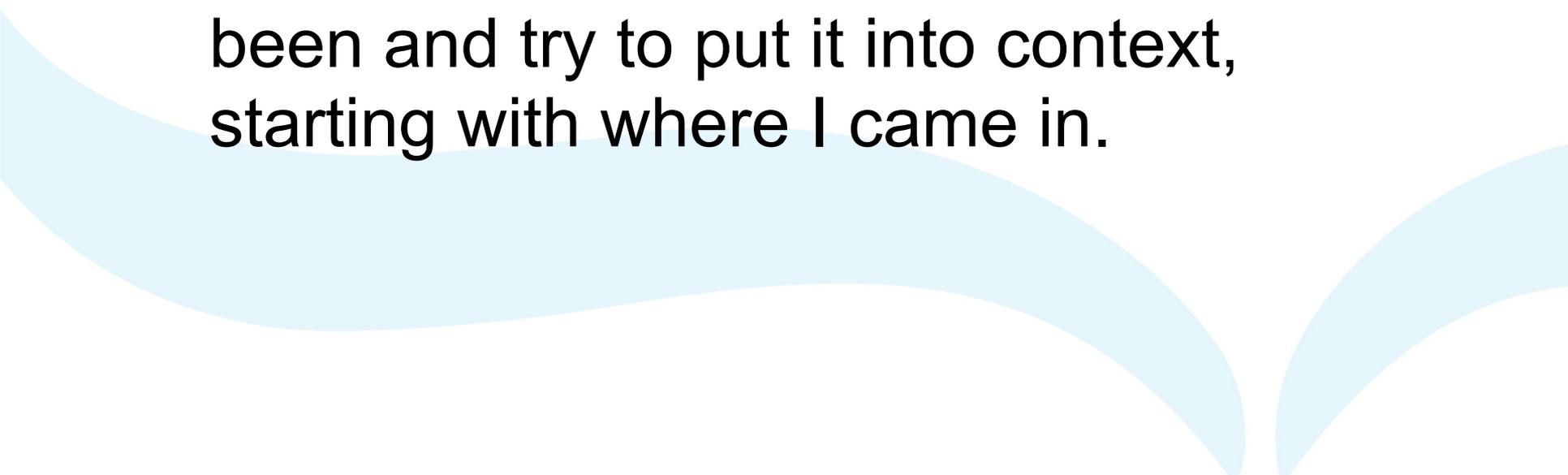
Brimming with Technology!

- Da Vinci Robot
- Integrated Theatres
- 7 Tesla MRI scanner
- 79 Bed Critical Care with vents, monitors, pumps
- 39 Theatres
- Networks coming out of our ears!



Is it now too much technology and are we as well equipped as our hospitals?

