

„For safe takeoffs“

InspectionWorks Archive offers a centralized and secure solution for managing and storing inspection data in the aerospace industry

Waygate Technologies supported a globally operating aerospace manufacturing company in establishing a centralized information and documentation management system for utilizing their inspection data. Both companies have been working together trustfully on multiple projects for decades.

The customer required a centralized and automated system for managing and storing inspection data, ensuring data integrity, improving searchability, and facilitating the long-term retention and traceability of inspection data for aerospace engines. Additionally, the system should be always compatible with the latest Microsoft technology stack. The customer had already been successfully using Waygate Technologies' InspectionWorks Archive for years and recently upgraded the latest premium version of the software in all of its US locations.

Benefits

- Improved control and ownership of data through centralized inspection data security management
- Scalable solution enabling connection between production sites, R&D departments, and headquarters with fully controlled access
- Enhanced access and searchable information leading to improved response times for audit requests
- Compatibility with industry standards, including DICONDE, ensuring seamless integration with existing systems
- Cost-effective and secure data storage solution resulting in lower overall storage costs

Challenge

As a manufacturer of aircraft engines with multiple and distributed locations, the customer faced the challenge of establishing a highly secure and highly available system for managing and storing their inspection data and protocols. They also aimed to make the system efficient and accessible to authorized personnel only at different locations. Additionally, they required seamless integration with established systems for field radiography as well as CT and relevant software.

Decentralized and siloed inspection records from 8 different locations across the United States had to be integrated with a central archive. The customer now has a comprehensive overview of the records and can effectively coordinate inspection work. Data Management proved to be tedious and time-consuming, it is now a streamlined and automated process, saving time throughout the process.

For enhanced Data Integrity, since storing inspection information on hard drives and NAS (Network Attached Storage) devices carried the risk of data loss or corruption, InspectionWorks Archive provides a robust mechanism, for improved data traceability.

To meet the customer's obligation to archive data for more than 20 years, the long-term archiving solution

Solution

InspectionWorks Archive proved to be the solution of choice. The software provides a customer network, and a secure long-term storage solution for the customer's data. Storing inspection data and results throughout the entire lifecycle of assets, such as aircraft engines, enabling retrieval of results for years based only on part numbers. Furthermore, it is compatible with all applicable industry standards.

Waygate Technologies' InspectionWorks Archive was fully compatible with the existing system architecture and provided easy access, searchable information and optimal storage and management capabilities for large

required the management of immense amounts of data in a cost-effective manner. It also had to comply with the strict regulations and guidelines of the US Federal Aviation Administration, which mandated the retention of all scanning data from inspections throughout the entire lifecycle of an engine/asset.

Data accessibility was improved, as relevant departments need to respond quickly to information requests and conduct thorough examinations of aviation asset data. To find specific records, such as for audit purposes, the data needed to be adequately searchable.

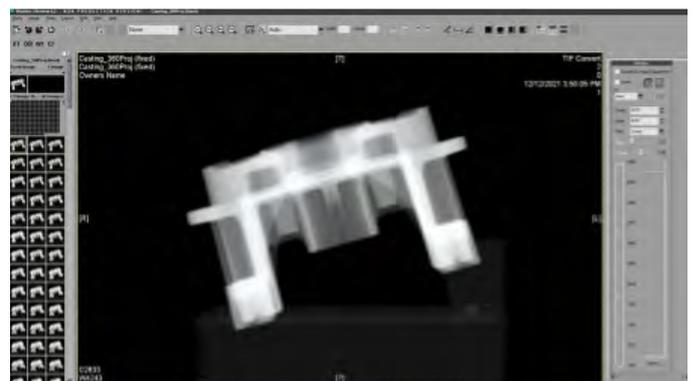
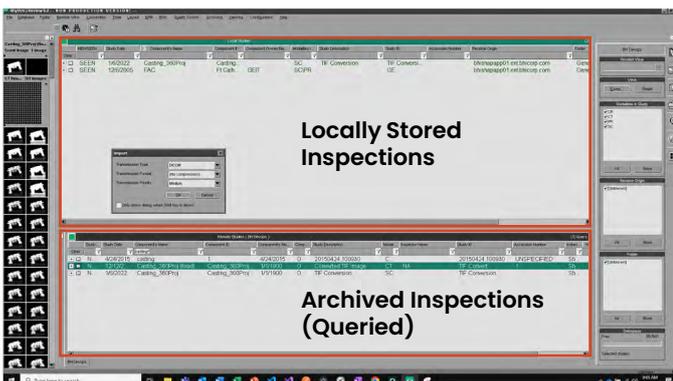
To overcome these challenges, the introduction of Waygate Technologies' centralized and automated data management system was necessary. Ensuring data integrity, improving searchability, and facilitating the long-term retention and auditability of inspection data.

