



# Health Estates Conference



Welcome to the 12th Health  
Estates Conference!



31st October 2024



# Health Estates Conference



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# Health Estates Conference



## Chair Opening Address



**Rob Jepson**

Group Director of Estates and Facilities  
Manchester University NHS Foundation Trust



# Health Estates Conference



## Keynote Presentation



**Steven Hipwell**

Digital lead for Lancashire and South  
Cumbria's New Hospitals Programme -  
NHS



# Building Digital Estates

**Steve Hipwell**, Digital Lead for Lancashire and South Cumbria  
New Hospitals Programme



# Blending physical and digital infrastructure and services

## Some key opportunities and coordinating them

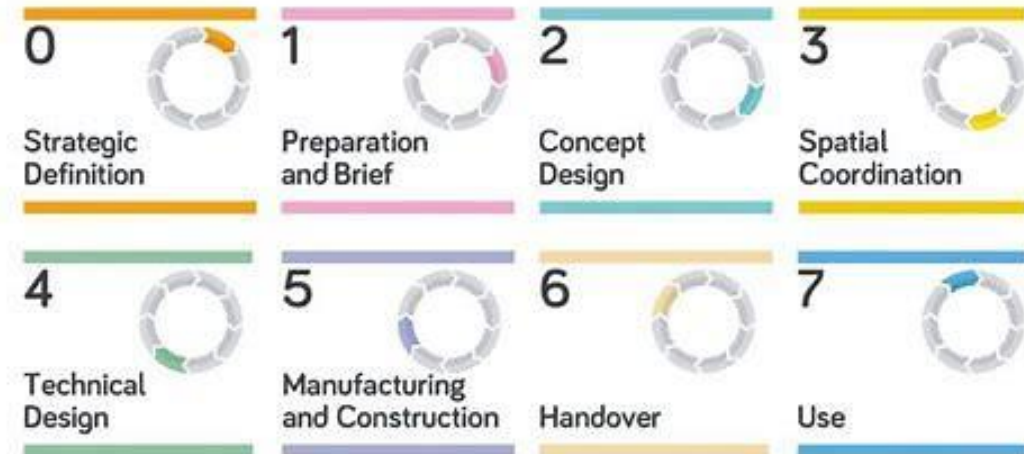
- Shaping integrated services and delivery to better meet people's needs – hospitals without walls, system wide services
- Improving experiences and flow – patients, staff, visitors, everyone's
- Interoperation of services
- Removing unnecessary costs
- Sustainability
- Future capacity
- Mapping current and future Target Operating Models and plans to realise them.



# Lancashire and South Cumbria's approach in coordination with the national teams

## Our approach

- Showcase what's possible
- Build multi-disciplinary governance and delivery collaboratives
- Jointly develop, define and agree principles and strategy
- Develop Target Operating Models moving from current to future state
- Understand the processes, considerations and parameters of NHP builds and the dependencies for Integrated Care System's services – as both are developed and harmonised
- Surface known and expected constraints
- Adapt, curate, develop and apply for existing estate and services.



# Smart lighting WGH - uses the data network

## The benefits

- Significant benefits in the quality of light, adjusting for ambient light, colour temperature and proven links to **wellness and productivity**
- Reduced energy use – between **10% to 50%** dependent on scope and scale
- Fully automated with sensors for **control, optimisation and data**
- **Reduced Facilities Management (FM) costs** for maintenance and safety, smart lighting is low voltage, long-life and low overheads and **sustainable**
- **Smart emergency lighting** can reduce FM costs by up to **90%** over traditional systems – Source ISTL.

