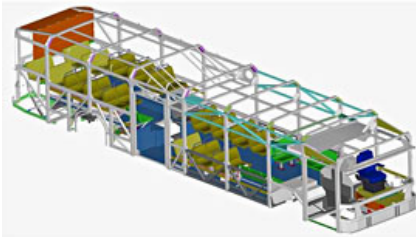


# Product engineering design (CAD)



## **Styling feasibility**

- Verification that both legislation and internal OEM standards requirements have been met

## **Technical feasibility**

- Verification that production and structural requirements have been met
  - Stamping feasibility
  - Weld access
  - Assembly sequencing
  - Section areas
  - Material thickness
  - Paint access
  - Paint drainage

## **3D component design**

### *BIW-space frame*

- Space frame design for small or special vehicles
- Body and chassis frame design for buses and coaches

### *BIW*

- Bodies with stamped components

### *Closures*

- Bonnets
- Hinged doors
- Sliding doors
- Tailgates
- Filler doors

### *Exterior and interior trim*

- Dashboard elements
- Cockpit modules
- Frontend modules

- Front and rear bumper systems
- Side door trims
  - Package, gaps and offsets
  - Design
  - Volume definition
  - Ergonomics
  - Tolerance calculations

- Trunk elements
- Front seats
- Rear seat systems

#### **Process quality control**

- Weld gun access studies
- Stamping feasibility
- Mold flow investigations
- Studies and optimization of tolerances

#### **2D assembly sequence schemes**

- A4 format for ease of handling intended for both design and process engineering use

#### **2D detail and assembly drawings / Explosion drawings**

#### **Assembly instructions.**

- Final assembly process sheets