

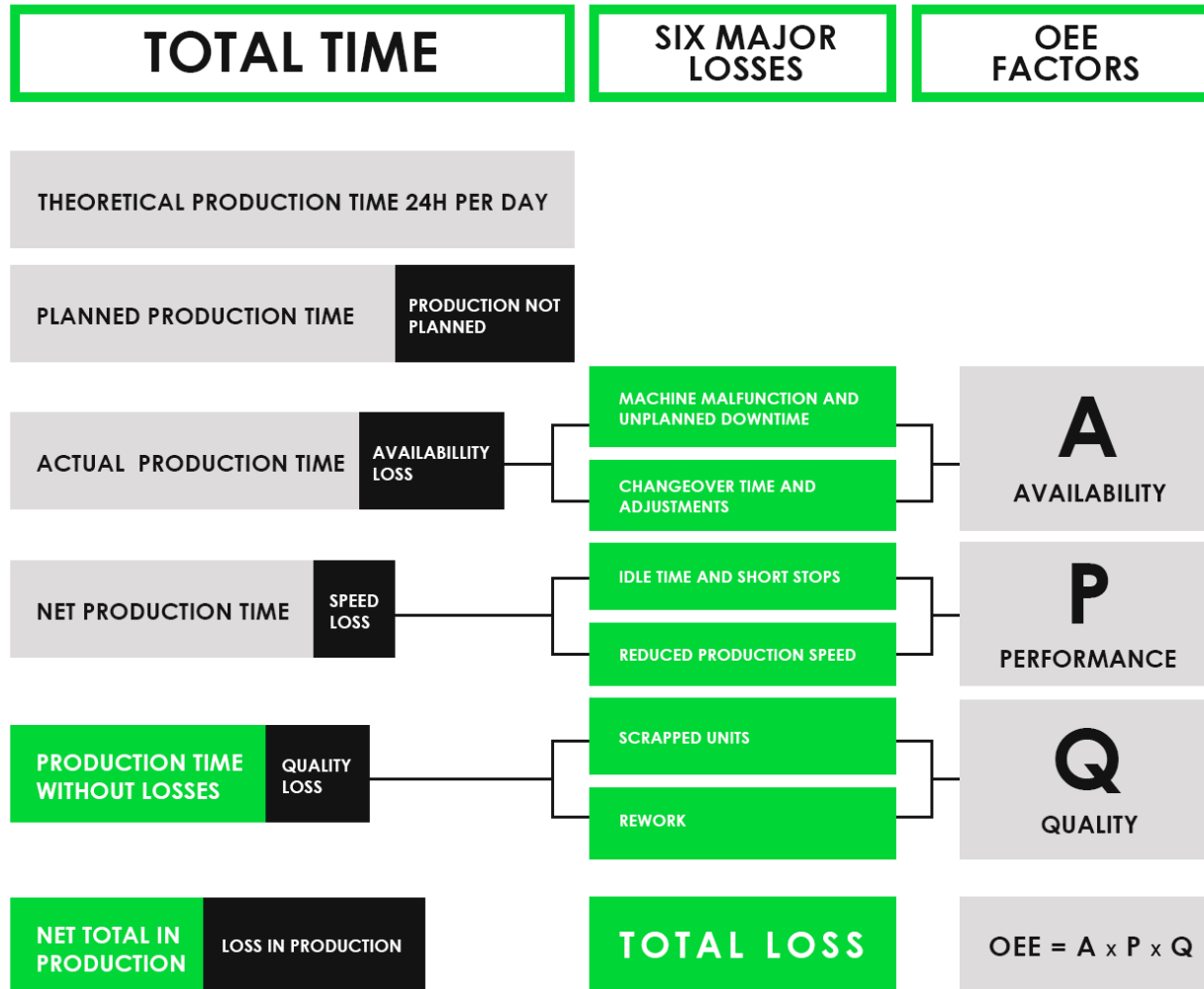
zyfra
MDCplus

Digitize your shop

ZYFRA DIGITAL MANUFACTURING

WWW.MDC-PLUS.COM

Let's find the bottlenecks in your production



OEE (Overall Equipment Effectiveness) is a globally accepted standard for measuring manufacturing productivity.

In short: it identifies the share of the total manufacturing time that is truly productive.

MDCplus at a glance



MDCplus is a real-time machine monitoring and manufacturing data collection (**MDC**) system with hundreds of customizable reports and charts that can be used to track jobs, parts, operations, work centers, OEE, scrap, costs, downtime and people.

