

 We are .....

**INGENIEURBÜRO**

**HANLI**

# Our Portfolio



- Complete factory planning of the rough layout
- Process analyses and -optimisations (FMEA)



## Paint Shop Planning

- Pre-Treatment,
- ED-Coating,
- Anticorrosive-Coating,
- Primer-, Basecoat- and Clearcoat-Processes

Project management, factory planning

Paint shop planning

Assembly planning

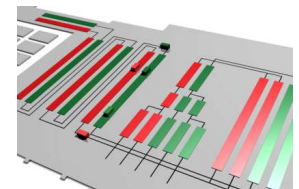
Logistics concept, material flow

## Assembly-Line-Planning

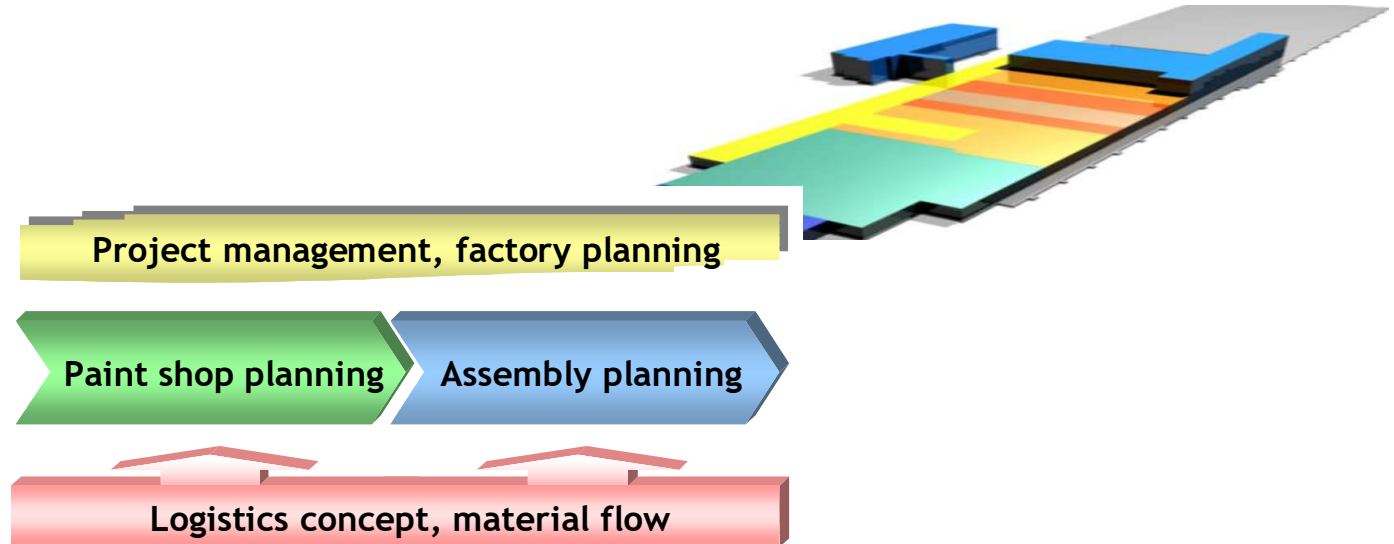
- Assembly lines
- Screwing technology
- Means- and Operating supplies
- Manipulators



- Simulation Studies
- Planning of Logistics centres, Supplier parks
- Container management
- Production shift



# Ours Strengths



**We are recognized partners of the planning and production of the automobile and automobile supplier industry**

- Since 1996 project experience in the automobile and aircraft industry
- Recessed knowledge in the industrial painting technology
- Technological competence and Consistent customer orientation
- Professional aim oriented Procedure
- Manufacturer independent support of the complete investment chain from a hand

We are your industrial partner for

## Paint Shop Planning



- Since 1995
- Pretreatment Process
- ED-Coating Process
- Anticorrosive Coating Process
- Primer, Base and
- Powder Coating Processes

for the

- Aerospace, Automobile,
- Commercial Vehicles and
- Supplier Industry

We are your industrial partner for

## Paint Shop Planning

### Our Service

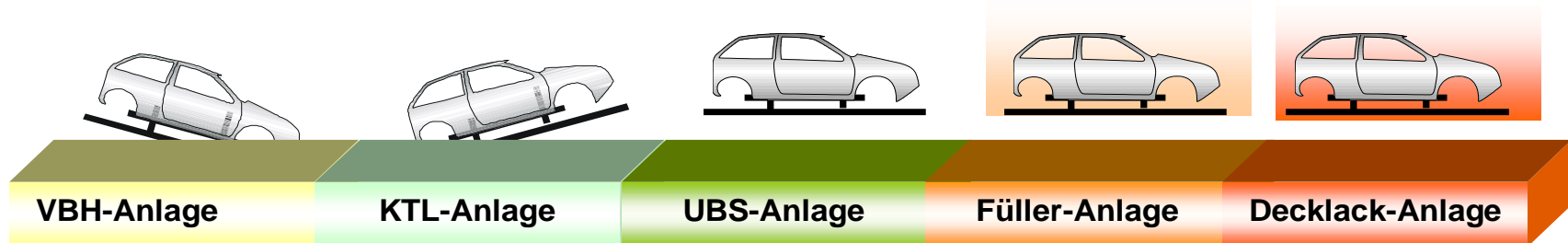
- Consulting, Design and Dimensioning
- Support for Contracting, Construction and Building
- Support for Launching and Production Start

