



Hewlett Packard
Enterprise

Make sustainable IT part of your transformation

HPE Services for sustainable IT



Most companies are undergoing digital transformation to accelerate business outcomes. Leading organizations are embracing sustainability as part of their next-gen business models. And by aligning technology strategies with sustainability initiatives, organizations across industries are growing stronger, more resilient, and keener to accelerate transformation.

The benefits

How do companies benefit from investing in more sustainable IT infrastructure¹

41%

Improve
profitability

32%

Streamline the
innovation process

28%

Meet regulatory
requirements

27%

Improve operational
efficiency

26%

Lower energy
related costs

HPE Services addresses sustainable IT, ranging from an individual application to the largest data centers, and all points in-between

Hewlett Packard Enterprise sees sustainability as a catalyst for the business — a force for good and game-changing optimization through reduced carbon footprints and smarter economics realized in the circular economy. As a company committed to being a net-zero enterprise by 2040, with science-based targets, HPE helps businesses advance sustainability agendas with a holistic approach to impacting emission inefficiencies across the IT estate, edge to cloud.

HPE Services help you with expertise and design for sustainable transformation, solutions for operational efficiency, and visibility that optimizes every workload with less energy and smaller footprints. Having helped you get to your sustainable IT targets, HPE helps you operate your environment, whether you're or HPE is operating it. What's more, HPE helps maximize value across the asset lifecycle, engaging in the circular economy.

Incremental gains in sustainable IT are fine, but organizational headwinds will ultimately slow or even prevent a positive impact.

The challenges

Many leading companies have seen success in targeted sustainable IT initiatives. These bright spots are limited in scale and are not typically part of a holistic strategy integrated and woven throughout the business. And while the decision to reduce energy consumption and greenhouse gas (GHG) emissions has often been driven by a desire to achieve good corporate citizenship, or by concern about existing or future regulations, energy prices continue to exhibit extreme volatility. As regulatory and reporting pressures increase throughout global markets, businesses are searching for ways to reduce their expenditures on the energy needed to power their business growth. The imperative has become to achieve both goals, mixing global stewardship with sound business sense. However, multiple challenges stand in the way:

- A scarcity of expertise to implement a sustainable IT strategy
- The complexity of driving sustainability in a hybrid cloud reality
- Inefficiencies across the lifecycle lead to a larger environmental impact
- The potential of working with a myriad of suppliers

To truly address sustainable IT with transformational intent, multiple vendors would likely include sustainability consultants, IT infrastructure vendors, business sustainability specialists, and a data center engineering and design firm and be considering an as-a-service supply model. HPE has all this.

If IT is “on point” for sustainability, then HPE is the best partner providing a one-stop, integrated experience.

¹ “European Custom Survey,” IDC, July 2022

Sustainable IT

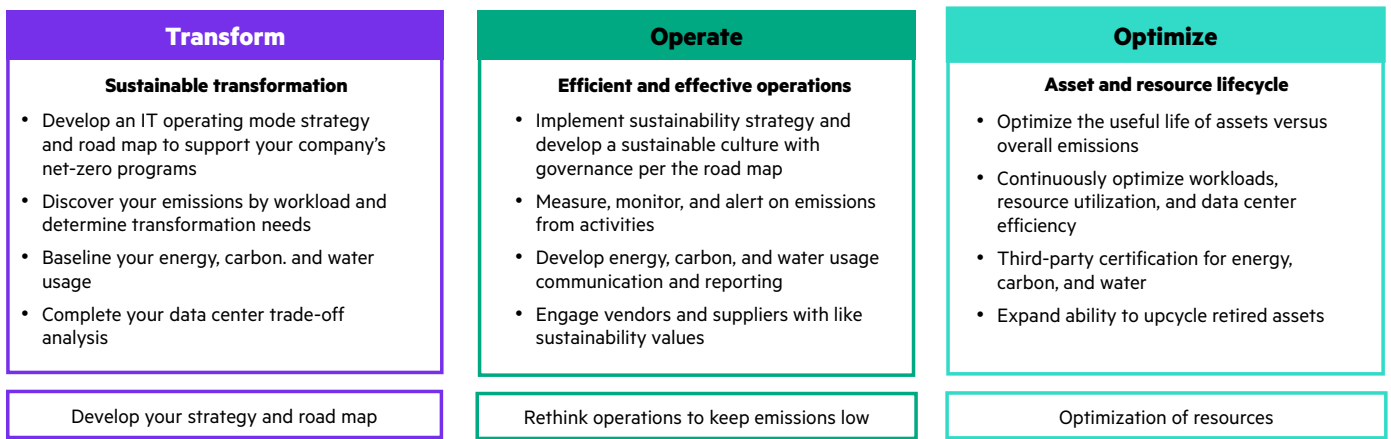


Figure 1. The three phases of the sustainable IT lifecycle

Transform: A workload-centric approach

While most technology vendors tend to take a data capacity approach to try and drive sustainable IT efficiency, HPE takes a workload-centric approach. This methodology has a significantly larger impact than addressing storage and compute or the data center facility as the targets to drive efficiencies. HPE still does both, but it is informed by workload. Taking this approach, HPE IT massively addressed IT-based carbon emissions while achieving its business-based data center objectives.