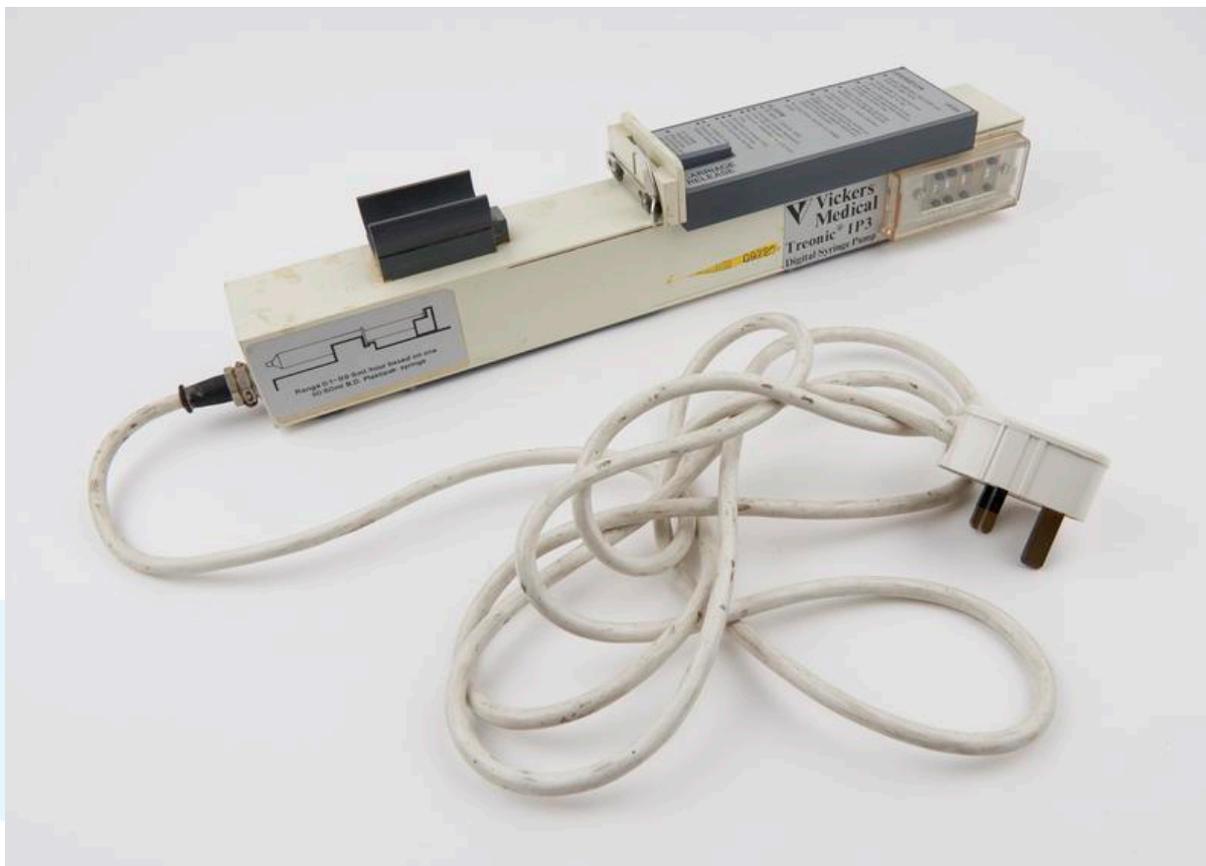
Let's have a look back at where we've been and try to put it into context, starting with where I came in.

