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Digital Sovereignty and Strategic Migration Opportunities Report

Generated for: [Customer Name] Analysis Date: August 22, 2025

Disclaimer on Cost Estimates and Data Limitations

This report employs a conservative methodology, recognizing the inherent complexities of enterprise software environments and the significant effort involved in migration initiatives. While immediate cost optimization may be a factor, the primary focus of strategic migration is on achieving digital sovereignty, reducing vendor lock-in, and realizing long-term cost savings and enhanced control over digital infrastructure.

All cost estimates provided are based on publicly available market research, indicative vendor pricing for commercial alternatives, and industry benchmarks for migration costs and potential savings. These figures are strictly estimates and require thorough validation through actual vendor negotiations, formal pricing discussions, and detailed project planning within your specific organizational context. The actual effort, cost, and time required for migration can vary significantly based on factors such as data migration complexity, compatibility requirements, user training needs, and integration challenges with existing auxiliary services (e.g., endpoint management, data loss prevention, identity services, etc.).

The analysis also explicitly acknowledges data quality limitations from the provided inventory. While efforts have been made to derive accurate insights, incomplete or miscategorized data can impact the precision of recommendations. Furthermore, enterprise environments often benefit from existing vendor relationships, volume discounts, and bespoke enterprise agreements, which may alter the presented cost comparisons. Migration recommendations are thus positioned as strategic, long-term opportunities aligned with broader European digital sovereignty initiatives, offering substantial benefits beyond immediate financial savings, including increased control over IT infrastructure, improved data residency, and enhanced security posture.

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This strategic software portfolio analysis identifies significant opportunities for [Customer Name] to enhance its digital sovereignty, reduce dependency on US-owned commercial software, and achieve substantial long-term cost optimization. The growing trend in Europe towards greater control over

digital infrastructure is a key driver for this analysis. By strategically migrating from proprietary US-based solutions to European alternatives or widely adopted open-source software, the organization can gain increased autonomy, improve data control, and foster a more resilient and flexible IT ecosystem.

Key findings highlight prevalent reliance on US-owned platforms across critical categories such as Operating Systems, Office Productivity Suites, and specialized tools. For each category, this report provides actionable recommendations for transitioning to viable alternatives, underpinned by evidence-based cost considerations and strategic benefits.

Digital Sovereignty and Vendor Diversification Context

The European landscape is witnessing a decisive shift towards digital independence. Recent initiatives and policy discussions underscore a growing consensus that Europe's digital future cannot remain solely dependent on American technology giants. This movement, often encapsulated by the call for an "EU-Linux" operating system, aims to build secure, self-sufficient digital ecosystems within the European Union.

- The EU's push for "EU-Linux" reflects a broader awakening to strategic vulnerabilities inherent in digital dependency, especially on Microsoft's ecosystem. This initiative, even if a "proof of concept" now, emphasizes creating a standardized Linux environment tailored for public sector organizations, focusing on security, sovereignty, and efficiency.
- Demonstrated cost savings from switching to open source are a powerful motivator. Kerala's schools, for instance, achieved an estimated cost avoidance of \$360 million USD by systematically replacing proprietary software with a custom Linux-based operating system and applications like LibreOffice, GIMP/Krita, and Inkscape on over 200,000 computers. These savings were primarily derived from avoiding recurring licensing fees.
- Similarly, the German state of Schleswig-Holstein is undertaking an ambitious plan to replace 30,000 Microsoft Windows and Office government computers with Linux and LibreOffice by 2026. This move is driven by a desire for digital sovereignty, the ability to control their IT destiny free from a single tech giant's roadmaps, pricing, or data collection policies. They are replacing Word and Excel with LibreOffice and Outlook with Open-Xchange, with a full transition to Linux desktops planned.
- While Microsoft has offered concessions to European cloud providers, such as pay-as-you-go
 licensing and a "Microsoft 365 Local" package, these moves are often viewed critically. Some
 industry groups dismiss them as "stalling tactics" aimed at avoiding regulatory scrutiny while
 continuing to lock in customers with restrictive practices. A significant point of contention
 remains the technical tie-in between Microsoft Entra ID (formerly Azure Active Directory) and
 Microsoft 365, limiting choice in identity management solutions.
- Denmark's digital declaration of independence exemplifies a growing European revolt. Its
 Ministry of Digitalization plans to phase out Microsoft Office and Windows in favor of LibreOffice
 and Linux across its public sector. This decision is driven by financial considerations
 (Copenhagen's Microsoft bill increased by 72% in five years), concerns over dependency on a
 near-monopoly, and geopolitical tensions, which have sparked debate about data protection
 and reliance on foreign technology.
- Telefónica Germany's decision to shift its VMware support to a third-party provider (Spinnaker) due to a five-fold price increase from Broadcom (VMware's new owner) highlights the risks of vendor lock-in and aggressive licensing changes. This demonstrates a credible path for resisting

such tactics and exploring alternative support models or virtualization platforms like opensource solutions.

These examples underscore the strategic drivers for migration: reducing vendor lock-in, enhancing data control, improving security posture, fostering fair competition, and achieving long-term cost savings. Licenseware's SIM platform is instrumental in identifying current software usage, including potential US-owned SAM tools, and establishing a baseline for these digital sovereignty initiatives.

