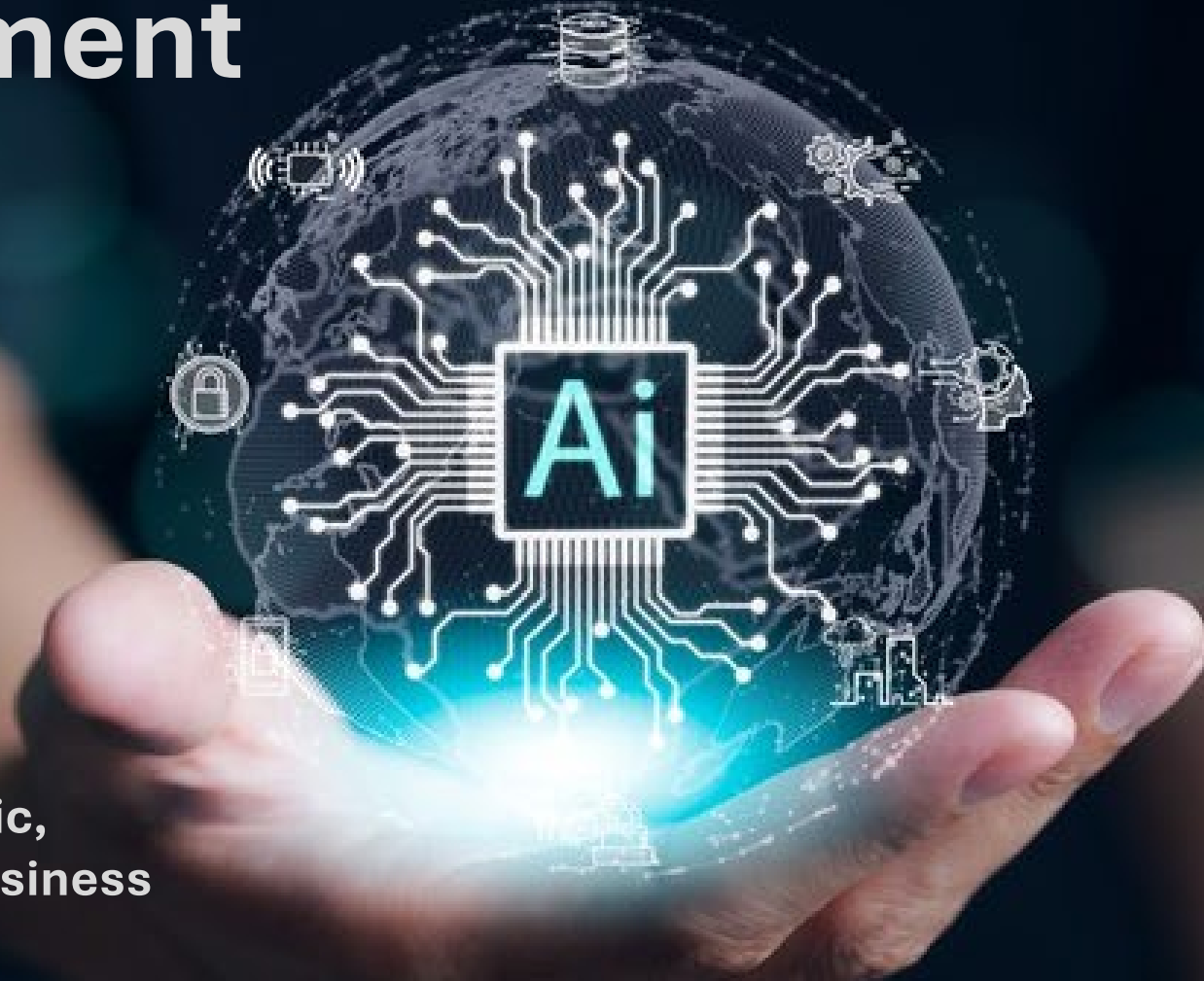


Artificial Intelligence in 'soft' Facilities Management



Judith Stewart
Director of Economic,
Commercial and Business
Development



What AI fits with sFM?

Machine Learning:

- Powers predictive maintenance, anomaly detection, and data analysis to improve decision-making.

Natural Language Processing (NLP):

- Enables AI-powered chatbots and virtual assistants for enhanced occupant communication and support.

Computer Vision:

- Facilitates facial recognition, occupancy tracking, and security monitoring in facility environments.

Internet of Things (IoT) Integration:

- Connects devices and sensors to gather real-time data for AI-driven analysis and automation.



Why bother with AI?

- Efficiency & Cost Savings
- Patient & Staff Experience
- Safety & Compliance
- Sustainability
- Workforce Productivity

But what can it really do?



Efficiency & Cost Savings

- **Automation of routine tasks** (e.g., cleaning schedules, catering orders, portering requests).
- **Predictive resource allocation:** AI forecasts peak demand (meal times, waste collection, patient transfers), ensuring the right staff/equipment are available.
- Reduction in **waste of time, food, energy, and supplies**, directly lowering costs.



Efficiency & Cost Savings

In Northwick Park Hospital, Infinity replaced the old paper system for requesting porters in the Emergency Department, the performance of which has significant consequences on the operational efficiency of the entire hospital.

