The past was HMI.
The future is UNIQO.

UNIQO

ASEM

HMI was the past, UNIQO is the future

The requirements of Industry 4.0 and IIoT are changing today's industrial automation.
More networks, more information, more data exchange.
Every new era is boosted by technologies...

Inspired by machine manufacturers and their needs for more performance, more powerful applications and simple programming and operation we have developed UNIQO.

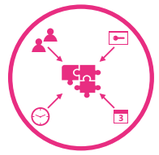
Modular Design
High Performance
Distributed Systems
Dynamic Applications
Cross Plattform
Simple

Based on the concept of object orientated programming we designed a platform which gives more flexibility through the cross platform technology and a fully modular approach, connects to any automation device via OPC UA, reduces development time significantly via reusability and provides a unprecedented way of user experience.

OPC UA

The UNIQO Automation Framework
UNIQO has been first designed to be a framework of automation objects to implement satisfying industrial applications.
The framework provides efficient implementation of commonly used functionalities such as authentication, user profiling, historicizing, operations integrity based on transactions and events management.

Made for Industrial Application



Combine functional modules totally free To fit every requirment

Enter the world of UNIQO and make your choice!
New and unprecedented possibilities are opened up by the completely modular approach in which objects and function modules can be freely combined and without restriction. UNIQO perfectly fits the requirements of todays and future automation business by covering standard HMI requirements, advanced SCADA functionalities and flexible programming of new software for automation devices.

What is UNIQO HMI?

UNIQO HMI is the new ASEM complete solution for human-machine interface applications offering the highest degree of object oriented programming combined with efficient and innovative design paths.

Cross Platform

UNIQO is platform independent. Available for ARM and x86 architectures, Linux and Windows operating systems and even for smart devices with mobile OS. All functionalities are available without differences on all platforms.

Fully modular and Object-oriented

With the modularity of UNIQO you get new, undreamt-of possibilities for project design. Object-oriented programming, inheritance and programming at runtime simplify programming considerably.

Completely based on OPC UA

UNIQO is completely based on OPC UA, implementing the communication protocol and the Information Model as server and client. UNIQO is ready for IIoT and Industry 4.0 matching the requirements and needs of customers today and in the future. UNIQO can implement aggregation server application to collect, model and share data in the most efficient way.

Secure

Secured data exchange via OPC UA communication protocol.
UNIQO has a built-in application security level with user profiling, groups definition, roles and granular permissions.

Fully Dynamic

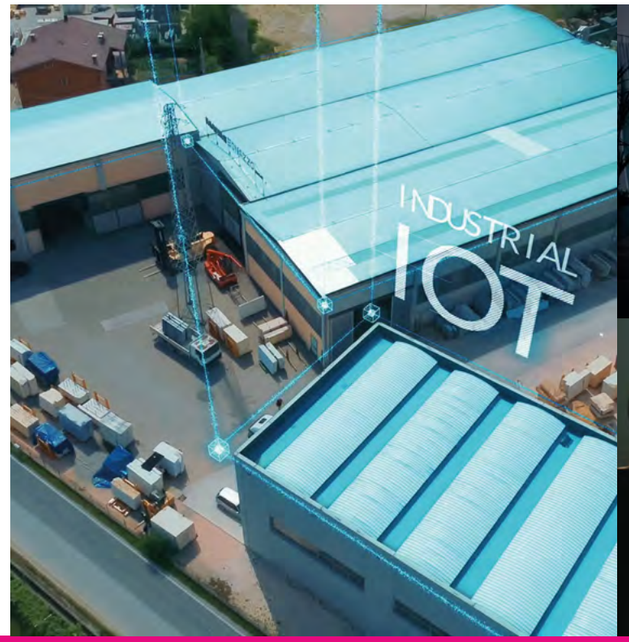
With the mapping of all functions, variables and data as objects in UNIQO HMI, dynamic changes to the project at runtime are now also possible for the first time. The properties of the project can be changed and adapted without cumbersome re-engineering of the project and cost-intensive machine stops dynamically at runtime.

