NTT DATA

2024 Infrastructure Lifecycle Management Report

A critical enabler of business success

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Introduction

Introduction

Hardware and software are the core components of any infrastructure solution that enables organizations to deliver services and products, empower their workforce and grow their businesses. However, these increasingly complex assets require unremitting management throughout their lifecycle, and this can be time-consuming and costly.

A key contributor to this complexity is the digital transformation of industries. Every business is now a technology business. Without the right technology and supporting infrastructure, they may miss out on opportunities or be left behind by their competitors. It's therefore crucial to manage hardware and software assets effectively, from their acquisition to their retirement.

Another contributor is the significant change in how organizations buy hardware and software. Infrastructure equipment providers now offer a wider range of buying options for their customers, with choices that include capital expenditure, subscriptions, Enterprise Agreements, single- or multiarchitecture bundles and Whole Portfolio Agreements.

Every architecture asset can present unique management, maintenance, integration and compliance needs. This makes it harder for organizations to find the most appropriate options while taking into account the cost, management and licensing implications of an asset's lifecycle.

NTT DATA's research on technology strategy indicates that:

More than
8 in 10 organizations agree that **inadequate or outdated technology is holding back their innovation** efforts.

94%
of C-suite executives believe **legacy infrastructure is greatly affecting their business agility** (including the ability to optimize customer and employee experiences).

#2
CIOs and CTOs cite **digitalization** and greater adoption of **innovation and new technologies** as one of their top business objectives (second only to their environmental, social and governance goals).

But just
45%
of C-suite executives say their **digitalization efforts are at an advanced level.**

Nearly
half
of all organizations say their **technology strategy** (including lifecycle management) is **not fully aligned** with their **business objectives.**

In this guide, we discuss the challenges related to hardware and software lifecycle management and how to overcome them by using platforms and services that provide clear and accurate visibility, insights, guidance and, ultimately, control. This enables organizations to align infrastructure lifecycle management more closely with their unique business goals, including employee experience, cost optimization and sustainability.

Introduction

Why does lifecycle management matter?

Hardware and software lifecycle management ensures the reliability, performance and security of organizations' infrastructure, aligned with their business goals and processes. They gain visibility of and control over their infrastructure assets, and they can more easily integrate and harmonize their hardware and software assets across their multivendor estates.

In turn, this means organizations, IT teams and, ultimately, users have secure and uninterrupted access to the latest features and functionalities of the technology.

Efficient lifecycle management also reduces an organization's total cost of ownership by avoiding unnecessary spending on outdated or underused hardware and software. It lowers their maintenance and support costs and helps them negotiate sensible licensing deals. And it often presents an opportunity to improve sustainability by using more energy-efficient and less carbon-intensive solutions.

Other key benefits include having less exposure to risks such as license compliance issues, security breaches, the environmental impacts of obsolete equipment, and unsupported software that could cause costly business interruptions.

Lifecycle management in practice

The upside of lifecycle management is clear, yet more than two-thirds of organizations report working with old or obsolete network assets.

This leads to interoperability challenges and major security risks, among other problems, and shows there is plenty of scope for improvement in organizations' lifecycle management strategies.

Outdated technology and legacy infrastructure are hindering success; good lifecycle management practices are needed to mitigate the risk

71% of organizations say that network assets are mostly ageing or obsolete, while **64%** say that technical debt has accumulated.

Inadequate or outdated technology is listed as one of the top reasons for misaligned technology strategies.

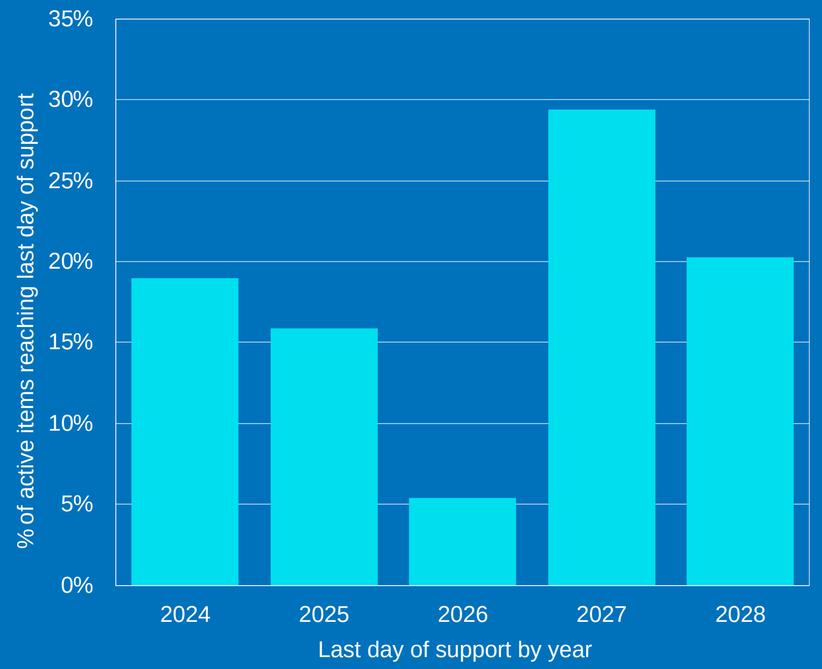
Organizations list lack of interoperability with legacy technology systems as a factor hindering investment in digital technology.

