How Cloud Computing Will Change The Aviation Maintenance Operation

Building Safer Operations and Increasing Productivity with Cloud-Based Information Services

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Introduction

There is a lot of buzz on the Internet and other media about "cloud computing" and its revolutionary promise to transform how work is done. Given the potential for cloud computing to increase productivity, improve safety, and reduce cost, it is more important than ever to understand how this technology trend will affect aviation maintenance. The purpose of this white paper is to provide a better understanding of cloud computing in order to aid maintenance professionals as they make decisions regarding this emerging technology.

What is Cloud Computing?

The sometimes confusing definitions for cloud computing underscore why many people have a hard time understanding what it is. For example, The National Institute of Standards and Technology defines cloud computing as "...a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service provider interaction."

No wonder people are confused. Stated more simply, cloud computing is software provided as a service over the Internet and accessed through a web browser. For this reason, cloud computing is sometimes also called Software as a Service (SaaS). The "cloud" comes from computer network diagrams where an image of a cloud is used to represent the Internet. With cloud computing, both the application software and the data used by that software are made available in the cloud (i.e. over the Internet), rather than being stored locally on a computer or company network.

In fact, most people have used cloud computing services without even being aware that they have. Anyone who has ever used Facebook or accessed e-mail online has used cloud computing. With both of these examples, the application and the data are accessed over the Internet as a service without being installed on a PC or local network.

Today, cloud computing is revolutionizing business as more users are now free to use applications and information from any device with Internet access – such as tablets on the maintenance shop floor, or laptops out in the field. Since all software and information is stored remotely and managed by the cloud-based service provider, users no longer have to worry about security, data corruption, viruses, computer theft, equipment malfunctions, or software glitches. The provider of the service manages and updates all information stored online so that the users of the service, or their Information Technology (IT) departments, don't have to – freeing up employee time to focus on other tasks.

Cloud computing also protects critical data from the risks associated with any variety of disasters, such as hurricanes, earthquakes or long-term power failures at your place of business. User information is safely stored in a secure, remote location rather than on a computer hard-drive or business network server. Data and services can always be accessed wherever and whenever an Internet connection is available, which ensures business continuity.

How Cloud Computing Benefits Business Operations

Supports Safety and Quality Efforts

When information is managed in a central location by a cloud computing service provider, and available on any computer with an Internet connection, the risk of not having current information, or not having access to the right information, is dramatically reduced, or possibly even eliminated. Collaboration tools included with cloud services also aid safety efforts because users are able to share specialized information, and the company can include operational procedures inside OEM technical publications that are available to anyone in the company.

Reduces Cost

Upgrading from a local computer or network to a cloud computing system is fairly inexpensive, and the upgrade costs are offset by time savings and productivity improvements. Perhaps one of the greatest benefits of cloud computing for any aviation maintenance operation is the low cost of implementation. Cloud services require very little IT department involvement, freeing IT professionals to focus on other important work. In most cases, companies can start using cloud-based services with their existing computers and an existing Internet connection. There's no additional desktop software to install and update. There is no need to add more capacity for software or data storage to network servers. And, getting new users started is typically easy, reducing the cost and investment of setup and training.

Having all information in one central, online system reduces the complexity and administrative cost of managing various publications, maintenance tracking, and other critical information at multiple locations. New users, additional locations, and even occasional users are quickly and easily added and can immediately access the resources from any computer with an Internet connection. Publications and revision currency are managed by the cloud computing service, keeping the operation in compliance and reducing the need for a full time librarian.

Improve Oversight and Reporting

Having all information in one central, online system also provides greater visibility and control over what is being accessed. Simple reporting allows the business to quickly demonstrate currency and compliance – regardless of the number of mechanics, the number of maintenance locations, or the variety of aircraft being serviced. It is also possible for mechanics to create a log of all publications used on a job, which can be stored for future use, or for management oversight. Management tools also allow the business to monitor how library licenses are being used and whether licenses are efficiently allocated.

How Cloud Computing Supports the Director of Maintenance

Improved Productivity

For the Director of Maintenance (DOM), cloud computing is a productivity enhancer and time saver. New users and users at new locations are quickly added without any additional software installation or IT department intervention. Revisions and updates are also no longer a concern since they are handled by the cloud computing service provider. Productivity is enhanced for the DOM through reduced effort in managing information and providing access to essential knowledge services.

Control Information and Manage Licenses

Controlling which authorized users have access to online information is critical; especially for larger operations with many employees. Through cloud computing, the administrator, or someone he/she assigns, can quickly and simply add or remove authorized users from the service. Administrators can assign who has access to individual libraries, improving how user licenses are accessed and allocated. It is even possible to monitor in real time who's accessing information and log them off the cloud-based system remotely if desired.