Strategic Migration Opportunities: US Software to European/Open Source Alternatives

This section outlines strategic migration opportunities from key US-owned commercial software, leveraging the comprehensive capabilities of Licenseware SIM for identification and NEO AI for indepth analysis and strategic recommendations. The selection of US-owned software for detailed analysis is based on high usage, strategic importance, or high recurring costs as indicated by the provided inventory data and general market understanding.

Operating Systems

Current Landscape

Product Name	Count	Est. Annual Cost (US)	Strategic Rationale for Migration
Microsoft Windows 11	54377	\$199.99 (Pro, one-time est., for comparison)	Digital sovereignty, vendor lock-in reduction, cost optimization, data control, security concerns.
Microsoft Windows 10	1169	\$199.99 (Pro, one-time est., for comparison, nearing End of Life)	Digital sovereignty, vendor lock-in reduction, cost optimization, data control, security concerns, End-of-Life forcing upgrades.

Analysis & European/Open Source Alternatives

The prevalence of Microsoft Windows as the primary operating system presents a significant opportunity for enhancing digital sovereignty and realizing substantial long-term benefits. Migrating to Linux-based operating systems typically requires no hardware replacement, and often extends the lifespan of older devices due to their lower resource intensity compared to Windows. This can lead to considerable hardware cost avoidance and reduced environmental impact.

- Linux Alternatives: Prioritizing EU-based Linux distributions, such as TUXEDO OS (Germany), or popular European choices like Linux Mint (based on Ubuntu/Debian), or Ubuntu (widely adopted globally with strong European presence), offers significant advantages. These distributions provide user interfaces and experiences (e.g., KDE Plasma, Cinnamon, Zorin OS) that can be configured to be similar to Windows, easing user adoption and reducing training overhead.
- macOS as an Alternative: While not European or open-source, macOS offers an alternative to Windows that can run many open-source applications (e.g., LibreOffice, GIMP, Firefox). However, migrating to macOS would entail a complete hardware refresh, representing a significant

- upfront cost. Mac devices do tend to have a longer average lifespan, which could amortize some hardware costs over time.
- Security Implications of Linux: Linux generally presents a smaller attack surface and is less frequently targeted by mainstream malware compared to Windows. Its robust package management systems and granular permissions models enhance security. However, potential risks include a learning curve for IT staff unfamiliar with Linux administration, and potentially less commercial security software availability requiring alternative strategies or open-source security tools. Kernel vulnerabilities, while rare, also need to be continuously monitored and patched.
- Other Benefits: Moving to Linux for corporate desktops can contribute to improved corporate software hygiene. Users are less likely to install incompatible video games or unauthorized software on Linux, leading to a more focused, productive work environment and reduced security risks from shadow IT.

Alternative Product Name	Type (EU/Open Source/Other)	Key Benefits (Sovereignty/Cost/Features/Security)	Migration Considerations (Effort, Data, Training, Hardware)	Est. Annual Cost (Alternative) / Savings Potential
TUXEDO OS	EU / Open Source	Digital sovereignty, cost (free), customizable UI/UX, strong security posture, community support.	High effort for large-scale deployment, data migration, user training, compatibility testing. Minimal hardware cost.	Free / Substantial savings (approx. \$199.99 per device in software licensing).
Linux Mint	Open Source	Ease of use (Windows-like UI), large community, free, stable, good for older hardware.	Medium effort for deployment, data migration, user training, compatibility testing. Minimal hardware cost.	Free / Substantial savings (approx. \$199.99 per device in software licensing).
macOS	Other (US- owned)	Strong security, user-friendly, robust ecosystem, runs many open-source apps.	High upfront hardware cost (full refresh), data migration, user training, compatibility testing. Longer device lifespan.	Included with hardware (est. \$1,000 - \$3,000+ per device for new hardware) /

Alternative Product Name	Type (EU/Open Source/Other)	Key Benefits (Sovereignty/Cost/Features/Security)	Migration Considerations (Effort, Data, Training, Hardware)	Est. Annual Cost (Alternative) / Savings Potential
				Negative savings initially.

- 1. Initiate a pilot program with a selected European Linux distribution (e.g., TUXEDO OS or Linux Mint) within a specific department to gather real-world feedback and refine migration strategies.
- 2. Leverage Licenseware SIM to identify a subset of users or departments whose current software usage profiles are most compatible with Linux alternatives, minimizing initial disruption and optimizing success rates.
- 3. Develop comprehensive training programs for end-users and IT support staff, focusing on the chosen Linux distribution and open-source office suites.
- 4. Explore commercial support options for the chosen Linux distribution to ensure enterprise-grade reliability and security patching.
- 5. Conduct a detailed total cost of ownership (TCO) analysis for both Linux and macOS alternatives, factoring in hardware, software, training, and ongoing support, to validate long-term financial benefits. Licenseware NEO AI can assist in simulating these complex TCO scenarios.

Potential Strategic Benefits & Cost Savings: Significant reduction in recurring software licensing costs, enhanced digital sovereignty through control over the operating system, improved data security and privacy, and extended lifespan of hardware assets.