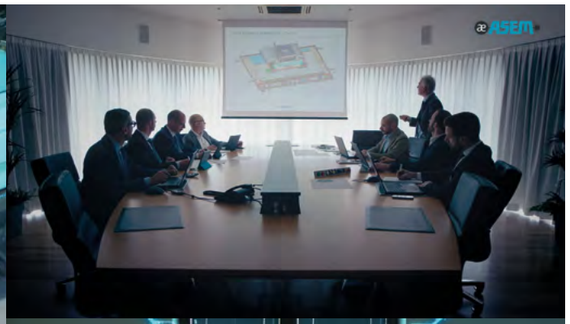
User Experience

UNIQO provides panels, a new flexible concept allowing multiple object containers on the same window/page, with latest generation navigation paradigms (i.e. masterdetailinterface, UI-pagination, breadcrumbs). UNIQO is featuring advanced data and user controls to implement ergonomic and appealing applications.

Comprehensive Library-Functionalities

Integrated into a comprehensive library concept, UNIQO offers a wide range of state-of-the-art operating and graphic elements al ready from the s tart. In addition to control elements, animations and visual effects, also data and visualization objects are available. The library manager is the essential component to support administration, creation and versioning of own libraries, objects and modules.





What are the benefits of UNIQO HMI?

The right solution for every hardware

UNIQO is fully compatible with any hardware platform and operating system, allowing a free and independent decision about the best fitting solution for the application.
The optimized architecture ensures always the most powerful user experience.

Compatible to any plattform

Shorten Time to market

Because of the modern and flexible architecture with plenty of features UNIQO offers a wide range of possibilities to shorten development time without any compromises regarding features, performance or user experience in every scenario. Compatible to any automation device UNIQO can retrofits existing installations regardless used technologies. The possibility of rapid prototyping within UNIQO enables an agile approach to machine development, minimizing the risk of investment.

Agile Programming | Minimize development | Rapid Prototyping

Safe investment into future and Enlarge your opportunities

UNIQO fully implements OPC UA which is the recommended standard of Industry 4.0 and IIoT to ensure future proofed solutions which are secure and open to integrate 3rd party systems. Offering new strategies in designing programs and applications UNIQO is widening your business opportunities. The cross platform architecture enables UNIQO to be effectively used even in legacy environments.

OPC UA server | Integrated 3rd party solutions | Open solution

Openess, Modularity and Reusability

Within Uniqo it's very easy to expand or add features to your project by programming in C# to create unique solutions. You can even build the complete project without using the UNIQO IDE. Customer developed functions are perfectly integrated as they were native features. Projects can be designed on a modular concept, which makes it easy to reuse, modify or expand the solution to quickly and simple satisfy customer specific requirements.

Modify, Expand | Use own tools | Cut costs

Faster response to customer or support requirements

With UNIQO it's possible to offer a much faster reaction in case of maintenance, upgrades or even changes and extensions of a project thanks to the powerful runtime programming. By taking advantage of the OPC UA technology a project can be upgraded in a live mode by UNIQO IDE which is fetching the actual project directly from the devices according to the project security settings.

Live mode for Upgrades | OPC UA enables quick support

Thinking out of the Box

Engineering design creativity has no more limitations. Thinking out of the Box with UNIQO makes classic design paths obsolete. The UNIQO framework gives you the freedom to design and implement your ideas outside of old and legacy approaches.

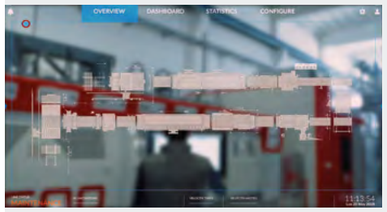
Combine modules as you need | Create completely new solutions | Dinamic Application

What's so special about UNIQO?

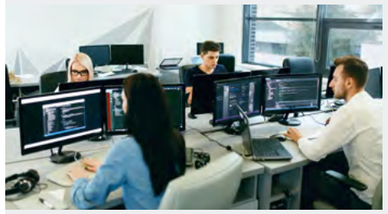
User experience
Implementing the newest layout paradigms, UNIQO offers a complete new user experience. Get comfortable with a clear, responsive and structured interface.
- Carousel
- Built-in animation
- Master-detail view
- Breadcrumb navigation
- HTML5 web browser objects, etc.

Object orientated programming
UNIQO implements all the advantages of object orientated programming.
Any functionality, component can be modelled as object, made as type and use instances of those types.

