ECHO
DIGITAL ECOSYSTEM

EASY, CONNECTED, HUMAN, OPEN

# ECHO SYSTEM IS THE NEXT STEP IN THE DIGITAL TRANSFORMATION

Manufacturing once used to be all about machines and what they made. Today, it's a little more complicated. For some time now, companies like SIPA have been offering packages of equipment and services – manufacturing solutions – to help customers produce better products consistently, throughout the lifetimes of their machines. Today, as the fourth industrial revolution, Industry 4.0, begins to change from a catchphrase into hard reality, those solutions are taking on a radically new aspect, Industry 4.0 is characterized by the fusion of different worlds, physical and digital (and to a certain extent biological), as well as the growing utilization of technologies such as artificial intelligence, machine learning, cloud computing, the Internet of Things, all sorts of advanced wireless technologies, and more. For companies that are able to master this transformation, there really is the prospect of important production and product improvements.

LOOKING AFTER FINE DETAILS

SIPA's ECHO platform is a child of Industry 4.0. It was conceived to help customers transform their operations in the digital age and help them concentrate more on aspects of what they make – product quality, quantity, costs, and so on – while it takes care of the fine details of how it is made.

And like a child, ECHO continues to grow. At the core of this innovative digital ecosystem is a way to remotely monitor the operation of a SIPA machine in real time; but is far more than that. It is a complete assistance package, where the customer can find everything they need to keep their machines running in an optimal condition, without having a SIPA technician constantly on call: preventative maintenance details, machine software updates, training manuals, details of orders place and offers made, spare parts, and more. All together in one centralized platform.

ECHO IS GROWING AND MATURING

SMART TELESERVICE
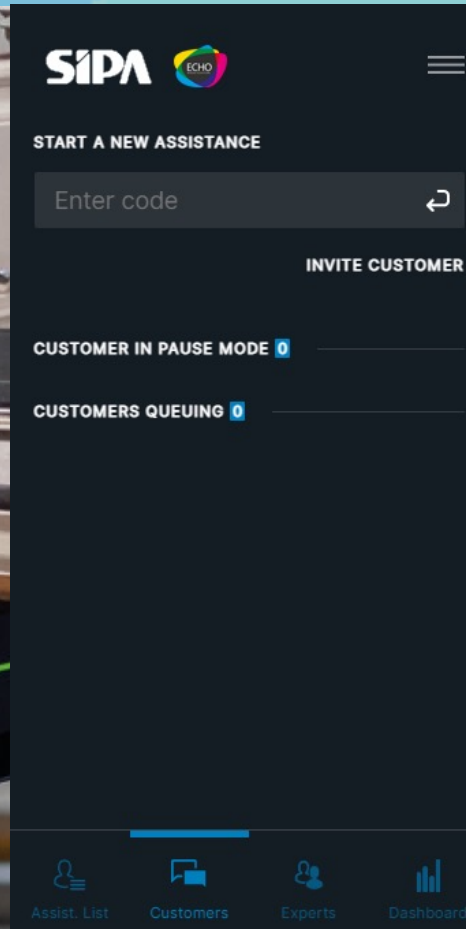
SIPA introduced this revolutionary digital ecosystem at Drinktec some years ago, describing it as accessible, interactive, hyper-connected. Since then, thanks to technology advances and customer feedback, it has developed and matured. The concept is a clear one: to help PET container producers make their way safely, surely, and confidently, through the fourth industrial revolution. ECHO connects individuals, businesses, suppliers, and customers to bring value to players all along the supply chain.
"ECHO is truly innovative," says Roberto Ghirardo – Sales Manager Digital Products and Services at SIPA. "It promotes the growth and development of our industry through the active participation of professionals from a perspective inspired by total transparency, accessibility and usability. We live in a world full of data, information, and knowledge. Echo makes it possible for our partners to systemize and use all these elements in a lean way, and to create more value."

