



# Sustainable magnetic resonance imaging solutions for a resilient tomorrow

SIGNA™ Voyager





# Creating a more sustainable future requires we care for the planet and its inhabitants.

It is essential that we continue to drive progress toward early, precise, and accessible diagnosis and treatment of more patients. For the planet, it is critical that we do so with a reduced impact on precious and rare resources that are imperative to life. We believe that the advancement of precision health, greater digitization of healthcare, and increased access to quality care are fundamental to accomplishing this goal.

We support carbon policies that reduce greenhouse gas emissions and promote sustainable development. We are committed to achieving net zero by 2050 and are part of the UN-backed “Race to Zero,” with a goal of reducing emissions based on the Paris Agreement. We’ve also set a public goal to achieve a 50% reduction in our own operational emissions by 2030. As a result of these efforts, we want to enable a more sustainable health system by addressing not only the environmental impacts of our products but also the challenges healthcare professionals and their patients face with resilient, digital options.



We are committed to achieving **net zero** emissions by 2050.

We’ve set a public goal of a **50% reduction** in our own operational emissions by 2030.

**We deliver sustainable, intelligently efficient solutions for a resilient tomorrow.**

Building a healthier world to help improve access to care and enable better patient outcomes.



**Green**

Using fewer resources for a healthier planet.

**Digital**

Transforming healthcare through innovation.

**Resilience**

Building flexibility and dependability across healthcare systems.



## SIGNA™ Voyager helps create a resilient tomorrow

Our 1.5T MR, SIGNA™ Voyager, and its services help ensure that radiology professionals and the patients they serve have the technology necessary to create a sustainable and resilient tomorrow.

### Reducing environmental impact

- The GE MR magnet is clinically strong for up to 25 years.
- GE MR systems are eligible for refurbishment, reuse, or recycling at the end of their product life.
- 30% less helium is required and no helium refill onsite during installation.<sup>1</sup>

### Improving outcomes

- SIGNA™ Voyager AIR™ IQ Edition gives technologists and radiologists quick, patient-friendly exams with consistent, optimal image quality.
- The AIR™ family of products delivers clinical versatility and comfort, intelligent productivity improvements, and consistently extraordinary image quality.

<sup>1</sup> Compared to previous generation MR system.





# Contributing to a healthier planet

**More than half of the healthcare sector’s climate footprint, approximately 53%, is attributable to energy use.**<sup>2</sup> As a result, we have strengthened our commitment to environmentally conscious design and sustainable practices across our product manufacturing, sourcing, distribution, installation, and service operations. This includes improving energy efficiency, optimizing the use of limited or rare materials, providing digitally enabled and maintenance service throughout the product lifespan, and offering refurbishment and recycling options at the end of product life.

**GE Healthcare environmental management system is ISO 14001 certified**

Our production and service operations align to ISO 14001 standards.

**We’re committed to environmental product design**

This product conforms with IEC60601-1-9:2007.

## Materials

GE Healthcare reviews the environmental aspects of the material supply used within our products to increase recyclability and decrease the use of hazardous substances, when possible.

### Recyclable

84% of the MR magnet is recyclable and can be recycled into raw materials after retirement.<sup>3</sup>

Our MR system covers are completely recyclable plastics.

### Reduce the use of hazardous substances

REACH (EC) 1907-2006

## Manufacturing

Through our environmental reviews, we also focus on reducing waste.

### Reducing electricity

The system uses Ultra High Efficiency (UHE) technology to generate exceptional imaging performance<sup>4</sup> using about half the amount of electrical current than a contemporary system.

<sup>2</sup> Health care climate footprint report | Health Care Without Harm (noharm-uscanada.org)

<sup>3</sup> Data on file.

<sup>4</sup> Gradient Imaging Performance 45 mT/m – 200 T/m/s



## Packaging

GE Healthcare imaging equipment has a robust and multi-sourced supply chain for systems and spare parts across all product portfolios.

