السعودي البريد
Saudi Post

Postal Workers Use Latest Technologies, Process 100 Per Cent More Mail Items a Day

Overview

Country or Region: Kingdom of Saudi Arabia

Industry: Government—Postal

Customer Profile

Government-owned Saudi Post is the official postal service for Saudi Arabia. Established in 1961, the organisation employs more than 10,000 people and owns the postal service brand Wasel.

Business Situation

Saudi Post wanted to develop a geographic numeric system based on global positioning technologies to identify postal addresses accurately and easily.

Solution

Saudi Post deployed Microsoft® technologies to establish a new infrastructure for the addressing and postal delivery system.

Benefits

- Customers highly satisfied
- New services rolled out
- E-government promoted
- Delivery improved
- E-services available
- More mail processed
- Productivity increased

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>
> Dr. Usamah M. Altaf, Vice President and Chief Information Officer, Saudi Post

Until recently, the Kingdom of Saudi Arabia lacked a standardised system for designating addresses for houses and streets. As a result, the official postal authority of the kingdom—Saudi Post—found it difficult to deliver mail. In addition, the communication infrastructure could not efficiently support local and international businesses operating in the kingdom. Saudi Post worked with Microsoft® Gold Certified Partner ESRI's geographic information systems (GIS) technology to establish an address-mapping solution. It considered other technologies, but chose to introduce an IT infrastructure based on Microsoft products to support the system. The organisation's mail delivery service is now 99.99 per cent accurate and it has increased its daily mail processing capacity by 100 per cent. Moreover, businesses can now use the service for e-commerce and other government agencies can develop additional e-government services.

ESRI®

Microsoft®

Situation

In recent years, the Kingdom of Saudi Arabia has accelerated its efforts in reducing economic dependence on oil-based businesses and is diversifying into new revenue-generating sectors. The government is encouraging foreign investment, finding ways to boost the growth of local businesses, and applying the latest technologies to improve services in all government organisations.

A key factor helping the country achieve its goals is Saudi Post—the kingdom's official postal service. Operating like a private sector company since 2002, this government-owned organisation has undertaken a series of initiatives to support recent economic developments.

Saudi Post manages a collection and distribution network of more than 6,321 points of presence including 82 agents and 770 postal representatives. Its services cover all the cities and villages in Saudi Arabia, processing 900 million mail items a year. In 2005, the organisation also undertook a groundbreaking strategic initiative—called the Wasel Service Project—to establish an efficient communication infrastructure and lead the way for business-support services such as e-commerce.

Until recently, Saudi Arabia lacked a standardised addressing system. Each city had a different schema for numbering homes using numeric and alphanumeric characters. Most citizens had to rent mailboxes at post offices and collect their mail in person. Destination names in Arabic often had multiple spellings in English, and an absence of zip codes made it difficult for postal workers to sort the items. These factors were driving up the costs of providing the postal service because it took a long time to process mail. Postal workers delivering mail at home also had to rely on experience to find addresses, and training new employees was a challenge.

Dr. Usamah M. Altaf, Vice President and Chief Information Officer for Saudi Post, says: "We urgently needed to create a standardised addressing system and make the delivery service more efficient by automating processes. The primary aim was to improve postal services, but it was also crucial for the development of e-commerce and e-government. It could enhance the economy by presenting a positive image of the country and inspiring confidence from international businesses."

Solution

Saudi Post initially considered a solution using database management software running on Linux servers, but decided that the most cost-efficient roadmap would be based on Microsoft® technologies. Dr. Altaf says: "The support for Microsoft technologies, including technicians and Microsoft partners, is more widely available within the country compared with support for other technologies. This was important for our IT team to manage the new system efficiently. Microsoft products also easily integrate with our existing technologies and help us maximise return on our previous IT investments."