Here is an example of what ECHO can do: through a smart Teleservice feature, remote SIPA technicians can accompany the customer's local technicians on the shopfloor with guided operations through a connection via mobile or wearable device. The local technician uses the camera on his device to frame the area of the machine they need help with, and the remote SIPA technician shows in real time what they need to do (see photo).
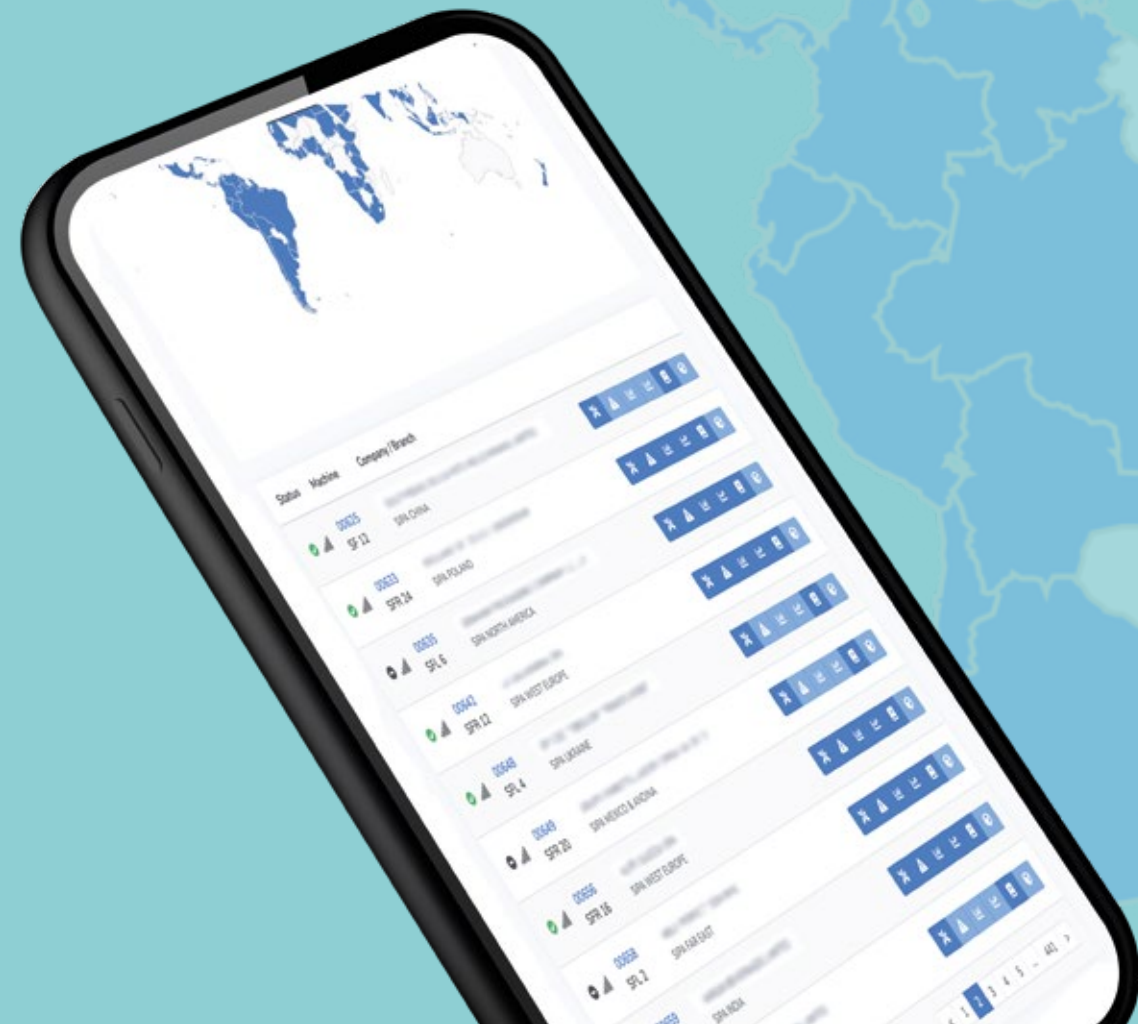
COMPREHENSIVE LINE MONITORING

ECHO can be powered by XDATA, which lets the customer monitor an entire line comprising not only the SIPA machines but also those of other suppliers. This is possible because it enables communications between systems from various providers.
Several solutions are already available today and more are in the pipeline. Here is a summary of those currently installed:

- Teleservice, a remote assistance with that provides troubleshooting and includes Augmented Reality;
- Smart Monitoring of production data and performance, powered by data driven business analytics;

- Xdata and Xchange IIoT packages, which collect, export and analyze sensors from all installations to enable analysis and data-driven evaluation of plant efficiency, with optimization suggestions;
- Warehouse 4.0, enabling customer operators to easily register all stock movements using a barcode scanner connected to the cloud.

Xdata, for example, includes such features as an overview of all machines, process values, analysis of production KPIs, Statistical Process Control, alarm statistics, event history and trends. Integration to the cloud is optional.

CYBER SECURITY IS CRITICAL

"A top priority for any digital solution, however, is the security of connection," says Lorenzo Guazzelli – Digital Innovation Manager. "To ensure this, a new SIPA infrastructure will replace any obsolete point-to-point S-connection previously adopted."
The core network is now based on a pair of PaloAlto Firewalls located in a powerful data center. This can establish IPSec VPN tunnels with the latest and certified security standards, implementing Threat Prevention, Intrusion Prevention, Antimalware, Application Visibility and URL filtering services.
All the connections and data transfer use the same secure VPN tunnel, established with the XCON device, that ensure further firewalling and IP network address translation ("natting"). In this way, it is possible to manage connections and authorize each technician to reach only the machines of his competence, and all the traffic is logged and easy to consult.