ASSET LIFECYCLE MANAGEMENT (ALM):

5 BEST PRACTICES FOR REMOTE AND HYBRID WORK MODELS

Windows 11

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INTRODUCTION

The pandemic's mandated shift to remote work, once considered the world's largest work-from-home experiment by Gartner[1], has proven to be something more.

Nearly four years later, employees work from home about 30 percent of the time, vs the pre-pandemic average of 5 percent[2]. This is only expected to grow in the coming years. Employees prefer remote work to in-office work, innovation has improved IT, productivity is up, and energy consumption is down.

Yet, with all its benefits, transitioning from centralized, in-office work structures to distributed and decentralized work is no mean feat for IT departments. Systems and hardware assets must be especially well managed, further complicating ALM.

This new set of challenges expands the focus beyond physical asset management to include:

- Remote device deployment, configuration, tracking, and on-location management
- Secure employee access to data and applications
- Compliance with increasingly complex government regulations
- Remote communication and collaboration
- Productivity and user experience without manual assistance from IT

The growing surge in remote and hybrid work, evolving security threats, and advancements in technology are creating new and increasingly urgent hurdles in the world of ALM.

Fortunately, advances in technology and asset management are helping IT teams to better meet these ongoing needs.

1. https://www.gartner.com/smarterwithgartner/with-coronavirus-in-mind-are-you-ready-for-remote-work

2. https://news.stanford.edu/report/2023/03/13/7-things-know-working-home/

ALM TECHNOLOGICAL ADVANCEMENTS

New hardware and software solutions have emerged to accommodate the offsite workforce.

Today's Windows 11 Pro devices are designed to support both remote and on-premise work. Their modern OS adds features and tools like Windows Autopilot and Intune that streamline IT management and support efficient remote support for end users. It also offers Windows Hello for Business, with an added layer of security in remote settings via biometric authentication.

To accommodate and fortify these advanced software features, hardware manufacturers have stepped up their game. Modern Windows 11 Pro devices now come with built-in encryption (such as TPM 2.0 chips) and secure boot processes to protect remote endpoints against malware and unauthorized access.

In this ebook, we aim to help IT and business leaders across industries navigate the challenges of today's hybrid work world. We've designed it as a guide to best practices for achieving efficiency and growth while enabling employees to thrive in remote and hybrid work environments, all through a lens of ALM.

WHAT DOES EFFECTIVE ALM HELP ORGANIZATIONS ACHIEVE?

While ALM aims to optimize the performance, usage, and cost-effectiveness of IT assets, the question remains: to what end? What should effective ALM help an organization do?

When strategies in each stage of ALM align with the organization's key objectives, effective ALM becomes instrumental in helping the organization fulfill its goals and mission.

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THE FIVE STAGES OF ALM

There are five widely recognized stages of ALM, and strategies for each should align with the organization's key objectives and budget constraints.

1 PLANNING AND PROCUREMENT
Identify asset requirements, plan, budget, select vendors, and purchase assets.

2 DEPLOYMENT AND INSTALLATION
Set up devices for use (preconfigure and configure), deploy, install, and integrate assets.

3 OPERATION AND MAINTENANCE
Regularly maintain assets (update, repair, and monitor) for optimal performance and longevity.

4 DEVICE REFRESH
Upgrade, replace, and modernize assets to keep up with technological advancements and changing business needs.

5 DECOMMISSIONING AND DISPOSAL
Retire assets by decommissioning, wiping, and disposing of (selling, donating, recycling, or properly discarding) in compliance with legal, environmental, and corporate policies.

DEVICE REFRESH COST SAVINGS
How much could your organization save?[3]

Number of PCs	Cost Savings
500	$413,481
2,000	$1,752,723
5,000	$4,377,132
10,000	$8,591,441

To learn about the economic benefits your organization might achieve from a Windows 11 Pro device refresh, check out Microsoft's Windows Devices Calculator[4].

With just a few inputs, this interactive tool models your customized business case to estimate a three-year ROI from upgrading devices. The output includes calculations, tables, and charts.

