

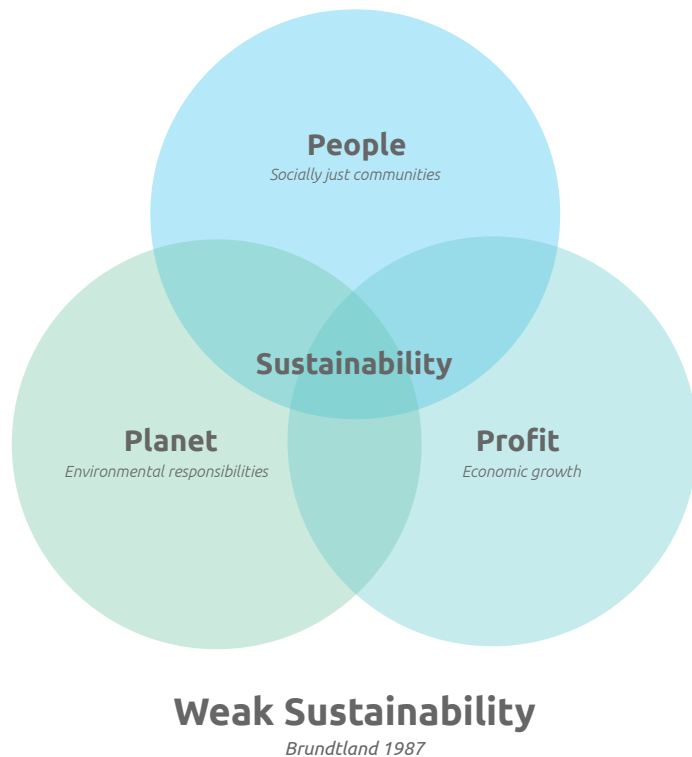
 mobile recell

# Quick Start Guide: Sustainability in IT



## Defining Sustainability

Sustainability is meeting the needs of the present without compromising the ability of future generations to meet their own needs. It exists where there is a balance between economic, social, and environmental needs. [This is known as the triple bottom line.](#)



While the concept of sustainability has been around for centuries, the graphics to explain it have evolved. Rather than a Venn diagram of three equally prioritized circles depicting that sustainability exists at the overlap of planet, people, and profits, a nested circles diagram is commonly used to convey the dependencies that exist among the environment, society, and the economy. This nested model more accurately depicts that sustainability can only exist when the environment is healthy, society is thriving, and the economy is prosperous.

## The Circular Economy

It's the latest buzzword in sustainability circles. The phrase may be new to you, but its basic concepts are as old as civilization: *reduce, reuse, recycle*.

The circular economy goes far beyond *the three R's*. However, to fully understand the circular economy, it's essential to learn about its counterparts—the linear economy and the recycling economy—and how they differ from circularity.

## The Linear Economy

Our current model for material management is known as the linear economy, in which we *TAKE* materials from the earth through mining and other extraction methods, we *MAKE* products from these materials (including fossil fuels), we *USE* those products, and then we *THROW* those materials *away*.

However, there really is no such thing as *away* because discarded materials must go somewhere—either to a landfill, where it will sit for centuries, or an incinerator.

This is a linear process because it has a beginning and an end.

## The Recycling Economy

The recycling economy is similar to the linear economy, but it has one distinction: there's a loop that cycles from *USE* back to *MAKE* and then on to *USE* again.

The recycling economy is an improvement to the linear economy because the material's usable life is extended for another cycle.