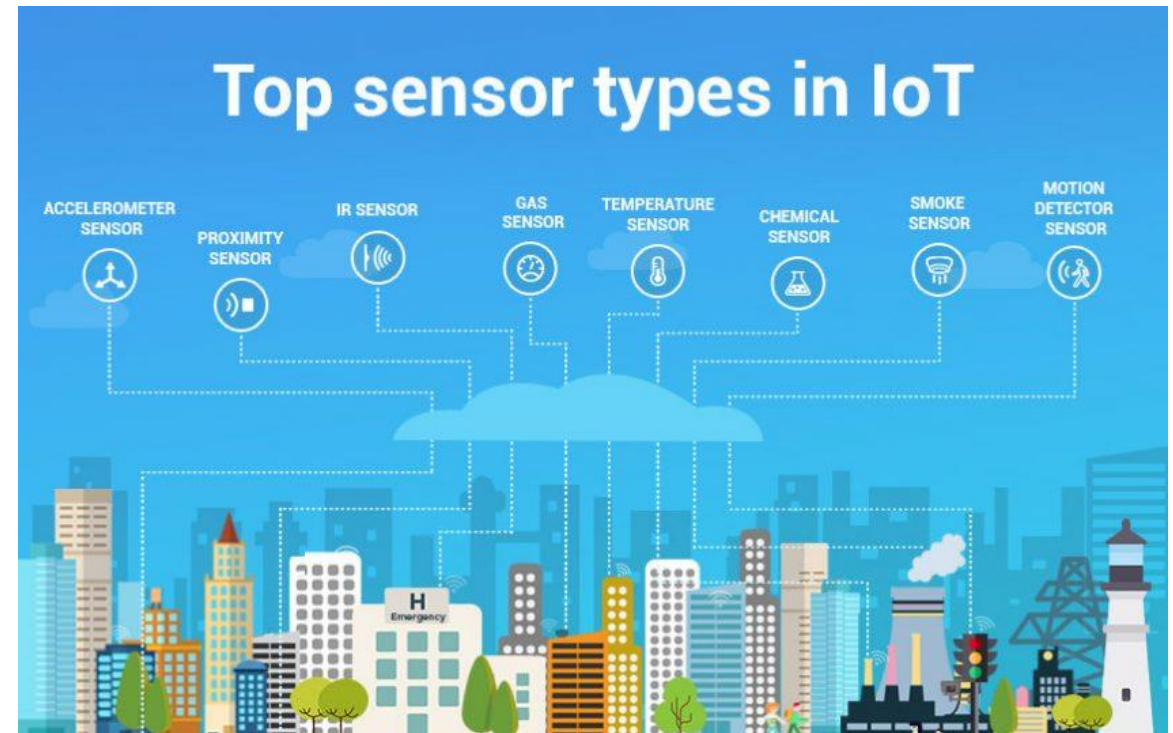




# Environmental sensors WGH

## The benefits

- **Occupancy and utilisation** sensing to understand and optimise estate, facilities and resources
- Sensors and controls to **baseline and adjust services** leading to tariff reductions, cost savings, **10%+** reductions, MKUH reduced energy consumption by **50%** using sensors
- **Water temperature and flow management** to remove the need for manual running of taps, costs estimated at **£30k+ per year** at WGH
- Workflows and sensors to enhance **security, safety and sustainability**
- **Environmental data** for clinical use-cases: infection prevention control, recovery times and length of stay.



# Drones for roof leak, thermal loss and mapping use cases as WGH

## The benefits

- The BT drone service captured and analysed **2,700 images** of WGH roof and immediate spaces in **1 day** at no cost, typical cost £2-3k
- The **benefits realised** were **immediate**, identifying cracked tiles, hot and cold spots for leaks and thermal loss and the likely causes such as vegetation growth and degraded flashing for targeted maintenance
- Drone captured data will **enhance existing estates data and intelligence**
- **Traditional scaffolding** for the entire site and roof and thermal inspections and mapping would run into **£100,000s** and **less effective**.



# Bed occupancy monitoring for pressure sores use case, falls detection and prevention at RLI



In-patient falls are the most frequently reported safety incident.

More than 250,000 falls and 1,000 fractures are reported from hospitals each year in England and Wales.

UK data shows an average of 6.63 falls per 1,000 occupied bed days, which equates to more than 1,700 falls in an 800-bed general hospital at current bed occupancy rates.

Data also showed that 30 to 50% of falls resulted in physical injury, as well as fractures which occurred in 1-3% of patients – NHS care supplier.

## The benefits

- **RADAR sensors** to be fitted above 8 beds in RLI wards 4 and 5 to collect movement data and are accurate to 20cm and less.
- **Mobile alerts** can be tailored to alert nursing staff when a falls risk patient is out of bed and certain conditions are met.
- **Movement data** to be collected for pressure sores use case for interventions. The aim to **reduce distress to patients, reduce length of stay and associated complications and costs**. Pressure sores cost the NHS upwards of **£3.8m per day**.

# Bed and medical device asset tracking at RLI wards 4 and 5

## The benefits

- **Increases flow, efficiency and productivity** and **reduces anxiety** as the location and condition of assets is known to staff
- **Improves inventory management** and stock control, especially when integrated with dynamic purchasing systems and **Enterprise Resource Planning systems**
- Enhances **security and safety** and contributes to **Scan4Safety** principles
- **Reduces cyber security and software patching and vulnerability issues** when digitally enabled assets are known, tracked, discoverable and appropriately managed.



