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noris.next
Complex information system
for industrial and manufacturing companies.
It increases productivity and reduces costs.

The NORIS.NEXT system aims to be a technology leader in the information systems market. It's a new version of NORIS, which works on Microsoft.NET platform.

NORIS.NEXT is built on its own application kernel. The base system contains all standard modules for economics, salaries, human resources and logistics. Specialized modules for different industries and different types of production make it a powerful information tool that accurately copies the business and manufacturing processes of industrial and manufacturing companies.

NORIS.NEXT enables you to effectively manage your business and ensure its flexible development. It is a customer-oriented system with an emphasis on fast and accurate response and improvement of electronic communication with the client. The terms and costs of the contracts are under permanent control of the system and the customer.

NORIS.NEXT uses advanced technology to manage production, automatization of planning and distribution of working instructions. Real-time data collection and location are provided through suitably designed terminals.

Thanks to precise inputs, reducing errors, eliminating document circulation, and switching from evidence to true production management, the system is perceived as a fast return investment and a significant source of internal savings.

System characteristics

Complexity and modularity
Variable system with modular architecture that you can put into operation in a very short time.

Performance, technological advancement
High performance, big data, reliability, stability, integrability and trouble-free operation with modern technologies.

Safety
Hierarchical system of access rights. All data protection. All events are monitored and logged.

Openness and compatibility
Integration with any third-party application. It supports XML, EDI, ... technologies and open integration interfaces.

Adaptability and flexibility
You can customize the system to your needs. You can reduce the dependence on the supplier and thus the total cost of maintenance and service.

Simple administration and operation
It includes sophisticated management and operation tools, on-line system and contextual documentation.

Intuitive user environment
It includes an integrated report generator, designer of dynamic forms, reports, and items of proof classes ...

Standardization
It respects Slovak legislation, international norms and standards including technological ones. It is linked to Microsoft products.

Industry-specific solutions
It meets the specific requirements for your and other industries, it covers and secures your processes and needs.

Mobility, online information
Actual information anytime and anywhere. It supports all types of devices including mobile platforms.

Modules

CORE

SYSTEM CORE

Base NORIS.NEXT
NORIS.NEXT WorkFlow services
GDPR support GDPR Plus
NORIS.NEXT.WEB

BASIC MODULES

ECONOMY
Accounting
Billing accepted
Billing issued
Cash
Cash register
Bank
Property/assets
Short-term assets
Order

HUMAN RESOURCES
Salaries
Human Resources

LOGISTICS
Stock and sales
Book of journeys

PRODUCTION SUPPORT

BUSINESS ADMINISTRATION
CRM
Contracts
Managerial outputs
Koncern management, processing and reporting
Meetings

PRODUCT MANAGEMENT
Production planning
Production management
Technical preparation of production

TRANSPORTATION
Transportation
Mechanization transport centre
Processing of CCS

ENHANCING MODULES OF PRODUCTION

Class and quality control
Warehouse management
Maintenance Management, Service
Production controlling
Forecast, sales plan
Realime data
Data emulators
Graphic signalization
Production attendance

INDUSTRIAL SECTOR NORIS

noris.next

Mechanical engineering, metal production

Food industry

Textiles, clothing, footwear, woven materials

Building materials

Electrical engineering, automatization

Chemistry, rubber, plastics

Wood production, furniture

Foundry, metallurgy

1.1 Production planning

It consists of set of planning devices. These devices are of different distinguishing levels which enable to create optimal combination of planning algorithms , including estimations and prognosis, from time capacity planning up to direct short-term workshop planning with optimization of production cycle. It is possible to use dynamic material planning, cooperation planning, planning of workers´needs or professions and equipment. It enables to combine production model to the warehouse and production model to the order.

In case of need it is possible to plan only "narrow places" in the production. Graphic devices are used for presentation. They can be modified for maximum informative value for operating including description of actual functioning and condition of the production. Part of the planning is, as well, creation of setting into the production in the form of optimal production order and production amount with the creation of valid production documentation (etiquettes, documents).

Characteristics, basic parts, functions:

- Evidence of production orders, its approving
- Dynamic plan including use of material, parts, directing of critical items, balancing capacity planning
- Capacity calendars
- Balances - balancing planning period (balancing time planning) - control of narrow places in the production (volume, prices, etc.)
- Time planning
- Workshop planning
- Order planning and production management
- Internal production order
- Cooperation planning
- Complete map of production infrastructure
- Planning of material requirements
- Planning of production process
- Optimization of production process
- Optimization of in-process production
- Variant planning of alternative technologies

Production management

This module contains programmes for detailed evidence and management of material flow, financial flow, production of workers and machine holding. Initially it comes from facts about technological production preparation and production planning. It enables usage of majority methods of data collection, mainly data collection from production in the actual time while using bar code and evidence of production batch. Evidence of workers´ attendance and of their movements is, as well, one of the delivered forms of data collection usage.

