Clobbi

Industry 4.0 – the future is now. Solutions for your success

Customer Service Level Increase
-More orders that meet target date
-More Customer requirements met
-Less time for packaging & shipment

Output Volume Increase
Realistic production plan
Increased bottlenecks' throughput
Increased Customer service level
Better supplies of materials
Improved packaging provision

Intelligent enterprise solution for cable&wire

CLOBBI SOLUTIONS

Clobbi Vision

Digital transformation

Improved effectiveness

Business processes' optimization instead of just automation

Measurable economic benefits

Clobbi is a business solutions provider for Cable&Wire Industry since 1993.

Clobbi specializes in digital transformation, business processes' optimization and automation for Cable&Wire based on Industry 4.0 SmartFactory ideology:

- R&D (CableDesigner)
- Optimal production planning (AI, APS/MES)
- Production processes' virtualization & modelling (DigitalTwins)
- People and equipment integration (Industrial IoT)
- Equipment predictive maintenance systems (RCM)

Clobbi solutions are available as

- Cloud service (subscription)
- Server software installed at Customer's infrastructure

Solutions for cable&wire

SmartFactory

CableDesigner

CableEAM

DigitalTwins

CRM&Sales

Logistics&Inventories

Finance&Economy

CableERP

OPERATING RESULTS

| Output Volume Increase

- Realistic production plan
- Increased bottlenecks' throughput
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| Customer Service Level Increase

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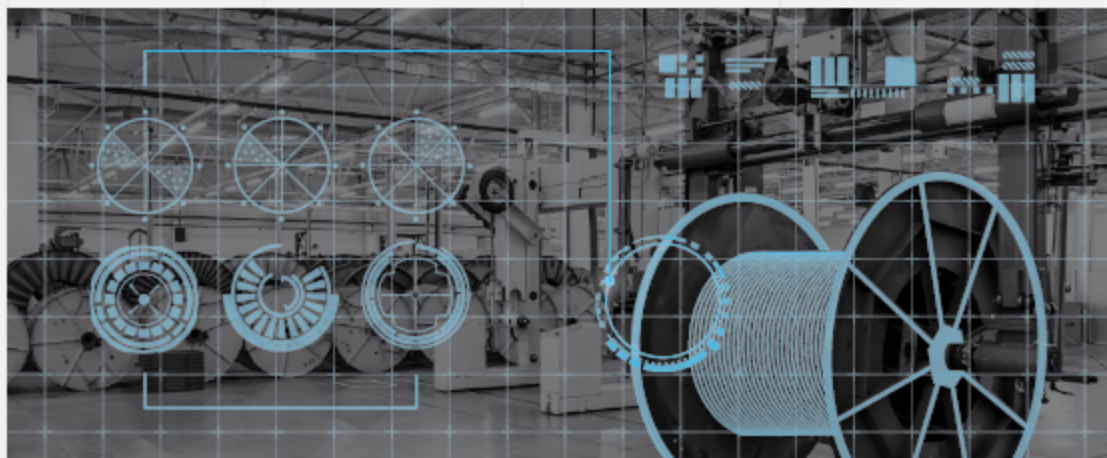## | Inefficient Inventories & Losses Decrease

- Work-in-progress ineffective inventories' reduction
- Reduced materials' inefficient inventories
- Packaging & shipment time reduction
- Reduced materials' overrun

| Increased Enterprise Manageability

- Manufacturing process transparency
- Online production control
- Improved alignment of sales, planning, purchasing, finance, production, maintenance, and human resources

CLOBBI ADVANTAGES

Proven practices

Tough team of experts

Unique digitalization experience

All production resources classified

Over 170,000 of preconfigured types
System can be used immediately after installation

Specialized cable design CAD system

Exclusive tailor-made CAD system - CableDesigner.
Unique solution for technology and engineering production process preparation

- Cable design calculations
- Standards of work settings
- Technological parameters compilations
- Production costs calculations and control

Extended CRM&Sales

Sophisticated tools for CRM&Sales and WMS

- Full cycle of sales process management
- Monitoring and control of Customer specifications
- Detailed WMS
- Sales management business process optimization
- Increased sales volumes

Clobbi.SmartFactory concept

- Optimized multi-criteria production management
- Online KPIs' monitoring & control
- Bar / QR coding
- Digital production event management system

- Industrial IoT & DigitalTwins
- Personnel & equipment integration
- Maximum production assets' effectiveness

Clobbi.CableEAM

Enterprise Asset Management based on RCM standard

- Reduced equipment maintenance costs
- Increased Overall Equipment Efficiency

CLOBBI - DIGITAL TRANSFORMATION PLATFORM

Fast deployment
You can start using all services immediately

Economically soft start
Initial investments are minimized, no need to buy expensive high-end equipment