HPE Right Mix Advisor

It is a process used to identify application modernization and hosting requirements. But it also allows HPE to build an analysis of workload power consumption and calculate CO₂ equivalent emissions, collectively for all applications, or can be more specific, for example, focus on SAP® workload. This process is paired with the redesigned HPE Edge-to-Cloud Adoption Framework to enable support of sustainable IT goals in an organization's operating model.

HPE Edge-to-Cloud Adoption Framework

Again, a well-established HPE Services methodology for cloud adoption, the framework is enhanced to address the effect of sustainability goals on an organization's operating model. HPE Services cloud experts identify eight core domains across the operating model and are able to assess and address sustainable IT readiness and implementation requirements for your environment to operate successfully through a sustainability lens.

Sustainability workshops

HPE Services host several workshops, which can accommodate where you are on your journey. They range from half-day introductions to the sustainable IT topic through to several weeks in length, taking deep dives into a holistic view of the impact of the enterprise or organization through their data centers, data center hosting strategy, and IT, holistically.

80%+
reduction in IT-based
carbon emissions

Estimated breakdown

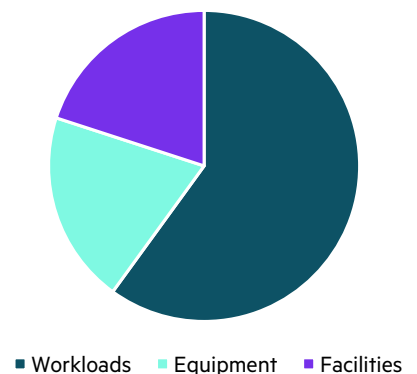


Figure 2. HPE IT reduction in carbon emissions

HPE Services is able to provide expertise across IT technology and data centers. Here are some examples of the energy- and sustainability-focused capabilities available to you:

- **1st LEED Gold certificate design²**
- **1st LEED Platinum certificate design³**
- **Advisor to EU Code of Conduct for data centers**
- **Advisor to Singapore Government Code of Conduct for data centers**
- **Advisor to United States Environmental Protection Agency (EPA) and Lawrence Berkeley National Laboratory (LBNL)**

IT energy and sustainability discovery workshop

Encourages cross-functional collaboration via a highly interactive executive workshop. The setting allows groups to achieve a common understanding through the articulation of goals and strategic objectives. This gateway service helps prioritize and enable subsequent services

IT energy and sustainability baselining service

Provides accurate representation of an organization's energy and carbon data by following commonly accepted accounting and reporting principles to help ensure organizations present an accurate account of energy use and emissions

IT energy and sustainability road map service

Reduces energy use and GHG emissions through targeted, transformative, and actionable plans for both short and long term

IT energy efficiency analysis

Increases efficiency and reduces carbon emissions by lowering mechanical, electrical, air mixing, and operational inefficiencies that affect energy consumption

IT water usage analysis

Improves water efficiency through determining water consumption patterns and associated GHG emissions from site and source water consumption

IT sustainability trade-off analysis

Increases energy efficiency through comprehensive TCO analysis of data center design **upgrade** approaches toward sustainability goals such as fuel cells, economization, liquid cooling, and such

IT resource usage monitoring

Improves efficiency through real-time monitoring of energy and water usage at the submeter level using specific monitoring software tools such as DCIM

IT energy and carbon reporting

Reduces organizations' carbon and GHG footprint through a comprehensive inventory and audit of energy usage, travel, materials, parts, and water as well as waste management

IT data center energy certification

Achieves certifications for the European Code of Conduct, USGBC LEED standards, U.S. EPA ENERGY STAR®, and ISO certifications by auditing data center efficiency, gathering required information for framework submission and subsequent certification

Figure 3. A sample of energy and sustainability-focused capabilities and expertise

^{2, 3} The LEED system is registered to U.S. Green Building Council (USGBC).

Operate: A continuum of sustainable IT

Now that your environment benefits from having set it up for success, HPE Services continues to work with you, focused on your operating model. Capabilities include services and solutions to gain visibility, control, and management of your IT and data center carbon footprint. This includes access to dedicated experts who deliver insights and planning recommendations to improve operational efficiency. Because you might enter your sustainable IT journey at an entry point that is further down your transformational journey, HPE Services is able to bring a collection of capabilities representing different stages of your journey, into one advantageous continuum of care, helping ensure a consistent and value-added experience across your sustainability efforts as well as your IT estate. And, of course, this can be achieved in HPE GreenLake.