### Our Clients

- Volkswagen, Mercedes-Benz, Airbus,
- Skoda, MAN, Thyssen, EADS, Komatsu, ....



- Advertising document for Paint shop-planning for the automobile industry:
  - Planning and putting into service from Pre-treatment-, ED-Coatings-, Anticorrosive Coating and covering lacquer plants
  - Special technology procedures, Application procedures, Paint supply-systems, Sewage- and output air treatment
- Factory planning from the Concept construction to the Execution planning with the systems HLS (MicroStation), AutoCAD and ProEngineer
- Coordination Expert removals and Construction of test documents
- Documentation underlay: flight plan, Business security reason, work safety





**Our team is effective of Planning experiences within the last years for the following projects back:**



## **Example: Our Order was...**

- Subject support for construction of Advertising documents for a new paint shop by Volkswagen Commercial vehicles in Hanover
- Application technology, Paintsupply, Cubicle Lay-out, Material flow, promotional program
- Company of Translation into action, putting into service and acceptance
- Catalogue all operating supplies and work instructions

Our team is effective of Planning experiences within the last years for the following projects back

## New Painting Line:



Base-Coating



TNV-plant



Control area



Sewage treatment



Paint supply



Primering



Paint extraction



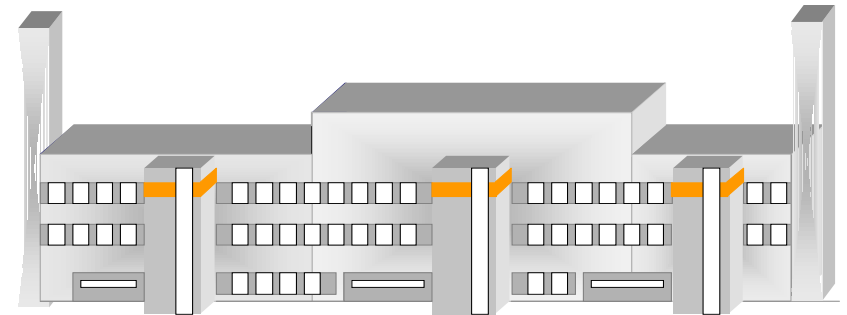
Non-Salt-Water



Our team is effective of Planning experiences  
for the following projects back:

## Paint Shop Plans

- Volkswagen AG
  - Complete Paint shop Wolfsburg
- Skoda
  - Paint shop Mlada Boleslav
- Volkswagen Poznan
  - Paint shop (Pre-treatment, ED-Coating, Anticorrosive Coating, Primer, base and clear coat, completion)
- Volkswagen Nutzfahrzeuge
  - Painting line 3 (T4/5)
  - Pre-treatment - and ED-Coating line T4/5 and LT2 and Anticorrosive Coating line LT2,
  - Paint shop for T5 (Primer-, base and clear coat lines)



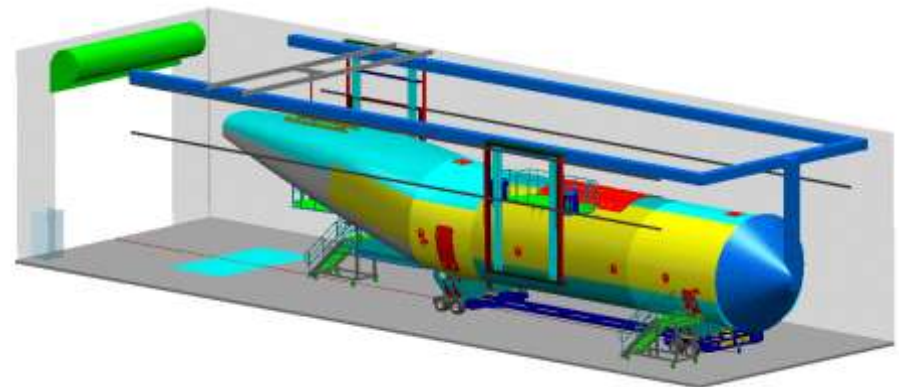
Our team is effective of Planning experiences within the last years for the following projects back:

