
GE Healthcare Unveils New AI & Digital Technologies & Solutions to Help Solve Healthcare's Problems



At the Radiological Society of North America's (RSNA) 2021 Annual Meeting, GE Healthcare unveiled around 60 innovative technology solutions spanning the healthcare spectrum including patient screening, diagnostics, therapy planning, guidance, and monitoring. Amidst a global pandemic and mounting pressure on the industry, the company accelerated innovations underpinned by artificial intelligence (AI) and digital solutions to help transform healthcare delivery, making it easier and more efficient for clinicians and health systems, and more personalized and precise for patients.

The pandemic exposed the fragility of the global healthcare system, creating an urgent need for technology and solutions that help clinicians manage seriously ill COVID-19 patients, advanced diseases – such as cancer and heart disease – a backlog in non-urgent care, and an ageing population, while battling burnout and workforce shortages.

With these circumstances in mind, GE Healthcare is proud to introduce technologies and solutions at #RSNA21 that help healthcare systems:

- Increase efficiency and productivity;
- Reduce clinician burnout;
- Empower clinicians with AI and analytics when, where and how they need it;
- Create a more resilient and sustainable healthcare industry; and
- Increase access to care.

"Our goal is to make healthcare more human by breaking down barriers so clinicians can work at the top of their game, healthcare systems can operate more efficiently, and patients can get the best and most personalized care possible," said Kieran Murphy, president & CEO, GE Healthcare. "Healthcare is at a turning point and at GE Healthcare we are using our clinical expertise and know-how to deliver innovative technologies and solutions that help solve healthcare's most pressing problems, advance precision health and improve patient lives."

Transforming healthcare through imaging technologies and digital offerings

Over the last year and a half, the industry has embraced technological innovation. What was once considered "futuristic" is now fundamental. In an environment where clinical expertise, regulatory know-how and speed matter, GE Healthcare rose to the challenge. Working alongside clinicians and care teams to understand the most pressing needs of radiologists and hospital administrators, the company innovated new solutions, leveraging its healthcare-specific intelligence platform, Edison, to help providers achieve greater efficiency, reduce errors, increase speed to appropriate treatments, and increase access to care.

To this end, GE Healthcare developed the following new AI-powered, automated and data-driven solutions to help encourage greater diagnostic confidence, ease the burden of care and improve workflow for healthcare systems around the world:

- **SIGNA Hero**[\[i\]](#) is named for our heroes on the frontlines, who continue to care for seriously ill patients as well as a backlog in non-urgent care – all the while battling burnout and workforce shortages. The new 3.0T MRI system offers new workflows and AIR Recon DL enhancements designed to help our heroes on the frontlines address some of today's most pressing healthcare needs: enhanced productivity, patient comfort, and sustainability[\[ii\]](#).
- **SIGNA Artist Evo**[\[iii\]](#) enables healthcare systems to modernize their legacy 1.5T narrow 60 cm bore MR systems to 1.5T, 70 cm bore systems, accommodating more patients of different shapes and sizes. Furthermore, the company's patented flexible AIR Coils design and

AIR Recon DL image reconstruction help provide clearer, sharper and more detailed images faster – enabling shorter patient setup times and reducing table time.

- **Revolution Apex platform**[\[iv\]](#) provides exceptional image quality and low dose scanning for routine and challenging cases in many care areas with optimized clinical capabilities, built-in scalability and upgradability options.
- **Allia Platform** is designed to enhance user experience, improve workflow efficiency and increase the adoption of advanced image guidance in daily practice – all important factors in today’s constrained healthcare environment. In addition to personalizing the Interventional or hybrid operating room with just one click of the user interface, leveraging the Edison platform, the system also harnesses the power of AI with AutoRight[\[v\]](#) – an advanced AI-based interventional image chain – and Liver ASSIST Virtual Parenchyma [\[vi\]](#), [\[vii\]](#) – a 3D visualization software solution designed to provide AI-based virtual parenchymography to help clinicians simulate injections dynamically and perform liver embolization procedures with confidence.
- **AMX Navigate** represents GE Healthcare’s latest in portable x-ray technology with a new Zero Click Exam workflow solution and power-assisted Free Motion telescoping column to reduce lift force by an estimated 70 percent[\[viii\]](#), helping to decrease X-ray technologist strain. The rugged reliability of the AMX Navigate helps ensure it is ready to perform at the bedside of the patient.
- **Critical Care Suite 2.0** offers a collection of AI algorithms embedded on a mobile x-ray device for case prioritization, automated measurements, and quality control. For the past year, the suite’s AI algorithm to help clinicians assess Endotracheal Tube (ETT) placements has helped clinicians care for an influx of critically ill COVID-19 patients who required ventilation under the FDA COVID-19 imaging guidance. Now, Critical Care Suite 2.0 has received full Food and Drug Administration (FDA) 510(k) clearance.
- **Vscan Air** provides clinicians with quick insights at the point of care at a time when they need it most. This wireless and pocket-sized ultrasound device provides exceptionally clear image quality, whole-body scanning capabilities, and intuitive software - all in the palm of the clinician’s hand. A dual-probe enables whole-body scanning – with the flip of the wireless dual probe (for deep and shallow scanning) and a push of a button to capture images. Vscan Air offers a high-performance ultrasound machine in a lightweight, portable device designed to improve patient experience and access to ultrasound technology – involving patients by sharing real-time image sharing as simple as see, snap, send.
- **Enterprise Imaging in the Cloud** delivers the power of technology in a smart, digital ecosystem giving radiologists easy and seamless access to GE Healthcare’s latest AI-based tools, data and intelligent technology for visualization, diagnostics and workflow as well as third party algorithms – from anywhere, anytime[\[ix\]](#), [\[x\]](#). The solution is cloud-based, enabling healthcare systems to manage upgrades instantly and digitally, with little to no new hardware or on-site IT team required.
- **Digital Expert Access** is a real-time virtual collaboration solution that is integrated into imaging devices. With imaging experts in short supply and high demand and imaging moving beyond hospital campuses, Digital Expert Access allows sharing of expertise, best practices, and in-the-moment advice, as well as remote console control – all from a distance.
- **ulrichINJECT CT Motion** uses automated syringeless technology to support workflow efficiencies. The injector, now approved with RIS/PACS integration, removes the need for manual syringe filling which may minimize examination preparation time and minimize contrast media waste.