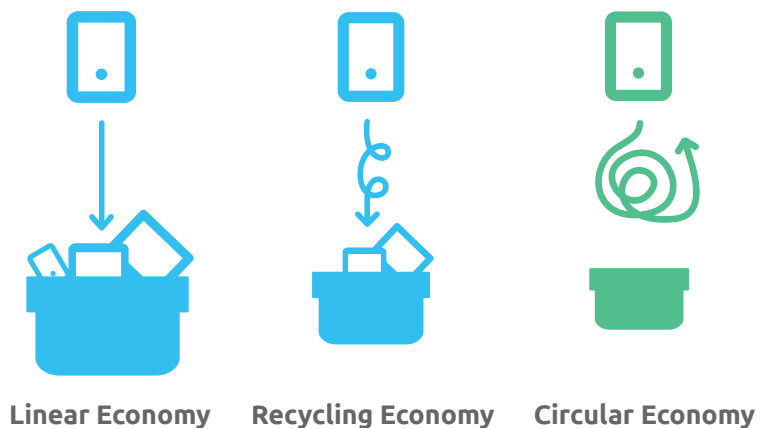
But, in most cases, the material's second time through the *MAKE-USE* cycle is its last, and soon, that material ends up in the landfill or incinerator to join all the other materials in the linear economy.

Often, the product made from recycled materials is of lesser value, of lower quality, or has diminished utility and/or durability. This is known as *downcycling*, and it provides minimal progress towards a truly sustainable model for managing materials.

## The Circular Economy

The more sustainable model for managing materials is the circular economy.

In a circular economy, products are designed to stay in use for as long as possible, and once their usable life is over, they are refurbished, repaired, or recycled—which is known as upcycling. Since products are designed for utility and longevity, minimal waste is created, and whatever waste is created is managed in the most sustainable manner.



# The Importance of Sustainability for Businesses

Every business is impacted by and has an impact on economic, social, and environmental factors. There are three primary reasons businesses need to adopt sustainable practices within every functional area—to manage risks, capture opportunities, and apply ethical considerations.

## 1. Manage Risks

There are some risks related to sustainability—both inside and outside an organization’s control. Smart businesses assess those risks, take necessary steps to avoid identifiable risks, and minimize the impact of potential risks outside their control. Here are some risks businesses try to mitigate:

### Supply chain vulnerabilities:

disruptions/delays from commercial shortages, trade union strikes/boycotts, or geopolitical events

### Regulatory compliance:

varies by country (European Union vs. United States) and state (California vs. Texas)

### Investor scrutiny:

private capital and public shareholders

### Physical impacts of climate change:

infrastructure damage/loss, supplier disruptions, rapid shifts in consumer demand due to natural disasters

## 2. Capture Opportunities

Beyond risks, sustainability presents many opportunities. Savvy businesses recognize these opportunities and capture them through informed efforts, engaged communication, and continual improvement. Here are some opportunities businesses can capture:

**Increase efficiency by reducing product size:** With smaller products, businesses can receive more units per shipping container, which allows them to reduce packaging materials, shipping costs, and, in turn, save money.

**Create a talent advantage:** Attract and retain employees who want to work for a sustainable company—**nearly 70% of employees** are more willing to apply for and accept positions from environmentally sustainable companies.

**Meet consumer demand:** Acquire new customers, as sustainability is a **top-rated purchase influence** for 60% of consumers globally.

**Acquire new investors:** Businesses incorporating sustainability into their strategies are more likely to successfully acquire new investors—**72% of private investors** always screen companies for ESG risks and opportunities at the pre-acquisition stage.

### 3. Apply Ethics Considerations

Sustainability is widely recognized as the right thing to do—for individuals, organizations, and governments at every level. Climate change is impacting our planet and creating real challenges for our collective ability to continue doing business. We must all engage in more sustainable practices in order to meet the [Paris Agreement](#)'s goal of limiting climate change to 1.5°C (34.7°F) temperature change from pre-industrial levels in order to avoid catastrophic global consequences.

**Right thing to do:** for individuals, organizations, and governments at every level

**Climate change:** impacts our planet and creates real challenges for our collective ability to continue doing business

## The Importance of Sustainability for Information Technology (IT)

Your company likely has sustainability goals IT can help achieve, and increasingly, IT leaders are expected to engage in sustainability initiatives. By 2025, [50%](#) of CIOs will have performance metrics tied to the sustainability of the IT organization. There are many ways sustainability and IT operations align for cost savings, reduced risk, increased efficiency, and improved performance.