# Digital twin RLI Emergency Department

## The benefits

- **Digital twin** planned for the Royal Lancaster Infirmary Emergency Department to model **optimum layout and flow**
- **Building and modelling digitally** is cheap, quick, collaborative, engaging for stakeholder groups, promotes co-design and ownership
- **Digital twins** of healthcare facilities can be overlaid with asset information, location sensing, used for occupancy and utilisation and safety and security ex. MKUH Cancer Centre
- **Designing digitally first** avoids design, engagement and coordination issues later that can **impact the buildings operational life-cycle.**



# Patient entertainment and distraction RLI wards 4 and 5

## The benefits

- To be scoped
- **Hospital entertainment systems** have been linked with **patient empowerment, distraction and improved recovery times**
- **Entertainment systems** can be tailored for **multiple uses** including communication with family and friends, clinical consultations, information and advice and environmental room control
- A **patient able to make use of in-room or mobile entertainment systems is more empowered**, which can translate to decreased assistance required from ward staff.



# Robots for cleaning and rehabilitation RLI

## The benefits

- **Autonomous** and semi-autonomous (co-bots) can clean large and long open spaces **2 to 3 times quicker**, evidence from LUFT, than a human cleaner
- A robot can clean **all-day and at any-time** only requiring re-charging and re-stocking with cleaning materials
- **Recruitment and retention** of cleaning staff is a challenge
- **Quality and consistency** of cleaning is a common issue and risk in the context of **infection prevention** control and other factors
- Robot cleaners offer high levels of availability, reliability, consistency, quality and **return on investment**, the one featured in the image is £50k.



# Smart theatres WGH

## The benefits

- **St George's London** have trialed and adopted a smart theatre model to reduce costs, lost availability, reduce energy consumption and to promote sustainable practices and improve flow
- St George's have extrapolated the combined **savings across 31 theatres to be around £1.5m per year**
- There are early-stage discussions at UHMBT to deploy the same model in an operating theatre at WGH. The St George's team involved have offered their support and to share methods, specifications and learning.





# Environmental data for clinical applications in the Secure Data Environment (SDE)

The **Secure Data Environment (SDE)** is a secure data and research analysis platform. It is part of an interoperable NHS Research Secure Data Environment network.

## The benefits

- **LTHTr** are hosting the LSC region's **Secure Data Environment (SDE)**
- **UHMBT** are providing **environmental data from the Building Management System** to feed into the **SDE**
- We are confident that by **aggregating environmental and clinical data sets** and points that we will discover insights and linkages between environmental factors such as: temperature, humidity, ventilation, lighting, noise and air quality with clinical factors such as: infection prevention control, recovery time and quality, length of stay, sleep hygiene and patient and staff experience.

# Interoperability and integration

## The benefits

- A **lack of interoperability and integration** is a known challenge within the NHS with **extensive negative consequences** including mass duplication, lack of visibility, uncoordinated workflows and waste
- Early-stage planning is underway to bring together key stakeholders from **across the integrated care system (ICS)** to explore the opportunities for collaboration, sharing resources and developing and adopting common standards
- The aim is to **improve interoperability and integration across the ICS**, develop and share a common roadmap and remove unwarranted duplication.





## Thank you

- Any questions?
- To find out more, visit [www.newhospitals.info](http://www.newhospitals.info)



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## Panel Discussion

# Health Estates Conference



**Tim Radcliffe**  
Net Zero Food  
Programme Manager  
NHS England



**Dr Philip Tamuno**  
Head of Sustainability and Net  
Zero - Barking, Havering and  
Redbridge University Hospitals  
NHS Trust & Barts Health NHS  
Trust



**Alex Pitman**  
Green Project Director  
Alder Hey



**Janet Smith**  
Head of Sustainability  
Royal Wolverhampton NHS Trust  
and Walsall Healthcare NHS Trust



**Helen Taylor**  
Healthcare Coordinator  
The Carbon Literacy Project



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# Refreshments & Networking



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## Chair morning reflection



**Rob Jepson**

Group Director of Estates and Facilities Manchester  
University NHS Foundation Trust



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## Case Study





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## Case Study



**Steve Robertson**  
Director of Containment  
CCTech Ltd





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## Case Study



**HYDROP**



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## Case Study



**Chris Knight**  
Training Manager  
HYDROP E.C.S.



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## Keynote Presentation



**Paul Reid**

Head of Transport and Travel  
NHS Greater Glasgow and Clyde

# GREATER GLASGOW AND CLYDE JOURNEY THIS FAR TO NET ZERO AND SUSTAINABLE TRAVEL



# **NHS GREATER GLASGOW AND CLYDE ZERO EMISSION TARGETS**

- We are committed to ensuring that our whole fleet, both owned and leased, has zero tail pipe emissions as early as possible. We want to encourage sustainable travel by NHS staff for work purposes and reduce the need to travel by private vehicle.
- We want to use the power of our own actions and our purchasing power as a large organisation to help bring about the shift in vehicle technology that is necessary to protect us all from climate change

## **ACTIONS WE WILL TAKE**

- NHSGGC are continuously encouraging sustainable travel by making staff and visitors aware of the various public transport links that are available to them
- Providing over 220 Electric Vehicle Charging Points across our Estate for Public, Staff, Visitor and our own Fleet Use.
- Where possible make the transition to zero emissions fleets.
- Promote Cycling and Walking.
- Promote Mobile Services to patients.

