thingsat

Outsourcing the management of your standard operating environment

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Introduction

To meet business needs and help support and grow their businesses, IT teams are under pressure to deliver more services at a faster pace than ever before.

Technical teams face significant challenges as many organisations use IT infrastructure that spans multiple operating systems and versions, numerous vendors and differing hardware configurations and management tools.

These complex environments often require large, highly skilled IT teams to handle the associated interoperability issues, complicated administration, and convoluted processes. The result is often delayed provisioning, increased downtime, and greater security and compliance risks.

Work for many is now digital and mobile, and working in digital spaces creates additional challenges for organisations. The standard operating environment needs to be reassessed as the norms of a physical workplace don't always translate to the digital world. It's hard to standardise technologies and tools when workers need to improvise solutions on the fly and have access to lots of download options.

Outdated approaches to infrastructure design, management, and operation can prevent IT teams from effectively and efficiently delivering the services a business needs. A standard operating environment (SOE) lets you simplify and modernise your infrastructure and operations for reduced costs, higher uptime, and improved flexibility, security, and productivity.

On the resource side, SOE work is up and down. If you have a dedicated SOE team, you may find they are busy at some points and not utilised at others- a cost many businesses cannot afford.

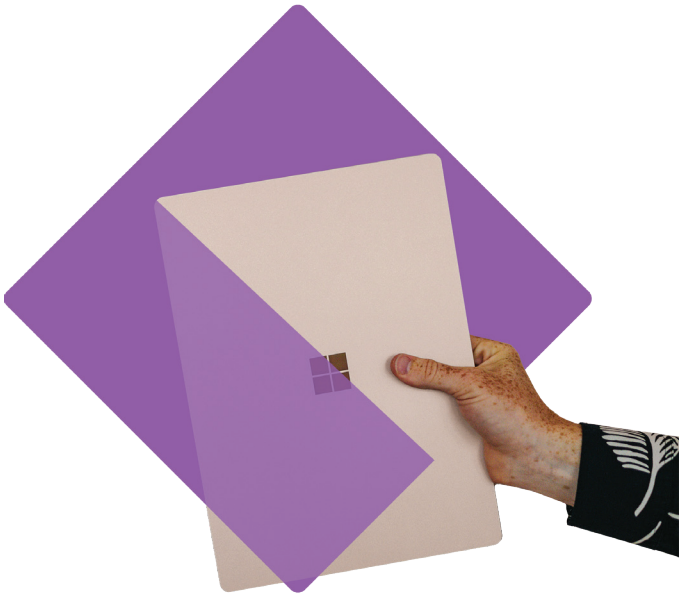
Outsourcing the management of your operating environment is the future of efficient, effective IT. When you outsource SOE to a third party, they manage it for you, and the service they provide is often referred to as a Managed Operating Environment or MOE. While an organisation internally could build their own MOE, the level of specialised expertise makes this uneconomical to do. Service providers can operate at scale affording them the ability to invest in these specialised skills.

What is OS, SOE, and MOE?

The operating system (OS), its standard configuration, complimentary service packs, common apps, and their associated upgrades are all common components of a standard operating environment.

The Standard Operating Environment (SOE) is a specification for standards for computer hardware, operating system, security, and applications software that a company's IT team defines as the standard build. Workstations, notebook PCs, and mobile devices such as smartphones and tablets may all have their own standard operating environments.

A Managed Operating Environment (MOE), is an adaptable and dynamic environment managed by a third party and able to grow and change with an organisation's hardware and software needs. It allows user-level customisation without affecting the integrity of the environment 'business operations.'



More about MOE

A Managed Operating Environment (MOE) refers to a type of IT infrastructure that is managed by a third-party provider, usually an IT service provider, and is designed to meet specific business requirements. It is a standardised, centrally managed IT environment that is typically used by larger organisations to support business operations.

A MOE typically includes a suite of standard software applications, operating systems, and hardware configurations that are preconfigured and tested to work together seamlessly. The environment is designed to be highly available, secure, and scalable to meet the changing needs of the business.

In a MOE, the third-party provider is responsible for managing and maintaining the infrastructure, including system updates, patches, backups, and security, while the customer organisation is responsible for managing their data and applications within the environment.

A MOE can deliver significant benefits, including cost savings, improved reliability, increased security, and reduced complexity. However, it is important to carefully evaluate the potential risks and benefits before implementing a MOE to ensure that it aligns with the organisation's strategic objectives and requirements.

MOE - Internal or outsource?

While a MOE is typically managed by an external party, it is possible for a company to create and manage its own MOE internally. However, creating and managing a MOE requires significant expertise, resources, and ongoing maintenance, which can be challenging for most businesses.

