Breaking the Capex Barrier: Unlocking NHS Innovation with 'As-a-Service' Technology

In this article, we explore how financial constraints are limiting the NHS's ability to modernise, impacting patient care and operational efficiency. Omnicell's Automation as a Service (AaaS) model offers a flexible, off-balance-sheet solution to fund automation, to enhance patient safety and streamline workflows without Capex constraints. We then get the views from a Trust that has adopted this innovative new financing model, sharing their experience of how it is helping them overcome budgetary challenges while improving efficiency and patient care.

The National Health Service (NHS) is under huge financial strain, particularly because of capital expenditure (Capex) funds. As such, funding availability to maintain and modernise facilities such as introducing vital technology, tackling outdated infrastructure throughout the healthcare system is being severely impacted. This lack of investment and modernisation is resulting in inefficient work practices which negatively impacts patient care, causing longer wait times with decreased capacity.

The NHS's capacity to modernise IT systems and technology is likewise limited and hampered by lower capital spending despite the fact that healthcare is growing more dependent on cutting-edge digital solutions such as electronic health records, telemedicine platforms, AI-driven diagnostic tools and automation. All of which is leading to inefficiencies and even affecting the quality of patient care, and in some instances, patient safety.

The latest report by *Lord Darzi (November 2024)* advocates for a holistic approach to healthcare improvement, including addressing financial challenges, while maintaining a focus on both patient safety and operational efficiency.

The report underscored the complex relationship between financial constraints, patient safety, and operational efficiency and called for a new strategic approach, which, amongst others, includes the adoption of technology, as well as workforce development to mitigate these current challenges while at the same time improving and driving efficiency.

The flow of patients through hospitals is poor and the lack of capital investment in hospitals has resulted in worsened productivity. The NHS has been starved of capital and the capital budget has been repeatedly raided to plug holes in day-to-day spending; crumbling buildings, outdated equipment, too little automation, with parts of the NHS yet to embrace the digital era unlike other economic areas.

Despite the complex issues, Lord Darzi says "the NHS is in the foothills of digital transformation. The last decade was a missed opportunity to prepare the NHS for the future and to embrace the technologies that would enable a shift in the model from 'diagnose and treat' to 'predict and prevent' – a shift I called for in High Quality Care for All, more than 15 years ago."

Some of the key areas highlighted in Darzi's report for improvement include;

- **Integrated Care Models:** Developing more integrated patient-centred care models to optimise resources and improve outcomes by ensuring that care is better coordinated with patients receiving the right treatment at the right time.

- **Technology and Innovation:** leverage technology, such as electronic health records, AI, and data analytics, to streamline operations, drive efficiency, and improve the delivery of care.

- **Quality Improvement:** the importance of continuous quality improvement initiatives to identify inefficiencies, improve safety standards, and reduce costs in the long run.

In my role as Senior Commercial Director, I have witnessed the transformative effects automation can have on the workload of nurses, and strongly believe it holds the key to leaner and safer workflows on both wards and in operating environments. Additionally, when done correctly, automation can free up nurses' time spent on manual processes, reducing drug errors, as well as allowing the NHS to save money.

Workloads with excessive administration brought about by archaic manual processes have resulted in a serious morale problem across the board, but by harnessing tech, it's possible to make clinical staff roles more attractive by releasing staff to do the job they were trained for.

Many Chief Pharmacists, Procurement Directors, and Heads of Nursing we talk to love our concepts but have little to no capital budget to spare. As a result, we are introducing a new package of services to help Trusts expedite their drive to automation.

A new way to harness the benefits of pharmacy automation in challenging financial times

With over 15 years' experience of delivering automation into over 100 NHS Trusts, we know that the current budgetary pressures have never been higher and present significant challenges when planning for long-term project technology investments. That's why Omnicell has developed a new financing model, Automation as a Service (AaaS), to mitigate the budget availability barrier often associated with capital expenditure, or CapEx, investments. By working in close consultation with our customers, we have developed an annual package, that provides the equipment, software and expertise to install, replace, manage and maintain a portfolio of pharmacy and clinical automation systems. We provide this together with ongoing education, training and services on a long-term basis to provide a continually optimised solution.

Overcoming budgetary constraints

To overcome the current limitation on investment in capital, this package is completely compliant with IFRS16 accounting standards to sit off the balance sheet, meaning the agreement can be funded through operating expense.

This partnership will help Trusts to scale-up their technology and automation infrastructure over time, with flexibility and reduced risk making it a sustainable and realistic approach to funding innovation to drive patient safety and efficiency, as well as being 'future-proof' of technology upgrades and developments.

## The implementation support process

So how does this all work? Adoption of new technology through solution design, workflow, change management and education are critical to the success of any project.

We partner with Trusts to assess and diagnose any issue with current workflows, identify any gaps or areas for improvement, and design the optimum solution tailored to their individual organisational needs. Before any implementation process, we commit to reviewing our proposed solution to ensure they will enhance all the medicine or medical supplies management workflows we have identified for improvement to ensure the outcomes our customers want.