Currently, the digital world contributes to global warming more than it helps prevent it, which is becoming a critical situation for tech leaders. The energy consumption of information and communication technologies is increasing by [9%](#) every year. Tech leaders must act to slow this growth.

Changes in organizational processes or practices can be a solution for this trend. New practices like [digital sobriety](#)—an approach that strives to reduce the environmental impact of digital technology—can reduce energy consumption to 1.5% per year.

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Gartner



# Applying Sustainability to IT

IT operations within a company can consume resources both directly and indirectly, so there are many opportunities to apply sustainability principles.

In analyzing these opportunities, the goal is to balance people, the planet, and profit to determine where improvements can be made in the short term and which will require a longer term strategy.

The best place to start is by asking questions and gathering information. Find out what resources are being consumed and what data is already being collected about quantities, frequency, and costs. This will allow you to identify and assess the biggest sources of waste—whether in the form of materials, time, energy, or money—within the IT operations of your organization.

Here are the places to look first:

## Energy

### Data Centers

The equipment that powers your organization's data needs—as well as the buildings that house them—consume a significant amount of energy as direct power and for climate control. In fact, data centers account for roughly **1%** of global electricity demand.

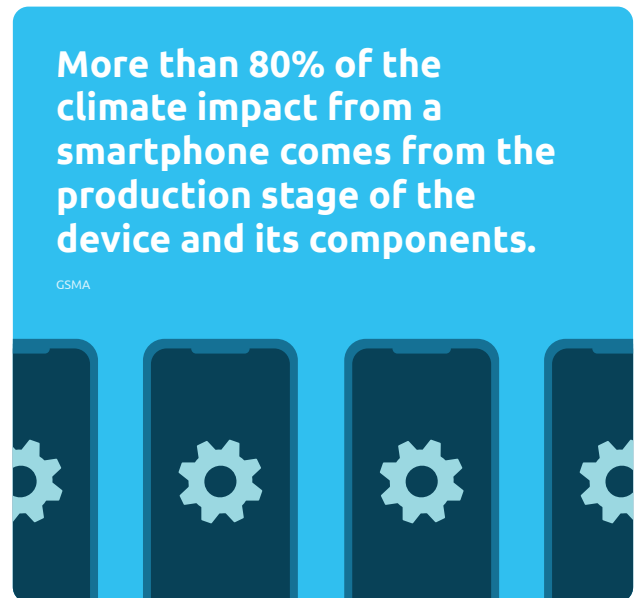
These facilities may or may not be within your control to manage directly, depending on your utilization of on-site data processing and third-party, cloud-based data providers. If your organization controls these facilities, you can take advantage of tools and resources available from the US Department of Energy (DOE) and the [Center of Expertise for Energy Efficiency in Data Centers](#)—such as the Data Center Pro (DC Pro) and the Power Use Effectiveness (PUE) Estimator—to diagnose how energy use is distributed in your data center and determine ways to save energy and money.

Regardless of your ability to control data centers, you should aim for visibility into the energy consumption and efficiency of your data operations.

A few additional ways you can incorporate sustainability and energy efficiency into your data operations is by transitioning data centers to the cloud or purchasing [carbon offsets](#) based on energy consumption. You can often purchase carbon credits from the data processing provider directly.

## Device Consumption

More than **80%** of the climate impact from a smartphone comes from the production stage of the device and its components. Therefore, extending the usable life of a device lowers its carbon footprint. There are a few other ways to conserve energy during the use phase of a device's lifecycle such as closing out apps not in use, dimming screen brightness, decreasing screen time out, and more. Some unified endpoint management (UEM) platforms even allow you to enable fleet-wide device settings for energy efficiency.



