

**ITAM REVIEW**  
FROM ITAM FORUM

# The IT Asset Manager's Guide to Sustainable IT

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# Introduction

This newly updated guide provides a toolkit for IT Asset Managers and key stakeholders to align their processes and activities with the global corporate focus on sustainability. With IT being a key driver of business and economic growth, it's vital it's run on ethical, sustainable principles. We believe this is a key component of IT Governance (throughout this decade) and that now is the time for ITAM teams to take the helm and drive progress in this area.

The good news is that we are already doing a lot as sustainability aligns with core ITAM values of optimisation, cost management, and risk management. What this movement gives us is the ability to gain new relevance and visibility within our organisations, whilst doing our bit to address the climate emergency.

In this updated guide, we provide insight into the latest regulations, explore new methods for measuring and accounting for carbon emissions, and provide several case studies illustrating how sustainability makes both financial and environmental sense. This win-win is critical for delivering sustainability goals in a world where ESG is under pressure.

## The Circular Economy

Key to the sustainability movement is the concept of circularity and the circular economy. Circularity seeks to minimise the environmental and resource cost of an activity by reducing the “take” of scarce environmental and biological resources through re-use, repair, and recycling. In short – only take what you need, only once you’ve exhausted all other alternatives, and considered the long-term impact of what you’re taking. More formally, this can be represented in the form of the R-Ladder or “7 Rs”.

“Circularity seeks to minimise the environmental and resource cost of an activity by reducing the “take” of scarce environmental and biological resources.”

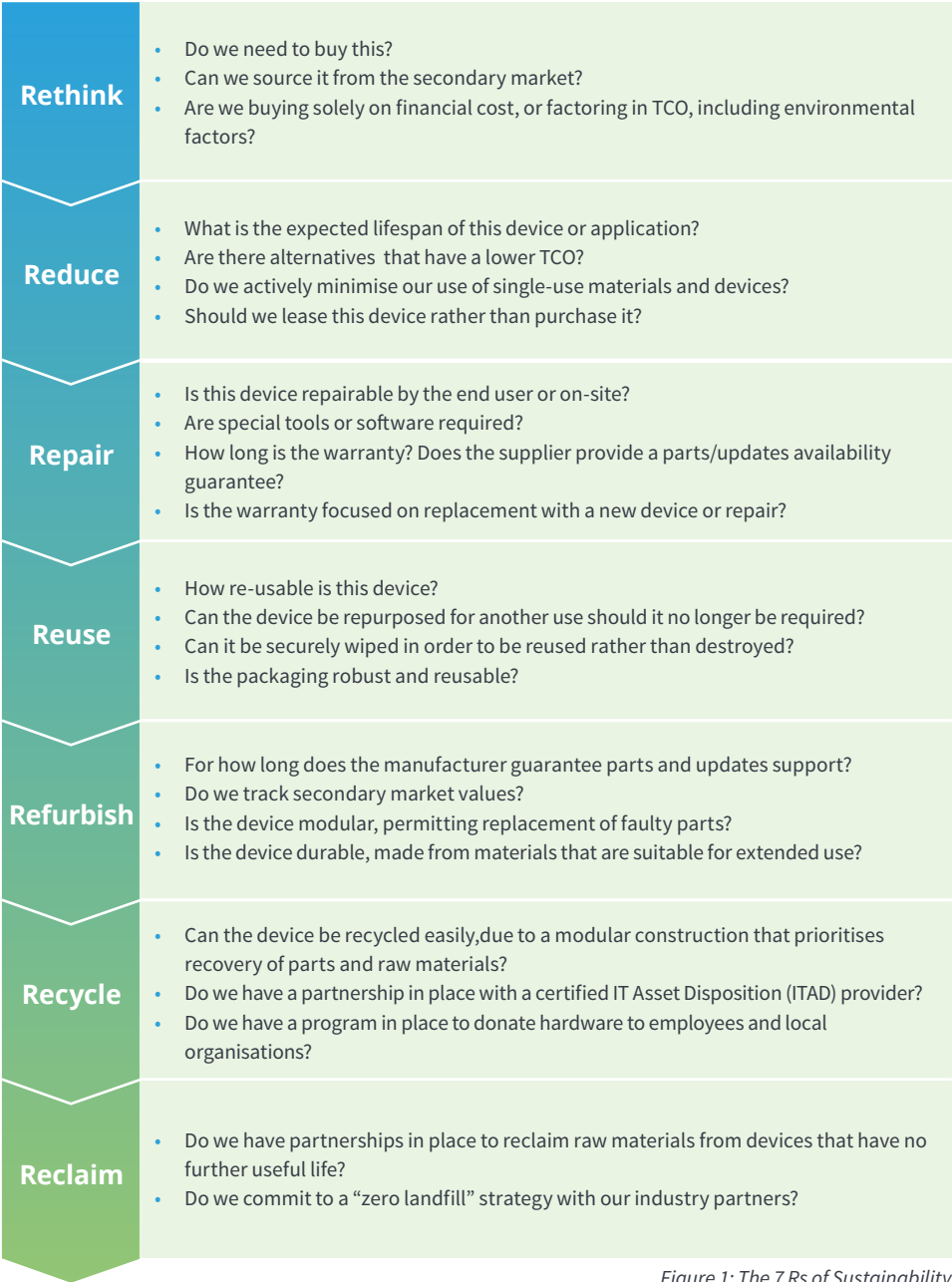


Figure 1: The 7 Rs of Sustainability

## Mapping ITAM Processes to the Circular Economy

Taking these 7 Rs and mapping them to our existing asset lifecycle processes is straightforward, as illustrated here.

