Planning Scope

- Production line planning for the body shop
- Planning discussions with engineering service providers
- Site supervision and coordination in the pre-construction phase
- Moving to the final location
- Preparation of tender documents
- Technical evaluation & award recommendation
- Site coordination
- Commissioning
- Acceptance

Production Line

- Layout Planning
- Planning of transmission stations and technology
- Planning for the space requirements of each station
- Planning for safety at work with consideration of ergonomics
- Adaptation of control technology
- Planning of component deployment
- Planning of rework stations
- Linking different standards required
- Layout control and adaptation
- Media planning
- Implementation of the requirement profile

Economic and reliable establishment of an automated production line
**Reference** | **Assembly planning for project F30 / F35 and E84 plant Tiexi China**

**Layout Planning**
- Planning of production line for assembly construction
- Planning discussions with engineering services providers
- Planning of media
- Planning of the onsite equipment process
- Planning of transfer stations and technology
- Planning of occupational safety in consideration of ergonomics

**Production line**
- Implementation of the specification profile
- Planning discussions with engineering service providers
- Layout control and adaptation
- Shifting to the definite location
- New production line layout planning for 30 units

**Result**
**Economic and process reliable manufacturing of an automated production line**
Planning Scope

- Duplication of the existing inner, middle-u outside frame system
- Extension of the bottom plate and subfloor line
- Create a new stud welding line
- Planning of new Data-Matrixcode stamping equipments
- Optimization of cycle time
- Implementation of best practice concepts
- Exact scheduling coordination
- Software updates

Data-Matrixcode Stamping Equipments

- Determination of positions for the stamping equipments and test cameras
- Integration into the production control system IPS-L as well as in IPS-T
Below-ground line, bolt-welding line, floor plate line (F30, F35, E84)

- Determination of allocating IP-addresses
- Planning and control of software and hardware
- Integration and communication construction of software and hardware
- Adjustment of tact time
- Determination of the positions for the newly added process computers, robots and welding controllers, cabinets and test systems
Reference | Project control / QPP at TP-4-LG Specialist Project Management
Assembly LG

Tasks / Goals
Design of the optimal technical concept for the production scope of assembly technology

Activities
- Assembly Process Planning along the PEP
- Determination of the assembly structure from the PVL
- Controlling of the gAMS applications
- Creation and implementation of frame schedule plan in PEP
- Assistance in project and product development measures
- Management of the project rounds and VC
- Representation of the FZG project manager

Result
Monitoring and control of product line objectives in the TMO
Reference | **Planning and implementation of a front-end and cockpit conveyor systems for BMW derivatives**

**Front-end conveyor systems**
- Layout design
- Planning and procurement of conveyor systems
- Implementation of automated transport systems

**Cockpit conveyor systems**
- Layout design
- Concept design of a workpiece carrier storage
- Planning and procurement of conveyor systems

**Planning Scope**
- Front-end
  - Automated transport system in Pre-Assembly
  - Electric monorail to assembly site
- Cockpit
  - Electric monorail in Pre-Assembly
  - Electric monorail to assembly site
  - Chain conveyor at the assembly site

**Result**

Planning, Procurement and Implementation in Plant Shenyang / China
**Planning Scope**
- Development of a reference structure
- Space requirements analysis
- Variant planning
- Detailed planning
- Interface investigation
- Planning of media connections
- Implementation planning
- Collision test with project environment

**Implementation Process**
- Space requirements analysis ➔ Detailed planning ➔ Implementation planning

**Result**
Development of an economic Assembly-Structure
Scope

- I01: Motor-transmission Pre-assembly line
- BEV: Electric motor + Electric transmission
- REX: Electric motor + Electric transmission + ZB_REX
- ZB_REX
- M12: Motor-transmission Pre-assembly line

Main Tasks

- Management / Control of the quality planning
- Requirements management
- Testing and Q-regulations
- Quality-related process issues
- Technical cleanliness (TecSa)
- Quality objectives of the project
- Relief in Project 6 MnSoP