Depending on the area for improvement a renewed closed loop workflow solution can help Trusts to fully automate core inventory management processes, reduce medication errors, drug diversion and waste, or it could put an end to medical supplies shortages and inefficient, wasteful ordering processes.

Automating medication and supplies management processes can transform operational efficiency and improve patient experience in hospitals. Hospital pharmacy workflow automation solutions foster cohesion between pharmacy and nursing and by using real-time data, intelligence solutions deliver visibility for hospital and clinical staff. Crucially, these insights allow them to make more informed decisions, faster.

These solutions would include a blend of automated dispensing cabinets, our MedXpert and SuppliesXpert software for anywhere inventory management, and our intelligent bedside medication trolley the Smart Cart – enabling you to achieve the most from it and thereby maximising your return on investment.
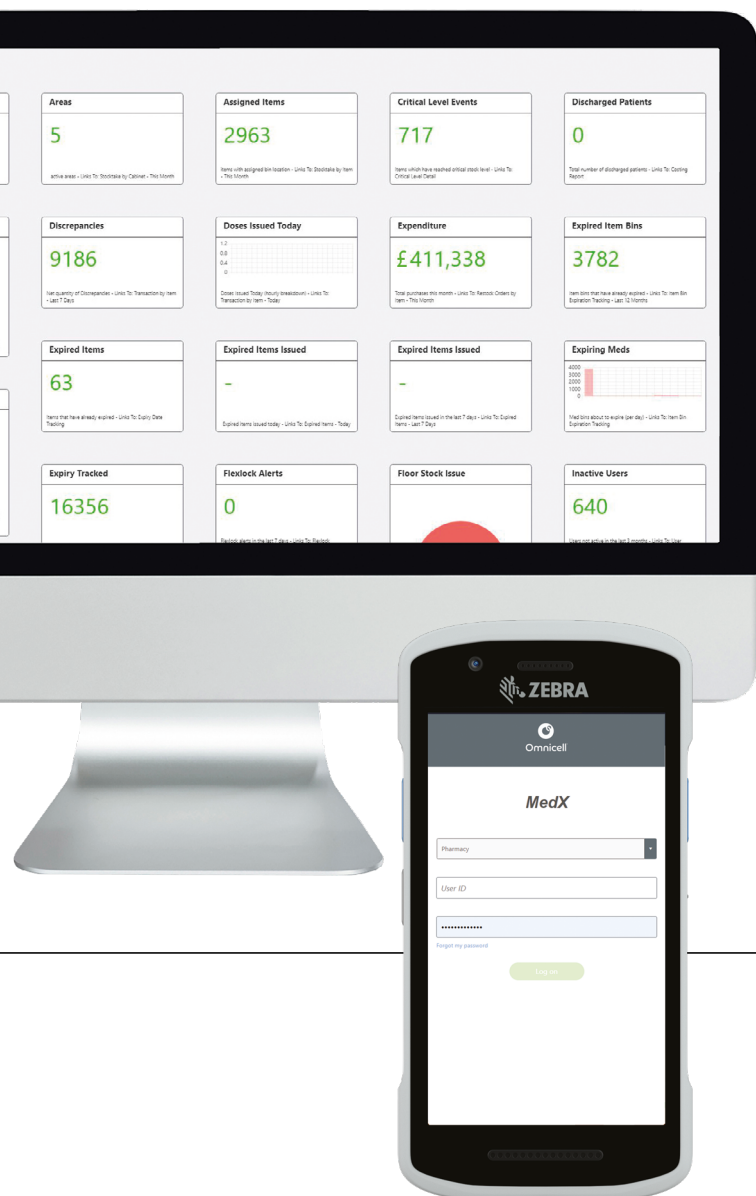
We work with Trusts to implement automation solutions based on a tried and tested 4-step change management process and methodology.

Stage 1: Awareness

Stage 1 involves identifying the driver and need for change and helping customers to communicate this to the relevant internal stakeholders. This aims to create a shared understanding of why this change is needed, together with the expected outcomes both in the short-term and long-term.

Stage 2: Readiness

The following Stage 2 is a focus on laying the groundwork and preparing the organisation for the change. This includes identifying potential risks, developing a plan to mitigate those risks, and ensuring that the necessary resources are in place to support the change.

Stage 3: Adoption

The Adoption in Stage 3 is part of actioning and implementing the change and ensuring smooth integration within the organisation. This Stage will include training and a series of support programmes to ensure internal champions are assigned, employees are bought in and equipped to adapt to the new ways of working.

Stage 4: Review

We evaluate the success of the change and make any necessary adjustments. This Stage helps to ensure that the programme has achieved its intended objectives and that any unintended consequences are identified and addressed. Our Success Management service contract ensures dedicated support and access to Omnicell's team of clinical pharmacists and healthcare consultants. It includes ongoing performance monitoring, data analysis, health checks, and optimisation services to ensure that the organisation is achieving the best possible outcomes for their patients.