An external provider that specialises in managing MOEs can bring a wealth of expertise, experience, and resources to the table, allowing companies to benefit from economies of scale and best practices. Additionally, outsourcing the management of the MOE can free up internal IT resources to focus on other strategic initiatives and core business operations.

Ultimately, whether an organisation chooses to create and manage its own MOE or outsource the management to an external provider depends on factors such as the company's size, budget, expertise, and strategic objectives.

ThingsAt Device Maturity Model

Level 5

Device provisioning and ordering is integrated into staff systems to automate all workflows. Strong security culture exists with executive visibility of compliance and actions.

Level 4

MOE has been deployed to automate device deployment.

Patching and compliance is proactively managed and automated with review of non compliance.

Level 3

SOE has been implemented for consistent device provisioning.

Policies exist and patching is managed through SCCM and compliance reports are generated.

Level 2

Checklist of applications and configuration but still done manually.

Some security policies such as password etc. Some patching and management procedures existing but no management.

Level 1

Manual Procurement of device and configuration of each device.

Reactive security measures, patching and no formal policies.

SOE - Internal or outsource?

SOE requires a highly specialised set of skills and expertise, and good SOE managers are a scarce resource.

With an in-house SOE function, the standard practice is to have a limited device range, limited systems and usually a limit of one device vendor. Whilst internally this makes management a simpler task, it places constraints on the organisation.

> ***SOE takes significant effort to get right and keep right.***
>
> Ruy Franco, ThingsAt CEO

It's not easy to enforce a set of standards in a completely airtight way, especially in large scale environments. The deeper the SOE definition, the more hands-on effort is required to test, select, and maintain the standard, the broader the extent of the SOE, extends the work required further.

You need the people to plan and implement the program, as well as those to manage it as a regular ongoing function, the test facilities, and technically skilled people to conduct product testing, the Network Management Tools such as software distribution technology and the time and skills to manage the vendors.

Working with an external partner provides companies with access to more vendors and experience, allowing organisations to have mixed vendor fleets if they choose to. A mixed fleet can bring ancillary benefits with it, primarily because when you create a competitive environment you can drive better commercial, technical, and business outcomes.

Benefits of SOE outsource

The benefits of outsourcing SOE are well-documented and proven.

More effective automation as a standard outsourced solution facilitates the maintenance of the software environment and fosters speed and replication by allowing process automation to deploy software on workstations and help eliminate error-prone manual tasks.

Greater exposure to a range of vendors and devices from the outsourced provider enables greater flexibility in device choice should the enterprise need it.

Better business efficiency by outsourcing the management of provisioning, configuration, software patching and other upgrades- reducing the cost and time associated with deployment, maintenance, and support of workstations.

Outcome-based contracts ensure that the enterprise can achieve the required performance for a fixed fee during the contract length. This mitigates the increasing cost of staff year on year and removes the need to train staff to ensure that they are skilled in the latest resources and security needs.

Enhanced governance, compliance, and security because third party management makes it easy to identify when something is out of place. MOE eliminates manual load, enhances compliance and management, and improves the overall security of the organisation's IT systems and applications.

Ability to integrate SOE delivery and security testing without the need to have both skills in house.

Considerations for outsourcing MOE

Deciding when to outsource certain IT functions can be complex and dependant on several factors:

Cost Efficiency

Can a provider deliver a service at a reduced cost, often through the leverage of scale of aggregated customer demand?

Expertise

Is the function a specialist area that is not just hard to recruit for but requires ongoing training investment in people's skills?

Scalability

How scalable up or down is an internal solution vs a provider?