Use a combination of our software, hardware and services to transform your production into digital.

MDCplus at a glance

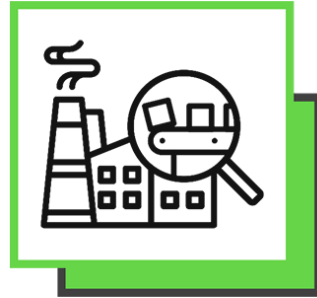


Machine Data COLLECTION

Automatic / manual data collection

Use the existing network to monitor CNC machines, robots, PLCs

Display machine status on large TV screens, PCs, mobile devices



Production OPTIMIZATION

Machine-based job scheduling improves utilization and production flow

Creation and configuration of new orders

100+ KPIs and Metrics

Customizable Reports and Charts



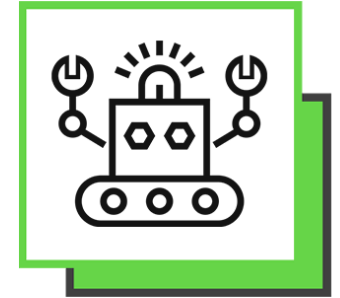
Downtime MANAGEMENT

Unlimited number of data collection events

Track reasons for machine down time
Reduce unscheduled downtime

EMAIL & SMS messaging

Computerized maintenance management system



Digital MANUFACTURING

Paperless production

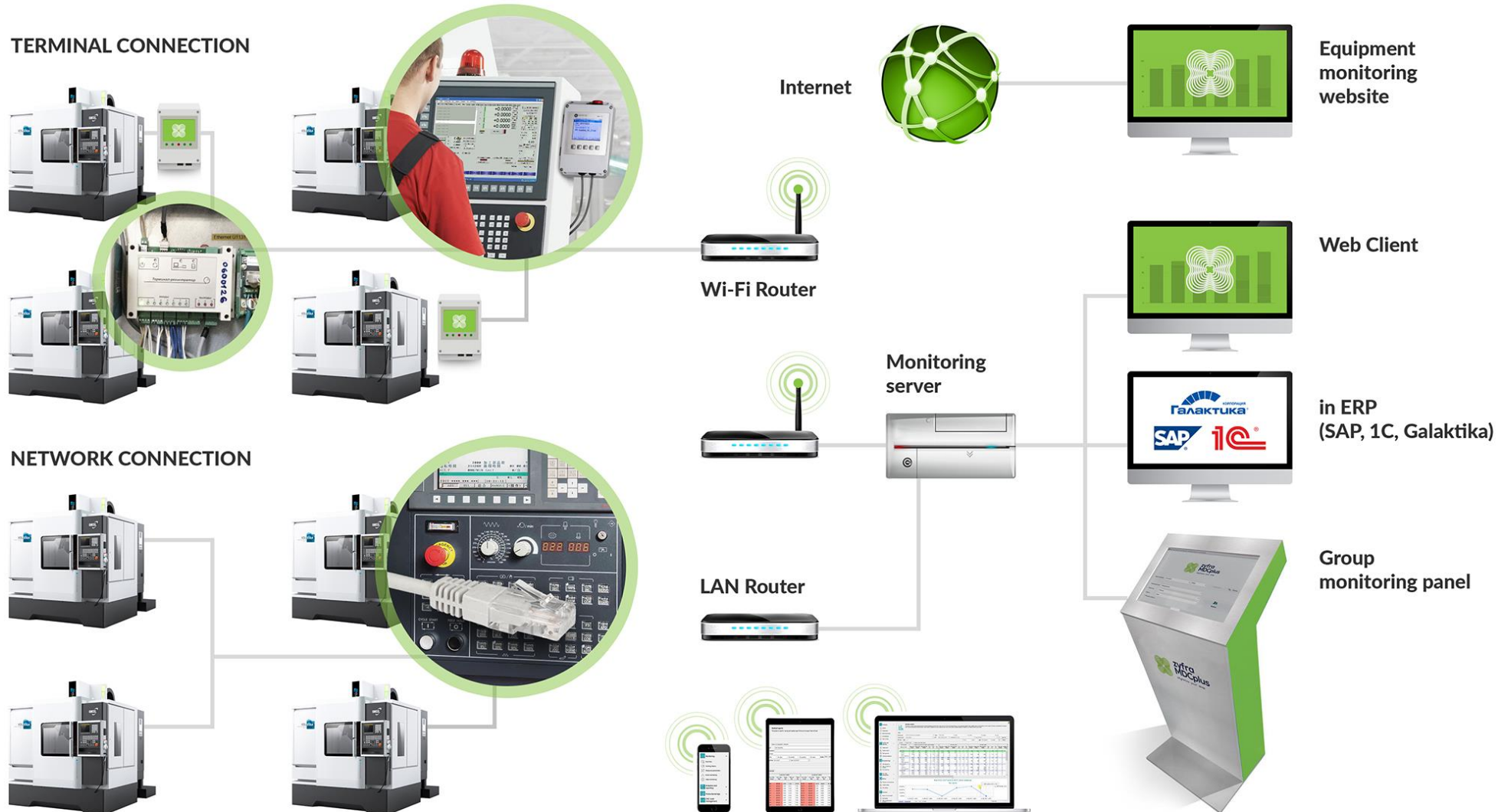
Include all machine tools and employees in the same network