### Improved Packaging

We are replacing our wood and corrugated cardboard packaging with paper, increasing the amount of recyclable packaging.

## Product utilization

Our imaging products are designed to help enable energy efficiency through dedicated features and advanced applications to reduce the environmental impact.

### Reduce energy consumption

#### Guidance for product utilization

Instructions are provided for use of the equipment to minimize the environmental impact during installation, use, and operation.

#### Reduce energy consumption during use

Utilize standby power mode to reduce energy consumption by 62% when the system is idle.<sup>5</sup>

34% reduction in scan time and 12% reduction in power consumption per patient with improved image quality with AIR™ Recon DL.<sup>6</sup>

#### Power consumption<sup>7</sup>

Off mode: 5.7 kW  
Standby (no scan): 11.05 kW  
Scan mode: 16.11 kW

#### Reduce consumable energy utilization

1115L helium recovered per system.<sup>8</sup>

Our helium recovery systems use cooldown, ramp boil off, and training quench to reduce any escaping gas.

30% less helium is required and no helium refill onsite during installation.<sup>9</sup>

<sup>5</sup> Compared to energy consumption when the system is in scan mode.

<sup>6</sup> Compared to conventional technology. Data on file.

<sup>7</sup> Per COCIR Self-regulatory initiative for medical imaging equipment, over a 24-hour period, with 12 hours of active day and 12 hours of inactive night scenario.

<sup>8</sup> Value based upon factory recovery system. Data on file.

<sup>9</sup> Compared to previous generation MR system.



AIR™ Anterior Array Coil (AA)

## Product utilization (Cont.)

### Ergonomically designed

#### Patient setup and positioning

AIR™ Coils are designed to be flexible and  $\leq 60\%$  lighter to provide greater coverage than traditional coils. They allow greater patient positioning freedom and patient comfort, as well as reduced burden on the technologists lifting the coils.

Improve patient comfort with AIR™ Recon DL by enabling shorter scan times and reducing the time spent on the table.

Accelerate your scanning process the minute the patient gets on the table with AIR Touch™, a workflow application that automates coil selection and landmarking.

Optional detachable eXpress Patient Table improves patient handling and comfort, allowing for faster patient setup.

#### Reduce noise

Silenz is a 3D Zero-TE sequence comprised of high bandwidth excitation and reduced gradient-switching radial acquisition that result in near-ambient sound levels. Silenz has added flexibility in sequence prescription to enable faster scan times.



## End of product life

We are increasingly putting our retired products' materials back into the supply chain to maximize efficient use and minimize unnecessary waste. This circularity model enables our imaging products to extend their clinical impact through longer lifespans while reducing the environmental footprint. Additionally, we offer our customers partnered support for upgrades and services throughout a product's lifespan to maintain optimal performance and help drive better patient outcomes.

Our refurbishment programs involve an extensive inspection and testing process, designed to bring equipment back to its original certified manufacturing specifications. If the system is not suitable for refurbishment, eligible parts are harvested for reuse after quality and performance testing, while the rest are returned to dedicated recycling facilities.

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### Guidance for end of lifecycle

Equipment instructions are provided to minimize the environmental impact for disposal or recycling.

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### Upgrades: hardware and software options are provided as a solution to extend the product lifespan.

Upgrade your clinical applications with SIGNA™ Continuum for all existing installed SIGNA™ MR systems.

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### Parts harvesting and refurbishment: options are provided to reduce waste and environmental impacts while extending imaging access to less advantaged regions.

MR system parts are eligible for assessment for the refurbishment program, in which they are assessed for refurbishment, harvesting, or recycling, at the appropriate time in the lifespan.<sup>10</sup>

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94–96% of most systems are reused, refurbished, or recycled, extending the lifetime of each product.<sup>10</sup>

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### Waste reduction

This system is in accordance with Waste Electrical and Electronic Equipment (WEEE) regulations.