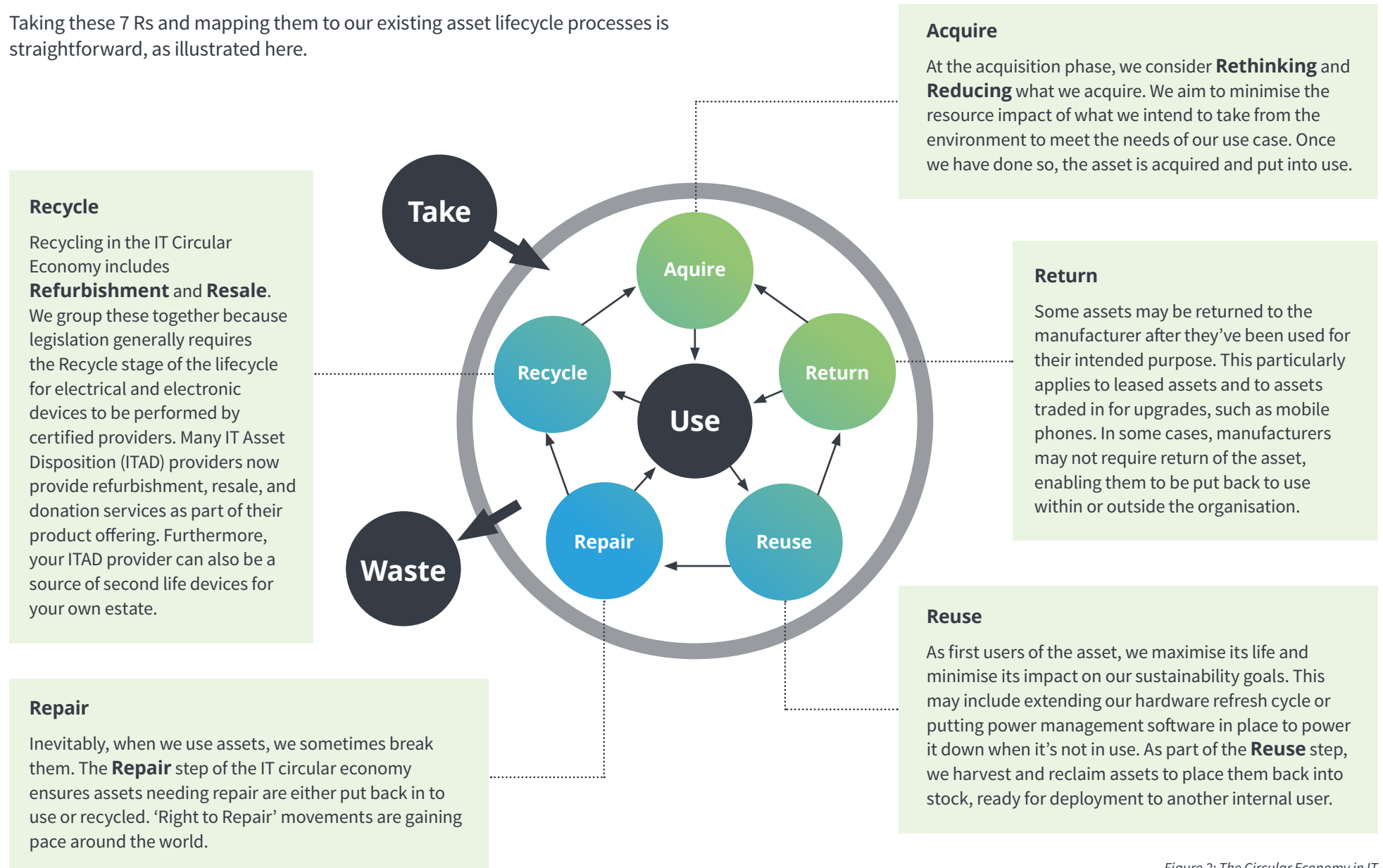


Figure 2: The Circular Economy in IT

## Challenges in Establishing a Circular Economy in IT

Presently, there are several challenges in establishing a circular IT economy. The pace of change is such that manufacturers have conditioned organisations and individuals to commit to upgrade cycles incompatible with a truly circular economy, and, for most, unnecessary. Modern computing devices are powerful and capable, so how do manufacturers perpetuate this upgrade cycle?

### Software-enforced hardware obsolescence

All modern devices are overly capable for the general business computing needs of most users. We define general business computing as word-processing, spreadsheets, email, collaboration tools, and internet use. All these functions could be achieved using very basic hardware, compared to the typical base specifications of current laptops. So why should we replace those laptops?

Generally, replacement is required because they're out of warranty, or parts are no longer available, or because they've been made obsolete by software upgrades. Business software is packed full of features most users don't need, and those features require more advanced hardware. This also applies to the operating system, whereby Microsoft set minimum hardware standards to run Windows 11 (and Windows 10 before this). Organisations are then forced to replace otherwise perfectly serviceable hardware due to Microsoft, and to a lesser extent Apple, ending support for previous OS versions. Whilst in part this is for security reasons – older OSs may be vulnerable to emerging threats – there is also an element of commercial choice at play because it's costly to maintain legacy versions.

In the mobile device world, progress has been made with both Google and Apple guaranteeing seven years of support and security upgrades for their most recent devices. For more on this subject see our [article series](#).

### Regulatory-enforced hardware and software obsolescence

Industry regulations such as HIPAA, Sarbanes Oxley, and PCI-DSS may require organisations to run sensitive workloads on current or supported versions of software and hardware. Typically, the requirement is for the version to be the current or previous major release (often referred to as the N-1 rule) and that security updates must still be available for that release. In this case, for certain enterprise software, the solution may come from third-party support providers that specialise in managing legacy environments.

Furthermore, we've seen commitment from some enterprise software providers such as SAP and Microsoft to provide long-term service versions of their software for customers looking to extend lifecycles. This issue is also somewhat mitigated by the increasing use of SaaS applications, which tend to be continuously updated.

*“In the mobile device world, progress has been made with both Google and Apple guaranteeing seven years of support and security upgrades for their most recent devices.”*

### Cloud shift

Generally, the shift to cloud computing is net-positive for organisations concerned with sustainable IT. Cloud datacentres will always be run more efficiently from a power, cooling, and utilisation perspective than an on-premises datacentre. However, not all clouds are created equal, and the build costs for new datacentres are not fully factored into total cost of ownership calculations. For more on this subject, see Flexera's Patron Perspective in this guide.

Aside from the infrastructure capital costs and energy source, consideration must also be made regarding cloud management. Unused IaaS instances and redundant SaaS applications are wasteful in terms of power consumption and resource allocation. Whilst all cloud and application providers are actively managing capacity to minimise their own costs, we as IT Asset Managers must ensure we're keeping our own house in order by powering down unused instances, right-sizing applications, and so on.

“Generally, a circular economy has higher upfront financial costs, at least until the organisation has undergone the cultural shift to stop thinking the best way to solve a business challenge is always to buy a new widget.”

### Right to Repair

As hardware has become ever more capable, there has been a trend towards tight integration of components, leading to a drop in repairability. For example, the latest Macs feature soldered-in memory and storage chips, and batteries are no longer user replaceable. Furthermore, access to diagnostic software, tools, and parts is restricted by some manufacturers in some markets. This is particularly prevalent in the U.S.A. where there's a strong and growing Right to Repair movement with bipartisan support and being driven by the agricultural sector. The first fruits of this campaign were harvested in June 2022 with the passing of the [Digital Fair Repair Act](#) in New York state. Since then, Right to Repair has gained pace worldwide. However, there's still much education to be done to encourage buyers and users to accept more modular, repairable, and longer-lived devices rather than the latest, highly-integrated, shiny objects of desire.

### Organizational resistance

However, it isn't just external factors that present a barrier to the creation of the IT circular economy. The shift in mindset requires new processes, a new perspective on the acquisition and use of assets, and funding. Generally, a circular economy has higher upfront financial costs, at least until the organisation has undergone the cultural shift to stop thinking the best way to solve a business challenge is always to buy a new widget.

Of all the barriers, it's the most important and easiest to surmount. The way to do this is to engage with like-minded stakeholders, including end users within your organisation. Fortunately, many of these key stakeholders are likely on the same sustainability journey. The key is to hook every one of those stakeholders up to the common purpose. But who are the key stakeholders?



## Key Stakeholders

### C-Suite

Sustainability is a key corporate objective for most organisations, given commitments to “Net Zero” in many fields by 2030. This is despite push-back against environmentalism and green business in many countries worldwide. We need to and can do more to shore up support for sustainability as reporting abilities improve. Many initiatives – such as laptop lifecycle extension – deliver financial benefits even the hardest headed corporate warrior will appreciate.

The C-Suite can help drive your program through objective setting, and you may also benefit from a dedicated champion in the form of a Chief Sustainability Officer (CSO).

Given the high volume of assets we manage, and our holistic view of our estates, we can be a strong ally for CSOs, delivering real-world progress in the form of IT circularity.



### Project Office

Often, new projects have their own budgets and a high degree of governance autonomy. If that’s the case within your organisation, you need to work with this team to ensure sustainable choices are built into decisions.

Your greatest impact and influence is likely around the reuse of existing assets, along with ensuring project costings accurately reflect environmental impact. Projects are run to a budget and can tend to focus on delivery rather than the long-term lifecycle. So, it’s important they’re incentivised by your C-Suite to look long term.



### Procurement

Procurement teams are fellow travelers on the sustainability journey and key to supporting desired changes around the acquisition of assets. It’s now normal for RFIs and RFPs to contain sustainability clauses.

Large contracts are highly visible and can attract scrutiny from employee and consumer activists and so, it often seems that every new contract announcement highlights its sustainable credentials.

