

Utilities & process control

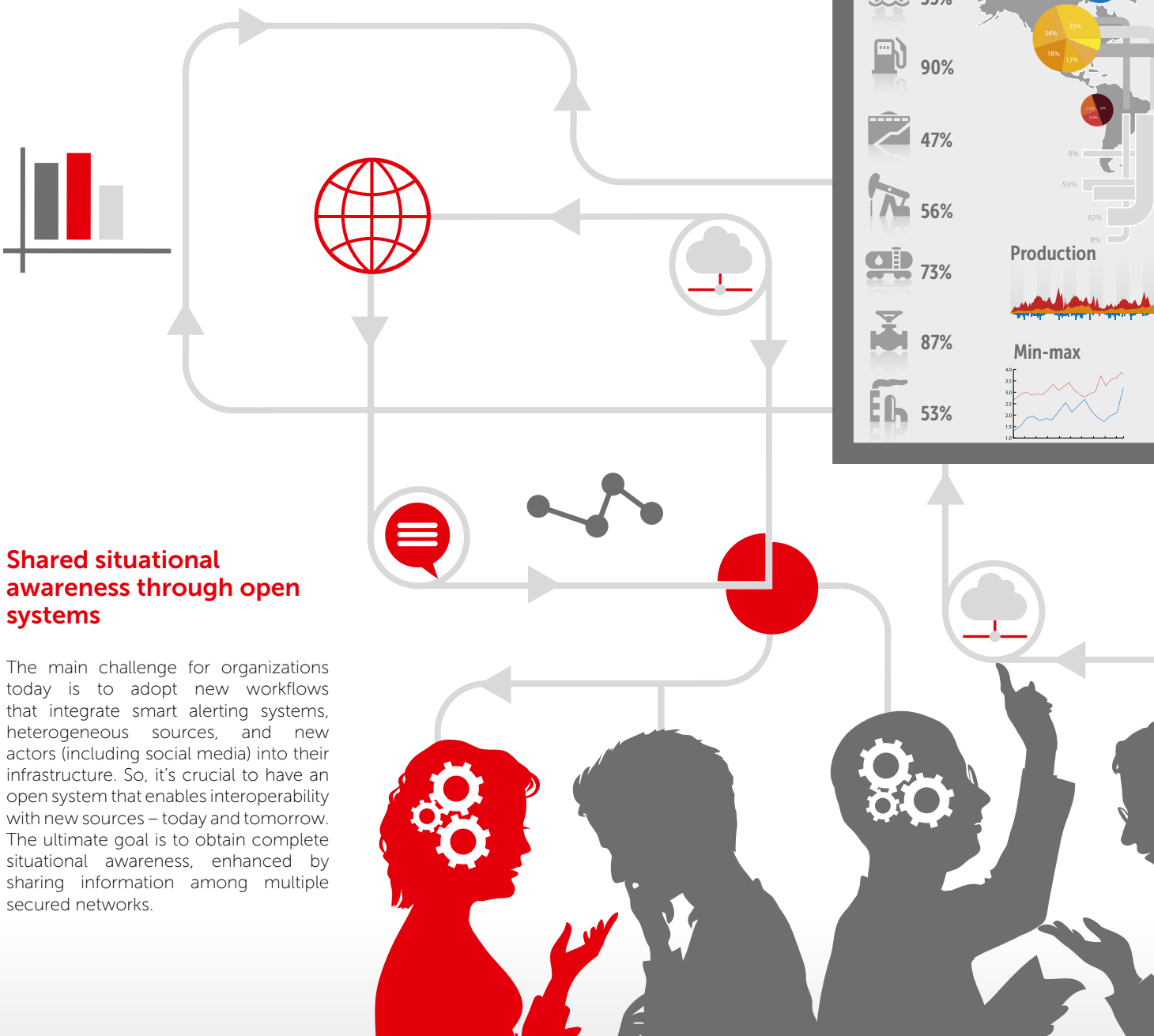
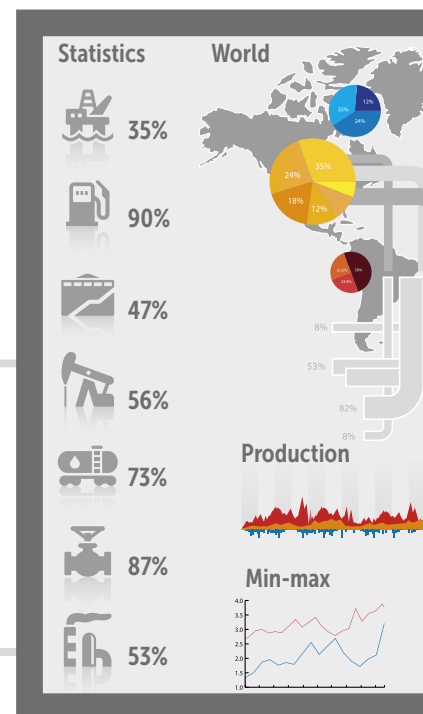
Optimizing the operator experience to maximize insight