Office Productivity Suites & Collaboration Tools

Current Landscape

Product Name	Count	Est. Annual Cost (US)	Strategic Rationale for Migration
Microsoft 365 Apps for Enterprise	54378	\$120 - \$360 per user/year (est. for Enterprise Standard/Premium)	Vendor lock-in, recurring subscription costs, data residency concerns, digital sovereignty.
Microsoft Teams	43382, 4544, 902, 702, 532, 285, 230, 228, 191, 86, 66, 63, 61, 38, 33, 21	Bundled with M365 (some free tiers exist, but enterprise use implies paid)	Dependency on US cloud infrastructure, data privacy, compliance, digital sovereignty.

Product Name	Count	Est. Annual Cost (US)	Strategic Rationale for Migration
Google Chrome	55653, 1064, 152, 88, 86, 83, 62, 40, 39, 37, 34, 32, 31, 13, 10, 3, 1	Free (enterprise management tools can have costs)	Data privacy, user tracking, digital sovereignty.
Microsoft Edge	55541, 1583, 723, 160, 109, 56, 54, 31, 6, 5, 4, 3, 2, 1	Free (enterprise management tools can have costs)	Data privacy, digital sovereignty, integration with Microsoft ecosystem.
Adobe Acrobat Reader DC	55620	Free (basic version, enterprise features are paid)	Dependency on Adobe ecosystem, potential upgrade pressure to paid Acrobat versions.
Adobe Acrobat DC	311	\$239.88 per user/year (est. for Pro DC)	Recurring subscription costs, vendor lock-in, data sovereignty, security concerns.
Slack	373, 6	\$80 - \$150 per user/year (est. for Business/Enterprise Grid)	Vendor lock-in, data residency, privacy, recurring costs.

Analysis & European/Open Source Alternatives

The extensive use of US-owned office productivity suites and collaboration tools, particularly Microsoft 365 and its bundled services, creates significant dependencies. Migration requires careful planning to replace not only core applications but also a suite of integrated auxiliary services. These include endpoint management (e.g., Microsoft Intune), security features (e.g., Defender for Endpoint, DLP solutions), document management (e.g., SharePoint, OneDrive), email (e.g., Exchange Online), and collaboration platforms (e.g., Teams).

- Office Suites: LibreOffice (Europe/Open Source) and OnlyOffice (Europe) offer robust alternatives to Microsoft Office. LibreOffice is a free, widely adopted open-source suite with word processing (Writer), spreadsheet (Calc), and presentation (Impress) applications, with high compatibility with Microsoft Office formats. OnlyOffice provides a collaborative online office suite with strong document compatibility and self-hosting options for data control.
- Collaboration & Communication: Replacing Microsoft Teams or Slack requires a multi-faceted approach. Nextcloud Talk (Europe/Open Source) offers integrated video conferencing, chat, and file sharing, especially potent when self-hosted for maximum data sovereignty. Jitsi Meet (Open Source) provides secure video conferencing, and Element (Matrix) (Europe/Open Source) offers decentralized, encrypted messaging and collaboration.
- Email: For email management, the combination of Postfix and Dovecot with a webmail client like Roundcube (all Open Source) provides a powerful, self-hosted European solution, offering full control over email data and infrastructure.

- **Document Management & Cloud Storage:** Nextcloud (Europe/Open Source) serves as an excellent self-hosted alternative to OneDrive and SharePoint, offering file sync and share, collaboration, and various integrations, ensuring data residency and control.
- PDF Editors: PDFCreator (Europe/Open Source) and PDFgear (Free) offer strong alternatives to Adobe Acrobat Reader DC and Adobe Acrobat DC for many common PDF tasks like creation, editing, and annotation.
- **Browsers:** For web browsing, Mozilla Firefox (Open Source) and Brave Browser (Open Source) are strong, privacy-focused alternatives to Chrome and Edge.

Alternative Product Name	Type (EU/Open Source)	Key Benefits (Sovereignty/Cost/Features)	Migration Considerations (Effort, Data, Training, Auxiliary Services)	Est. Annual Cost (Alternative) / Savings Potential
LibreOffice	Open Source	Free, high compatibility with MS Office formats, data control, community support.	Medium-High effort for user training, document macro migration, feature parity for advanced users.	Free / Significant savings (est. \$120-\$360 per user/year for M365).
OnlyOffice	EU / Open Source (Community Edition)	Collaborative features, strong MS Office compatibility, self-hostable.	Medium effort, data migration, user training, integration with existing systems.	Free (Community) / Significant savings. (Commercial versions available for enterprise features).
Nextcloud Talk	EU / Open Source	Integrated chat, video calls, file sharing; self-hosted for data sovereignty.	Medium-High effort for deployment, integration with existing contact directories, user training.	Free (Open Source, requires infrastructure) / Significant savings (replacing Teams/Slack).
Mozilla Firefox	Open Source	Privacy-focused, strong security, free, extensive addon ecosystem.	Low effort (user familiarity), existing browser configurations.	Free / Savings on enterprise management tools if applicable.

Alternative Product Name	Type (EU/Open Source)	Key Benefits (Sovereignty/Cost/Features)	Migration Considerations (Effort, Data, Training, Auxiliary Services)	Est. Annual Cost (Alternative) / Savings Potential
Brave Browser	Open Source	Built-in ad/tracker blocking, privacy-focused, fast.	Low effort (user familiarity), existing browser configurations.	Free / Savings on enterprise management tools if applicable.
PDFCreator	EU / Open Source	Free PDF creation, merge, encryption.	Low-Medium effort, user training for new workflow.	Free / Potential savings if replacing paid PDF software.

