



Intelligent enterprise solution for
machine-building industry

Clobbi Vision

- Digital transformation
- Improved effectiveness
- Business processes optimization instead of just automation
- Measurable economic benefits

Clobbi solutions

We help large and medium-sized machine-building enterprises to adjust processes and improve their management system based on Industry 4.0 ideology:

- **Research and Development (Engineering)**
- **People and equipment integration (Industrial IoT)**
- **Optimal production planning (AI, APS/MES)**
- **Equipment predictive maintenance systems (RCM)**

Solutions for machine-building:



Clobbi.Engineering
(R&D, CAD/CAM integration)



Clobbi. SmartFactory
(MRP, APS/MES, AI)



Clobbi.DigitalTwins
(IIoT, VR/AR)



Clobbi.SmartEAM
(RCM, Predictive maintenance)

Clobbi.Engineering

20 - 30%

Shorter Time-2-Market

CAD system integration

- SolidWorks
- PTC Creo
- Siemens NX
- Autodesk Inventor

Process Engineering

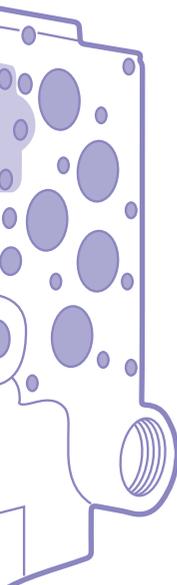
- Complete hierarchy of the product based on 3D model
- Manufacturing parameters
- Setup & adjustment time
- Equipment usage norms

CAM system integration

- Tools for production technology creation
- CNC machining programs archive
- Preparing tools set-up card
- Measuring tools card

Use case

Modern enterprise manufacturer of cold-pressed steel wheels for buses, cars and trucks, and agricultural machinery. The production capacity of the plant exceeds 8 million wheels per year.



4 → 2 days

Reduced production design lead time

by 10%

Reduced readjustments time

by 12%

Reduced manufacturing equipment downtimes due to optimal process design

by 15%

Reduced cost of tools reorder

Clobbi.Engineering – reduce time-2-market by 20-30% due to CAD/CAM integration and Advanced Manufacturing Process Engineering

Clobbi.SmartFactory

10 - 25%

Increase in output volume

1

Optimal production planning (APS, AI)

- Tailor-made optimization methods
- Leadtime for each batch

2

Simulation

- Multiple objectives and constraints
- Production Plan alternatives

3

Execution (MES, IIoT, Mobility)

- Workorders for equipment&personnel
- On-line production accounting
- Labeling with QR codes
- Actual production status

4

Event response (II.0, APS-online)

- Events monitoring and control
- Automatic plan rescheduling
- New workorders for execution

5

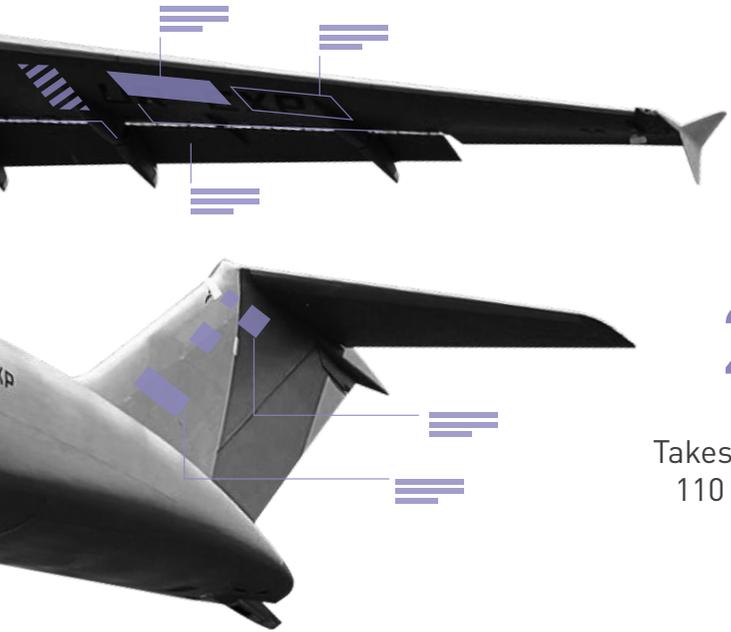
Business discovery (BI, KPI)

- Planned vs actual KPIs
- Intelligent decision-making
- Data driven management



Use case

Modern machine-building company producing aircraft parts. Machining department has 50 workcenters. Average staff is 520+ people. Over 40% of total production output is a mastering of new products.



