

# Strategie voor het ontwerpen van de circulaire economie

**Nele Vervenne**  
**Dell Technologies**



# Sustainable Products, Solutions and Services

Working to meet our goals, so we can meet yours

## Climate Action

Net zero by 2050

We will reach net zero greenhouse gas emissions across scopes 1, 2 and 3 by 2050.

By 2030, we will reduce:

- Scopes 1 and 2 GHG emissions by 50%.
- Absolute scope 3 GHG emissions from purchased goods and services by 45%.
- Absolute scope 3 GHG emissions associated with the use of sold products by 30%.

## Circular Economy

2030 goals

For every product a customer buys, we will reuse or recycle an equivalent product.

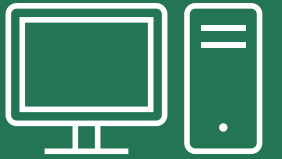
50+% of our product contents will be made with recycled or renewable materials.

100% of our packaging will be made from recycled or renewable materials.



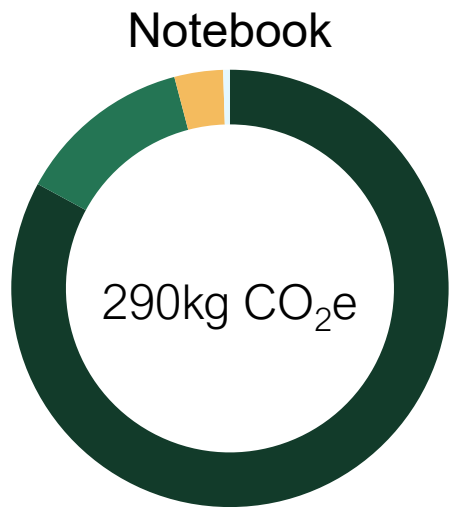


Driving Innovation in  
**Product  
Sustainability**

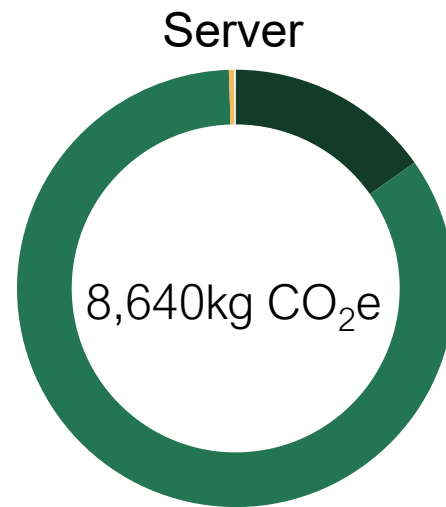
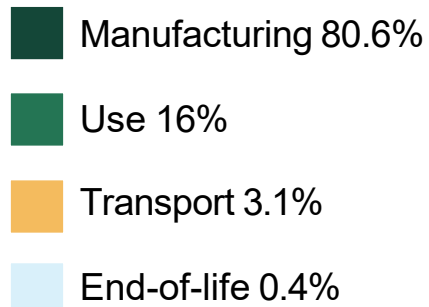




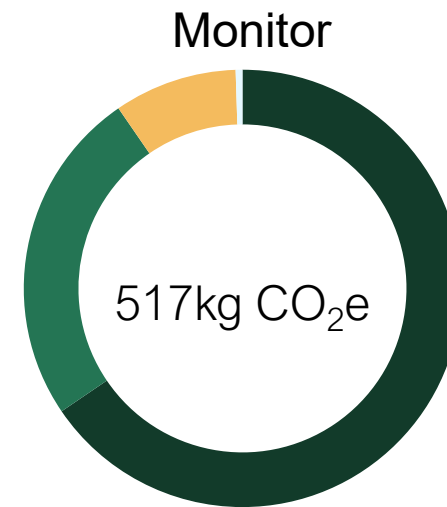
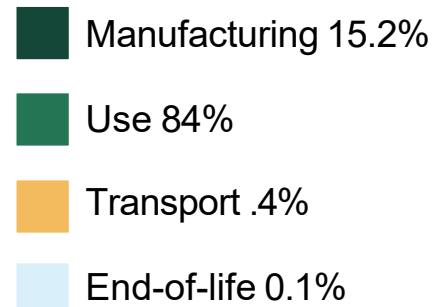
# Reducing the product carbon footprints (PCFs) of our products



