Business challenge
To keep healthcare services running smoothly in remote areas, NHS Highland must dispatch its engineers to urgent work no matter how far they are from base. How could it help its teams stay connected?

Transformation
NHS Highland worked with MACS EU to deploy IBM® Maximo® Anywhere and IBM Maximo Scheduler—enabling engineers to respond rapidly to urgent maintenance requests even in places with poor connectivity.

Business benefits:

10%
increase in productivity helps maintain high service levels

2 hours
saved per person per week on collating data enables timely reporting

Drives
cost-efficiency and redirects investment to improve asset management

NHS Highland
Responding fast to maintenance requests to support high-quality patient care

NHS Highland is one of the fourteen regions of NHS Scotland, the country's publicly funded healthcare system. Serving 320,000 people over sites across 32,500 square kilometres, NHS Highland is one of the largest and most sparsely populated Health Boards in the UK.

"By continuing our collaboration with MACS EU, we can deliver even better asset management services to the remotest healthcare facilities."

Eric Green
Head of Estates
NHS Highland

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Delivering outstanding care in the remotest regions

Well-maintained facilities and equipment are essential to the smooth running of any healthcare organisation—and when unexpected issues arise, engineers must react quickly to fix them within tight service level agreements (SLAs).

Eric Green, Head of Estates at NHS Highland, takes up the story: "NHS Highland is responsible for patients across almost half the landmass of Scotland. We manage everything from large, 500-bed city hospitals to small healthcare facilities in remote places such as the island of Iona, and everything in between.

"With such a range of asset types and challenging geography, we need to plan our maintenance carefully to ensure that every asset is maintained to the same high standard. For example, because some facilities are up to four hours away from our engineering head office, we need to enable our teams to complete as much work as possible during a single visit. At the same time, we must react quickly and flexibly to resolve urgent, unplanned maintenance issues whenever and wherever they occur—which sometimes means changing our work plans as often as once per hour."

He continues: "For many years, we have recognised the benefit of mobile asset management platforms, and in the past we used a mobile application to push work schedules to our engineers' devices. The challenge with this approach was that the application required a constant internet connection. If the signal dropped—which often happens in the remote locations our engineers work in—we would be unable to share updated work orders and reroute our people to urgent jobs.

"If the asset management system was unavailable for an extended period of time, we would be forced to use paper work orders until normal service was restored. In addition to the valuable time required to re-key paper records back into the electronic system, the disruption of switching back and forth between the two approaches increased the risk of important records getting lost in the shuffle. To meet our asset management goals, we decided to look for a more robust approach to mobile asset management."

"Today, our work order management processes work perfectly, which frees up around two hours per person per week to focus on value-added analysis and reporting."

Eric Green, Head of Estates, NHS Highland

Connecting every engineer, wherever they work

To solve the challenge, NHS Highland decided to upgrade to the latest version of IBM Maximo Asset Management and implement IBM Maximo Anywhere to boost its scheduling capabilities—part of the IBM Watson® Internet of Things.

"NHS Highland cares for many patients 24/7, and from the estates management perspective it's vital we support our clinicians with the well-maintained assets they need to drive positive patient experiences and outcomes," Green explains.

"To keep that promise to our patients, we were looking for a robust solution from a mature, dependable vendor—and IBM Maximo Asset Management met those requirements perfectly. As well as requiring minimal customisation to deliver the functionalities we needed, IBM Maximo offered us an end-to-end solution for all of our business processes, from purchasing in the back office to engineering on the front line."

To enable a smooth rollout of the new solution and drive adoption across the business, NHS Highland engaged an expert team from IBM Gold Business Partner MACS EU.

"Working with the MACS EU team was a very positive, productive experience," comments Green. "The MACS EU team invested a great deal of time in building a deep understanding of the way our business works, and their attention to detail early in the deployment process shone through when it came to configuring and deploying the new asset management solution."

He continues: "The team used their experience of previous implementations to help us prioritise our work effectively, and delivered training and guidance on change management whenever we needed it. Our goal was a straightforward, turnkey implementation, and working with MACS EU helped us to achieve just that."