Increase Efficiency

Anyone in the company can access information from any computer with an Internet connection, so they don't have go to a dedicated workstation to get the data they need. Information on technical publications, service bulletins, STCs, regulations, compliance tracking, maintenance due lists, parts, vendors and customers can be easily accessed in one cloud service from any computer, anytime, anywhere, reducing down time. Currency reports, compliance reports and FAA forms are all accessed in the cloud and can be generated by any user from any computer.

Easy Library Management

With cloud computing, libraries are managed by the service provider, including publication updates, regulatory updates, and service information updates, so DOMs and mechanics can focus on other responsibilities. Publications are organized into a logical library system, and updates are quickly processed and automatically added every day. Since all updated information is available from any computer with an Internet connection, DOMs can be confident that all users have access to the same information and that it is always current.

Manage Workflows and Get Insight

With cloud computing, managing and monitoring the workflow and checking on the status of a job suddenly becomes simpler. DOMs know immediately when a job is started and completed. The application provides immediate insight into parts requests and whether the part was in stock or placed on order. Sales representatives can view next due maintenance and forecast future maintenance for better customer service. Since the information is taken directly from the technical publications, the DOM can be more confident in the accuracy of information, and the status of everything is available in real time.

How Cloud Computing Aids the Mechanic

The Right Information in the Right Way

Perhaps no one in the maintenance operation benefits more from cloud computing than the mechanic. Having real-time, immediate access to the most up-to-date libraries and regulatory information right on the shop floor is a tremendous improvement over older processes that required a dedicated workstation, or even a special room for maintenance and regulatory libraries. Order data, manuals, service information, parts availability, customer contact info, the latest regulatory updates, the most current maintenance procedures, forms, business procedures – all of it is available the second it's needed. And it can be accessed anywhere, from any computer with an Internet connection. Having all information available in one system from one source also provides commonality across manufacturers and publication types which simplifies the job of searching and cross referencing information.

Safety and Compliance

Mechanics have immediate access to the right information in the right way. They don't need to worry about currency or whether someone has installed the latest revision disc or updated paper pages. With cloud computing, mechanics always have access to the most current documentation, even when they are traveling or out in the field. Parts lists can be generated by copying and pasting information directly form the technical publications and can be electronically sent, reducing the time spent and risk of errors that were possible with old-style, handwritten parts requests. Productivity improves, as does safety and compliance because the information mechanics need is available when and where they need it.

Learning and Collaboration

Via the cloud, aviation maintenance professionals can more easily and efficiently manage and share information with fellow workers and the company. It should be noted that collaboration is one of the key advantages of cloud computing. With everything in the cloud, it is easy for multiple users to access the same application and data at the same time and easily share information about the data. Notes with specialized information can be attached to documents. Company procedures and processes can be added to any publication. Instant access to collaborative information improves communication and business processes and reduces risk for the company and mechanics.

Training

Getting started typically is easy, reducing the time required for learning how use the cloud computing resource. Online tutorials are available to bring users up to speed on how to navigate and use the system, so it's easy to get online, login and begin finding the information they need. Collaboration tools allow new users to gain additional insight from seasoned professionals through notes added to the documentation. Online support and answers to frequently asked questions also improve the ability to quickly learn and begin using cloud computing systems.

How Cloud Computing Helps the IT Department

IT departments in aviation operations will find that cloud computing frees them from the almost daily maintenance, revisions and upkeep associated with desktop or network server systems. The cloud is also evolving the IT function in aviation maintenance to support the need for instant access to the apps and data necessary to get the job done from any device, anywhere. For IT professionals in aviation maintenance operations, the many advantages of cloud computing include:

- **Easy to Implement** – Cloud-based services are simple to implement because IT professionals don't have to purchase, install, or maintain special software – even occasional users have immediate access.

- **Scalability** – Companies can easily expand or add services as their businesses grow and their needs change. It's very easy to add users, services, licenses, increase storage space, and update or add information.

- **Fewer Tech Support Calls** – There's no computer software to install, maintain or update, so IT professionals spend less time on the phone working through issues with users.

- **No More Revisions** – Because all of the data is managed by the service provider, users no longer need to juggle CDs, schedule downloads, or manage revisions. Maintenance operations always have access to the most current information from the service provider.

- **Configurable** – Many good cloud-based solutions can be configured to the business; instead of the business configuring to the software. Tools provided by the service allow administrators to configure how information is presented and prioritized based on specific user or business needs.