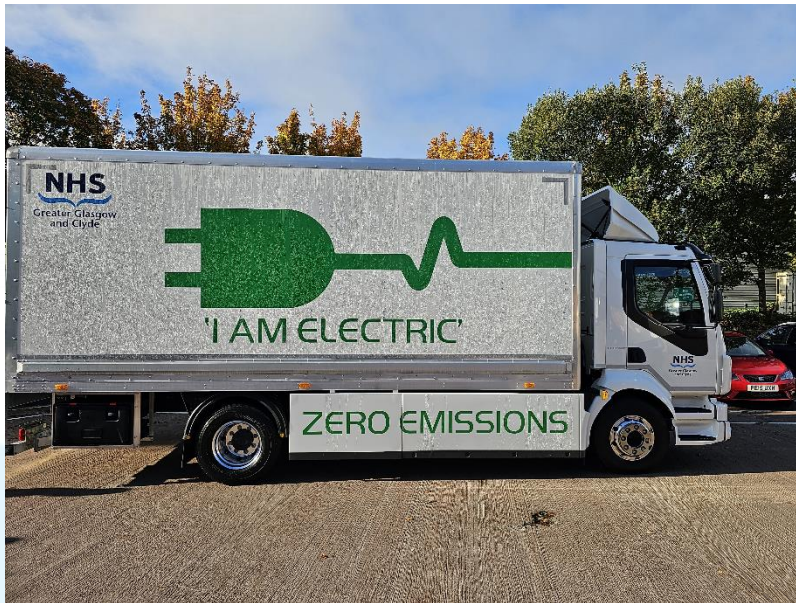


# SMALL AND LIGHT COMMERCIAL VEHICLE REVIEW



- Review current workings and mileages
- Infrastructure to charge
- Driver Training
- Risk Assessments

# HEAVY GOODS VEHICLES



- Range and options limited
- Schedule Reviews and weight consideration
- Charging Infrastructure
- Additional Equipment requirements

# CHARGING INFRASTRUCTURE

- Supply Routes
- Parking Areas
- Risk Assessments
- Supply Capacity
- Public Demand
- Load Balancing Charging
- Supply Chain Issues



# CAN WE DO MORE TO REDUCE EMISSIONS?



# CYCLE TO WORK AND SUPPORT

- Management of NHSGGC Cycle to Work scheme.
- Staff can apply for a tax free loan of up to £4000 and repay via salary deductions over 6, 12, 18 or 24 months.
- Savings on bike and equipment of 25-32%
- Generated savings of approximately £119,000 in National Insurance for 2023/24



## CYCLING SUPPORT

- Dr Bike sessions across our acute sites to support staff with bike maintenance
- Work with partners to provide support and guidance on bike security.



# PUBLIC TRANSPORT

- Annual public transport season ticket options for staff for First Bus, Scot Rail and SPT ZoneCard.
- Staff can purchase annual season ticket and repay via salary deductions.
- Journey planning support
- Partnership working with public transport providers and local authorities



# CAR SHARE

- Management and development of car share scheme to reduce single occupancy car use
- Car share schemes for staff at Gartnavel, QEUH, RAH and West Glasgow ACH





**THANK  
YOU**



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# Lunch & Networking



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## Chair Afternoon Address



**Rob Jepson**

Group Director of Estates and Facilities  
Manchester University NHS Foundation Trust



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## Keynote Presentation



**Matthew Smith**

Associate Director Operational Estates and  
Engineering - University Hospital Leicester