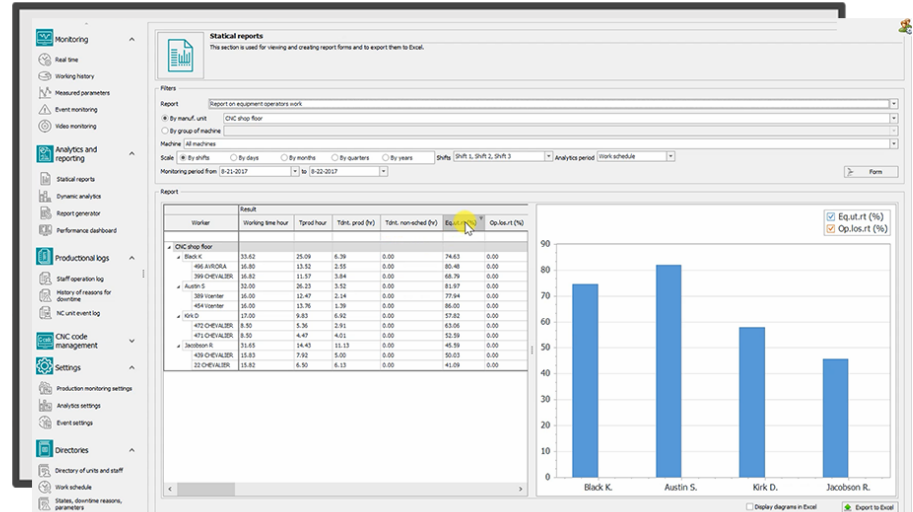
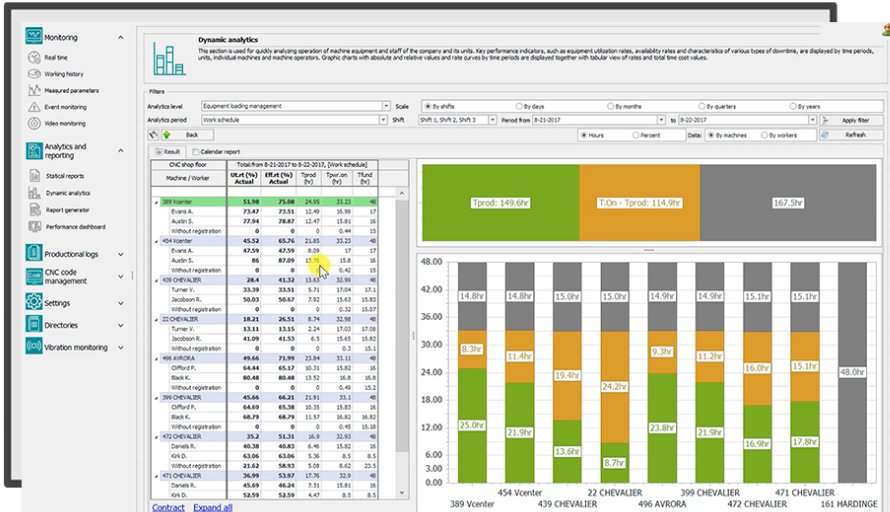
Assign and transfer jobs and NC programs to the machine