By using IBM Maximo Scheduler and the latest IBM Maximo Anywhere asset management mobile apps, NHS Highland gains the flexibility, reliability and availability it needs to coordinate fast-changing maintenance schedules.

"We equipped our mobile workforce with iPads to access maintenance histories, schematics and other technical information via the IBM Maximo solution," adds Green. "We also frequently engage contractors for specialised maintenance on assets such as sterilisation equipment and alarm systems. Because the mobile app is platform-agnostic, contractors can securely access IBM Maximo work orders on their own Android, iOS, and Microsoft Windows operating systems—making it easier to manage and report on work done by contractors."

He adds: "One of the most valuable things about the new mobile app is that it tolerates intermittent loss of internet connectivity very well, which enables us to keep our engineers in the loop about changes to the day's schedule. What's more, the solution enables us to augment our work orders with photographs—making it easier for our people to scope the requirements of a job, prepare any necessary equipment in advance, and find it more quickly when they arrive on site."

Ensuring fast, responsive services

Today, NHS Highland's 90 engineers and 30 back-office personnel use IBM Maximo Asset Management to deliver responsive maintenance services across the region.

"If one of our hospital managers calls us to report that they have a heating, water or power issue, we've got to respond immediately," says Green. "Today, we have the peace of mind that we can re-route our service engineers to perform essential work whenever and wherever it's needed."

"Thanks to our IBM solution we can ensure that we are offering all our stakeholders a high quality of service."

Eric Green, Head of Estates, NHS Highland

He continues: "In the past, the need to switch constantly between paper and electronic processes meant that we ran a weekly roundup to track down any work orders that had become lost in the system because of technical faults—a time-consuming task. Today, our work order management processes work perfectly, which frees up around two hours per person per week to focus on value-added analysis and reporting."

With an integrated mobile asset management platform at the heart of the organisation, NHS Highland is already enhancing its services.

"Maintenance tasks often require further works, and previously it was difficult to capture this easily," explains Green. "With our new IBM Maximo solution, we can now complete the tasks on a work order that have been completed and then raise a 'follow-on' work order for the tasks that need further work. This enables a full history of completed work, and makes it easy to identify and schedule any necessary follow-on work.

"Similarly, if one of our engineers replaces a heater that is smaller than the old one, they can take a picture of the exposed area of the wall and raise a follow-up work order to have it re-painted."

"We estimate that these numerous small improvements have increased our overall productivity by 10 percent—making it easier for us to achieve a consistently high standard of maintenance across all the facilities we manage."

By gaining the assurance of clean, accurate data on all assets under management, NHS Highland is better able to demonstrate its compliance to key stakeholders in the healthcare system.

"We report to a number of organisations, including the board of NHS Highland, the Scottish government and external regulatory authorities such as the fire and rescue service," explains Green. "Among the key stakeholders we report to are our hospital managers—and we need to demonstrate that we have remedied the issues they face within the required SLAs.

"Today, we offer hospital managers a weekly report on all the proactive maintenance we have completed, as well as a description of any outstanding work orders. These reports have proved extremely popular, especially with hospital managers for remote locations that do not have their own on-site maintenance personnel. Better understanding the challenges that our hospital managers face is important to help us stay attuned to their needs, and thanks to our IBM solution we can ensure that we are offering all our stakeholders a high quality of service."

Based on the success of its work with IBM Maximo Asset Management, NHS Highland is already looking to the future.

"Working with MACS EU, we have mapped out a five-year roadmap to transition from reactive maintenance to a proactive, condition-based maintenance model," says Green. "Big data is only valuable when you can put it to good use—and we see that the information that we are collecting today will ultimately enable us to use predictive analytics to drive up asset availability and reduce our costs."

He concludes: "By continuing our collaboration with MACS EU, we are in a strong position to deliver even better asset management services to the remotest healthcare facilities—helping our clinicians to deliver the highest quality of care."

Solution components

- IBM® Maximo® Asset Management
- IBM Maximo Anywhere
- IBM Maximo Anywhere Work Execution app
- IBM Maximo Scheduler

Take the next step

To learn more about IBM Maximo Asset Management solutions, please contact your IBM representative or IBM Business Partner, or visit the following website: ibm.com/products/maximo

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