The operational phase of the sustainable IT lifecycle is clearly the lengthier phase, which means it needs to be not just set up right but operated in the right way. HPE has methodologies that can be continuously applied to address sustainable IT success and payback. For example, a sustainability trade-off analysis focuses on capturing sustainability opportunity cost and assessing its impact on reliability and operational considerations. This comprehensive view leads to the recognition of the opportunity cost — or cost-effectiveness of your IT hosting platforms in a hybrid cloud footprint and provides a balance of improved efficiency and reliability of owned, hosted, or public cloud hosting choices.

HPE Services also provides resource usage monitoring as a near-real-time energy and water usage monitoring capability as well as IT resource utilization monitoring. These capabilities pair monitoring technologies such as building management systems, infrastructure management, capacity and utilization monitoring dashboards, and AI-based technology coming to the fore (Digital Twin). Monitoring and management solutions help to visualize data center and IT operational environmental and usage factors, remediate problem areas, and manage change.

Reporting

Many governments are taking steps to reduce energy and GHG emissions through policies that include the introduction of voluntary programs, carbon or energy taxes, and regulations and standards. As a result, companies must be able to understand and manage their GHG risks if they are to ensure long-term success in a competitive business environment and be prepared for future national or regional climate policies. A well-designed and maintained corporate GHG inventory can serve several business goals.

The energy and carbon reporting service from HPE provides a comprehensive carbon and GHG inventory and audit, including analysis of inputs and assessment of your IT organization's carbon and GHG footprint. The analysis considers key inputs, including energy usage, travel, materials, parts, and water and waste management. The footprint assessment is performed for both facility and IT and includes IT equipment production, packaging, components, inventory, and transportation.

End of use: IT asset management

Where do you send used IT equipment? Did you know that you have options other than a landfill that can help drive your business transformation and help protect the environment? HPE Financial Services (HPEFS) creates investment capacity for digital transformation by extending the life of technology and repurposing products back into the economy. The process begins at the HPE Technology Renewal Centers (TRCs) — the largest IT manufacturer-owned tech renewal network in the world located in Andover, MA, and Erskine, Scotland.⁴ At the TRCs, reuse is prioritized over recycle.



⁴ [“Re-use, refurb, recycle: Circular economy thinking and data center IT assets,” DCD, March 2022](#)

HPE technology renewal by the numbers⁵

3.6M+
assets processed

This includes
1.9 million
data center assets and
1.7 million
notebooks, desktops,
tablets, and printers

93%
of servers upcycled
and returned to
active use

\$1.1B
infused back into
customer budgets
from upcycling and
accelerated migration
programs over the
last 3 years

⁵ HPE technology renewal FY22 data

IT Asset Management solutions designed to help drive transformation

» HPE Asset Upcycling Services

Change the way you think about removing assets, focusing on decommissioning, and retiring tech with circularity in mind. You'll also be able to unlock trapped capital while ensuring secure, environmentally responsible removal and retirement of assets.

» HPE Accelerated Migration Services

Extending the useful life of tech, consolidating multi-gen environments into a single environment to improve usage and reduce environmental impact.

» HPE Certified Pre-owned Services

Keep tech in use longer by augmenting existing systems with more capacity or supporting legacy environment not ready for replacement yet. Ranging from subassemblies, feature upgrades, to whole systems, a full portfolio of data center equipment is available "off the shelf" or custom-configured to meet almost any budget or circumstance.

» Virtual Warehouse Services

Ensure your assets and financial plans align to your business goals by warehousing decommissioned IT assets so that they can be redeployed for future projects.

» Proof of concept enablement


When pursuing an innovation project that's designed to keep your business ready for what's next, having an available pool of affordable assets delivers both the IT help needed and the freedom to do more with your budget.

» Data center consolidation

When decommissioning assets and consolidating multi-vendor data center investments, create financial vitality through pre-configured, customized systems that help streamline project complexity.

Take the step

Are you asking the questions?

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- Do you have environmental, social, and governance (ESG) supplier requirements in your request for purchases (RFPs) or IT sustainability goals for your supply chain?
 - Are you trying to reduce energy use, especially in your data center or IT infrastructure workspaces?
 - Do you have a sustainability strategy and/program that drives change across the entire organization/has executive oversight?
 - Are your IT waste disposal or renewal processes consistent across all locations? Do they demonstrate compliance with your supply chain and environment policies?
 - Do you think infrastructure management (admin, maintenance, physical/firmware updates) should be easier?
 - Is IT sustainability integrated with your digital transformation / technology strategy?
 - Do you have a baseline for IT carbon emissions?

Begin your sustainable IT journey with HPE Services and take a workshop. The workshop has four primary sections. It first introduces sustainability challenges as they relate to the HPE Edge-to-Cloud Adoption Framework. Leveraging this, a discovery session is held to determine the high-level maturity across 20 sustainability capabilities. And on a separate day, we return to close the workshop to share our findings, your organization's relative maturity, and recommendations.

Learn more at

[HPE.com/us/en/living-progress/sustainable-it.html](https://hpe.com/us/en/living-progress/sustainable-it.html)