Characteristics, basic functions, code-lists:

- Production order
- Production batches
- Issuance to production
- Production rendering
- Warehouses and inter-warehouses
- Managing of workers
- Managing of down-times
- Managing of abnormalities
- Managing of tools
- Notification of production
- Statistics of production
- Workshop operative management of sources
- Current dynamic control of production expenses, evaluation with calculations
- Production quality certification
- Managing of work-in-progress, inter-warehouses with material, components, waste, errors, non-productive times
- Supervision, evaluation, statistic
- Data collection in actual time
- Dispatching management support with graphic illustration of workplace condition
- Attachments to constructive systems CAD
- Editor for illustration of drawing documentation, texts, photographs directly at the products

Technical preparation of production

The module contains complete information about the products. These information are structured according to technological process, decomposition of the product to little parts, half-finished product and materials. System is parametric for codification and assignment of rules for alternatives´use, custom, constructive or technological. It is possible to set optional calculative items and patterns, material characteristics and parameters of quality in the whole system. The module is more than just technical production preparation. It creates complete preparation of organizational, production and planning rules and definitions which are used in the whole production system. It creates knowledge base of production management. By its help it constantly evaluates all saved information.

Basic code books of TPP module:

- Standard operations
- Standard materials
- Patterns and parameters
- Calculating sheets
- Types of technologies
- Standard workplaces
- Standard devices

Class and quality control

Solution for modern class and quality control

Characteristics, basic functions of TPP module:

- Basic range card
- Basic identification, SCP, EAN, number of sheet, possibility to arrange numbers from eligible code books, possibility to generate automatic name and EAN.
- Definition of basic parameters of product, technological and optimal amount, defectiveness, continuous production time, rules for spare production forms
- Decomposition of products, piece list and inverse piece list
- Eligible creation of numbers, amount of levels in decomposition which is limited only by edifice of number
- Comprendious function for product creation including evidence of used materials, operations, parameters, calculations, structural and inverse piece list
- Possibility to define other products and waste while being divided Work with more quota units of measure at the same time with decomposition, possibility to distinguish technologies and basic industry
- Alternatives- unlimited amount of technological or custom alternatives, multidimensional tables of sizes, colours, used materials
- Alternatives have registered only abnormalities from the base which enables to create effective service and database size
- By alternatives it is possible to create ample matrices of products; most of the data, such as time regulation and consumption regulation, are calculated from the basic model
- Creation of technological process - technological process consists of standard operations, possibility to define technologically alternate ways, cooperations, attachments to inter-warehouses and workshops, coefficient of multi-machine service
- Combination of various forms of compensation
- Production calculation - valuation of every product and piece, development of price, dynamic calculative patterns, schedule base for calculation of product burden - calculation of minute of machine and device flow
- Technical parameters - definition of physical mechanical characteristics of products, pieces and materials, quality parameters and planning parameters
- Possibility of patterns usage between the parameters
- Drawing and text documentation - system uses editors available for creation of arbitrary documentation including connection on constructive systems
- Shift control - batch control, price upgrade, calculations, changing of pieces, materials and operations
- Connections to constructive system - CAD, control system of machines, possibility to sort and offer decomposition of products and code books of pieces and materials; possibility to send technical documentation into the control systems and receive exits
- Effective definition of product structure
- Effective creation of stable and alternative technologies
- Definition of standard workshops, tools and operations
- Usage of systems to show the piece lists and definitions of products on working surface
- General model of alternatives´creation
- Definition of technical product items
- Creation of optimized calculative product sheets (calculative items, calculation patterns)
- Table values - user values tables for calc instead of patterns

This system is available for:

- Integration with existing ERP systems - delivery including connection arrangements
- Independent operations or in the package together with product control modules, maintenance control, stock control or with other modules of system NORIS/ NORIS. NEXT
- Creation of standard and solution adjusting to customer´s rules
- Solution for already established certifications or support for acquiring of system certification according to ISO9001, VDA, QS9000 or ISO/TS 16949
- Optimization and re-effectiveness of all processes which are related to class control

System of class and quality control includes:

- Control of company´s class documentation
- Control of technical norms and drawings in connection to class control
- Notice and solution of discrepancies in actual time, WorkFlow, indexes and statistic, improvement and goals of the class
- Evidence of audits (internal and external system and process audits)
- Claiming - from customers, suppliers, internal and external
- Suppliers, customers and their evaluation from the perspective of class control
- Measuring accuracy technique - evidence, connections to production control, statistic, calibration
- Preventive and predictive maintenance including warehouse control of spare parts

Class control monitoring includes:

- Support of all types of trials, control plans, production audits and class tests;connection to batch release in the warehouses according to samples or time period
- Error messages - collective error messages, connected functions over the discrepancies - closing, cancellation, assignment of responsible person
- Discordant products control - evidence of discordant batches, expired batches
- Entry inter-operational and outgoing control
- Release of material and production (functions for technologist, laboratory, production and logistics - defined conditions of batches, release on exception, prolongation of

expiration etc.)
- Own module of test room or connection to external test room and laboratories - work with samples of material, products, release of samples, connection to other sample, certificate of samples, connection to discrepancies
- Planning of laboratory tests - definition of patterns, representatives, definition of code books, tests

Downtime and productivity monitoring includes:

- Evidence of downtime and warning code books
- Emulators for notice of warnings, downtimes and reparations
- Matching of warning and connected reparations
- Statistic and evaluation of downtime

Warehouse management

Basic characteristics of module Warehouse with WMS management support:

- Evidence of purchasing and internal production batches, assurance of traceability on the level of batch (FIFO method)
- Warehouse dimensions´observations - order, alternative, batch, placement, class, packaging, expiration
- Support of internal and external creation and evidence of etiquettes with ban code of the batch and EAN of material, semi products, products, their packaging and etiquettes. Printing of placement etiquettes and manipulative items - production support
- Evidence and usage of warehouse placement with the definition of eligible parameters
- Support of all warehouse and production operations with the help of wireless terminals
- Ability to block and release all warehouse items and use the attribute of production release or expedition release based on certificates and attributes
- Evidence of transport packaging, palettes and other returnable containers
- Solution of warehouse movements - acceptance, conversion, preparing, out-going and stock including returnable operations
- Definition of rules of storage according to packaging type - containers, cages, palettes
- Preparation and out-going in pieces, cardboard and palettes
- Printing of palette labelling into the specification - palette ticket
- Printing of palettes content and delivery - delivery note
- User content definition and etiquette form definition - customer etiquettes
- Creation of preparing way through the warehouse according to adjustable criteria
- Out-going according to orders and specifications for printing of palette tickets, delivery notes according to customers and countries
- Observation of work in progress and life cycle of orders
- Stock system and transfer of stock differences into the system
- Observation of expedition - evidence of palettes,, orders and planning of expedition rides

Reasons for warehouse management:

- Automation of all actions over the warehouse
- Reduction of workers and higher productivity and load of warehouses
- Minimization of errors thanks to bar code scanning
- Use of optimal way of preparation
- More objective evaluation and motivation of warehouse staff
- Auto-realization of warehouse documents by bar code scanning and confirmation
- Automatic issue of head documents - invoices, customs documents

Maintenance management, Service

The value of production and operation devices is more than hundreds thousands and million of Euro. Head management realises that it is very important to observe the key financial documents such as cash-flow, value of warehouse supply and in-process production but as well maintenance expenses like machinery, techno¬logies and tangible property.

It is possible to observe the maintenance from various points of view: preventive maintenance expenses, necessary unplanned operations, reaction time periods and layoff period, defectiveness of machinery, value of the it¬ems in spare part

warehouse, etc. Summary of these aspects represents big amount of money which are difficult to obs¬erve and control without specialized information system. Value and amount of spare parts which are stored come up to thousands of items and hundreds of thousands of Euro. There are doz¬ens of staff employed in the maintenance. Maintenance processes can be di¬vided into static data settings, that means machine definition (machine card), maintenance parameters and afterwards dynamic settings - that means reali¬sation and planning of preventive maintenance, solution of necessary operations, solution of warehouse movements in the ware¬house maintenance, notice of work done, etc. The last but not least, reporting about all these processes.