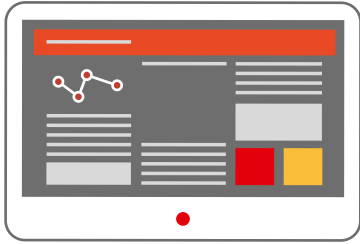
New challenges for the utilities & process control market

The ready availability of a super-abundance of information (Big Data) offers new opportunities to provide the right insights at the right time. And today's 'Always Connected' (Flexible mobile on the move) state speeds the information arriving for analysis.

But all these technologies combine to create information overload. This new Information Age calls for a powerful and dedicated infrastructure for data sharing and visualization.



The main challenge for organizations today is to adopt new workflows that integrate smart alerting systems, heterogeneous sources, and new actors (including social media) into their infrastructure. So, it's crucial to have an open system that enables interoperability with new sources – today and tomorrow. The ultimate goal is to obtain complete situational awareness, enhanced by sharing information among multiple secured networks.



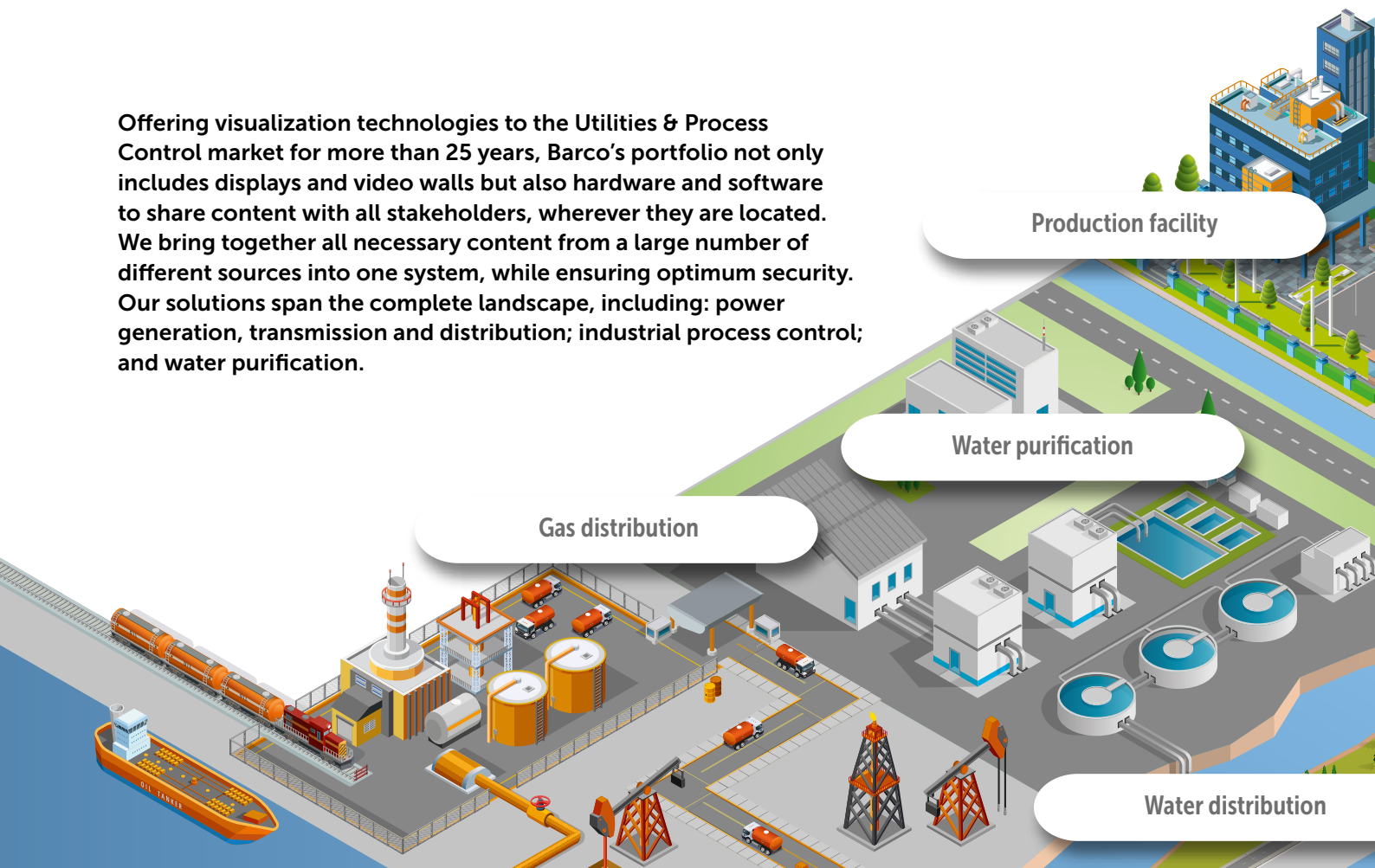
The ad-hoc capability is very useful for facilitating collaboration among the operations staff which can ultimately lead to better decision-making.

