

A glowing blue and white neural network overlay is shown on the left side of the page, representing a human brain. The network consists of numerous nodes connected by lines, with some nodes highlighted in a brighter blue. The background is a dark blue gradient with faint circuit-like patterns and light trails.

Interoperability a bridge to AI

eBook

INTRODUCTION

Dear Reader,

The healthcare industry is a universe unto itself. Few other industries are as complex, expensive, and comprehensive as medicine. Healthcare institutions are facing great pressure, however practical steps can be taken to increase productivity, reduce overall cost and enhance patient care.

Better clinical collaboration, having patients more involved in their care, getting actionable insights from healthcare data - just to name a few.

In the same time, as the ability to survive in healthcare is increasingly based on the quality of data and how it is managed, hospitals must have the right tools in their arsenal to extract value from their investments.

Let's take Artificial Intelligence (AI) as an on-trend example. *It relies on a multitude of different data sources being linked around the patient and made available to AI systems that haven't even been conceived of yet.*

A healthcare system can only prepare for it through interoperability.

Starting the interoperability conversation today and laying practical foundations will reap rewards for the future.

*So how do we hop on the interoperability highway? **Think bigger, move away from tick the box IT solution selection for just today's needs. Broaden discussions with wider clinical and management stakeholders on how and why a shared picture of patient data is required for the future.***

Enjoy your reading,

The GE Healthcare Team



Is the collaborative health conversation all talk?

Imagine a health environment where workforce shortages can be easily balanced against the demand to deliver a high standard of service; where data silos are connected to empower patient care, privacy and cybersecurity concerns; and where the installation of an IT solution helps generate insightful information leading to expected financial returns.

Healthcare institutions are facing great pressure, however practical steps can be taken to increase productivity, reduce overall cost and enhance patient care.

- Has your organisation considered how to streamline collaboration across its network of care teams and partners?
- Have you considered how your patients can become more involved during their care?
- Is it time to put performance analytics on the management board meeting agenda?



Is the collaborative health conversation all talk?

By Nicola Booton-Mander, Revenue Marketing Manager, Healthcare Digital, GE Healthcare

INTRODUCING EAST MIDLANDS RADIOLOGY (EMRAD) CONSORTIUM IN THE UK

- Advanced analytics identified where out-of-hours radiology reporting could be brought inhouse, reducing the need to outsource and resulting in a cost reduction of almost **31 percent in just 10 months, saving £103k.**
- **A saving of £130k** has been made in 12 months across 5 trusts, as the disuse of CDs, for medico-legal data exchange, eliminates postage costs.
- Simplified workflow, switching from manual data collection and CD burning to a streamlined cloud based solution, slashed medico-legal patient data turnaround times from 7 to 1 day driving up human workforce productivity.
- Seamless and boundaryless examination reporting has accelerated the treatment of patients enhancing health outcomes. For example, a patient having a scan in Lincoln can be reported on by a clinician in Nottingham, 63km away. No waiting for a clinician at the physical location, no need to transfer the patient, nor order a repeat scan.



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WHERE DOES THE PATH TO CONNECTED HEALTHCARE START?

Connecting people, systems and data to achieve collaboration requires a focus on interoperability. CIOs, IT teams and departmental managers need to work together and identify software and tools that not only meet their needs, but that are open, flexible and vendor neutral.

These shouldn't tie them in to one specific supplier and can be easily bolted together without a dramatic IT overhaul.

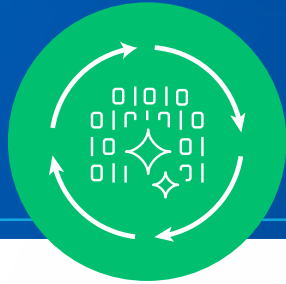
IT in the healthcare environment is no longer just about functionality, the understanding of cross-enterprise interoperability is much bigger now than a straightforward approach.

Data is going to get even bigger in healthcare to meet resource, capacity and financial challenges head on.

Starting the interoperability conversation today and laying practical foundations, will reap rewards for the future.

Engage your stakeholders, rethink your approach and start talking.





Why is clean healthcare data the panacea for AI success?

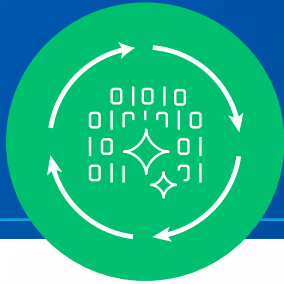
Everyday there are new headlines on the rise of Artificial Intelligence (AI). It's exciting and it's inspiring.

Is the saviour of our pressured healthcare systems nearly here?

Behind the news and scholarly articles however, it's slow going manipulating ideas and theories to create a market ready hero.

The success of AI is totally dependent on the size and quality of annotated data sets. Groups doing clinical research or developing algorithms need access to imaging data sets for training and validation. They are looking for very specific real-life cases that have been reported on by experts in their field to be able to 'teach' a computer algorithm to recognise the difference between healthy and diseased tissue or organs.

Let's take the example of lung nodule detection and classification algorithms. Rather than drowning developers in millions of random chest x-rays or scans, we should provide them with more specific data sets, such as, "non-smoker males diagnosed with lung cancer below the age of 40 years".
Extraction of the right data will accelerate the potential of AI.



Why is clean healthcare data the panacea for AI success?

