WHITEPAPER

SaaS delivery for WMS

ROI and business case considerations

infios
a Körber company

Introduction

The shift to Software as a Service (SaaS) has been under way for several years across the IT industry. And it has now become the prevalent delivery model for supply chain solutions—including Warehouse Management Solutions (WMS).

In an SaaS delivery model, a vendor provides web-based access to applications, through a subscription pricing model.

The vendor takes responsibility for delivering the solution as a complete service: the WMS application, the underlying system hard- and software, system maintenance, updates, backups, support and IT security. This eliminates the need for customers to buy, deploy, maintain and support both the IT infrastructure and the WMS application. Which, in turn, saves the customers significant upfront deployment costs and the need to operate the solution on an ongoing basis.

Software as a Service (SaaS)

So, why has the move to the SaaS delivery of WMS software intensified? This is largely due to:

- growing pressure to reduce cost, in particular capital expenditures, in both IT and supply chain departments.
- a mandate to maximize the reliability and availability of the WMS, due to the mission-critical role of high-performing warehouse operations in the overall supply chain.
- the need for more scalability and agility, as warehouses need to adapt to changing business needs in a highly dynamic—and sometimes disruptive—environment.

There are currently two common deployment models for WMS: self-hosted by the customer (on-premises or in the cloud); and SaaS.

The below table clarifies the responsibilities associated with sourcing and operating a WMS in each deployment model.

	Customer-hosted WMS		SaaS-delivered WMS
	On-premises	Data center	
IT infrastructure—hardware and software	Customer	Customer (outsourced to provider)	WMS vendor
Infrastructure maintenance, upgrades and backups	Customer		WMS vendor
IT operations and support	Customer		WMS vendor
WMS license	Customer	Customer	WMS vendor
WMS maintenance and support	Customer	Customer	WMS vendor

When evaluating WMS providers and choosing a deployment model, it is imperative to understand the resulting total cost of ownership (TCO). The scrutiny of new technology projects has never been higher and building a complete business case to justify an investment in supply chain management technology has never been more crucial.

Assessing the total cost of ownership (TCO)

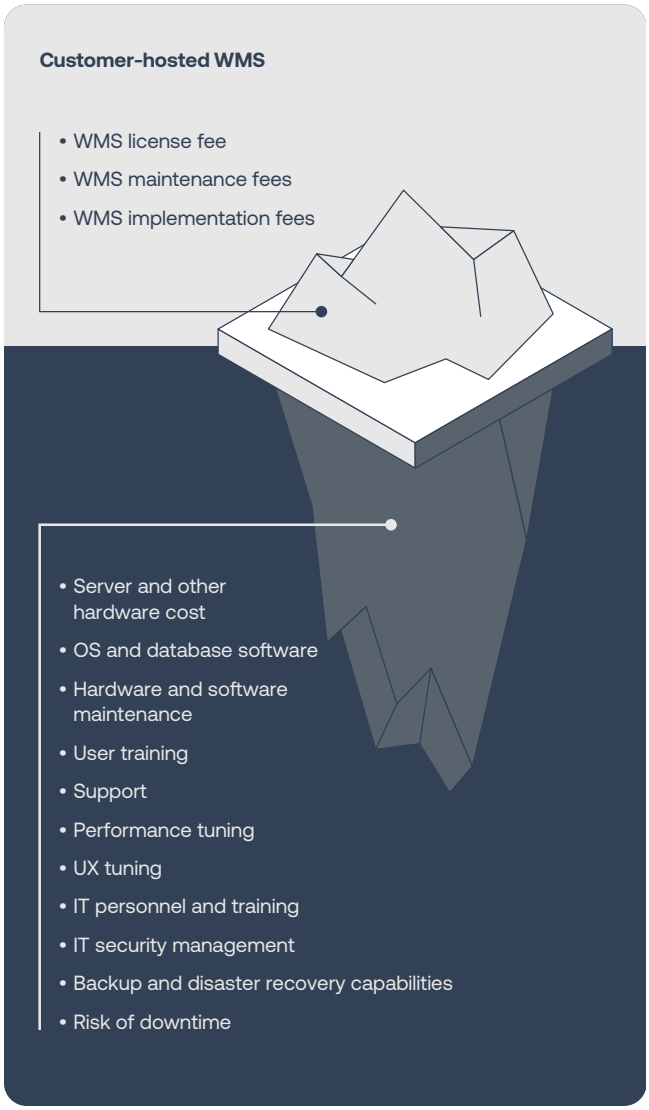
When first evaluating SaaS, many businesses find that the cost of the recurring SaaS fees over several years seems high compared to the one-time cost of a WMS license and the associated software maintenance.