Risk Management

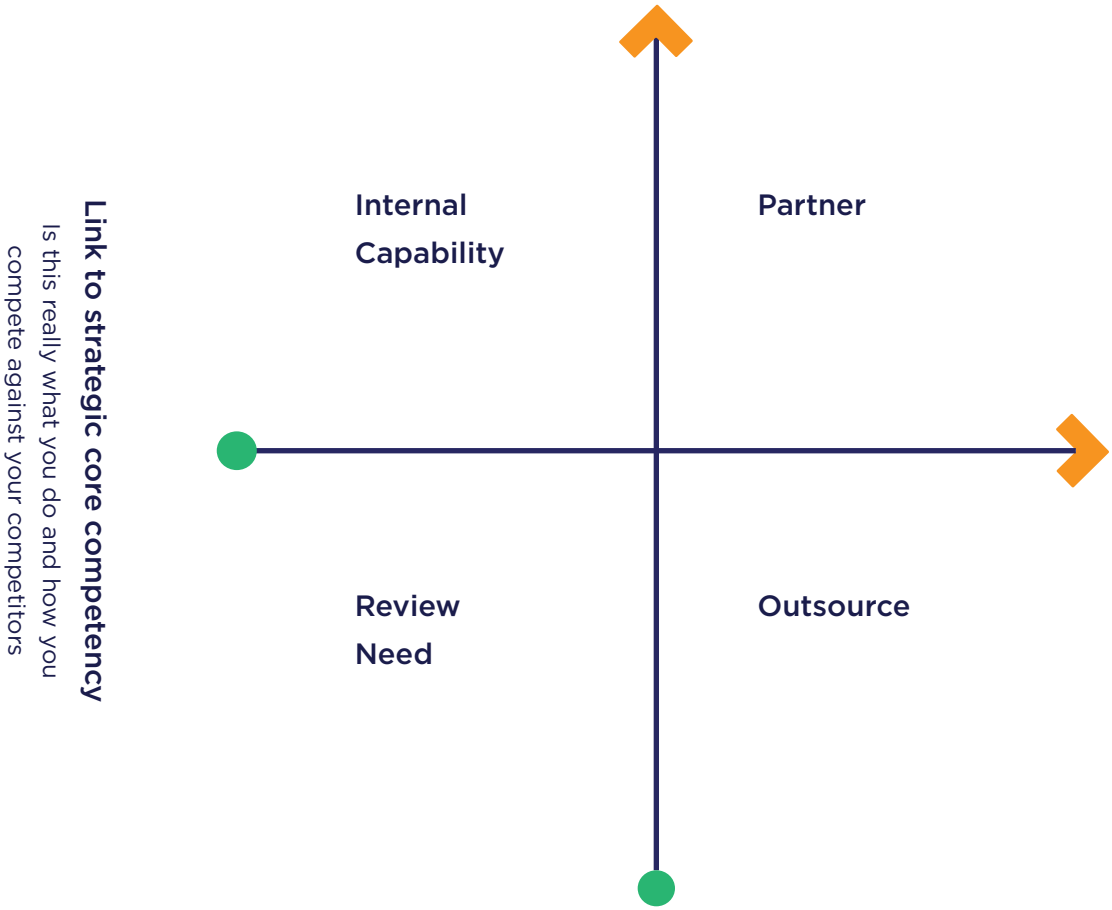
Often customers are more objective to the risks when they are not delivering the function themselves, and therefore pay closer attention to the findings.

Strategic Focus

This is the critical factor, for most businesses, running application packing and SOE management is not core to how they compete in the market. Should this be a distraction?

Strategic Focus Quadrant

When you compare an IT function in this model, the function can be plotted against the two axes. This helps you to determine whether to invest internally into this capability, or simply find a partner or outsourced provider to do the work.



When considering outsourcing a function like SOE, a reasonable comparison example is doing your tax, any bookkeeper or accountant knows tax – however you go to a specialist tax accountant for your tax because it's what they do and arguably better than you could internally.

The top questions to ask which will help you determine if your business is a suitable candidate for outsourcing the management of your operating environment:

- Is this core to how you differentiate yourselves in the market to win customers?
- Do you have specific, deep expertise in SOE?
- Do you know if you getting the best outcome from managing SOE in-house?
- Can you benchmark your SOE performance?
- Do you have your devices configured with a common configuration, and is it aligned with industry best practice?
- Do you have a quantitative number that tells you how your SOE is performing and whether your team is doing a good job?
- Considering compliance and governance, is everything up to date with licensing etc?

If your business has a SOE team, they may be limited to the exposure of the device and systems that are in that business, they are probably busy at some points and then not utilised at other points because SOE work is up and down.

Outline of SOE management options

On-premises

Do your staff need to wait for new or replacement machines to be delivered to IT, unpacked, loaded with software then redelivered before they can do any work?

Likely this is either due to IT manually installing software, or the software delivery system is based on SCCM, Microsoft's on-premises platform for software delivery and management. SCCM has been around since 2007, is designed in part to run on local infrastructure with slow site to site links and works well in this scenario.

If you are running on-premises SOE, you are likely facing risks or issues that require mitigation, such as:

Flexibility Risk

On-premises SOE infrastructure lacks flexibility in terms of accessing resources from outside the organization, which can make it challenging to adapt to changing business requirements. Intune is available to any compatible Windows, Android or MacOS device with an internet connection, allowing a Managed Operating Environment (MOE) to be delivered wherever your users are delivering value, not just when in the office.