## AIRBUS Project A400M

- Examination of alternative ventilation concepts of a preservation cubicle and the trunk to the construction of advertising documents
- Supply to the application technology, colour supply, lay-out, material flow
- Offer of the translation into action, putting into operation and removals



Paint- and Restreatment-Boxes



Our Team has a long experience in planning paint shops

## PT/ED-plant to Coat Motor Coaches:

### 7 Section Pre-Treater (PT Line)

- Degreasing
- Rinse I and Activate
- Zn-Bondering
- Rinse II and Passivate
- De-ionised water rinse

### 3 Section ED Line

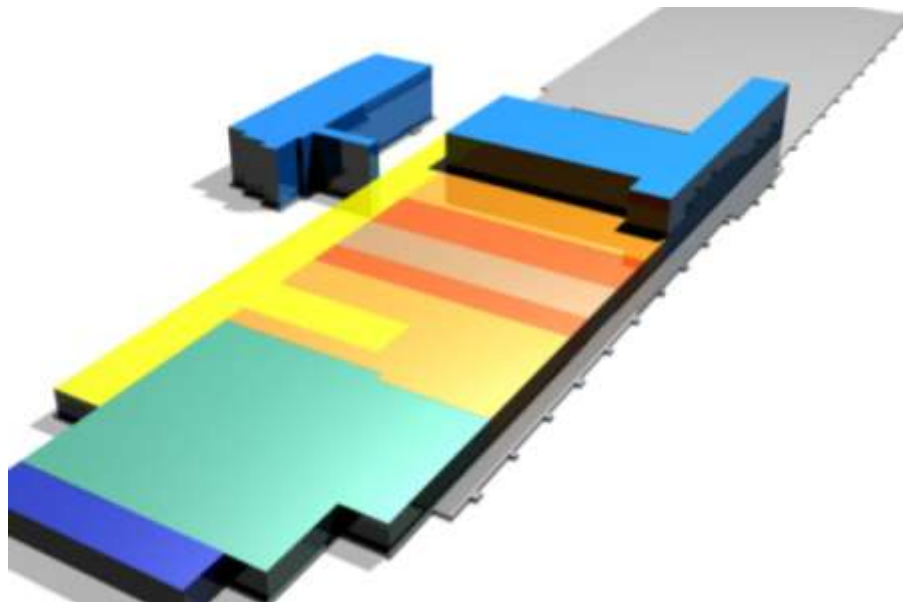
- ED Coating
- Ultra filtration rinse I and II

### Additional

- Dryer with waste heat recovery, cooling section
- De-ionised water plant and Waste water plant



## Project Management, Factory Planning



Project management, factory planning

Paint shop planning

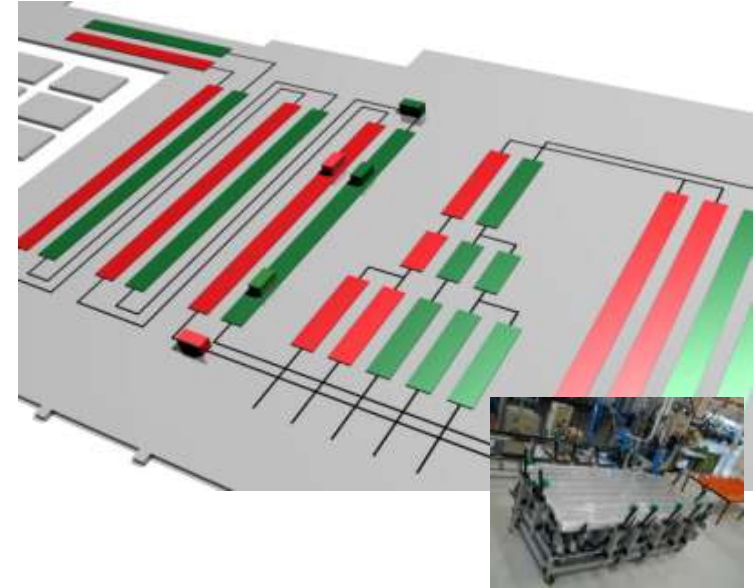
Assembly planning

Logistics concept, material flow

## T5-Camper-Plant

Planning and putting into service a new self-sufficient assembly shop

- Feasibility study
- Searching a location for the assembly shop
- Demises checklist
- Search for investors
- Design layouts from development of concepts to the plan of execution
- Simulation and work organisation
- Workplace engineering (planning of tools, jigs and fixtures)
- Design of assembly
- Assignment of work cycles and Monitoring of dates
- Tendering for tools, jigs and fixtures
- Monitoring of implementation and of start up phase
- Putting into service