William Hunter King,
SCADA Analyst for Austin Energy



Fluent processes – at any time

Offering visualization technologies to the Utilities & Process Control market for more than 25 years, Barco's portfolio not only includes displays and video walls but also hardware and software to share content with all stakeholders, wherever they are located. We bring together all necessary content from a large number of different sources into one system, while ensuring optimum security. Our solutions span the complete landscape, including: power generation, transmission and distribution; industrial process control; and water purification.



Production facility

Water purification

Gas distribution

Water distribution

Application areas

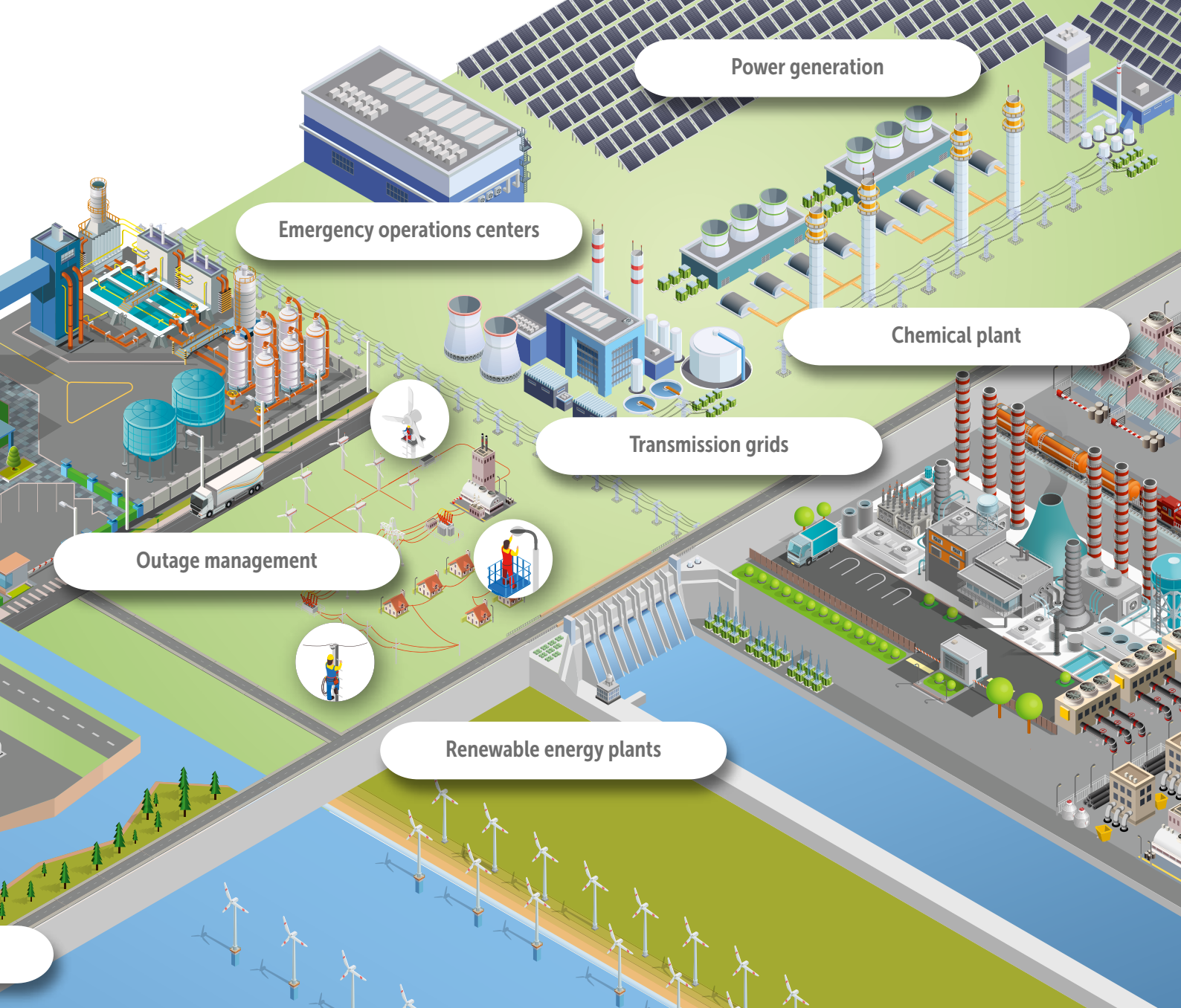
Electric Power, Transmission, and Distribution Control Centers

