BOSCH
Invented for life

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

We started planning for the future 6 years ago

At our plants with **Industry 4.0**

9 Learnings From I4.0 Implementations

1. The journey into connected production requires a goal
2. Focus on the people
3. Lean is the engine, Industry 4.0 the turbocharger
4. Only measurable success is actual success
5. Each challenge requires its own solution
6. Industry 4.0 is not a sprint, but a triathlon
7. Network, customize, roll out
8. Compatibility is the key
9. Concepts must adapt to production, not to the paper

SUCCESSFUL I4.0 IMPLEMENTATIONS ACROSS FUNCTIONS

Success Factor	Technology	Application of Success Factor
A journey into 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 the necessary data reduced from 320 to 34 hours per month		
Lean is the engine and Industry 4.0 is the turbocharger	Multi-Product Line	Lean principles were applied to reduce wastages. With the addition of Industry 4.0 technologies, efficiencies reached the next level
Results : 10% increase in productivity 30% reduction in inventory		
Focus on the People	Driverless Transport Vehicles	By involving employees early on, acceptance was achieved. For successful change management, agile methods were used.
Results : Involving employees in the change helped smoothen the transformation and usher in a new way of thinking		
Concepts must adapt to the production and not to the paper	Intelligent Transport management	While On Paper, using fixed schedule milkruns were to deliver efficiencies. On ground realities were different and thus RFID capture was used to collect Real-time data of material delivery.
Results : Increase of process efficiency of up to 15%		
Only measurable success is an actual success	Energy Management	Real-time sensor data was used to evaluate energy consumption. Intelligent algorithms helped detect deviations and troubleshoot.
Results : Monitoring of the equipment conditions alone helped the **Homburg plant** achieve significant savings.		

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