The Address Locating System

The organisation worked with the geographic information systems (GIS) technology of Microsoft Gold Certified Partner—and one of the world's leading vendors of GIS solutions—ESRI. Saudi Post built an address-mapping system based on global positioning technology. It locates homes and commercial addresses by allocating a unique 13-digit numeric code—which was invented by Saudi Post—for each square metre of land within Saudi Arabia. Every building in the country is represented on the GIS map through this code.

Mobile devices used by the Wasel service employees play a key role in this state-of-the-art solution. They remotely connect to the GIS and provide workers with directions to the correct destinations. Subscribers to the Saudi Post Wasel service are given a mailbox embedded with radio frequency identification (RFID) chips—an automatic identification method. Wasel service workers read these smart chips on their mobile devices when they deliver registered and express mail items to the intended address.

Technologies and Processes

The new addressing and postal delivery system at Saudi Post uses technologies such as:

- Microsoft SQL Server® 2005 data management software—integrated with the digital mapping system and the mail distribution system, it stores information such as mailing addresses, corresponding zip codes, and details of mail items processed by Saudi Post.
- The Windows® CE .NET version 4.2 operating system—used for mobile devices to provide networking and communication features to connect securely to the digital mapping solution through wireless networks.
- The Windows Server® 2003 operating system—to manage all production servers at Saudi Post.
- Microsoft BizTalk® Server 2006—to integrate all the systems used for the new addressing and postal delivery solution.
- Microsoft Office SharePoint® Server 2007—to provide an internal portal for Saudi Post administration staff, as well as an Internet-facing Web site for Wasel subscribers.
- Microsoft Exchange Server 2003 to send e-mail messages and mobile phone alerts to Wasel subscribers.
- The Windows Mobile® version 5.0 operating system—to run the postal workers' mobile devices.

Subscribers can use their mailboxes to receive as well as send mail. They place an item in the mailbox installed outside their houses and schedule collection by Wasel service staff using the Saudi Post Internet portal. When delivering the mail, the Wasel service scans the RFID chip using the mobile device and scans each item's bar code.

The mobile device sends scanned data of delivered items to the delivery database. At the distribution centre, this information is transferred to the central database running on SQL Server 2005. BizTalk Server 2006 then distributes this data to:

- The Mail Delivery and Management System (MDMS) to integrate it with data collected from the sorting machine and pass it to back-office systems—such as GIS, registered mail, customer relationship management, and other postal applications—and to the mobile device.
- The GIS mapping database, which is also based on SQL Server 2005. Administrators can access this data through the Office SharePoint Server 2007 portal to track mail, delivery schedules, and the postal worker responsible for delivering a particular item.
- Exchange Server 2003—sends updates to Wasel subscribers through e-mail and text messages to their phones to confirm the delivery of the posted item.

Benefits

Launched in October 2007, the Wasel Service Project has been instrumental in modernising the communication sector in the kingdom. Currently available in 23 cities, Wasel will cover 56 cities by 2009, serving five million locations. By purchasing licences to use the mapping service, businesses can now use it for e-commerce, and other government agencies can launch e-services. Internally, Saudi Post has increased its daily

processing capacity by more than 100 per cent, and the licence subscription fee will provide an additional revenue stream. The groundbreaking project has gained recognition from postal authorities across the world, and, in 2007, Saudi Post received the Postal Industry Innovation Award from Microsoft.

"An important factor for the project's success was integrating Microsoft technologies with other line-of-business applications," says Dr. Altaf. "Microsoft has proved to be an indispensable business partner for us through its continual support. We plan to implement more of its solutions, such as upgrading the existing database to Microsoft SQL Server 2008 Enterprise Edition, to further improve the system's performance."

High Customer Satisfaction with 100 Per Cent Automated Service

The postal service, which previously had to rely on its customers visiting post offices to collect mail, has achieved 100 per cent automation of the dispatching process. By using zip codes to identify a location anywhere in the kingdom, mail can be delivered to the correct recipient even without the individual's name. Dr. Altaf says: "Using integrated Microsoft technologies, we can track the mail, direct postal workers to the right address, and help ensure delivery within the appropriate time. As a result, our dispatching system is now 99.99 per cent accurate and our customers are highly satisfied with the service."

