# AUTARK

Industry 4.0

www.autark.com

**Computer controlled automation**

## Software development

Your application for transparency throughout the entire production process

**AutaLIS**
- Head station
- Line control
- Recipe administration
- Electronic-Key-System (EKS)
- Logistics management
- ERP Connection

**AutaDES Connect**
- Connection to quality and operational data collection, sensors, PLC, HMI, measuring systems, etc

**AutaDES Server**
- Management of data
- Validation of data
- Standardization of data
- Input of structured data into the AutaDES database

**AutaDES Webservice**
- REST API web interface for third-party solutions

**AutaDES Client**
**AutaDES Web-Client**
- Intelligent data processing
- Process optimization
- Statistics, analyzes
- Visualization of knowledge

## Components

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **Data connectivity** | **Data management** | **Intelligent data processing** | **Process optimization** | **Intelligent manufacturing** |
| Collection of relevant data by sensors, machines and systems | Provision of information and transpa-rency due to collected data | Analyzed, contextua-lized, joint knowledge to support digital operators | Forecasting / profiling based on predictive pattern re-cognition as with predictive maintenance | Independent system coordination / autonomous system decisions |

## 1: Data connectivity

- Establishment of communication links
- Collection and transmission of data by PLC, HMI, screwing systems, joining systems, camera systems and sensors
  (can be supplemented as required)
- High-frequency data collection for database
  - » Data synchronization of customer data with AUTARK data
  - » Precise specification of the required data and network requirements, adapted to the customer processes
- Use of secure protocols, technologies and encryption

### CHALLENGE

- Collection of third-party data
- Different interfaces
- Synchronization of data
- Interfaces to SAP or ERP systems

### RESULT

- Collection of huge amounts of data
- Permanent safe storage
- Authenticity of information
- Use of standard interfaces

## Required technology

- AutaLIS
- AutaDES Connect

## 2: Data management

- Check data and structure it uniformly
- Lifetime high-availability storage
- Provision of data on different platforms
- Secure access

### CHALLENGE

- Data evaluation
- Data consistency
- Data standardization
- Provision of data using modern interfaces
- Access and deliver the data to various external clients

### RESULT

- Standardized data formats
- Basis for a knowledge-database
- Platform-independent devices

## Required technology

- AutaDES Server
- AutaDES Webservice

## 3: Intelligent data processing

- Analyzing of data
- Application of statistical functions
- Reporting
- Cost analysis
- Traceability

### CHALLENGE

- Classification of data by recipient
- Generation of management key figures
- Process quality assessment
- Product quality assessment
- Statement on the availability of production

### RESULT

- Basics of machine learning and algorithms
- Indicators for decision-making in technological and economic processes
- Automatic warning functions, alarm generation
- Report generation
- Inventory and accounting

## Required technology

- AutaDES Server
- AutaDES Client

## 4: Process optimization

- Resource planning
- ERP and control system
- Optimization of production in terms of quality, quantity and availability

### CHALLENGE

- Proactive maintenance
- Proactive staffing needs
- Proactive ERP
- Optimization of work processes

### RESULT

- Bottleneck analysis
- Trendlines
- Predictive needs assessment

## Required technology

- AutaDES Client

## 5: Intelligent manufacturing

- Control of logistics systems
- Connection to Enterprise Resource Planning (ERP) such as SAP

### CHALLENGE

Automatic orders for material

Automatic check of material availability

Automated acceptance of finished goods

Production-related triggering of the automated processes

### RESULT

Connection and control of logistics systems

Connection and control of third-party systems

## Required technology

- AutaLIS

# AUTARK

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