The solution is now **used to by more than 500 staff in the ED**, the performance of which has significant consequences on the operational efficiency of the entire hospital. In LNWH, Infinity Health has helped **reduce cancellations by over 80%**. This has resulted in a sustained **reduction of six minutes per porter request**, which translates to a **saving of more than 10,000 hours each year**, equivalent to **five FTEs**.



London North West
University Healthcare
NHS Trust



Health Innovation
WEST MIDLANDS



Better Patient & Staff Experience

- **Smart room controls** give patients independence, reducing staff workload.
- **AI-powered helpdesks and chatbots** provide instant responses for staff and visitors, improving service satisfaction.
- **Faster portering** and bed turnaround reduces waiting times and stress for both patients and clinicians.



Better Patient & Staff Experience

Nottingham University Hospitals (NUH) – Voice-Activated Environmental Controls

Lisa Yates, Digital Strategy Lead at NUH, said: “All the technologies we are currently testing at Linden Lodge are critical in giving our patients a sense of independence as they receive treatment after serious illness or injury.

“The ability to adapt the conditions in their rooms helps to create a positive patient experience. We’re also finding that giving patients autonomy is reducing pressure on staff too as there are far fewer calls for assistance, allowing them to focus on clinical care and rehabilitation.



Enhanced Safety & Compliance

Documentation & Regulatory Compliance

- **AI Assistants:** Scan, summarise, and check compliance with UK NHS regulations (CQC, HTMs, HBNs, HSE).
- **Audit Trail Automation:** Automate logs of cleaning, waste disposal, and portering activity for easy inspections.
- **Policy Enforcement:** Chatbots or AI assistants guide staff in real time on compliance protocols (e.g., sharps disposal, PPE usage).
- **Data Dashboards:** Provide compliance reports for regulators (e.g., CQC, NHS Environmental Health standards).

Automated Incident Logging

- AI systems auto-generate incident reports for compliance and audit trails.

Waste Management Compliance

- **Computer Vision for Waste Sorting:** Automatically verify segregation of clinical, sharps, and general waste, reducing human error.
- **AI-powered Smart Bins:** Track fill levels and send alerts before overflow, reducing infection risks and non-compliance fines.



Enhanced Safety & Compliance

A large urban NHS Trust using Wastify's smart terminals and AI platform reported the following after 6 months:

28% reduction in clinical waste disposal

42% increase in recycling diversion

Real-time dashboard visibility across 15 sites

Fully automated ESG and CSRD-aligned reporting

Accurate tenant-level billing for outsourced facilities

Wastify's AI didn't just optimise their operations, it enabled cost recovery and waste transparency at scale.





Sustainability

- **HVAC + Air Quality AI Monitoring:** Ensure compliance with **HTM 03-01 standards** (ventilation for healthcare premises).
- **Legionella Risk Detection:** AI algorithms monitor water system IoT sensors for early detection of risk conditions.
- **Energy Compliance:** AI can optimize energy use while maintaining **NHS Net Zero** compliance goals.



Sustainability

QEHKL: Optimising energy efficiency

Prior to solution implementation, analysis of historic data revealed a potential natural gas savings of 6%—£34,000 (or US\$43,336)—in 2018, so QEHKL was optimistic about the potential savings realized during the actual solution implementation in 2019. They were not disappointed. The solution achieved 8% savings—£100,000 (or US\$127,460)—in natural gas costs and a carbon reduction of 180 tonnes (or 198 US tons) in one year. Extending the solution to QEHKL's self-generated energy sources (wind and CHP), provides an estimated additional 17% savings in energy costs equating to £129,000 (or US\$164,423).

The Queen Elizabeth
Hospital King's Lynn
NHS Foundation Trust

An internal Caresyntax study from 2022 showed that hospitals utilizing such AI systems reduced their operating room energy consumption by 25%. In our experience, the energy savings generated by these AI efficiencies far outweigh the energy consumed by the AI systems themselves.





Workforce Productivity

- AI tools (like Otter.ai, GrammarlyGO, or custom FM chatbots) reduce admin burden, freeing staff to focus on patient-facing tasks.
- Automated scheduling reduces fatigue and improves staff satisfaction.
- Practical Applications using robotics and AI combos in cleaning



Workforce Productivity

The most recent ICE task report found Co-Botics can clean an average of 702.75 sqm per hour. The statistics demonstrate productivity has increased by almost 300%. This has allowed the team to redeem over 15 hours a day of manual cleaning, resulting in a saving in labour costs.



East Suffolk and North Essex
NHS Foundation Trust

“The Trust has been very pleased with the work [the robot] has done, and it has helped to highlight the need for thorough cleaning at this time - you could almost call it an ambassador!”

By releasing the staff member to undertake other touch point cleaning, the use of [the robot] has given the Trust a better standard of cleanliness within the areas used.”

Julie Dennis, Senior Soft FM Manager
Sherwood Forest Hospitals NHS Foundation Trust

So what's next?



The **future of AI in Soft FM for healthcare** is a move from reactive support services to **intelligent, predictive, fully integrated and sustainable hospital ecosystems**, where FM becomes as data-driven as clinical care.