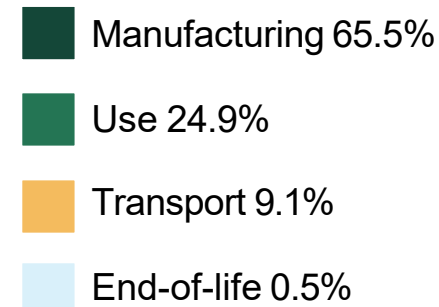
Latitude 5440



PowerEdge R740



P2722H Monitor



## HOW WE'RE REDUCING:

### MATERIALS

Investing in new and innovative materials

### ENERGY

Maximizing performance while ensuring energy efficiency

### REUSE AND RECYCLE

Prioritizing reuse in all forms

### PACKAGING

Using recycled and renewable materials and efficient logistics

### REPAIRABILITY AND UPGRADABILITY

Making it easy to access and replace parts

Advancing Sustainability with  
**Sustainable Materials**







POST-  
CONSUMER  
RECYCLED  
PLASTIC

BIO-BASED  
PLASTICS

RECLAIMED  
CARBON  
FIBER

PLANT-BASED  
FIBERS

RECYCLED  
AND LOW-  
EMISSIONS  
ALUMINUM

OCEAN-BOUND  
PLASTIC

RECYCLED  
COPPER

RECYCLED  
STEEL

CLOSED-LOOP  
MATERIALS

# Sustainable materials in Dell products and packaging

We are increasing our use of recycled, renewable and low-emissions materials in more components and products — including our highest-volume-selling notebooks for maximum impact.



# Low emissions and recycled aluminum

Using materials with a reduced carbon impact, including suppliers who use renewable energy



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Models with low-emissions and recycled aluminum  
with 75% recycled content and 25% hydropower

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Latitude 9440

Precision 5680

Latitude 7340, 7340 2-in-1, 7440, 7440 2-in-1, 7640  
(July 2023) 50% recycled, 50% hydropower

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Models with low-carbon emissions aluminum  
produced with hydropower

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XPS 13 Plus (9320)

XPS 13 (9315)

XPS 13 2-in-1 (9315 2n1)

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Aluminum typically has a high carbon footprint due to the smelting process, which is powered by coal. This hydropower-produced material reduces the carbon footprint by up to 90%.

# Reclaimed carbon fiber

Upcycling industrial waste from the aerospace industry for use in our products



Models	Reclaimed carbon fiber
Latitude 5340/5340 2-in-1/ 5440/5540	Laptop lid – 20% Laptop base – 20%
Precision 3480/3580/3581 Mobile Workstation	Laptop lid – 20% Laptop base – 20%

 21% + 30% + 20% = 71%

Bioplastic      PCR plastic      Reclaimed carbon fiber      Total sustainable materials in the lid



# Bio-based plastic and rubber

We're reducing petroleum-based plastic by expanding our use of bio-based materials

Tall oil-based bioplastic lid



Castor oil-based rubber cushions

Models	Bio-based materials
Latitude 5440/5540/5340 and 5340 2-in-1	Bio-based plastic in lid (21%), bio-based rubber feet (39%)
Latitude 7340/7340 2-in-1/ 7440/7440 2-in-1/ 7640	Bio-based rubber feet (39%)
Latitude 9430/ 9440 2-in-1	Bio-based rubber feet (42%), bio-based plastic in keyboard <small>(9330 and 9440 only)</small>
Precision 3000 MWS	Bio-based plastic in lid (21%), bio-based rubber feet (46%)



In 2021, Dell Latitude and Precision mobile workstations were the first products in their categories made with these materials.



# Recycled copper

We are using recycled copper in more than 1 million power cables with a goal to impact more than 20 million in the next few years



50% recycled copper  
in the cable

90% recycled plastic  
in the adapter

Notebook power adapter cables made with recycled copper

100W Type-C adapter

130W Type-C adapter

Often used in electronics, copper is difficult and expensive to extract, so it is becoming an increasingly rare earth metal. Our goal is to establish demand and encourage copper recycling in order to keep it in the circular economy.