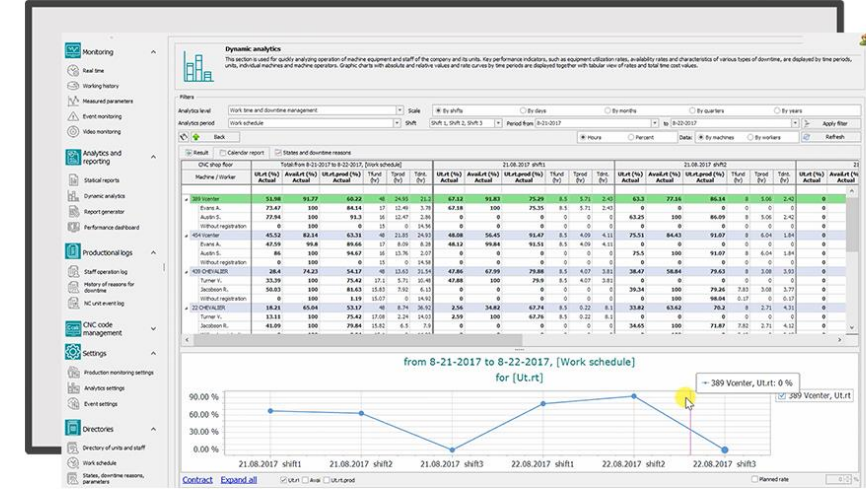
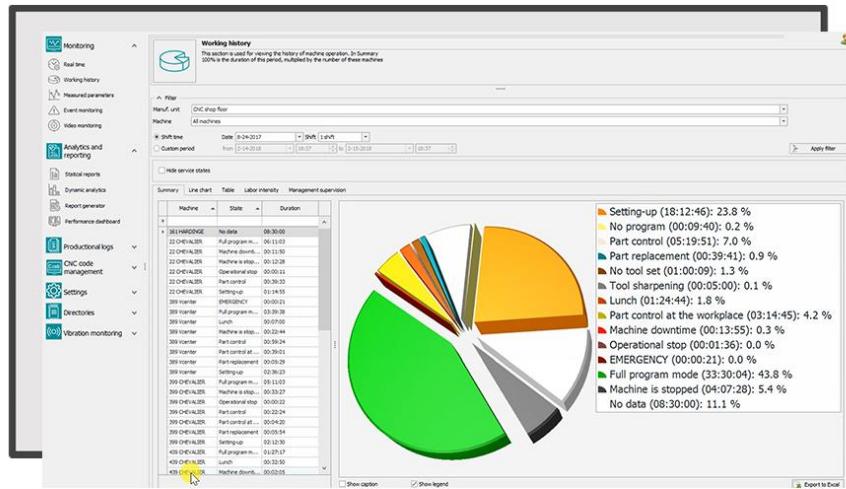
ERP and MES integrations

Predictive Maintenance

How MDCplus works







- 100+ Report and Graph templates
- Report generator
- Overall Equipment Effectiveness (OEE)
- Cycle Time per Part
- Number of parts per shift / operator

- ☐ Number of scrapped parts
- ☐ Scheduled Maintenance
- ☐ Unscheduled maintenance
- ☐ Setup Time per part
- ☐ Operator effectiveness

MDCplus hardware



- ❑ HMI Operator touch monitor
- ❑ Monitoring terminal
- ❑ MDC Adapters
- ❑ Barcode scanner
- ❑ RFID reader

- ❑ Interactive kiosk
- ❑ Serial Wi-Fi Adapter - RS232
- ❑ Xbee module
- ❑ Current sensor
- ❑ Vibration sensor

Manufacturing Control



Features

- 1 Machine-based job scheduling
- 2 Overall Equipment Effectiveness (OEE) calculation
- 3 100+ KPIs and Metrics: Good part quantities, Scrapped parts, Cycle time, etc.
- 4 Production plan control
- 5 Flexible setting of control parameters



Computerized Maintenance



Features

- 1 Work orders for planned and unplanned activities
- 2 Maintenance and repair history
- 3 Comprehensive inventory management
- 4 Reports and analytics
- 5 Recurring services and alerts



CNC Program Management



Features

- 1 Transfer NC programs to CNC machines
- 2 Wide range of communication methods: parallel, RS-232, RS-422 and wireless Ethernet
- 3 NC program lifecycle management
- 4 Full traceability of program-related information: version, status, changes, etc.
- 5 Advanced remote control
- 6 PDM integration