Your procurement team is best placed to promote circularity, providing it is incentivised to consider (i.e. objective setting by the C-Suite).



“ Procurement teams are fellow travelers on the sustainability journey and key to supporting desired changes around the acquisition of assets. It’s now normal for RFIs and RFPs to contain sustainability clauses.”

## Service Desk and IT Ops



These teams deal with numerous requests per day for new hardware, software, and repairs. They're also a key stakeholder in the secure chain of custody that's particularly important in managing the lifecycle of devices.

Work in these teams is high cadence and highly focused on customer service. Enabling them to meet these demands whilst acting sustainably can be a challenge – there may be a tendency to swap out a device rather than repair it to minimize downtime.

These teams can provide key reliability and repairability data for a circular IT program. The Service Desk will have rich data about fault rates for particular hardware. IT Ops will have data around average repair times and ease of repair for those devices. Make use of this data to inform future hardware acquisitions.

For example, standard laptops are usually more modular and therefore repairable than a highly integrated device such as a Surface or MacBook. Chromebooks and thin clients can be swapped without requiring software to be reinstalled.

All this data is highly valuable but is perhaps overlooked when procurement focuses too heavily on financial cost. Generally, a more robust and repairable device will have a higher upfront cost but lower TCO once repair time and replacement frequency are factored in.

We explore this in more detail in the Laptop Lifecycle Extension case study later in this guide.

## Security



Security teams tend to operate in the here and now and don't take a long-term view. With the ever-increasing volume of cyber-attacks and vulnerabilities, they're at the front line every single day and may have strict controls in place regarding patch levels and hardware support/warranty – which can impact your sustainability goals.

As with any defender, intelligence is key to them, and the comprehensive discovery, inventory, and normalisation offered by ITAM tools can provide this.

For sustainability objectives, it's important data includes metadata such as end-of-life, end-of-support, and warranty expiry dates.

Whilst security rarely drives procurement, it's a powerful ally if you can use this data to enable them to sign off an extended lifecycle for an asset – perhaps due to the availability of extended or third-party support.

## Users



As temporary custodians of these assets, there is much users can do to deliver sustainable outcomes. Communication plans focusing on sustainability will gain traction amongst employees who care about the topic. Such programs should focus on simple things like taking better care of assets, not losing them, and returning them when no longer required. Similarly, enabling users to choose when they receive upgrades by showing them the environmental impact of their decision can nudge them towards more sustainable behaviours both at work and at home.

Supporting employee-led initiatives in this area will be a powerful agent for change. Such “bottom-up” changes provide senior leaders with an easy mandate and an immediate reputational reward for listening to employees and doing what they ask.

For example, an online asset catalogue could show users which devices are more repairable or longer lasting, perhaps nudging them towards requesting a highly modular and repairable but less “cool” Fairphone.

“ Enabling users to choose when they receive upgrades by showing them the environmental impact of their decision can nudge them towards more sustainable behaviours both at work and at home.”



## Five Questions to Ask

With stakeholders engaged and a clear mandate for action, where should you place your initial focus? The key is to question every new requirement as this cuts wastage of resources at source.

The five questions to ask of every asset request are:

### 1

#### Do we need this?

The first step is to ask the fundamental questions: What is the clear business purpose for this acquisition? What is the expected lifecycle value we gain from it? What is the total environmental cost of acquiring this asset? Who will own it?

Most importantly, the mindset should be, “We need an X to do Y”. The need should be broad and generic. For example, “We need a method to communicate with customers”. Not, “We need to give everyone in the customer contact centre mobile phones”. And certainly not, “Let’s buy everyone iPhone Pro 16 phones so they can contact customers”.

It’s all too simple to go with an easy option, or something we’ve always done, but that option may not be as sustainable as an alternative.

“It’s all too simple to go with an easy option, or something we’ve always done, but that option may not be as sustainable as an alternative.”

### 2

#### From where can we source it?

Wherever possible, aim to source the requirement either from your own stock or the secondary market. This is essential given that around 85% of the entire lifecycle environmental impact happens during the production and distribution of a laptop. As IT Asset Managers, we should be adept at tracking unused assets, and those should always be the first choice when sourcing a device to meet a new requirement. If the requirement can’t be met internally, work with a secondary market supplier to source the device. Only with those options exhausted, should a net new device be purchased.

A further option is to lease rather than to buy. Whilst financially more expensive upfront, leasing provides flexibility and simplifies the lifecycle management process. Working with a leasing provider that places sustainability at the core can provide white-glove end-to-end technology lifecycle management, greatly simplifying and reducing operational overheads. With leasing already commonplace in the market for plant, vehicles, and some consumer electronics, it’s only a matter of time before it gains traction and accelerates in IT.

# 3

## Can we reuse it?

Worldwide, there've been successful campaigns to reduce the use of single-use plastics. However, this is a drop in our plastic polluted oceans compared to sourcing devices and software that may be reused multiple times. High quality devices with extended warranty coverage and parts support will be financially more expensive upfront but last longer. For every year we prolong an asset's life, we reduce the need to go back to the well for more finite resources. For every year we extend use, we amortise that higher upfront cost.

In the new world of "work anywhere," reuse presents additional challenges. Asset managers need to determine, along with other stakeholders, policies about asset recovery when employees leave the organisation. Do we wish to reclaim monitors, keyboards, mice, and other peripherals? Do we even purchase those devices and own them as company assets, or do we provide an allowance for employees to source their own? From an e-waste perspective, the latter may be desirable as companies are responsible for the safe disposal of electronic items they own. If we leave company-owned devices in the hands of leavers, how do we ensure they don't end up in landfill?

"High quality devices with extended warranty coverage and parts support will be financially more expensive upfront but last longer."

# 4

## Can it be repaired?

Repairability goes hand-in-hand with reuse. Inevitably, as devices are used, things happen that require them to be repaired or refurbished. Repairability and the right-to-repair are big campaign topic worldwide. The EU has recently passed legislation requiring manufacturers of consumer "white goods" to provide at least 10 years of parts support and to make devices that are inherently repairable. Similar movements are gaining momentum in the U.S.A. and Canada.

Leading the way, however, is France, the first country to publish a [Repairability Index](#). This is a method for assessing how repairable a device is and covers smartphones and laptops. Although consumer-focused, it provides a very visual self-certification for device manufacturers that may, in time, become a source of competitive differentiation and lead to improvements in repairability. France already plans to take this initiative further, launching a durability index in 2025, which will expand the certification to include design and manufacturing factors that reward robustness, limiting the need for repairs to be carried out.

This intervention is particularly timely and necessary, as devices are increasingly controlled by their manufacturers through restrictions such as parts pairing. For example, many parts of recent iPhones are encoded to work together, meaning if one of those parts is replaced by a non-authorised repairer, certain functionality, such as Face ID, no longer works.

For more on right-to-repair, listen to this [BBC podcast](#).