86% say inadequate or outdated technology is holding back their innovation efforts.

Source: NTT DATA technology strategy research, 2023

There is no time like the present for organizations to rethink their lifecycle management. **For instance, our research shows a peak in 2027 of currently active hardware with a scheduled last day of support reaching end of life – meaning that, by then, 69% of the hardware will no longer be supported.**

Last day of support for active hardware with a scheduled end date

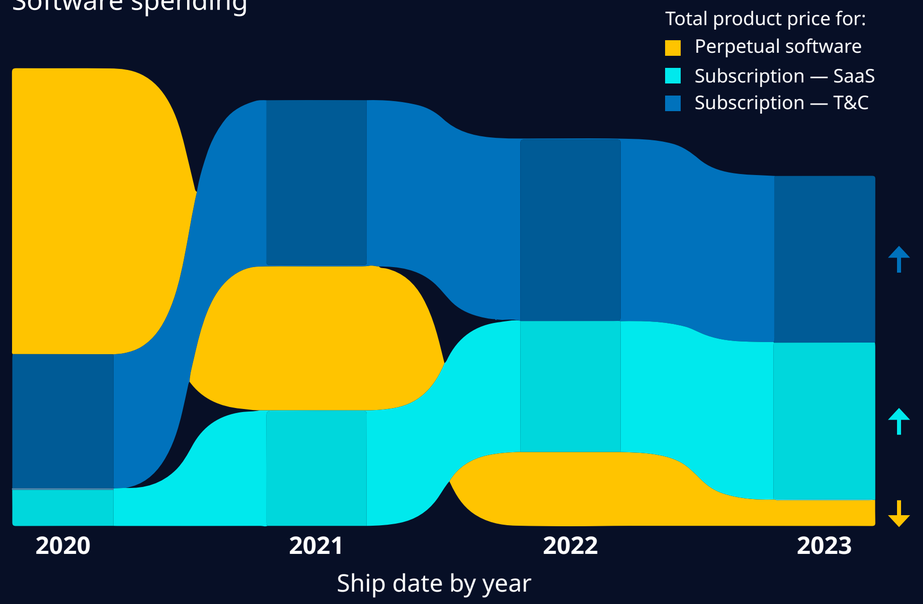


Source: NTT DATA aggregated asset purchasing research, 2023

As this major hardware refresh cycle looms, lifecycle management will be a key enabler of success. However, the urgency of implementing lifecycle management best practices extends far beyond just hardware, as service offerings are fast taking on new shapes and forms. **Organizations have spent less on hardware assets and perpetual software licenses in the past four years and more on software as a service (SaaS) and term-and-content (T&C) subscriptions.**

Product spend per asset type

Software spending



Hardware spending

Expenditure on hardware has **decreased by 15%** since 2020.

Source: NTT DATA aggregated asset purchasing research, 2023

Although subscription-based models deliver more flexibility and agility, they also add complexity in terms of scheduling, planning, cost optimization and support, especially during software subscription and service contract renewals.

Vendors' monetization models, explained

Hardware in this context refers to equipment used within an organization's IT infrastructure, including their servers, storage devices, network and security devices, and meeting-room and collaboration devices.

Perpetual software refers to a licensing model in which users buy a software license that does not expire, so they can use that version of the software indefinitely. They may receive updates and support for a limited period, such as the first year, then choose to renew their support and update the software for an additional fee.

Software as a service (SaaS) involves a different deployment model. The software is cloud-based and provided to organizations over the internet, allowing for pay-per-use or other flexible pricing models. A key aspect is that the software is hosted by the provider, so it does not require any installation or maintenance by the user.

Term and content (T&C) subscription software refers to paying a regular fee (usually monthly or yearly) to access a product over a specified period. This model may include upgrades and support, and is increasingly used for software deployed on-premises.

Lifecycle management in practice

Enabling an integrated strategy: why you need software-defined infrastructure

Read more about NTT DATA's Software-defined Infrastructure Services.

While hardware is important, the shift to subscription-based models has placed a new emphasis on software lifecycle management. Software-defined infrastructure (SDI) allows you to manage your computing, networking and data center resources as software, so you can deliver IT services more rapidly based on your business needs.

However, while many organizations have tools in place to manage their SDI configuration, few have access to platforms to manage their software lifecycle.

SDI lifecycle services are key to realizing technology and business outcomes through a platform-delivered approach.

SDI lifecycle service providers use a unified service portal to give organizations access to a comprehensive suite of tools, people and processes to manage their software-defined technology across the full lifecycle.

The benefits of SDI lifecycle services

With SDI lifecycle services, you gain full visibility of and control over your software assets and delivery, so you can ensure that they are aligned with your business goals. You can also leverage the power of SDI and IT to advance your digital transformation.