Result

Achievement of the TA-Quality objectives

Responsible for

- Implementation of FMEA/RiFi
- Implementation of the process series
- Creation of the NA-Forecast

Reference | Sub-Project Management-Quality of the Motor-transmission Pre-assembly line and assembly of range extender BMW vehicle models i3 and X1 (China)
**Task:** Planning and Implementation of Plant Construction W.19.88 Shenyang / Tiexi

**Area:** Assembly

- Design and planning of conveyor systems
- Planning of assembly process and creation of control concepts
- System implementation, supplier support and on-site assistance
- Interface coordination assembly, construction and facility planning, implementation and support
- Planning / implementation container / “Supplier area”, section leading,
  - Coordination process / materials handling systems
- Overall coordination and layout-design

**Result**

Construction according to schedule \(\Rightarrow\) SOP, Start-up, Delivery, Volume Increase
Task: Planning of Conveyor Technology (MAT-Powertrain and Marriage W.19.88)

Planning Scope:
- Concept development for system and assembly process
- Preparation of tender documents and concept negotiations
- Coordination with assembly, LOG, construction, procurement, safety, IH and suppliers
- Construction supervision and implementation planning
- Implementation / on-site construction, start-up and SOP
- First and final acceptance, FMEAs and availability tests

Result: Timely commissioning with maximum availability
**Task: Planning of Conveyor Technology: Seat supply, Front-end Pre-assembly, Cockpit Pre-assembly W.19.88**

**Planning Scope:**
- Developing concepts of conveyor technology for decision making
- Interface coordination with process, construction and logistics planning
- Creation of construction / availability-FMEAs
- Specification and procurement from inquiry to requirements report
- Construction and production progress monitoring at suppliers
- Professional supervision for each system during the realization period
- Acceptance process

**Result**
Flexible process with minimal investment
**Task: Planning of Handling Filling & Finish Line (Apron Belt)**

**Planning and Implementation Scope:**
- Design, planning and technical implementation of Handling
- Interface coordination with process, construction and logistics planning
- Implementation and commissioning of Handling, on-site support
- Assembly management / supplier coordination cross-department on site for e.g.:
  - F1 / F2 rework area steel construction
  - CMM – measuring station, finish area assembly / body shop pit edge angle
  - Finish area body shop pit edge angle

**Result**
Error-free start-up with 15 Units / h, design of handling to 60 Units / h
Task: Planning and Implementation Plant Construction  W.19.88 Shenyang / Tiexi

Assembly Planning:
- Interface coordination assembly and construction planning
- Recording media needs in 0.50 + 0.80 by using room book incl. position determination
- Sourcing of infeed, cabinets, 3D point loads system / facility technology in the hall floor, platforms and pits
- Design of the lighting layouts and wiring procedures based on energy efficiency
- Subproject management on site: installation of platforms, implementation of media infrastructure

Result
Standardized interface coordination between construction and assembly planning
Planning and Implementation Scope:
- Layout planning by using computer-aided software MicroStation V8
- Design of 2D and 3D assembly layout step by step (15, 30, 60 units)
- Design and adaptation of reference structure
- Planning for expansion of assembly scope
- Drawing documentation
- Coordination of all current drawing objects
- Training of successor BMW, delivery and acceptance

Result

Construction and assembly related technical reliability of Layout
Planning and Implementation Scope:

- Layout planning container village, media supplies and surface coverage
- Coordination of storage and work space for suppliers, time scheduling
- Schedule coordination, delivery process planning and implementation, "Supply Chain Management"
- Section leader 2 “Assembly” - coordination process and handling equipment suppliers

Result

Suppliers coordination and container village construction according to the plan
1. Car workshop in Dadong

Planning scope
- Planning of layout for R&D car workshop
- Planning discussions with engineering services providers
- Construction site supervision and coordination for preliminary mounting
- Shifting to the definite location
- Technical evaluation
- Construction site coordination
- Start-up
- Acceptance

Car workshop
- Planning of the onsite equipment process
- Planning of transfer stations and technology
- Planning of space requirements for every workplace
- Adaptation of control technology
- Planning of new office, warehouse and toilet
- Connection of different standards required
- Layout control and adaptation
- Planning of media
- Planning of IT requirement
- Planning of tools, cabinets and measurement equipments

Result
Handover is in the middle of October
2. Car workshop in Tiexi

- Planning of the equipments for Car workshop in Tiexi
- Planning of the equipments for mobile Car workshop in Tiexi
- Planning of tools, cabinets and measurement equipments for Car workshop and mobile Car workshop in Tiexi.
- Following up the purchasing process for Car workshop.