# Recycled steel

Our desktops use certified recycled content in the steel materials of the chassis components



Products made with recycled steel

OptiPlex Tower Plus – minimum of 10%

OptiPlex SFF Plus – minimum of 10%

OptiPlex SFF – minimum of 10%

Select PowerEdge servers – minimum of 16%



# Recycled plastic

We use recycled plastic in nearly every hardware product we make, and we're expanding our use into more components throughout our devices



## Products made with recycled plastic

OptiPlex Desktops – Up to 59%

Latitude Laptops – Up to 30%

Precision mobile workstations – Up to 30%

Precision fixed workstations – Up to 37%

Monitors – Up to 85%

Vostro – Up to 20%

Inspiron – Up to 27%



Advancing Sustainability with

# Energy Efficiency

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# Meeting strict energy-efficiency guidelines

Our products have earned ENERGY STAR® certifications and adhere to strict energy-efficiency specifications established by the U.S. EPA, helping to save energy and costs while protecting the planet.



57

Server models

27

Storage products

33

Networking switches

290

Desktops and laptops

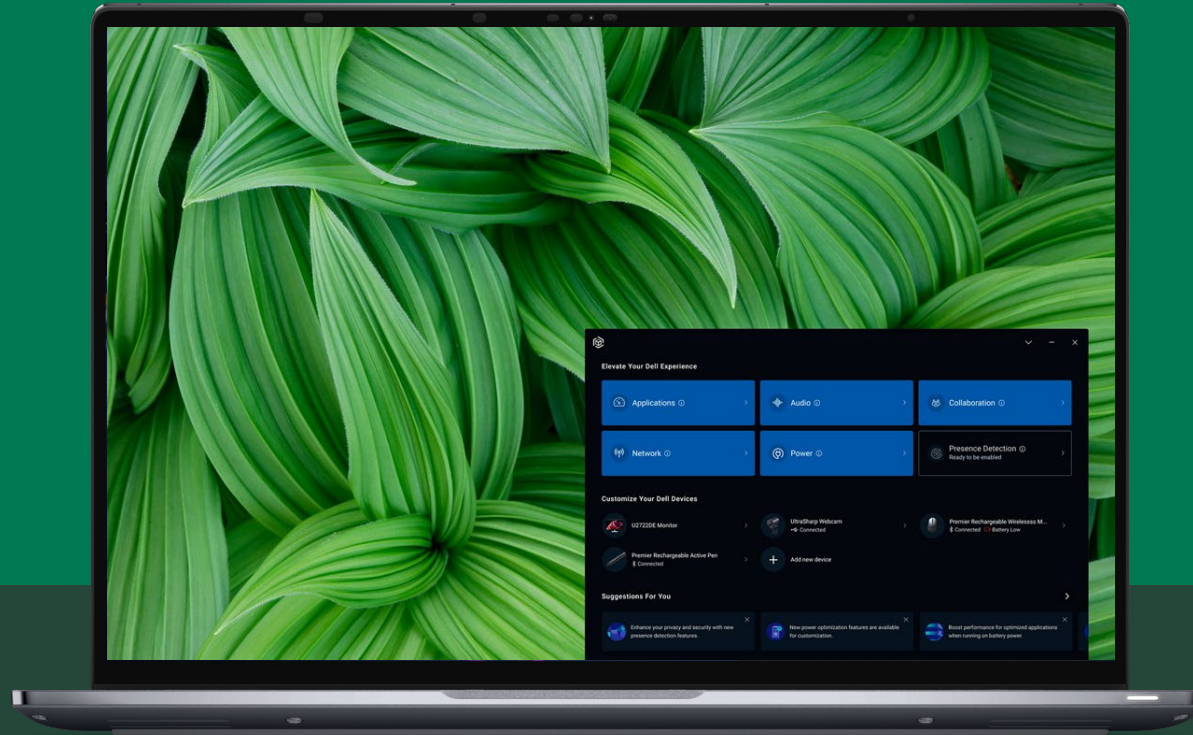
121

Monitors and displays

# Energy saving intelligent client devices

## Dell Optimizer

Maximize power and performance with our AI-based optimization that adapts to users' devices



## Eco-Modes

Optimize energy usage by employing efficient devices with eco-mode features for maximum efficiency

21%

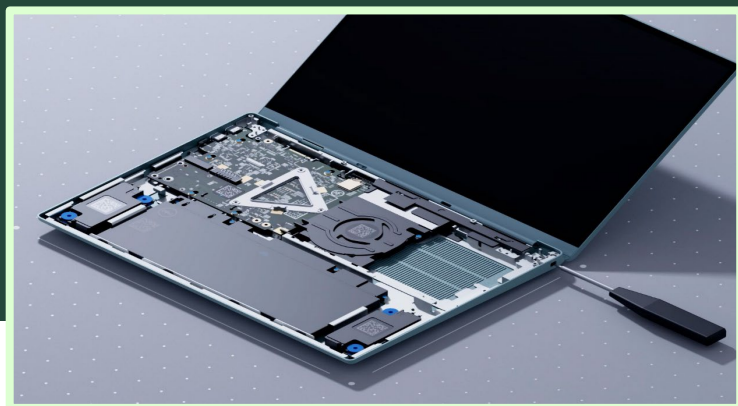
improvement in performance per watt with Dell Optimizer when thermal management features are set to Quiet mode.<sup>1</sup>