SDI lifecycle services can deliver the following benefits:

Reduce costs and increase return on investment: These services help you improve software adoption, increase budget certainty, lower the total cost of ownership and maximize your return on investment.

Reduce risk and improve compliance: SDI lifecycle services can automate and simplify compliance processes, improve entitlement management, embed security into service delivery, reduce attack surfaces and protect data – helping you avoid penalties and fines.

Maximize outcomes and performance: As your operations become more effective and integrated, you can enhance customer experience and speed up digital transformation while increasing your revenue, profitability and competitiveness.

Enable standardized and improved governance for lifecycle management: You can simplify and streamline your software governance and compliance processes through a centralized service portal and dashboard.

Manage multiple software vendors and license agreements: SDI lifecycle services help you control your multivendor software environment in one place. You benefit from the service provider's relationships with leading software providers and platforms, and you save money and reduce risk by optimizing your software assets and delivery.

Get services, support and expertise anytime, anywhere: Connect and work with experts and partners through an omnichannel platform offering the best solutions for your needs.

Monitor and improve your software performance and compliance: Stay on top of software licensing, contracts, uptime and outcomes with proactive and predictive notifications and resolutions. Avoid penalties and fines, and plan for changes.

Lifecycle management in practice

The changing purchasing landscape

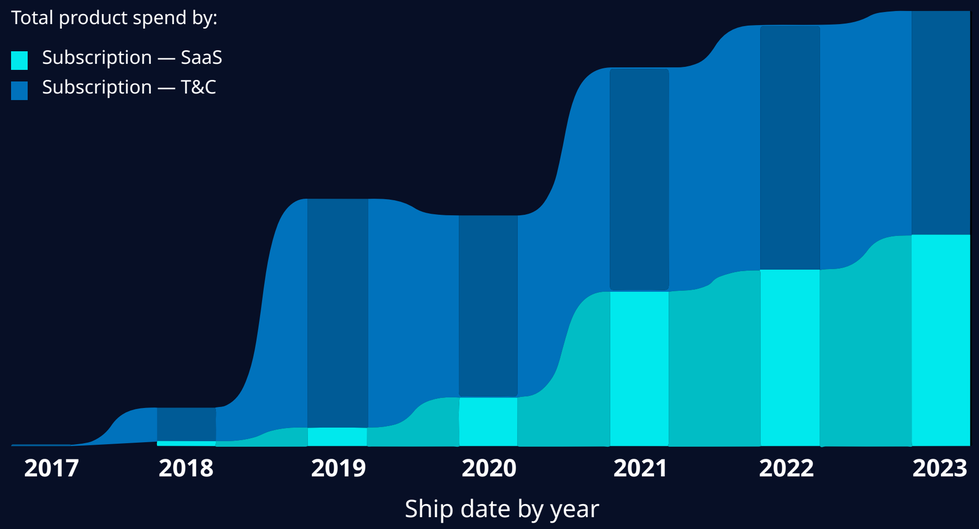
Navigating the hardware and software purchasing landscape – which presents a variety of options, such as subscription-based licenses, cloud-based services, hybrid models and pay-per-use models – can be daunting.

These options offer different levels of functionality, scalability, security and cost, with implications for their ongoing management and integration with an organization's other systems and platforms.

For instance, vendors are increasingly providing network infrastructure features through a variety of subscription layers. These are often coupled with services such as telemetry-based insights and cloud-based management platforms. Organizations might not buy a full network infrastructure solution as a single offer, opting instead to purchase specific elements of the solution – all of which may be linked to different subscription or licensing models.

While this approach gives organizations the ability to tailor their investments to their financial and operational needs, it also adds complexity to budget planning, license management and measuring the return on investment.

Product spend: subscriptions



Average year-on-year increase in expenditure since 2018

Subscription – SaaS

133%

Subscription – T&C

115%

Source: NTT DATA aggregated asset purchasing research, 2023

Our data shows that organizations have increasingly directed more budget to subscription models since 2018.

Lifecycle management in practice

The realities of hardware and software asset management

In a perfect world, when organizations are acquiring hardware and software for their infrastructure needs, they will consider:

- Their **current and future business requirements**, including having an IT strategy aligned with their business strategy to ensure that their infrastructure enables success
- Their **budget and financial constraints** and alignment with buying models, such as subscriptions or Enterprise Agreements, that suit their financial needs
- Their **risk appetite and governance policies**, and having granular visibility of their existing infrastructure to mitigate any associated infrastructure risks swiftly
- Their **existing technology assets and capabilities**, transition planning for moving to new solutions and support for assets that are at the end of their lifecycle
- Their **vendor relationships and contracts**