Ensuring that our automation is interoperable with existing healthcare systems

Our solutions to utilise interoperability technology to its fullest potential, integrate with ePMA and EPR systems to remove redundant steps, improve efficiency and increase safety. With live integrations at Epic, Cerner, Veradigm (AllScripts), and SystemC sites across the UK, we have turnkey integration capabilities for over 70% of NHS Trusts and Health Boards, and we can develop more vendor integrations in line with every customer business case. Our automated solutions integrate workflows to ensure that nurses can remotely request medicines from their local Omnicell automatic dispensing cabinet, or at the patient bedside with our intelligent bedside Smart Cart, ensuring medications are pre-selected for when the nurse arrives at their cabinet, reducing potential queues by between 30%-50% as the medicine selection is done with the patient, maximising nurse time with their patients.

By putting our pharmacy automation in step with NHS healthcare systems, it moves our customers towards closing the loop, strengthening patient safety from the moment the drug or medical device is ordered to the moment the drug is administered to the patient.

Our commitment to future-proofing your automation solutions

Omnicell releases regular software upgrades, each upgrade includes new features and benefits for Trusts. As part of our ongoing partnership through the new Automation as a Service model, this will include both the delivery of the upgrade, as well as the education and change management support to realise the benefits and use cases of each new feature.

In addition, Omnicell systems have an average life cycle of ten years, and during this time there is typically an operating system upgrade. The AaaS model will ensure all upgrades are delivered by Omnicell on time with no additional or hidden costs. It also includes all upgrades to any server infrastructure and third-party providers – such as Microsoft.

To ensure our partnership stays on track against agreed deliverables we will hold quarterly Governance meetings to review the system and people performance against the contract and delivery of agreed SLA and KPIs.

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A customer perspective

Automation as a service in practice

London North West University Healthcare Trust

"The Trust has been using Omnicell's automation solutions prior to 2020, and then more so since the Covid pandemic thanks to DoH funding. During our Annual Review of Medicines in 2023, it showed that whilst we had a good partnership with Omnicell there were some gaps in our provision. The Trust Executive Group was pleased that 90% of organisation's medicines management systems were covered by automation but were keen to fulfil that remaining 10% across some wards and clinical areas to complete the picture from a Trust assurance point of view.

As part of this, we also reviewed Omnicell's automation solutions that were first introduced prior to 2020 to clarify when they would need updating and replacing. This showed that some estates and cabinets were shortly coming to their end of life and would need upgrading and investment.

Together, covering both the new areas and the necessary upgrades, we realised that this would require a significant capital outlay. But with central capital investment limits and the need for a long-term arrangement, the new Automation as a Service arrangement was a particularly attractive proposition for us.

As the Chief Pharmacist it was also attractive, that this type of partnership would mean that we wouldn't have to develop additional business cases in the near future. And, looking ahead into the longer term, we were also concerned about what the development pipeline looked like, with new EPR with AI technology starting to come through – we wanted the assurance of long term support in the way we use medicines management alongside automation.

This decision also alleviated capital investment problems as well as providing a long-term partnership during technology changes, which would allow the Trust to focus on other areas in need of capital investment.

Our Trust is medium to large with just over 1,000 beds over 3 distinct sites. Our support from Omnicell includes automated dispensing cabinets (ADC) in central pharmacy, ward level controlled and general medicines stock automation, CD electronic registers being implemented in wards (already in central pharmacy) and we're in process of implementing MedXpert technology, to further support analytics of medicines usage across the Trust.

The training we have received from Omnicell has been really positive. Understandably, there was some initial trepidation but once nursing staff became used to the new systems, they don't want to go back to a ward without automation! From our experience, staff like the assurance of who has accessed and used medication, especially with regards to Controlled Drugs – as there is a full audit trail and insight at the touch of a button.

There have been a few challenges: such as learning how it fits into EPR in Aug 2023, but because we have a partnership with commitment, we have confidence in working out how can we take it forward together, rather than buying automation 'off the shelf. And now through collaboration, we're looking forward to integrating Omnicell with Cerner and delivering a closed-loop workflow

We have found that automation really helps with drug safety and assurance. This can be seen when accessing medication, the system will flash up drugs which require a pregnancy test before the point of administration, serving as a good safety/policy reminder directly at the point of access. And, CQC love it!

We have confidence, that only those who should have direct named access to medications, have it, rather than having keys just lying around! Having the assurance that cabinets are fully locked and only those who are registered on the system can access drugs also reduces drug diversion – from a governance point of view is ideal."

Damien Kelly
Chief Pharmacist & Group Clinical Director
at London North West University Healthcare

Let's talk! If you'd like more information, or want to arrange a follow up meeting, don't hesitate to get in touch with your Omnicell Regional Sales Manager, or email us at Sales-AA@omnicell.com

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