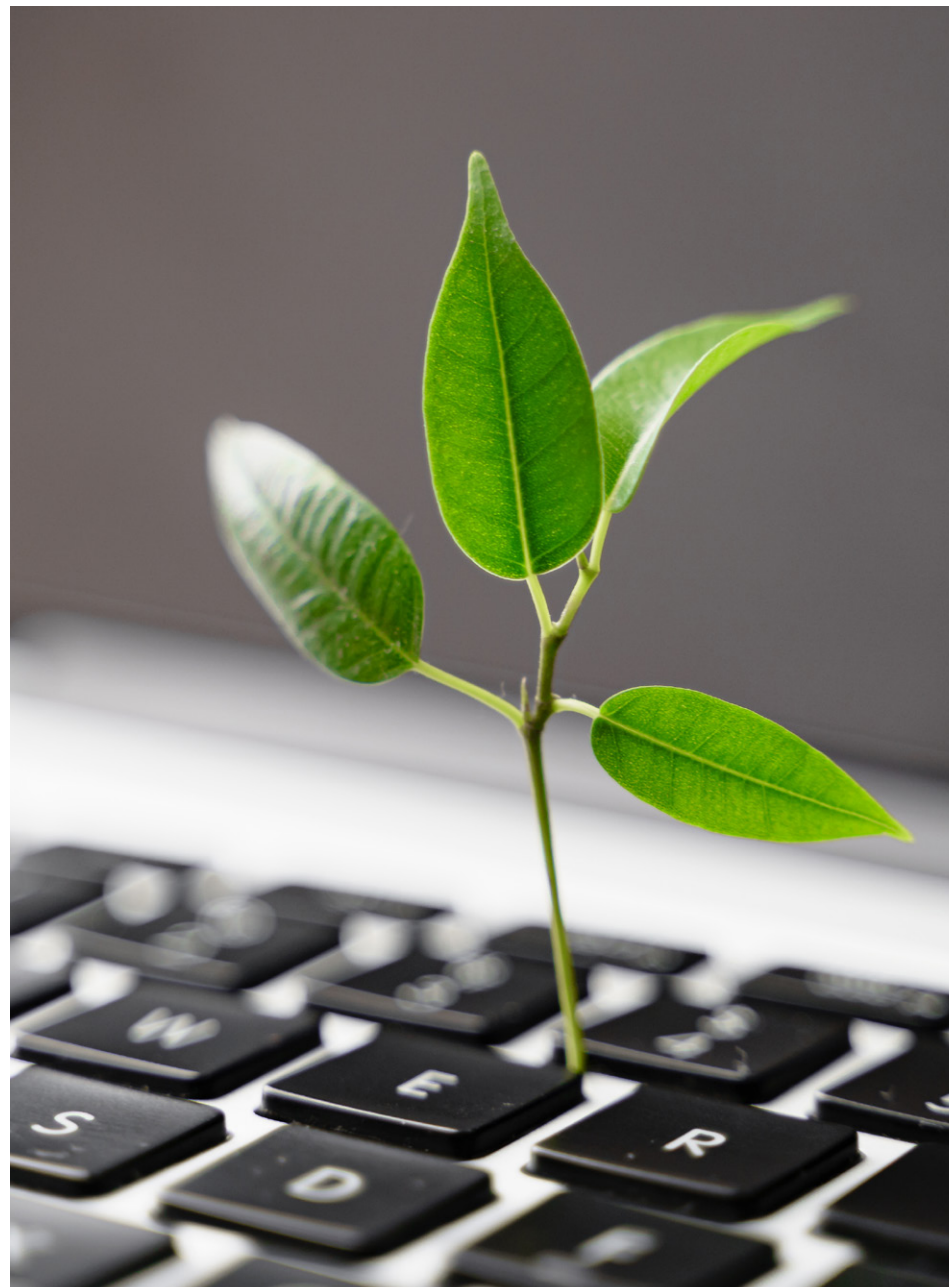
# 5

## Is there a secondary market for it?

There is a sweet spot for deciding to no longer reuse or repair an asset. This is governed by the value that device has on the secondary market. This isn't just a monetary value. Disposing of assets whilst they can still lead a meaningful life reduces the environmental impact of that device. Why? Purchasing a second-hand device prevents the new owner from buying a brand-new device, avoiding the 85% total environmental impact hit from manufacture and distribution.

Furthermore, if we utterly exhaust a device before disposing of it, the only recourse is for it to be recycled, a costly and inefficient process, particularly for devices that aren't yet built with easy reuse and recycling in mind. For us as owners and consumers of devices, exhausting a device turns an asset (with resale value on the secondary market) into a cost, as your ITAD provider will charge you to recycle it.

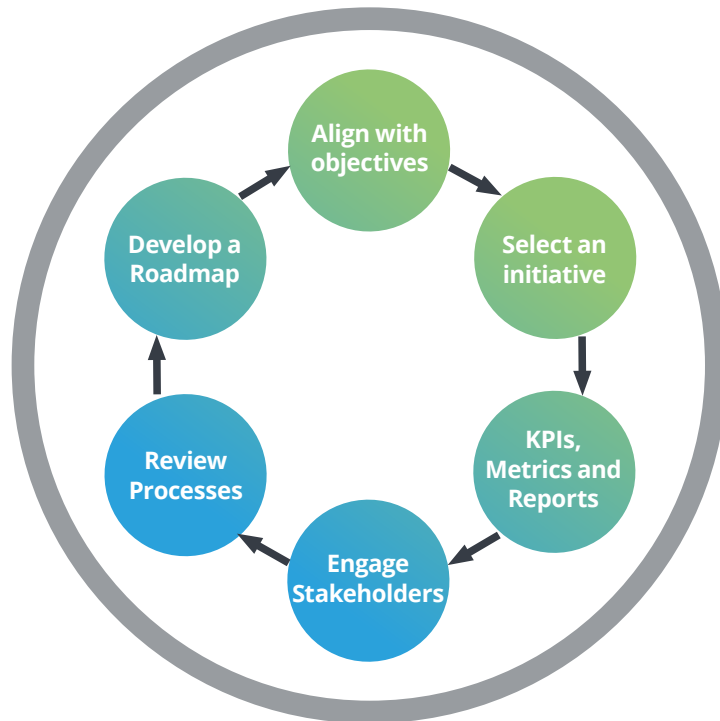
When these factors are considered, the higher upfront cost of buying durable, longer-life assets may reduce both the financial and total environmental cost of ownership. It can be considered to be an extension of the “buy cheap, buy twice” [Boots Theory](#) of socio-economic unfairness, but with the impact felt more by the environment than the buyer.





## Practical Sustainable IT

So, if you've committed to do something about making IT more sustainable where do you start?



“ As Sustainable IT is concerned in part with changing behaviours and habits, it's vital that successes are communicated. ”

### Align with a Corporate Objective

Even if your organisation doesn't yet have a formal ESG (Environmental, Social, and Governance) program, you can still likely leverage a corporate objective to support a more sustainable approach to IT.

For example, there may be a digital transformation program underway, or a focus on improving employee satisfaction, or reducing costs.

Find a suitable objective, and think about how adopting a circular approach to IT could support it.

### Select an Initiative

Initially, ensure you focus on a deliverable that you control exclusively. For IT Asset Managers, this is likely the Reuse stage of the 7 R ladder, via our reclaim process. This process directly supports ESG goals if you have them. If not, then it will support cost reduction goals.

### Develop KPIs, Metrics, and Reports

KPIs and metrics can be used to track progress internally and as the basis for reporting. As Sustainable IT is concerned in part with changing behaviours and habits, it's vital that successes are communicated. This can help to build a groundswell of support behind a program and even convince doubters to come on board. Reports can take the form of dashboards, narrative reports, and league tables. Furthermore, as we're seeking to engage individuals in positive behaviours, the use of gamification techniques could be explored.

In addition, it's also useful to align with global standards for reporting environmental compliance. One such standard is the GHG Protocol, which classifies greenhouse gas emissions into three scopes. For ITAM teams in most organisations the scope to focus on is Scope 2 – emissions from purchased or acquired electricity and other emitting power sources. Whilst not yet ratified by GHG, a new Scope – Scope 4 shows promise for ITAM because it attempts to quantify and reward companies in terms of carbon credits for avoided emissions.

A further approach is proposed by SBTi – the Science Based Targets initiative. This organisation provides a wealth of guidance on planning and measurement of sustainability initiatives.

