

Product data sheet for WIAM software products

Product: **WIAM® LabDataHub**



Scope of Application

The product is used in laboratories for **planning, organizing and managing data**. This product can be used for company laboratories as well as for contract laboratories with defined processes. The product supports the processes from order creation to the transfer of results between internal and / or external process partners.

Customer Benefit

The product supports customers in the digitization of their laboratory processes. Our advantages are the comprehensible and safe handling and the automatic evaluation of measurement and result data. It facilitates efficient laboratory planning through the overview and networking of all resources, devices and test equipment right through to certificates and qualifications.

Functionalities / Key Features

Order management for small and large laboratories:

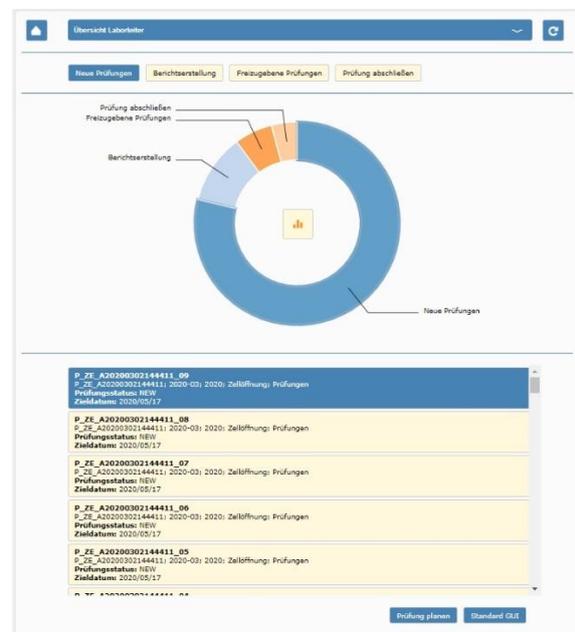
- ✓ Creation of any number of order masks for internal and external test orders
- ✓ Assignment of order categories to user groups
- ✓ Transfer / distribution of orders to internal and external laboratories
- ✓ Any number of test orders and categories for orders
- ✓ Planning of orders with clear processing via dashboard functionality
- ✓ User-defined creation of important parameters such as Status, target date, duration, costs, order number, and much more.
- ✓ Sample handling and scanning with QR codes
- ✓ Approvals based on the 4-eyes principle

Resource management

- ✓ Creation of testing machines, employees, measuring devices and another test equipment
- ✓ Assignment of machines, devices and employees to test orders
- ✓ Calendar function: overview of all machines, orders or employees when assigning data

Test equipment management

- ✓ Creation of any test standards and specifications (customers, suppliers, laboratories)



WIAM® LabDataHub: Dashboard example

- ✓ Creation of information on machines and devices (certificates, calibration information, expiry date)
- ✓ Employee pool with qualifications and / or assignment to specific machines

Reporting / dashboard

- ✓ Dashboard for an overview of orders, tests, resources, status, etc. with any installation of further steps
- ✓ Export of information for reporting e.g. in Jupyter Notebook with individual report design (visual and content)

Kontakt

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- ✓ Create management reports (utilization, KPIs, ...)

Digital laboratory information process - expansion and evaluation

- ✓ Transfer of a cross-material data model for laboratories, e.g. Measurement & test data, test standards, resources, orders, device management
- ✓ Extensibility of the data model, e.g. new test methods, new devices
- ✓ Validation and evaluation of measurement results through to statistics using formulas (mean, standard deviation, coefficient of variation)
- ✓ Creation of any formulas for evaluation, validation and further processing through scripts in the interface that can be adapted by key users (WIAM® Formula Service in JavaScript and Python)

Automation

- ✓ Provision of tools for automated testing machine connection, for conversion into machine-independent data exchange formats and for automated upload into the application
- ✓ Machine-independent and expandable data exchange format for consistent further processing of raw and result data
- ✓ Provision of a CRON job editor for the automatic execution of formulas (time-controlled, action-controlled) with examples

Digitization and Automation

WIAM® LabDataHub is based on the server on the **JavaEE stack** and can therefore be used across platforms on **Windows and Linux**. It can be operated as a stand-alone solution, but also in a distributed environment with several parallel instances (on the AppServer or with Docker).

The software is **cloud-compatible** and is used productively in company-specific cloud environments as well as with public cloud providers (e.g. AWS).

For the integration in digitization and automation processes, WIAM® LabDataHub has a **generally valid data format** (Excel, XML or JSON) with which the entire database or any sub-aspects (structure, transaction data, objects) can be mapped for data exchange (import / export) port). An associated mass data interface enables data transfer via a REST-API, considering the integrated rights management.

The product supports various **single-sign-on** concepts for integration into the corporate environment but can also be adapted to company-specific solutions. The connection to an Active Directory is configurable.

The frontend based on **HTML5 / Javascript** can thus be called up in modern browsers. No additional software is required on the clients.

WIAM® LabDataHub has a scripting engine called WIAM® Formula Service, which, depending on the rights management, can be used to store and execute **algorithms** in Python and Javascript **for data processing** at runtime. Consequently, WIAM® LabDataHub can be expanded by administrators or key users **at runtime** without having to update the application in the backend. In conjunction with the WIAM® **CRON** service, these algorithms can be **executed automatically in a time- or action-controlled manner**, which means that automated workflows can be designed.

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Technical Requirements

Operating System: Windows 10+, Windows Server 2012+ Linux

Application Server: GlassFish 4, Apache Tomcat 8+, further on request

Database Server: MSSQL 2005+, MySQL 5+, Oracle 9+, PostgreSQL 9.3+

Hardware Requirements: Intel Core i5+ or Xeon E3+, 8GB+ Free Main Memory (RAM), 200GB+ Free Disk Space (HDD, SSD)

Operation, Maintenance & Support of application as **SaaS**

Secure Access by VPN, https, user rights

Weitere Informationen

ZwickRoell TextXpert integration

Integration with test and measuring equipment manufacturers, e.g. ZwickRoell, Hegewald & Peschke, Sartorius, MTS, Instron, Mettler Toledo, Shimadzu

Interfaces to individual testing machines and test rigs can be requested

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