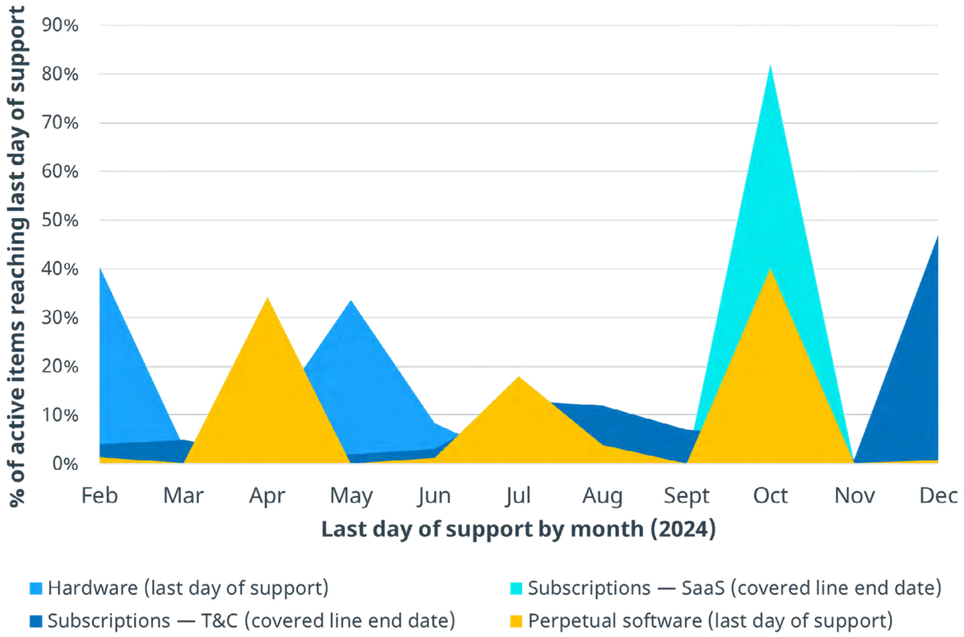
Then, once they've made the acquisition, they will constantly track and evaluate the usage, performance and compliance of their hardware and software – and adjust their maintenance, replacement and license renewal strategies accordingly.

IT leaders will also put in place a policy to dispose of end-of-life assets in a responsible and sustainable way.

However, the reality is that organizations buy and deploy assets at different times, with different software versions. And, amid the ongoing cycle of fragmented procurement, sometimes security issues arise that call for unplanned updates.

The lifecycle rollercoaster: fluctuation and fragmentation in lifecycle patterns add huge complexity.

Active items reaching last day of support in 2024:



Source: NTT DATA technology strategy research, 2023

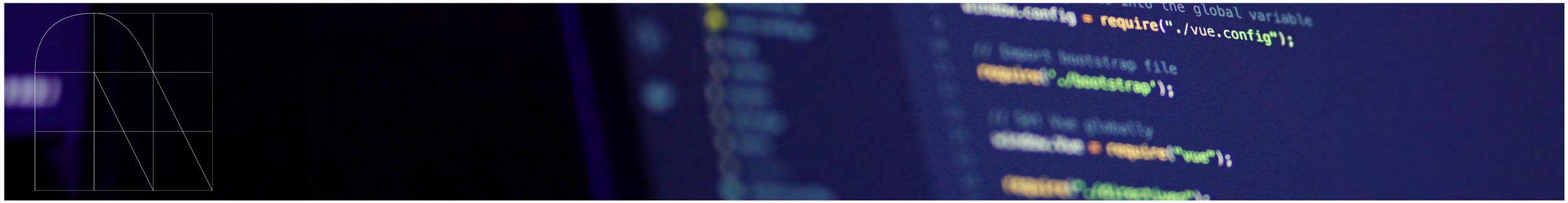
Lifecycles require regular review – as often as monthly. But, as our research shows, hardware and software expiry and renewal dates hardly ever align. This makes it difficult to contain costs and address incompatibility issues.

The possible impacts of such misalignment include:

- More frequent reactionary spending
- Lost productivity and business revenue
- Repeating remediation projects
- Impedes volume purchasing strategies
- Overpayments on overcovered or underconsumed assets

