



About the customer

JOT is a global partner for several industry-leading companies in the telecom, automotive and life science industries.

JOT operates in Asia, the Americas and Europe with over 400 employees and annual revenues of €50 million (2013).

Challenge

The manufacturing robot platforms are modular in design as the robot solutions always include customer and product specific modifications. However, the user interface customizations were costly to create and maintain, since all robot cells had embedded user interface computers. Hundreds of software engineering hours were required to customize all the user interfaces for the robot cells.

Maintenance of the customized software solutions shipped around the world was equally challenging and expensive.



Adalia's Solution

Adalia created the new technology, vision and strategy as a consultancy assignment.

Individual displays of the robot cells were replaced with a tablet user interface, giving the operator control over the whole production line.

Adalia CloudLink was integrated into production line setup to dispatch events between the tablet user interface and the robot cells. The CloudLink unit was also used to securely link the robots to the cloud-based backend.

Adalia's Cloud Services enabled

- » Maintenance services
- » Usage statistics and maintenance alarms (failing components, measured/MTBF)
- » World-wide federated user management
- » License management
- » Support services
- » Service access to live video and instrument data feeds
- » Remote diagnostics
- » Robot software upgrades
- » Central knowledge base for customer's self-service problem solving
- » Electronic user manuals

How we did it

Adalia overtook a technology vision consultancy project. In three months Adalia released the new technology vision, documenting a new user experience architecture for JOT robot cells, and outlining a cloud-based electronic service platform, both aligning fully with current product requirements and customer's future visions.

Individual user interfaces and displays of the robot control computers were removed, and a wireless tablet user interface for was implemented.

During the implementation phase, a widget-based tablet user interface along with a web-based drag&drop design tools were created. These tools allow the regular commissioning personnel to customize and maintain the customer-specific user interfaces for the assembly line.

The tablet user interface has dashboard views containing real-time status information of the units in the production line, as well as views for communicating with a single unit to perform different tasks ranging from software updates to jogging of the robot.

A major enabler for new services was the application of Adalia's CloudLink technology. The CloudLink functions as a data aggregator, synchronizing relevant configuration data to JOT cloud services.



Customer benefits

Increased efficiency. Saving time and money.

- » User interface became attractive and usable, instead of previously being “engineer minded” .
- » Many unnecessary service trips overseas have since been avoided: Up-to-date configuration data is directly available from the cloud.
- » Regular commissioning personnel are able to create customer specific user interface variations. Programmers time was freed to actual R&D tasks.
- » Removal of displays and unnecessary logic lowered the unit cost of a robot module by 4%. Savings in customer specific programming were even larger.

New business opportunities by cloud-based service platform:

- » Predictive maintenance
- » Remote support
- » Data services