

Improved Security for Korea Gas with HanPrism

Korea Gas Corporation

As Korea's sole liquefied natural gas (LNG) provider, KOGAS safely distributes natural gas to 17 power plants and city gas companies nationwide, including 17,491 households in 207 districts. KOGAS operates 4 production facilities and boasts the largest single tank storage capacity at 270,000 kiloliters. In total, KOGAS operates a nationwide pipeline network spanning over 4,790 kilometers, stably supplying LNG throughout South Korea.

Challenges

Safety is a top priority for KOGAS. KOGAS strives to minimize risk throughout the process from gas production to supply by constantly running safety diagnostics and emergency drills. KOGAS also analyzes factors impacting the stable demand and supply of natural gas. KOGAS understood the importance of a data infrastructure to manage its data resources and related solutions, but its existing plant information system (PIS) data infrastructure did not help KOGAS improve its safe and efficient operation.

1. Cyber Security Concerns

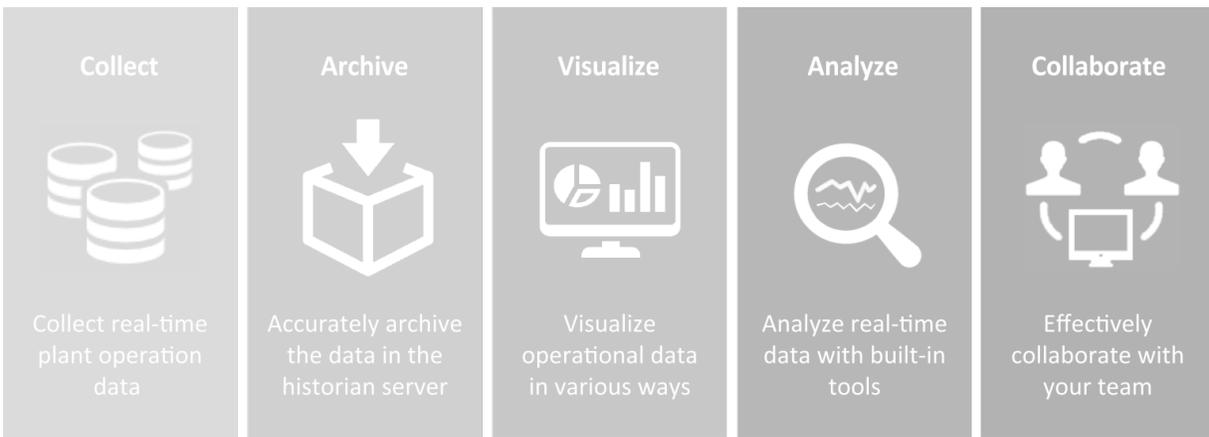
The Korean government designated KOGAS as a critical information infrastructure. Therefore, KOGAS needed to reinforce its security system including its information system to protect KOGAS from cyber threats. Their existing PIS was able to provide a cyber security solution but that solution was too expensive.

2. Maintenance and Upgrade Burden

KOGAS did not participate in the yearly maintenance program for their existing PIS. When an issue occurred, KOGAS would pay the vendor for the needed services. KOGAS wanted to add additional tags to their system, but the vendors policy required KOGAS to renew the yearly maintenance program and pay a penalty fee for not having a current maintenance program. In order to add additional tags, KOGAS had to pay for the additional tags, the yearly maintenance program, and a penalty, which significantly increased the price.

HanPrism

In 2013, KOGAS chose HanPrism to be their data management system after comparing HanPrism to their existing system. The HanPrism data migration tool migrated historical data for over 18,000 points across 5 years from the existing historian server to the HanPrism server. HanPrism replaced the existing PIS system at two facilities and became the data infrastructure for 1 new additional KOGAS facilities. With HanPrism, KOGAS effectively manages vast amounts of data securely and utilizes built-in visualization and analysis tools throughout all the layers of the organization.



Benefits

1. Reinforced Cyber Security

By replacing their existing system with HanPrism, KOGAS did not need to buy an additional expensive cyber security system. HanPrism is a comprehensive solution that includes physically unidirectional networks to stop any cyber-attack. Meeting the Korean government security requirement, KOGAS is able to consistently and stably collect, store, and utilize their data and ensure the confidentiality, availability, and integrity of their data.

2. Reduced Maintenance Cost

With HanPrism's Care Program, KOGAS receives the necessary support and training to effectively use its data to create actionable intelligence. In addition, by analyzing KOGAS requirements, the HanPrism's Care Program fixed many errors from the previous PIS such as database and point information.

3. Increased Actionable Intelligence

HanPrism became the total data infrastructure for KOGAS, collecting and storing equipment data. User conveniently and efficiently monitor their process and data with intuitive user interfaces and mimics. In addition, KOGAS now loads historical data faster and more precisely than its previous PIS.

KOGAS leaders and directors view the status of individual facilities as well as the entire fleet using HanPrism. Engineers and operators HanPrism charts and the Excel add-in application to analyze data daily, weekly, and monthly. Overall, KOGAS constantly utilizes HanPrism to generate actionable intelligence and simplify the decision-making process.

Challenges	HanPrism	Benefits
<ul style="list-style-type: none"> Government mandated cyber security requirements Expensive cyber security solution and maintenance program 	<ul style="list-style-type: none"> Reliable solution that fulfills Korean government cyber security system requirements Reasonable maintenance costs and customized engineering and support Powerful analysis and visualization tools utilized by operators, engineers, managers, and executives 	<ul style="list-style-type: none"> Protected their data and assets from cyber threats Reduced maintenance cost and increased usability Actionable intelligence that leads to effective business decisions