Focusing on sustainability in MR solutions

SIGNA™ 7.0T

GE HealthCare

Creating a more sustainable future requires us to 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 medicine, 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. GE HealthCare is committed to achieving net zero by 2050 and we have signed up to the Science Based Targets initiative (SBTi) business ambition for 1.5C, a group of visionary corporate leaders taking ambitious climate action, and we have committed to implementing science based targets. This includes a public goal to reduce operational emissions (scope 1 and 2) by 50% by 2030 against a 2019 baseline. 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 solutions.

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We've set a public goal to reduce operational emissions (scope 1 and 2) by 50% by 2030.

Leading a new era in sustainability for a more resilient tomorrow

We're creating a world where healthcare has no limits, helping to improve access to care and enable better patient outcomes.

Environmental
Using fewer resources for a healthier planet.

Digital
Transforming healthcare through innovation.

Resilience
Building flexibility and dependability across healthcare systems.

SIGNA™ 7.0T* helps create a more sustainable tomorrow

Our SIGNA™ 7.0T and its services help ensure that radiology professionals and the patients they serve have the technology necessary to create a more sustainable and resilient tomorrow.

Reducing environmental impact

- There are zero carbon emissions from the system.

- Up to 50% scan time reduction with AIR™ Recon DL lowers energy consumption.[1]

- Nearly all materials are classified as non-hazardous.[2]

- Does not require room shielding.

Improving care

- The SIGNA™ 7.0T system features a superconducting magnet designed to provide excellent homogeneity.

- Approximately five times more powerful than most clinical systems, SIGNA™ 7T is designed to help detect subtle structures that may be significant for clinicians and researchers alike.

- It delivers impressive results with diffusion tensor imaging (DTI) and functional MRI (fMRI) studies.

1 Compared to conventional technology. Data on file.
2 Except for the solder alloy EU RoHS Annex IV Exception 12.
*SIGNA™ 7.0T is FDA cleared in the USA. Not CE marked. Not available for sale in all regions.

Contributing to a healthier planet

More than half of the healthcare sector's climate footprint, approximately 53%, is attributable to energy use.[3] As a result, we have strengthened our commitment to environmentally conscious design and we are implementing more 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 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.

[3] Health care climate footprint report | Health Care Without Harm (noharm-uscanada.org), based on 2019 report

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.

Recyclability	The Tesla 7T900 AS magnet is highly repairable and supports >99% material recovery and reuse or recycle at end of life.
	Our system covers are completely recyclable plastics.
Reduce the use of hazardous substances	EU RoHS directive 2011/65/EU
	REACH (EC) 1907–200

Product utilization

Our imaging products are designed to help enable energy efficiency through dedicated features and advanced applications to reduce the environmental impact. Ergonomic design can help to enhance health and potentially reduce environmental impacts, such as reducing waste and saving energy.

Ergonomically designed

Patient setup and positioning	AIR™ Recon DL enables shorter scan times, reducing the time spent on the table.
	AIR x™ automated MR slice prescription reduces setup time and provides reproducible planning to ensure exam consistency.
Reduce staff burden	Increased productivity and streamlined workflows with shorter scan times.
	eXpress Patient Table can be undocked and removed by one user in under 30 seconds.
Reduce noise	Silenz is a 3D Zero-TE sequence comprised of high-bandwidth excitation and reduced gradient-switching radial acquisition that drastically reduce noise level from an ear splitting, motorcyle-level 91 dB to within 3 dB of scan room ambient sound. In addition, Silenz has added flexibility in sequence prescription to enable faster scan times.

Product utilization

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 20% when the system is idle.[4]
Power consumption[5]	Off mode: 17.52 kW Standby (no scan): 35.28 kW Scan mode: 44.87 kW
Reduce consumable energy utilization	Tesla's 7T900 AS magnet achieves zero boil-off with high thermal margin and often requires no helium refill over six years or more after installation.

[4] Data on file.
[5] 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.

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 support for upgrades and services throughout a product's lifespan, when available, 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 remaining parts are returned to dedicated recycling facilities.

Guidance for end of lifecycle	Equipment instructions are provided to minimize the environmental impact for disposal or recycling.
Upgradeable hardware and software options are provided as a solution to extend the product lifespan.	Users have access to our latest state-of-the-art applications along with deep-learning tools like AIR x™ Brain and Knee as well as AIR™ Recon DL, while delivering the diagnostic confidence of an ultra-high-field system.
	SIGNA™ Lift works within the existing space to transform the whole system around the powerful magnet with all-new electronics, gradients and workstation, as well as the latest applications for SIGNA™.
Parts harvesting and refurbishment options are provided to reduce waste and environmental impacts while extending imaging access to less advantaged regions.	94–96% of most systems are reused, refurbished, or recycled, extending the lifetime of each product.[6]
Waste reduction	This system is in accordance with Waste Electrical and Electronic Equipment (WEEE) regulations.

[6] 100% of products within MR, CT, nuclear medicine, PET, and X-ray are eligible for refurbishment, although whether a system is actually refurbished versus harvest for parts or otherwise recycled or reused is dependent on the state of the system when GE Healthcare takes possession of it.

Digitizing healthcare through transformative innovations for a more 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 resilience and perseverance.

Helping clinicians advance patient 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 for quicker decision making	HyperWorks applications enable fast scanning with astonishing imaging and unsurpassed speed, delivering up to 8x faster results.
	HyperSense acceleration technique enables faster 3D image acquisitions.
	Hyperband for EPI provides more diffusion directions, number of slices or higher temporal resolution without extra scan time.
Keep your imaging equipment up to date with advanced clinical applications	Using a deep-learning-based reconstruction algorithm, AIR™ Recon DL improves SNR by making use of the raw data to remove image noise and ringing.
Help improve patient outcomes with improved image quality	Advanced gradients and substantially high SNR enable visualization of individual-level microstructural changes.
	SIGNA™ 7.0T has an amplitude of 113 mT/m and a peak slew rate of 260 T/m/s, enabling both clinical and research applications.
Drive advancements of 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.

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	Reduce scan time up to 50% with AIR™ Recon DL.[7]
	AIR x™ automated MR slice prescription reduces setup time and provides reproducible planning to ensure exam consistency
Reduce downtime	The OnWatch™ remote monitoring system reduces unplanned down time by 35% with an 11% reduction in on-site repair time.[8]
	Additionally, it boasts a 43% remote fix rate with 83% of issues resolved during the first call.[8]
	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	SIGNA™ 7.0T incorporates a broad assortment of capabilities to enable privacy and security. The layered approach of defense in depth limits the risk that the failure of a single security safeguard will allow compromise of the system. 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.

[7] Compared to conventional technology. Data on file.
[8] 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.

Reduce setup time	AIR x™ allows five times faster setup with four times fewer mouse clicks.[9]
Reduce exam time	Reduce scan time up to 50% per patient with AIR™ Recon DL, enabling improved workflow and efficiency.[10]
	Reduce overall scan times without compromising image quality with HyperSense, which can be used in 88% of all clinical procedures.
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* for updates.

[9] Comparison of automated workflow with AIR x™ versus traditional setup process. Data on file.
[10] Compared to conventional technology. Data on file.

Creating a healthy world to help enable better patient outcomes.

GEHealthCare.com/about/sustainability

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