3. This is based on a Commissioned study delivered by Forrester Consulting "The Total Economic Impact™ of Windows 11 Pro Devices", December 2022. Note, quantified benefits reflect results over three years combined into a single composite organization that generates $1 billion in annual revenue, has 2,000 employees, refreshes hardware on a four-year cycle, and migrates the entirety of its workforce to Windows 11 devices.

4. https://tools.totaleconomicimpact.com/go/microsoft/windows11ProDevices/index.html

BEST PRACTICES FOR ALM SUCCESS

The evolving landscape of remote and hybrid work and the complexities involved in managing IT hardware assets throughout their lifecycles present unique challenges that demand innovative approaches.

To help IT and business leaders streamline and enhance asset management in this dynamic environment and align ALM with their unique goals, we've identified the following five best practices:

1. Embrace Cloud Based Technology

Managing a remote or hybrid workforce without cloud-based tech deprives ALM of the scalability, flexibility, security, and efficiency provided by cloud solutions.

Cloud services can:

✓ Allow IT asset managers visibility into the status, performance, and location of distributed assets, as well as remote access for repairs

✓ Save money with lower upfront subscription costs and predictable operating expenses

✓ Easily scale up or down based on the organization's needs

✓ Enable regular, automated software updates via services like Windows AutoPatch

✓ Offer strong security measures to protect data and applications

✓ Provide more powerful computing capabilities (as required by AI and ML tools, for instance)

✓ Improve productivity and collaboration with multiple-user access to tools, applications, and storage solutions from anywhere with an internet connection

How ALM can embrace cloud technology

The Microsoft Entra ID (formerly Azure Active Directory) integrates seamlessly with several cloud services to facilitate centralized configuration, tracking, management, device health, and compliance analytics.

- **Windows 11 Pro devices** integrates with Microsoft Endpoint Manager for centralized configuring and managing settings, policies, and updates, and for monitoring and enforcing compliance.

- **Microsoft 365** provides admin centers for centralized management of users, devices, applications, and services, as well as insights into device security, risk assessment, and threat protection.

- **Windows Autopilot** (replaces Microsoft Deployment Toolkit) enables remote and centralized configuration of new devices and application of custom settings and configurations during initial setup.
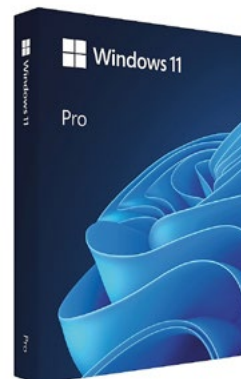
2. Strengthen Security for Distributed Assets

83 percent of leaders[5] reported at least one firmware attack between 2018 and 2020. Devices used off-premise are more susceptible to cyber threats and breaches. The increased risk comes from the difficulty of securing a broader range of potential entry points.

Several new tools and techniques, including preconfigured PCs, up-to-date software, and modern hardware, can significantly strengthen remote and hybrid work security.

HOW NEW ALM SOLUTIONS HARDEN SECURITY

Deploy company PCs preconfigured with security policies

Preconfiguring PCs lets IT teams bake in security from first principles. Windows Autopilot helps by delivering a suite of security enhancements:

- Allows IT administrators to create custom profiles with specific settings, applications, and policies

- Minimizes the risk of security misconfigurations

- Ensures devices adhere to security policies from the moment they're powered on

- Can be used to reset, repurpose, or recover devices (useful for securely wiping, reconfiguring, and reassigning devices to new users)

- Preconfiguring PCs lets IT teams bake in security from first principles

Upgrade to current hardware

Contemporary operating systems like Windows 11 Pro require advanced security features built into modern PCs, such as:

- **Secure Boot and Trusted Boot** to prevent devices from loading malicious software

- **Secured-core PCs** designed for data-sensitive scenarios (intellectual property, classified intelligence, and financial information), with security features that shield user credentials and other critical data

- **TPM (Trusted Platform Module) 2.0** to secure cryptographic keys and credentials

