TMASYSTEMS

TO CLOUD OR NOT TO CLOUD

PUTTING THE MAINTENANCE MANAGEMENT DEBATE TO REST

An examination into the benefits of moving from an on-premise solution to a cloud-hosted solution.

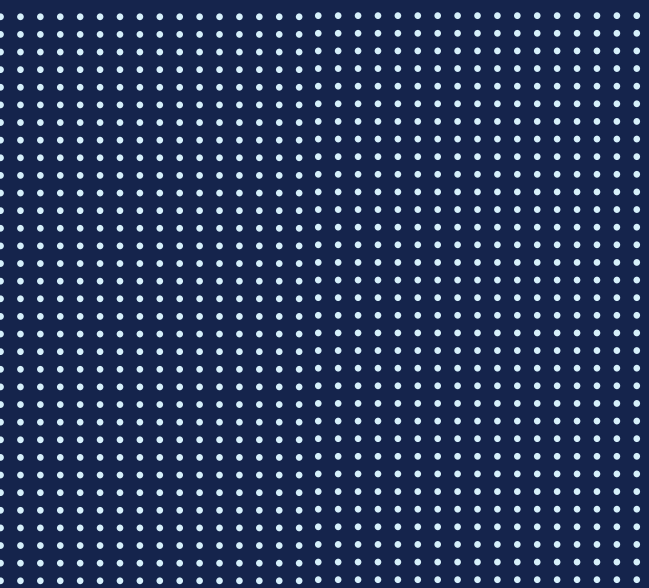
Prepared by
TMA Systems
1876 Utica Square
Third floor
Tulsa, Oklahoma 74114
918-858-6600

www.tmasystems.com

How did we get here?

Before the COVID-19 pandemic changed everything, the world was generating 41 zettabytes of data each year. That volume grew to 64.2 zettabytes in the next year and is projected to grow to 181 zettabytes by 2025.[1] This exponential growth in data volumes is forcing a shift in outlook and infrastructure of data storage across industries. The same study also pointed that the installed base of data (the amount of data that is in use) storage is forecasted to grow at a CAGR of 19.2% between 2020 and 2025.

To stay abreast of this deluge of data, enterprises must ask two crucial questions: how to best compute this data and where to store it. For businesses, everything – from inventory management to equipment and facility health and last-mile logistics – is data. As can be imagined, even a single facility can generate overwhelming volumes of data. Enterprises have traditionally relied on on-premise data storage and computation. But the changing times, organizational needs, and technological evolution are slowly but surely revealing the cloud imperative.



Moving Maintenance Management to the Cloud: A No-Brainer

The growing data volumes present an opportunity to facility asset owners to venture beyond traditional maintenance strategies. And more enterprises are realizing the importance of data in improving the maintenance decision-making process. McKinsey expects 43 billion IoT (internet of things)-connected equipment to be in use across facilities by 2023.[2] And while on-premise infrastructure to store and compute this data is still a fairly feasible approach, it may not be enough in the near future.

A major concern for enterprises is the security of on-premise systems. Upgrading and patching hardware to remain compliant is one of the key activities performed by in-house IT teams. However, it is time consuming, tedious, and susceptible to cyber threats. Cloud can help enterprises install more secure and compliant hardware without the issue of a lock in due investments made in the past.

Cloud Storage Costs Dip

-25%

The exponential increase in generation of data and enterprises' appetite to leverage data to enhance maintenance demands a level of scalability that is simply not cost-effective for a rigid on-prem architecture. On the other hand, SaaS-based systems come equipped for such a scenario. SaaS-based computerized maintenance management system (CMMS) and enterprise asset management (EAM) solutions are much easier and significantly more cost-effective to scale when needed, compared to on-prem installations. Moreover, with cloud storage costs dipping 25% annually on average, enterprises have more reason to move their maintenance management systems to the cloud.[3]

The Benefits of SaaS-based Maintenance Management

While on-premise CMMS solutions are quite capable in their own rights, they often lack some of the functionality of their cloud computing counterparts, not to mention the logistical hurdles they present. As is evident from the examples cited above, simply moving to a SaaS maintenance program can be a game-changer for enterprises. As with any cloud-based software, a SaaS-based maintenance system can be accessed from any device, anywhere, as opposed to the physical proximity required to access an on-premise maintenance system.

Another significant advantage that SaaS-based maintenance software offer over on-premise systems is the ease of configurability. On-premise systems help enterprises customize and configure their maintenance software based on their exact requirements. But these are often expensive and lead to costs of outsourcing the implementation of new features. SaaS-based maintenance management systems, on the other hand, offer easy-to-configure solutions with third-party solution providers, such as TMA Systems, taking ownership of the release and implementation. This further ensures that maintenance teams are not locked in to an expensive, difficult-to-configure release.