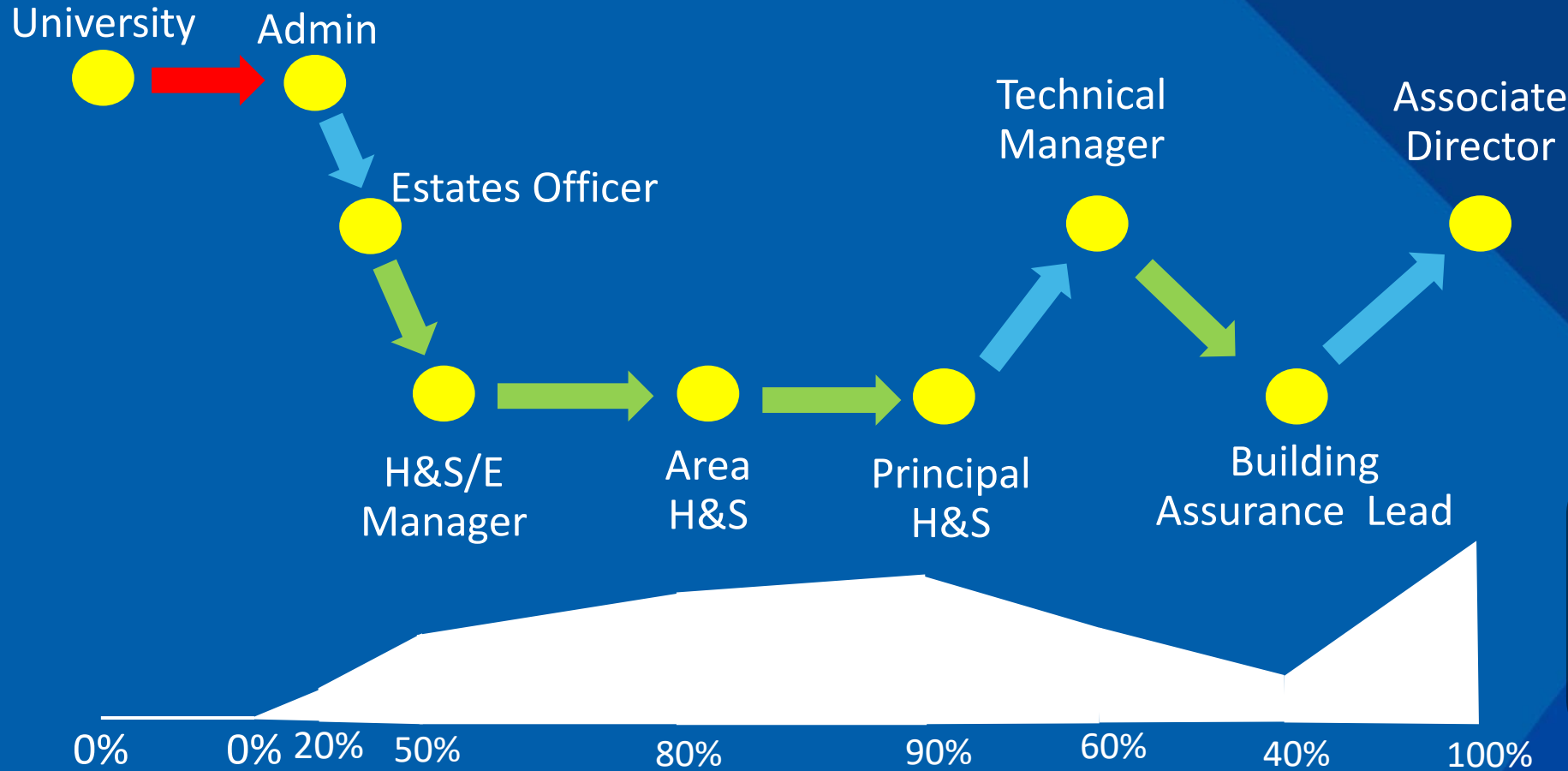
# Workforce

The need for succession planning and the recruitment of a new generation of skilled professionals to ensure the continuity of effective estates management.



Matthew Smith CMIOSH, MIHEEM, BEng, DipNebosh, DipEnvNebosh  
Associate Director Operational Estates and Engineering

# Typical Estates Professional Career – is there one?



Aircraft Engineer  
Estates Professional  
Safety / Sustainability

## TAKEAWAYS



# Where do you even start?

## Structure

- Is it realistic
- Is it documented
- Is it funded
- Is it supported

## Be Clear

- Process + Guidance
- Share – easy access
- Remind
- Appraisals – make them work



