

Stabilis - digital Lean Manufacturing support

Lean Manufacturing

A leading system for the standardisation and continuous improvement of quality and management performance, based on continuous improvement in production processes and personnel development.

Benefits

Limiting waste generation and streamlining production to ensure considerable cost savings and inventory limitation, as well as enhancing work safety with simultaneous manufacturing of the highest-quality products.

How we support

Lean Manufacturing is a way of thinking and acting for the entire organisation, thus its full implementation requires changes to be introduced in management methods. However, regardless of the implementation scope, Stabilis facilitates implementation of numerous good practices and changes, resulting in limiting of waste generation and enhancing the quality and performance. Due to the design of processes and user interfaces in the manner required and dedicated to the organisation, Stabilis facilitates a flow of information and tasks as well as real-time operation optimisation.

The Stabilis system facilitates integration of all hardware and IT infrastructure processes and elements in an organisation. It results in the automation of numerous operations and, additionally, unifies the machinery controls. It also facilitates the electronisation of communication and liquidation of paper document flows, by involving the personnel on all operational levels in the implemented changes.

Practice Automation (Jidoka)

Products:

Operator, Monitoring, Smart Factory

Principle Lean foundation

- Enabling machine operators to leave machinery while it continues to run.
- Creating an operator-machine communication channel to receive information on all manufacturing irregularities.
- Automatic machine stop after a problem is detected.

Benefits

Autonomation (Jidoka)

- Decrease in the number of defects, due to separating human operation from machine operation.
- A machine detects functional problems more quickly than a human monitoring its operation, and a rapid alerting process facilitates instant response and troubleshooting, even if an operator is not present by the machine.

How we support?

We ensure the integration of additional quality and performance improvement sensors.

Autonomation (Jidoka)

Then we define processes to be triggered in response to readouts obtained from these sensors, regarding both machine behaviour and information transferred to other machines or people (operators, managers and maintenance department).

We display this information in monitoring centres and on tablets. We also facilitate remote issuing of commands to machines and presentation of their

Practice Just-in-time (JIT)

Products:

Operator, Smart Factory

Principle Lean foundation

- Synchronising all activities within a production process, thanks to the pull system and continuous flow.
- Handling minimum inventories on a safe level, on the basis of at least two inventory management standards.
- Reducing the production cycles.

Benefits

Just-in-time (JIT)

- Reduction of work in progress and inventory levels within the entire production-warehousing process and decreasing the related costs.
- Increasing productivity and reducing the possibility of resource obsolescence or destruction.

How we implement

Optimising operations within the entire value chain by synchronising the flow of materials between warehouses and workstations, ensuring their just-in-time presence.

Just-in-time (JIT)

Extending the methods of defining minimum inventories available in ERP systems with statistical methods and trends.

Use of precise internal and external location systems to optimise the distribution of materials in warehouses and warehousemen's movement paths, taking into account planned orders.

Practice Continuous Improvement (Kaizen)

Products:

Operator, Monitoring, Smart Factory

Principle Lean foundation

- A procedure consisting in continuous, step-by-step improvement of the management and production process at all levels, taking into account just-in-time business techniques, etc.

Benefits

Continuous Improvement (Kaizen)

- Stimulating innovativeness.
- Creating new concepts in production techniques.
- Reducing process implementation time and enhancing quality.
- Creating transparent and objective assessment and reward criteria.
- Cost effectiveness.
- Enhancing work safety and quality.

How we support

We facilitate identification of process fragments that can be improved.

Each process is defined using a graph in our system, which includes all operations that can be performed.

Continuous Improvement (Kaizen)

Thus, each process is divided into stages, making it possible to analyse each stage and define in real time such indicators as:

- time of locating and delivering materials from a warehouse, standstills and micro-standstills for changeovers;
- production and finished product transfer speed;
- amounts of utilities, products/waste, etc.;
- operator's working time.

Such information constitutes the basis for detecting fluctuations among process parameters (operator, supplier, product type, etc.) as well as defining the best results achieved within a given period. It is also possible to define possible scopes for modifications and find optimum solutions in relation to the target functions (e.g. reducing inventories) as well as other optimisations based on operation harmonisation and synchronisation.

Moreover, operators are able to report possible improvements.

Practice Pull System (Kanban)

Products:

Operator, Monitoring, Smart Factory

Principle Lean foundation

- A production control method where material management is considered to be the critical factor, resulting in the fact that each organisational cell manufactures exactly as much as is necessary at a given time.

Benefits

Pull System (Kanban)

The benefits result from basic Kanban principles, i.e. no deficiencies, no delays, no inventories, no queues - wherever and for whatever reason, no standstills, no unnecessary process and control operations, and no displacements.

Long-standing implementation of the Kanban method in the Toyota company has resulted in:

- increase in production by 30%;
- decrease in all inventories by 60%;
- decrease in deficiencies by 90%;
- decrease in manufacturing space by 15%;
- decrease in the number of operators and administration-technical personnel by 15%.

How we implement

In its basic version, Kanban assumes the utilisation of multi-section sheets filled in by various departments, i.e. the planning department in relation to demand, the production department in relation to order manufacturing and semi-finished product use, and returned to confirm completion.

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Other Lean Practices supported by the Stabilis system:

Management information on time
Transparency
Rewarding good results
Piecework
Safety
Paperless

Key Performance Indicator (KPI)
Level Loading
Waste (Muda)
Overall Equipment Effectiveness (OEE)
PDCA (Plan, Do, Check, Act)
Error Proofing (Poka-Yoke)
Single Minute Exchange or Die (SMED)
SMART Goals
Standardised Work
Tank Time
Total Productive Maintenance (TPM)
Visual Factory
Total Quality Management (TQM)

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