Scalability Risk

On-premises infrastructure has limited scalability, and manually installing software limits the ability to handle sudden growth or changes in the organisation's needs. ThingsAt can package and deliver software to your workstation fleet as it grows. Considerations include internet speeds available to your workstations, however the other traditional issues that are associated with on-premises infrastructure (Server Disk space/CPU/RAM) are not an issue with Intune, as this is part of the service.

Cost

Setting up and maintaining an on-premises infrastructure for SOE management can be costly, as organisations need to invest in hardware, software, and IT staff. Migrating to a based hybrid or cloud solution reduces this exposure, and ThingsAt can provide this at a set monthly price per machine. Achieving significant savings in Server Licences and hardware.

Security Risks

On-premises infrastructure requires significant efforts to maintain the security of the environment. Moving to cloud infrastructure with ThingsAt allows you to reduce your exposure, by automating patch management for your workstations and allowing for lost/stolen workstations to have user data deleted.

Maintenance and Upgrades

Maintaining an on-premises infrastructure for SOE management can be time-consuming, as it requires constant maintenance and upgrades to keep it up to date.

Dependency on IT Staff

On-premises infrastructure requires a skilled team of IT staff to manage and maintain it, which can make organisations dependent on them.

Hybrid

Hybrid refers to a combination of on-premises and cloud workstation management tools and may be appropriate dependent on your organisation's unique situation. If you are looking to move to a full cloud solution or move along your journey to a hybrid MOE but are unsure of the risks, your environment can be assessed, and you would be advised of the risks and how to migrate your environment via the following process:

1. Review prerequisites for Azure and your on-premises environment

a. Confirm your existing and required licencing requirements.

b. Confirm your existing and required access requirements.

c. Confirm your existing and recommended configuration (infrastructure and endpoints).

2. Set up hybrid Azure AD

a. Integrate on-premises AD with Azure AD, using Azure AD Connect and Active Directory Federated Services (ADFS). With successful configuration, your staff can seamlessly sign into internal and external systems using their on-premises AD credentials.

3. Configure workstations to register and be managed with hybrid.

4. Enable co-management so devices can be configured by both cloud and legacy toolsets.

5. Package and deploy Applications and settings via hybrid system as per agreed setup.

Cloud Azure AD *What does the Cloud offer?*

Moving to Cloud Azure AD brings a host of services including Microsoft's Intune service with Autopilot, along with Azure Active Directory. This delivers secured access to your organisation's resources, wherever your user may be at the time. This allows the shift from the traditional application packaging (SOE) where a package is designed for a specific device, to a MOE where a computer can be customised remotely and automatically to apply to a business' policies and applications without needing to load a full image. This is substantially faster and allows the flexibility to have varying device types and even BYOD devices can be enrolled to the business' systems. It also removes any link back to the office for user logins and filesharing supporting hybrid workplaces.

Autopilot

Autopilot allows new Windows machines to be delivered straight to your users, ready for them to logon. Working with hardware partners, a SOE provider ensures that when a workstation is on its way to your user, the unique ID of the machine is linked to your organisation. This way the workstation can be delivered directly to the end user, with no need for IT staff to be involved – the machine is ready for the user to logon as soon as it has internet access. Limitations are that Autopilot is not compatible with MacOS currently.

Intune

Intune provides the Managed Operating Environment over the internet via a native windows client, or a user-downloadable client for MacOS, and allows the following to remotely occur:

- Application delivery: package and deliver software to Windows and MacOS managed devices.
- Configuration Policies: recommended configuration sets for MOE services, allowing for collaboration with your IT security team to provide a standard set of controls, much like Group Policy can do for Hybrid and on-premises setups.
- Software Updates: partially, or fully automate Windows OS and Office 365 patching to minimise your security exposure. Microsoft's Automatic Patching with reporting may incur additional licencing costs however this can be advised in advance along with recommendations.

Azure AD

This is a cloud version of Active Directory, the tool that allow both users to logon not only to Windows, but also into company applications that require the user to logon with their work email.

Are you ready to outsource the management of your operating environment?

With any IT outsource, there are issues you need to keep in mind:

Security issues

Outsourcing IT services will undoubtedly involve sharing your database and business information with a third party. There is always the risk of sensitive information being leaked or hacked. Double-check the trustworthiness of outsourcing firms before signing them on. Hire a reputable provider that has sufficient experience, skill, and reputation in the industry (like us).

Quality issues

When your in-house team works on a project, you will have a fair idea of how it will eventually turn out. However, it may not be possible to predict this when you outsource a project. If your SOE experience is limited, it could be difficult to evaluate the performance of the third party. To overcome this potential issue, make quality assurance a part of the contract, and define the expected outcomes clearly.