A critical function in today's power systems – the nerve center that integrates a myriad of automation and control technologies, and the command center from which system operators make critical and timely decisions.

Water Purification and Distribution Centers

Distributed production facilities responsible for the complex water purification process, which is becoming more automated and demands improvements in situational awareness. The centralized distribution center receives increasing amounts of field data for optimizing the water distribution network.





Emergency Operations Centers

A central command and control facility responsible for carrying out the principles of emergency preparedness, emergency management, or disaster management functions at a strategic level during an emergency. The EOC also ensures the continuous operation of a company, political subdivision or other organization. The common function of all EOCs is to collect, gather and analyze data, make decisions, and disseminate those decisions to all agencies and individuals concerned.

Gas Distribution Centers

A central command and control facility responsible for monitoring the distribution network in real-time.



User-centric decision-making

Today, the available information is enormous, and only a small fraction is fully analyzed and monitored. Technology can help us get the most out of the available data, but the decision-making is still in the hands of humans. That's why Barco's product offering includes four quadrants – with the user at the center.



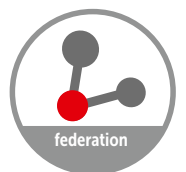
Control rooms

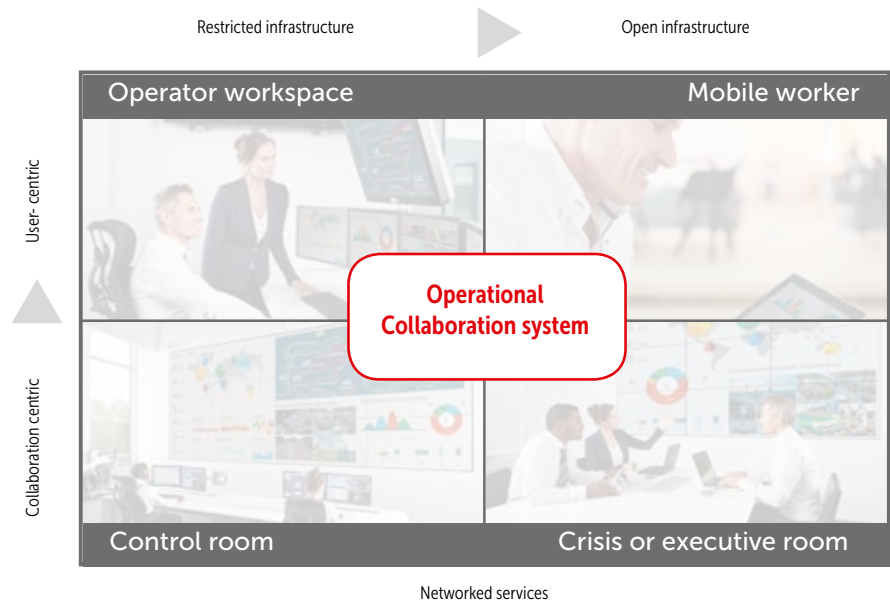
The control room is an organization's central information hub – where all information comes together to be analyzed and interpreted in real-time. Barco has been a world-leading provider of video wall solutions and control room visualization software for over 25 years, with reference installations across all utilities and process control segments. The large video wall provides an essential overview of the complete grid or production process, while the operators see the details on their desktop applications.