Maintenance management system

Is specialized part of information system of production management , it is dedicated to complex support of maintenance process. It is possible to operate all activities over maintenance objects with this module- preventive and periodic maintenance, revisions, reparations, planning, emergency conditions, realisation and evaluation of investment shares. Solution is base don possible integration with production management system and following principles of this integration:

- Maximum support of continuous and effective production, optimization of machine layoff
- On-line reaction to situations in the production
- Usage of WorkFlow to control the maintenance process up to final solution of layoffs, signalization of delays, control of management staff
- Unitary usage place, ways of control and notice of access permission
- Direct connections to other production and economical modules (Production, Quality, Order, Property, Commercial warehouse etc.)
- Possibility to use system editing and adaptation "made-to -measure"
- Communication with other systems and applications by the means of system devices

System for maintenance management support consists of three modules:

- Technical maintenance preparation - evidence part
- Maintenance planning - preventive part
- Maintenance management - operative part

Module Technical maintenance preparation

Is aimed to database notice of maintenance objects (machines, devices, etc.) and all related data. Maintenance object is a general term which contains all that is related to maintenance and reparations. We talk about individual machines or their parts, related buildings, complexes, floors, section of network infrastructure etc. For each maintenance type it is possible to define its own structure card of maintenance object with specific technical parameters - characteristics which are supposed to be registered for this type. It is possible to register piece list decomposition to individual components to each maintenance object and all necessary spare parts. Module contains definition of process - standard activities for particular maintenance object. Thanks to connections on production and warehouse module systems and integration functions with external systems and applications (e.g. Systems of data collection and industry atomization, Attendance system etc), it is possible to observe other economical and production data about maintenance objects (e-g- expense calculation, depreciation, expenses of spare parts, operating condition of machinery, amount of hours of production, etc.). It is possible to add to registered notes, eligible external documents or links to these documents in shared disposal site or internet/intranet (e.g. Technological schemes, production rules, agreements with suppliers etc.).

Maintenance planning module

Is used for preparation, observation, management and evaluatio of maintenance planes. Planning creates preventive maintenance and layoff plan which contains all registered particular dates and work that should be done and associated maintenance objects. In determining of layoffs periods it is possible to think of already registered warnings (errors), which were registered by machine staff. There is a reservation of sources in planning (human, technical, material) which are necessary for operating of planned activities. Standard or periodical maintenance could be re-defined in Maintenance regulation and plan for particular maintenance object could be automatically generated according to mentioned data - it is possible to use MRP planning, planning according to values of technical items - e.g. Counter, measurements, scales, etc. regulation items represent particular steps (periods) of work which is supposed to be done within that type of maintenance - it is possible to add notice from technical documentation. Master continues with maintenance and layoff plan by creation of particular working maintenance orders, its realisation and observation of its admission (connection to Attendance module and Data collection module).

Maintenance management module

Enables to observe, sort out and evaluate cut-offs - emergency conditions of maintenance objects from warning reporting up to liquidation or resolution of the problem. According to on-line regime of emergency dispatching and need to exactly observe and register actual condition there is a user adjustable working surface. External report of emergency conditions could be registered into the system by the means of data import or manually via blank forms; by opposite way they are printed or delivered information about the resolution stage. Basic function of module is maintenance report module - warnings and following production cut-offs, and targets connected to its resolution. System offers compendious scheme and signalization which is distinguished by colours according to type and importance of cut-off. It is possible to add and observe particular Operations of emergency maintenance into the system in the time and place of accident. Labour groups by the means of Work report announce to dispatching which emergency or planned action are taking place. Like this the enable to keep the on-line current perspective not only about condition and process of work but about movements of the workers as well. The production has shift form and passing of work in progress between shifts.

Setting and running of maintenance system modules offer following important economical and operational contributions:

Complex evidence of all kept objects and all activities over the maintenance objects

- Current and transparent information such as support for deciding
- Easier control process and maintenance planning, support of controlling and decision process with the help of WorkFlow
- To decrease expenses for maintenance by optimization and coordination of activities
- Minimization of data inconsistencies between the evidence in different systems
- Usage of huge system of outputs and print set

General interface for integration with other systems and applications

- Connections to production system enable to share information about machines in current time
- Use of terminals in production by maintenance staff enable to report any activities in current time and place
- Usage of bar codes of devices, service, spare parts enables fast and easy evidence and automation of reports.

Maintenance management matters

In choosing and process-controlled setting of maintenance management system, total costs of maintenance can be decreased by many percent. By decrease the amount of reparations and unplanned layoffs could be reached increase of productivity and prolo¬ngation of life cycle of devices. Return of investments does not count in years but in many cases in mo¬nths.

Production controlling

Basic reporting is realized on the level of templates, graphs, desktop views and index which create integrated data warehouse directly in the system.

Every system user can use these services after the course and he/she can create his/her own production reports directly into the production system.

Data can be used as background for fulfilling the other managing modules or external reporting systems.