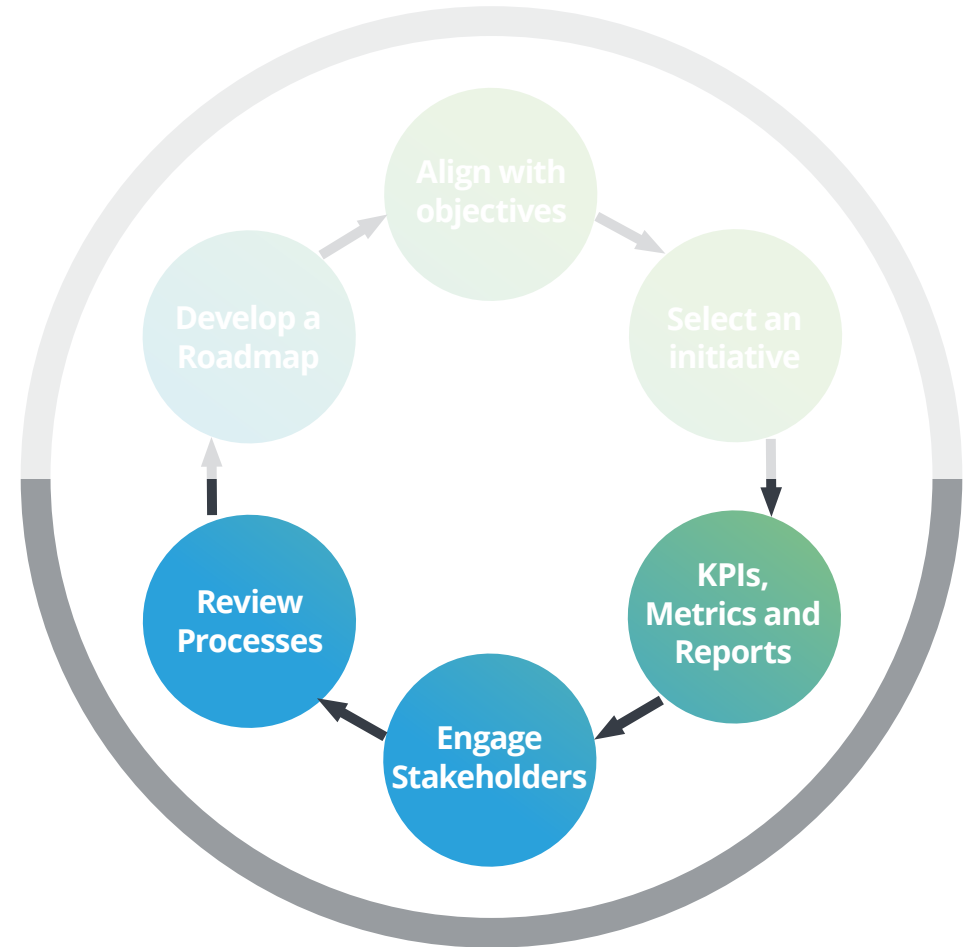
### Engage Stakeholders

With a successful reclaim program under your belt, it's time to engage the stakeholders you need to help develop the sustainable IT program to the next level.

Whom you focus on will depend on whom your ITAM team reports to and the strength of your existing stakeholder relationships. Work with your stakeholders to see how ITAM data can help them start a sustainable IT program to support their objectives.

### Review Processes

Once sustainable initiatives are up and running, review your existing processes, and see how they need to be modified to deliver your chosen objectives. Use the R ladder to guide you. You may find that much of what you already do directly supports sustainable IT. After all, managing IT lifecycles is what we do.





## Develop a Roadmap

With a few successful initiatives delivered, it's time to take a more strategic approach to sustainable IT. Here are some areas you may wish to focus on.

### Advocating for Sustainability in the Cloud

Whilst cloud deployment is significantly more sustainable than deploying apps on prem in our own datacentres, that doesn't mean we can ignore its impact on sustainable IT. Every aspect of cloud usage (compute, storage, network transfer) consumes power and therefore, results either directly or indirectly in greenhouse gas (GHG) emissions. Why indirectly? Power is finite so even if your cloud provider is carbon neutral and using sustainable power sources, their demand takes sustainable supplies from other power consumers. Furthermore, cloud datacentres consume vast quantities of water for cooling. As the world heats up, droughts may become more frequent and water therefore scarcer. What this means is that every workload optimised, every SaaS application right sized, every terminated user removed, contributes directly to improving the sustainability of your cloud usage.

For more on the true impact of cloud computing, see the Partner Perspective from Flexera (page 37).

### Supporting Social Initiatives

ITAM already contributes to the "E" and "G" of ESG, but there is also an opportunity to make a difference to our local communities. Our ability to track the entire asset lifecycle and our partnerships with ITAD providers mean we can work with local charities and institutions to better plan the donation of used equipment. Such programs are high profile, benefitting both the organisation and the individuals receiving the donated equipment.

### Integration with Application Lifecycle Management

Application Lifecycle Management (ALM) is predominately concerned with ensuring corporate applications remain current and supportable with the aim of minimising technical debt. This continues to be a key focus for CIOs and is often the driver for modernisation or digital transformation programs. ITAM teams already have data to support ALM, and we can include sustainability metrics in our exchanges with ALM teams. For example, our hardware and software libraries increasingly contain data on power consumption, warranty end dates, and even GHG emissions.



# Case Studies



## Sustainable IT Perspectives

In this section, we present several real-world case studies and insights from ITAM Forum Patrons. Use these to understand the art of the possible and to engage others in your nascent sustainable IT program.

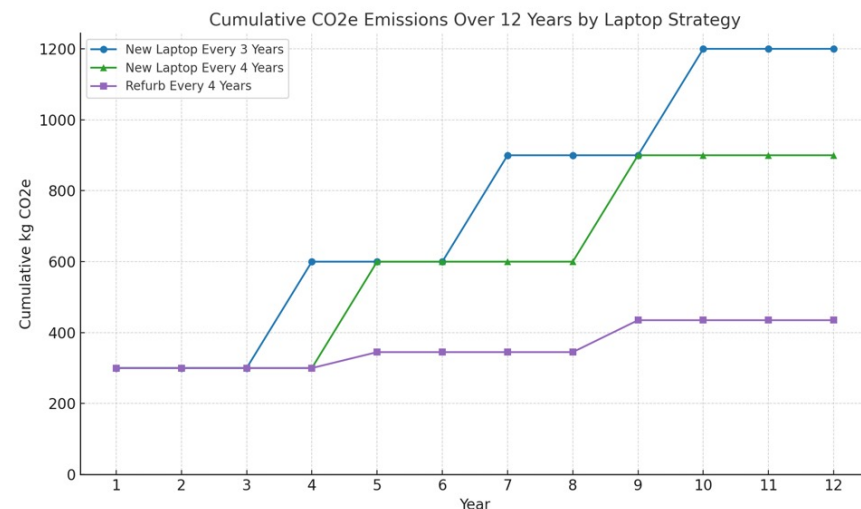
### Laptop Lifecycle Extension

The production and distribution of a new laptop accounts for around 85% of its lifetime CO<sub>2</sub>e emissions. If we are serious about sustainable IT, this is a key area to focus our efforts.

Consider this scenario:

- An organisation refreshes its laptop estate every three years.
- Brand new devices are issued, and the old devices are assigned to an ITAD provider.
- A proposal is made to extend the lifecycle to four years.
- A further proposal is to refurb existing devices every four years. Research indicates a refurb costs 15% of the CO<sub>2</sub>e of a new laptop.

The CO<sub>2</sub>e of these scenarios (excluding daily use and final disposal, which we assume is the same regardless of refresh cycle) is shown in the chart to the right.