	On-Premise	Cloud
Hardware requirements	• Requires on-premise hardware and servers	• Requires only internet connectivity
IT requirements	• Users are responsibe for IT support needs	• Vendor takes care of updates, implementations and support
Security	• Users are responsible for security and compliance	• Vendors are responsible for security and compliance
System cost	• High up-front cost, additional updates are paid	• Monthly subscription cost, price per user
Personnel cost	• Involves significant personnel costs	• Includes minimal personnel costs
DBA administration	• Users are responsible for DBA administration	• Vendor handles DBA administration, often comes integrated

Fig. 1: On-premise vs SaaS-based maintenance management in a nutshell

Over and above these definite advantages, there are other cost and operational benefits that enterprises can unlock by moving to SaaS-based maintenance management. For instance, new releases for on-premises customers are placed on customer support sites, where IT managers require to download and install the releases. SaaS customers receive all updates seamlessly and are often even unaware of the updates made. They need very little IT support whereas on-premise customers require a dedicated DBA to manage their environments. Also, on-premise customers need to jump through multiple hoops to upgrade their systems and keep them up to date. Whereas SaaS solutions help them stay updated with the latest versions for bug fixes and added functionality.

Here is a detailed look at some of the notable benefits of the cloud:

Cost-Efficiency

The cloud helps enterprises save costs while also improving productivity. Data centers and on-site servers are costly to procure and maintain, and enterprises often find it difficult to keep them up to date. In contrast, SaaS maintenance management solutions offer flexibility to enterprises while limiting the cost burden of procuring, managing, maintaining, and replacing/ disposing of the physical data centers to a subscription-based model. This means enterprises only pay for the features for only as long as they need them.

Scalability

Scalability is a thorn in the side of enterprises that still use an on-premise set up. Scaling an on-premise architecture involves procuring servers and ensuring a seamless implementation and integration process. The problem with that is that in an on-premise architecture, there is a recurring maintenance cost of the data centers. This is over and above the outsourcing costs that the enterprise must incur to make up for any deficit in in-house technical skills required for such an implementation. Enterprises must adapt over time and in this digital age of technological innovation, the changes come all too frequently and it is important for enterprises to be able to scale up or down as needed. The cloud offers that option as the space and services required by an enterprise based on a sudden increase or decrease of scale are available in real time and can be used instantly.

Recovery & Sustainability

Disaster recovery is another important consideration for enterprises. On-premise disaster recovery is a very involved process drawing on internal resources and the possibility of considerable downtime. In contrast, the recovery for a cloud-based disaster and subsequent service outage is almost instant with the help of state-of-the-art recovery tools. With a number of built-in security compliance measures, a cloud-hosted solution stores data in a manner that ensures protection, and much lower risk, against a security compromise.

The cloud also reduces carbon footprints and average energy consumption, making it greener and sustainable. With so much focus on ESG and sustainability goals, the cloud is the best option for environmentally responsible enterprises.

Collaboration & Turnaround

As has been proven in the post-pandemic "new normal," collaboration tools are essential and directly correlated to company productivity. Cloud-hosted virtual meeting apps come loaded with features that enable digital collaboration. In the instance of maintenance management, such a comprehensive collaboration environment could significantly improve the decision-making process and eliminate lost time through real-time communications and data exchange. This improves productivity and subsequently establishes efficient enterprise operations while considerably reducing turnaround.

Future Readiness

The cloud is always up-to-date. The servers are built to improve and consistently upgrade. As a result, enterprises can avail all the updated maintenance management functionalities in real-time. All that is required is to develop future-facing operational strategies.

Automated cloud-hosted facility management software enables enterprises to remotely control their operations on intuitive dashboards. These tools provide data-driven insights crucial to business and IT enabling enterprises to make measured assessments on physical and digital assets, safety and security, inventory, and compliance, among others. Therefore, it is not a surprise that the global facility management software market is projected to be worth $87.13 billion by 2027, up from $37.18 billion in 2019, growing at a CAGR of 10.94% in the forecast period.

Additionally, in a cloud environment, technology partners can provide much better support as they have direct access to the data. They can also deploy new features or hot fixes far more efficiently than having to package installers for on-premise customers.[4]

Debunking the Security Myth and Paving a Path to the Future

With the pandemic making operations remote and fragmented, it is paramount for enterprises to be able to manage their assets and resources, and optimize efficiency. In that quest, enterprises must adopt cloud-hosted CMMS, EAM, and computer-aided facility management (CAFM).