## Power Generation Source

As with energy efficiency measures, your ability to control the generation source of the energy you consume will depend on what equipment you own, what work or processes you outsource to service providers, and whether facilities are owned versus leased. Most utility providers offer **green power programs**, allowing you to opt in to sourcing all or some of your energy use from renewable generation sources such as wind, solar, and hydroelectric. This is a great way to source renewable energy without incurring significant capital expenses, like you might if you tried to produce the renewable energy yourself—such as installing solar panels on your property.

## Transportation and Logistics

The process of transporting, distributing, and recovering IT equipment from source location to destination through its lifecycle consumes energy. This energy use can be estimated based on distance traveled, mode of transportation, size or weight of the equipment, and its packaging. Suppliers, vendors, and logistics providers can supply this information, and they often provide options for more energy-efficient modes of transportation or shipment arrival dates.



## Materials

### Selecting Equipment and Devices

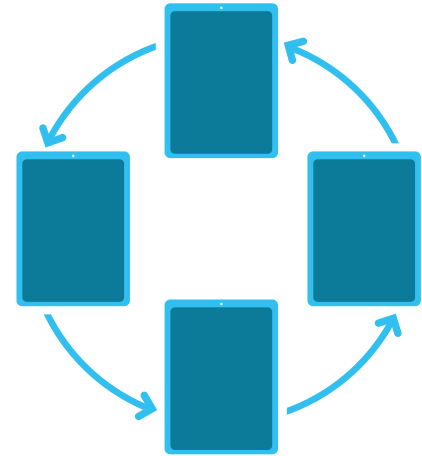
The selection of the equipment and devices you purchase for your organization is another opportunity for increasing the sustainability of IT operations and lessening environmental impact.

The **Electronic Product Environmental Assessment Tool (EPEAT)** is a global ecolabel for the IT sector managed by the **Global Electronics Council (GEC)**, and it helps purchasers, manufacturers, and resellers buy and sell more sustainable and circular technology products and services.

EPEAT criteria are developed in a multi-stakeholder, voluntary, consensus-based process and address environmental and social impacts across the entire product lifecycle, from extraction of resources and manufacturing, through to assembly, use, and final disposition.

### **Reuse or Recycling of Mobile Devices and Other IT Assets**

The greenest option for IT equipment and devices is to reuse existing materials for as long as possible, whether for redeployment or resale. A successful reuse program works seamlessly in tandem with large planned device refreshes and for individual device turnover—due to damage or employee attrition—and, as a result, these recovery programs achieve high device return rates.



### **Protection and Durability**

Protecting the devices purchased can help extend their usable life while saving money and resources spent on replacements. For mobile devices and computers, many companies issue and require the use of cases, screen protectors, and padded bags to protect company-owned laptops, smartphones, and tablets.

### **Packaging in Logistics**

Packaging for the logistics process is often overlooked, but its impact is significant. IT assets can be over-packaged, which consumes more materials and increases shipment costs. Depending on the types of shipping methods used, there are opportunities for reuse and recycling to minimize environmental impacts.

Packaging type impacts the amount of recycled materials used versus virgin materials used, and virgin materials consume more energy and raw materials in their production compared to packaging with a high percentage of recycled materials. The packaging type used also impacts the recyclability of that packaging at the end of its lifecycle.

Bulk (or freight) shipments use pallets that may or may not be reused multiple times, depending on durability. For example, high density polyethylene (HDPE) plastic pallets are more durable than wood pallets, and therefore have a longer lifecycle. Plastic pallets often have a high percentage of recycled plastic content as well.

Pallets are often wrapped in a stretchable plastic film that is usually recyclable if kept clean, properly sorted, and diverted to a special collection program for plastic film. You can also opt to use pallet wrap film with recycled content to lower the environmental impact even more.

