## **Automotive Engineering Services**





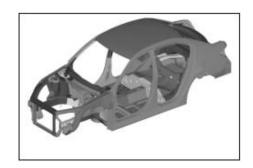
#### **Automotive BIW Solutions**



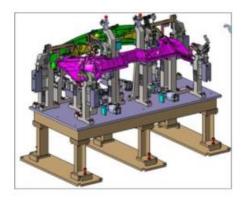
#### **Automotive Engineering & Manufacturing Services**

## **Capabilities**

- BIW Fixture Design
- SPM Design Solutions
- Automotive & SPM Manufacturing Solutions
- Onsite & offshore technical staff support

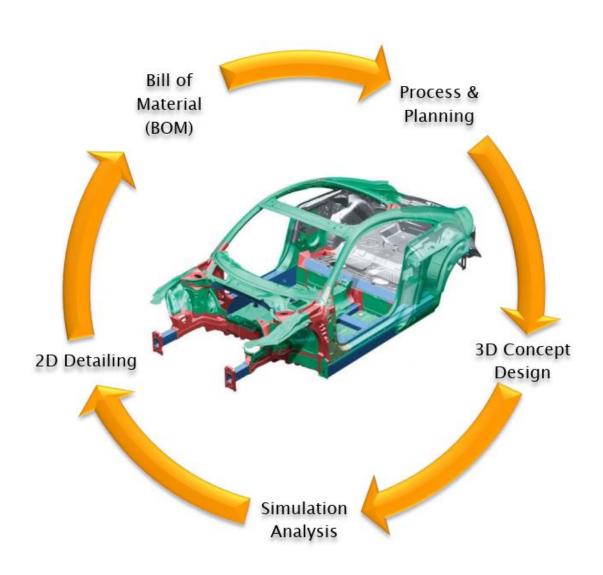






### **BIW Process**

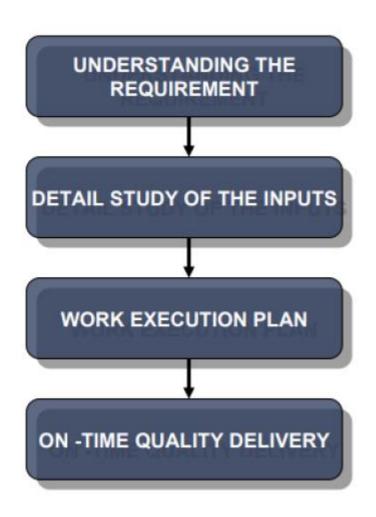




### Our Approach







### **About Us**



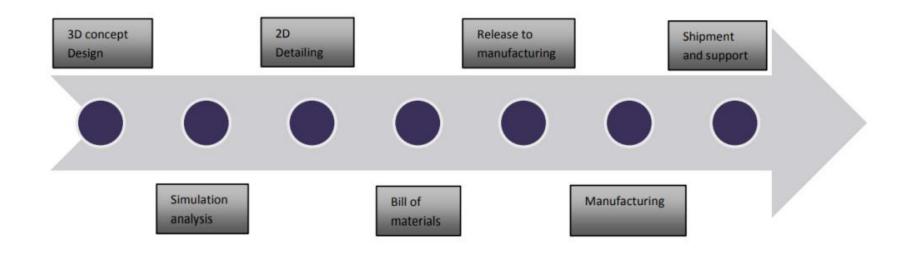
Elite Teknica Pvt Ltd is a leading service provider in the field of BIW Fixture design, simulation and manufacturing of auto components & special purpose machinery for automotive.

We analyze customer's specific needs in building robust technological and precision oriented landscape and also garner them by providing manufacturing and allied support for perfection In general we support engineering industries starting from concept evaluation, production drawings, process planning, simulation with manufacturing/support.

Our key assets are people who worked with all major OEM's and Tier 1 companies. We have experience in managing large turnkey projects both at customer site & offshore.

### **Design Services**





- ▶Pre-production Fixtures
- ➤ Robotic Line
- **>**Welding Fixtures
- >Manual line welding Fixtures
- ➤Geometric Stations
- ➤ Re-Spot Stations
- ➤ Checking Fixtures
- ➤ Material Handling

- ➤ Grippers
- ➤Geo Grippers
- ➤ Loading and Passing Tables
- ▶Pedestal
- ➤Gluing Stand
- ➤ Gripper Validation
- ➤ Manufacturing Drawings
- ➤ Bill of Materials

### **BIW Design Capability**



#### **INPUTS**

- ▶Process document
- **≻**Layout
- ➤ Panel data
- >Weld data Information
- Standard library
- ➤Stock list