- **Easier to Manage Data** – Data is all stored in one place and accessed over the Internet, making it more secure and easier to manage. Typically, administrators can set user permissions for viewing, editing, or deleting data. They know where all the data is located and who has access, so it is unlikely for important company data to "disappear."

Conclusion: ATP® Cloud-Based Services brings the power of cloud computing to your aviation maintenance operation.

The ATP Aviation Hub™ streamlines maintenance workflows and improves processes with anywhere, anytime access to ATP® Libraries, ATP Parts, ATP Maintenance, and the AskBob™ AMT Community. Subscribers have access to trusted and current information through one simple and intuitive web browser interface making the ATP Aviation Hub Cloud Application an indispensable tool for general aviation.

ATP Knowledge™ Information Services
The ATP Aviation Hub™ cloud application is a key component of the ATP Knowledge™ information services platform, offering a rich set of information services valuable in keeping aircraft airworthy and safe, including:

ATP Libraries
Improves access and increases efficiency in finding information and enhances technical publication acquisition and revision management processes. Learn More »

ATP Maintenance
The industry's affordable and easy to use maintenance tracking solution that is united with your ATP Libraries and ATP Parts.Learn More »

ATP Parts
Simplifies maintenance processes by integrating parts ordering and inventory management with your ATP Libraries and ATP Maintenance Learn More »

ATP® Libraries

ATPKNOWLEDGE™

ATP® Parts

ATP® Maintenance
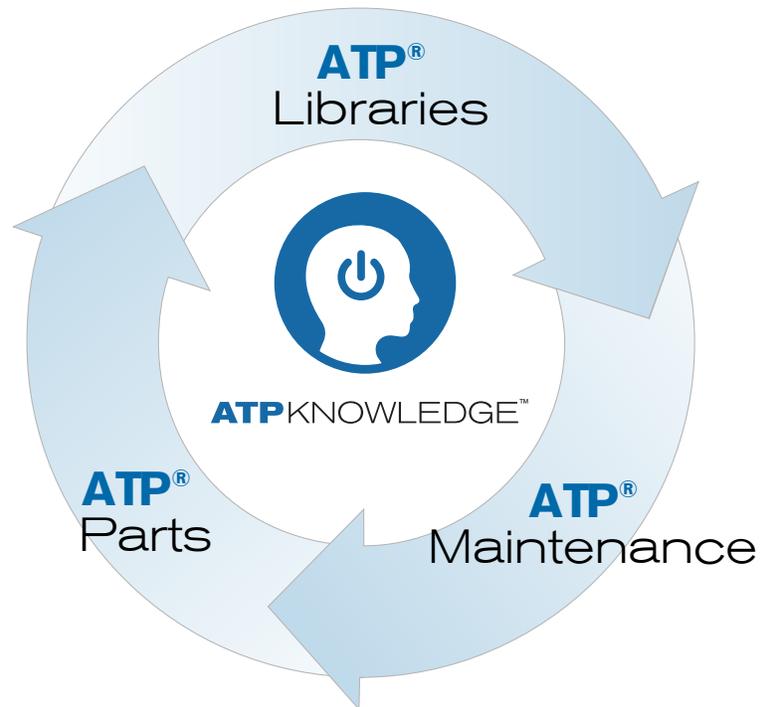
Using the ATP Knowledge platform, mission critical information access has never been so convenient.

• Reduce operation and technology costs by decreasing the need for IT support, eliminating updates and revisions, and reducing training time.

• Streamline workflows and processes with fully integrated access to publications, parts ordering, maintenance tracking and compliance reporting.

• Improve safety, and maintain compliance by ensuring that everyone has access to the same current and trusted content in one cloud application

About ATP

ATP is a global information services company serving business sectors obligated to meet the most demanding safety and compliance standards. ATP's 40 years of industry leading innovation has produced the ATP Knowledge™ information service platform, the premier productivity and safety solution, and continues to set the pace for the adoption of best practices in the aviation industry. Headquartered in Brisbane, California, ATP's team is comprised of closely associated engineers and entrepreneurs with deep technology and aviation related experience.

Today, more than 15,000 subscribers in 96 countries, including over 50 of the world's regulatory bodies, rely on the ATP Knowledge™ information service platform to keep aircraft safe and airworthy. The ATP Knowledge™ information services platform is a unique combination of technology innovation, industry expertise, and single source information access that delivers mission critical information to subscribers when and where they need it. The reliability of ATP's information services is unrivaled, and enables measurable cost savings and increased operating efficiency. The company's proven commitment to its customers' success has resulted in a deep respect and trust in ATP and its people.

Learn more at: http://www.atp.com.

Learn More about the ATP Aviation Hub Cloud Application

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