- **Hardware-Based Root-of-Trust** to slow down would-be attackers

- **BitLocker drive encryption** to protect data by encrypting the entire drive

- **Other advanced processor technologies** integrated at the chip level to enhance protection against advanced malware and attacks

5. Microsoft Security 2021, https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RWP0mz

HOW NEW ALM SOLUTIONS HARDEN SECURITY, CONTINUED

Windows 11 Pro Built-in Security

Cutting-edge tools built into Windows 11 Pro devices introduce advanced security features crucial for securing endpoints and safeguarding against sophisticated cyber threats, data breaches, and unauthorized access. As proof, new Windows 11 Pro device users have experienced a 58 percent drop in security incidents[6].

Windows 11 Pro devices security solutions include:

- **Microsoft Defender for Endpoint:** Adds advanced threat detection and response capabilities.

- **Microsoft Security Compliance (MSC) Toolkit:** Use the MSC policy analyzer to identify and apply baseline securities to devices upon deployment.

- **AppLocker and Windows Defender Application:** Control allow IT administrators to control app and file access.

- **BitLocker drive encryption:** Protects user data.

- **Windows Hello for Business:** A replacement for passwords, applies user-friendly, two-factor authentication using a PIN, facial recognition, or fingerprint.

Restrict access based on user, device, location, and risk

Windows 11 Pro integrates into Microsoft Entra ID (formerly Azure Active Directory), allowing IT managers to execute conditional access policies. This lets IT verify user identity, device compliance, location, and risk level before users can gain entry to corporate resources.

Train remote workers on security awareness

Employees can be the weakest link in cybersecurity, but with education, they fall for phishing and malware less frequently, substantially reducing the burden on IT.

6. Tech Aisle https://techaisle.com/research-reports/236-us-smb-and-midmarket-pc-purchase-hybrid-work-trends-survey

3. Automate, Standardize, and Streamline IT Tasks and Processes

Conducting tasks manually isn't just time-consuming. It also puts organizations at risk of human error.

Automation reduces risk while saving time

In remote settings where on-site support isn't readily available, automated systems track and manage assets in real-time, updating IT managers on asset status, location, and condition.

According to Forrester's The Total Economic Impact™ Of Windows 11 Pro Devices report, automating system updates reduces IT management costs by 40 percent and time spent on device management by 24 percent [7].

Automated and standardized IT processes can easily scale to accommodate increasing numbers of devices, without a proportional increase in ALM complexity or resource requirements.

HOW TO IMPLEMENT IT AUTOMATION

Standardize and automate monitoring, system updates, provisioning, and maintenance by using next-gen IT tools.

Use OS automation

Windows 11 Pro adds automation capabilities, such as:

- Software updates

- Patch management

- Asset monitoring

Automated processes make it easier for organizations to scale and adapt to the increasing pace of changes in the business world.

Simplify onboarding with automated provisioning

Windows Autopilot significantly streamlines the setup and configuration of new devices, reducing IT workloads and making the onboarding process more efficient and user-friendly.

Adopt predictive maintenance with analytics

The Windows 11 Pro OS is compatible with advanced analytics and AI tools available through Microsoft 365 and Azure. These tools enhance ALM by analyzing usage patterns and performance metrics from Windows 11 Pro devices, facilitating predictive maintenance and informed decision-making.

Standardize processes with integrated management tools

Microsoft Endpoint Manager ensures that all devices adhere to the same policies and configurations.

7. Forrester, https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE4Vrvx

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4. Increase the Focus on User Experience (UX) and Training

Remote employees play a crucial role in the success of IT ALM, especially in security and proper asset use.

Untrained users, slow computing, and poor UX trigger increased calls for support and maintenance. This can drive up ongoing costs as resources shift to assisting users and addressing system usability issues.

Low user readiness and unappealing UX can also fuel resistance to change among staff, lack of engagement, negative attitudes about the new system, or preference for older, familiar, and potentially less efficient methods.

User training can improve efficiency and adoption

When end users are upskilled in new ALM approaches, they generate fewer trouble tickets, drastically reducing demands on busy IT teams.