Addressing System Helps Saudi Industry Offer New Services

A key outcome of the new addressing system developed by Saudi Post is the creation of a database of its customers. The organisation now has profiles—including name, age, profession, and number of family members—of all Wasel subscribers. Businesses can access this data by paying a fee to Saudi Post, and use it with appropriate guidelines

for marketing and communication activities such as direct mail campaigns.

Dr. Altaf says: "Large enterprises, government and non-government agencies, and especially small and medium-sized enterprises can now develop new value propositions. These developments in Saudi industry will lead to newer revenue streams and higher competition. We specifically expect the retail industry to diversify business models and improve its offering."

Saudi Post Contributes to E-Commerce and E-Government Agenda

Due to the increased reliability of the postal service, businesses in Saudi Arabia are starting to adopt e-commerce business models and sell their products online.

"E-commerce transactions are now a reality in the kingdom because customers can have parcels delivered to their houses rather than to a mailbox at the post office. In addition, valuable items are secure and not lost in the delivery processes, because Saudi Post can track them at all stages," says Dr. Altaf. "The new postal service is great for businesses because it now contributes to reducing operational costs by helping them save time, money, and effort when transacting with customers—this was not possible earlier."

For government agencies, the service has opened up new channels of communication with customers. Dr. Altaf explains: "The system's database is integrated with the e-mail server. So the e-mail address we provide to Wasel subscribers also represents the physical address data. As a result, government agencies can use our address database or online services to communicate with residents."

Government Agencies Improve Service Delivery

The availability of data on the location of homes and their owners has proved to be an

asset for other government organisations in Saudi Arabia. A prime example is the use of this data by the Social Security agency to deliver welfare benefits to beneficiaries anywhere in the kingdom.

Saudi Post will also be providing the mapping service to the policing system and emergency services. Dr. Altaf says: "Previously, if citizens required an ambulance, they struggled to provide travel directions to their address. Now, using the mapping service, hospitals can quickly send emergency help to patients."

E-Services Are Available to Citizens for the First Time

Once only an offline service provider, the postal authority has now launched a host of new e-services by integrating its Web site with the SQL Server data management software. Just by registering on the Web site, users can:

- Track and trace mailed items
- Find a post office branch and search the zip code of a particular subscriber
- Find locations of businesses and government agencies using the postal Wasel address

Dr. Altaf says: "Users can also access services through their Web-based mobile devices. These world-class services are available to residents of Saudi Arabia for the first time and have resulted in a significant increase in the Saudi Post customer base."

Employees Process 100 Per Cent More Mail

The GIS solution has resulted in parcels being processed and delivered to Saudi Post customers much more quickly. Dr. Altaf says: "Saudi Post can now handle many more items of mail a day than previously. We have recorded a 100 per cent increase in the number of items processed a day compared to the same quarter last year."

Some operational improvements that help the postal service manage a bigger workload are:

- A decrease in the mail delivery and pick up times as postal workers quickly find the right destination
- Better quality by regular monitoring of the status of delivery to subscribers' mailboxes using the data supplied by the embedded RFID tag
- Timely decision-making to improve services on the basis of statistical and operational reports generated by the system
- Greater management control of the postal service and staff performance remotely through handheld devices

Gulf Countries Make Their Postal Systems 80 Per Cent More Productive

The zip code addressing system based on advanced technology has proved to be a great advantage for the kingdom. Not only has it solved the challenge posed by a lack of house numbers and street names, it also eliminates mismatches between English and Arabic.

Dr. Altaf explains: "Whereas current sorting machines available in most Gulf countries can only deal with 20 per cent of the mail, the introduction of zip codes could increase productivity up to 80 per cent—which is the average rate in developed countries."

Based on these statistics, Saudi Post has showcased the GIS solution to other Gulf countries to help them introduce more efficient postal services. Dr. Altaf says: "The system has been highly praised and we expect to sell licences for the service to other countries as well."

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