

CASE STUDY:
**CHECKIT IMPROVES
EFFICIENCY IN
BLOOD SCIENCES**

When the Blood Sciences department at Leeds Teaching Hospitals NHS Trust needed an end-to-end temperature monitoring solution, Checkit was just what the doctor ordered.

Our client

The Blood Sciences Department at Leeds Teaching Hospitals NHS Trust is one of the largest in the UK, based over two university teaching hospitals sites and processing over 10,000 samples daily from GPs, outpatient clinics, hospital wards and other pathology laboratories.

This demanding environment requires sophisticated analytical equipment, reagents and consumables, all of which must be kept within strict temperature limits to ensure test accuracy.

In addition, the department also stores a lot of patient samples both pre and post-analysis, requiring 24/7 monitoring of fridges, freezers, and storage modules to maintain their integrity.

Following a service improvement suggestion and scoping exercise, in summer 2018 Checkit was installed within the laboratories on both sites.

"The Checkit system assisted in helping our department ensure that the reagents and patient samples that we analyse are accurately temperature monitored at all times. It's now also possible for any member of our team to monitor all laboratory storage areas and devices at any time, at a glance, and from any location. This level of control is vital in ensuring we're able to provide the best possible service to patients and the clinical teams who care for them."

Richard Liversidge,
Blood Sciences Service Lead, LTHT



Sector: **Laboratory**



Number of Locations: **2**



Products: **Operational Insight | Work Management | Automated Monitoring**



checkit

Before Checkit

Prior to using Checkit, the Blood Sciences Department took a 'snapshot' approach to temperature monitoring.

Support workers took daily manual readings using digital thermometers spread across multiple temperature-controlled areas. Any readings outside acceptable ranges were reported to Biomedical Scientist colleagues for them to investigate and take action.

The problems with this method are clear. It was labour-intensive, particularly for the staff having to abandon their routines to perform checks and re-checks. Non-continuous monitoring and a non-graphical data format made trends hard to identify, so it was difficult to act before breaches occurred.

What's more, it was difficult for the management team to review the actions taken, as records were not stored centrally.

The critical nature of the work undertaken in Blood Sciences meant the department had a clear idea of what they needed from an automated monitoring solution:

- Automated data collection and alerts on a 24/7 basis
- User-friendly software, with vital functions available from a single menu, accessible from any PC
- A prompting system to ensure consistent recording of actions taken
- Easy-to-read visual data, so trends can be readily identified
- Web-based monitoring of all locations from a single dashboard
- Reliable temperature sensors providing fully traceable measurements
- Safeguarding against loss of data

"We reviewed various commercially available electronic monitoring systems and had meetings with a range of suppliers. We chose Checkit because they were able to deliver on all of our key requirements."



Implementing Automated Monitoring

Checkit helps ensure patient samples, reagents, and consumables are stored within strict temperature limits, providing reassurance over the consistency and quality of patient test results.

Those same sensors, placed in transport bags, also enable continuous measurements whilst samples are in transit. This means that staff can be assured that sample integrity is preserved even before the samples are within their direct control.