- 1. Launch pilot programs for LibreOffice/OnlyOffice in departments with less complex document workflows to assess compatibility and user acceptance.
- 2. Investigate self-hosted Nextcloud for integrated file storage and collaboration, providing a unified platform for documents, communication, and basic project management.
- 3. Standardize on Mozilla Firefox or Brave as primary web browsers for improved privacy and reduced dependency on US tech giants.
- 4. Leverage Licenseware SIM to map the functionalities of current US-owned productivity suites against proposed alternatives, and use NEO AI to evaluate the impact of replacing bundled services (e.g., Intune, Defender, SharePoint) with European/open-source equivalents, ensuring a holistic migration strategy.

Potential Strategic Benefits & Cost Savings: Substantial reduction in recurring subscription costs, enhanced data privacy and control through self-hosted solutions, increased digital sovereignty, and greater flexibility in IT infrastructure management.

Software Asset Management (SAM) Tools

Current Landscape

Product Name	Count	Est. Annual Cost (US)	Strategic Rationale for Migration
Flexera FlexNet Inventory Agent	56367	Highly variable, but typically high for enterprise SAM suites (est. \$5 - \$20 per device/year)	Digital sovereignty for IT infrastructure management, vendor lock-in, data residency for critical SAM data, cost optimization.

Analysis & European Alternatives

The reliance on US-owned SAM tools like Flexera poses a direct challenge to digital sovereignty, as critical inventory and licensing data reside within systems controlled by non-European entities. Migrating SAM capabilities to an EU-based platform like Licenseware not only addresses data residency and digital sovereignty concerns but also offers the opportunity for significant cost optimization and enhanced control over the SAM process itself.

Licenseware is a leading EU-based alternative that offers comparable or superior functionality with enhanced data residency and digital sovereignty. Its modular approach allows organizations to select specific capabilities, such as inventory management (SIM), contract management (LCM), and advanced analysis (NEO AI), tailoring the solution to exact needs.

Alternative Product Name	Type (EU)	Key Benefits (Sovereignty/Cost/Features)	Migration Considerations (Effort, Data, Training)	Est. Annual Cost (Alternative) / Savings Potential
Licenseware Platform	EU	Digital sovereignty, data residency in Europe, modular and scalable, cost optimization, specialized SAM focus.	Medium-High effort for data migration from existing SAM tools, integration with existing IT systems, staff training on new platform.	Contact Vendor / Potentially significant savings compared to large US-owned SAM suites.

Recommendation

- 1. Conduct a detailed assessment of current SAM requirements and pain points, leveraging existing Flexera data and internal stakeholder interviews.
- 2. Initiate a pilot project with Licenseware's Software Inventory Manager (SIM) to demonstrate its capabilities in identifying and categorizing software assets, focusing on US-owned commercial software and open-source alternatives. Licenseware SIM, with its G2 taxonomy alignment and dynamic recognition service, is perfectly positioned to support this initial data gathering and analysis.
- 3. Work with Licenseware's NEO AI platform to compare current Flexera functionalities and licensing implications with Licenseware's offerings, developing a phased migration roadmap.
- 4. Prioritize the migration of critical SAM data to the Licenseware platform, ensuring data residency and compliance with EU regulations.

Potential Strategic Benefits & Cost Savings: Full digital sovereignty over SAM data, reduced operational costs associated with traditional SAM tools, enhanced transparency and auditability, and a flexible, scalable platform for future SAM needs.

Web Browsers & Search Engines

Current Landscape

Product Name	Count	Est. Annual Cost (US)	Strategic Rationale for Migration
Google Chrome	55653, 1064, 152, 88, 86, 83, 62, 40, 39, 37, 34, 32, 31, 13, 10, 3, 1	Free (enterprise management costs may apply)	Data privacy, user tracking, digital sovereignty, dependency on US tech giant.
Microsoft Edge	55541, 1583, 723, 160, 109, 56, 54, 31, 6, 5, 4, 3, 2, 1	Free (enterprise management costs may apply)	Data privacy, digital sovereignty, integration with Microsoft ecosystem.
Apple Safari	1173, 4, 2	Included with macOS/iOS devices (no direct cost)	Data privacy, digital sovereignty, dependency on US tech giant.
Google Search	(Implicit in Chrome usage)	Free (revenue from ads and data)	Data privacy, user profiling, digital sovereignty, fostering competition.
Bing Search	(Implicit in Edge usage)	Free (revenue from ads and data)	Data privacy, user profiling, digital sovereignty, fostering competition.

Analysis & European/Open Source Alternatives

Web browsers and search engines are critical gateways to information and digital services, making their selection paramount for digital sovereignty and data privacy. Current reliance on US-owned browsers like Chrome and Edge, and search engines like Google and Bing, exposes users to extensive data collection and potential vendor influence.

