Project: Evaluation of the Production Flow for Stock and Storage Space Optimization in the Shop Floor Area

Client : A key player in the automotive equipment manufacturing industry

Project objectives:

Evaluation of the material flow within the production department and proposed improvement solutions for balancing and ensuring stock availability in the production area – without interruptions due to lack of raw materials or subassemblies.

Initial situation:

At the client site, a wide range of components for automotive onboard equipment are produced for a large number of clients, globally recognized manufacturers in the automotive industry. The production within the department is highly diverse, including mass production as well as a small number of prototypes. Most of the components are produced consecutively on the same machines, with the department relevant to our project having a limited number of production machines that operate beyond the installed capacity (additional hours and shifts). This situation is a significant limiting factor for production capacity and speed

Main activities:

1. Visiting the production process
2. Evaluating the situation and communicating the current state to the client
3. Proposing improvements for material flow optimization and inventory level control
4. Establishing action plans with the client

Results:

1. Proposal for modifying packaging for transport within the factory between different production stages – reducing the current space usage by 33%.
2. Implementation of daily planning – reducing current space usage by 33%.
3. Calculation for implementing Kanban and evaluating the introduction of Kanban – automated production planning based on Kanban quantity – reducing space usage by 30%.

4. Proposal to implement machine-level scanning – complete traceability within the manufacturing flow and inventory adjustment at the part level based on the manufacturing recipe (BOM), reducing inventory across the entire department by at least 40%.
5. Two proposals for Ergonomics and Work Standardization (reducing average production time by 7% and 12%, respectively).
6. Proposal to implement measurable indicators for activities affecting production capacity and inventory levels in the production department where the project was carried out (calculations, calculation formulas, KPI dashboard).