DIGITAL SERVICES with eCATALOGsolutions - THE VISION OF DIGITALIZATION BECOMES REALITY
ZIMMER GROUP - THE COMPANY

- founded: 1980
- founders: Günther Zimmer, Martin Zimmer
- managing directors: Günther Zimmer, Martin Zimmer, Achim Gauß, Christoph Boog
- Turnover Zimmer Group worldwide: ca. 165 M. €
- Employees worldwide: 1200
digitalZ

The Digital Services of the Zimmer Group
virtualz
the digital twin
WHAT IS A DIGITAL TWIN?

„A Digital Twin is a digital representation of a material or digital representation immaterial object from the real world. It does not matter if its counterpart already exists in the real world or will exist in the future. Digital Twins enable a comprehensive data exchange. But they are more as pure data and can also contain models, simulations and algorithms, that describe their counterpart from the real world and its characteristics and behavior."

Gesellschaft für Informatik (GI): Digitaler Zwilling
THE WAY TO THE FUNCTIONAL MODEL

1. VIA CADENAS PARTcommunity

CADENAS Website

PARTcommunity

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THE WAY TO THE FUNCTIONAL MODEL

2. VIA ZIMMER GROUP WEBSITE/ SERVICE OVERVIEW

- Burstenvöser DC Motor – bis zu 30 Millionen Zyklen
  Wartungsfreiheit

ANGBOTSANFRAGE

DOWNLOADS / 3D-CAD DATEN

- Ersatzteillisten
- Montageanleitung
- Download CAD-Daten
- Download IODD
- PDF - Datenblatt
THE WAY TO THE FUNCTIONAL MODEL

2. VIA ZIMMER GROUP WEBSITE AS EMBEDDED SOLUTION
THE WAY TO THE FUNCTIONAL MODEL

3. VIA SIEMENS NX
SCHEMATIC CONSTRUCTION OF THE DIGITAL TWIN

physical Reality

virtual Reality

HMI

PLC/ Control Hardware (Hardware-in-the-loop System)

MES

Virtualization Software
Siemens MCD/ ISG Virtuos

Funktional Model

Virtual Plant/ Machining Cell

Virtual Workpiece

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SCHEMATIC CONSTRUCTION OF THE REAL SYSTEM

physical Reality
USE CASES - MACHINING CELL/ WOODWORKING INDUSTRY
USE CASES - MACHINING CELL/ WOODWORKING INDUSTRY
USE CASES - INTRALOGISTIC/ AUTOMOTIVE OEM
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USE CASES - INTRALOGISTIC/ AUTOMOTIVE OEM
virtualZ - ADVANTAGES AT A GLANCE

- **Digital twin of the product / Advantages for the system builder**
  - Simulation and validation of product properties
  - Test and optimization during the development phase / parallelization of processes
  - faster product innovation
  - higher product quality

- **Digital twin of the production/ Advantages for the plant manufacturer and operator**
  - PLC code generation
  - virtual Commissioning
  - error-free operation from the beginning
  - higher product availability
  - Material flow and runtime in real time simulation

- **Digitaler Zwilling of performance / Advantages for the operator**
  - predictive maintenance planning strategies
  - optimize energy consumption
  - verify statistical analyzes
  - improve production efficiency
cloudZ - ON DIFFERENT PLATFORMS
cloudZ - ON DIFFERENT TARGET SYSTEMS
cloudZ - ONLINE HELPDESK & DIAGNOSIS

Component information

Order number: GEH6140IL-03-B
Serial number: SWA0011_SWA002K_
Firmware version: 01-000136879
Number of gripping cycles: 2097127360
Max operating temperature: 50°C
Max consumption of current: 5A

Link to product line/ Zimmer Group
Link auf Montageanleitung
cloudZ - ONLINE HELPDESK & DIAGNOSIS
Cloud infrastructures are characterized by high computing power and storage capacity, predestined to generate **additional benefits from status and process data**.

Prerequisite are **communicative components** and a **data infrastructure**.

The added value of cloud services is based on the fact that components in machines/plants provide far more **additional data** than their dedicated application.

The linking and plausibility of this data generates the **added value**.

The launch is **condition monitoring / predictive maintenance** and **operational statistics** from components to entire production plants.
visualZ
HMI for components and systems
visualZ - HMI FOR COMPONENTS
visualZ - HMI FOR COMPONENTS

Product Parameter
Product Visualization
Process Parameters

IO-Link
IODDfinder

HTML-5 Web-App
visualZ - HMI FOR SYSTEMS
visualZ - HMI FOR SYSTEMS
visualZ - ADVANTAGES AT A GLANCE

- easy and uncomplicated access to components and systems
- ergonomic and clearly structured user interfaces
- low training requirements for the operating personnel
- minimization of operator errors due to optimal usability
- highest possible productivity and efficiency
- contribution to OEE maximization
controlZ功能性软件元素
controlIZ – FUNCTIONAL SOFTWARE ELEMENTS FOR PLC- AND ROBOTS
controlIZ – FUNCTIONAL SOFTWARE ELEMENTS FOR PLC- AND ROBOTS
controlIZ – FUNCTIONAL SOFTWARE ELEMENTS FOR PLC- AND ROBOTS
controlZ - ADVANTAGES AT A GLANCE

- simple and uncomplicated implementation of components and systems
- shorter commissioning times
- minimization of operator errors due to optimal usability
- contribution to OEE maximization
supportZ
Service - allways and everywhere
supportZ - SERVICE ALWAYS AND EVERYWHERE
supportZ - ADVANTAGES AT A GLANCE

- fast uncomplicated support worldwide
- always the competent expert in direct dialogue
- access to the component and plant history
- access to Digital Twin and in-advance production as payable services
- maximum data security through encrypted transmission of systems and process parameters
open digital platform (integrated offers third-party providers)

digital service business with market companions

digital service business paid / unpaid

conventional Products & Services

in 2025

globale market volume of Digital Services:
98 Mrd. USD (2016)
987 Mrd. USD (2025)

Quelle: Wieselhuber & Partner, McKinsey
Thank you for your attention