# Oil and Gas

# Bluewater

## Hoofddorp, The Netherlands

### Goals

- To replace and upgrade the existing integrated control and safety systems
- To achieve 'First Oil' on time in order to avoid contract penalties and lost production
- To maximize the availability/uptime of the control and safety systems and to minimize the total cost of ownership

### Challenges

- The Project teams are located in multiple locations, that is, the Netherlands, Slovakia, Germany and SingaporeProcess data from the new ICSS, including serial interfaces, safety systems and new I/Os, were available only in the very late stages before the planned FAT
- The original DCS had to be kept 'alive' as long as possible and the existing safety systems had to remain operational with just a few hours available to upgrade

### Results

- After replacing the Emerson ProVox and Delta V DCS systems and implementing a new integrated control and safety systems on the Glas Dowr, Bluewater was able to successfully meet 'First Oil' date on time
- Bluewater and its customer can now monitor the control and safety systems, both on and offshore, in real time Increased end-user ctivity
- Multiple connections possible to different servers creating redundancy



Industry: Oil and Gas

"The Glas Dowr Kitan project has been a tremendous success for all parties. We were impressed with the Schneider Electric attitude throughout the project and their 'change the game' approach. It is one thing to have a good project plan in place, but another to actually execute and deliver."

**Ernest Hofstee**
Senior Project Manager, Bluewater

# Borealis Group
## Austria

### Goals

- Create an automation system that will reduce risk, lower production costs and address all environment and sustainability Goals

### Challenges

- Be able to check static equipment such as piping and pressure vessels Be able to evaluate the functioning of safety systems designed to prevent damage to man and/or the environment

### Results

- An optimal safety systems was completed with less cost that inventing in traditional sensors

- Preventive maintenance are scheduled effectively

Industry: Oil and Gas

"The implementation of the Mobile Operator Rounds system cost less than 100.000 euro in total. That is not more than we would have needed if we had chosen to connect only 10 sensors to our DCS. If the new system will prevent a standstill of only one day of our factory, we will have earned enough to repay the investment."

Wouter Verheyden,
Reliability Team Leader at Borealis

# Chevron

## San Ramon, California

### Goals

- Chevron wanted to improve refinery performance and reliability, reduce maintenance costs, and simplify regulatory compliance. It was also eager to document the knowledge of workers approaching retirement.

### Challenges

- The refining industry is driven by tight margins, and oil companies are constantly looking for ways to boost efficiency and reduce costs

### Results

- Improved refinery reliability

- Reduced costs

- Better knowledge retention

- Improved regulatory compliance

Industry: Oil and Gas

"Using Mobile Operator Rounds to accelerate and sustain process improvements, Chevron has reduced maintenance costs, improved availability, and achieved cost effective regulatory compliance."

**Mike Brooks**
Global Refining IT Adviser, Chevron

# Chevron Oronite Company LLC

## Gonfreville l'Orcher (Le Havre), France



### Goals

- Implement a SCADA system for a new additive production unit
- Facilitate information sharing between shop applications and the SAP ERP application
- Use thin clients to connect to the SCADA servers
- Determine standards that make it easier to reuse and update applications

### Challenges

- Adding different types of equipment to the ERP application
- Standardizing current terminology
- Meeting very short implementation deadlines
- Adopting the ISA-95 standard to define data sharing between the shop floor and the ERP application.

### Results

- Information sharing between the ERP application and production units no longer requires manual intervention
- Launching a new product and adding new items is handled without jeopardizing the existing product
- Modifications to an object are immediately transferred to all of the graphic displays, resulting in significant time savings

Industry: Oil and Gas

"We were looking for a SCADA system that would be easy to connect to our ERP application and we also wanted to implement the ISA-95 standard. The Wonderware System Platform met our expectations."

**Serge Talleux**
Industrial IT Director

# GDF Suez
## Redcar & Cleveland, United Kingdom

## Goals

- GDF Suez initiated a plan to split control of a 14.7-kilometer gas pipeline running between its Teesside Power Station and a gas reception facility and a gas processing plant which provides dual natural gas fuel supplies for the plant

- A robust solution was needed to replace signals originally collected by kilo-stream telemetry and then transmitted via analog telephone lines through a gateway to the distributed control system at the gas processing plant

- Relocate the control Infrastructure and associated data to the control room at the TPS

## Challenges

- The company mandated that the power station control system update occur live, because shutting down the natural gas supply pipeline would incur significant financial losses

## Results

- The Schneider Electric® solution delivered greater system efficiencies as obsolete equipment was upgraded to current power facility control technology

- GDF Suez benefited from improved engineering know-how that enables plant managers to better analyze possible problems and enhance and modify the control system as required

- The power station now has improved overall safety since signal collection at much higher frequencies provides real-time data to more immediately identify and address potential issues

Industry: Oil and Gas

"Schneider Electric delivered a significant amount of flexibility and capabilities to the system design."