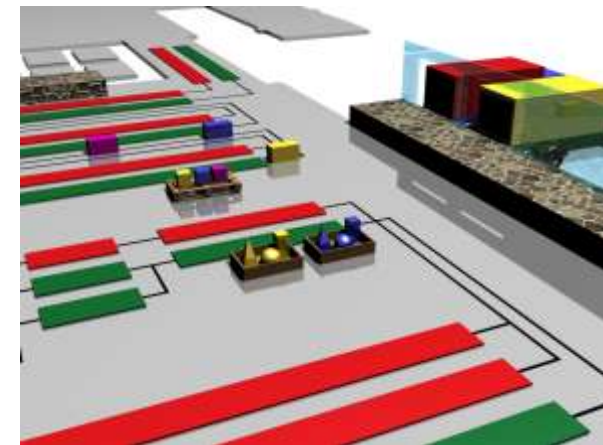
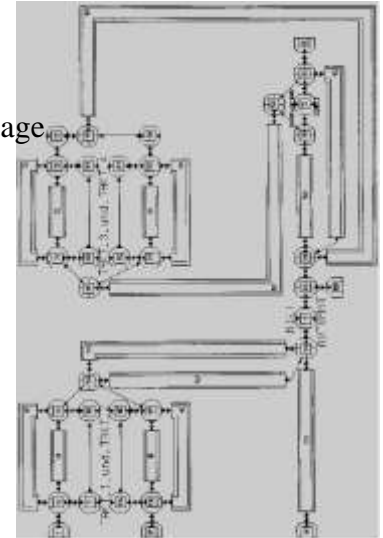


## Use of simulation technology

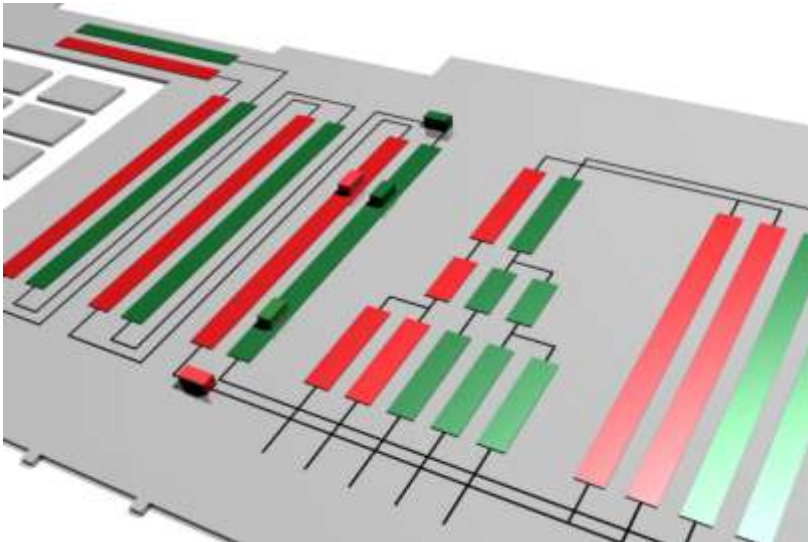
- Design of production systems
- Optimization of production flow
- Monitoring of production process
- Review logistic concepts and factory management
- Different Simulation systems



Integrierte  
Landeckklappenmontage



## Assembly planning



Project management, factory planning

Paint shop planning

Assembly planning

Logistics concept, material flow

Our Team has a long experience in assembly line planning

## Integration of new vehicle designs in an existing factory:

Specifications for...

- System engineering and material handling
- Needed modifications
- Design layouts from concept development to plan of execution
- Monitoring of implementation, putting into service



# Logistics concept, material flow



Project management, factory planning

Paint shop planning

Assembly planning

Logistics concept, material flow

Logistics concept, material flow

**Our Team has a long experience in logistic planning:**

## **Planning of a new warehouse for heavy weights**

Logistic building, 10.000 m<sup>2</sup> floor space with 17.000 shelf places

- Admission and structuring of items
- Concept development and planning of the logistic building
- Making specifications with layouts
- Conversation with suppliers, offer evaluation, contract negotiations, design and development of construction with supplier, monitoring of implementation and technical approval of shelves
- Concept development and introduction of a new warehouse strategy, to store and remove from storage, to involve the new warehouse in the existing production
- Standardisation of logistic containers
- Revision of packaging instructions and delivery specifications





# Our references

We have proved ourselves for the following companies:

**gedas**  
your IT partner



**K+S KALI GmbH**



**Fritzwinter GmbH**



Leibniz  
Universität Hannover



Produktionstechnisches  
Zentrum

**Poznan Sp.zo.o.**

**Slovakai, a.s.**

**Kraftwerk GmbH**



**SALZGITTER  
FLACHSTAHL**

Ein Unternehmen der Salzgitter Gruppe

**EISENMANN**

**Nutzfahrzeuge**



**KOMATSU**  
TAKE THE LEAD

**DAIMLERCHRYSLER**

**Schuberth**  
HEAD PROTECTION TECHNOLOGY

**What can we do  
for your  
business?**