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ECG Monitor



Syringe Pump



The 70's and 80's Technology in daily life

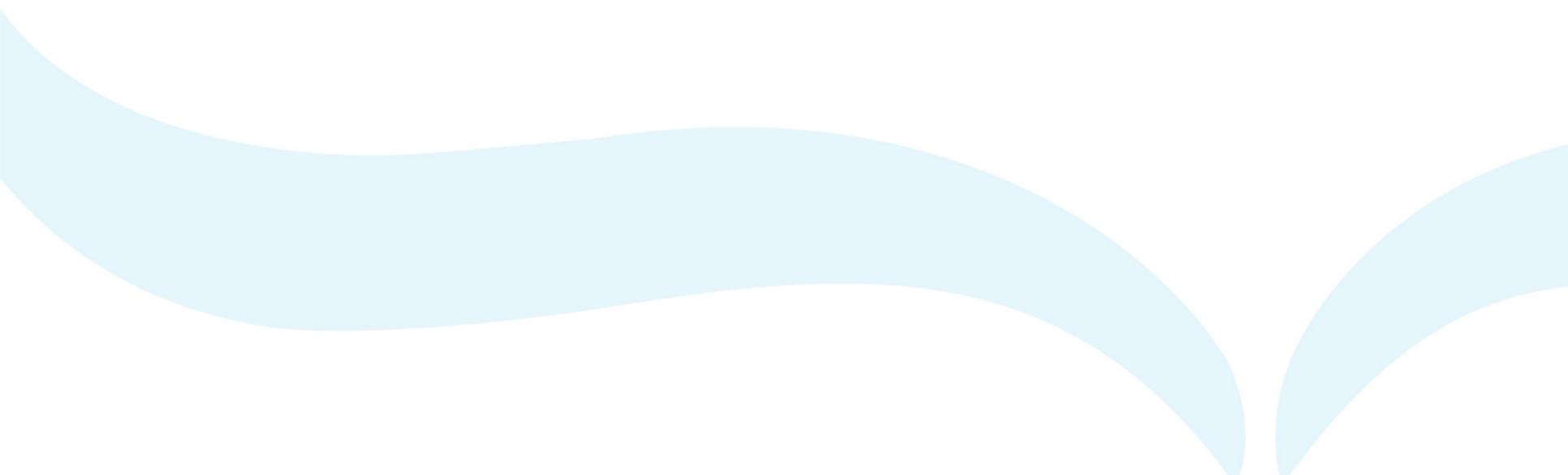


Computing



- Did the technical skills we needed in daily life then help us with operating Medical Equipment and how does that compare now?
- Firstly – we didn't have as much
- Secondly – it was a lot simpler...
- Arguably more dangerous!
- Let's look at this example



- One of the key things to note about this early equipment was everything was accessed from buttons on the front.
 - Limited in what it could do and so were your interactions to operate it.
- 