## Bring People on the Journey

- Direct line reports
- Unions
- People Team
- Finance
- Execs

### TAKEAWAYS

 Wide look

 Clear Plan

# UHL Estates Operations & Engineering



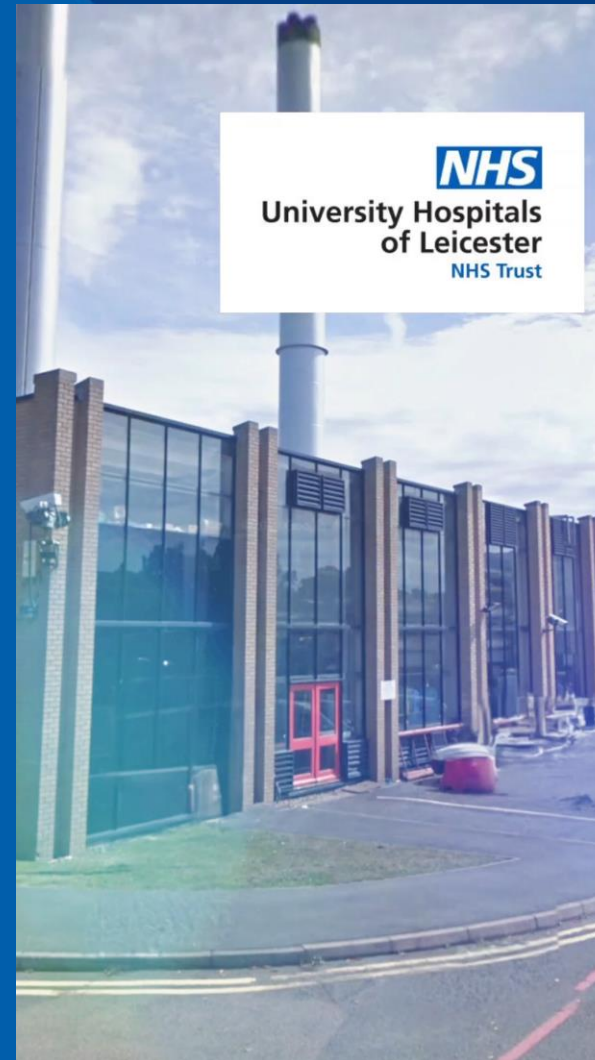
## TAKEAWAYS

- Wide look
- Clear Plan
- Think about progression



# Developing the Future

- Think about 'who's next'
- Prepare people for the next step
- Make appraisals meaningful
- Target your resources
- Support those who show willing
- Encourage those who have potential
- Provide clear feedback/plan following interview
- Show everyone the process works



## TAKEAWAYS

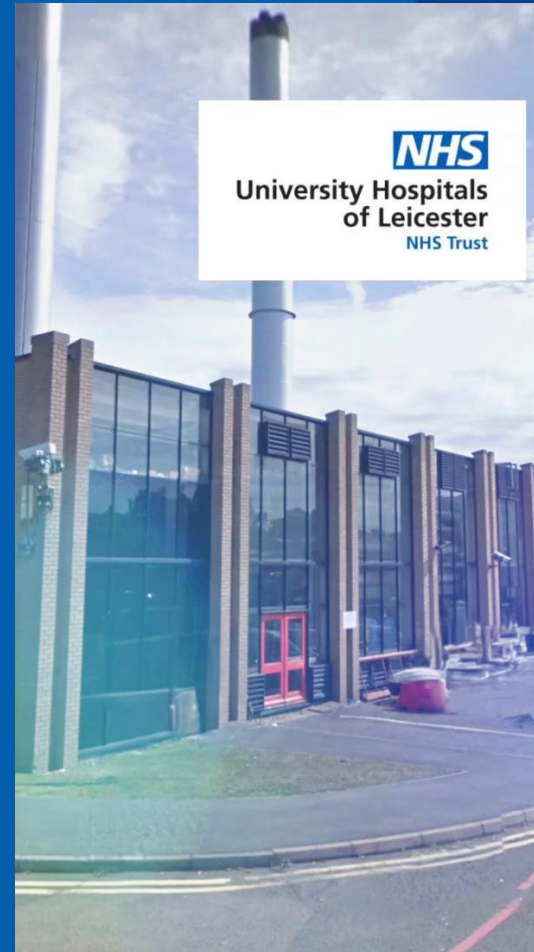
- Wide look
- Shape the culture
- Think about progression
- Who do you already have
- Be practical

# Apprentices – the obvious solution?

- Traditionally only considered the negatives of apprentices
- Massive positives from bringing someone in at the start of their career and giving them the support they need
- IHEEM offer free membership to apprentices

## Apprenticeships available

- Property Maintenance Operative
- Building Services Engineering Installer
- Plumbing and Domestic Heating Technician
- Installation and Maintenance Electrician
- Team Leader/Supervisor
- Operations/Departmental Manager