Guaranteed Functionability
Clobbi development team is responsible for scheduled maintenance and technical support for all solutions. Clobbi users can fully concentrate on daily usage of our services and development of their business processes

Own rules of the game
It is possible to configure all Clobbi services considering proprietary enterprise business processes

Scalability of services
Clobbi Customers can easily extend functionality of Clobbi services and purchase additional user licenses if necessary

Availability of services
Clobbi provides 24x7 access to all services with all functionalities. Likewise, Clobbi Customers use their services from any computer or user device via the Internet

Integrated enterprise IS
All Clobbi solutions could be integrated in unified ERP system all the functionalities for effective enterprise management

Easy to use

Fast start

Security

Mobility

Cost effectiveness

High performance

Own rules of the game

INDUSTRY 4.0 SMARTFACTORY

MRP

APS/MES

Tailor-made
optimization
methods

Industrial IoT

Simulation

AI

Digital Twins
(AR, VR)

MRPII Production and Capacity Planning

S&OP planning
Sales and operation advanced planning – forecast of sales
targets, production plan, resource requirements

MPS planning
Main production plan - custom manufacturing,
production-to-order, production-to-stock, Rough Cut Capacity
Planning (RCCP)

MRP planning
Work-in-progress scheduling and required materials' detailed
volumetric production planning

CRP planning
Work centers' output capacity planning

APS\MES Planning
Optimal production plan is generated automatically
according to business objectives

- Execution schedule for each manufacturing operation with
  account of works-in-progress and production durations
- Detailed planned lead times' calculations for each production
  order
- Optimal planning based on multiple objectives and
  time & cost constraints
- Production plan alternatives with efficiency and productivity
  outputs

Clobbi.SmartFactory automatically executes orders according to Optimal Plan

- Works-in-progress manufacturing and handover to next operations
- Product testing and quality control
- Packing and stocking

Automatic event management model

- Manufacturing events' monitoring
- Automatic production plan rescheduling
- Dispatching new work orders
- Monitoring specifications' deviations
- Reaction to breakdowns and downtimes

Online production records

Manufacturing operations' execution actual status

- Output of each workcenter
- Allocation of materials and works-in-progress
- Order execution start & finish
- Spoilage & wastes
- Equipment downtime information

Digital Twins (Industrial IoT, AR/VR)

- Production process virtualization and modelling
- Industry 4.0 equipment integration to management system
- Technological process, quality, equipment, and production orders' online monitoring

People and equipment integration (Industrial IoT)

- Information is read from equipment units via IoT
- Personnel input information online via their pads/smartphones

Your intelligent virtual production assistant

LOADING...

5 to 20%
Increase
in output volume

20 to 50%
Shorter
time-to-market

SMARTFACTORY.ADVANTAGES

Output increase
- Optimal APS/MES production plan generation
- Capacity utilization volumetric scheduling
- Need for materials and drums daily planning
- Operational production rescheduling
- Output manufacturing parameters' control
- Approved outturn execution
- Optimized maintenance and repair

Customer service level increase
- Forecasting commitment periods for Customer orders' production and shipment
- Incremental APS/MES planning and forecasting orders' dispatching dates
- Orders' dispatching committed and actual dates' monitoring
- Operation-wise planning, monitoring, and analysis whether Customer requirements are met
- Operational production rescheduling
- Approved plan execution

Enterprise manageability increase
- Volumetric output KPIs and committed deadlines' online control
- Better subdivisions' operating consistency
- Production process' transparency

Ineffective production inventories and losses control
- Need for work-in-progress operation-wise planning
- Work-in-progress ineffective inventories' monitoring
- Need for materials' planning based on materials' availability at the workshop
- Need for semi-finished products' planning considering work-in-progress
- Workshops' / production floors' / workcenters' work-in-process tracking
- Operation-wise planning, monitoring, and analysis whether Customer requirements are met
- Operation-wise need for materials' planning
- Workshop materials' dispatching control
- Materials' excessive usage control

CABLE DESIGNER

MDM – Production resources classification and unification

- All production resources classified – over 170,000 of preconfigured types; system can be used immediately after installation
- Products' and work-in-progress' specifications formalized
- Corporate adaptivity
- Multilanguage classification system
- Staged business processes

Pre-production design

- Product design engineering and modelling
- Over 1000 preconfigured product designs
- Alternative product designs and their comparison
- Product sketches and design documentation

Production engineering

- Preconfigured production process calculation methods
- Work-in-progress production process development
- Production cycles and processes design and modeling
- Equipment & in-plant container utilization rates
- Wastes' normalization
- Manufacturing BOM and technological documentation

Production resources' normalization

- Open model normalization – basic and auxiliary materials, labor, equipment, commercial and process drums, waste, recyclable waste, energy
- Normalization alternatives

