AVEVA

Italpresse Gauss tapped new revenue streams by creating a custom HMI and first-of-its-kind remote maintenance solution based on AVEVA's Monitoring and Control and AR/VR platforms.

Italpresse Gauss
Industry - OEMs & Machine Builders

Goals

- Develop a custom HMI that operates with other OEM devices and software platforms.

- Incorporate AR/VR technologies as an asset performance and remote support tool.

- Support the company's leadership position in Industrie 4.0.

Challenges

- Introduce Industrie 4.0 technologies to a traditional aluminum foundry industry.

- Leverage breakthrough AR/VR technology to pilot new asset performance management and operator training solutions.

- Deliver new concepts to market on an aggressive timeline.

AVEVA Solution

- System Platform

- InTouch HMI

- AR/VR Platform

Results

- Delivered an open interface HMI architecture that communicates with other devices, collects data on a local SQL server database, and improves situational awareness.

- Reinvented the concept of asset maintenance and support for the captive foundry industry.

- Tapped into completely new revenue streams by embedding AVEVA's open, flexible platforms into its machines.

The Next Frontier for Machine Builders

Capriano del Colle, Italy – Italpresse Gauss builds machines and automatic work cells for light alloy casting primarily for the global automotive industry, with a focus on excellence, technological innovation, quality and production flexibility.

Italpresse Gauss is committed to increasing its leadership position and worldwide presence by providing cutting-edge technological solutions. To stay ahead of Industry 4.0., Italpresse Gauss looked to the AVEVA portfolio to develop both "HMe", a custom HMI with advanced data management and diagnostics capabilities; and "AMe", a powerful AR application for live remote maintenance and service assistance.

Designing an Open Interface HMI Based on the AVEVA Portfolio

Using System Platform and InTouch–both based on Microsoft .Net, SQL Server and Azure–Italpresse Gauss developed a custom monitoring and control interface they coined "HMe".

While its prior HMI placed the responsibilities of control, data storage, and visualisation all on the machine operator, HMe is delivering an open interface architecture that communicates with other devices, automatically collects data on a local SQL server database within the application, reduces operator complexity, and improves situational awareness.
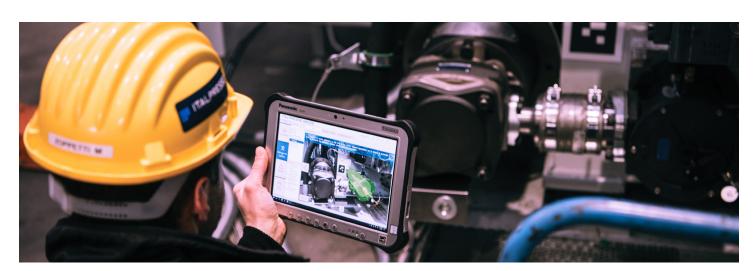
By partnering with AVEVA on HMe, Italpresse Gauss has virtually reinvented the concept of HMI for the captive foundry industry. In less than 3 years, the machine builder has successfully embedded HMe in more than 200 presses, with demand still on the rise.

It was not just a matter of products or technical solutions, it was a matter to creating a common vision, a common strategy, and also to create something really new, in the market for the foundry customers. At the end of the day, we really changed the name of the game for the foundry market."
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Mauro Beduschi,
Sr. Product Sales Account Executive, AVEVA

Not only are they forging a smarter user experience for machine operators and engineers, they're also realising the potential of Industry 4.0 for OEMs everywhere–achieving greater results, creating new features, and selling new services rooted in an open HMI platform.

Reimagining Asset Performance Management Using AR/VR

18 months after the introduction of HMe, Italpresse Gauss teamed with AVEVA again to introduce a new user experience that's reshaping the way asset performance management is executed in the industry. This application they called "AMe", built using AVEVA's AR/VR solution–a powerful toolset based on Microsoft Visual Studio, DirectX and the Windows API.

The value of AMe starts with a Digital Twin–a complete high fidelity digital representation of a physical asset within an AR/VR environment. For Italpresse Gauss and its customers, that Digital Twin means providing a safe, reliable environment to study, inspect, and test asset maintenance and optimisation strategies prior to implementation.

AMe supports maintenance and asset performance optimisation by applying augmented and virtual reality layers over the Digital Twin. Using a tablet device or Microsoft HoloLens, Italpresse Gauss customers can actually view an augmented overlay of the physical asset, and access step-by-step procedures for maintenance or training needs.

"What is being consolidated is the capability to provide support for maintenance, support for troubleshooting, and support for remote controlling of the machine."
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Carlo Scalmana,
President, Italpresse Gauss

Building Upon AMe to Deliver a New Concept of Remote Support

AMe doesn't just embed an asset maintenance solution into Italpresse Gauss' machines. It also connects the OEM with its customers like never before by adding interactive remote support for maintenance engineers and operators in training. In essence, it's like having an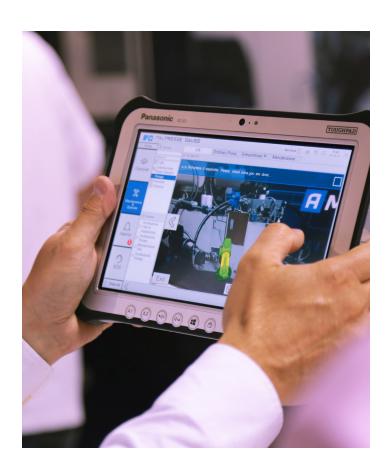 Italpresse Gauss service operator directly on the site together with maintenance engineers.service operator directly on the site together with maintenance people.

"Through SOS Italpresse Gauss will be able to support the final customer by seeing what they see, and also interacting with them to suggest and give the right information and contextual information framing on the machine in front of him."
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Maurizio Galardo,
Director, AR/VR Business Unit, AVEVA

The remote support feature of AMe is a game changer, enabling Italpresse Gauss's support engineers to use modern tablet technology to be virtually present at their customer's plants, resolving problems collaboratively– wherever the asset is in the world.

Harnessing AVEVA to Rise Above Industry

In an increasingly competitive global marketplace, manufacturers must seek new ways to separate themselves from the competition and provide new value for their customers. This is how the products and services developed by Italpresse Gauss are reshaping the way we look at modern captive foundries, and opening new business opportunities for OEMs and their customers.

Even in captive foundry environments, where innovations can be slow to take hold, Italpresse Gauss is changing how the global automotive industry approaches asset maintenance and operator training with the help of AVEVA's augmented and virtual reality platforms.

Innovations like HMe, AMe and Microsoft's HoloLens technology offer a glimpse at the future of engineering, operations, training, remote support and asset performance maintenance–not just for captive foundry or machine building, but for industrial organisations across the world.

"We are investing more than 50% of our energy and our money, regarding research and development... to implement this capability in our machines"

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Carlo Scalmana,
President, Italpresse Gauss

AVEVA's software portfolio enables companies like Italpresse Gauss to embed key software technologies – which they can then use to unlock new business models, such as combining maintenance-as-a-service concepts with monitoring and control software to create game-changing AR/VR solutions.

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