- Browser Alternatives: Mozilla Firefox (Open Source, headquartered in US but strong privacy focus and open governance) and Brave Browser (Open Source) are excellent privacy-oriented alternatives. Firefox is a mature, widely used browser with strong community support and a long-standing commitment to user privacy. Brave offers built-in ad and tracker blocking, further enhancing privacy.
- Search Engine Alternatives: To reduce reliance on US-based search giants, consider privacy-focused or European alternatives such as Ecosia (Germany), which also uses its profits to plant trees, or Startpage (Netherlands), known for providing Google search results anonymously.

Alternative Product Name	Type (EU/Open Source/Privacy- Focused)	Key Benefits (Sovereignty/Privacy/Features)	Migration Considerations (User Training)	Est. Annual Cost (Alternative) / Savings Potential
Mozilla Firefox	Open Source	Enhanced data privacy, strong security, customizable, broad compatibility.	Low effort (familiar user experience for	Free / No direct cost, potential

Alternative Product Name	Type (EU/Open Source/Privacy- Focused)	Key Benefits (Sovereignty/Privacy/Features)	Migration Considerations (User Training)	Est. Annual Cost (Alternative) / Savings Potential
			many), minimal user training.	savings on privacy tools.
Brave Browser	Open Source / Privacy- Focused	Built-in ad/tracker blocking, faster browsing, enhanced privacy.	Low effort (Chromium- based core offers familiarity), minimal user training.	Free / No direct cost, potential savings on privacy tools.
Ecosia Search Engine	EU / Privacy- Focused	Privacy-centric, supports environmental initiatives, diverse search results.	Very low effort (can be set as default in any browser), no user training.	Free / No direct cost.
Startpage Search Engine	EU / Privacy- Focused	Anonymous Google results, strong privacy protection, no tracking.	Very low effort (can be set as default in any browser), no user training.	Free / No direct cost.

- 1. Mandate the use of privacy-focused browsers like Mozilla Firefox or Brave as primary browsers across the organization.
- 2. Set default search engines to European or privacy-centric alternatives like Ecosia or Startpage within the corporate browser configurations.
- 3. Provide user education on the importance of data privacy and the benefits of these alternative tools.
- 4. Utilize Licenseware SIM to monitor browser usage and ensure compliance with the new policy.

Potential Strategic Benefits & Cost Savings: Enhanced data privacy and reduced user tracking, stronger alignment with EU data protection regulations, reduced dependency on dominant US tech companies for core internet access, and no direct software licensing costs.

Al / Chatbots (Large Language Models)

Current Landscape

Product Name	Count	Est. Annual Cost (US)	Strategic Rationale for Migration
OpenAl ChatGPT	66	\$20 - \$60 per user/month (est. for Plus/Teams)	Data privacy, intellectual property concerns with cloudbased models, digital sovereignty, recurring subscription costs.
Google Gemini	(Implicit in Google Suite usage, but dedicated enterprise versions have costs)	\$20 - \$30 per user/month (est. for Gemini Business/Enterprise)	Data privacy, intellectual property concerns with cloud-based models, digital sovereignty, recurring subscription costs.

Analysis & European/Open Source Alternatives

The rapidly evolving landscape of AI and Large Language Models (LLMs) presents both immense opportunities and significant challenges, particularly concerning data privacy and digital sovereignty. Relying on US-owned cloud-based LLM services raises concerns about data residency, intellectual property leakage, and potential foreign access to sensitive information.

- European LLM Alternatives: Mistral Al (France/EU) is a prominent European developer of LLMs, offering a potential cloud-based alternative with a stronger focus on European data protection standards. Utilizing European providers helps ensure that data processing adheres to GDPR and other regional regulations.
- Local Deployment of Open-Source LLMs: A highly strategic alternative involves deploying open-source LLMs locally, such as Llama 2 (developed by Meta, but open-source and deployable locally) or Falcon LLM (from UAE, open-source and deployable locally). This approach offers significant privacy and data protection benefits, as sensitive data remains entirely within the organization's control and infrastructure. However, it typically requires substantial hardware resources for optimal performance, including powerful GPUs and ample RAM, which translates to higher upfront infrastructure investment and specialized expertise for deployment and maintenance.

Alternative Product Name	Type (EU/Open Source/Local)	Key Benefits (Sovereignty/Privacy/Cost/Control)	Migration Considerations (Hardware, Integration, Expertise)	Est. Annual Cost (Alternative) / Savings Potential
Mistral Al	EU / Commercial	Enhanced data privacy (EU-based), potentially better GDPR compliance, reduced dependency on US tech.	Integration with existing workflows, potential retraining of models, API integration.	Varies by usage/subscription (est. similar to US commercial LLMs) / Potential for better data control.

Alternative Product Name	Type (EU/Open Source/Local)	Key Benefits (Sovereignty/Privacy/Cost/Control)	Migration Considerations (Hardware, Integration, Expertise)	Est. Annual Cost (Alternative) / Savings Potential
			Commercial subscription costs.	
Llama 2 (locally deployed)	Open Source / Local	Full digital sovereignty, maximum data privacy, no recurring per-user software costs, customizability.	High upfront hardware investment (GPUs, RAM), specialized expertise for deployment and finetuning, integration challenges.	Free (software) + High hardware costs (est. \$5,000 - \$20,000+ per server) / Significant long- term software cost savings.
Falcon LLM (locally deployed)	Open Source / Local	Full digital sovereignty, maximum data privacy, no recurring per-user software costs, customizability.	High upfront hardware investment (GPUs, RAM), specialized expertise for deployment and finetuning, integration challenges.	Free (software) + High hardware costs (est. \$5,000 - \$20,000+ per server) / Significant long- term software cost savings.

