Executive Summary

In the industrial sector, increased specialization of expertise and the need for a faster pace of decision-making make collaboration not just another trend—but the difference between success and failure.

With short innovation cycles, changing customer needs and intense competitive pressure, harnessing the power of employees across functions and regions has become extremely important for manufacturers. However, such cross-enterprise knowledge sharing requires a robust, scalable and secure platform for collaboration.

Honeywell Process Solutions has taken collaboration to a new level in the process industries with its Experion® Collaboration Station. This solution, comprised of a large-format, multi-touch display for system or plant-wide data, changes the way industrial organizations access information and solve problems. It enables high-quality collaboration with the field or with experts in other locations, and is particularly useful in facilitating regular plant events like shift changeovers and operations meetings, and also when troubleshooting is needed.

With secure collaboration across the enterprise, industrial firms can extract maximum value from the talent in their organization and release the trapped value from their asset base.
# Experion Collaboration Station: A Common View for Improved Operational Effectiveness

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Background

When you think about it, collaboration is at the heart of every business. Most people are a part of a team that needs to work together to achieve the best possible results; the team is a part of many teams that must collaborate to help grow an enterprise.

One of the major barriers to human performance improvement in industrial organizations has been the development of functional “silos,” meaning that each part of an operation only works vertically within its own narrow space—not horizontally across functions. These silos limit the amount of interaction needed to drive maximum value from assets.

In complex environments, such as processing plants, turning information into action often requires specialized knowledge and understanding of what the information actually reveals. A few select individuals may hold this specialized knowledge across the facility. The goal is to make the information available and obtain talented personnel from the various disciplines to work together toward transforming information into actions.

Today's Operational Demands

Industrial companies with a global reach and presence need a way to get everyone on the same page, and to effectively operate as a single entity instead of as a fragmented organization. They require improved methods of communication to coordinate multinational activities, meet increasingly stringent regulatory requirements, and better manage changing workforces.

Today's typical process plant has multiple repositories of data, and the volume of data is increasing each year and becoming more fragmented. There is a growing need to bring all this information together and make sense of it, and make faster and better decisions.

At the same time, fewer personnel are operating plants. Process, maintenance and other support resources backing up these facilities are often located remotely. Business support resources such as production planning are normally situated at remote sites, too, typically at headquarters.

Value of Collaboration

There are four major market developments making enterprise collaboration increasingly vital for process industry manufacturers and other industrial entities. They are:

- **Globalization:** Every company in the world is affected by globalization, and the more globalized the business is (or wants to be), the more important collaboration becomes.
- **Specialization:** In a technology-driven environment, increasing specialization of knowledge-based work has made collaboration a key initiative.
- **Innovation:** As competition increases, the only way to ensure a business advantage is through innovation. Collaboration promotes real-time organizational awareness of opportunities for innovation; shortens the cycle time for conception and design; and helps drive acceptance, adoption, and expansion of ideas.
- **Distributed Expertise:** In a global economy, employees often have to coordinate efforts with people all over the world. This makes harnessing the power of people across functional/geographic boundaries a critical success factor.

Enterprise productivity can come from a number of areas, ranging from improved decision-making and reduced re-work, to a more robust innovation pipeline and fewer sub-optimal decisions based on imperfect information. Indeed, the promise of timely collaboration is game-changing transformation, if applied in the right way.
Latest Technology Trends

Collaboration tools enabling people to connect and interact virtually have a global economic impact on productivity. Significant economic returns annually may be unlocked by this technology in knowledge worker productivity, on a scale critical to performance and growth in the 21st century.

![Figure 1. Collaboration tools enabling people to connect and interact virtually have a global economic impact on productivity.](image)

As industrial firms begin to embrace organizational change, more intently on improving communication and collaboration, there are apt to be specific types of technologies that can increase collaborative behavior across enterprise networks, which will help employees to share objectives and activities in achieving business goals.

For example, the use of touch screens in mobile phones and tablet computers is well developed and accepted by users. Large-format touch screen monitors offer display capabilities such as pan and zoom, plus the ability to show multiple windows of related information concurrently. Similarly, the use of video for business and operational purposes is increasingly common. Video streaming and video calling are now common methods of communication. In a business environment, desktop sharing is a routine technique covering voice and visualization.

Honeywell’s Integrated Approach

Operators, engineers, technicians and supervisors collaborate in pretty much everything they do in a typical industrial plant setting—it’s not always efficient and it’s not always effective, but what if it were?

Honeywell Process Solutions has developed a powerful tool that greatly expands visibility of enterprise information, with a common view for all those collaborating. This solution, known as Experion Collaboration Station, is the first of its kind in the process automation world to integrate with the control system and show information from any available source. Through complete visual integration with Honeywell’s Experion Process Knowledge System (PKS), it enables plant, business and support personnel to use interactive displays, embedded video and other telecommunication capabilities to communicate, collaborate and make decisions, regardless of whether they are in the control room, conference room, situation room or in remote locations.