Overall, adopting a long-term refurb strategy yields CO<sub>2</sub>e emissions of just over a third of the three-year refresh scenario. Furthermore, clearly, this will yield cost savings too, with the price of typical refurb components (memory, battery, SSD) being a fraction of the cost of a new laptop and due to advances in technology, providing more performance per dollar. For example, the price of a 500GB SSD drive is around a third of what it was five years ago.

“The production and distribution of a new laptop accounts for around 85% of its lifetime CO<sub>2</sub>e emissions. If we are serious about sustainable IT, this is a key area to focus our efforts.”

# Case Study: The Real Cost of Data Centres: Resource Requirements in the Digital Age



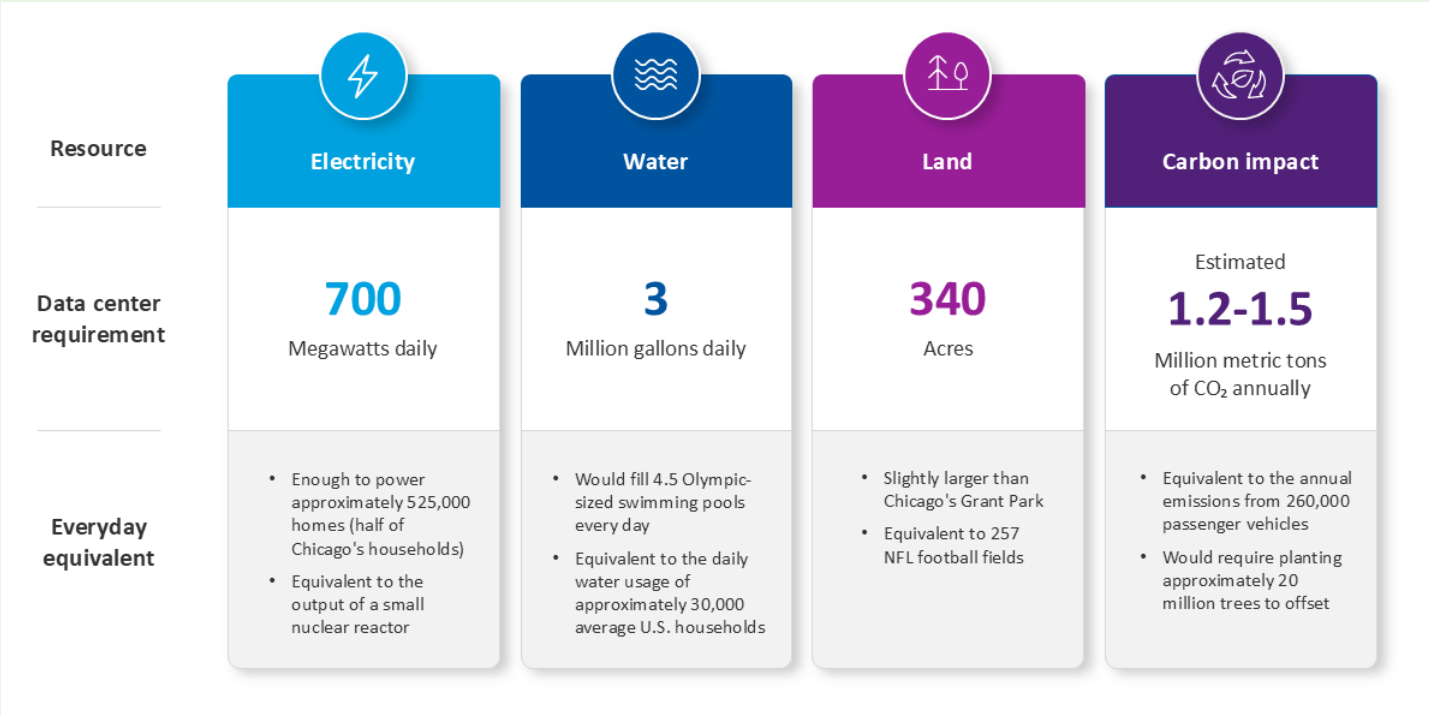
Author: Mark Bradley, Flexera

In our increasingly connected world, data centres serve as the invisible foundation of our digital lives. But what does it take to build and maintain these digital warehouses? A proposed Equinix data centre in Minooka, Illinois, U.S.A., illustrates the extraordinary resources these facilities require.

## The Physical and Environmental Footprint

The proposed Minooka data centre would span 340 acres, making it slightly larger than Chicago’s Grant Park. The facility would consist of eight one-story buildings, each roughly the size of a Walmart Supercentre, housing an extensive array of computer servers.

More striking than the land use are the resource requirements:





Resource Challenges:

Water Consumption

Fresh water is a vital resource essential for life. As communities grow, they must carefully manage their limited supply of drinking water to meet the increasing demand from new residents and businesses, as well as the effects of climate change.

The 3 million gallons of water required daily represents one-third of all the drinkable water that Minooka will be allowed to draw from a \$1.54 billion Lake Michigan pipeline it is constructing with five neighbouring towns. This water primarily serves to cool the heat-generating servers.

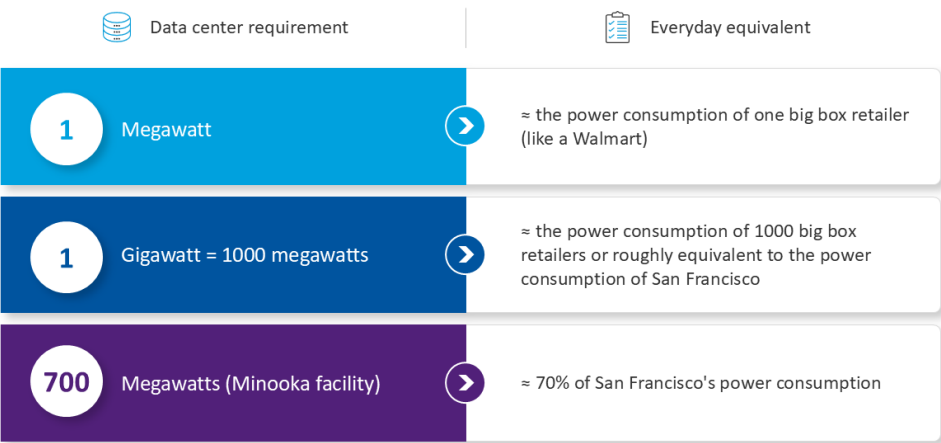
Equinix reduced its initial request from 6 million gallons to 3 million by opting to cool half of its servers using only air – a change that heightened the electricity requirements.

“ ComEd has predicted a 40% rise in electricity demand by 2040, primarily driven by the growth of data centres.”

Power Demands

The required 700-megawatt electricity supply would strain the local grid and potentially increase costs for all consumers. ComEd has predicted a 40% rise in electricity demand by 2040, primarily driven by the growth of data centres.

To put these power requirements in perspective:



For context, Microsoft’s new data centres are seeking 1 gigawatt of power exclusively for AI resources – 40%+ more than the entire Minooka proposal.

The functions of AI and cryptocurrency further intensify these demands. According to Goldman Sachs, a ChatGPT search consumes nearly 10 times more energy than a standard Google search.

## Balancing Economic Benefits and Environmental Costs

For communities like Minooka, data centres present complex tradeoffs:

### Potential Benefits:

- Hundreds of permanent jobs
- Tens of millions in annual tax revenue
- Less disruptive than some alternative developments

### Potential Costs:

- Strain on water resources
- Increased electricity demand and potential price increases
- Environmental impact from energy consumption
- Displacement of farmland and agricultural communities

## Looking Forward

As data centre development accelerates, companies are seeking solutions to lessen resource demands:

- Recycled wastewater systems
- Heat recovery for nearby buildings
- Air cooling instead of water cooling
- Renewable energy integration

The actual costs of our digital lives – measured in acres, gallons, and megawatts – remind us that even virtual activities have tangible resource requirements. The challenge ahead involves discovering sustainable methods to balance our digital needs with environmental stewardship, and Flexera is dedicated to tackling this challenge with our customers.