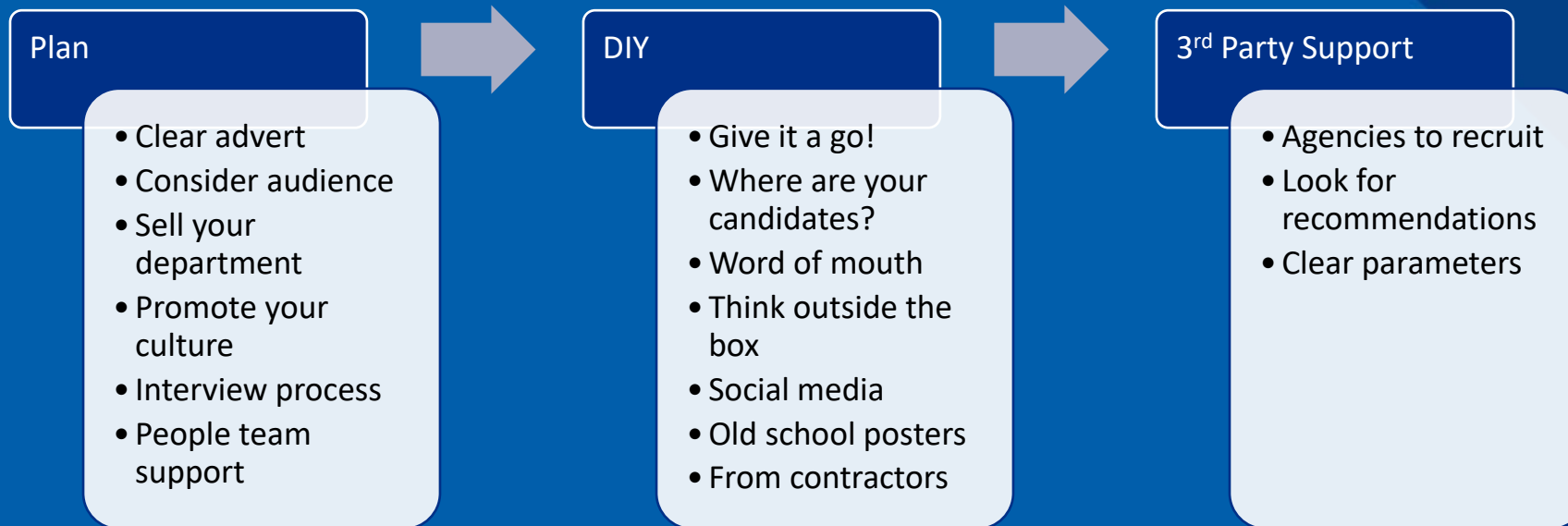
## TAKEAWAYS

- Wide look
- Clear Plan
- Shape the culture
- Think about progression
- Who do you already have
- Be practical
- Build your team up

For more information:  
[instituteforapprenticeships.org](https://instituteforapprenticeships.org)

# Recruitment

Assuming you've done everything you can to develop from within its time to recruit



## TAKEAWAYS

- Wide look
- Clear Plan
- Think about progression
- Who do you already have
- Be practical
- Build your team up
- Sell yourself

# TAKE AWAYS



1. Wide look – consider people with a varied career
2. Clear Plan – what you want, who's involved, timescales + document
3. Think about progression – what options are there
4. Who do you already have – potential to develop from within
5. Be practical – what resource do you have to deliver the plan
6. Build your team up – bring in apprentices
7. Sell yourself – promote positivity, advertise, think outside the box



**Gardeners team nominated for Trust recognition awards**



University Hospitals  
of Leicester  
NHS Trust

# Thank you for listening

Matthew Smith CMIOSH, MIHEEM, BEng, DipNebosh, DipEnvNebosh  
Associate Director Operational Estates and Engineering



# Health Estates Conference



## Keynote Presentation



**Mr Andrew Grimes MSc, MRICS**  
Associate Director Property and Capital  
Development - Ashford and St. Peters  
Hospitals NHS Foundation Trust

# Optimising Capital Investment strategies in Health care Infrastructure: A focus on NHS Estates

Will/should Capital remain tight across the NHS?  
Capital planning needs to be realistic and deliverable.

**CDEL: a four-letter word?**

Healthcare Estate Development Strategies must meet the needs of patients, stakeholders, town planners and transport planners



## New Hospital Programme -NHP

The NHS has a huge footprint, with an estate spanning 25 million m<sup>2</sup> – that's equivalent to over 3500 football pitches. We have over 10,000 buildings, including 1,140 hospitals and 7,500 primary care sites.

<https://www.england.nhs.uk/blog/a-changing-landscape/>



Ashford and  
St. Peter's Hospitals  
NHS Foundation Trust

GRIMES



**Andrew Grimes** MSC, MRICS

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Press release

## Housing targets increased to get Britain building again

The government has announced an overhaul of the planning system to fix the foundations and grow the economy.