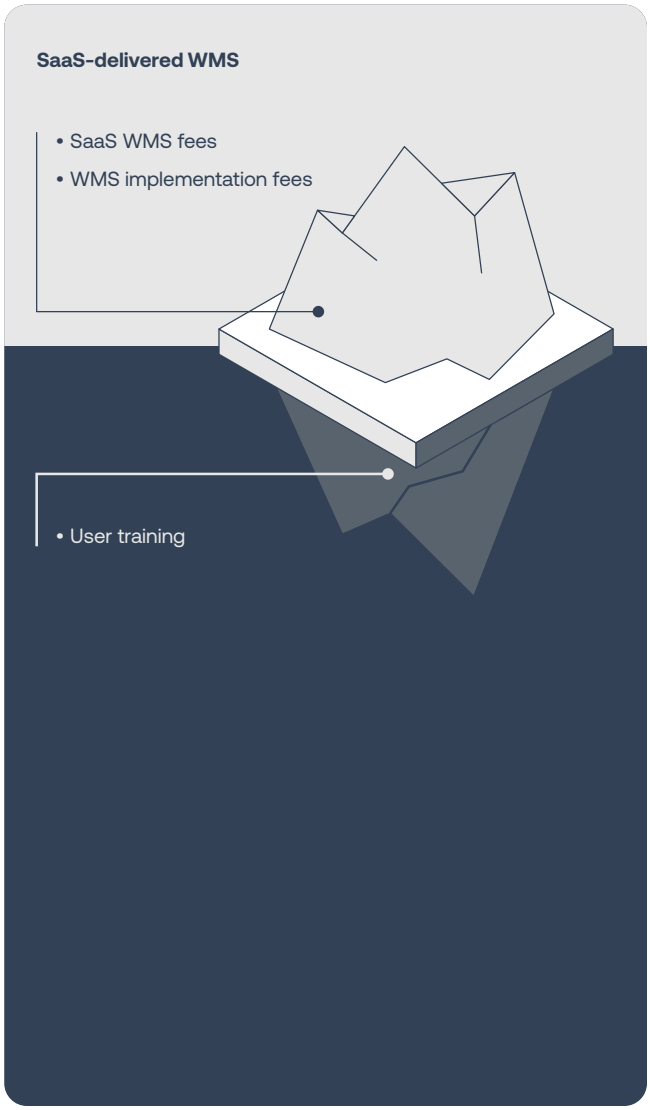
However, this first impression is usually misleading, as it does not take into account the total cost of purchasing and operating the WMS for years to come.

This approach has also been compared to looking only at the tip of the iceberg (the WMS license and maintenance), while missing the bulk of the cost that is hidden underneath the surface (the operating cost components that are not immediately obvious).

Just the tip of the TCO?

At first glance, an on-premises WMS can appear to be a more economical approach. But the less obvious costs associated with purchasing, deploying and operating the WMS can add up.





Once all cost categories are taken into account, most companies find that SaaS does indeed carry a significantly lower TCO. Often, the annual cost of software maintenance and ongoing operations is several times higher than the cost of the software license itself.

With an SaaS WMS, it's also possible to avoid the capital expenditure (CapEx) that would have been associated with a WMS hosted on-premises. In this way, an SaaS WMS can support the kind of operating expenses (OpEx) model that many finance departments are starting to mandate. OpEx appeals because the stable, predictable monthly fees simplify financial planning; also the operational expenses are fully tax deductible in the same year they are incurred. Capital expenses on the other hand, need to be depreciated and deducted over multiple years.

Removing the IT requirement. Empowering the supply chain team.

The immediate benefit of switching to an SaaS-based WMS is that it removes the need to purchase and maintain the IT infrastructure. But it has other significant benefits that contribute to TCO, directly or indirectly.

It also frees up valuable IT personnel who can be applied to other business areas. The operation of supply chain software solutions has become increasingly complex over the last decade and requires highly skilled employees.

Many businesses find they cannot hire and retain enough qualified IT professionals or that doing so is prohibitively expensive.