Operator workspace

Although ICT has undergone rapid, far-reaching changes, the operator workspace has not quite kept pace. The result is a very inefficient way of working, in which operators often have to switch between several computers on their desk – each with its own keyboard/mouse combination – to get the information they need. Barco's OpSpace provides a solution to this problem, offering a highly efficient virtual environment that integrates all needed information in one place.





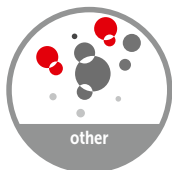
The mobile worker or field agent

Stakeholders are not confined to the organization’s premises. Barco’s system allows operators to push ‘perspectives’ (bundled information windows) out of the control room to field and mobile users or remote decision-making units.



Crisis room or executive room

In crisis situations, decisions need to be taken quickly. Sometimes this is handled in the control room; in other circumstances, a break-out to a separate crisis (or executive) room is needed. Barco’s dedicated screen technology and user-intuitive presentation tools ensure that all of the information – whether coming from the control room, the network, or one of the attendees’ mobile devices – is displayed optimally ... which leads to better and faster decision-making.

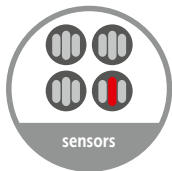


Networked services

Beyond the network-based sharing of perspectives for situational awareness, several networked services are available today: recording and playback, media services and collaboration tools. Furthermore, Barco’s strategic alliances program integrates the dedicated application software needed to enhance the end-user’s operations.

Tailored to create optimal situational awareness

Barco has the experience and expertise to create solutions that offer the situational awareness that ensures the fluency of your processes. We know that extremely reliable video walls and displays with impeccable image quality are very important. But Barco does not stop there. We go beyond display, delivering the tools needed for all stakeholders to work together in perfect synchronization.



Multi-sensor, multi-source solution

Utilities and process control operations are not limited to elements known from traditional scenarios – they can integrate any possible information source. Creating a single graphical representation of your process means merging different digital formats easily. This allows you to maintain all your assets digitally. Integrating live or recorded video feeds that come from surveillance cameras, operational video cameras over IP, infrared cameras, combustion cameras, CCTV, web content, and television channels.

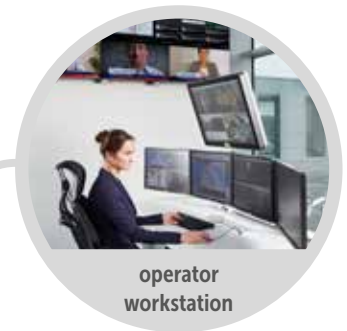
Scenario concept

At every moment, operators need to be situationally aware. By setting up scenario perspectives that can control the content of the display wall, you can speed up the process of searching for the content that you need. Using best case practices, your operational efficiency will increase, reaction time will shorten, and your staff will become more efficient because the latest data will always be available when you need it most.

There was a lot of light in the room and yet the images on the Barco wall were crystal-clear and bright. No other competitors could compare.

Ulrich Platta, Head Engineer Vattenfall Mining

Different user-specific perspectives from various operators can be brought together on one video wall or display. In this way, the operator has a dedicated surface at his disposal. User-specific perspectives also facilitate collaboration in complex situations. Furthermore, sharing perspectives between manned and unmanned displays creates a multitude of collaboration possibilities.