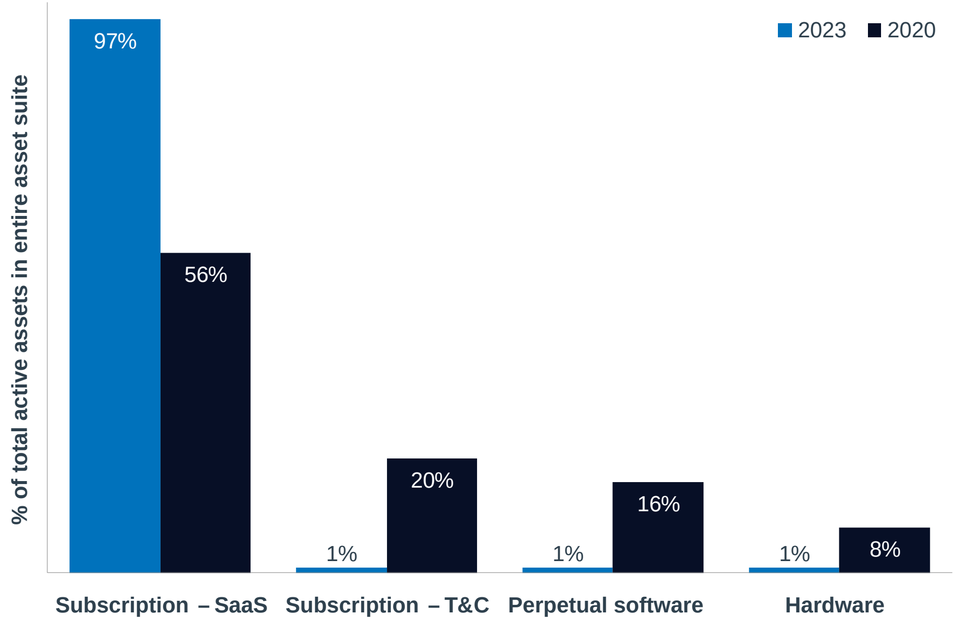
Coupled with a massive increase in the number assets and licenses to manage, this misalignment means many organizations do not fully understand what they have bought and installed over the years – and having multiple vendors involved creates layers of intricacy. It becomes hard to track these assets, leading to over- or underuse and confusing, misaligned licensing across regions or business units.

There is also the risk of wasting time and money on outdated or irrelevant hardware and software, with a knock-on effect on employee and customer experience, and an increased risk of security breaches and compliance conflicts.



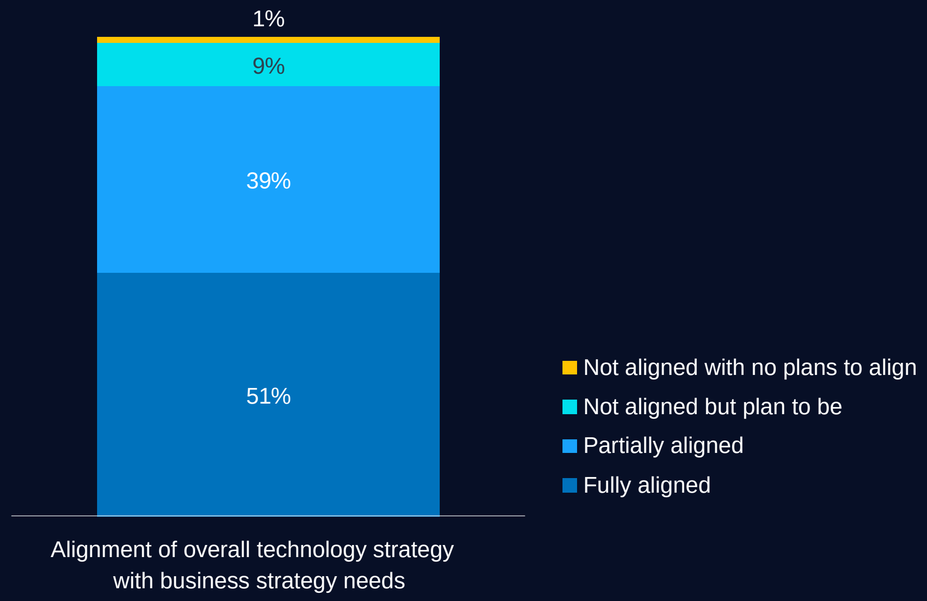
Radical shifts in the types of licenses held by organizations have led to them rethinking their business and technology strategies and adapting their purchasing and operating models in turn.

Distribution of asset license type showing the growing complexity of the landscape between 2020 and 2023:



Source: NTT DATA aggregated asset purchasing research, 2023

Lifecycle management issues are also a symptom of misaligned technology and business strategies. According to our research, just over half of organizations believe they have fully aligned these strategies, which is a prerequisite for achieving their key business objectives.



Source: NTT DATA technology strategy research, 2023

Organizations need a clear, unfragmented view of their hardware and software inventory, usage and licensing – linked to costs, risks and outcomes – before they can take a cradle-to-grave approach to asset lifecycle management that optimizes costs and support while mitigating risk.

Common challenges in lifecycle management

The complexity of hardware and software lifecycle management stems from having to continually make informed decisions about upgrading or replacing assets based on their performance, value and sustainability.

Usually, the biggest hurdle to overcome is not having enough visibility of and control over hardware and software usage, consumption and compliance.

In our research, 82% of senior technology decision-makers agree that a lack of visibility across their network architectures is restricting their operational insights and causing reactive firefighting when problems occur.

This means they are unable to plan consistently. Their licenses are likely to be misaligned and over- or underused, and they have little insight into how their hardware and software infrastructure assets are contributing – or not – to their sustainability goals.

Let’s examine the most common problems related to a lack of visibility.

Common challenges in lifecycle management

Inconsistent planning and poor governance

When an organization has no clear or consistent strategy for planning their hardware and software lifecycles, there's a greater risk of making ad hoc or reactive decisions that don't consider the long-term implications or benefits – which makes for poor governance.