"With InspectionWorks Archive from Waygate Technologies, we have found a solution to efficiently manage and centralize NDT data storage in a highly secure and efficient manner. With the solution, we were able to increase security, improve process efficiency, and meet compliance objectives."

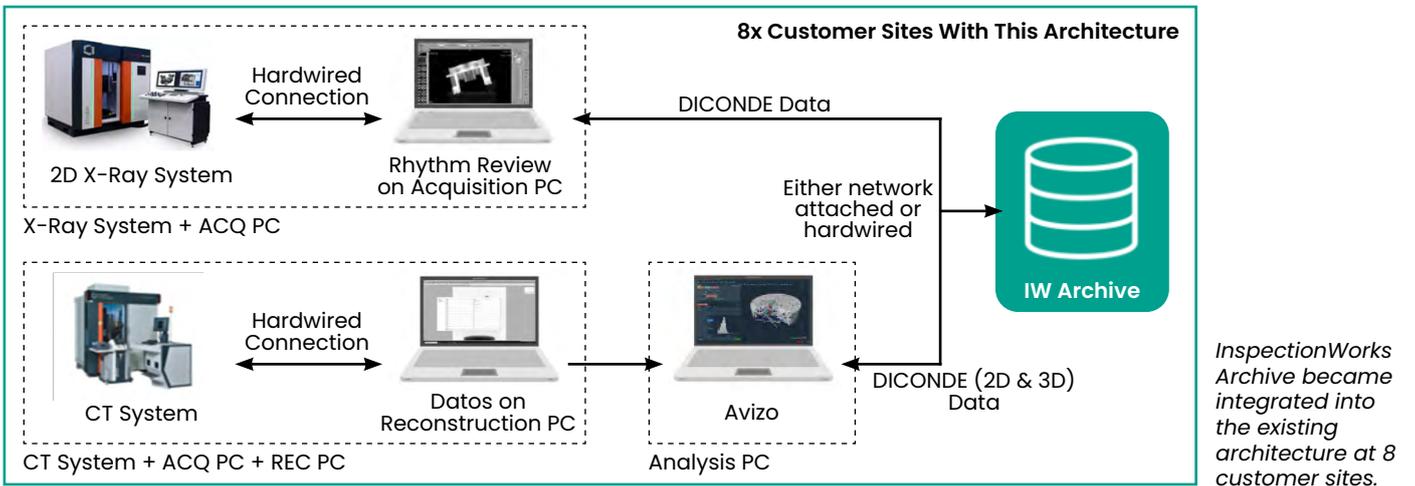
Customer Voice

amounts of inspection data.

In the customer's architecture, inspection data is acquired from both 2D X-ray systems and CT systems and analyzed in the Rhythm Review and Aviso software. The interface allows for the integration of the 2D and 3D software with InspectionWorks Archive, enabling the central storage of images on the InspectionWorks Archive Server in the DICOM-compatible format.



Easy search capability. inspection data can be easily retrieved due to the integration of InspectionWorks Archive with Rhythm Review, a popular X-ray analysis software.