Dynamic content management

Barco's display management software features integrated layout management and digital video switching functions. In essence, it allows operators to manage and share content efficiently. Common operational picture (COP) and scenario building functions enable operators to respond to events and raise alarms in line with best practices. Event-associated displays facilitate exception-based management – drawing proper user attention to manage events, rather than requiring active user interaction.

For example, the video or data of an area of interest defined by the Data Management System (DMS) can pop up at the proper size and location on the display unit.

In addition, scenarios can be set up according to workload for day or night shifts, using the full capability of the display wall.

Best value product portfolio optimized for smart visual decision-making

Barco's product portfolio for the Utilities & Process Control market is optimized for 24/7 use in mission-critical applications. Thanks to our technological leadership and expertise, these products have been successfully deployed in thousands of applications around the world.



Laser rear-projection video walls

Barco's RGB laser rear-projection video walls are the most advanced models on the market today. With 2x more brightness than mainstream LED-lit rear-projection video walls, Barco's RGB laser series can operate under all lighting conditions, including daylight. Furthermore, unmatched colors, focus and contrast levels ensure immaculate image quality. With an incredible lifetime – up to 11.5 years of uninterrupted operation – this video wall series lasts longer and requires less maintenance. And as they provide higher brightness levels while consuming 25% less power than LED-lit models, Barco's RGB laser rear-projection video walls deliver a very low TCO.

LCD video walls with LED backlights

Bringing excellent image quality, with high brightness and a wide color gamut, LCD video walls are an alternative to rear-projection video walls – especially for small to medium-sized control rooms. Barco's LCD video wall series offers a near-seamless set-up for excellent tiled visual performance. What's more, because our LCD video walls are designed for use in control rooms, they offer a number of special features – including automatic calibration and redundant power supply – to ensure a long lifetime with few interruptions.

OpSpace

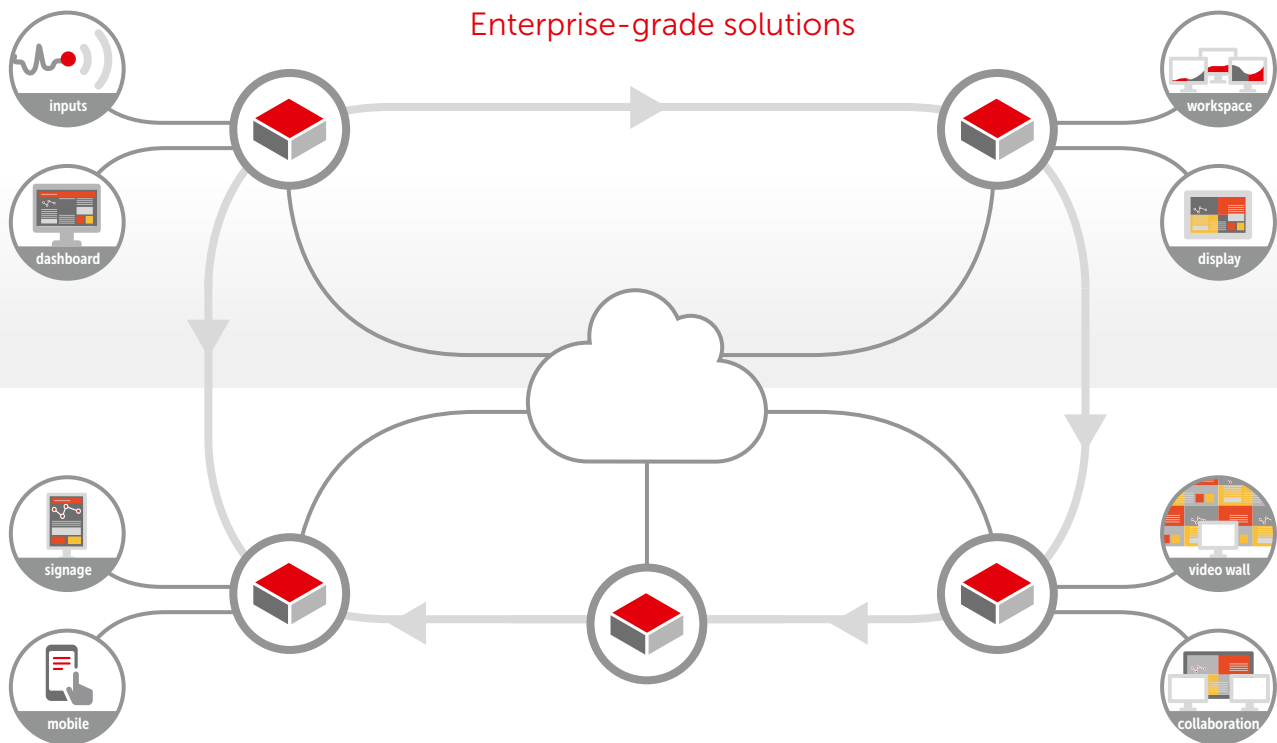
OpSpace is Barco's revolutionary operator solution for the requirements of the Big Data era – with its increased systems complexity, scope and scale, and stricter security regulations. OpSpace creates a single workspace – consisting of a number of displays on the operator's desk – for viewing, monitoring and interacting with multiple clients that reside on multiple networks with different security clearances or liability concerns. All necessary information can be consulted and manipulated within a single pixel space, and with just one mouse and keyboard. In this way, the operator is at the center of the information, with all data within easy reach.

