DELMIA’s Transportation & Mobility Body-in-White Manufacturing solution provides OEMs and Tier 1 suppliers a collaborative planning solution to design, validate and ensure the quality of the body-in-white assembly manufacturing specifications within a 3D environment.

As the number of car programs increase, so does the number of variants, which puts a strong demand on the need for plant flexibility. DELMIA’s Body-in-White Manufacturing solution helps companies standardize and reuse existing processes and resources. The complete manufacturing plan can be validated with 3D simulation of robots, workers, stations and even complete assembly lines. This optimized manufacturing engineering process enables early validation, reduces planning time and improves the quality of planning.

Visualize and validate the assembly steps of the car body.
INDUSTRY CHALLENGES

• How to engineer products in context of manufacturing constraints for early validation and shorter time-to-market?
• How to capitalize and optimize manufacturing processes to achieve the highest productivity with production quality?
• How to achieve plant flexibility for the increasing number of variants that come with more car programs?
• How to standardize and reuse existing processes and resources from one car program to another?

SOLUTION HIGHLIGHTS

• Physical view of the product structure used as a direct input for BIW assembly planning definition
• Early phase 3D validation of manufacturing assemblies regarding geometry, fasteners and weld gun & tool accessibility
• 3D assembly graph definition to visualize and validate the assembly steps of the car body
• Automatic or manual creation of manufacturing assemblies and assignment of fasteners based on design specifications
• Include fasteners in definition of manufacturing assemblies and visualize them in 3D
• Multi-model and multi-site planning definition
• Station-and line-level simulation
• Robot offline programming

SOLUTION VALUES

• Prevent data duplication and provide an improved product-fastener-process integration and change management solution
• Quickly react to a change and improve quality of planning by reducing planning errors with early phase validation
• Increase plant flexibility to produce more models and save time
• Lower cost of ownership
• Reduce line commissioning time and cost

USERS

• Body-in-White Project Managers
• Body-in-White Assembly Planners
• Body-in-White Robot Programmer
• Body-in-White Simulation Engineer
• Body-in-White Plant Designer
Delivering Best-in-Class Products

Virtual Products
CATIA

Model and Simulate our Planet
GEOVIA

3D Design
SOLIDWORKS

Information Intelligence
EXALEAD

Realistic Simulation
SIMULIA

Dashboard Intelligence
NETVIBES

Digital Manufacturing and Production
DELMIA

Social Innovation
3DSWYM

Collaborative Innovation
ENOVIA

3D Communication
3DVIA

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