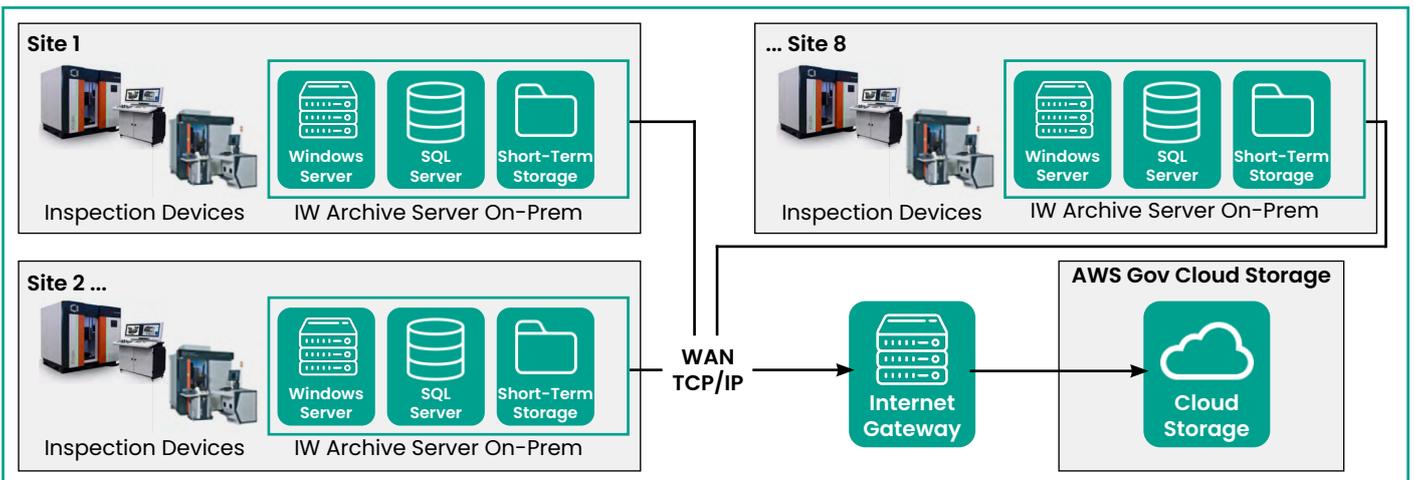


After a successful deployment of InspectionWorks Archive version 4, the customer decided to migrate to the latest version 8 in 2022. To ensure compatibility with all existing IT requirements, Waygate Technologies conducted a successful pilot installation of InspectionWorks Archive 8. The solution was subsequently rapidly rolled out to all 8 locations.

For short-term storage and management of inspection data, data is cached locally on the InspectionWorks Archive Server. All 8 locations are connected worldwide, and the interface enables the safe convergence of IT and

OT networks. To comply with regulations and centralize archiving, the data is stored in the AWS GovCloud, to meet the specific regulatory and compliance requirements of US government agencies, contractors, and other US customers running sensitive workloads in the cloud.

InspectionWorks Archive version 8 also introduced new features such as compatibility with Windows Server 2019 and support for all major browsers for the administration console. This allowed the company to ensure up-to-date Microsoft security patches and significantly improve user experience of data handling.



Eight customer sites are globally connected and inspection data are transferred securely to AWS CloudGov storage.

“We at Waygate Technologies are proud to partner with large industrial organizations that want to simplify the management of their high volume of inspection data while ensuring full security and access control. With InspectionWorks Archive, they can use all their historical data at a fingertip, to improve their asset design, improve quality and improve inspectors' productivity.”