Good governance ensures that an organization's hardware and software are used in a compliant, efficient and effective way. It involves understanding the business processes and people that interact with the hardware and software, and it's linked to budgets and spending controls. It also involves aligning stakeholders, regions and business units with business outcomes.

Without good governance, organizations face the following risks:

- **A lack of standardization and consistency** – especially between siloed departments and business units – with different or inconsistent policies, procedures or practices for procuring, deploying, using, maintaining and disposing of hardware and software.
- **No room for innovation** with hardware and software, as organizations miss out on upgrades and start losing their competitive edge.

  Nine in 10 respondents say that innovation and software-defined network virtualization are now driving the need for more holistic and agile networks.

A clear and consistent procurement and governance approach will guide an organization's hardware and software purchasing and usage. Institutions in the highly regulated financial services industry, for example, tend to have comprehensive lifecycle plans in place, with standardized equipment lists and roadmaps to replace equipment before the end of software support or last day of support.

In other industries, such as manufacturing, telecommunications and retail, this isn't always the case, as some organizations don't quantify the risks – or will accept the risks and refrain from updating or replacing installed equipment while everything is going well.

Commonly used terms in lifecycle management

- **Notice of end of sale:** An initial alert sent by a hardware vendor ahead of equipment reaching end of sale, to assist in planning
- **End of sale:** The equipment is no longer available for purchase from the vendor
- **End of software support:** The vendor stops doing any further software development on the equipment, including bug and security fixes
- **End of support/last day of support:** The last date to receive service and support for the equipment

Common challenges in lifecycle management

Hardware and software incompatibilities

It’s not easy to keep hardware and software compatible, up to date and supported. Incompatibilities make it harder for organizations to update their technology in line with their business objectives. They can be caused by:

- **Outdated or unsupported software or hardware:** This affects performance, security and continuity while creating compatibility issues with other systems or platforms. The organization may no longer have access to upgrades, leading to rising support costs or even legal liabilities.
- **Mismatched software or hardware:** This can lead to performance issues, operational disruptions and security breaches, and makes it complex to manage and maintain an organization’s infrastructure.
- **Unstable or unreliable software or hardware:** Expect errors, crashes or other failures that will affect the availability and security of the organization’s infrastructure, as well as the customer experience. It can also lead to data loss.
- **License expiration or noncompliance:** This may affect the functionality and security of hardware and software – possibly leading to penalties, fines or a loss of access to support and updates. Organizations may also over- or underconsume their licenses.

Organizations may therefore overspend on hardware and software assets that are not fully used or aligned with their business goals, or underinvest in assets that are critical for their performance and security.

It’s also worth noting that paying for a software subscription doesn’t mean the software is being used effectively. Subscriptions can keep software up to date and functional, but they can also lock organizations into long-term contracts that may not suit their changing needs. Organizations may end up paying for features that they do not use, or they may acquire devices that can’t run the software.

Also, older doesn’t always imply obsolete when it comes to hardware. Older equipment can be very reliable after two or three years of operation, once all the bugs have been ironed out, and a replacement may introduce a new round of issues. Again, it comes down to how aging equipment is managed and replacement cycles are planned.

The solution lies in taking a structured approach to architecture design and planning that allows for considered maintenance and renewal of hardware and software assets – often with the help of experts.

Common challenges in lifecycle management

Multivendor complexity

The plethora of vendor relationships typically involved in the asset management chain just adds to the challenge. Varying contract terms, refresh cycles, regionalized ownership and tracking abilities make it harder for organizations to negotiate good deals or update their technology consistently.

Understanding how different vendors package their hardware and software can also be a struggle, as the transition from bundled hardware and software to distinct procurement models has introduced complexity.

According to our research, the top five challenges when managing multiple vendors are:

1. **Contract or service-level complexity,** such as contracts not being delivered as promised
2. **A lack of or limited interoperability between technology and vendors** – for instance, incompatible security features across products
3. **Not having access to skilled resources** to manage vendors effectively
4. **Maintaining multiple software versions**
5. **Complex contract terms** and a need for outcome- or value-based agreements

Organizations dealing with these challenges will have neither an accurate view of their multivendor hardware and software assets from different vendors nor the tools or processes to manage them effectively. This can make it more expensive to manage and maintain their infrastructure.

Common challenges in lifecycle management

Sustainability

Effective lifecycle management presents environmental, social and governance opportunities.

Most organizations have goals to reduce the environmental impact of their operations. These include limiting the carbon embodied in, and emitted by, their hardware and software infrastructure.

Finding a sustainable balance for an IT estate involves deploying energy-efficient, low-carbon solutions while maximizing the value of existing assets. Then, circular IT practices refurbish or recycle aging equipment to reclaim scarce materials and minerals vital for manufacturing. It's a win-win for efficiency and sustainability.

In addition, IT infrastructure lays the foundation for greater levels of carbon savings through initiatives such as ecofriendly smart buildings, using digital twins to create virtual models of infrastructure, and IoT solutions for environmental monitoring, leak detection or even flagging open doors that should be closed. By measuring energy consumption, heat and water usage across business operations in real time, IT systems can use predictive analytics and AI modeling to reduce carbon emissions, water consumption and wastage.