- 1. Conduct a strategic assessment to determine the appropriate balance between cloud-based European LLMs (e.g., Mistral AI) and local deployment of open-source LLMs (e.g., Llama 2, Falcon) based on data sensitivity, performance requirements, and available budget.
- 2. Prioritize local deployment for highly sensitive data and core business intelligence where data sovereignty is paramount, budgeting for necessary hardware infrastructure and specialized talent.
- 3. Utilize Licenseware NEO AI to model the cost-benefit analysis of different LLM deployment strategies, comparing not only licensing costs but also hardware, energy consumption, and the value of enhanced data control and intellectual property protection. NEO AI can also assist in evaluating the functional parity and integration complexity of various LLM options.
- 4. Invest in training internal teams on open-source LLM management and fine-tuning to build inhouse expertise and reduce external vendor dependency.

Potential Strategic Benefits & Cost Savings: Maximum digital sovereignty and data protection for AI initiatives, elimination of recurring per-user subscription costs for cloud LLMs, and the ability to customize AI models to specific organizational needs.

✓ Corporate Software Environment Hygiene

Analysis of Non-Standard, US-Owned, and Potentially Unproductive Software

The inventory data reveals numerous instances of software that can be categorized as bloatware, consumer apps, OEM utilities, or general unmanaged freeware/shareware. While individually these might seem insignificant, collectively they pose risks including security vulnerabilities, performance degradation, and shadow IT concerns, as well as potential for unmanaged data sprawl. Identifying and rationalizing this software is crucial for maintaining a clean, secure, and efficient corporate environment.

Application Category	Product Name	Count	Analysis & Risk	Recommendation (Removal/Migration to Alternative)
IT Management Software	Dell SupportAssist	38638	OEM utility, potential for data collection by Dell, unnecessary for centralized IT management.	Removal or configuration to minimize data sharing. Centralized IT management tools should handle system health.
IT Infrastructure Software	Intel Graphics Command Center	35977	OEM utility, consumer-oriented graphics control, likely unnecessary for most corporate users.	Removal for most users, retention only for specific graphic-intensive roles.
Security Software	TeamViewer Host	31266	US-owned remote access software. While legitimate, often used for unauthorized access if not tightly controlled. Data privacy and control concerns.	Evaluate necessity. If remote access is required, migrate to a centrally managed, EU-based, or open-source solution with robust security controls.
Development Software	Don Ho Notepad++	2818, 51, 28	Open-source (good), but unmanaged installations can bypass corporate standards.	Standardize deployment via central IT, ensure security patches, explore enterprise features of alternatives if needed.
Media and Entertainment	VideoLAN VLC	14674, 13512,	Open-source (good), but unmanaged	Standardize deployment via central IT, ensure regular

Application Category	Product Name	Count	Analysis & Risk	Recommendation (Removal/Migration to Alternative)
Software		13	installations can lead to outdated versions with security vulnerabilities.	updates and security patches.
Office Software	pdfforge PDFCreator	5258, 882, 34, 17, 4, 3, 1	EU/Open Source alternative (good), but unmanaged installations can lead to varied versions and lack of centralized support.	Standardize deployment and configuration through IT, ensure all users benefit from the EU/Open Source solution.
IT Infrastructure Software	Nmap Npcap	52597	US-owned network packet capture library. While essential for network security, unmanaged installations could pose risks.	Ensure installations are limited to authorized IT/security personnel and centrally managed/monitored. Evaluate EU alternatives for network monitoring where possible.
Development Software	Git	474, 10	Open-source version control (good), but unmanaged installations can lead to security gaps or unapproved workflows.	Standardize deployment, integrate with secure enterprise version control systems, ensure regular updates.
Office Software	Zhorn Software Caffeine	81, 4	Small utility, often installed by users to prevent screen sleep. Can bypass corporate power management policies.	Assess legitimate use cases, implement alternative IT-managed power settings, or provide approved alternatives.
File Compression Software	Corel WinZip	72, 18, 1	US-owned, proprietary file compression tool. Commercial cost.	Migrate to open-source alternatives like 7-Zip (Open Source) for cost savings and digital sovereignty.

Licenseware SIM is crucial for maintaining corporate software hygiene. Its ability to categorize and identify these non-standard or potentially unproductive software installations by vendor, product type,

and usage patterns allows for targeted cleanup efforts, ensuring that only approved and necessary software is present within the environment, or that open-source/European alternatives are properly managed.

Oracle Java Licensing Risk & Open Source Migration

Current Landscape

The inventory data shows a mix of Oracle Java SE Development Kit installations and various OpenJDK distributions (Amazon Corretto, Eclipse Foundation OpenJDK, Azul Systems Zulu, BellSoft Liberica JDK, Perforce OpenJDK). This mixed environment indicates an awareness of alternatives but also highlights potential ongoing licensing risks with Oracle Java SE if used for commercial purposes.