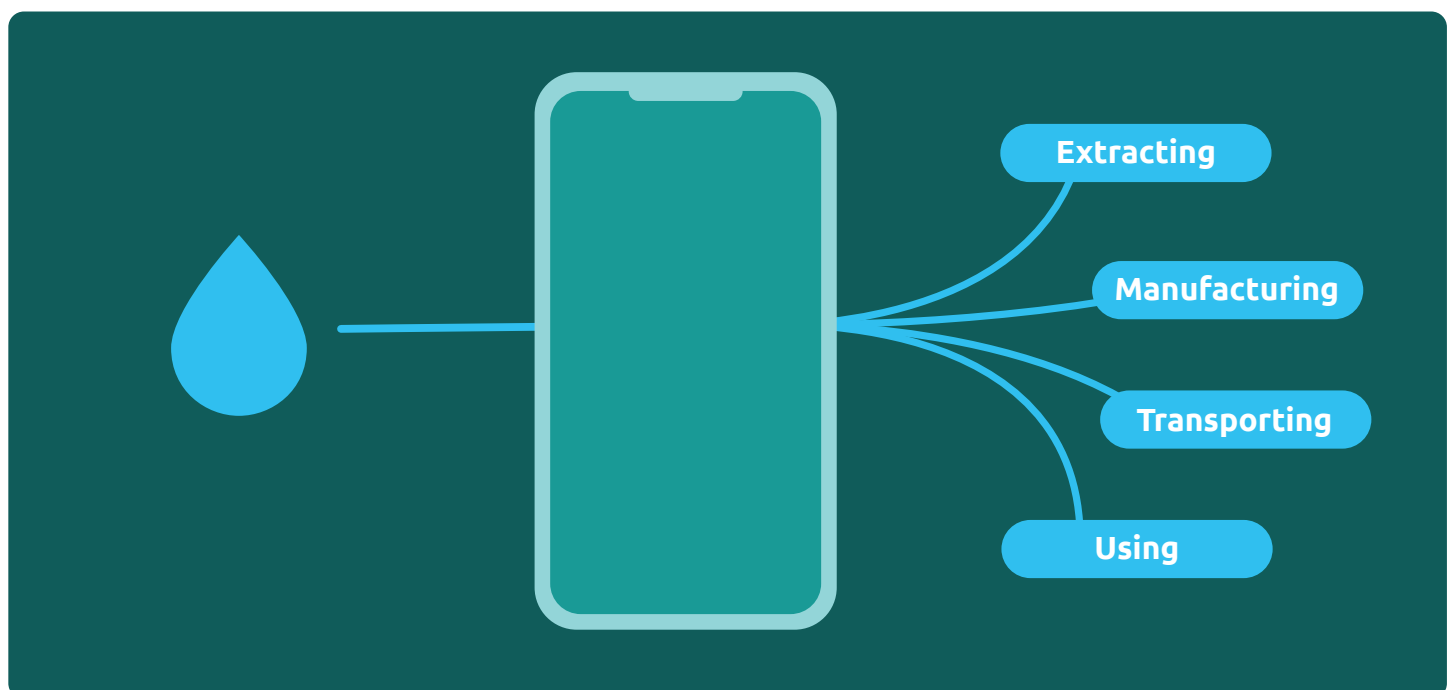
Finally, cardboard is the most prolific material used for packaging IT assets, both for bulk and individual shipments. Cardboard can be made from 100% recycled content or 100% virgin materials—and the entire range in between—so it's worth understanding the recycled content of the cardboard you purchase and your suppliers use. Regardless of its recycled content, cardboard is highly recyclable and local programs to recycle it are widely accessible.

## Water

Water is consumed by all the activities related to the processes of extracting, manufacturing, transporting, and using electronic equipment and devices—including generating electricity and manufacturing packaging.

Data centers that power cloud computing **require a significant amount of water** to continuously cool the buildings that house the servers.

You may have limited visibility or control on how much water is consumed in each step of the process, but generally, minimizing the use of energy, materials, and transportation fuel minimizes consumption of water simultaneously.



# Achieving Greater Sustainability in IT Operations

Achieving greater sustainability in IT is logical, collaborative, and iterative. Curiosity and a commitment to continuous improvement are essential tools in the process.