**Derren Wicks,**
Lead Maintenance Engineer

# Infineum

## Vado Ligure, Italy

### Goals

- Increase plant's availability by anticipating any potentially damaging situations
- Optimize operators' efficiency and reliability during inspection activity
- Limit production downtimes to scheduled maintenance only

### Challenges

- The proximity of the plants to inhabited areas makes it essential for the sites to be safe and reliable at all times
- Detection of critical indicators, e.g. vibrations or the presence of foreign particles, which automatic instruments do not usually detect effectively
- Maximize the value of the time and experience of the field operators

### Results

- The Wonderware solution has enabled the plant to achieve a plant availability factor of over 90%
- The system has allowed the operational procedures for visual inspections of equipment to be optimized and standardized, thanks to the removal of paper reports
- Wonderware Mobile Operator Rounds features now allow operators to identify potential problems which were previously neglected, thus avoiding the need for any emergency intervention

Industry: Oil and Gas

"The first phase of the project has been completed, with CNPC having successfully desalinated thousands of tons of seawater."

# Kuwait Oil Company

## Kuwait

### Goals

- To ensure the safest oil refining operation by using the latest in 3D simulator training technology
- To effectively train both field and control employees to address refinery tasks quickly and efficiently
- To capture and knowledge-transfer best practices to new employees to increase efficiency and reduce operations and maintenance costs

### Challenges

- The company established new more extensive training requirements for its employees
- Kuwait Oil's aging workforce required the successful transfer of knowledge to its new generation of plant operators
- Management needed to maintain efficient production while at the same time ensure worker safety and competence

### Results

- EYESIM helps the company to prepare new operators even before they step into new working environments
- Kuwait Oil can now better execute efficient training for its field and control room operators by means of a High-Fidelity Process Simulation coupled with a Virtual Walk-through Plant Environment3D visualization training using EYESIM enhances safety resulting in fewer accidents, which avoids costly plant shutdowns

Industry: Oil and Gas

"The Simulation Platform helps in plant safety and combined with Smart Training supports the efficient overall operation of the refinery."

**Jamal Abdul-Hameed Al-Humoud**
Manager, Research & Technology Group

# TekSolv
## United States

### Goals
- To reduce the amount of time to deploy new projects
- To maintain highest level of environmental safety and engineering services
- To establish a technology standard that integrates all TekSolv applications

### Challenges
- The multiple platforms and software products in place were not integrated and offered no technology standard
- Customers had to rely on stagnate or latent data to understand water levels or what fugitive emissions were present
- The safe and reliable collection of data in real-time information was difficult due to the remote locations of customer work sites

### Results
- Deploying new projects now takes only a matter of minutes/hours instead of days
- The system's object-oriented design facilitates significant cost savings in overall system programming and preserves the company's technology investment
- Data can now be accessed from any device at any time from any location

Industry: Oil and Gas

"In terms of ROI we look at man-hours, and the man-hours that we invested to deploy a new project now takes only a matter of minutes, maybe a few hours, rather than a few days."

**Jason Reed,**
Director of Information Technology, TekSolv

# RasGas
# Doha, Qatar

## Goals

- Implement cost-saving measures to extend business efficiencies

- Expand production while maximizing existing technologies

## Challenges

- Communication from on-shore control room to off-shore well is 130 km away

- Multiple operating platforms and hardware versions

## Results

- World's largest LNG supplier with expected total production of 77 million tons per year

- World's longest safety system peer-to-peer network allows the onshore LNG system to shut-down the remote offshore wellheads from a distance of 130 km

- Provided lowest risk level and with the highest life cycle value

Industry: Oil and Gas

"By working with Schneider Electric, RasGas is setting the pace for the LNG industry globally, supplying more efficient and more environmentally friendly energy for export to the world."

**Scott Pickens**
Electrical Engineer
Hanover

# Western Refining
## El Paso, Texas

## Goals

- Improve management of maintenance and operations

- Efficiently track materials and work orders

## Challenges

- Update aging legacy system to a modern windows- based maintenance management system, while reducing costs and improving efficiency

## Results

- Scalable asset management to support company growth

- Familiar Microsoft Windows work environment Improved management of maintenance and operations

- Full accountability of work orders, labor, and materials

- Streamlined purchasing of materials and services



Industry: Oil and Gas

"Cost-value was the major factor in our decision to go with Schneider Electric. What also helped set the Schneider Electric solution apart was its use of Windows technology and its deep and growing relationship with Microsoft. This assured that employees could work in a familiar software environment and exchange data easily with other applications."

**Blake Larsen,**
Information Technology Manager