

# Focusing on sustainability in ultrasound



**Voluson™ Expert Series**  
**Voluson Expert 22, Voluson Expert 20,**  
**Voluson Expert 18**



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.



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

**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.

# Voluson™ Expert Series helps create a more sustainable tomorrow

Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 ultrasound systems and their services, help ensure clinicians and the patients they serve have the technology necessary to create a more sustainable and resilient tomorrow.

## Reducing environmental impact

- Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 ultrasound systems are designed to be refurbished, reused, or recycled at the end of product life to minimize unnecessary waste.

## Improving care

- AI-based measurement tools reduce exam time and increase measurement accuracy.
- Ergonomic design improves the user experience and reduces strain on clinicians and system operators.
- Lyric Architecture generates new levels of penetration, resolution, and frame rates to reveal fine anatomy in 2D/3D/4D with ease.



# Contributing to a healthier planet

More than half of the healthcare sector's climate footprint, approximately 53%, is attributable to energy use.<sup>1</sup> 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

<sup>1</sup> 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

We're committed to high recyclability of our products and reuse when possible.

Approximately 45% of the Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 consoles consist of recyclable raw materials:

Steel: 25.9 kg / 27.29%

Zinc: 5.1 kg / 5.40%

Aluminum: 10.8 kg / 11.36%

Copper: 0.89 kg / 0.94%

Packaging for Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18:

Cardboard consists of recycled content and can be recycled.

PE foam uses 60% recycled content and can be recycled.

### Reduce the use of hazardous substances

EU RoHS directive 2011/65/EU

REACH (EC) 1907-2006

All Voluson consoles comply with the European RoHS Directive 2011/65/EU including Commission Delegated Directive (EU)2015/863.

All Voluson consoles comply with the REACH Regulation (EC) No 1907/2006.



## Packaging and distribution

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

### Product packaging

Reusable packaging is utilized for all Voluson consoles.

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The packaging weight of the Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 have been reduced 19% compared to previous versions.

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Packaging material for deliveries to the Zipf, Austria, site is collected and reused onsite.

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### Product transportation

Air Transport: 37.5%

Truck Transport: 62.5%

## Manufacturing

Through our environmental reviews, we also focus on implementing more renewable energy and reducing waste, when possible.

### Reducing electricity

Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 ultrasound systems are made in our Zipf, Austria, facility which uses 100% environmentally friendly and renewable energy.

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The Zipf site has reduced greenhouse gas emissions by 50 tons per year.

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Various energy reduction projects are ongoing in our Zipf facility.

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The site has reduced heating gas by ~50% by using a heat pump to meet heating needs.



## 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

#### Reduce staff burden

Operators and clinicians can adjust Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 ultrasound consoles for comfort and ease of use. The Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 are adjustable:

Shift front-rear: 200 mm (7.9 inches)

Swivel left-right: +/- 40° from center

Lift up-down: 300 mm (11.8 inches)

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The monitor can be moved forward and backward, adjusted in height, and inclined.

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Cable hooks are available for integrated cable management of ultrasound probes.

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Ultrasound probes have been ergonomically designed to do the following:

- Handle and manipulate with ease.
- Connect to the system with one hand.
- Be lightweight and balanced.
- Have rounded edges and smooth surfaces.

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An optional foot switch is used for hands-free, comfortable system control.



## Product utilization

### Guidance for product utilization

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

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### Reduce energy consumption during use

A screen saver can be set to appear after a definable period of inactivity.

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When in Auto Scan Stop, freeze mode is activated after five minutes of inactivity.

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After an hour of inactivity, the system automatically activates freeze mode, even when Auto Scan Stop is not enabled.

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Standby mode uses 96.5% less energy than ready-to-scan mode and more than 97% less energy than scan mode.

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### Power consumption

Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18

Off Mode: 0 kW·h

Standby (no scan): 0.009 kW·h per hour

Ready-to-scan: 0.257 kW·h per hour

Scan Mode: 0.332 kW·h per hour

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There are zero direct carbon emissions at place of use.



# 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.

## Product utilization

### 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

Upgrades are available for Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18

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

Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 ultrasound system parts are eligible for assessment through the refurbishment program, in which they are assessed for refurbishment, harvesting, or recycling at the appropriate time in the lifespan.<sup>2</sup>

94–96% of most systems are reused, refurbished, or recycled, extending the lifetime of each product.<sup>2</sup>

100% of parts are harvestable for spare parts.

100% of Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 consoles are eligible for refurbishment.

### Waste reduction

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

<sup>2</sup> Products within ultrasound are eligible for refurbishment, although whether a system is 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. Data on file.

# 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

Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 have several AI tools to help with the consistency and completeness of exams.

- Using AI feature SonoCNS, you can reduce exam time by 81% versus manual measurement process when conducting fetal brain assessment.
- Reduce keystrokes up to 65% during mid-trimester anatomy scans when using AI-based SonoLyst.
- SonoPelvicFloor reduces keystrokes 75% and offers users a timesaving of 80% with the introduction of automated view plane alignment and automated measurements.

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Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 ultrasound system software updates and upgrades are available to customers via media or eDelivery.

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

Lyric Architecture generates new levels of penetration, resolution, and frame rates to reveal fine anatomy in 2D/3D/4D with ease. It works in harmony with our unique probe technology offering advanced imaging capabilities.

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Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 combines AI and automation applications to increase productivity, streamline workflows, minimize rework, and deliver the most personalized patient care possible.



## 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

iCenter™ analytics provide insights for hospital managers to improve operational performance, asset utilization, and asset performance.

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### Reduce downtime

GE HealthCare's predictive analytics tools reduce downtime, optimize workflow, and reduce service interventions.

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iCenter analytics track metrics and deliver data on equipment status, maintenance history, and performance to help reduce downtime.

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The remote service platform InSite™ connects you with a GE HealthCare Online Service Engineer or Applications Support Engineer. It has remote diagnostics capability as well as the ability to request service.

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Software updates are available for download via eDelivery.

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### 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.



## Enabling intelligent exam workflows

Intelligent automation features help to drive consistency, enable fast, easy exams, and improve workflow with fewer resources.

### Reduce setup time

Users can easily access patient information from an external Worklist Server.

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Voluson consoles have a customizable touch panel which allows the user to organize the display in the most efficient way for them. Voluson Expert 22, Voluson Expert 20, and Voluson Expert 18 touch panel provides approximately 23 million ways to adjust the touch panel display.

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### Reduce exam time

A suite of applications is designed to improve workflow and can substantially reduce keystrokes and analysis time, leading to increased efficiency and shorter exams.

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Using *fetalHS* for fetal heart exams can reduce exam time by 48%.

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### Ease of use

Flow Profiles can help reduce unnecessary keystrokes by 64% and decrease Doppler exams by 56%.

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Using SonoFHR can reduce keystrokes up to 85.7%, as compared to the manual heart rate measurement.

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### 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.



# Creating a healthy world to help enable better patient outcomes.

[GEHealthCare.com/about/sustainability](https://GEHealthCare.com/about/sustainability)

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