

# 5 next-gen HMI benefits: Innovating the future of operations control



Industrial and manufacturing companies must react quickly to be competitive in today's world. To stay competitive, they must connect workers on the plant floor to information faster than ever before.

While plant-based HMI has helped operators solve problems for decades, newer, modern solutions extend those benefits to users outside the control room. Now, companies are using HMI technologies to deliver the visibility needed to manage remote and mobile operations.

Create a new work environment for industrial operations and reap the benefits. Here are the top five benefits hybrid-cloud HMI solutions can deliver to your organization.

## 1 A powerful graphics engine enables situational awareness

Often, users lack actionable insights and visualizations due to a poor user interface (UI) and user experience (UX). However, advancements in visualization technology gives users the clarity they need to understand the recent past, the present, and the predicted future – clarity that increases situational awareness.



Operators perform significantly better using effective visualizations to identify value leaks and increase operational performance. Gaining awareness over critical operations has never been easier. From graphics to wizards, templates, and elements, advanced digital solutions deliver a rich user experience and real-time, contextualized insights. When operators have access to real-time insights and quality data they can trust, they can quickly identify and correctly respond to abnormal events and anomalies.



## 2 HMI anytime, anywhere

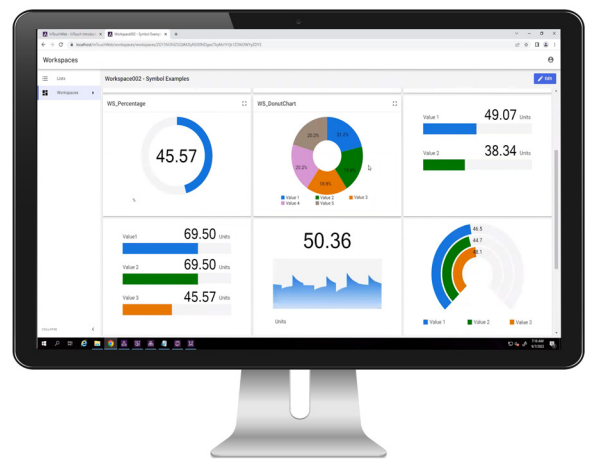
Next-generation HMI solutions offer real-time visualizations that support localization via dynamic runtime language switching – and they are natively enabled for web, mobile, and cloud. By making the plant floor visible anytime and anywhere, these solutions are empowering a new wave of connected workers.

Native cloud integration lets users push tag data into the cloud, where it facilitates operational reporting, charting, and dashboarding. Solutions with a QR code reader let operators use any smart device to scan a QR code and bring up dynamic HMI displays or faceplates, operator work instructions, or any other contextual information.

From doing inventory management to accessing standard operational instructions, the QR code opportunities are virtually limitless. What's more, solutions built on a hybrid-cloud architecture allow users to deploy legacy HMI displays – originally built for a desktop environment – over the web without re-engineering.

## 3 Engineering efficiency with a modern look and feel

Operators are not developers and greatly vary in their technical programming and scripting skill sets. They must be able to perform configuration changes without help from a “super admin” or Python programmer. The right digital solution can give plant-floor users the power and flexibility to create their own customized views and dashboards without scripting and programming or any development tools. Using a drag-and-drop approach, users can deploy consistent, dynamic visualizations and custom HMI applications across any PLC/RTU, mobile device, or operating system—regardless of size or manufacturer.



Common graphics standards across all devices help operators become more familiar and efficient with the software regardless of the device they use. Since a hybrid architecture supports cloud storage and data management, users can standardize and reuse visualizations across teams and sites.

In addition, application templates can save hours of engineering time. Users can start from a template, some of which are available as standard features, to develop an HMI. System integrators can reuse their engineering projects in multiple projects. OEMs can deliver base applications to their end users. New users can get started in a shorter time.



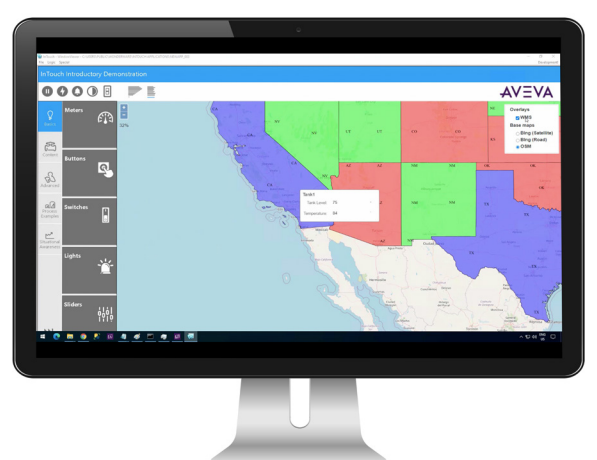
## 4 Unlimited scalability and flexibility

A next-generation HMI solution should allow businesses to scale as they grow, without incurring incremental costs. Organizations should seek solutions that allow unlimited licensing, which means there are no constraints on I/O and tags. For enterprises that need to provide access to many users, the right solution allows unlimited clients, including web and mobile, which avoids the pain and delay of procurement cycles. In addition, organizations should find a solution that has been thoroughly tested to handle a large number of I/O points (300K) to mitigate performance issues.

The real cost of implementation for any software always includes software licensing, the development/engineering cost, and the maintenance cost for the lifetime of the project. A solution that offers flexibility in both functionality and scope mitigates the need to re-engineer the application, ultimately lowering the cost of ownership. Organizations should deploy an HMI solution that addresses vital project life cycle issues of efficient development, functional evolution, maintenance, and diagnostics.

## 5 Secure HMI software

Security is serious business. Organizations should select a hardened software product with integrated security capabilities to meet the ever-evolving need for enhanced cyber security. A solution that supports hybrid-cloud deployment provides the best of both worlds. Remote users can gain secure access from outside the control network via any HTML5-compliant web browser.



The right HMI solution should offer security functionality that ensures data communication encryption, SSL/HTTPS, and the latest Microsoft libraries. Microsoft Active Directory and Microsoft Azure authentication integration can provide single sign-on, multi-factor authentication. Of equal importance, a solution should not use JAVA, as it introduces an increased threat vector. A top-tier provider will ensure that every release is vetted by a team of seasoned cybersecurity experts to ensure it is even more secure and robust than the prior version.

Make the best HMI investment you can

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