HOW TO IMPLEMENT USER TRAINING

Educate end users

Train users and keep them informed about usage policies and updates, as well as new features, operating systems, and devices. Microsoft provides extensive online training resources for all its products.

Incorporate cloud-based management tools

Cloud-based tools enhance remote support and maintenance capabilities.

- Microsoft Endpoint Manager provides a unified platform for managing PCs, mobile devices, and servers.

- Microsoft Intune is a management tool for PCs, mobile devices, and mobile applications that lets IT manage and secure devices and apps from a single console.

Equip end users with up-to-date technology

Introduce tech that uses familiar but advanced design and accessibility. This helps remote employees learn new tools and software, thereby reducing the need for training.

- Windows 11 Pro resembles the previous OS enough to promote high levels of familiarity but improves its UI for increased efficiency and ease of use.

- Snap layout and self-service features reduced incoming help desk tickets in a composite's IT department by 80 percent.

- Familiarity enabled existing Windows users to work seamlessly with a 15 percent increase in productivity when they switched to Windows 11 Pro devices.

5. Partner with an ALM Expert

Internal IT teams are often limited by staff and technology. This makes it difficult to track, configure, and maintain IT assets, especially in remote, large, or widespread organizations. Teams can get bogged down with time-consuming operational issues and staff training, leaving little time for strategic planning or digital transformation.

Partnering with an ALM Expert can help your organization:

- **Customized assistance.** A partner like Connection will consult with IT teams to learn about your organization's unique circumstances. Then they can help develop a custom refresh strategy that equips important roles with the best technology to do their jobs, and strikes the right balance between security, reliability, and affordability.

- **Scale up operations** with flexibility that internal teams can't match.

- **Access specialized expertise** in areas like complex compliance requirements, emerging technologies, or specialized asset types that might not be available in-house.

- **Reduce costs** by lowering the overhead of internal asset management.

- **Achieve operational efficiency** through streamlining ALM processes, freeing up internal IT resources to focus on strategic initiatives and core business activities.

- **Leverage advanced technologies**, including Windows 11 Pro, for innovative solutions, upgrades, remote asset management, and cutting-edge IT infrastructure.

- **Mitigate risk and stay compliant** with partners who are up to date with changing regulatory standards (critical in today's complex legal and cyber security environment).

- **Leverage economies of scale** with a wider range of assets and services more cost-effectively than managing assets in-house.

- **Proactive maintenance and monitoring** to ensure assets function optimally, reduce downtime, and avoid common IT issues.
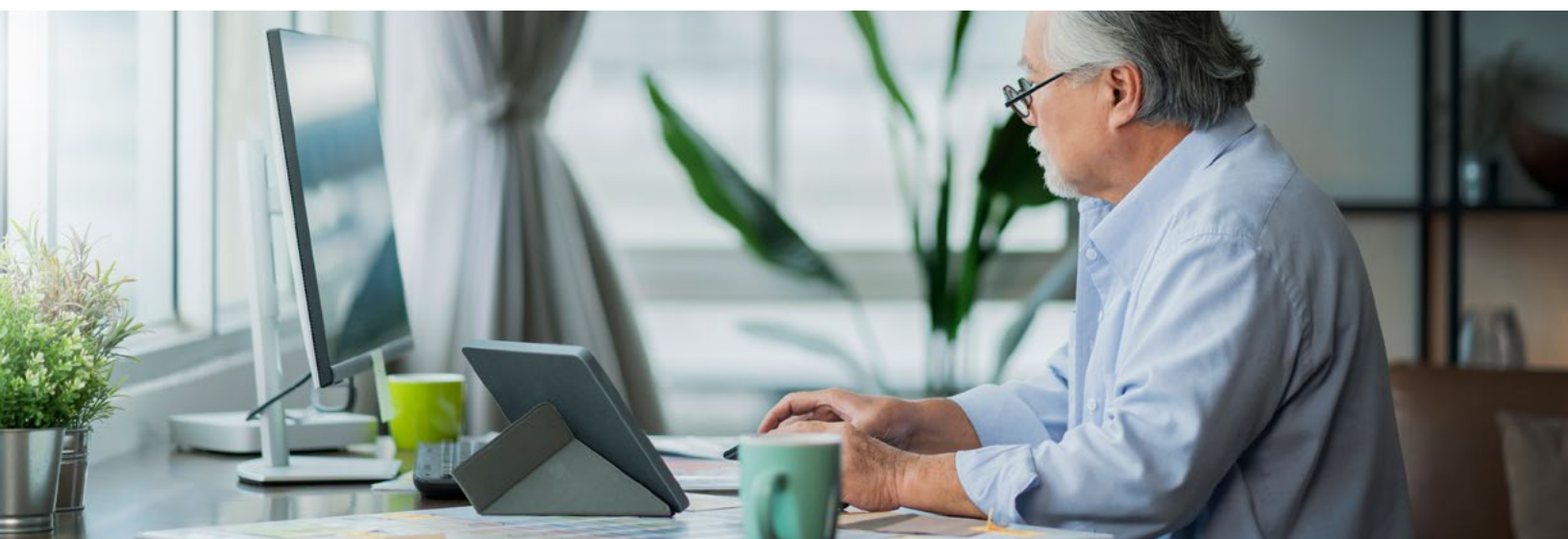
AS A DEDICATED IT SOLUTIONS PARTNER, HOW CAN CONNECTION HELP YOU?