Snapshots
Runtime project changes are monitored, detected and saved in dedicated layers. The changes can be easily undone returning back to the original project safely.

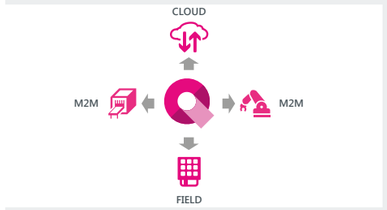


Runtime = Designtime
The view can be easily changed during runtime at any time without any additional tools. Adapting customer specific views and applying changes to a project during runtime becomes easy and comfortable. Changes take effect immediately.



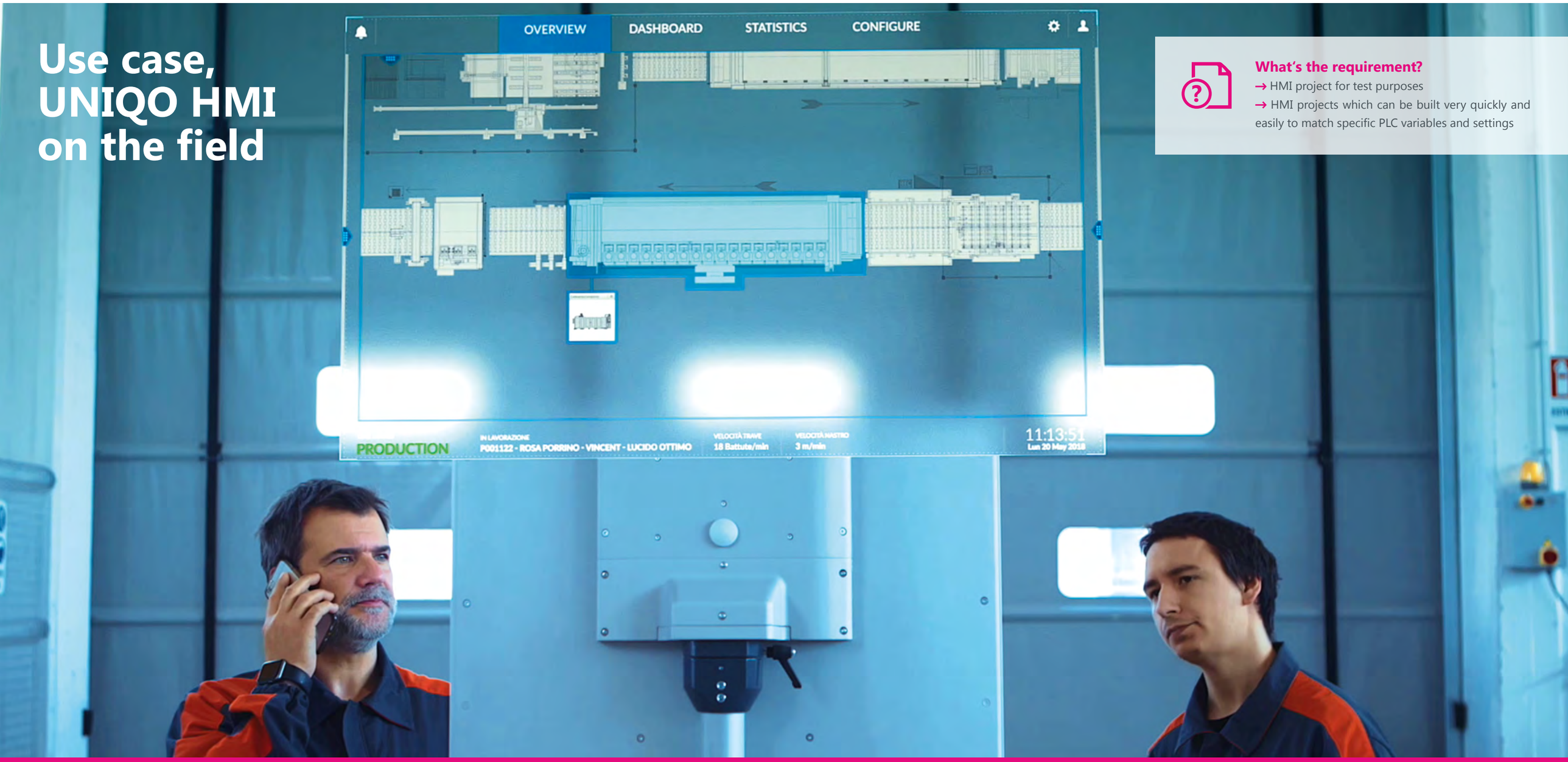
Powerful user library
Any part of the HMI project including script logic and complex objects can be modeled and efficiently archived to reuse and share them.