by **23%**

Increased total production throughput

20 min

Takes optimization for 110 000 operations

by **15%**

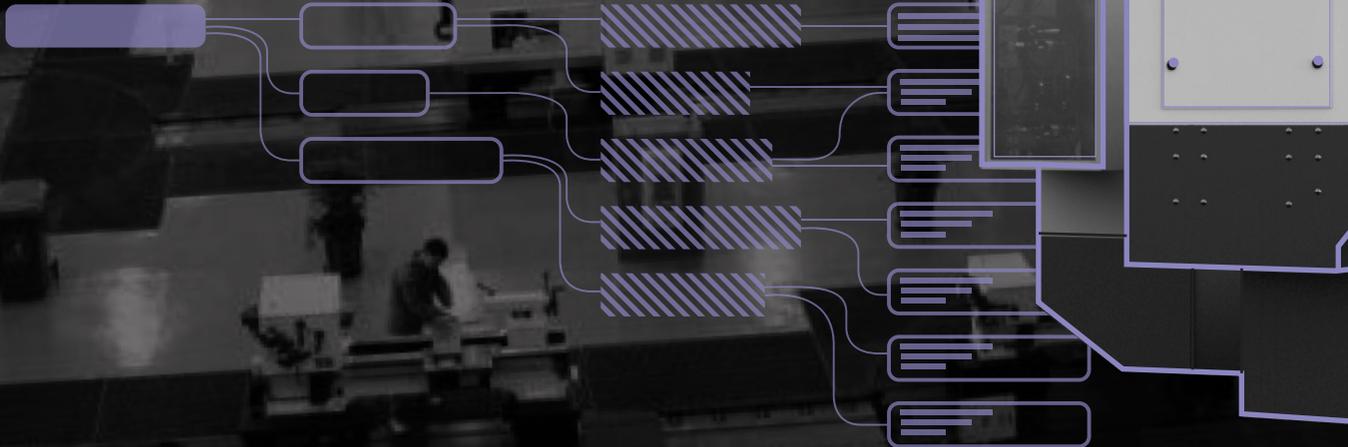
Decreased costs for tool replenishment

Due to production planning optimization, Clobbi.SmartFactory allows to find and eliminate manufacturing bottlenecks and avoid schedule overruns.

Clobbi.DigitalTwins

20 - 30%

Higher OEE





Digital ecosystem (I4.0, IIOT)

- Clobbi, equipment and people integration



Virtualization (AR\VR)

- 3D shop-floor models
- Simulation and modelling



Intelligent production

- Live production process
- Combine real-time actual and planned data



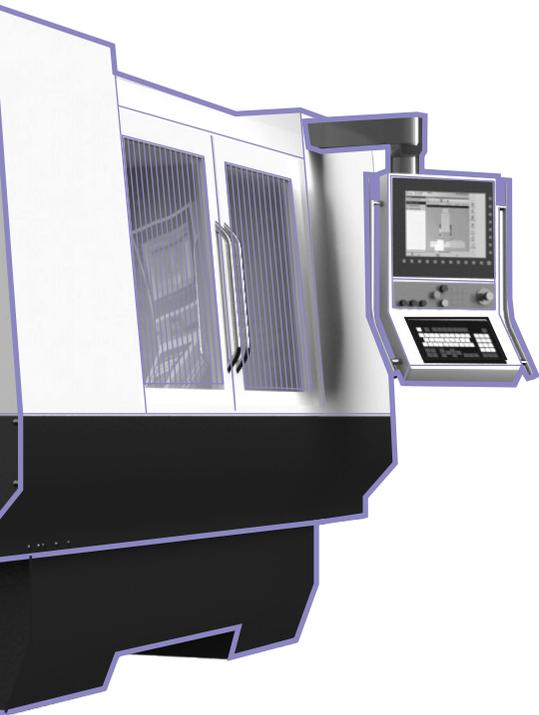
Monitor, alert and report

- Equipment operation
- Manufacturing parameters
- Technological process quality
- Real-time performance rate
- Customer order execution



BigData processing and analysis (AI,BI)

- Ways to improve production process and technology
- Actual vs planned KPIs
- Intelligent decision-making



Clobbi.SmartEAM

30 - 50%

Less machine downtime

10 - 40%

Maintenance cost reduction

1

Industrial Internet of Things (IIoT)

- Equipment Connection
- Visualization
- Virtualization
- Predictive Maintenance (PdM)

2

Field Service Management (FSM)

- Self-Service Management
- Warranty & Claims Management
- Supply Management
- Service Engineers Management
- Request Management Center

3

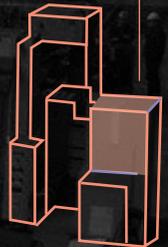
Key add-ons

- Real-time equipment monitoring
- DWH and BI
- BigData processing and analysis
- Multifunctional dashboard

4

RCM Enterprise Asset Management

- Reliability Centered Maintenance standard
- Equipment Data Management
- Inspection Scheduling
- Maintenance Scheduling
- Predictive maintenance



Use case

Large locomotive repair plant with 1600 employees. Plant provides over 1000 wheel pairs repairs and over 200 engines repairs per year

by **12%**

Increased equipment
availability ratio

by **80%**

Increased plant
throughput

by **15-20%**

Reduced critical
repair cycles

by **8%**

Reduced maintenance and
repairs cost

Clobbi.SmartEAM decrease stocks of spare parts, increase transparency and manageability of all departments

5 to 20%



Output Volume Increase

30 to 50%



Less Total Machine DownTime

20 to 30%



Higher overall equipment efficiency (OEE)

10 to 40%



Reduction of maintenance costs

20 to 50%



Shorter time-to-market

95%



Customer Service Level Increase

ISO 9001:2015
BUREAU VERITAS
Certification



mach@clobbi.com
www.clobbi.com/mach/
/company/clobbi/
+ 44 203 807 06 40