However, as with any cloud solution, companies often tend to shy away from SaaS-based maintenance management systems under the pretext of security concerns and misconceptions. That's not to say that there are no legitimate concerns. For instance, the healthcare sector is highly regulated and must adhere to strict and ever-changing compliance needs. Violation of these regulations, via a data breach, could lead to severe financial and reputational repercussions.

But contrary to these ideas, cloud-based maintenance management systems are far more secure than their on-premise counterparts. Today, cloud-based software is configured to meet the strict guidelines found in heavily regulated sectors, including healthcare. Moreover, with the ownership of updates and releases resting with the service providers, enterprises can eliminate the need to constantly monitor data security and compliance.

Common Cloud Security Concerns & Misconceptions

- Insecure APIs
- Poor visibility
- Compliance concerns
- Misconfiguration of services
- Poor cloud security strategy
- Insider threats

The cloud comes with the security of encryption, meaning that the data stored there can be accessed only by authorized persons. Cloud hosts are frequently modernizing their security infrastructure and making data privacy mechanisms more robust. Having to safely store data, monitor access credentials, and firewall the data against breaches of any kind is too much work for enterprises when done on premise.

Maintenance 4.0: A New Era of Maintenance

The current maintenance management ecosystem is plagued by several obstacles: ever-increasing maintenance costs, the financial repercussions of downtime, rising prices of spare parts, and the fresh disruptions to the supply chain. Maintenance is on the verge of a new era of technology that could see enterprises tackling these issues more effectively.