Alexis Herve
Director Global Operations – InspectionWorks
Waygate Technologies



Results

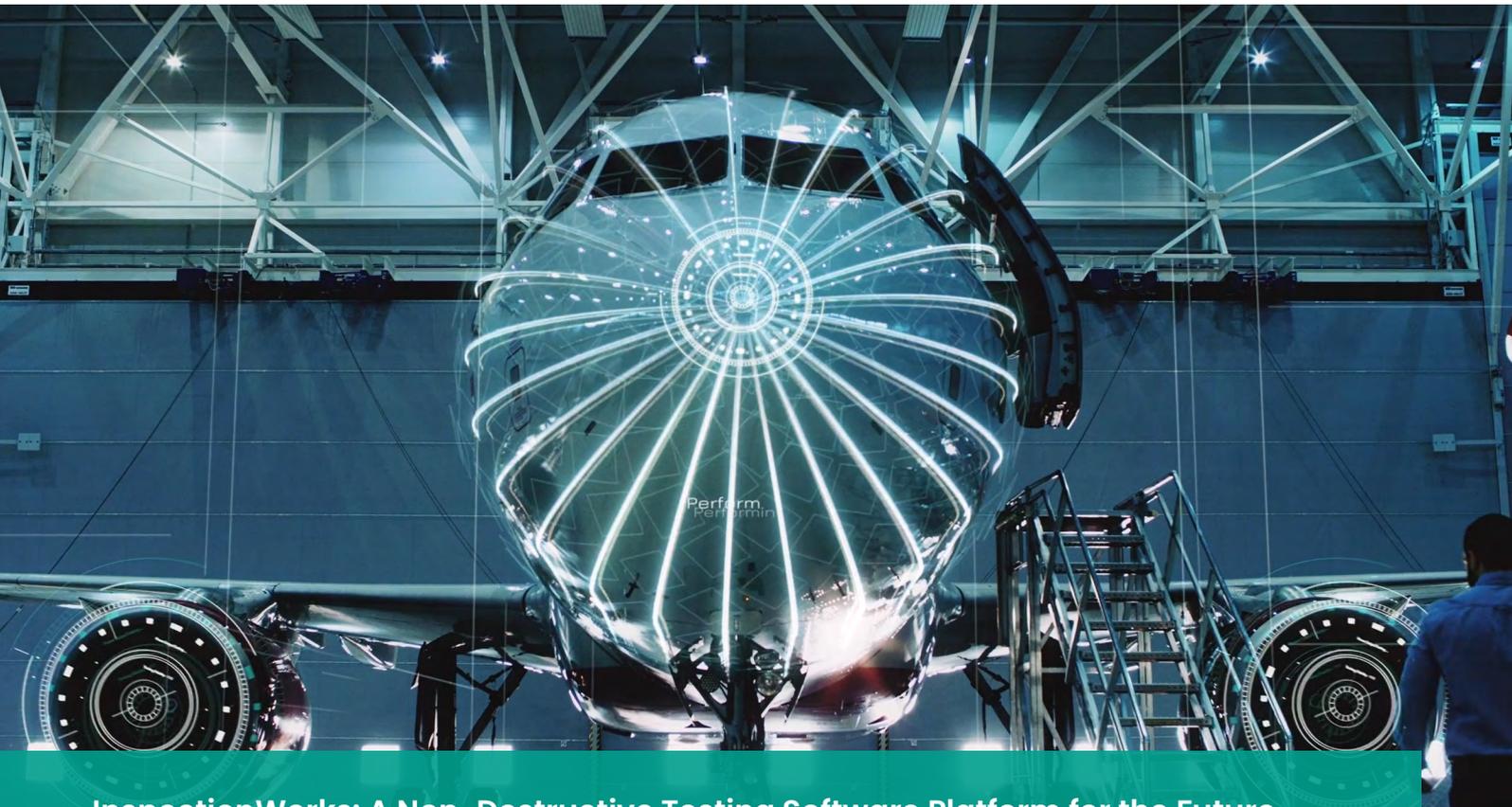
Centralized storage, management, and control of sensitive inspection data are crucial for aircraft engine manufacturers to ensure safety and quality. The inspection data generated during the manufacturing process and maintenance plays a vital role in ensuring that engines meet stringent safety standards. By deploying InspectionWorks Archive, the customer guarantees the integrity and accuracy of their data through centralized storage and management, safeguarding it from loss, damage, or unauthorized access.

With Waygate Technologies' InspectionWorks Archive, the customer gains the ability to effectively track inspection data across all locations and retrieve it over extended time periods. This enhances both internal quality assurance practices and compliance with aviation industry regulations and standards. The centralized data management system facilitates data traceability, ensuring that inspection data remains accessible throughout the entire engine lifecycle.

Moreover, the system improves efficiency and collaboration within the organization. Inspection data becomes easily accessible and searchable, enabling quicker analysis and decision-making. The centralized platform of InspectionWorks Archive fosters collaboration among different teams and locations, facilitating seamless information exchange and data sharing.

The integration of InspectionWorks Archive with popular technologies, such as Microsoft, and compatibility with industry standards like DICONDE, ensures that the customer's systems remain up-to-date. This allows for smooth documentation and auditing processes across all locations, aiding in meeting compliance requirements.

Safety, quality, and compliance are essential for Aircraft engine manufacturing. InspectionWorks Archive provides the necessary tools and capabilities to achieve these objectives: central storage management of sensitive and valuable inspection data.



InspectionWorks: A Non-Destructive Testing Software Platform for the Future

InspectionWorks is a software platform that combines data from multiple non-destructive testing (NDT) tools, and connects the entire inspection history of all assets. It helps to acquire, analyze and act on inspection data. It enables adding inspection insights to a digital twin throughout its lifecycle. This transforms inspection data into a tool for faster and better decisions, saving costs and enabling a more competitive product.