# Advancing Sustainability with Design

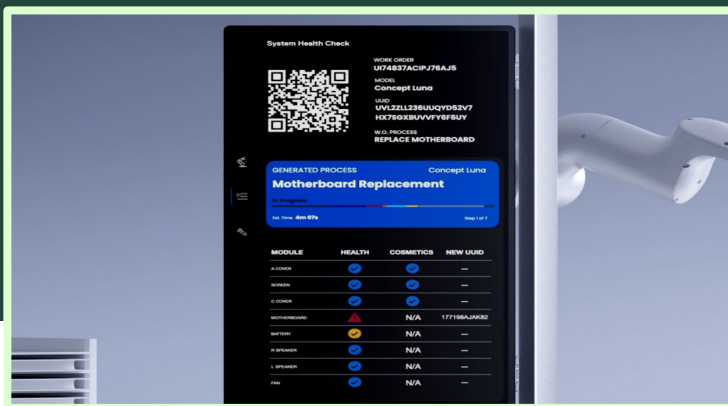


# Designing an interconnected and circular system for the future of PC manufacturing with Concept Luna



## SUSTAINABLE PC DESIGN

Design for **harvest and disassembly** using **modular designs** within the device to reduce the time needed to repair, upgrade, or recover parts for reuse and recycling.



## INTELLIGENT TELEMETRY

Accurately diagnose components' health to **inform proactive repairs** and **maximize longevity** and component reuse.



## ROBOTIC AUTOMATION

Use of robotic arms and telemetry to **enable repair, harvest, reuse and recycling** more quickly and at scale.

[Watch the full video here.](#)





### Recover & Recycle

We offer many solutions for reusing or recovering used tech of any brand.



### Design

Our products are efficiently designed to require fewer materials, utilize environmentally responsible materials, and maximize reusability and recyclability.

### Use

We are lowering the energy intensity of our technology to reduce energy waste, emissions and operational costs.



### Build

We focus on operational efficiency and conservation, using renewable electricity and avoiding waste in all forms whenever possible.



### Ship

We use rapidly renewable packaging materials and efficient configurations to create a smaller transportation footprint.

# Circular design principles

We are implementing designs that allow our products to be more easily disassembled, which in turn, makes them easier to repair, reuse and recycle.

“Decisions made at the design stage determine 80% of environmental impacts.”

*Ellen MacArthur Foundation*



## DESIGN FOR HARVEST

Making it easy to harvest parts and recover materials to reuse, recreate and recycle



## REPAIR/ REFURBISHMENT

Creating with modular designs and simplified access to components and materials



## DEMATERIALIZED/ OPTIMIZED

Reducing needed materials while optimizing and streamlining architecture



## DURABILITY

Engineering to withstand more during use and extending life where possible



## SUSTAINABLE MATERIALS

Building with circular or reduced-impact material choices and using high-grade material streams



## EVOLVED BUSINESS PRACTICES

Providing product take-back, cascaded ownership and as-a-Service solutions



Advancing Sustainability with  
**Responsible  
Packaging**



This packaging is made from 100% recycled or renewable materials.



