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

<table>
<thead>
<tr>
<th>Success Factor</th>
<th>Technology</th>
<th>Application of Success Factor</th>
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</thead>
<tbody>
<tr>
<td>A journey into connected</td>
<td>Digital Shop-floor Management</td>
<td>The clear goal was to integrate a digital shop-floor management system into the existing production system</td>
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<td>production requires a goal</td>
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<tr>
<td>Lean is the engine and Industry 4.0 is the turbocharger</td>
<td>Multi-Product Line</td>
<td>Lean principles were applied to reduce wastages. With the addition of Industry 4.0 technologies, efficiencies reached the next level</td>
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<td>Focus on the People</td>
<td>Driverless Transport Vehicles</td>
<td>By involving employees early on, acceptance was achieved. For successful change management, agile methods were used.</td>
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<td>Concepts must adapt to the production and not to the paper</td>
<td>Intelligent Transport management</td>
<td>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.</td>
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<tr>
<td>Only measurable success is an actual success</td>
<td>Energy Management</td>
<td>Real-time sensor data was used to evaluate energy consumption. Intelligent algorithms helped detect deviations and troubleshoot.</td>
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Results:
- Manual work for collection and preparation of the necessary data reduced from 320 to 34 hours per month
- 10% increase in productivity 30% reduction in inventory

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