Programming, Scripting and API
UNIQO framework offers a full set of C#-API allowing a full customization of HMI features. Furthermore it allows to develop complete new application related functionalities. Design and program applications without UNIQO engineering software is also possible, thanks to full support of design time script.



Interoperability and gateway function
Field data can be read from any automation device by means of their proprietary communication protocol or standard OPC UA client. The information can be organized, modelled and securely provided via OPC UA. UNIQO is fully compliant with the most modern concepts of IIoT, M2M and data exchange at any level.

Use case, UNIQO HMI on the field



What's the requirement?

→ HMI project for test purposes

→ HMI projects which can be built very quickly and easily to match specific PLC variables and settings

Marble and Stone industry

Implementation of complete completes machines into production line

- Each step and machine must be tested before final assembly of production line
- Each machine is different with customer specific settings and hardware

Solutions with UNIQO

- Design of the PLC program with external PLC engineering software
- UNIQO IDE reads PLC variable and I/O list form ERPsystem and it's used create screen templates
- Dynamic programming at runtime by means of a C#-Script which parses the imported information and creates automatically the needed set of HMI screens

C#-Skript | Rapid Prototyping | Screen templates | UNIQO IDE

UBIQUITY
Control Center

UBIQUITY

HMI
Operators panel
to run the machine

Industrial-PCs
High performance for
every application

CODESYS
SoftPLC available
for each IPC

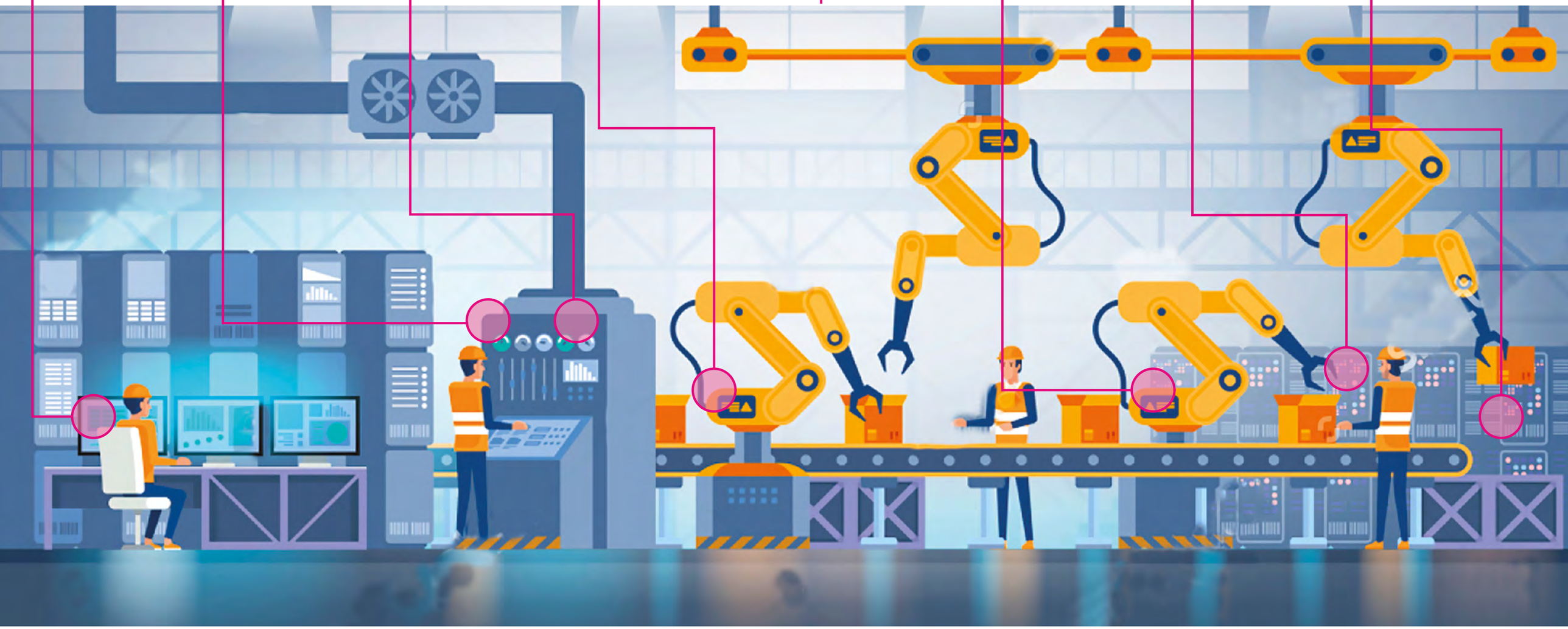
Standard Fieldbus
EtherCAT,
MODBUS TCP

NETcore

ARIO 500
Remote I/O
on machine

Arm mounting
IPCs and monitors

Panel-IPC
Integrated SoftPLC and
Visualization possible



More than 40 years experience in development and production

As a pacesetter in the integration of communication and information technologies for industrial automation, ASEM stands for innovation, investment and entrepreneurship.

30% of all employes are dedicated to R&D

ASEM has been offering products for industrial automation since 1979. We position ourselves as a reliable partner who accompanies and supports its customers throughout the entire development process of HMIs, controllers and remote maintenance solutions.

Rappresented 5 continents worldwide

We invest continuously in research and development and continuous training. The focus on understanding and anticipating rapidly changing market requirements, responding to customers and defining suitable strategies has enabled ASEM to achieve continuous growth in recent years.

Own R&D Department and Production in the middle of Europe

ASEM relies on open and standardized technologies that flow into the development and production of modern hardware platforms and flexible, easy-to-use software.