<sup>10</sup> Products within MR, CT, Nuclear Medicine, and PET/CT are eligible for refurbishment, although whether a system is actually refurbished versus harvested for parts or otherwise recycled or reused is dependent on the state of the system when GE Healthcare takes possession of it.



## GE Healthcare product stewardship commitment

For more than 20 years, GE Healthcare's GoldSeal program has played a vital role in reducing medical imaging equipment waste by promoting and enabling the reuse of equipment and parts from de-installed imaging systems. After undergoing an extensive inspection and testing process, GoldSeal equipment is refurbished to meet the original system specifications. Buyers of GoldSeal MRI, CT, or PET/CT products can save on the acquisition costs associated with buying new equipment. Machines deemed unsuitable for GoldSeal refurbishment are dismantled at end of life, and after successfully passing acceptance testing criteria, specific parts are harvested for reuse. Where harvesting is not appropriate, GE Healthcare recycles about 94–96% of most systems. In a typical year, GoldSeal refurbishes approximately 8,000 pieces of imaging machines and ultrasounds.

### NEW PRODUCT PURCHASE OR LEASE

#### GOLDSEAL PROGRAM: LEASE RETURN PRODUCT OR BUYBACK

- Comprehensively refurbished and/or remanufactured
- Updated with new software
- Recertified following all FDA requirements
- Equipment backed with 1 year, same-as-new equipment warranty

#### RECLAIM FOR PARTS AND MATERIALS

Identify parts for refurbishing and/or repurpose

#### END OF LIFE

About 94–96% of most systems are recycled, substantially reducing the volume of waste en route to landfills.



## Digitizing healthcare through transformative innovations for a resilient tomorrow

We are committed to investing in digital capabilities that help accelerate clinical decision making, optimize imaging operations, and drive efficiencies in exam workflows, all of which can improve patient outcomes. Enabling digital transformation will further enhance our predictive and maintenance service operations for the life of your products.

**We are also dedicated to driving a more resilient and sustainable future in healthcare.** Many factors, including the pandemic, climate-related weather disasters, and supply-chain issues amplified this need. Managing operations through these challenges requires resiliency and perseverance.

### Advancing clinical outcomes

Advanced applications and cutting-edge AI tools provide personalized data to drive actionable insights, helping healthcare professionals make fast, accurate clinical decisions for care pathways.

#### Gain actionable clinical insights quicker for earlier diagnosis

Acquire multiple contrasts in a single scan with MAGiC, resulting in up to 50% faster scan than acquiring all contrasts separately.<sup>11</sup>

34% reduction in scan time and 12% reduction in power consumption per patient with improved image quality with AIR™ Recon DL.<sup>12</sup>

Reduce overall scan times without compromising image quality with HyperSense, which can be used in 88% of all clinical procedures.

#### Keep your imaging equipment up to date with advanced clinical applications

SIGNA™Works AIR™ IQ Edition includes new, advanced applications and enhancements to solve your daily challenges and empower any technologist to deliver high quality images with remarkable clarity.

Smart Subscription protects your equipment from obsolescence and keeps the system at its best. It improves patient outcomes and productivity due to improved functionality and easy access to innovation.

<sup>11</sup> Based on MAGiC clinical study of 109 patients from 6 separate institutions.

<sup>12</sup> Compared to conventional technology. Data on file.



## Advancing clinical outcomes (Cont.)

### Help improve patient outcomes with improved image quality

80% of cases see improved SNR without added scan time with AIR™ Recon.<sup>13</sup>

AIR™ Recon completes the AIR™ family of products with image reconstruction software that helps improve SNR and image sharpness in every image without having to overcompensate in your scanning protocol.

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### Drive advancements with precision health

Wing-to-wing clinical solutions from setup to report help reduce scan times and increase precision health, including anatomy-dedicated post-processing tools and quantitative tools for measuring and assisting diagnosis.

<sup>13</sup> Results may vary.



## Optimizing imaging operations

Our AI-based and advanced digital solutions are designed to increase efficiencies across the radiology spectrum without increasing the administrative and training burden on radiologists and technologists.

