From lean to INDUSTRY 4.0

We share what we practice, plan, test and successfully implement

Rapid digitalization has ensured that the future of the industry is connected

At Bosch, we started planning for the future 6 years ago

At our own plants with Industry 4.0

The journey also connected production requires a goal

Focus on the people

Lean is the engine, Industry 4.0 the turbocharger

Only measurable success is actual success

Each challenge requires its own solution

Industry 4.0 is not a sprint, but a marathon

Network, customize, roll out

Compatibility is the key

Concepts must adapt to production, not to the paper

HERE ARE SOME OF OUR SUCCESS STORIES

**Success Factor** | **Technology** | **Application of Success Factor**
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A journey also connected production requires a goal | Digital Shop Floor Management | The clear goal was to integrate a digital shop floor management system into the existing production system.

Results: Manual work for collection and preparation of necessary data reduced from 30% to 14 hours per month.

Lean is the engine, Industry 4.0 the turbocharger | Multi-Product Line | Lean principles were applied to reduce waste. With the addition of Industry 4.0, flexible production lines reached a new level.

Results: 15% increase in productivity; 36% reduction in inventory.

Lean is the engine, Industry 4.0 the turbocharger | Diverse Transport Vehicles | By involving employees early on, it was possible to enhance the successful change management approach. Agile methods were right.

Results: Involving employees in the change helped smooth the transformation and other change management efforts.

Lean is the engine, Industry 4.0 the turbocharger | Intraplant Transport Management | With On-Paper, using fixed schedules and rules was very time-consuming. On-ground scanners were stolen and the RFID system was unable to collect real-time data of material delivery.

Results: Increase of process efficiency of up to 15%.

Lean is the engine, Industry 4.0 the turbocharger | Energy Management | Real-time sensor data was used to evaluate energy consumption. Intelligent algorithms helped detect deviations and optimizations.

Results: Monitoring of the equipment conditions alone helped the Kromberg plant achieve significant savings.