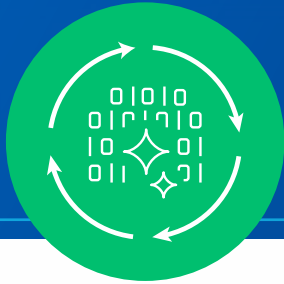
By Jan Beger, Director Application Services, Healthcare Digital, GE Healthcare

ACCESS TO CLEAN & DIVERSE DATA HELPS RE-IMAGINE MEDICINE

Healthcare is great at creating data. Hospitals store hundreds of millions of digital images and it has grown exponentially since CT and MRI took centre stage as a frontline diagnostic tool generating thinner and thinner slices of the body. But healthcare is poor at using all this data to create insights.

The solution would be to organise unruly data better, as the ability to survive in healthcare is increasingly based on how data is managed. We should consider having reports stored and demographics parsed into specific database fields so that the data can be queried and segmented in any and every way. This means searches and extraction of data can be run on patient population queries or on diagnosis type. This would help clinicians in hospitals now and support the future of innovations.

A Vendor Neutral Archive (VNA) can help. It houses medical images and files of clinical relevance from across the healthcare enterprise – drawing data from disparate systems, across multiple specialities using international standards such as DICOM. Accessed via a single standard interface, it can unify the clinical ‘ologies’ for a complete picture of patient data.



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INTEROPERABILITY: A BRIDGE TO AI

Creating an interoperable bridge between how we acquire and organize data coming from multiple sources, and the development of AI, will yield a new dimension for modern healthcare.

Specialist staff resource pressures and the growing number of patients with complex conditions are set to stay.

The amounts of data we see today is only a fraction of what will exist in five years.

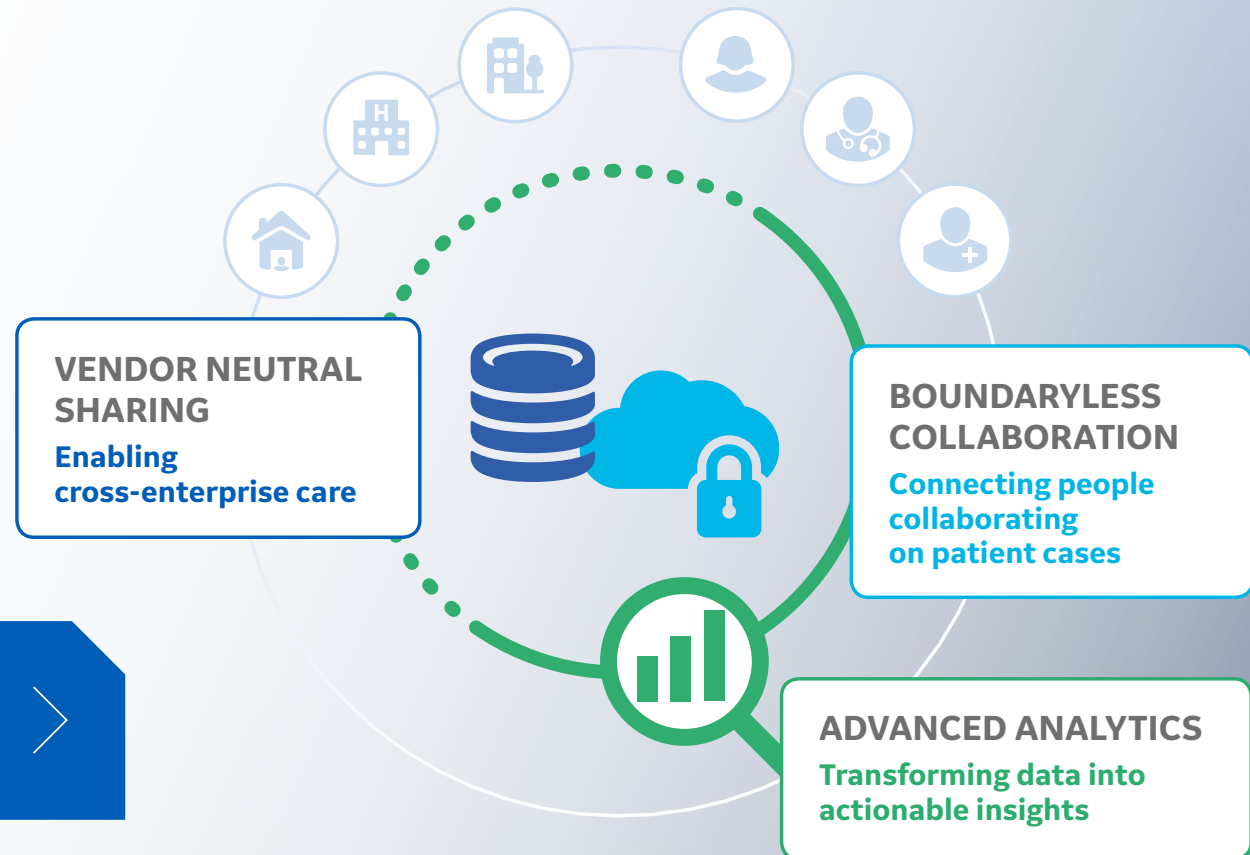
It is by managing patient data better and using analytics that we can turn the healthcare kaleidoscope to gain more control on the sequence of events and outcome patterns.

We hope you enjoyed your reading. Are you ready to become more strategic about interoperability?

Complement your existing multi-vendor ecosystem with Smart Connected Solutions to deliver better patient experience, enhance productivity and future proof your IT investment.

Learn more about Smart Connected Solutions >

SMART CONNECTED SOLUTIONS





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GE imagination at work

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