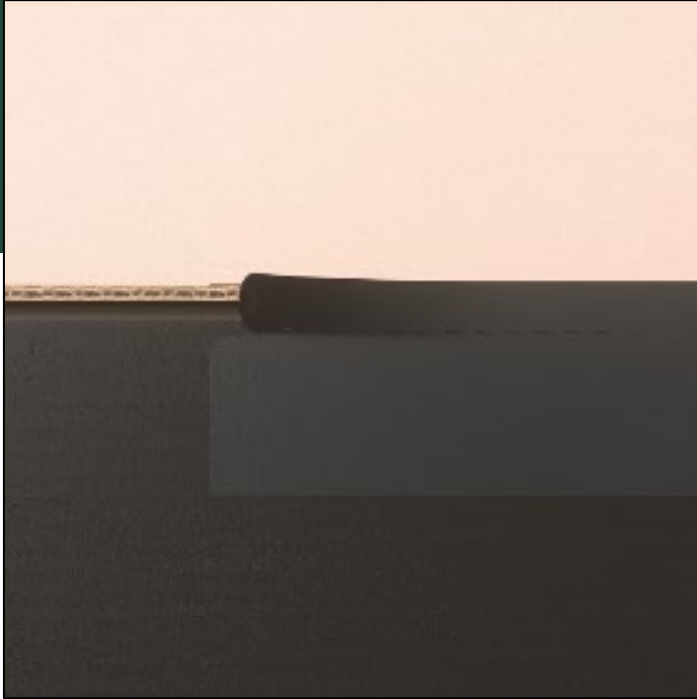


Across our entire product portfolio, over 90% of our packaging materials are recycled and renewable.

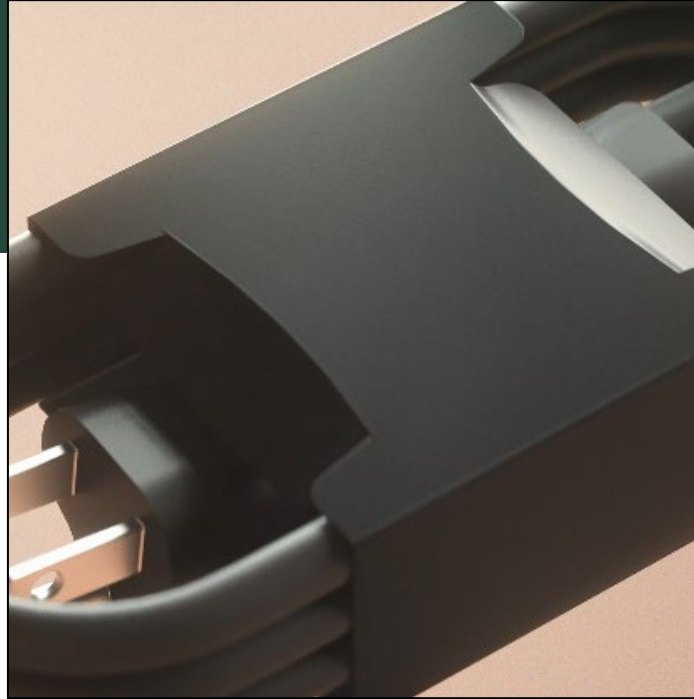




# Responsibly made, responsibly sourced and 100% recyclable laptop packaging



PAPER PULL TAPE



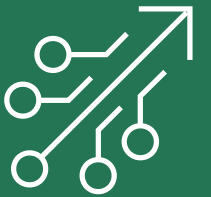
PAPER WRAPPED CABLES



RECYCLED AND REUSABLE  
SYSTEM POUCH

Advancing Sustainability with

# Evolving Business Models



DELL Technologies



# Simplify your cloud experience with Dell APEX

Right size your IT environment with subscription solutions that reduce e-waste and energy consumption

## Reduce overprovisioning

Flexibly scale your IT operations according to your business needs to reduce overprovisioning emissions and costs.