Experion Collaboration Station provides the means for industrial organizations to visualize data across the enterprise in a way never before possible. The tool is designed to improve collaboration between multiple experts within the organization, making it easy to integrate all types of overviews, alarm displays and other users’ computer screens; display business network data and Distributed Control System (DCS) information; and see the same views simultaneously for enhanced decision-making processes (See Fig. 2).
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Figure 2. Honeywell’s Experion Collaboration Station enables industrial organizations to visualize data across the enterprise in a way never before possible.

Ideal for large, highly distributed operations, as well as multiple sites with central engineering, Experion Collaboration Station allows for faster, more efficient evaluation and action on abnormal situations, and supports broader communication among employees—no matter where they reside—so they can share the same view of information through intuitive navigation and ease of use.

Experion Collaboration Station is particularly valuable to plant and operations managers who want to track the state of their process for faster response to both routine and emergency situations. This includes sites with frequent product grade changes, complex processes and dynamic operations, where addressing problems quickly has significant benefits. It is also useful in management of emergency situations. The Station displays performance information across distributed assets such as oil & gas fields and pipeline operations, and rapidly establishes communication and collaboration between centralized operations, maintenance and specialists without having to bring them to the same location.

Best of all, Honeywell’s approach to the Experion Collaboration Station minimizes the cost and difficulty associated with developing a similar “homegrown” or “DCS agnostic” solution to securely integrate DCS and business data.

How the Solution Works

Experion Collaboration Station employs a large-format monitor, which features interactive displays and multi-touch gesture control capabilities. The Station allows collaboration from the control room, the plant, home, and from experts halfway around the world. It can be used during normal operations, in shift handover, and for troubleshooting or any type of operations meeting.

All Experion PKS displays and any application available to the user can be opened and displayed on the collaborative screen. This may include applications such as:

- Enterprise historians
- Maintenance
- Closed Circuit Television (CCTV)
- Permit to work
- Production planning
- Standard Operating Procedures (SOPs)
- Materials management
- Reporting
Experion Collaboration Station is an integral part of the Experion PKS architecture. It includes a secure read-only Experion Station that cannot be used for actual plant operations such as performing setpoint changes. The Collaboration Station connects to the Experion system via the Experion eServer, using Experion's unique Distributed System Architecture (DSA) to access all connected Experion Servers. As the Collaboration Station is located on a network outside the control room environment, users can display additional applications available on the business network, uniquely merging the control room and business data (See Fig. 3).

The Experion Collaboration Station can be configured with the latest Microsoft® enterprise software technology, including the Microsoft Lync® instant messaging client. Basic features include instant messaging, VOIP, and video conferencing inside the client software. Microsoft Lync also includes real-time multi-client collaborative capabilities, which allow teams of people to see and simultaneously work on the same documents and communications session. These features are implemented as follows:

- Collaboration through PowerPoint® documents, where participants can control and see presentations, as well as add text, drawing and graphical annotations.
- Polling lists, where presenters can organize polls and all participants can vote and see results.
- Desktop sharing, where participants can see and collaborate on their windows screen.
- Windows applications sharing, where participants can see and collaborate on a specific application.

Remote participants can collaborate from their desktop by viewing information shared from the Collaboration Station or by displaying information from their own desktop on the large Collaboration Station screen. This is achieved using standard desktop sharing tools, tightly integrated in the Collaboration Station (Fig. 4).
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Figure 4. Remote participants can collaborate from their desktop by viewing information shared from the Collaboration Station or by displaying information from their own desktop on the Station monitor.

Benefits for End Users

Experion Collaboration Station heightens situational awareness in a wide range of application scenarios, displaying all relevant information in a shared yet secure environment. This solution benefits diverse stakeholders across the plant and business enterprise by:

• Maintaining context even while users navigate between high-level overviews and detailed content for a location/asset.
• Providing a navigational structure which is simple and intuitive; there is no need to remember complex navigational hierarchies and no training is required.
• Displaying everything in one view, instead of navigating between large numbers of display links.
• Seamlessly transitioning between displays—whether overview or detail—presented in full context.

Immediate collaboration is possible around the Experion Collaboration Station, typically to reduce the impact on performance from an abnormal situation through faster analysis and response:

• Rapidly establish communication and collaboration between centralized operations, maintenance and other specialists supported by relevant information.
• Common view of the situation for both local and remote collaborators, as opposed to existing solutions where collaborators have their own separate view—or no view at all—with more potential for miscommunication.
• Faster navigation between different contexts enabled via panning and zooming between displays across the screen with persistent content.
• Exploits all available resources: people, advanced applications and control systems in one collaborative system.
Conclusion

Honeywell’s Experion Collaboration Station is a breakthrough initiative for process industry customers seeking to expand enterprise collaboration, and thus optimize their overall operational effectiveness and performance. Users can employ new technologies enabling visualization of multiple streams of process and business information on a large interactive display, around which many people can collaborate for rapid and effective situational awareness and decision making. This solution is aimed at any organization that designs, operates and maintains large industrial facilities where co-operation between personnel needs to be catalyzed. It also helps address the challenge of skilled labor shortages by leveraging the expertise of remote experts as needed.

For More Information
Learn more about how Honeywell’s Experion Collaboration Station can improve collaboration across your enterprise, visit our website www.honeywellprocess.com or contact your Honeywell account manager.

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