Open & Standard Technologies

ASEM offers complete solutions for every industry thanks to the implementation of the concept of "open and standardized technology" in all our products.

Long term availability

We guarantee a long-term availability of 7-10 years for each product and offer support and repair services for a further 5 years.

Customization

ASEM offers customizations (Custom Light or Full Custom) to meet specific customer requirements, whether it is hardware (mechanical or electronic), firmware or software.

Perfectly matched Hard & Software

Due to a complete in-house design, development and production, we are able to offer perfectly aligned hardware and software as well as outstanding quality. Burn-in tests and functional tests are carried out on 100% of the boards in climatic chambers. Furthermore functional tests are performed on all assembled systems.

ASEM in numbers:

- 200 employees, 60 R&D employees
- Headquarters in Artegna (Italy)
- Production in Artegna (Italy) with approx. 10.000 m^2
- R&D offices in Verona and Giussano (Italy)
- Sales offices in Italy, Germany and Europe
- Worldwide presence through partners and distributors

1979 Development and production of industrial automation systems

1983 **Entry into information technology**, production of MS-Dos compatible PCs

1992 **Entering industrial automation**
ASEM is the first company in Italy producing IPCs for the automation market

2006 **ARM-based HMIs**
Development, design and production of ARM-based operator panels, Growth of international export business
Establishment of our own software department

UBIQUITY PREMIUM HMI 5

2010 **Introduction of a secure remote maintenance platform**, certified in accordance with IEC62443-3 and a new visualization platform

2011 Expansion of production capacities at the Artegna site
Introduction of a new generation of control and visualization systems

UNIQO
UNIQLOUD

2018 Introduction of a new automation software platform based on OPC UA

ASEM has been a leading supplier of information and communication technology for industrial automation since 1979. The company positions itself as a reliable partner that accompanies and supports its customers throughout the entire development process of HMIs, controllers and remote maintenance solutions. The company relies on open and standardized technologies that are integrated into the development and production of modern hardware platforms and flexible, easy-to-use software. ASEM invests in research and development and continuous education. ASEM's focus on understanding and anticipating rapidly changing market requirements, responding to customers and defining appropriate strategies has enabled continuous growth in recent years.

ASEM S.p.A. Via Buia, 4 - 33011 Artegna (UD) - Italia
Phone: +39/0432-9671 - Fax: +39/0432-977465
Email: industrialautomation@asem.it - Website: www.asem.it

DIGITAL AUTOMATION TECHNOLOGIES