## Offload lifecycle management

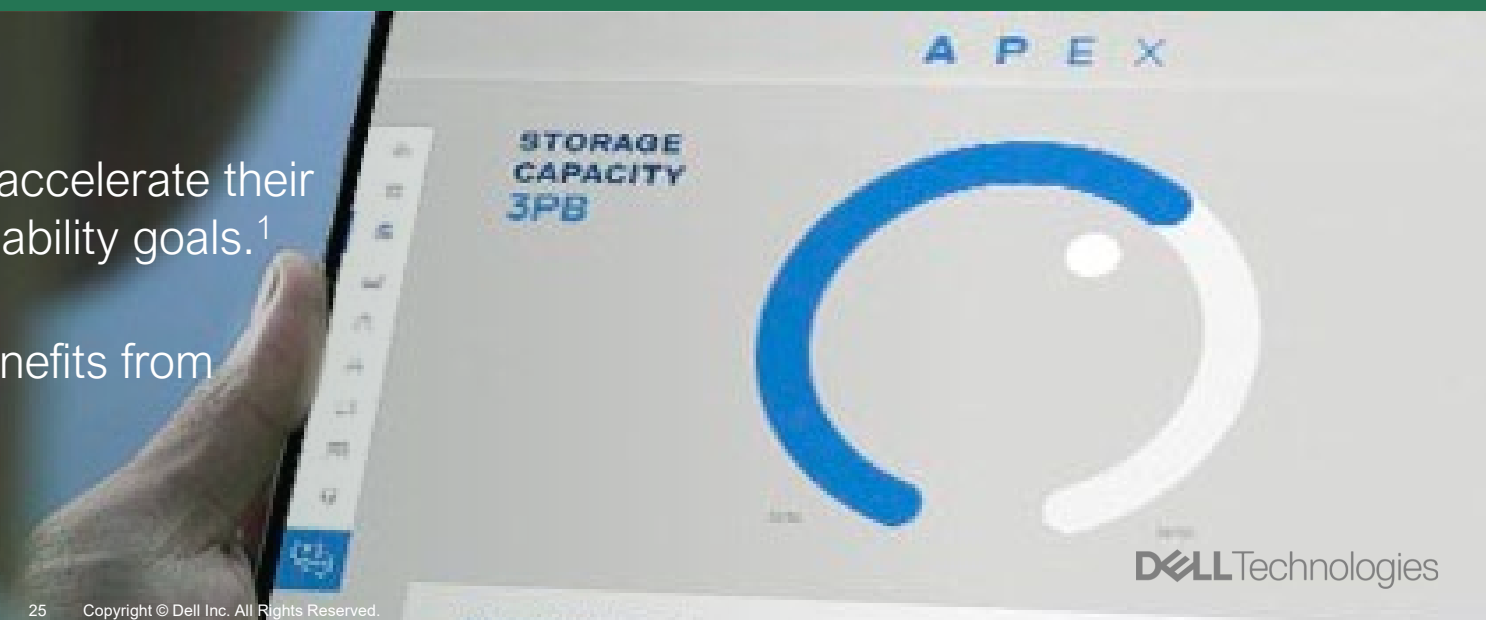
Dell APEX can responsibly manage your infrastructure lifecycle, minimizing e-waste and time obligations.

## Host data in colocation facilities

Reduce your carbon footprint and contribute to your sustainability goals by hosting solutions in colocation facilities powered by 95% energy.

71% of firms say they need a partner to accelerate their programs and achieve their sustainability goals.<sup>1</sup>

88% of IT decision-makers anticipate benefits from adopting an IaaS model.<sup>1</sup>



DELL Technologies

# Responsibly procure your technology

The route to workplace as a Service



Create your user  
profile



Choose the devices and  
software for each type of  
user



Select the service  
bundle best suited for  
each user profile



Transparent pricing



Pay-as-you-use





Advancing Sustainability with  
**Responsible Recovery  
and Recycling**

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# Committed to delivering sustainable recovery & recycling services

72%

**OF COMPANIES** need external help to make sure they cover IT security and risk requirements

\$10.5

**TRILLION** is the estimated global cost of cybercrime by 2025

46%

**OF COMPANIES** plan to increase investment of asset disposition services in the next 12 months

Helping you reduce your environmental impact, meet sustainability goals and extract value of retired IT by:

- Accelerating the circular economy through reuse and recycling to positively impact your company's environmental footprint
- Secure handling and sanitization of your sensitive and important data to help ensure it does not fall into the wrong hands
- Reinvesting value from your aging equipment to help your business grow
- Responsibly recycling e-waste and address your company's environmental compliance requirements while diverting from landfill



# 25+ years of experience in global recovery solutions



## Data Protection & Security

All sanitization processes are in alignment with NIST SP 800-88 r1 standard data sanitization requirements.



## Partner Management

We vigorously vet, audit and hold partners accountable to the highest ethical and environmental standards.

Certifications:

- Responsible Recycling (R2)
- ISO 9001
- 14001, E-Stewards



## Value Recovery

We can help resell your retired equipment so you can reinvest that value or get credit toward future technology.



## Environmental Compliance

We adhere to strict standards for environmental compliance worldwide to further cement our commitment.



## Responsible Recycling

We thoroughly test returned equipment for functionality to minimize waste where possible.

- On average, 70% of materials our business services recovers are reused throughout the industry.

# Responsible recovery & recycling services portfolio

## Business

- Asset Recovery Services
- Data Sanitization and Destruction Infrastructure Services
- Tech Refresh & Recycle: Future-Proof Program



We have collected 2.6+ billion pounds\*  
of used electronics for reuse or  
recycling since 2007.

\*1.2 billion kilograms



**Bedankt!**