



# Summer Schools 2023

a **digitalhealth** event 

27-28 July



**#DHSS23**

## Masterclass: health IT return on investment (ROI), analysing and reporting the benefits

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# Health IT return on investment (ROI), analysing and reporting the benefits

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# Agenda

**Interactive session, we welcome your comments, questions, criticisms!**

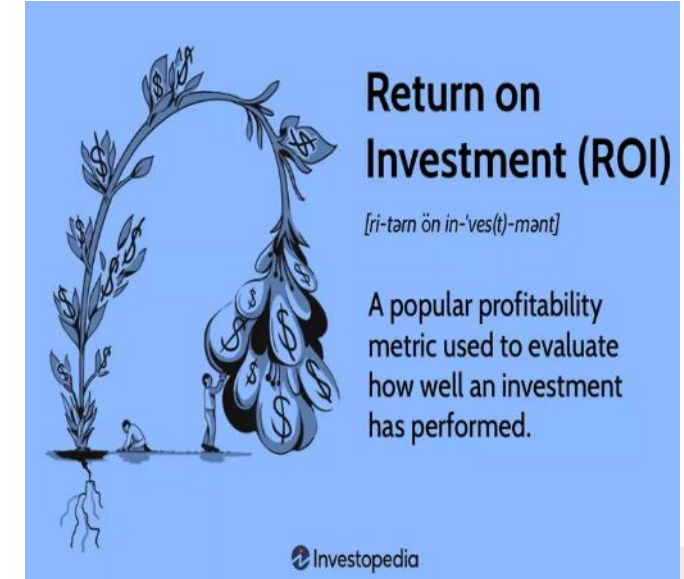
- How did we get here
  - North Lincolnshire & Goole NHS FT experiences
  - Some maths (how we've approached RoI at Imprivata)
  - The future
- 
- A decorative graphic consisting of several light gray, semi-transparent geometric shapes, including rectangles and trapezoids, arranged in a scattered pattern across the bottom right portion of the slide.

# How did we get here?

- Why
    - Core requirement for NHS Business cases
    - Need to make more informed decisions
    - Drive to show "value" in projects
      - Can/should all projects ultimately require money saving?
  - What
    - Desire to look at "what if?" scenarios
    - Before change and after change
      - Can't analyse every location/person
      - Need to extrapolate micro to macro
  - Who
    - Clinical
    - Finance/procurement
    - Board
- 
- The slide features several light gray, semi-transparent geometric shapes, including rectangles and trapezoids, scattered across the right side and bottom. These shapes are arranged in a way that suggests a 3D architectural or abstract design, with some overlapping others.

# North Lincolnshire and Goole NHS FT & Hull University Teaching Hospitals NHS Trust

- Two popular methods for achieving the goal of lower spending are **cost avoidance** and **cost savings**.
- **Cost avoidance is a measure** that decreases potential increased expenses as a way of lowering the organization's future costs. To simplify, it is the actions that an organization does to avoid incurring costs in the future. Cost avoidance is a spend management strategy focused on anticipating and reducing the likelihood of future costs.
- Because good cost avoidance eliminates costs before they appear, the results of the practice are difficult to quantify.
- In cost avoidance, all actions are done to reduce future costs. For example, the organization may spend regularly to maintain the condition of the machines used in production.
- Failing to maintain the machines may accelerate their deterioration which could lead to more expensive repairs or worse, needing to replace them.
- **Cost savings** is the practice of lowering your current costs.
- The lower your expenses, the less your hard-earned revenue goes to operational costs. Then, you can invest in company growth initiatives like hiring and expansion.



Return on investment (ROI) is a performance measure used to evaluate the efficiency or [profitability](#) of an investment or compare the efficiency of a number of different investments. ROI tries to directly measure the amount of [return](#) on a particular investment, relative to the investment's cost. [To calculate ROI](#), the benefit (or return) of an investment is divided by the cost of the investment. The result is expressed as a percentage or a [ratio](#).

