

## Mechanical engineering

### Vertical solution

The Navertica Mechanical Engineering Solution is intended for companies, whose processes predominantly fall within mechanical engineering production.

#### Key processes in these companies

- Product design and set up of the production documentation (routings)
- Production of components and related assembly by use of slitting/levelling/cutting operations, heat treatment and manual or machine processing
- Assembly of partial components and their eventual combination with purchased items
- Finishing and polishing of material, products and final packaging
- Advanced logistics and production planning
- Quality management procedures and dispatching
- Replenishment planning such as purchase or transfers
- Flexible calculation rules

The important process specification of these companies is made-to-order production and frequent modifications of the production bills of materials and routings, which impact hand in hand advanced planning procedures.

#### Grow your business

In addition to modern machinery, engineering companies need software tools that flexibly support all business and manufacturing processes to maintain and increase competitiveness.

Microsoft Dynamics NAV and Dynamics 365 Business Central, a comprehensive enterprise solution that integrates the vertical Navertica Mechanical Engineering solution, is the cornerstone of such a strategy.



#### Key features of the Industry

- Planning optimization of input material purchase
- Advanced manufacturing planning and management methods
- Automatic registration of all logistics and manufacturing operations in the manufacturing process
- Two-way link between customer request and production order incl. purchase request
- On-line evaluation of differences between plan and reality
- Flexible modification of technological processes depending on machine capacities, availability of operators and material and constantly changing customer requirements
- Workshop management automation
- Specification of material, semi-finished products and products using production batches
- Flexible response to changes in volumes and types of processed materials and to changes in manufacturing processes
- Online posting of all transactions to general ledger

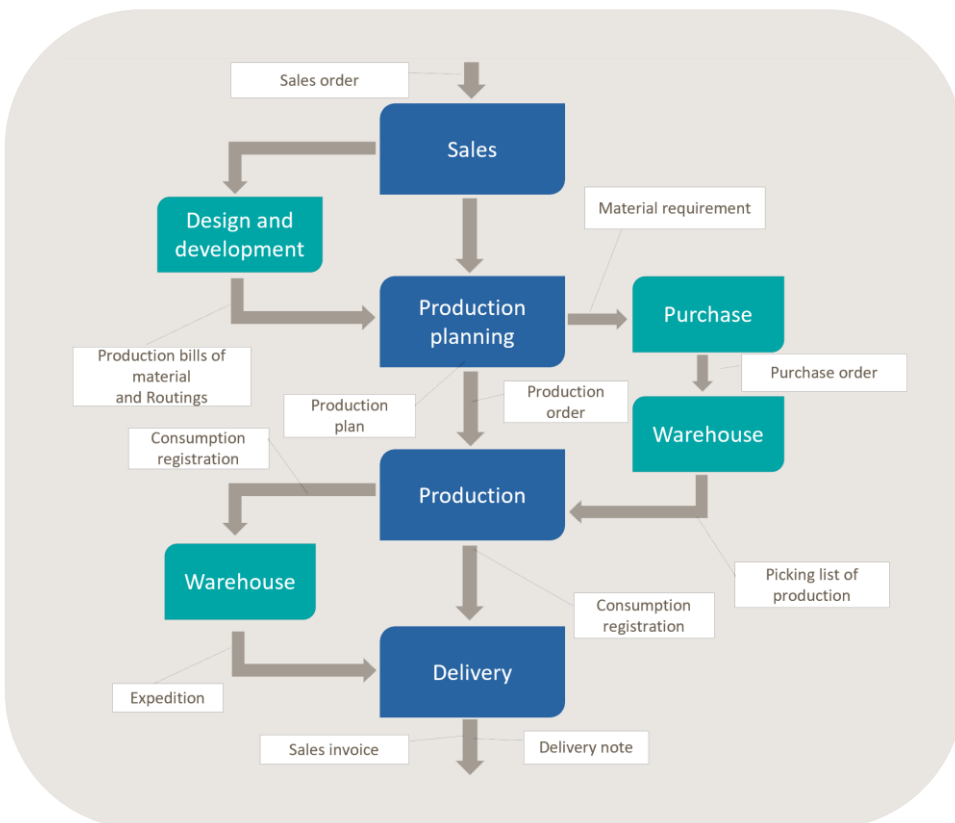
Microsoft Dynamics NAV and D365 Business Central is an integrated system for complex business management that can be implemented quickly and efficiently using the correct methodology. It has simple and intuitive usage and everyone can easily learn its principles.