Reason for setting of Production controlling:

- Observation of extent of utilization and effectiveness of particular machines
- Evidence and statistics of device and product usage
- Evaluation of production orders - effectiveness of production of particular product, order
- Evaluation of planned and final calculation with particular production order or complete statistics of expenses according to sizes
- Comparison of particular production orders and production doses, comparison of calculations
- Monitoring of unit and overhead costs in calculations of production orders
- Production economy - valuation and evidence of unfinished production
- Creation of other production index according to needs and their monitoring and evaluation (downtime, error rte, operations, evaluation of work places, teams, workers and professions).

Forecast, sales plan

Optimization of warehouses and production according to production trends. Possibility to create business plan as forecast of sale.

- To receive forecasts from customers in electronic form (XML, EDI)
- With planning to control allocation of other sources as well (cooperations, machines and devices) in longer time period than is given by real orders (global purchase order)
- Effective creation and administration of business plans, connections to real orders based on user defined masks (product representative)
- Evaluation of plan and reality of particular forecasts.
- Optimal condition of stock in relation to tendencies and trends of sale

- Backgrounds for other financial planning and planning of all production sources.

Reasons for setting of Forecasts and sales planning:

- Optimal condition of stock in relation to tendencies and trends of sale
- Backgrounds for other financial areas

Real time data

- Networks and terminals CAPTOR fo data collection in production, warehouses and attendance
- Wireless terminals and network MOTOROLA and other producers for controlling of warehouse and production evidence
- Collection of signals from the machines, communication with intelligent devices (scales, wires, measuring)
- Sensors and printers of bar code and complete identification in production and warehouses.

Reasons for deploying data collection in real time :

- Integration of all information in production into compact management system
- Automation and integration of all activities in production
- Setting the on-line controls and evaluation of quality, identification of problem areas
- Substantiate marks in production, usage of batches and other data from order´s ´genealogy´
- On-line maintenance control, calling, monitoring of operations, evaluation and statistics, planning
- Consecutive on-line monitoring of production expenses, statistic evaluation
- Quality feedback for exact production planning
- Permanent control of work productivity and automatic background for compensation
- Evaluation of critical areas in production processes from the point of view of norms and downtimes.

- Emulators QUORT for effective data collection in production are created made to measure and they try to solve effective dose production for logical unit or time period. We talk about collective production eduction by master in one shift and changing shift or group eduction of production order or doses. Work eduction on production dose etc.
- Emulator can work with bar code sensors and make the data import faster
- Assignment offer for production eduction can be connected to assignments of capacity piece plan for particular workshop and take out from it
- Emulator enables to report non-production times, downtimes, maintenance calling, quality worker or master. There are all auxiliary information, drawings and manuals for work or control on the display.
- Emulator displays to workers in actual time, the basic index of their work, productivity, earnings, error rate, downtimes and data for comparison for all workshop
- Emulators are executable after the computer turn on for workshop conditions and can be controlled by mouse, key board or touch screen display.

Reasons for setting of emulators for production data collection:

- We talk about one of the fundamental building stones of production data collection
- It combines effectively with industrial or wireless terminals and bar code sensors
- It enables to control the workers in production and it atomizes transfer of production documentation on workshop and collection of all information about production in actual time.

Graphic signalization

- Ground graphic view to production with on-line signalization of all abnormalities in production in connection to data collection in actual time
- Graphic work area is used as well on the place where there is data collection not that often, such as device for entering production data, quality or maintenance data
- Work areas are created by configuration directly by the service including auxiliary graphic symbols
- It is possible to define the colour of workshop in code book of downtimes after the downtime entry
- Special type of downtime - warning, it is displayed in field workshop as number - summary of all actual unsolved warnings (information for maintenance and production)
- Over the graphic working surface it is possible to call all standard functions of production system and as well basic emulators of data entry or correction of reports from terminals in production.

Reasons for deploying graphical desktops :

- Maintenance workers, quality workers, masters or foremen can, with this device, control the production in actual time and correct development of their workshops on time and effectively from their own PC
- Archiving of all actions in production enables to observe the behaviour of all participants in the production process in longer time lapse and compare them
- Production report, at the same time, generates connected reports to adaptation of production process, salary and accounting data.

Production attendance

Arrivals and leavings of workers is included in additional module of production management.

- System for complete evidence of workers in production. It is possible to define two types of terminal in the system. Attendance terminal and production terminal. Both of them use common type and attendance cards
- It is possible to report reasons of absences in the attendance terminal. Production terminal is used for report of production abruption
- Reported attendance and production actions are confirmed and added by master in the form of diary. He/she can use function of month closing and pre-running of salary data.

Reasons for deploying of Production attendance:

- The advantage is the integrated attendance system in the production system
- Direct connection to attendance and background for salary system of the company.