# North Lincolnshire and Goole NHS FT & Hull University Teaching Hospitals NHS Trust

- Board /Executive focus – Meeting financial plan
- Meeting Performance Targets
- ROI in practice in Healthcare
- 65-70 % budget is .....
- Return on Investment – tension with “anchor Institution” in community

Cost avoidance (deferred cost) - if we do not spend this – potential future cost = x

May be cost neutral – no ROI

How do you cost – reducing serious incidents; preventing death; that is not really an ROI case, but many digital project do this more than reduce overall spending or costs.

- Ex. Viewpoint

# Northern Lincolnshire and Goole NHS FT

- Challenge of financial RoI against Non-financial benefits
- Hard to make case for qualitative benefits
- SSO – working with benefits manager – understand how to measure benefits
- Calculations and approach
  - Before/after measurements
  - Survey
- Impact on service desk
  - Number of password reset requests.
  - Demonstratable benefit for other projects
- Benefits may need to be presented differently dependent on the audience.

## SSO Cost saving calculation:

Before/after measurements- how long to login before SSO vs after SSO deployment.

- Number of nurses on a shift in the ED (A)
- Number of times a nurse accesses a PC (B)
- Time saved per login attempt (C)
- Pay rate of the average nurse in ED (D)
- Cost saving =  $A \times B \times C \times D$ .

# Audience Question

What has been your best/most successful ROI or benefits analysis experience



# Audience Question

Is RoI a valid measure as we can only reduce cost (60-70% of cost is people) or bring in income?

# Input data

Type	Healthcare	
Region	UK	Choose your region from the list
Number of users	3,600	Enter number of users
% of users who access Spine	100%	For UK, enter % to include SCW+
% of users using CIDCW	0%	Enter % of users who will have CIDCW
Number of applications	1	Enter the number of key applications
Number of endpoints	10,000	Enter the total number of endpoints
% of MUD/Low use endpoints	90%	Enter the % of low use endpoints (MUD)
% of Kiosk/High use endpoints	10%	Enter the % of high use endpoints (Kiosk)
% of VDA endpoints	0%	Enter the % of virtual desktops
Shift Length	12 hr	Select the shift length

Type	Credentials	Login	Application	Daily Logins p/u
None - Low	6	20	60	20
None - High	6	20	60	40
MUD	4	26	24	20
Kiosk	4	4	31	40
VDA	2	18	6	3
Spine without SCW+	19	0	0	80
SCW+	1	0	0	80
CIDCW Reauth	4	0	0	10
CIDCW Witness	4	0	0	2
Clinical Workflow Reauth	15	0	0	10
Clinical Workflow Witness	15	0	0	2

# Output

	Current (no Imprivata)	With Imprivata	Saving	Clinician per year	Clinician per shift	WTE
High/Kiosk	63,776 hr	29,808 hr	33,968 hr	5,945 min	33 min	
Low/MUD	286,992 hr	180,930 hr	106,062 hr	2,063 min	11 min	
Overall	350,768 hr	210,738 hr	140,030 hr	2,451 min	13 min	

# Going forward

- Scalability of analysis
- Realising value of investments i.e., shelf to bedside
- Effective and efficient change management
- MDT interrogation of data
- Models for communicating deeper analysis and tracking of ROI:
  - The value of qualitative data
  - Availability of data
- Policy levers and resources for health systems and industry
  - (Just searching through a few





# BUILDING A DIGITAL STRATEGY

<https://nhsproviders.org/building-a-digital-strategy>

1. Digital can help us achieve the triple aim of better health, better care, lower cost

Better Health	Better care	Lower cost
Improved clinical safety	Finding records and documentation more easily	Channel shift (fewer phone calls, less paper)
Identifying illness sooner	Right help first time	Better deals with suppliers
Fewer medication errors	More consistent practice	Switch off legacy systems
Improved infection prevention	Clearer discharge summaries	Greater efficiency
Better clinical decision making	Better compliance with advice	More cost effective diagnostic testing
	Improved audit trail	Easier compliance with national standards or schemes
		Increased clinic utilisation
		More effective bed management