System allows you to respond flexibly to customer requirements and changes to those requirements at a cost-effective cost. Microsoft Dynamics NAV or D365 Business Central connects all employees, processes and informations of your organization.

### Key features of vertical engineering solutions

Implementing the vertical solution, Navertica Mechanical Engineering extends MS Dynamics NAV or D365 Business Central extended standard manufacturing functions with the ability to apply items and make work-in-progress stocktaking. In addition to analyzing the utilization of production capacities, it is possible to analyze internal and external disagreements, including monitoring of material consumption, machine time, hours worked by individual employees or whole teams in graphic and numerical form.

In addition to advanced resource planning, planned maintenance shutdowns for machinery can be envisaged. With the fine planning application, it is possible to graphically display selected orders and their operations, and drag-and-drop operations over time or between alternative centers in case of overloading a selected machine center. This application allows you to adjust the running production time according to the date of delivery or adjustment of selected operations and it is possible to keep individual simulated or used plans for later use.



### Functions and Feature

- Finance management
- Purchasing and Sales
- Warehouse management
- Production
- Maintenance management
- Quality management
- Expedition management
- Loading and sub-loading
- Call-offs and EDI
- Calculation
- Batch monitoring
- Types of packaging
- Pallet management
- Work teams
- Graphical display of orders
- Lot reservation
- Automatic shop floor management
- Cooperation management
- Alternative Machinery Centers
- Task Trays
- Machine Center Queues
- Work in progress
- Analysis of rejects
- Profit Analysis
- Revenue analysis
- Cost analysis
- Work-flow
- Production dispatching
- JIT
- ISO 9001
- ISO TS 16949
- OHSAS 18001
- ISO 14001
- ISO 27001

The production process significantly reduces the number of errors that originate both in handmade paper production documents and their subsequent laborious manual overwriting into the system. The correctness of recorded manufacturing operations and material consumption is ensured through the use of technologies such as touch screens and barcode readers connected to system using WiFi.

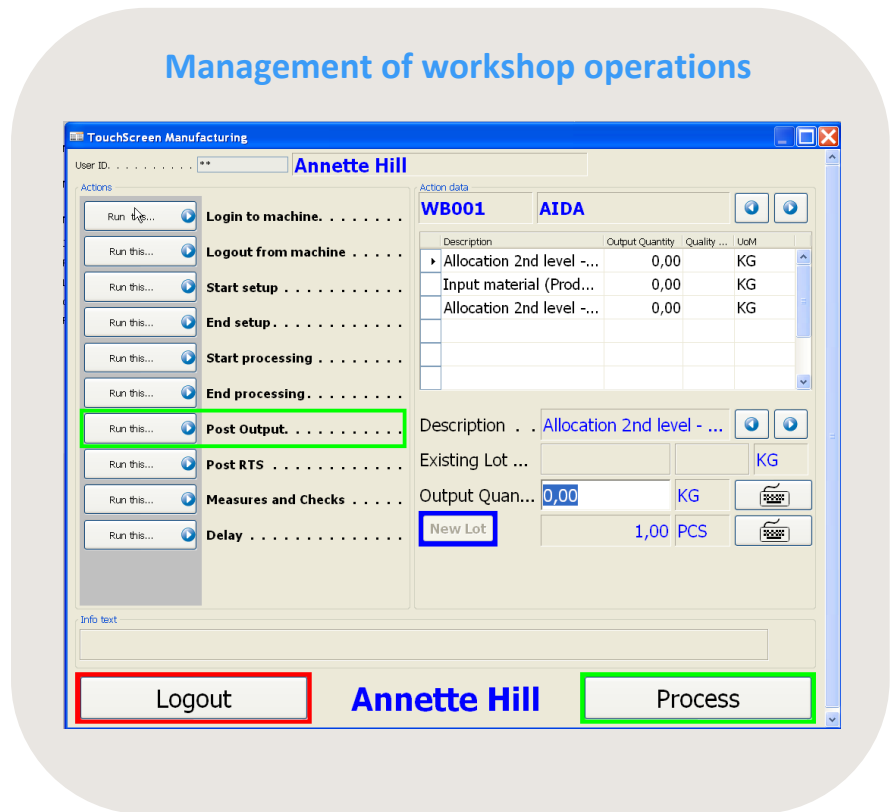
All production progress data is immediately available, so the production manager can respond to changes and disagreement in the manufacturing process at any time with a production overview.

