Malaysia Airports Technologies integrates airport operations with a SOA platform.

Overview

Business challenge

Kuala Lumpur International Airport (KLIA) opened in 1997 using a suite of disparate solutions linked together by middleware. As passenger numbers, flight frequencies and carrier types continued to grow, these older technologies were no longer sustainable. Malaysia Airports Technologies (MAT) needed a flexible mechanism for incrementally migrating to new applications and rolling out solutions to multiple airports whilst continuing to operate with the existing infrastructure technology and applications.

Solution

IBM offered an SOA-based solution that delivered a universal mechanism to interconnect all the applications required to support their world-wide airport operations—without compromising security, reliability, or scalability. IBM's solution also helped MAT to distribute real-time information from disparate sources of information and provided a powerful new means of unifying employees across the entire organization. IBM GBS developed a roadmap for MAT to migrate to this new flexible service oriented approach.

Benefits

- MAT can now distribute real-time information from disparate sources, providing a powerful new means of unifying employees across the entire organization
- It enables MAT to replace individual components without compromising the integrity of airport operations.

Industry

- Travel & Transportation

Malaysia Airports Technologies (MAT) is responsible for the operation and maintenance of all information technology systems and infrastructure at Kuala Lumpur International Airport. Among the services it offers include airport system solutions, system integration, networking, broadband network service, facility management and monitoring.

Challenge

Airport operations typically extend across multiple service providers, comprising processes, people and information segregated by location, role and function. KLIA opened in 1997 using a suite of disparate solutions linked together by middleware. As passenger numbers, flight frequencies and carrier types continued to grow, these older technology models were no longer sustainable.

MAT—the subsidiary of Malaysia Airports responsible for all the technology behind the operations at KLIA—knew that establishing an integrated, end-to-end on demand airport technology environment would help improve the information flow across internal business units. Instead of operating multiple systems that were not designed to work in synch, an integrated environment would enable more efficient and cost-effective processes, enrich collaboration, and create a less complex infrastructure from which to manage relationships with employees, partners, suppliers, agents and customers. However, replacing all the separate systems with a single system was both cost-prohibitive and logistically infeasible. Malaysia Airports Technologies needed a solution that would allow its existing applications to work together without having to replace its existing technology investment. It needed to ensure that as applications came to the end of their life they could be replaced incrementally without compromising the integrity of the airport operations. MAT needed a flexible mechanism for integrating the operations technology at KLIA that would support ongoing change and growth.

Solution

IBM offered Malaysia Airports Technologies a service-oriented architecture (SOA) based solution to deliver a universal mechanism to interconnect all the applications required across the airport—without compromising security, reliability, or scalability. IBM Global Business Services implemented IBM's Airport Integration Solution, which provides the common interface between processes, people and information, helping to convert complex airport operational functions into services that can be easily accessed without the need for significant changes in the underlying infrastructure. The solution brings together applications from leading

specialist providers in airport operations and management information systems, into a cohesive and complete solution optimized for airport operations. Utilizing IBM's SOA framework and integration solution enables MAT to leverage existing investments and to create a common communications network and operational database. IBM WebSphere, provides the platform that unifies disparate applications across the entire organization.

Benefits

It is estimated the Credit Card system will produce a combined benefit to LTSB of some £40m over 5 years, principally through:

- The solution creates, maintains, and stores resource, planning, and operations data in a secure repository, readily available for reporting, auditing, and analysis purposes
- Integrates and coordinates resource, planning, and operations information with best of breed front-end systems such as Flight Information Display Systems (FIDS), check-in counter displays and Common Use Terminal Equipment (CUTE), and back-office systems such as ERP and finance systems
- Communicates accurate and timely resource, planning, and operations information to essential departments: planning, operations, passenger-service, security, ramp workers and service partners
- MAT can now distribute real-time information from disparate sources, providing a powerful new means of unifying employees across the entire organization
- The solution provides MAT with a flexible platform to extend and enhance business functionality to the airport's changing needs and enables MAT to replace individual components without compromising the integrity of the airport operations.

"MAT can now distribute real-time information from disparate sources, communicating accurate and timely resource, planning, and operations information to essential departments."

—YBhg Dato' Azmi Murad, senior general manager, MAT

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