### Sources:

- Chicago Tribune, March 23, 2025, “[Illinois data centers clean energy](#)”
- The Wall Street Journal, “[Why Microsoft Wants Three Mile Island Nuclear Power](#)”





## Case Study: IT Sustainability – Optimising for Energy Efficiency and Carbon Reduction

Author: Luke Caswell, SoftwareOne



In the face of escalating climate change, rising energy costs, and global uncertainty, the IT industry continues to focus on sustainability. Recent regulatory changes, such as the EU's streamlining of CSRD reporting requirements, new climate disclosure regulations in APAC, and conflicting federal and state requirements in the U.S.A., make it clear that the regulatory environment remains dynamic and unpredictable.

Regardless, companies that decarbonise and increase energy efficiency will be better positioned to manage risk, retain investor and customer confidence, and sustain long-term value.

The 2025 PwC Energy Survey highlights the drivers that underscore the need for IT Sustainability:

- **Commitment to Net Zero:** 47% of businesses have committed to net zero by 2030, up from 28% last year.
- **Supply Chain Disruption:** Geo-political uncertainty, evolving trade relations, pose risks to complex global supply chains. Sustainability practices help mitigate these risks by ensuring efficient, agile, and resilient operations.
- **Increasing Energy Consumption:** 83% of businesses expect energy consumption to rise in 2025 due to technology adoption, including AI. Effective power management is essential to prevent demand from outstripping supply.
- **Energy Price Volatility:** 92% of businesses expect energy price volatility to increase costs within the next 12 months, necessitating smart technology investments to manage costs and enhance energy efficiency.



To address these challenges, IT must focus on three main areas:

# 1

## **Optimizing Data Centre Power Consumption**

With global power demand from data centres expected to double by 2030, efficiency improvements are vital for maintaining energy capacity and security. Designing data centres with energy efficiency in mind, incorporating features like high-efficiency power supplies and on-site generation is ideal but not always possible. Investing in tools that provide real-time data on power usage helps identify inefficiencies and optimise power consumption. Controlling and isolating hot and cold air streams enhances cooling efficiency, as does liquid cooling and economisers, which further improves data centre efficiency and can improve energy consumption by up to 40%.

# 2

## **Optimizing Software Sustainability**

Software optimisation plays a key role in reducing data centre energy usage and is often a more viable approach. Efficient algorithms and memory management can significantly cut energy use. For example, using faster sorting methods can reduce energy consumption in data processing. Virtualisation and containerisation improve resource utilisation by allowing better workload consolidation and dynamic resource allocation. Sustainable DevOps practices, such as adopting green architecture patterns and programming techniques, also improve execution efficiency and can improve energy consumption by 50%.

# 3

## **Governing Sustainability Across the IT Portfolio**

Regardless of where software is used or hosted, sustainability, like security, should be a fundamental part of the IT Governance and applied across the entire technology portfolio. Leveraging ITAM and FinOps practices can often accelerate sustainability initiatives by providing the visibility and controls needed to measure, report, and manage the environmental as well as financial impacts of technology.

“Efficient algorithms and memory management can significantly cut energy use.”



## Takeaways

### Leverage ITAM Intelligence for Sustainability:

Use energy and carbon efficiency metrics and monitoring tools in IT Asset Management to optimise power consumption, reduce emissions, and streamline costs. Utilise data from ITAM and FinOps, to inform carbon reduction and energy management plans. Employ automation and AI to dynamically optimise resource usage, improving data centre and cloud efficiency, and minimise energy demands.

### Champion IT Sustainability:

Promote IT sustainability practices such as, Energy Management, Application Resource Management, GreenOps, and Circular IT, and advocate for low-carbon and energy-efficient alternatives to reduce the environmental impact of technology.

### Don't Let Perfect be the Enemy of the Good:

Numerous strategies improve efficiency and sustainability, and ITAM teams can often become overwhelmed. Start with the basics and ensure visibility across your IT estate of power usage and emissions. Evolve IT sustainability, optimisation, and innovation in collaboration with other stakeholders and invest where it enhances overall business value.

## Conclusion

The IT industry has a critical role in the global effort to reduce carbon emissions and enhance energy efficiency. By focusing on these strategies, organisations can safeguard their technology use for a sustainable future. ITAM practitioners are pivotal in enabling optimisation and innovation for ongoing business sustainability and value.

“ITAM practitioners are pivotal in enabling optimisation and innovation for ongoing business sustainability and value.”

## Perspective: How IT Asset Management Supports Your Sustainability Goals

Author: Robbie Plourde, USU

Sustainability isn't just about going green – it's about making smarter, more responsible decisions across your business. That includes how you manage your IT assets. A strong IT asset management (ITAM) strategy can help you reduce waste, extend the life of your technology, and lower your carbon footprint – all while improving efficiency and cutting costs.

One of the biggest ways ITAM contributes to sustainability is by giving you visibility into your hardware and software usage. When you know what you have, how it's used, and where it's deployed, it's easier to avoid overbuying and underutilising resources. You can redistribute unused devices, deactivate idle software licenses, and ensure existing assets are fully optimised before buying more.

ITAM also plays a key role in extending the lifecycle of your assets. With proactive maintenance and timely updates, devices stay functional and secure for longer. That reduces the need for frequent replacements and minimises the environmental impact of e-waste. When it's finally time to retire equipment, ITAM tools help manage proper recycling and disposal processes to support compliance with environmental standards.

*“With proactive maintenance and timely updates, devices stay functional and secure for longer. That reduces the need for frequent replacements and minimises the environmental impact of e-waste.”*

Software asset management also helps reduce unnecessary energy consumption. By identifying and removing unused applications or consolidating software across departments, you reduce system demands and energy use. And with cloud and SaaS usage on the rise, ITAM strategies that include FinOps practices can help you monitor and optimise cloud services for more sustainable resource usage.

Plus, a clear ITAM strategy supports reporting and transparency – two critical areas for sustainability. With accurate data, you can track your progress toward environmental goals, meet regulatory requirements, and share results with stakeholders.

**In short, IT asset management is more than an operational necessity – it's a strategic tool for building a greener, more efficient business.**

By managing your assets with sustainability in mind, you're not just cutting costs – you're making a positive impact.

## Perspective: The Role of Lifecycle Management in Sustainable IT

Author: Billy Howes, Calero



### Lifecycle Management and Circular Economy

- According to the Gartner “IT Key Metrics Data 2024” report, reusing software can save organisations around 30% on new SaaS licenses as a result of deterring SaaS waste.
- Extending hardware lifecycles can cut costs, potentially saving millions in capital expenditures (Capex).

Standardise product acquisition, deployment, reuse, and retirement to maintain a robust and optimised lifecycle management process.

### Energy Efficient and Carbon Reduction:

- Sustainable IT practices, such as asset recycling logistics services, reduce electronic waste and carbon footprint, supporting organisational “Go Green” initiatives.
- Optimising assets and managing inventory boosts productivity by reducing waste and redundancy.
- Accurate inventory data ensures clear understanding of asset locations and status, aiding in informed decision-making that leads to achieving key business goals.

Seek advanced analytics which identify trends, predict failures, and highlight unused assets for better resource allocation.

### Compliance and Risk Management:

- A mature security program oversees the compliance of all technology assets with regulatory requirements, corporate policies, and security standards. The standardisation and close monitoring of asset compliance reduces risk of security breaches and loss of productivity because of security attacks.