Product Name	Count	Est. Annual Cost (US)	Strategic Rationale for Migration
Oracle Java SE Development Kit 20	1709	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java SE Development Kit 18	1036	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java SE Development Kit 8	818	\$2.50 per employee/month or per processor (commercial use, if actively used)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java SE Development Kit 11	164	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java SE Development Kit 16	156	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java SE Development Kit 17	107	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java SE Development Kit 22	842, 59	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java SE Development Kit 19	23	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.

Product Name	Count	Est. Annual Cost (US)	Strategic Rationale for Migration
Oracle Java SE Development Kit 15	27	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java SE Development Kit 13	18	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java SE Development Kit 1.4 Standard	7	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.
Oracle Java Development Kit 12 Standard	842	\$2.50 per employee/month or per processor (commercial use)	High licensing costs, complex licensing models, vendor lock-in, audit risk.

Analysis

The presence of various Oracle Java SE Development Kit versions in the inventory indicates a significant potential licensing risk. Oracle's Java SE licensing model, particularly the per-employee metric for commercial use, can lead to substantial and often unexpected costs. This risk stems from any use of Oracle Java SE for general-purpose computing or internal business operations, regardless of how the software was initially obtained. Even if some installations are historical or for specific niche applications, any commercial use could trigger an audit and significant back-fees.

OpenJDK distributions, such as Amazon Corretto, Eclipse Temurin, and Azul Zulu, provide robust, widely adopted, and actively maintained open-source alternatives. These distributions are fully compatible with the Java SE standard and are generally free for all uses, eliminating the licensing exposure and audit risk associated with Oracle Java SE. Many organizations globally have successfully transitioned to OpenJDK to mitigate these risks.

Immediate Action Required

- 1. Conduct a comprehensive audit of all Oracle Java SE installations to confirm usage scenarios and identify potential commercial use.
- 2. Immediately transition all commercial deployments of Oracle Java SE to a chosen OpenJDK distribution (e.g., Amazon Corretto, Eclipse Temurin, or Azul Zulu).
- 3. Implement a clear policy for future Java installations, mandating the use of OpenJDK distributions for all new projects and deployments.
- 4. Remove all instances of older, unsupported Java versions to reduce security vulnerabilities and simplify the environment.
- 5. Leverage the Licenseware Oracle Java Deployment Manager (OJDM) to conduct definitive discovery of Oracle Java SE installations and to validate the successful migration to OpenJDK distributions. OJDM provides precise data to assess licensing compliance and track the transition progress.

Potential Strategic Benefits & Cost Savings: Elimination of Oracle Java SE licensing costs and audit risks, full control over Java deployments, and alignment with open-source principles for long-term sustainability.

Adobe Creative Cloud Licensing Optimization & Open Source Alternatives

Current Landscape

The inventory data shows a range of Adobe Creative Cloud applications, indicating a significant investment in Adobe's proprietary design and content creation tools.

Product Name	Count	Est. Annual Cost (US)	Strategic Rationale for Migration
Adobe Photoshop CC	132, 24, 3, 1	\$251.88 per user/year (est. for single app)	High recurring subscription costs, vendor lock- in, digital sovereignty, exploring alternatives for non-power users.
Adobe Illustrator CC	129, 2	\$251.88 per user/year (est. for single app)	High recurring subscription costs, vendor lock- in, digital sovereignty, exploring alternatives for non-power users.
Adobe Creative Cloud (All Apps)	124, 2	\$599.88 per user/year (est. for All Apps plan)	High recurring subscription costs for full suite, potential for over-licensing if only few apps are used, vendor lock-in, data sovereignty.
Adobe InDesign CC	91	\$251.88 per user/year (est. for single app)	High recurring subscription costs, vendor lock- in, digital sovereignty, exploring alternatives for non-power users.
Adobe Premiere Pro	65, 15, 5, 1	\$251.88 per user/year (est. for single app)	High recurring subscription costs, vendor lock- in, digital sovereignty, exploring alternatives for non-power users.
Adobe After Effects CC	83	\$251.88 per user/year (est. for single app)	High recurring subscription costs, vendor lock- in, digital sovereignty, exploring alternatives for non-power users.

Analysis

Adobe Creative Cloud products represent a significant recurring expenditure and contribute to vendor lock-in. For many users, particularly those who only utilize a subset of the full Creative Cloud suite or require basic functionalities, the "All Apps" bundle can represent over-licensing. A critical assessment of user needs against the extensive feature sets of Adobe applications is necessary to identify opportunities for optimization and migration. Many users may not require the full power of commercial tools for their daily tasks, making them prime candidates for open-source alternatives.

Recommendation

1. **Optimize Existing Licenses:** Conduct a granular analysis of Adobe Creative Cloud usage. For users currently on the "All Apps" bundle who only consistently use one or two applications,

migrate them to single-app subscriptions to reduce costs.

