



“Currently, KARICO manages approximately 80,000 facilities, including reservoirs, pumping stations and drainage ducts. With the introduction of our Autodesk GIS solution, we’re able to manage our water resources and other facilities more systematically and scientifically. Additionally, it supports consistent and effective policymaking.”

Hong-guen Kim  
 KARICO

## KARICO Improves Service and Productivity

### South Korea Builds a Stronger Agricultural Infrastructure for Less with Autodesk Solutions

#### Project Summary

A government agency with more than 6,000 employees, KARICO maintains South Korea’s rural irrigation systems, promotes effective land utilization, and works with communities to preserve the nation’s agrarian cultural heritage. In 2001, the agency turned to advanced GIS technology from Autodesk to create a unified repository of all its valuable infrastructure and land use information. Then it initiated an even more visionary program, making its GIS and tabular data available on its employees’ desktops and mobile devices with Autodesk’s web and mobile solutions.

With its comprehensive GIS solution, KARICO is:

- Reducing IT costs by eliminating redundant systems
- Boosting productivity with readier access to GIS data
- Improving service to farmers by providing them with more consistent information and policies
- Minimizing the negative effects of floods and droughts with faster, more effective emergency response

#### The Challenge

As the market for agricultural products became increasingly global, South Korea’s farmers found it difficult to compete, placing their way of life at risk. In 2000, the government responded by bringing together a number of agriculture-related agencies and founding KARICO.

#### Multiple Systems Drain Resources

The new agency helps farmers by using the latest information technology to enhance the nation’s agricultural infrastructure, especially its rural water facilities. However, the new agency inherited a number of disconnected GIS and tabular database systems. The agency’s many designers and surveyors were forced to waste time entering information into multiple systems. Across the agency’s 93 regional offices, managers couldn’t efficiently view and update facility information. And at a strategic level, the agency’s leaders didn’t have the nationwide visibility they needed to aid in decision-making.

Given the critical importance of spatial information to its mission, KARICO decided that it needed an integrated system to store and share this information. “Without an integrated



GIS, agricultural resource management is extremely difficult because too many aspects of facilities management must be done manually," says Byeong-soon Yoon, KARICO's director of information management.

### The Solution

With system integration and work process improvements top considerations, KARICO chose Autodesk technology to power its enterprise GIS. Autodesk GIS Design Server, which stores and distributes KARICO's valuable GIS data, is at the heart of the new system. To enter infrastructure information into the system and execute design work, KARICO's designers use AutoCAD and Autodesk Map 3D. And to deliver GIS and tabular data directly to all its employees, KARICO uses Autodesk MapGuide, an application that makes dynamic maps available over the Internet and to mobile devices.

"We needed a GIS that integrated with our design system and enabled data distribution over the web to all our locations and many field employees," explains Gil-hyeon Nam, KARICO's director of information responsible for CAD and GIS. "We believed that the Autodesk solution was the best choice to satisfy all our requirements."

### An Accurate, Efficient System

Today KARICO is streamlining a number of essential processes using its Autodesk-powered spatial enterprise. Using the system, KARICO employees have instant access to facility management data, equipment status, design information, and disaster management tools. Additionally, the agency's leaders can use the system to generate nationwide statistical reports.

"Our integrated GIS provides the opportunity to implement efficient, systematic management of business processes that have been, up to now, handled manually," says Nam. "Information is now

standardized and shared, helping our facilities to be managed more accurately and our water resources to be managed more properly using scientific methods."

### The Result

#### Greater Efficiency and a Stronger Industry

KARICO has identified a number of benefits that it is receiving thanks to its complete Autodesk geospatial solution. The agency has reduced both duplicate design work and manual reconciliation between systems, improving the productivity of its design staff. And because it no longer maintains redundant systems, the agency is saving money on IT costs even as it continues to expand and improve its use of open spatial enterprise technology. The agency has also noted an improvement in its ability to serve farmers by being able to provide them with more consistent information, and, in the event of a flood or drought, more responsive relief services.

His perspective informed by his leadership position, Kim sees KARICO's Autodesk geospatial solution as a key contributor to the agency's success: "The greatest benefit from utilizing GIS is that it standardizes the procedure of establishing national agricultural policy by integrating tabular and geospatial data. With it, KARICO is better able to develop initiatives that build stronger farming communities and a more advanced agriculture industry in Korea."

To learn more about how Autodesk solutions are helping government agencies accomplish their missions, visit us on the web at [www.autodesk.com/infrastructure](http://www.autodesk.com/infrastructure).

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