From:

[Ministry of Housing, Communities and Local Government](#) and [The Rt Hon Angela Rayner MP](#)

Published

30 July 2024

All councils in England are to be given new, mandatory housing targets to pave the way to deliver 1.5 million more homes – tackling the most acute housing crisis in living memory.



Shinfield Civil Parish  
School Green Centre  
£3.5m CIL/S106 Funded  
scheme

Land Disposal to CALA



Optivo have  
invested c £30m



St. Peters Quarter, Chertsey :  
146 Keyworker flats  
212 Market houses  
116 Retirement Flats





# Extract from Summary letter from Lord Darzi to the Secretary of State for Health and Social Care

## Updated 25 September 2024

You asked me to identify the major themes for the forthcoming 10-year health plan. These include the following:

Re-engage staff and re-empower patients. Despite all the challenges and low morale, NHS staff are profoundly passionate and motivated to raise the quality of care for patients. Their talents must be harnessed to make positive change. The best change empowers patients to take as much control of their care as possible.

*Lock in the shift of care closer to home by hardwiring financial flows. General practice, mental health and community services will need to expand and adapt to the needs of those with long-term conditions whose prevalence is growing rapidly as the population age. Financial flows must lock-in this change irreversibly or it will not happen.*

*Simplify and innovate care delivery for a neighbourhood NHS. The best way to work as a team is to work in a team: we need to embrace new multidisciplinary models of care that bring together primary, community and mental health services.*

*Drive productivity in hospitals. Acute care providers will need to bring down waiting lists by radically improving their productivity. That means fixing flow through better operational management, **capital investment in modern buildings and equipment, and re-engaging and empowering staff.***

Ara Darzi

Paul Hamlyn Chair of Surgery, Imperial College London  
Consultant Surgeon, Imperial College Healthcare NHS Trust  
and the Royal Marsden NHS Foundation Trust  
Independent Member of the House of Lords

# Plans and Strategies

Clinical strategy – What and where

Estate plan – Estate staffing plan

Financing Plan – The money

Oven- ready Business Cases

The Local Plan – sites, infrastructure funds

Neighbourhood Plans (25%of CIL)

A 15-year Plan: A 60-year legacy



# From Shotfield Health Centre to Jubilee Health Centre campus – Better Healthcare closer to Home

Shotfield health Centre, Wallington



Mint House commercial offices



Mint House became JHC East Community Mental Health Services

2 GP practices financed the £12m project

JHC West



Mint House and Shotfield became the 4500 sqm Jubilee Health Centre in 2012

# S106/CIL in 2024



Sleaford St Health Centre  
Nine Elms Vauxhall, South-West London  
£15.5m S106 /CIL funding of a new development to meet  
population growth  
**Construction contract for fit out signed 2024. Opens 2025**



Shinfield Civil Parish  
School Green Centre  
£3.5m CIL/S106 Funded  
scheme: Opened 2021



Burney St

Burney St Surgery  
Greenwich South-East London  
S106 funded upgrade to meet  
growth: £770,000  
**IN CONSTRUCTION – 2024/25**

# Sources of funding



A fully funded £8m replacement for the Brocklebank Health Centre is part of the Atheldene Regeneration programme in Wandsworth, South-West London by NHSPS & Wandsworth BC  
**Opens in September, 2025**

- NHS England – long-term and short-term allocations
- Depreciation/internal capital
- Land disposals
- Occupying vacant retail/offices for clinical use – reducing new build capital
- Regeneration agreements – New facilities
- Development agreements – New non-core facilities (key worker housing)
- 3 PD Primary Care development extended to Out of Hospital and Community Health services
- Pay by service use facilities – Diagnostics, energy
- S106/CIL/HIF (Housing Infrastructure Fund)
- S106 Obligations held by Trusts in balance sheet.
- VAT Recovery
- Focusing capital on core activities

# Sources of funding : CDC short term

Woking Community  
Diagnostic Centre (CDC)

£6m CDC funding  
Opens December 2024

Extension of a town centre  
community hospital using  
modern methods of construction.



## And finally: GETTING BEST VALUE

- Does your organisation have the right skills to deploy capital? (Finance, development and construction?)
- Does the organisation have the right plan and timescales to use capital efficiently?
- Should the organisation provide or buy the capital resource?
- Is land or property available to meet the need?
- Is a framework procurement always the best solution?
- Does it provide value for money or block competition?



# Summary and thanks

## The obvious:

- A deliverable plan
- Sensible timescales
- The right skills and knowledge
- Adequate Funding
- Using short term funding initiatives within a long-term plan

*Thank-you for listening*





# Health Estates Conference



**Thank you for attending  
the Health Estates  
Conference**