### Increase productivity and consistency

Remotely update and manage protocols between facilities on your MR devices to help deliver consistent image quality and deliver optimal patient care.

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Gain data intelligence and actionable insights across your radiology department to increase productivity with Imaging Insights.

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MR Performance Excellence can help increase capacity by optimizing equipment usage.

- 33% reduction in scan time<sup>14</sup>
- Additional 2.250 exams per year<sup>15</sup>

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Leverage on-demand or scheduled virtual clinical applications training with GE specialists to support staff enabled by Digital Expert Access.

<sup>14</sup> Expanding MRI imaging capacity through data-driven workflow optimization at Houston Methodist Willowbrook Hospital - Case Study 2015 - JB25840US - The results achieved by these facilities may not be applicable to all institutions, and individual results may vary. This is provided for informational purposes only, and its content does not constitute a guarantee from GE Healthcare.

<sup>15</sup> Initial Report Out Houston Methodist Sugar Land Hospital JB23904US- The results achieved by these facilities may not be applicable to all institutions, and individual results may vary. This is provided for informational purposes only, its content does not constitute a guarantee from GE Healthcare.



## Optimizing imaging operations (Cont.)

### Reduce downtime

The OnWatch™ remote monitoring system reduces unplanned down time by 35% and service calls by 39%, with an 11% reduction in on-site repair time. Additionally, it boasts a 43% remote fix rate with 83% of issues resolved during the first call.\*

This, in turn, helps reduce travel and carbon footprint, as well as overall energy and waste, by keeping our systems optimally running.

Improved thermal performance allows the magnet to stay cold longer during extended outages, and the system can immediately return to scanning when the power goes back on.

### Cybersecurity

GE Healthcare's Design Engineering Privacy and Security (DEPS) process follows GDPR, HIPAA, NIST 800-53, NIST 800-30, ISO 27001, and NIST CSF requirements.

\*Data on file. Results may not be typical for all customers, and these results cannot be guaranteed.



## Enabling intelligent exam workflows

Intelligent automation features help to drive consistency, enable fast, easy exams, and improve workflow with fewer resources, all while achieving similar or improved outcomes.

### Reduce setup time

AIR Touch™ reduces set-up time by 59%.<sup>16</sup>

AIR x™ allows five times faster set up with four times fewer mouse clicks.<sup>17</sup>

### Reduce exam time

AIR Touch™ reduces patient table time by 37%.<sup>16</sup>

Up to 34% scan time reduction per patient with AIR™ Recon DL enables improved workflow and efficiency.<sup>18</sup>

Increase the number of procedures by 30% with SIGNA™ Lift.<sup>19</sup>

### Ease of use

AIR™ Coils optimize SNR, enabling positioning for any patient shape, while anatomy-dedicated post-processing tools unique to the specific organ system brings precision medicine into the MR suite.

Accelerate emergency egress — the eXpress patient table can be undocked and removed by one user in under 30 seconds, typically.

### Cleanability

Our equipment is designed to be cleaned and disinfected easily. We continue to test and approve new cleaning and disinfecting agents. Visit [Cleaning.GEHealthcare.com](https://www.gehealthcare.com/cleaning) for updates.

<sup>16</sup> Compared to previous generation software. Data on file.

<sup>17</sup> Comparison of automated workflow with AIR x™ vs traditional setup process. Data on file.

<sup>18</sup> Compared to conventional technology. Data on file.

<sup>19</sup> With GE SIGNA™ Lift, the system may be able to scan additional patients per day due to new capabilities and productivity.



**Building a healthy world to help enable better patient outcomes.**

GE Healthcare is a member of COCIR, the European Trade Association representing the medical imaging, radiotherapy, health ICT, and electromedical industries.\*\*

*\*\*<https://www.cocir.org/about-cocir/members.html>*

*Not all products or features are available in all geographies. Check with your local GE Healthcare representative for availability in your country. Not all features are included in the standard system configuration. Check with your local GE Healthcare representative.*

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