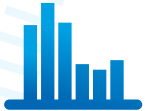
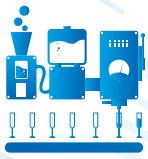


OIL & GAS





Oil and gas companies must have access to reliable real-time information when they need it to ensure the complete safety of their personnel and assets, whilst ensuring that their production activities are profitable. Integrating, presenting and summarizing multiple sources of information is therefore essential to help operators take informed decisions and to provide a new experience in Operational Efficiency and Performance.

Hypervision

Unifying and putting information into perspective, providing decision support, maximizing interactions between different disciplines (operations, security, maintenance, etc.). With Panorama Suite, put an end to a multitude of disparate systems, all tasks can be accessed in a combined manner. Panorama also facilitates data integration and exchange with Geographical Information Systems (GIS), Computerized Maintenance Management (CMMS) and ERP systems.

Manufacturer independent

Panorama solutions for the Oil and Gas industry deliver a secure, flexible and upgradable open software platform, able to connect virtually to any equipment (Analyzer, Flow meter, etc.) or automation systems (RTU, PLC, DCS, etc.), for monitoring of oil and gas production, as well as for controlling oil and gas pipelines.

Communication front-end

Panorama COM is a local or remote communication front-end supporting multiple standard protocols, and well suited to one-off transmissions and discontinuous connections. This means that remote management of your distant infrastructure (collection or injection wells, oil and gas pipelines, etc.) is completely transparent (whatever your display media) for accurate control and operation of your equipment and technologies (ADSL, GPRS, RTC, Radio link, etc.).

Information available in real time

Whether for small (100 variables) or large installations (>1,000,000 variables), Panorama E² displays all data in real time to enable detection and, if necessary, actions to be taken as quickly as possible. The information is acquired, processed if needed, then displayed directly on operator consoles to ensure optimum effectiveness in response to events.

Availability and reliability

Panorama E² satisfies the highest availability requirements, through native functions such as application distribution across several servers, fault scenario configuration, or even more demanding requirements, by implementing redundancy across up to 16 servers.

Data logging and securing

All information is recorded and can be protected using mechanisms inside or outside Panorama. Data security is achieved while respect-

ing usage rules and in line with your architecture and your constraints.

Analyze to improve

Panorama HISTORIAN, a standalone solution for collecting, archiving and analysing your data, interfaces with your process visualisation system, provides calculations, displays and reports specific to your needs in order to maximize your production, to optimize the use of your equipment and to improve safety.

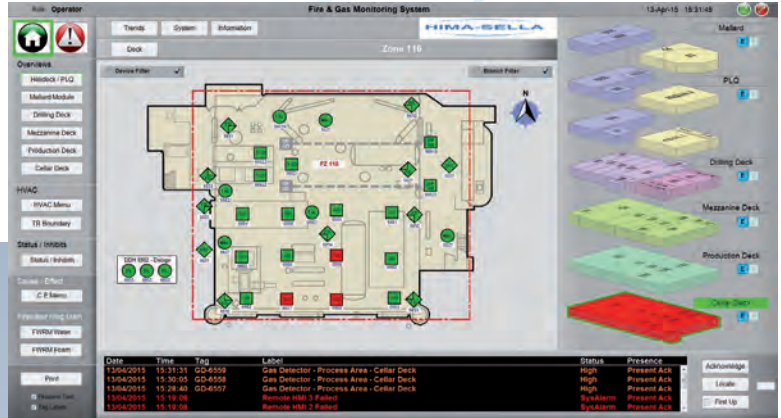
Used by thousands of clients

Process, Shutdown, Fire and Gas Detection, Codra's Panorama solutions are used in all sectors of the Oil and Gas industry, both upstream (exploration and production) and downstream (refining, transport and distribution), at both onshore and offshore sites.

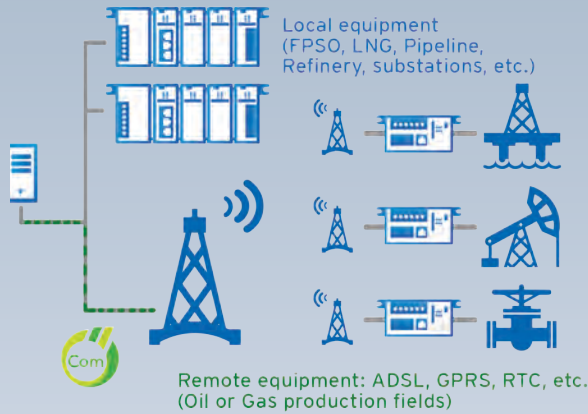




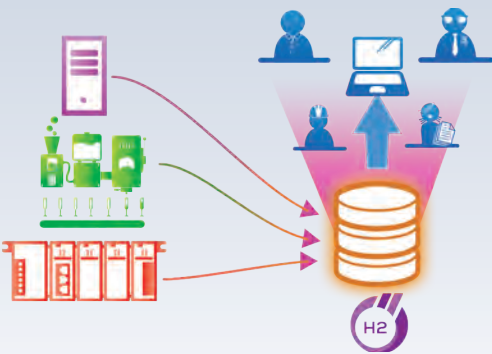
Monitoring of Fire & Gas detection and emergency shutdown safety systems



Unified management of your local and remote equipment with Panorama COM



Data centralization and calculation



Panorama Suite 2017 offers all the functions required to manage and control your facilities :

- Data acquisition, alarms, alarm history,
- Process mimics, trend drawings, schedules,
- Telemetry, remote access, communication media management,
- Alerts and on-calls.
- Native simulation mode,
- Reports for better management of installations,
- Redundancy, load distribution,
- Integration of video, access control, anti-intrusion, GIS.

Powerful, automatic tools to create and maintain applications.

Architecture reliability and flexibility/ integration with other information systems :

- From a single workstation to multi-user systems with redundancy on several levels,
- Links to centralized databases,
- Links to the user directory,
- Computer center operation on virtual machines.

Remote access via mobile devices (tablets, smartphones, HTML5 based web clients) or via desktop PCs.



Monitoring and control of production wells



Displays for monitoring and control of offshore platforms



References

ADMA-OPCO • AGIP • BP • BW OFFSHORE • CANADIAN NATURAL • CHEVRON • CONOCO-PHILLIPS • CYBERNETIX • DANA PETROLEUM • ECA EN • ECOPETROL • ENGIE • ENI • EXXONMOBIL • GASCO • GRDF • ICS TRIPLEX • KOC • PETROFAC • PHILLIPS 66 • PRIDE INTERNATIONAL • QATAR PETROLEUM • REGAZ BORDEAUX • SAUDI ARAMCO • SEVME • SHELL • SINOPEC • SONANGOL • STATOIL • SUNCOR ENERGY Inc. • TALISMAN ENERGY • TAQA • TRACERCO • TOTAL • YASREF •