## Understand Your Company's Sustainability or ESG Goals

If your company has a Chief Sustainability Officer or similar role, they are the best place to start. They will be a valuable resource and a champion for prioritizing your challenges and elevating your successes to top leadership. Connect with them and ask the following questions:

What existing ESG goals impact IT?

Does the company produce an annual sustainability or ESG report?

What metrics are currently collected, measured, and shared?

How can IT help achieve company-wide goals?

This discussion helps your company increase transparency, accessibility, and accountability for its ESG goals. Uncovering how IT can help magnify the organization's sustainability impact is the ultimate goal of these conversations.

## Sustainability conversations increase

Transparency

Accessibility

Accountability

# Implementing Sustainability in IT Operations



Ask questions and take an inventory of activities, processes, and their impacts.



Gather and track metrics for each activity and process.



Seek efficiencies, set informed goals, and prioritize goals.



Achieve short-term improvements first: entirely within your control and have no dependencies.



Pursue opportunities involving suppliers and vendors. Your initial successes will give you credibility and valuable experience when working with your partners.



Utilize carbon offsets after you have increased efficiency within your control.



Share knowledge, challenges, and successes with internal stakeholders.



Share knowledge, challenges, and successes with external customers, suppliers, and partners.



Determine a long-term strategy for incorporating sustainability into your IT operations.

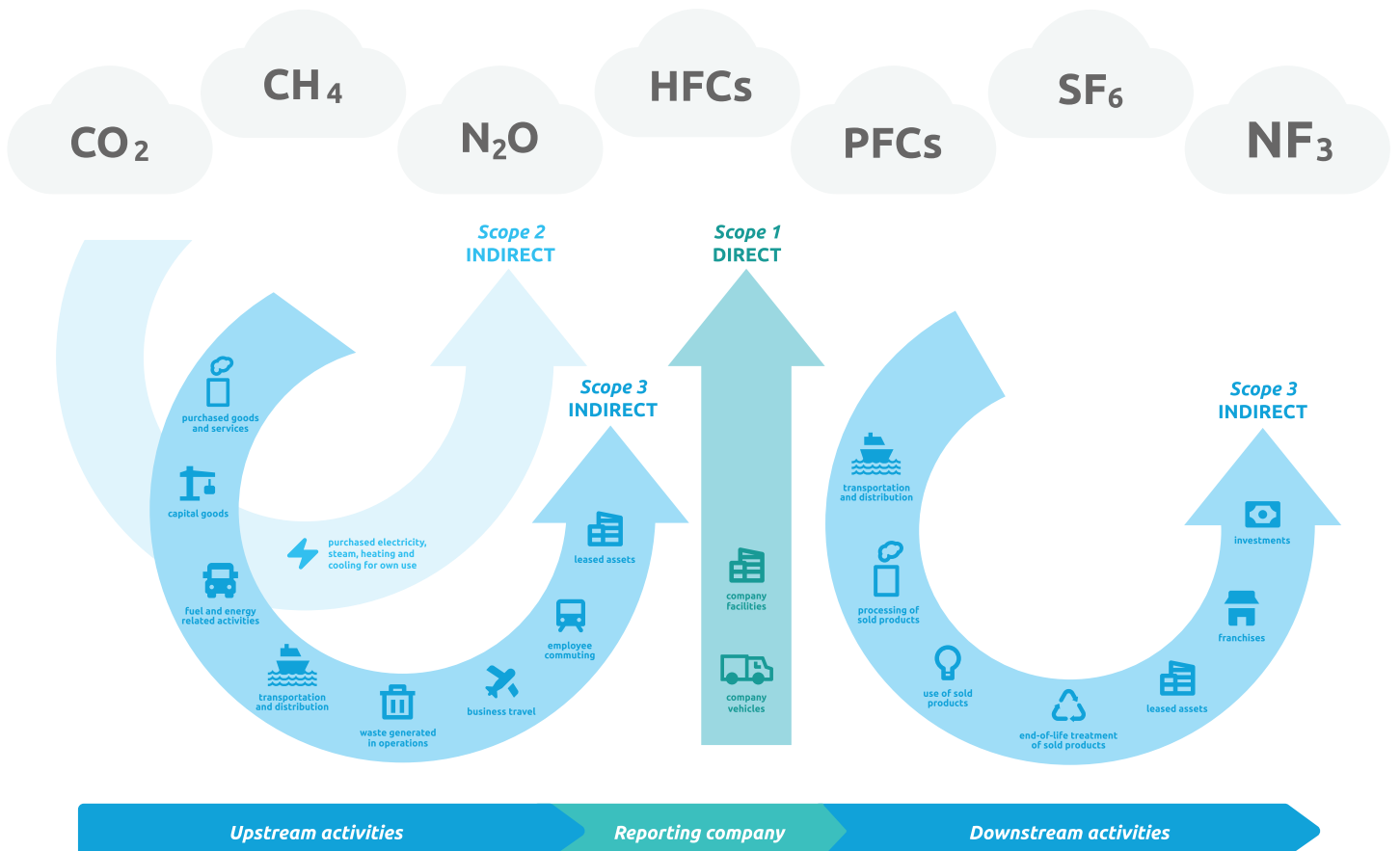
# Achieving Company Sustainability Goals with IT Help

