

AUTOMOTIVE INDUSTRY 4.0

END-TO-END TRANSPARENCY IN AUTOMOTIVE PRODUCTION WITH LEGATO SAPIENT

Are you also unsure where your losses originate at the end of the day? Are you lacking transparency and do you often experience unexpected downtimes in production? Downtime is expensive, especially in the automotive industry with its high degree of automation and extremely short cycle times. This is compounded by the challenges posed by warranty obligations. Seamless tracking and tracing is essential for being able to say which cars were fitted with the defective batch, even more than 10 years later, in order to launch a targeted recall campaign.

Our MES solution Legato Sapiient connects all production-relevant systems for uninterrupted data exchange. This results in uninterrupted transparency in real time, reduces downtimes and losses and thus increases your OEE.

Our MES solution Legato Sapiient at a glance:

- Use of the user frontend via standard web browsers thanks to the HTML5 architecture
- No need to install additional client software
- Location-independent use thanks to the use of mobile devices.
- Numerous standard functions included with every installation: evaluation, visualisation, reporting, data acquisition in real time, target values, switching commands, key figures and action management
- Various additional function modules depending on individual needs

Functional modules that are particularly relevant to automotive production: track & trace, HMI (Human Machine Interface) and TPM.



Track and trace Avoid recalls

Recalls represent the worst-case scenario for every company, resulting not only in enormous costs but also in damage to the company's image. A tracking & tracing system is vital in component production, body shops and paint shops on account of the statutory product liability and product safety requirements. Many production companies, however, only use tracking & tracing in a rudimentary way; harnessing its full potential is only possible when combined with MDC and PDA.

The MES solution Legato Sapiens enables:

- Seamless tracking & tracing of products complete with all product-relevant data throughout the entire manufacturing process
- Creation of a complete representation of the production – a digital twin
- Online data connection guarantees high quality data together with real-time monitoring of the actual situation – and therefore enables a product to be traced at any time
- Complete documentation of which components have been installed in a product
- Data exchange across system boundaries (shop floor, MES, ERP) through vertical data integration

With Legato Sapiens, you are prepared for the worst-case scenario: the faulty batch can be quickly identified and consequently a targeted recall action can be initiated.

Your advantages:

- Vertical and horizontal data integration – bi-directional data exchange
- High product quality is ensured through a high level of transparency in real time throughout the entire production process.
- Efficiency increases through key figures and CIP

HMI: connect your shop floor with the control level

Many companies in the automotive industry are still working with a very heterogeneous system landscape. The drawback of this is that there can be discrepancies in information that result in two sets of truths. The traditional separation between the control system level (MES) and the HMI is common practice, similar to the classic automation pyramid. System breaks and a discontinuous flow of information are commonplace, as important information from the HMI is only available at a specific location, usually as fat client solutions, despite the fact that it would also be necessary elsewhere.

The only remedy against a loss of information is to create duplicate visualisations and the like, which in turn involves considerable additional work. A further, not insignificant cost factor in the setup described above is the expensive and maintenance-intensive hardware and middleware of the terminals.

Legato Sapiens with the web-based HMI module:

- Closes the gap between control level and HMI
- Ensures a seamless flow of information with no losses as a single point of truth
- Significantly reduces the costs for terminal hardware and middleware – common computer hardware with a web browser is sufficient

With its fully integrated HMI module, Legato Sapiens ensures an uninterrupted flow of information between your shop floor and the control level – and always in the interests of efficient and cost-saving production.

Your advantages:

- Web-based solution for designer and user front-end (cloud-ready)
- Reduced project planning costs and consistent information base without system discontinuity
- Significant reduction of hardware and middleware costs

TPM: use your production facilities more efficiently

Using Excel or paper-based coordination and documentation of maintenance activities is neither efficient nor reliable. The TÜV requirements for documentation and archiving can be met in this way, but only with an extraordinary amount of time and effort and a certain susceptibility to errors.

The coordination of maintenance activities is based on manual processes and lacking any automation. Implementing needs-based maintenance is therefore very difficult and can lead to excess and insufficient maintenance. Excess maintenance unnecessarily wastes maintenance capacity, consumes expensive spare parts and operating materials, and wastes valuable production time. Insufficient maintenance results in unplanned wear and tear and hence unplanned production downtimes with time-consuming and expensive ad hoc repair work, which in turn destroys the entire production plan and incurs heavy costs.

Legato Sapiens enables:

- Digitalisation of maintenance processes and necessary transparency
- Efficient performance of maintenance activities thanks to maintenance plans and the maintenance orders automatically generated from them
- TÜV-compliant documentation and archiving of maintenance activities
- Clear definition of responsibilities and maintenance intervals
- Automatic due date calculation based on both time and value based on the prescribed, maintenance-relevant criteria, such as operating hours or stroke counter

The bottom line is that Legato Sapiens takes the pressure off your maintenance team, allowing your employees to concentrate on assuring smooth and efficient production processes with optimum input.

Your advantages:

- Avoidance of excess and insufficient maintenance through monitoring of online data as maintenance-relevant criteria
- Increased efficiency of maintenance processes based on key figures
- Optimal coordination and archiving of maintenance activities



Do you have specific questions about how you can optimise your production processes?

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