RESULTS

Productivity improvement

- R&D process optimization
- Basic materials' consumption reduction
- Lower production costs
- Mass calculations for product ranges

Shorter Time-to-Market

- Less time for product design and process development
- Fast answers to Customer enquiries
- Swift custom designs

Product design

Production engineering

Production resources' normalization

Cost & price

Quotation

CABLE EAM

RCM Enterprise Asset Management

- Reliability Centered Maintenance standard
- Equipment Data Management: preconfigured catalogue and methodologies for predictive maintenance
- Inspection Scheduling: reactive maintenance after equipment shutdown or based on feedback from operative personnel
- Maintenance Scheduling: planned equipment maintenance, service charts, diagnostics and monitoring
- Predictive maintenance: equipment shutdown time is predicted based on actual operational parameters
- Industrial IoT: integration of personnel and equipment

Clobbi.CableEAM contains out-of-the-box predictive maintenance methodologies for the most popular Cable&Wire equipment Vendors

Field Service Management (FSM)

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

Industrial Internet of Things (IIoT)

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

10 to 40% reduction of maintenance costs

Sustainable production volumes

Guaranteed quality

Preinstalled predictive maintenance methodologies

ADVANTAGES

Improve OEE

- Predict and prevent unplanned downtime
- Optimize equipment effectiveness and maintenance
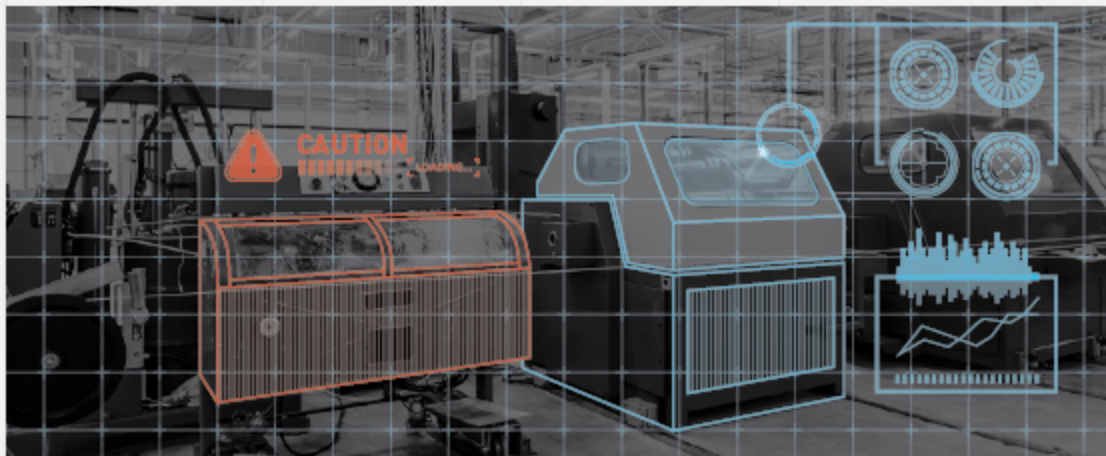
Increase Productivity

- Higher level of automation
- Production time reduction
- Better asset utilization
- Better inventory management

Increase Quality

- Real-time quality control at each stage of production
- Sensors & actuators
- Production losses' and rejects' reduction

Reduce Costs

- Real-time production monitoring and control
- Predictive maintenance
- Automation and digitalization

CRM&SALES

Customer relationship management (CRM)

- Managing leads, tenders, projects, possible transactions
- Marketing activities' planning and tracking (emails, calls, meetings, events)
- Tasks and assignments' control and tracking
- Managing Customer communications: integrating IP-telephony, SmartConnector, email, Hubber, chat-bots
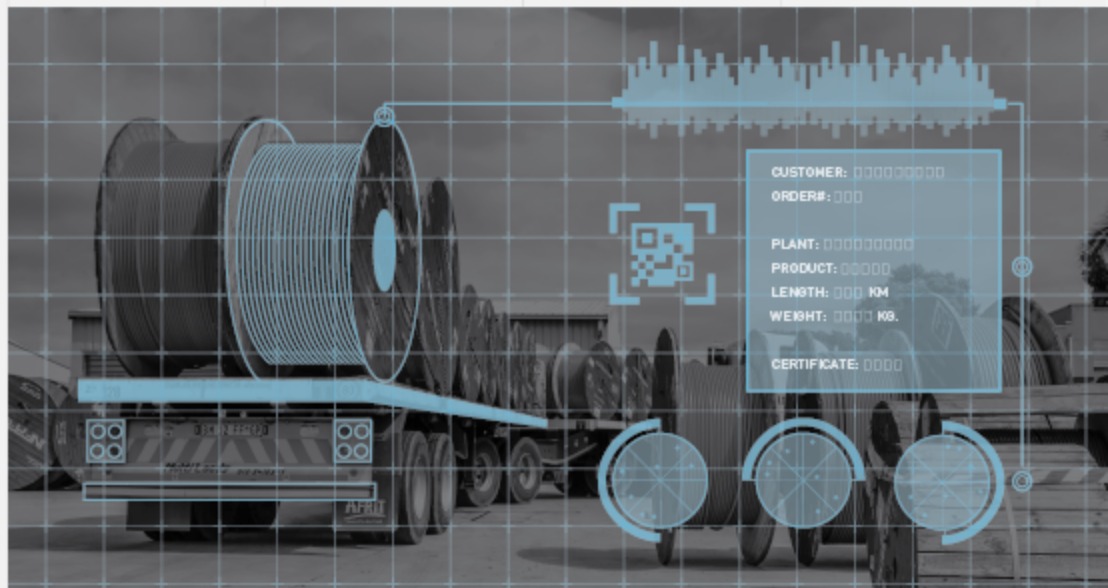- Handling sales funnel