Discover the unrealized production potential

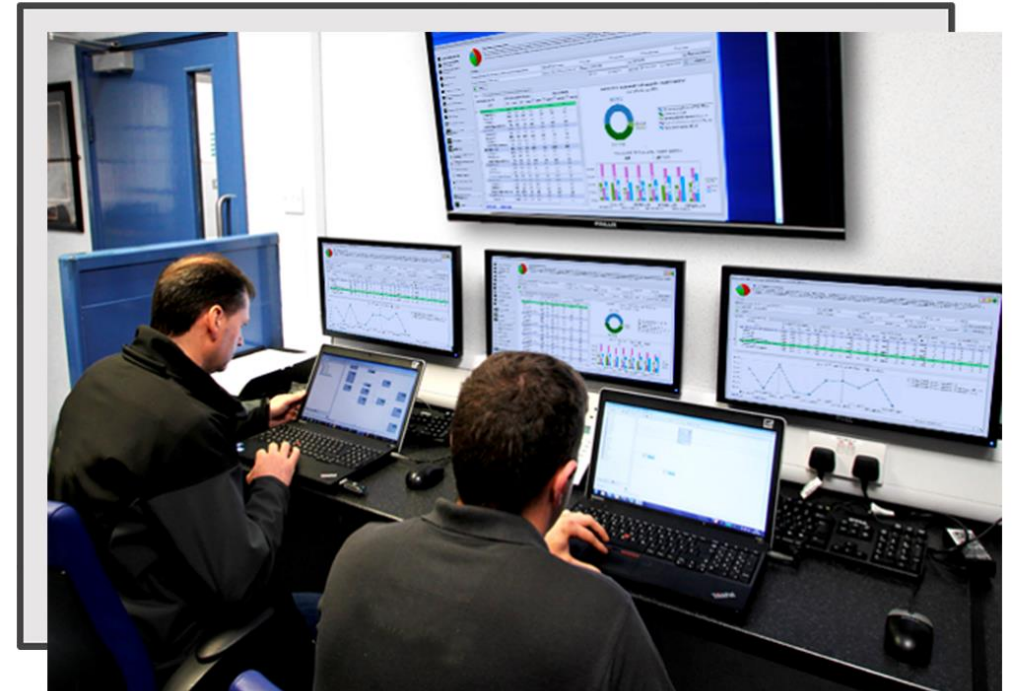
MDCplus can benefit both the one man operation with a few machines and the corporate enterprise with multiple factories

Reduce or Eliminate:

- ❑ Setup time
- ❑ Downtime
- ❑ Scrap
- ❑ Energy costs

Improve:

- ❑ Job planning and quoting accuracy
- ❑ Personnel productivity
- ❑ Machine and resource usage
- ❑ Reaction times for failures



Why invest



CASE 1

Without proper control some workers could have their machine tools turned on while they were out smoking.

Dispatcher monitoring diagrams revealed such unjustifiable breaks – machines could be switched on but no-load idle running and no finished goods were produced. Initially they had equipment utilization 34%, then raised to 51% in just one year. Such an improvement made it possible to eliminate Saturday work shifts.



CASE 2

One of the customers has a group of production and engineering people that meet weekly to go over the "Top Ten" downtime list and identify recurring problems.

"Waiting QC" was a big source of downtime, so they modified their procedures and built more gages to allow the operators to do more QC at the machine.



CASE 3

Using the downtime reports shop floor managers were able to identify the operators that required additional trainings.

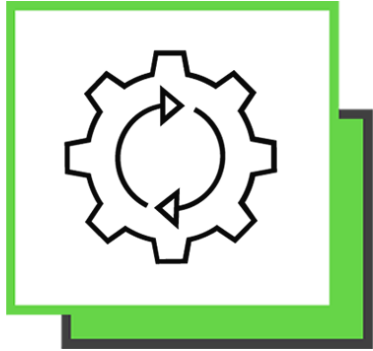
They asked the operators with lowest downtime number to do the actual training.

Analytics



- ❑ Connection to any machine
- ❑ Wide support for CNC controls
- ❑ Automatic / manual data collection
- ❑ Report generator
- ❑ EMAIL & SMS messaging
- ❑ CNC program management
- ❑ Job scheduling
- ❑ Computerized maintenance management system
- ❑ App for tablets and smartphones
- ❑ Energy and video monitoring
- ❑ Vibration Analysis
- ❑ Open API and database architecture
- ❑ Secure data transfer
- ❑ ERP and MES integrations

Support Center



Software Updates

Version update

At least 4 new releases
per year



24/7 Support

Round-the-clock online support

In person training hosted
by resellers

Downloadable product
documentation and tutorials



System Customization

Customizable Reports and Charts

Development of specific functions to
fulfill customer requirements



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