# Encouraging direction, do we go deeper ... if so how can we precision and accessibility

Services in healthcare are a combination of:

- **Transactions** like booking, referring, notifying, testing and prescribing
- **Care** like consultations, hospital admissions and operations
- **Pathways** that direct patients to the right services and treatments
- **Technology** that underpins services
- **People and organisations** that deliver services

## Principles

- **Reach beyond the usual voices.** Good user research can't be done by listening to expert patients or clinical informaticians alone. [Don't underestimate the importance of user research skills.](#)
- **Check your bias.** It can be tempting to assume you know what patients or clinicians need, particularly if you have been one. However, this can be a dangerous assumption: those involved in developing digital strategies are atypical.
- **What people say they want is not always what they need.** It is better to observe how they work, understand their lives and listen to their frustrations.
- **Think about *all* your users.** Thinking about your mainstream users vs those with more specific and unique needs can be a good way to test your digital strategy. This [short guide from IDEO](#) can support your thinking.

Key information to capture includes:

- **Volumes:** how many times is this service used each year?
- **Cost per use:** how much does it cost to provide this service?
- **Quality:** how good is the service?
- **Digital take-up:** what percentage of the volumes are delivered digitally?
- **Ownership:** who is accountable for running and improving each service?
- **Opportunity:** is this a service that could benefit from digital transformation and improvements in patient experience?

## Approaches

- **Use existing data:** like friends and family test results (especially write-in answers), complaints and staff survey responses.
- **Go to the 'gemba':** spend time shadowing, visit wards and try to use IT systems yourself.
- **Interviews:** a small number of user interviews and focus groups will often give you insights you won't get from surveying thousands.
- **Diversity and inclusion:** Ensure you are speaking to all parts of the communities you serve. As an employer make sure you [build diverse and inclusive teams](#) by reviewing recruitment practices, connecting with [new networks](#) and seeking new ideas. The NHS's [Widening Digital Participation](#) programme can provide more advice.
- **Go deep in one or two areas:** you won't be able to do detailed research across all areas of your trust, but it is helpful to explore a couple of domains in more detail.

# Contact our presenters



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## Read our blogs

<https://www.imprivata.co.uk/blog>

**Delivering ICS Digital Transformation, Identity Strategy and System Efficiency**

By Andy Wilcox, Sr. Solutions Marketing & Enablement Manager  
August 2, 2022

Unlocking the promise of joined-up health and care provision

On 28 April, the **Health and Care Bill** received Royal Assent and became an Act of Parliament. The bill formalises the intent to establish Integrated Care Systems (ICSs) across England. This evolution of health and care delivery will develop multi-agency partnerships that span the NHS, local government, voluntary, community, and social enterprise (VCSE) organisations, and other partners. ICSs will have the responsibility to plan and deliver joined-up health and care services for people in their local areas and collaborative working will be key to the successful delivery of this vision.

Ensuring the ICS vision becomes a reality will require clear communication, fast, secure access to information, and enthusiastic adoption by clinicians and all other frontline workers, with the aim of better meeting the needs of the populations being served. This in turn requires:

A strategic approach to planning, data access across the ICS, with a foundation in digital

WHITEPAPER

**What can a unified digital identity strategy bring to an ICS?**

Andy Wilcox  
Senior Solutions Marketing Manager

Listen to clinicians

Leadership from an ICS-level Design Board is needed so that the challenges addressed by organisations and... and, unfortunately, clinicians to join project... enables clinicians to registration.

the world.

and exemplars from digitalisation journey. It not only simplifies the... which can fund

28%	NHS Organization 6
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used purchasing... ing up further... ing support and... ICB comprising six... 35%. In short, the ICS... single entity rather

Visit our Digital Health Summer School 2023 resource centre



<https://rb.gy/gy13b>



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