Digital Factory/Hospital Planning
Integration of material flow simulation on a greenfield factory and hospital planning

Stuttgart – Weilimdorf
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Gime Batija

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- Digital Factory planning
- Digital Hospital planning
Introduction UNITY

Clients
19 of the DAX-30-companies and SMEs,
more than 1,000 client projects since 1995

Execution
from the initial concept to execution

Locations
8 branch offices in Germany,
6 international branch offices,
project sites throughout the world

Facts
Founded: 1995
Employees worldwide: 210

Globally, more than 200 clients of the following branches trust us:
- Automotive
- Healthcare Management
- and Medical Engineering
- Pharmaceuticals and
- Chemical Industry
- Energy
- Aerospace
- Manufacturing

Business activities for healthcare:
- Foresight and strategy development
- Digital factory planning
- Digital clinic planning
- Process management
- IT-Management

Combination of management methods from industry and hospital experience
100+ completed, successful hospital projects

Your benefit

Modern Management
Knowledge & Best Practices

Foresight & Strategy
Processes & Transformation

Corporate Management
Productivity & Revenue
Growth & Investment
Competitive Advantage

Customers Expectations
Customer Satisfaction

Corporate Management
Maximal productivity via Value Management and Program Management

Innovation, Product Development
From the initial idea to the successful market entry of the product/service

Marketing, Sales, Service
Front-stage orientation to provide customer acquisition and retention

Order Processing, Production, Supply Chain
From the demand through the efficient production to the delivery

Innovation, Product Development
From the initial idea to the successful market entry of the product/service

UNITY (Deutschland)
Foundation: 1995

Hamburg
Berlin
Stuttgart
München
Zürich
São Paulo
Kairo
Shanghai
Pekina

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Digital factory planning
Approach: From the demand to the final project results
The actual problems have to be faced and solved in the new factory planning.

The business goals are the basis for defining the requirements for the "ideal factory".

- combined manufacturing site for all three workshops
- mutual accessibility through customized extraction technology
- customized logistic concept
- last industrial manufacturing equipment
- lean production concept
- short, comparable process-times combined with timed production
- ergonomic workplace design
- savings in additional and non-productive time
- operating and monitoring of production via SAP, manufacturing execution system (MES) and material flow controller (MFC)
- real-time monitoring
Benefits:

- Reducing lead times and running paths by "flow-oriented concatenation" of all workstations and workshops.
- Smoothing of resource utilization by optimizing the processing sequences.
- Reduce employee exposure to designing ergonomic workstations.
- Central integration of management and support functions in the workshops.
- Paperless production control and order processing with harmonized MES.
- Reduction of routes and transport activities by centralizing all logistics sectors and automation.

The realignment and simulation of the new production on "greenfield" improved working conditions, increased productivity and reduced cycle times!
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Digital Hospital planning
Functionality of the ambulance simulation model

Processes
- To-be processes 'treating a patient' and 'planning ambulance'
- Number of patients based on as-is data analysis
- Adjustment according to the predicted number of cases

Ressources
- Opening hours of ambulances
- Allocation of examination rooms
  - Staffing
    - To-be layout

Patients

Disruptions
- Cleaning of rooms
- Delays according to normal distribution
  - Transport of patients
  - Patients and physicians
  - Duration of diagnostic examinations
Simulation of an admission and examination center
- Reducing waiting periods
- Optimisation of spatial use
- Securing operational concept
- Dimensioning and layout optimisation
- Validation of future scenarios

Thank You for Your Attention!
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