Data acquisition & display management

- Encoding/decoding capabilities
- User interfaces & Ops dashboards
- Bandwidth & network management
- Information Assurance

Single or multi-operator visualisation

- Collaborative workspaces
- Collaboration & workflow technology



Output distribution

- Digital signage & mobile endpoints
- Content distribution

Integration & services

- Recording & playback
- Applications hosting (API/SDK)
- Interoperability

Group collaborative visualization

- Large-area displays
- Collaboration technology

Video wall controllers and networked visualization system

Barco's family of video wall controllers perfectly enables displaying any type of video and data sources on any display configuration in a security and surveillance environment. The dedicated technology is designed to provide ultimate quality and reliability at any location anywhere in the world. Available for stand-alone video walls and networked visualization systems, Barco's video wall controllers are designed to work perfectly with the matching software to deliver the best possible image quality.

The modular architecture of Barco's networked visualization solution ensures that each system can grow and integrate new technology when needed. Connecting an unlimited number of sources to an unlimited number of displays, Barco's networked visualization solution ensures easy distribution over the IP network, to any location. And the integration possibilities with all leading VMS/PSIM integrators and recording and playback options give users the tools for getting the most out of their investment.

Control room management software

Barco's control room management software enables easy display wall management, efficient collaboration and fast decision-making – in and beyond any control room. This software suite provides operators and decision-makers with easy access to video, images and data, and allows them to connect to this information, configure how and where it is displayed, and collaborate in the most efficient way. Powerful and feature-rich – yet user-friendly – Barco's control room management software is the right suite for this complex job.

Skills and expertise, around the world

Deploying a visualization solution is more than just connecting a few cables. That's why a worldwide team of experts is at your service to provide a set of integration and deployment services, guaranteeing the right solution delivery. A single point of contact, planning, reporting, validation and testing are standard services – and these aspects are supervised by a Barco project manager to execute the project on time and in full. Custom solution engineering or deployment services (including customized training, engineering or installation) can be contracted as well, so that you have assistance on projects with elaborate system, solution or approach requirements.



Our operators can now easily share information based on a real-time, central overview of the operational as well as security aspects of the two reception terminals. The system's user-friendliness and the ergonomics truly motivate our team

Jan Deckmyn,
HES&Q Manager, Gassco

Ensuring the maximum operability and performance of your system while saving costs: that's the main objective of Barco's 'Maintain & Operate' services. Our worldwide support network is at your service to maximize the uptime and productivity of your display solution. To completely fulfill your needs, we provide the opportunity to define your own service and support levels – on top of the standard warranty services. Our dedicated services, which are available throughout the product life cycle, include repair services, spare part management, preventive maintenance, service project management, and more.

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The information and data given are typical for the equipment described. However any individual item is subject to change without any notice. The latest version of this brochure can be found on www.barco.com. All specs mentioned in this brochure are in accordance with ISO 21118 standards.