Apart from the immediate cost and resource benefits, supply chain teams typically find that an SaaS-based WMS increases the flexibility and agility of their operations:

- WMS capacity is highly scalable and typically combined with a usage-based fee structure. Both capacity and pricing flex up and down with changing business needs and seasonal peaks. For on-premises WMS, IT needs to maintain system capacity for peak seasons, which sits unused during off-peak times.
- Time-to-deployment is shorter. SaaS-based WMS can be provisioned and launched in less time than an on-premises WMS. The IT infrastructure is included in the SaaS delivery, and the vendor has developed robust, optimized rollout processes for the WMS application.
- The customer's personnel retains full access to the WMS application and its data, and can connect to it from anywhere they have internet access. This is especially beneficial for WMS installations with multiple sites.

Reducing the risk of downtime

For many businesses, their supply chain and the warehouses in it have become mission critical. A WMS outage, or even reduced WMS performance, means that orders cannot be processed on time, shipments are delayed and service level agreements (SLAs) missed. All of this carries a significant monetary risk and can cause long-term damage to customer satisfaction and loyalty.

Today's enterprise WMS offer a wealth of functionality and have, by extension, become complex software solutions. So has their operation—both in terms of IT operations and WMS applications maintenance.

SaaS-based WMS are delivered through the cloud, and vendors have developed specialized cloud and IT operations with strict governance processes. This ensures that the SaaS platform—the underlying cloud, as well as the WMS applications and their data—remain healthy and performant for the long term.

This is where observability comes in. Observability tools constantly monitor the health and performance of customer systems. They go beyond traditional monitoring tools, in that they allow teams to easily find and connect the causes of issues in complex IT systems and trace them back to their cause. They also provide superior system visibility for all involved IT operations and support personnel.

Moreover, today's state-of-the-art observability tools are AI-enabled. This lets them learn what "normal" system behavior looks like and identify potential issues immediately, often proactively, before they start to impact WMS performance.

SaaS providers invest millions of dollars into complex toolchains that combine observability solutions with automated ticketing and support systems. They also employ teams of specialized IT operations and support experts that are available 24/7, to ensure that issues are revolved as fast as possible. All this increases reliability and uptime, and ensures continuous WMS performance.

In a self-hosted scenario, some of these benefits may also apply, depending on the cloud provider's service offering. However, while this scenario removes the immediate headache of owning and operating the IT infrastructure, the customer still has to operate the WMS, maintain uptime and performance, and incur the resulting risk of downtime.

In summary, most businesses self-hosting their WMS would find it difficult or downright impossible to replicate the financial investment, expertise and processes required to provide the highly reliable service delivery offered by leading SaaS WMS vendors.

Assessing and quantifying the risk of downtime, and the expense associated with mitigating this risk in a self-hosted scenario, is an important factor to include in a business case for a self-hosted or SaaS-delivered WMS.

Ensuring SaaS security

Supply chains have become increasingly digitized and interconnected with logistics partners up and down the value chain. As a result, they are more exposed to cybercrime than ever, with ransomware and phishing two of the most frequent forms of attacks.

Vendors of SaaS WMS typically run advanced IT security operations to protect customers' WMS systems. This includes extensive physical and digital measures, including security risk management, third-party software assurance and IT technology hardening. Another component is strictly enforced security policies that are usually more rigorous than those of internal IT departments.

They also maintain teams of specialized, and scarce, IT security experts.

Similar to modern IT and cloud operations, most companies self-hosting their WMS could not match the investment or expertise required to maintain a comparable level of IT security.

CONCLUSION

The resources required to build and operate an IT infrastructure to support a performant, reliable WMS are enormous.

Customers who self-host their WMS have to take on this effort themselves, while SaaS WMS delivers the solution as a complete service. This includes the WMS application and the underlying IT infrastructure, maintenance and IT security, as well as the ongoing system operation and 24/7 support.

In other words, today's SaaS WMS are about much more than simply hosting a WMS with a cloud provider. The investment and expertise required to provide this service may not be immediately obvious when evaluating an SaaS WMS.

As a result, when comparing the costs of self-hosted WMS and SaaS-based WMS, it is important to accurately assess the total cost of ownership (TCO) that takes into account all applicable cost categories.

Once businesses take this step, they typically find that the TCO of an SaaS WMS is lower than the self-hosted option. They also find that they benefit significantly from applying the freed-up resources to their core business. It allows them to streamline processes to make organizations and people more strategic, agile and focused. It also lets them position themselves for efficient growth for years to come.

infios
a Körber company