Unexpected costs

If you need to revise some guidelines or project scopes after your service provider has begun work on the project, your expenses can go up. To avoid this, make sure you define the scope of the project or service and ensure everything is included. If it is a long-term contract, you could use a retainer model, where you pay a fixed monthly or yearly fee irrespective of the individual tasks.

Adverse effect on company culture

Sometimes, outsourcing tasks to an external provider can make your in-house team members insecure about their job, leading to reduced motivation and productivity. In case the outsourced team gets paid more than your permanent employees, it can create discontent within the company. Address any such issues sensitively and take your in-house employees into confidence and assure them of their job safety- and get them working on tasks that will grow your business and give them greater job satisfaction.

High level business case for outsourcing SOE

The business case for outsourcing the management of your SOE to a specialist provider may be based on one or a few of the following:

- Reduce costs to provide application packaging and compliance.
- Improve performance and employee experience through access to expertise not usually found internally.
- Scalability to manage work demand cycles for patching or urgent security risks including capability to react to business needs faster.
- Improve risk management by automating a lot of the work and having management focus on the objective review of outcomes, not staffing issues.
- Improve focus in the business by keeping limited internal resources focussed on what is key to compete not IT issues.

Improve reliability

If business continuity is the prime area of interest, an outsourced SOE can improve service reliability and extend available service times.

Organisations are encouraged to seek funding offsets in aspects such as the prevention of downtime; more consistent service quality; reduced stress for users; and better end service to customers. An organisations risk management policy and plans may offer a means to quantify these further.

Streamline deployment

If an organisation needs to achieve infrastructure changes quickly, the adoption of known standards can speed up planning and implementation times for deployment projects. Organisations should find there are savings through the shortening of project execution times and thereby receiving benefits earlier. Additionally, external help can be engaged, and you can scale up or down as your business needs change.

Better utilisation of resources

Internal SOE, not fully utilised? Paying too much senior person or junior not experienced enough to run the program properly SOE can be outsourced with a results-based solution. As a function, SOE does not lead to your competitive advantage- it is just something to get your computers working best as possible.

Reduced costs

An SOE requires some up-front costs which are recouped through efficiencies and economies of scale. The financial case can be modelled, for an organisation according to its requirements. A discounted cash flow analysis technique is recommended since the implementation options are likely to extent over various time periods. The most convincing financial case exists when there are few standards and many deployed sites. For organisations with many sites, the net benefit is stronger and is realised earlier.

Conclusion

The workplace is no longer the place where workers go to work. This fact alone is reason to assess support and services across the entire organisation and carefully examine where the most value is to be gained based on current activities and costs. The proliferation of devices per user, the rise of remote work and the shift of where work now lives creates an even greater headache for IT that can be well addressed by outsourcing device fleet management to a provider that can handle everything including the SOE.

SOE is part of the ThingsAt Device as a Service model. With a depth of end user computing advisory and professional services experience, our detailed value assessment phase allows us to build the plan of what needs to be done including documentation of a strategy and service guides so that everyone knows who does what. ThingsAt manages MOE fleets at all steps in the cloud migration journey, so we can deliver solutions based on on-premises SCCM, hybrid and pure cloud solutions.

The value creation stage is where we use our internal project management skills to help run the actions that need to occur to deliver the solution which includes SOE management and development and factory SOE build and configuration. This reduces the number of applications to the user needs to optionally install, and configuration can be optimised to target the right device for each user and assign applications prior to the user receiving the device.

ThingsAt can help you migrate software delivery and security controls to a based hybrid or cloud solution, utilising Microsoft Endpoint Manager (Intune) and AutoPilot.

All data and profile migration information can be implemented so the user has access to all the information they need from sign in. ThingsAt also provides a ‘white glove’ service to assist with user adoption and enable them to be more productive more quickly.

ThingsAt has experience dealing with mixed fleets of Windows and MacOS devices, allowing us to work with you to deliver the hardware and software that provides the results your organisation desires.
At ThingsAt, we have deep SOE expertise- it’s our day job. We can do SOE work over the top of existing laptops. We don't need to wait until they are in the cycle. And importantly, if you don’t have a benchmark for performance, we can benchmark an expected outcome for you and show you an improved performance over time.

We take the time to understand your business needs and current environment and work collaboratively with our clients to ensure we deliver the outcomes your business requires from outsourcing your SOE function, regardless of how it is currently implemented.

Read more about the ThingsAt Device as a Service solution and the benefits it can deliver your business https://thingsat.com/daas/

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