The production dispatching center allows for an overview of work in progress for dealers who can, based on these data, inform their customers about the status of their orders and possible change management. This also applies to shipping and subsequent planning of loading and pallet production or packaging preparation.

The vertical solution also includes the management of corrective and preventive measures and the creation of 8D reports, including statistics on the use of this tool.

The vertical solution also includes a calculation module, which solves the area of production valuation and cost calculation of sold goods. This module can also be used to simulate the cost calculations of an existing or not yet produced product.

The calculation tool allows you to create item cards, bill of materials, or technological process and evaluate planned and actual material, resources, cooperation, and overhead costs, and analyze individual cost items and their changes over time for the fixed cost valuation method.



## Production overview

Obecné

Úroveň zanoření . . . . . 0      Filtr čísla zboží . . . . . [↑]

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Stav	Číslo výrobní zakázky	Číslo zboží	Popis	Kód měrné jednotky	Průběh výstupu (odvádění)	Překročení výstupu	Množství	Dokončené množství
Vydaná	101001	LS-100	Reproduktor 100W dub Deluxe	KS	0%	0%	15	
Vydaná	101002	LS-100	Reproduktor 100W dub Deluxe	KS	0%	0%	12	
Vydaná	101003	LS-100	Reproduktor 100W dub Deluxe	KS	0%	0%	10	
Vydaná	101004	1000	Bicykl	KS	70%	0%	20	
Vydaná	101008	80211	Klávesnice Quietkey	KS	100%	0%	1	

## Functionality - Benefits

Functionality	Benefits
Effective replenishment planning	Lower consumption and better material utilization, resulting in lower raw material acquisition costs and up to 40 % profit increase. Warehouse value can be reduced by up to 50 %.
Continuous production management	Faster response to customer requests and thus higher chances of getting new orders. Reduce running time by up to 70 % and increase delivery probability by up to 45 %. This results in an increase in the number of new customers that can result in an increase in sales of up to 60 %.
Flexibility of planning material coverage	Better use of raw materials, faster response times and immediate yield calculations will enable better decision making and thus lower costs and better market positioning. Market share can increase by up to 30 %.
Item tracking in warehouses	Reducing the value of warehouses and thereby increasing liquidity. Reduce error rate by up to 50 % and reduce related costs by up to 40 %. Reducing the storage area reduces storage and handling costs by up to 50 %.
Tracking stock turnover	Lower value of warehouses. A smaller number of stock manipulations leads to a reduction in warehouse operations costs by up to 50 %.
Adapt to sudden changes in customer requirements	A more stable trade policy. This results in an increase in the number of new customers and thus an increase in turnover and profit of up to 60 %.
Customer access to their Internet supplies	Faster response time and thus lower ordering costs by up to 50 %.
Emailing warning messages	Warnings about overstaying credit, lack of materials or products waiting to be transported. Better transport planning. Less downtime and faster delivery. As a result, the market share may increase up to 30 %.
Capacity planning	Shorter production times and lower operation costs. Better organizing the use of crew capacities and evaluating their performance linked to remuneration. Performance / cost per resource ratio will improve up to 60 %.
Batch tracking system	Direct impact on quality management and complaint management on both suppliers and customers. As a result, the operation costs are reduced by at least 50 %.
Maintenance Management	Less frequent unexpected shutdowns due to breakdowns and better resource utilization planning at the time of scheduled maintenance results in lower costs, faster response times, resulting in up to 50% profit increase.

## Solution details

**Solution type:** Software, training and consulting services and application of know-how

**Product:** MS Dynamics NAV, Dynamics 365 Business Central and related integrated vertical solution for engineering

**The Importance of Microsoft Technologies:** Increasing the Productivity of the MS User Solution. The integrated vertical solution is represented by additional menus, new windows, and buttons on standard Microsoft application bars

**Solution price:** Contact Account Manager for pricing information

**Industry classification:** Engineering, steel processing, steel cutting, machine and equipment manufacturing

**Customer size specification in the market segments under consideration:** Medium segment: 50-1000 employees, small segment: 1-49 employees

**Supported language versions:** Czech and English

## NAVERTICA a.s.

Since 1990, we have been a provider of enterprise solutions based on Microsoft Dynamics 365, Dynamics NAV/AX, Business Central and Microsoft SharePoint. Our goal is not only to deliver the systems but primarily improvement of customer's profitability to get a better bottom line by using the provided solutions. We design, implement and support horizontal solutions for manufacturing, trading, project and service companies. We have completed complex deliveries in many European countries, South Africa and USA.

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