Sales management

- Sales and operations advanced planning
- Customer orders' end-to-end handling and progress monitoring
- Customer requirements' processing at all stages of order lifecycle
- Warehouse products' reservation according to Customer requirements
- Concurrent pricing and discount system
- Sales transaction profitability and economy calculation
- Customer pricing and quoting, hierarchy discounting system
- Manufacturing orders' management
- Shipments' and deliveries' management, financial control, and analysis

Contract management

- Contractual relations' classification and formalization
- Tracking supply and payment terms, contractual process' events
- Building events-actions diagrams
- Contractual documents' electronic filing
- Contractual documents' reviewal, approval, and e-signing
- Contractual obligations' execution control
- Contractual payments planning and tracking

There is no need to invent anything

Inventory management of finished products

- Inventory order accounting, products' length-wise accounting for each production order and drum
- Reservation of various lengths on one drum; tracking reserved and available lengths; drum-to-drum rewinding, unwinding, and cutting optimization
- Customer requirements' monitoring during finished products' offtake and stocking
- Complete real-time warehouse cycle management
- Warehouse handling time reduction and space optimization, inventory turnover acceleration
- Products' rewinding, repetitive testing and labeling
- ABC and XYZ analysis, turnover, stock normalization

CUSTOMER: □□□□□□□□□
ORDER#: □□□

PLANT: □□□□□□□□□□
PRODUCT: □□□□□□
LENGTH: □□□ KM
WEIGHT: □□□□ KG.

CERTIFICATE: □□□□□

COST&ECONOMY

| Planned cost calculation

- Product and semi-finished product cost and price alternatives
- Production cost forecasting and break-even point
- Product price calculation based on LME price
- BOM-based multilevel product cost calculation and work-in-process semi-finished product cost calculation
- Cost sharing methodologies with respect to product output, direct costs, wages, and manufacturing capacities
- Preconfigured cost calculation techniques

| Actual cost calculation and control

- Real-time direct and indirect costs tracking at each cost center
- Technological process' expenditures' accumulation from rolled wire drawing to finished product packaging
- Unified assortment, quantitative and cost accounting for work-in-progress and finished products at their stocks and costing for each workshop and production floor
- Normative cost accounting method and normative deviations' online control at the cost centers
- Real-time planned and actual cost factor analysis

Manage the basis of the future production costs

LOGISTICS&INVENTORIES

Procurement, supply and material planning management

- Long-term and short-term procurement planning
- MRP-based order and purchasing management and repetitive ordering point
- ABC and XYZ analysis, turnover, stock normalization
- Needs for resources' planning by periods, resources' availability and shortage alternative calculations
- Resources' shortage consolidated calculation for all all levels of all plans – strategic SOP, production plan and MRP
- BOM orders planning and control

Warehouse and inventory management

- Stock accounting files, stock availability and turnover for any date
- Stock accounting at storing places or stock types or any arbitrary
- parameters
- Parallel stock accounting in record in several measurement units
- Batch-wise and order-wise stock accounting in warehouses and production
- Complete warehouse cycle real-time management, incoming stock labeling, terminal and weighing equipment handling, available storage allocation, order acceptance and batching
  Time reduction for warehouse operations, storage space usage

10-40% inefficient inventory level reduction

Digital transformation

Improved effectiveness

Business processes' optimization

Measurable economic benefits

Clobbi is a business solutions' provider for Cable&Wire Industry since 1993

5 to 20%
Increase in output volume

30 to 50%
Less total machine downtime

20 to 50%
Shorter time-to-market

10 to 40%
Reduction of maintenance costs

20 to 30 %
Higher overall equipment efficiency (OEE)

>95%
Customer satisfaction level

ISO 9001:2015

BUREAU VERITAS
Certification

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OPERATING RESULTS

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