A partner of choice creating and investing in new possibilities for the healthcare industry

As innovators, integrators and clinical experts, GE Healthcare is aligning its products and solutions across care pathways, such as oncology, to create end-to-end solutions.

The company is working with industry leaders, such as [SOPHIA GENETICS](#), to deliver on the promise of integrated cancer care by bringing insights across multiple diagnostic modalities with the goal of better targeting and matching treatments to each patient’s cancer type, helping to ensure more effective and personalized treatment. Through the [acquisition of Zionexa](#), the company is advancing precision diagnostics and impacting clinical care by commercializing innovative molecular imaging agents.

Furthermore, GE Healthcare offers deep industry expertise, an ability to merge clinical and data science and a breadth of solutions across pharmaceutical diagnostics, cyclotrons, chemistry synthesis, PET/CT, PET/MR, nuclear medicine, advanced digital solutions, and pharmaceutical partnerships – all to help clinicians enhance patient care from discovery to diagnosis to treatment.

Using input from clinical partners, GE Healthcare has designed technologies and digital solutions to keep up with the ever-changing challenges that exist in the imaging world. The Revolution Apex platform, for example, is designed with advanced technologies intended to:

- Support one-beat cardiac imaging with motion management;
- Update their service line from a 40 mm detector and 0.28 second rotation speed up to a 160 mm detector and 0.23 second per rotation speed (FDA 510(k) pending)[\[xi\]](#), [\[xii\]](#) ; and
- Reduce contrast dose up to 33% potentially.

“I’m a fan of the new Apex [platform] system and all the possibilities around it. For us, it’s a big win,” said Johan de Mey, MD, PhD, Chair of Radiology at the Universitair Ziekenhuis, Brussels, Belgium. “In the past, we kept machines as long as possible, and we upgraded them with software. But if the hardware was obsolete, we removed it from the hospital. With the Apex, we have a platform with the latest technology and can easily upgrade as our clinical practice evolves.”

Altogether, GE Healthcare is a partner of choice to thousands of healthcare providers, medical technology innovators, and digital start-ups around the world.

Source & Image Credit: [GE Healthcare](#)

[ii] AIR Recon DL 3D and PROPELLER is 510(k) pending at the FDA. Not CE marked. Not available for sale in the United States or EU. Not commercially available in all markets.

[iii] SIGNA Artist Evo is 510(k) pending with the US FDA. Not yet CE Marketed. Not available for sale in the United States or EU. Not commercially available in all markets.

[iv] GE Healthcare's Revolution Apex platform is FDA 510(k) cleared and not available for sale in all countries.

[v] AutoRight refers to intelligent image chain features of GEHC's Interventional x-ray systems, from image acquisition to image processing and display.

[vi] Liver ASSIST Virtual Parenchyma is 510(k) cleared at FDA and CE Marked. Not available for sale in all countries.

[vii] Liver ASSIST Virtual Parenchyma solution includes Hepatic VCAR and FlightPlan for Liver with Parenchyma Analysis option and requires AW workstation with Volume Viewer, Volume Viewer Innova, Vision 2, VesselIQ Xpress, Autobone Xpress. These applications are sold separately. FlightPlan for Liver with Parenchyma Analysis option may not be available for sale in all countries.

[viii] GE Data on File. The lift force reduction is based upon the average lift force for the AMX Navigate of 11.0 N as compared to the Optima XR240amx average lift force of 58.3 N.

[ix] Anywhere the Internet is available.

[x] Cloud deployment currently only available in USA.

[xi] Scalability and upgradability are subject to the availability and compatibility of new capabilities and products.

[xii] 0.23sec and 19.5msec are 510k pending and not available for sales in all countries. 19.5msec effective temporal resolution is achieved by a 6x improvement of motion-blur reduction while maintaining high spatial resolution as demonstrated in cardiac phantom testing. The reduction in motion artifacts is comparable to a 0.039 equivalent gantry rotation speed with effective temporal resolution of 19.5 msec, as demonstrated in mechanical and mathematical phantom testing.

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