Beyond reducing the environmental impact of IT operations, there are boundless opportunities for technology to lower the carbon footprint of your entire organization.

IT can use technology to lower the carbon emissions from the company's supply chain.

Carbon footprint reporting for organizations often follows the leading carbon accounting standards—**Greenhouse Gas (GHG) Protocol**—which divides GHG emissions into three categories: Scope 1, Scope 2, and **Scope 3 emissions**. Digital tools provide the transparency, monitoring, and traceability necessary for assessing and reporting on Scope 3 emissions.

Scope 1 Emissions	Scope 2 Emissions	Scope 3 Emissions
<b>Direct emissions</b>	<b>Indirect emissions</b>	<b>Indirect emissions</b>
Sources owned or controlled by the company, such as company facilities and company vehicles	Supply chain emissions related to the purchase of electricity, steam, heating, and cooling for the company's use	Upstream and downstream activities in an organization's value chain, including end-of-lifecycle treatment of sold products, waste from operations, e-waste, business travels, employee commuting, leased assets, and much more



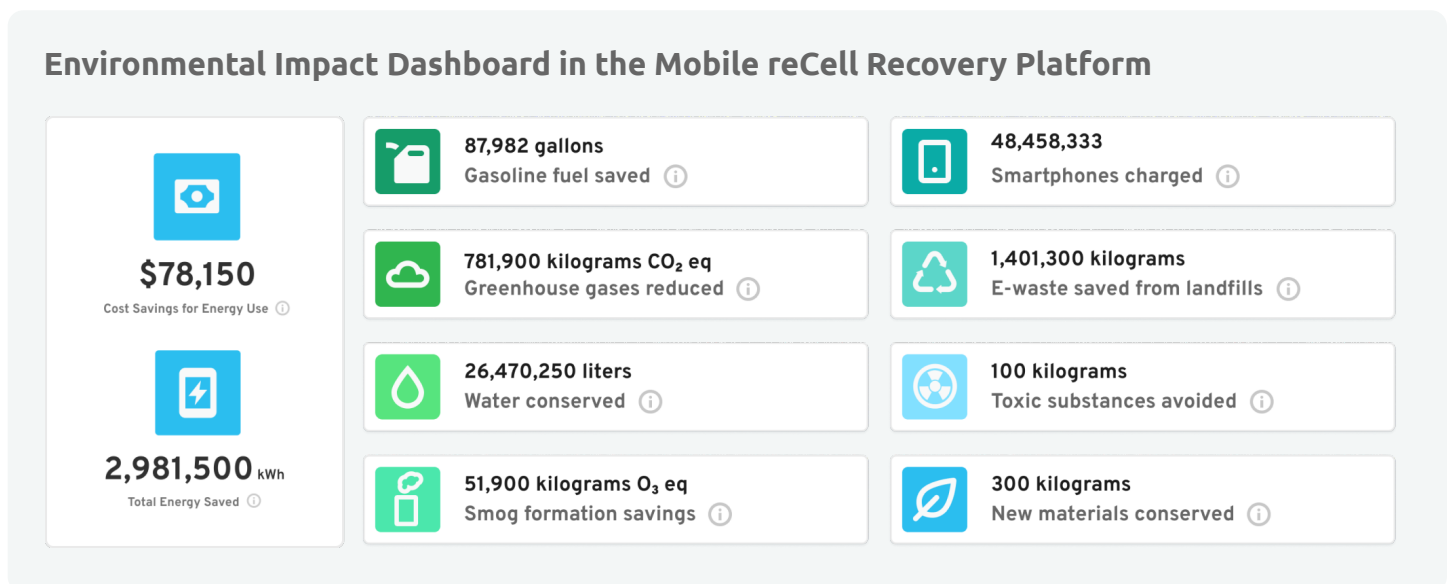
# How Mobile reCell Helps Companies Achieve Sustainability Goals