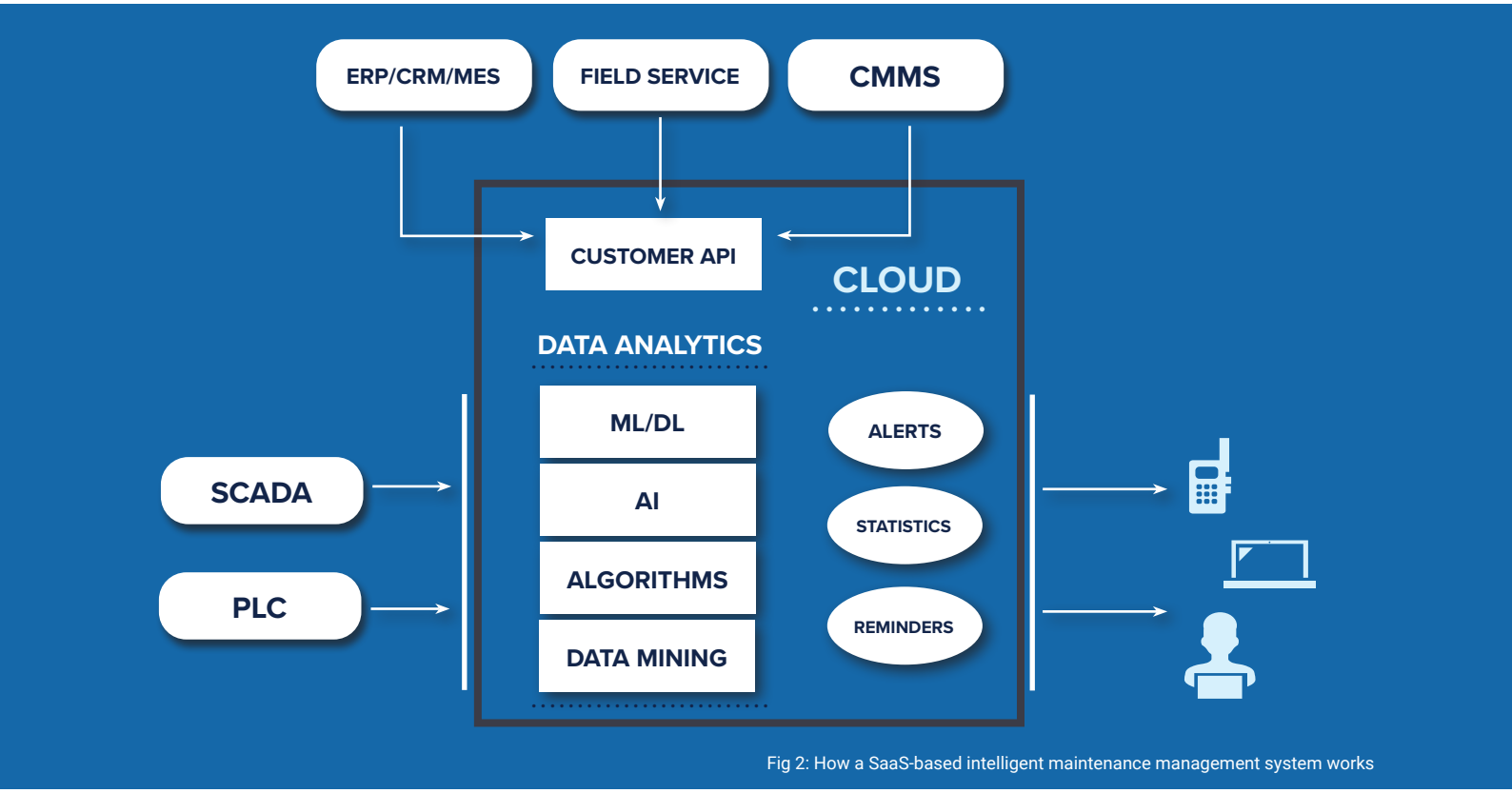


Fig 2: How a SaaS-based intelligent maintenance management system works

The emergence of 5G and IoT-based technologies are promising such a future – Maintenance 4.0 – founded on strong cloud connectivity. Such connectivity will see the gradual phasing out of traditional practices, swapping manual data collection techniques with powerful data dashboards that allow enterprises to automate a large portion of the maintenance processes. This would in turn accelerate the already emphasized shift from preventive to predictive maintenance models and allow for re-allocation and optimization of internal resources.

The Role of Technology Partners and Management Software

While migrating to the cloud is the obvious choice, not all enterprises manage to make the migration seamless or successful. It is not uncommon for enterprises to rush their cloud migration or have a flawed cloud strategy in place. Such errors invariably result in sluggish transformation, misuse of resources, financial drainage, and unachieved business outcomes.

To build world-class organizations and cloud-driven enterprises, there is a need to have tried-and-tested technology partners who come with purpose-specific expertise. For one, maintenance management systems play a crucial role in shaping future-ready enterprises, and it is therefore essential to have a knowledge and implementation partner who offers solutions that can make the migration to cloud reap the desired dividends.

Forward-looking enterprises rely heavily on CMMS to build workplaces of the future. While CMMS and EAM systems help optimize resources, labor, and assets, CAFM ensures seamless management of day-to-day business operations and an up-to-date operational facility. And the cloud plays an integral role in optimizing data, synergizing these systems, digitize operations, leveraging technological innovations, and achieving business outcomes.

TMA Systems: The Partner of Choice

For more than three decades, TMA Systems has been breaking ground and providing solutions to corporations, healthcare, education, and public sectors that push them ahead of the curve. The highly advanced, easily configurable technology products are designed to cater to the facility management needs of enterprise out of the box. End-to-end technical support has made TMA Systems a partner of choice for several world-leading enterprises. A dedicated sales staff, our in-house professional services team, and our technical support and customer success teams aid our clients on every step of the way through their journey with us.

We are industry agnostic and bring a set of diverse capabilities that make our products future-proof. Our robust mobile solutions – WebTMA GO and mobileTMA GO – help facility professionals perform their duties with minimum hassle and maximum efficiency. Our comprehensive global partner program allows enterprises to join with us to attain enterprise goals while pushing the innovation agenda.

We are here to help you transform your organization and optimize your facility management operations using the cloud. Our cloud-hosted products and solutions will make your enterprise journey seamless, productive, and outcome-oriented.

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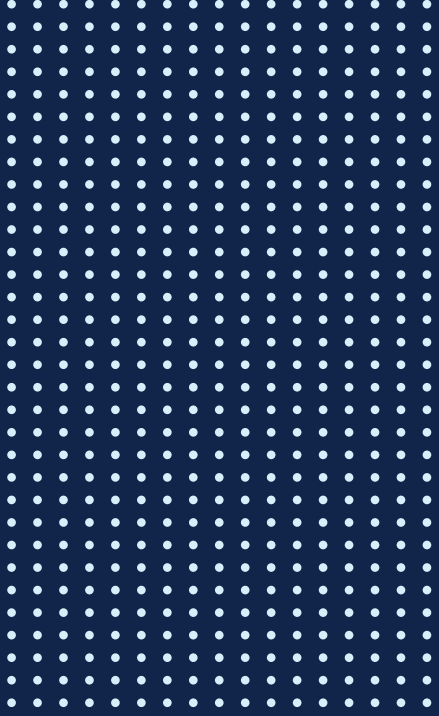

TMASYSTEMS

Address

1876 Utica Square
Third floor
Tulsa, Oklahoma 74114

Phone

Corporate : 918-858-6600

Online

Support : support@tmasystems.com
Client Success : csm@tmasystems.com
Marketing : marketing@tmasystems.com
Website : www.tmasystems.com