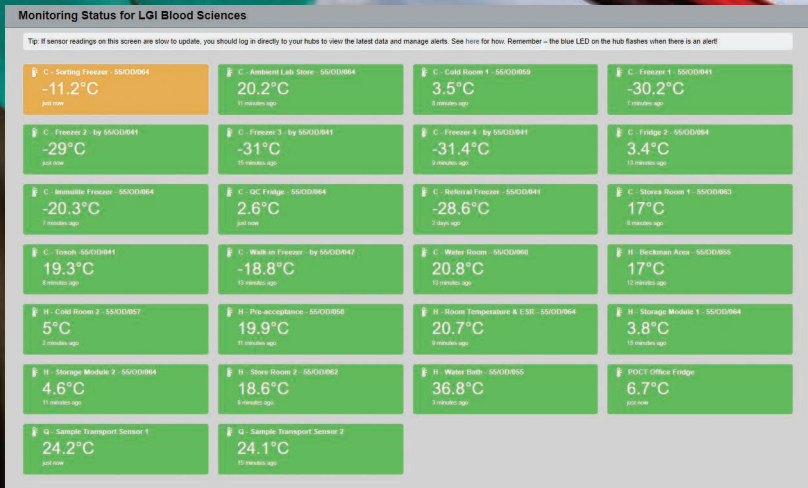
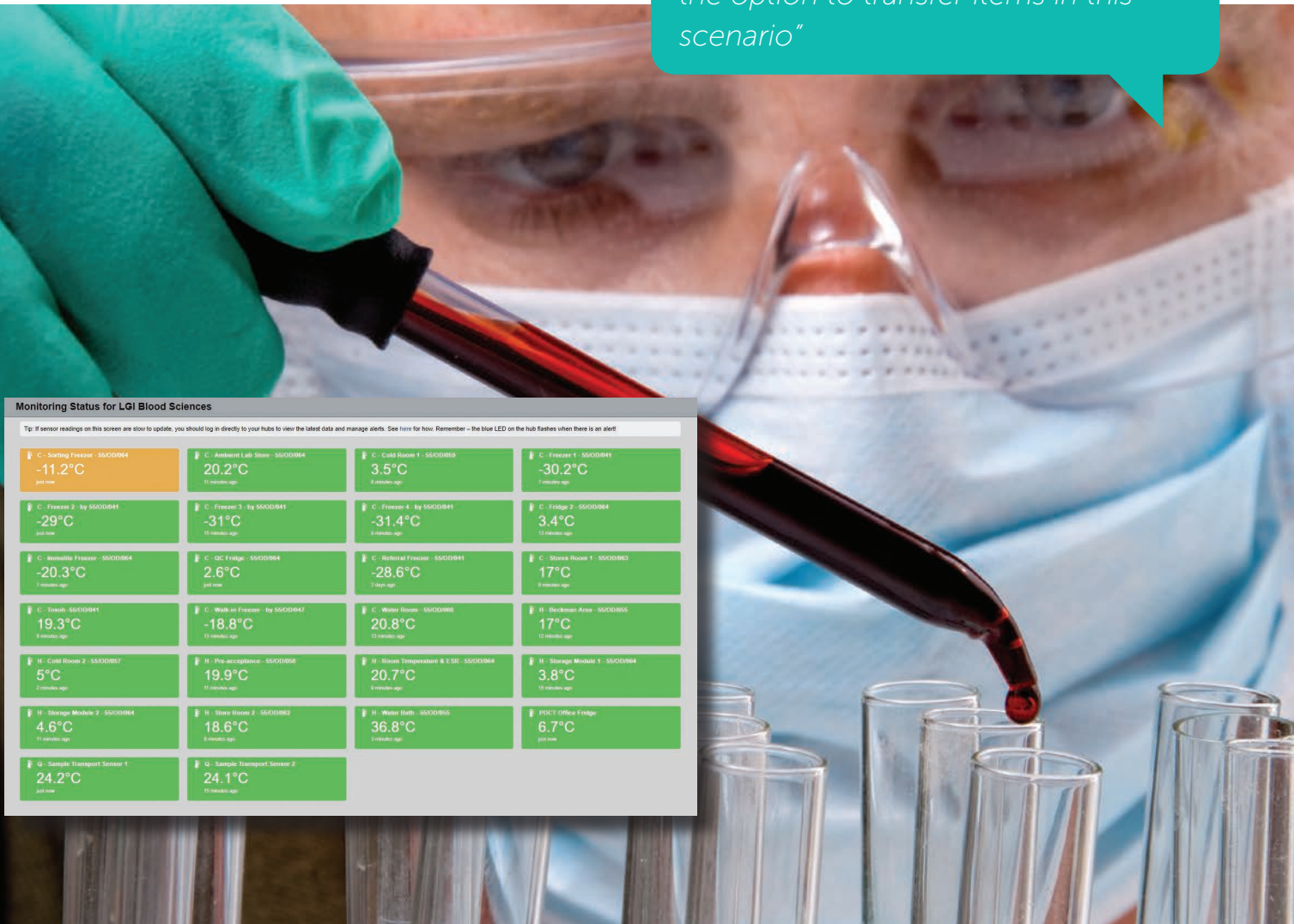
Robust battery life and data buffering mean that even in the event of a hardware failure or internet connection issues, there is no loss of data, and that data can be reliably downloaded once the issue is resolved.

Sensors can be supplied with an ISO17025 traceable calibration that has been performed in an external UKAS-accredited calibration laboratory. This provides assurance to the lab and

its users that the data measurements obtained are accurate. This boosts confidence in using the data to inform critical decisions, letting the department demonstrate to its accreditation body that all measurements are fully traceable to an international temperature reference standard.

All of this happens with minimal user intervention required. Checkit engineers set up the system, expand the network with new sensors when needed, and handle their annual recalibration. Checkit helps ensure patient samples, reagents, and consumables are stored within strict temperature limits, providing reassurance over the consistency and quality of patient test results.

"We are able to anticipate potential failures of fridges and freezers by reviewing temperature trends using the Checkit software, meaning we don't lose expensive stock in the event of a rare device failure and have the option to transfer items in this scenario"



The results... and the future

Right now, 35 separate locations in Blood Sciences are monitored using Checkit, soon to be expanded with the addition of another 14 within the R&D section.

The new system has saved staff time, which has been re-utilised in other areas. Staff have more control, and the need for paperwork has been greatly reduced.

Checkit has also provided increased confidence in the accuracy of test results which are vital to patient diagnosis and management.



No paperwork

Records are automatically created, timestamped and stored securely online



Unbroken cold chain data

Readings are always taken – even during power cuts



No missed checks

Checkit alerts you when checks are due



Staff trained in minutes

If they can use a smartphone, they can use Checkit

Following this successful rollout of Checkit, other areas within Pathology are now adopting the system. Memo, our electronic PDA device, allows remote interaction with system software, with users able to monitor alerts and review actions taken wherever they are.

Using this functionality the department is looking to apply the system to monitor cross-site sample transfer and standardise departmental audit, maintenance, and housekeeping activities, with significant reductions in paper-work.

"We've been able to remove the requirement to store and archive paper-based temperature monitoring records and can now refer back to historical records quickly and easily without the need to sort through archives. This saves considerable time for senior staff performing investigations and audits as part of their routine duties."

Daniel Carless,
Quality Manager.

About Checkit

Checkit Real-Time Operations Management helps businesses optimise performance and compliance, providing top-to-bottom visibility of work as it happens. For frontline staff, Checkit automates and guides their activities, improving efficiency and consistency. For supervisors, it automatically allocates and schedules work, making exceptions and issues easy to handle. For managers, it creates broad control and consistency, providing continual insights across the business.

Based in Cambridge, UK, Checkit is part of Elektron Technology Group PLC. Customers include the Ritz, Compass Group, Claridge's, One Aldwych London, Jamie's Italian, Alton Towers, Abel & Cole, Bakkavor, Cucina Sano, Abcam, NHS, University of Winchester and Nanna Mexico, among others.