Businesses rely on IT equipment and reliable data now more than ever.

Typical day-to-day IT operations and the devices managed by tech leaders consume a significant amount of energy and resources. The most advanced tech leaders apply the lens of sustainability to how they use and manage physical IT assets from the procurement phase through final recovery and disposition, ensuring products and materials are circulated at their highest value for as long as possible.

Mobile reCell's software-driven solution enables tech leaders to track the impact of their IT asset recovery and disposition program while providing transparency into the process, outcomes, and benefits.

Within Mobile reCell's Recovery Platform, companies can access Environmental Protection Agency (EPA) calculation-derived environmental impact data and integrate it into their sustainability metrics, reporting scheme, or annual sustainability or ESG reports. The environmental impact dashboard includes the amount of energy saved, carbon emissions avoided, and e-waste prevented as a direct result of the company's IT asset recovery and disposition efforts.



Mobile reCell's unique software-driven solution is secure, sustainable, transparent, and allows your organization to resell, reuse, and—when necessary—recycle IT assets efficiently and responsibly through automation.

If your organization deploys company-owned IT assets, Mobile reCell can help you maintain a sustainable enterprise mobility program. [Sign up](#) for your demo today.

# Additional Resources

## Sustainability and ESG Resources

- [United Nations Development Programme's Sustainable Development Goals](#)
- [Stockholm Resilience Center's 9 Planetary Boundaries](#)
- [World Resources Institute](#)
- [GreenBiz](#)
- [ESG Today](#)

## Circular Economy Resources

- [Ellen MacArthur Foundation](#)
- [World Economic Forum](#)
- [Sustainable Packaging Coalition](#)
- [National Institute of Standards and Technology \(NIST\)](#)

## Sustainability in IT Resources

- [5 IT Sustainability Approaches To Consider](#)
- [TechTarget](#)
- [Global Electronics Council](#)

## About Mobile reCell

Mobile reCell is the pioneer of software-driven recovery for corporate-owned IT assets. Supported by broad industry expertise and matching services, Mobile reCell helps organizations ensure data security, automate manual processes, recover maximum value, and deliver a sustainable solution. The IT asset recovery platform equips IT leaders and their end users with the resources needed for a smooth and successful recovery process. Mobile reCell's software provides complete visibility into asset shipment tracking, processing, and a secure logistics chain as it automates the recovery, repurposing, reselling, and recycling of corporate-owned IT assets. Mobile reCell's success is driven by a commitment to deliver an unparalleled customer experience with unrivaled technology.

To learn more about Mobile reCell's solutions, visit [mobilerecell.com](https://mobilerecell.com).