However, this is not a simple goal to achieve.

Yet, amid growing technology complexity:

80% of organizations
have policies and incentives in place to improve sustainablilty.

75% of C-suite executives
say sustainablilty needs to be a primary consideration in their IT procurement processes, and renewals should be included.

Nearly two-thirds of organizations
agree on the fundamental role of IT, data centers and cloud infrastructure in pursuing their sustainablilty agendas.

Only 38% of organizations
have been able to fully deploy an organization-wide sustainablilty strategy.

Source: NTT DATA technology strategy research, 2023

The first step in achieving sustainability goals and implementing sustainability strategies through technology is to build sustainable IT infrastructure that lays the foundation for efficient software and hardware usage. For instance, by migrating data centers and cloud infrastructure to renewable energy sources, organizations can often reduce the carbon footprint of their IT estate.

To enable effective hardware and software lifecycle management, organizations need to modernize their supporting infrastructure to make it more sustainable and efficient. This can be achieved by selecting low-carbon hardware and software products during procurement and using their foundational infrastructure to automate, virtualize, secure and scale IT systems and operations. In doing so, they can reduce hardware waste, human error and operational costs.

Modernizing the supporting infrastructure is not an end in itself but a means to achieve broader sustainability goals and initiatives. By using the right infrastructure technology, organizations can create smart and sustainable solutions that enhance the work experience and reduce the environmental impact of their facilities, buildings and cities.

For example, software-defined networking (SDN) can reduce the amount of hardware an organization needs through the virtualized, flexible and dynamic configuration of devices, while network analytics can provide insights into energy and incident management as well as the optimal time to upgrade or decommission hardware.

Moreover, sustainable infrastructure can enable the remote management and troubleshooting of IT assets, reducing the need for physical interventions and travel.

In these ways, environmentally smart infrastructure can help organizations improve their software and hardware lifecycle management, and reduce their carbon footprint and operational costs.

Navigating the sustainability technology maze

Top 4 challenges in advancing sustainability initiatives

1. Understanding the sustainability technology landscape and the impact technology has on sustainability initiatives
2. Lack of information on industry-specific best practices around sustainability
3. Keeping pace with changing regulatory and compliance mandates
4. Reliance on suppliers or partners who do not have similar sustainability goals

Source: NTT DATA technology strategy research, 2023

Lifecycle management can enable sustainability

A great starting point is to turn challenges into considerations during every phase of infrastructure renewal or procurement.

To solve the sustainability issues linked to their infrastructure, organizations need to know the latest best practices and regulatory and compliance requirements in these areas. They must also understand the sustainability goals and capabilities of their partners and suppliers.

The following examples show how these issues represent valuable opportunities for improvement:

High energy consumption: Older infrastructure is likely to consume more electricity than newer, more efficient models and will have higher levels of embodied carbon.

Obsolete or out-of-support hardware and software: These may incur higher disposal or recycling costs while leading to compliance or legal liabilities.

A lack of visibility: Without an accurate, up-to-date view of their power consumption and emissions, organizations face the risk of inefficiencies, waste and increased costs.

Security and data protection: Aging infrastructure is particularly vulnerable to security breaches. Data protection is paramount throughout the IT asset lifecycle, including data destruction when old hardware is repurposed or decommissioned.

Our research shows that the top five strategies for managing and recycling end-of-life hardware are to:

1. Upgrade equipment in place, reusing as much of the chassis and backbone as possible.
2. Send equipment to a reclamation center to be broken down and recycled.
3. Send packaging back to the supplier for reuse after delivery.
4. Have the supplier take back the equipment once it is no longer useful.
5. Resell equipment for possible second-hand reuse.

An experienced managed service partner will monitor the efficiency and power consumption of an organization's hardware and advise on recycling or reusing obsolete assets – for example, through take-back programs or partnerships with IT asset-disposal providers. The careful selection of these programs and partnerships is key to ensuring that IT equipment is managed in a safe, ethical and sustainable way, with accountability for the chain of custody throughout its lifecycle.

Business success through lifecycle management

Organizations that collaborate with a strategic partner to access specialist skills in hardware and software lifecycle management are more likely to achieve higher levels of visibility, agility and innovation than those that rely on fragmented, decentralized procurement and governance practices.

A skilled service provider will assess an organization's hardware and software, and then design a management and support strategy that ensures accountability and gives them visibility so they can make informed decisions. This can be achieved in two ways:

- **A service based on sales data only:** This shows the organization's install base along with potential challenges and opportunities. For example, it may highlight aging infrastructure, license expiration dates and subscription models, and identify the benefits of consolidating licenses, moving to an Enterprise Agreement or changing the organization's buying behavior.
- **An asset management service:** For organizations using technologies from multiple vendors, this service is built on a "single source of truth" for all hardware and software assets. It shows all licenses, tiers, features and consumption levels, and includes a data platform and team of experts to help with various processes. Asset management services can help organizations to plan and execute their technology roadmap, and manage their power consumption and other sustainability-related metrics.