The 1990's - soft keys and simple menus



Our Medical Equipment Now



Daily Life Technology Now

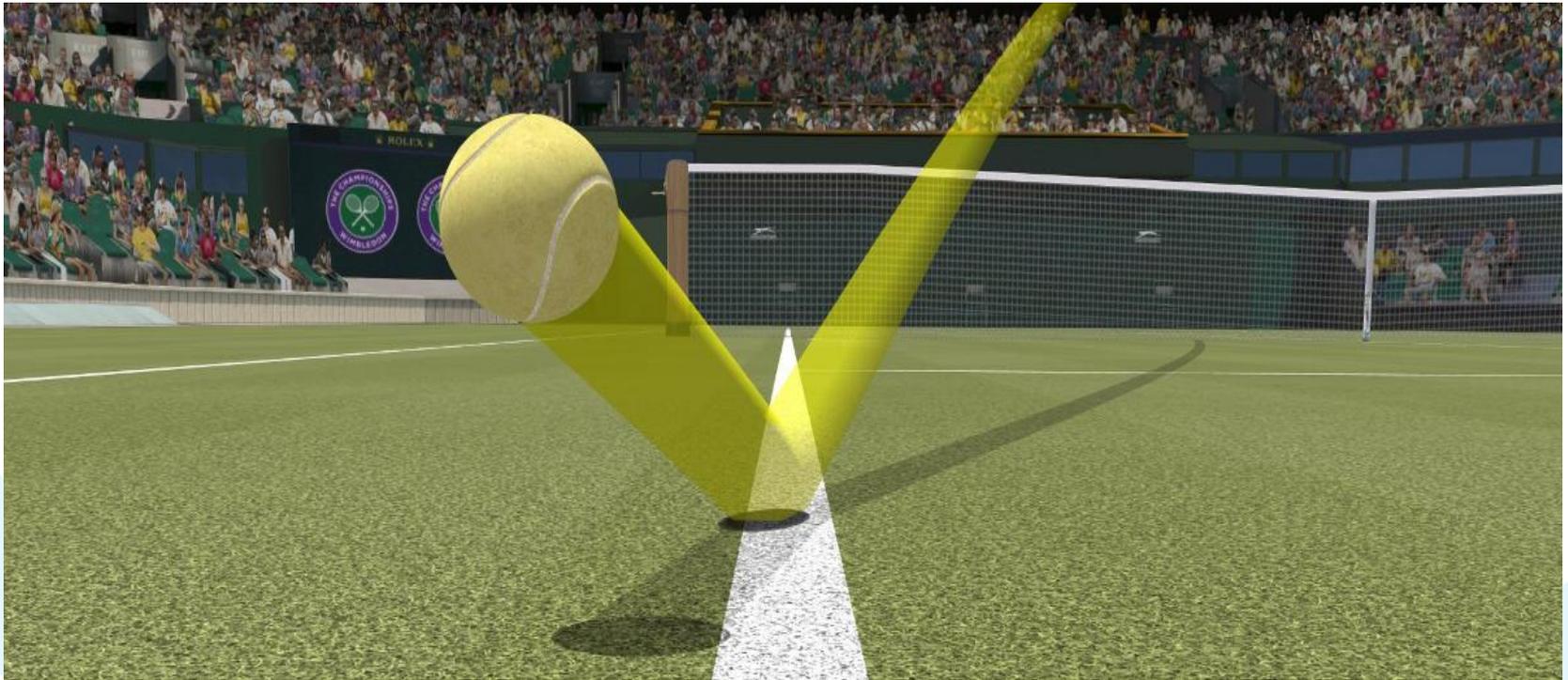


The tip of the Iceberg



- Technology all around
- Technology taught in schools
- There are very few areas it doesn't touch.
- You have to work with the technology available, you can't ignore it
- Think of these areas where it has been introduced....

Introduction readily accepted



Introduction Controversial



Keeping Apace

- Keeping up to date is hard
- Technology always seems ahead of someone's skill-set
- Always a generation that miss out
- Ageing workforce – later retirement
- Even in the geeky tech-world of equipment technicians – especially I.T.



NHS Greater Glasgow and Clyde and SQA – Healthcare Technology Management

The Scottish Qualifications Authority (SQA) is committed to supporting businesses and meeting Scotland's education and training needs. SQA supports organisations across a variety of sectors and industries through a wide provision of industry-recognised qualifications and education services.

Through SQA Customised Awards, organisations can design their own qualifications to meet their business needs. SQA Customised Awards are unique qualifications developed in partnership with, and owned by, the partner organisation to meet their business needs, and demonstrate quality and industry compliance.

In 2016, NHS Greater Glasgow and Clyde (NHS GG&C) worked with SQA to develop their Customised Award: Diploma in Healthcare Technology Management at Scottish Credit and Qualifications Framework (SCQF) level 9. This award recognises the specialist skills within the Medical Physics department of NHS GG&C.



About NHS Greater Glasgow and Clyde
NHS Greater Glasgow and Clyde has been an SQA approved centre since 2007, with a long history of delivering SVGs and other SQA qualifications, including Business and Administration, Health care, and Management.

Sharing Knowledge - What do we know that might give us some comfort?

- Modern Medical Equipment is, on the whole, reliable
- Database information can back this up
- We analysed 30 000 assets covering 1200 models
- We found an average failure rate of 0.2 per annum for true failures
- We found only 5 models breached > 1.0 failures per annum
- We found operator errors, accessory issues and damage, far outweighed true technical problems
- We found Preventive Maintenance intervention would have had no impact on the reported problems

Most Hi-Tech

- Tends to fail safe
- Really quite unlikely to cause harm due to a technical failure
- As just discussed - is very reliable
- Emphasis on ability to operate it safely
- What does give us sleepless nights?

Familiar Old Friends



- Wall Suction Units
- Gas Cylinders and Regulators
- Flow-meters
- Infusion Devices
- Damaged Mains Cables and Plugs



New Challenges

- Connectivity – interconnected devices
- Data Breaches
- Hacking
- Confidentiality
- Cyber-security strategies not considering Medical Devices
- A.I.
- Are we geared up...



Too Much Tech?

- I would argue NO
- As in previous decades it's proportionate to what we have become accustomed to in everyday life
- It does present generational and operational challenges
- Even if the equipment is safer, you still need the skills to operate it safely
- Future training will need some focus on wider issues of connectivity and cyber-security as well as the device.

Thank you for Listening
Any Questions?