Track compliance, manage security updates, and mitigate risks from outdated technology.

### Asset Security Checklist

To stay ahead of potential security issues, it’s important to establish a comprehensive security checklist, including:

- **Compliance Audits:** Regularly audit assets to ensure they meet regulatory and industry standards.
- **Security Patches:** Keep all assets updated with the latest security patches and vulnerability fixes where applicable.
- **Access Control Reviews:** Frequently review access to critical applications and revoke unnecessary access.
- **Data Encryption:** Ensure all data is encrypted both in transit and at rest.
- **Incident Response Plan:** Develop and regularly test an incident response plan tailored to asset security risks.

This approach not only enhances efficiency and cost savings but also supports sustainability and compliance efforts.

## Smarter, Greener IT: How Optimisation Drives Real Sustainability Gains

Author: Megan Barradell, SHI



Sustainability in business is no longer a nice-to-have – it's a strategic imperative. With 30% of CEOs now viewing sustainability as a competitive advantage and 90% believing digital technologies can accelerate environmental goals, IT is under pressure to lead the charge.

At SHI, we recently faced a common challenge in our IT Asset Management (ITAM) lab: limited server capacity was slowing us down. The conventional fix – buying new servers – came with a \$63,000 price tag and a hefty carbon footprint. Instead, we took a more sustainable route.





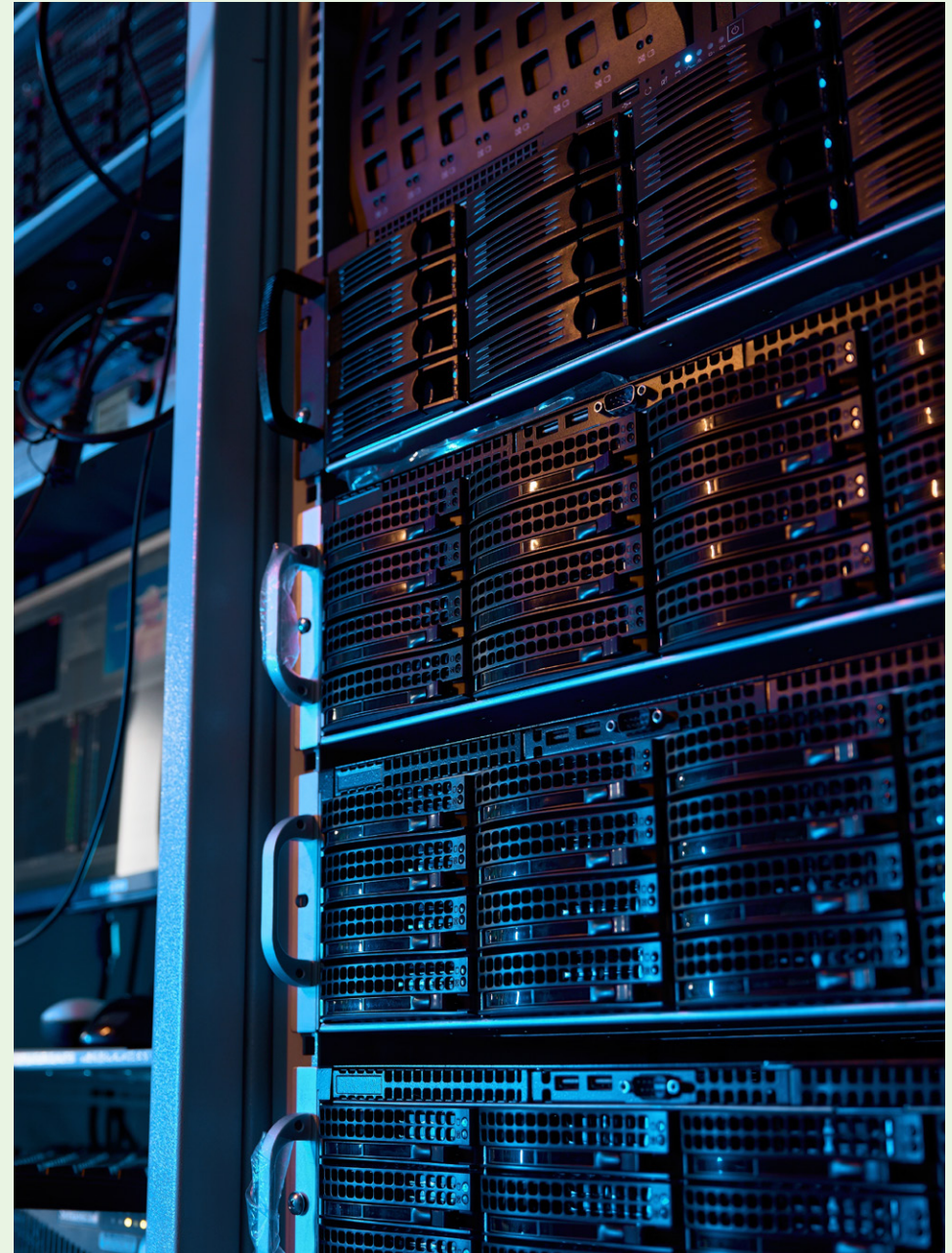
By assessing our existing servers using [Interact's](#) energy efficiency model, we discovered we could upgrade performance by installing refurbished components – at just a third of the cost. The result? A 148% increase in energy efficiency, a jump from a C to an A energy rating, and a staggering emissions saving: just 40kg CO<sub>2</sub>e versus 4,500kg+ if we'd purchased new equipment.

This isn't just a story of budget-smart decision-making. It's proof that sustainable IT strategies can deliver measurable environmental and business outcomes.

From energy-aware data centre management and AI-assisted cooling to secure global asset recovery and circular hardware use, the opportunities to green IT are everywhere. The key is to start small, use the data you already have, and engage the right stakeholders – from finance to procurement to internal sustainability champions.

As we've learned, sustainability is rarely a cost when measured correctly. In fact, it's often a powerful value driver. You don't need to reinvent your infrastructure to make a difference. With a change in mindset and a focus on re-use, efficiency, and measurement, IT can become one of the most impactful levers in your sustainability journey

“ This isn't just a story of budget-smart decision-making. It's proof that sustainable IT strategies can deliver measurable environmental and business outcomes..”





## Conclusion

Sustainability will remain a key priority for business leaders for the rest of this decade and beyond. At present, there is an opportunity for governance teams such as ITAM to take the lead in delivering IT sustainably. We have the data, processes, and stakeholder relationships to do this. Whatever your view of ESG initiatives, they present an opportunity for ITAM teams to elevate their standing within their organisations.

For climate-change sceptics – or those organisations solely focused on the financial bottom line – there are case studies that show sustainability can be a win-win.

For me, the idea that in some small way, what I do at work helps save the planet is a powerful one. It's certainly a more powerful motivation than focusing solely on corporate finances or risk management.

It's time to get out there and make a difference.



## About ITAM Review

ITAM Review, founded in 2008, is an independent global community for ITAM, SAM, and Licensing professionals. ITAM Review organizes conferences worldwide alongside webinars, podcasts, whitepapers, news and analysis. Subsidiary ITAM Review Learning provides online and in-person training and ITAM Review Careers matches worldwide ITAM professionals with companies looking for their next hire.

## About the author

AJ is an ITAM Industry Analyst at the ITAM Forum. He was previously a Software Asset Manager for Carnival UK, operators of the P&O and Cunard cruise lines. Coming from a background in IT Infrastructure, technical operations, IT Security & Compliance, AJ is well-placed to share his experience of how dynamic SAM teams can build mutually-beneficial stakeholder engagement.