The first step to determining which service is best is to draw up a technology roadmap for an organization's hardware and software lifecycles, indicating how the infrastructure should evolve along with the business.

Expert service providers like NTT DATA can help with hardware and software assessment and updates while providing support and operational control throughout the lifecycle.

Services may include:

Business success through lifecycle management

Managing aging technology

Working with a strategic service provider gives organizations access to a team of experts who can advise on replacing old and obsolete technology with new versions that support their desired business outcomes. This includes making sure the new technology can be integrated with an organization's other systems and platforms, and checking the technology's green credentials to see how the upgrade can contribute to sustainability objectives.

A partner can also assist with training needs and change management to encourage the full deployment and use of new assets.

Business success through lifecycle management

Managing license procurement, expiration and renewal

Service providers like NTT DATA can help organizations renew their licenses at the best possible price and terms, while optimizing their license consumption and adoption.

They often have close relationships with a range of vendors, enabling them to negotiate fair and cost-efficient deals for their clients.

Addressing multivendor complexity

A service provider will harmonize an organization's multivendor assets around a single point of visibility and guidance, making it much simpler to manage a range of vendors. This typically includes a portal to access and update the data, and access to experts to help with asset and account management across vendors.

Our research shows that 89% of respondents agree that such a service provider portal is a key enabler of network visibility.

An expert partner will not only establish and maintain good governance but also help an organization move to a central procurement model. This will consolidate their purchasing power, optimize their license consumption and align their business and technology strategies on a global or regional scale.

5 steps to revitalizing your organization’s lifecycle management framework

To improve hardware and software lifecycle management in your organization, follow these five steps:

1. **Develop a holistic view of technology assets**: Once you have a full view of the status of your contracts and licenses, expert advice will help you align this view with your business goals and make swifter progress in addressing existing security vulnerabilities. Source specialist guidance on creating a holistic management framework that mitigates risk, eases asset management and leads to cost optimizations.
2. **Implement procurement governance in lifecycle management**: Good governance keeps your hardware and software compliant, efficient and effective. It also guides your hardware and software purchasing and usage. Standardize your procurement practices to consolidate purchasing power and optimize your license consumption in alignment with your business and technology strategies.
3. **Minimize hardware and software incompatibility**: Incompatibilities crop up when old hardware can't run new software, or when software becomes outdated after you've upgraded the hardware. Lifecycle management strategies facilitate regular, efficient and consistent upgrades through standardization and the application of best practices. Again, we recommend using expert help in this area.
4. **Streamline your multivendor environment**: Working with multiple vendors creates hardware and software lifecycle challenges that may distract from your business objectives. An expert service provider with strong partner relationships can provide guidance across vendors and centralized visibility to streamline negotiations and purchases.
5. **Embrace sustainability**: Lifecycle management is an opportunity to speed up progress toward your sustainability goals by implementing sustainable infrastructure and energy-saving technology. Monitor and reduce the power consumption of your hardware and software, and mandate efficient renewals that involve sustainable technology and the recycling or reusing of old hardware according to best practices in circular IT.

Launch your lifecycle management strategy

A comprehensive lifecycle management strategy will take into account and build on everything you've achieved in the five-step process, so you can manage your hardware and software in a more holistic way.

Note that the success of your new strategy will depend on keeping your network technologies updated. Unsupported devices introduce risks of downtime, security breaches, compliance issues and more. Newer products deliver better performance, often have less embodied carbon and are designed with circularity in mind.

Read more about NTT DATA's Technology Solutions to see how our lifecycle management experts can help you.

About this report

About this report

Our observations are based on NTT DATA-affiliated purchasing data covering more than 248 million active assets from 130 install-site countries around the world, as well as bespoke insights based on NTT DATA's technology strategy research data. Participants were selected through random sampling on the basis that they had a direct or indirect influence on their organizations' technology requirements.

The research was conducted in several phases during late 2022 and 2023 to source responses from senior technology decision-makers.

Data integrity, validation and analysis were performed by NTT DATA's specialist in-house Strategic Intelligence and Thought Leadership team.

About NTT Ltd. and NTT DATA

As part of NTT DATA, a USD 30 billion IT services provider, NTT Ltd. is a leading IT infrastructure and services company serving 65% of the Fortune Global 500 and over 75% of the Fortune Global 100.

We lay the foundation for organizations' edge-to-cloud networking ecosystem, simplify the complexity of their workloads across multicloud environments and innovate at the edge of their IT environments where networks, cloud and applications converge. We offer tailored infrastructure and ensure consistent best practices in design and operations across all of our secure, scalable and customizable data centers.

On the journey toward a software-defined future, we support organizations with our platform-delivered infrastructure services. We enable a connected future.

Visit us at services.global.ntt

List of abbreviations

AI	artificial intelligence
IT	information technology
SaaS	software as a service
SDI	software-defined infrastructure
SDN	software-defined networking
T&C	term and content

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