Connection delivers customized IT solutions scaled and aligned with organizational needs, including professional ALM services, repairs, and training, to help your organization manage ALM more effectively.

Professional ALM Services

- Effortless Windows 11 Pro device migrations

- Hybrid environments
  (on-prem, cloud, or blend)

- Help desk, support teams, security, remote management (with Windows 11 Pro)

- Device provisioning and configuration for mass rollouts and refreshes

- Standardized and advanced configurations for multiple diverse personas and job roles (applications, profiles, settings)

- CIS hardening* (levels 1 and 2) for added device security

- White glove pre-provisioning for true, out-of-the-box device readiness

- First-article build and run on devices before mass production to prevent large-scale issues (security, networking, and bandwidth)

- IT asset disposal

- Device refresh strategizing for appropriate device lifecycles (to balance security and reliability with budgets)

- Asset portfolio optimization to equip critical roles with the right technology to do their jobs securely and effectively

Professional ALM Services continued

Repairs

- Complete depot and tech center for warranty and non-warranty repair service, housed in a 300,000-square-foot facility

- Advance Device Exchange program for quick (overnight) repairs and replacements

- Certified part work for (and expertise with) all major device manufacturers

Training

- Dedicated support and tailored training programs for preparing the organization's staff to use assets effectively

- "Scan-me-first" QR codes with customized device instructions

Efficiency and Insights

- Efficiency measures that allow entire organizations to focus attention on core competencies and strategic goals

- Insight on and access to the latest technologies

Connection's expertise, commitment to partnership & customer service, and breadth of solutions offerings, allow us to meet all your company's IT needs.

CHECKLIST

What to look for in a partner:

- ☐ Focused expertise that complements internal IT knowledge

- ☐ Competitive pricing on hardware and software

- ☐ The right experience and tools to help streamline ALM processes like procurement, deployment, maintenance, and disposal

- ☐ Up-to-speed on compliance regulations and security best practices

- ☐ Access to the latest technologies and fingers on the pulse of industry trends

- ☐ Ability to scale services in response to organizational growth or changing needs

- ☐ Dedicated support and tailored training programs

- ☐ Can implement proactive maintenance and monitoring strategies

Source: Windows 11 Readiness Checklist

CONCLUSION

The world of work has changed. With increasing frequency, organizations are seeking competitive advantage through remote and hybrid work models. To succeed, leaders must embrace this change by future-proofing IT ALM with modern hardware, technology, and best practices.

Connection is an IT solutions company that provides customizable technology solutions (devices, accessories, software, and services) to global organizations ranging from SMBs to enterprises, educational institutions, and governmental entities. Our core objective is to reduce IT challenges that are hindering key business performance.

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