2. Investigate and Pilot Open-Source Alternatives:

- For basic image manipulation and photo editing: Pilot GIMP (GNU Image Manipulation Program) (Open Source) as an alternative to Adobe Photoshop. GIMP offers robust features for raster graphics editing, sufficient for many common tasks.
- For vector graphics: Pilot Inkscape (Open Source) as an alternative to Adobe Illustrator.
 Inkscape provides powerful vector editing tools suitable for logos, illustrations, and web graphics.
- For digital painting and illustration: Explore Krita (Open Source), a professional and feature-rich digital painting program.
- For desktop publishing: Consider Scribus (Open Source) as an alternative to Adobe InDesign for creating professional layouts for publications.
- 3. **Quantify Potential Savings:** For a user currently paying \$599.88 annually for the "All Apps" bundle, migrating to open-source alternatives for their core tasks could represent a saving of nearly 100% of the software license cost. Even moving from an individual app subscription (est. \$251.88/year) to a free open-source tool offers substantial savings.
- 4. Utilize Licenseware NEO Al for its capability to analyze user requirements against open-source feature sets, providing a consultant-validated understanding of functional parity and identifying optimal migration candidates across your user base.

Potential Strategic Benefits & Cost Savings: Significant reduction in recurring Adobe Creative Cloud subscription costs, increased flexibility in tool selection, reduced vendor lock-in, and the ability to reallocate budget to other strategic initiatives.

Path to Full SAM Maturity

Achieving full Software Asset Management (SAM) maturity requires not only optimizing current software usage but also strategically planning for future technology adoption and managing the evolving software landscape. A key aspect of this is effectively integrating entitlement data for all software, both commercial and open-source, to maintain a holistic and accurate view of the entire software portfolio.

The Licenseware License and Contracts Module (LCM) is designed to be the central repository for all your software entitlement data. This includes existing commercial licenses (e.g., for remaining US-owned software) and, crucially, the contracts, subscriptions, and support agreements for newly adopted European or open-source solutions.

- **Centralized Entitlement Management:** LCM provides a single, unified view of all software entitlements, preventing over-licensing and identifying under-licensed areas.
- Open Source Support Agreements: For open-source software, while the software itself is often free, enterprise-grade support contracts are common. LCM helps manage these agreements, ensuring that you have the necessary support in place and are compliant with any associated terms.
- **Subscription Management:** For European cloud solutions or open-source distributions with paid services (e.g., managed hosting, premium features), LCM tracks these subscriptions, their renewal dates, and associated costs, allowing for proactive management and negotiation.
- Compliance and Audit Readiness: By maintaining accurate entitlement data in LCM, [Customer Name] will enhance its compliance posture and be audit-ready for both commercial vendors and the terms of open-source usage.

• Strategic Planning: Integrating this data with Licenseware SIM's discovery capabilities and NEO AI's analytical power provides a comprehensive foundation for strategic planning, allowing for informed decisions on further migrations, new technology adoption, and overall IT cost management.

Appendix: Glossary of Popular Software & Open Source Alternatives

Category	Commercial Software (US-Owned)	Open Source / EU Alternative	Key Benefit of Alternative	Migration Difficulty (Est.)
Operating Systems	Microsoft Windows	TUXEDO OS / Linux Mint / Ubuntu	Digital sovereignty, cost, security, hardware longevity.	Medium- High
Office Suites	Microsoft Office/365	LibreOffice / OnlyOffice	Cost (free), data control, strong compatibility.	Medium
Creative/Design (Image Editor)	Adobe Photoshop	GIMP	Cost (free), powerful raster editing, extensive community.	Medium
Creative/Design (Vector Graphics)	Adobe Illustrator	Inkscape	Cost (free), professional vector editing, SVG native.	Medium
Creative/Design (Digital Painting)	Adobe Photoshop (for painting)	Krita	Cost (free), specialized for digital painting, feature-rich.	Low- Medium
Creative/Design (Desktop Publishing)	Adobe InDesign	Scribus	Cost (free), professional layout, PDF export.	High
Databases	Microsoft SQL Server / Oracle Database	PostgreSQL / MariaDB	Cost (free), open standards, strong community, enterprise features.	High
Virtualization	VMware / Broadcom (VMware)	KVM / Proxmox VE	Cost (free), vendor independence, data control, flexible architecture.	High
Collaboration/Communication	Microsoft Teams /	Nextcloud Talk / Jitsi	Data privacy, self- hosting options,	Medium- High

Category	Commercial Software (US-Owned)	Open Source / EU Alternative	Key Benefit of Alternative	Migration Difficulty (Est.)
	Slack	Meet / Element (Matrix)	open standards, cost (free/subscription).	
CRM	Salesforce	SuiteCRM / ERPNext	Cost (free/open-source), customizability, data control.	High
Endpoint Management	Microsoft Intune	FOG Project (imaging) / Landscape (Ubuntu) / Headwind MDM	Cost (free/open- source), vendor independence, specialized features.	High
Project Management	Jira / Asana	Taiga / OpenProject	Cost (free/open-source), data control, customizable workflows.	Medium
Cloud Storage	Microsoft OneDrive / Google Drive	Nextcloud	Data residency, self- hosting for full control, cost (free/open-source).	Medium
Email Server	Microsoft Exchange	Postfix / Dovecot (with Roundcube)	Cost (free), open standards, data control, security.	High
Web Browser	Google Chrome / Microsoft Edge	Mozilla Firefox / Brave	Privacy, open- source, vendor independence.	Low
Search Engine	Google Search / Bing Search	Ecosia / Startpage	Privacy-focused, no tracking, European alternatives.	Very Low

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