3. R&D project in Tiexi

**Background**

- BBA is building up the R&D construction in Tiexi, including Sixteen laboratories and a big office.

**Detail**

- Planning of purchasing process for these key equipments,
- Begin time to start the purchasing process and how to follow up this process, as the delivery date is related to the construction
- Coordination with R&D function team and purchasing department
- Communication with German engineers for the specification
- Support EG, EK and other teams to search the supplier and make the purchasing request

**Result**

Preparation is ongoing without delay
Planning Scope:
- Attend department meetings, reporting supplier issues which happened yesterday or recently.
- Organize and discuss with assembly, logistics to judge issue property, which belongs to supplier issue.
- Contact supplier in time for issue details and push supplier to make containment action to avoid issue happening.
- Supplier issue into SAP and tracking supplier feedback, evaluate supplier action effectiveness and judge in 8D.
- Go to supplier side for issue investigation, push supplier to do POKA YOKE to improve process.
- Year evaluation for local supplier.
- Year process audit for local supplier.
- PPM evaluation.
- Organize supplier weekly meetings for KEY supplier to discuss and analyze issue and how to improve process.
- Information sharing and issue discussion with IPO.
- Supplier performance data input into SAP, B2B, PQM, LPKM system.

Oversea supplier management
- Contact German KIFA colleagues to share issue information, issue solving.
- Contact foreign suppliers, push foreign suppliers, problem solving.

Reference | QMT Supplier Management Plant Shenyang

Result

Improvement of supplier management
Planning scope:
- Planning of production line for doors, frontklappe, and decklid
- Planning discussions with engineering services providers
- Construction site monitor and coordination
- Schedule of the project control
- Operation instruction review
- Debugging of welding fixture manage and coordination
- Debugging of hemming machine manage and coordination
- Debugging of gelling machine manage and coordination
- Optimization of hemming mold manage
- Quality control
- Start-up
- Acceptance

Quality Control:
- Surface quality control, Audit score less than 1.6/per part
- Metallographic test of welding point pass
- Glue test pass according to VW2047 and VW2053
- Measurement of part pass
- Complain of back-end-of-line solution
- The problem list close
- Optimization for work cycle time

Result

Quality / project schedule / work cycle time meet requirements of SOP
Planning scope:
- Concept Planning for construction and SAD
- Concept proving with supplier
- Quotation and benchmark
- Project time schedule
- Concept and design review with supplier
- Manage and coordination on site
- Optimization fixture
- Quality control
- Following the problem list
- Start-up
- Acceptance

Quality Control:
- SAD surface quality control
- Metallographic test for welding point
- Functional measurement
- Cycle time optimization

Result

Quality / project schedule / work cycle time meet requirements of SOP
Planning scope:
- Planning of production line for doors, frontklappe and decklid
- Planning discussions with engineering services providers
- Construction site monitor and coordination
- Schedule of the project control
- Operation instruction review
- Debugging of welding fixture manage and coordination
- Debugging of hemming machine manage and coordination
- Debugging of gelling machine manage and coordination
- Optimization of hemming mold manage
- Quality control
- Start-up
- Acceptance

Quality Control:
- Surface quality control, Audit score less than 1.6/per part
- Metallographic test of welding point pass
- Glue test pass according to VW2047 and VW2053
- Measurement of part pass
- Complain of back-end-of-line solution
- The problem list close
- Optimization for work cycle time

Result

Quality / project schedule / work cycle time meet requirements of SOP