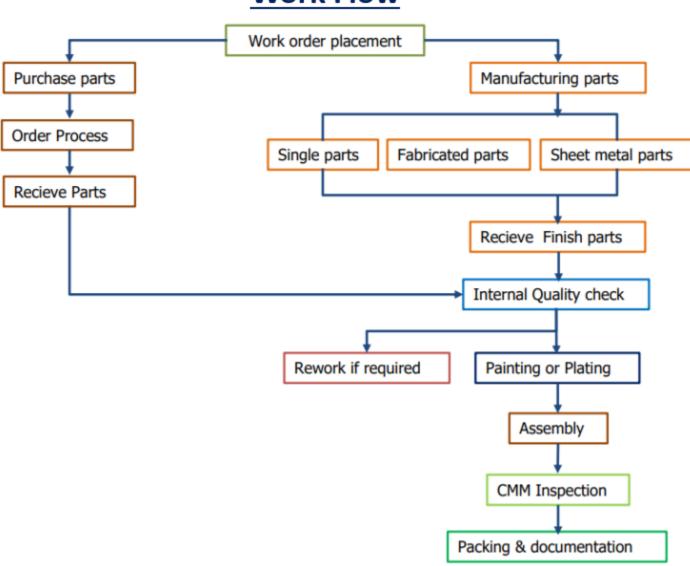
#### OUTPUT

- >3D Concept data
- ≥3D finish data
- ≥3D Final Native data
- >2D Manufacture data
- ➤ Bill of material
- Deliverables with documents
- Manufactured assembly fixtures

## **Manufacturing Work Flow**



#### **Work Flow**



### **Automotive Manufacturing**



#### **Project Management**

Time and Cost Estimation Input Data Study Manufacturing parts ordering Project Confirmation & Purchase parts ordering Recieve Purchase parts & Manufacturing Parts Quality inspection of Parts Assembly as per Drawings Quality Check and Measurement Packing and freight Booking Freight forwarding to customer Place

#### **BIW Project**



#### **Project Executed**

Project Name: BIW Welding Fixture

Team Size: 10

Tool Used: CATIA V5

Stations: Spot Welding Station

Project Scope:

 Fixture Design, 3D modeling, generation of manufacturing drawing and Ergo simulation for German auto manufacturer for Body side line.

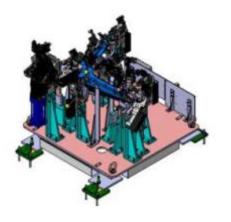
· Generation of 2D Manufacturing drawings & BOM as per customer standards and reference drawings.

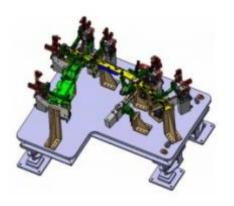
 Ergo & process plan Documentation Input: Panel Data, Clamp plan, Weld Point locations, Cycle time target, Plant Layout, Weld gun library.

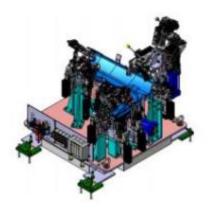
Standard Deliverables: Fixture/Gripper 3D cad data, BOM, Manufacturing

drawings & Pneumatic sequence sheet

Client: Tier 2 from Europe



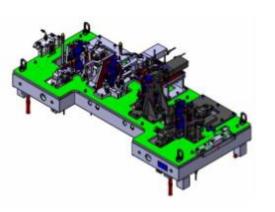


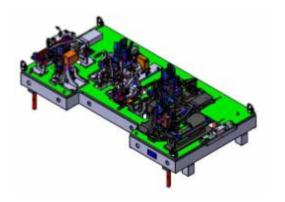


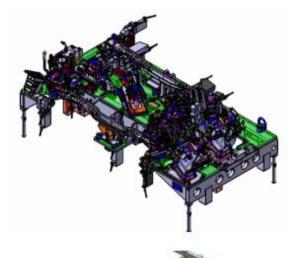


## **Welding Geo Fixtures**

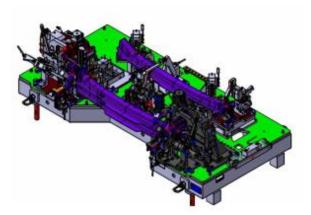


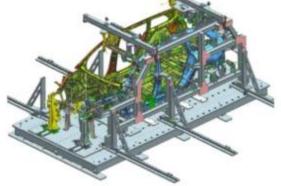












### **Welding Geo Fixtures**



#### Input 3D-Model



Name of the Project

:-7

Team size
Tools Used

:- CATIA V5 R14,

**Project Description** 

:- Detailing of welding

:- BIW welding fixture

fixtures including Production drawings

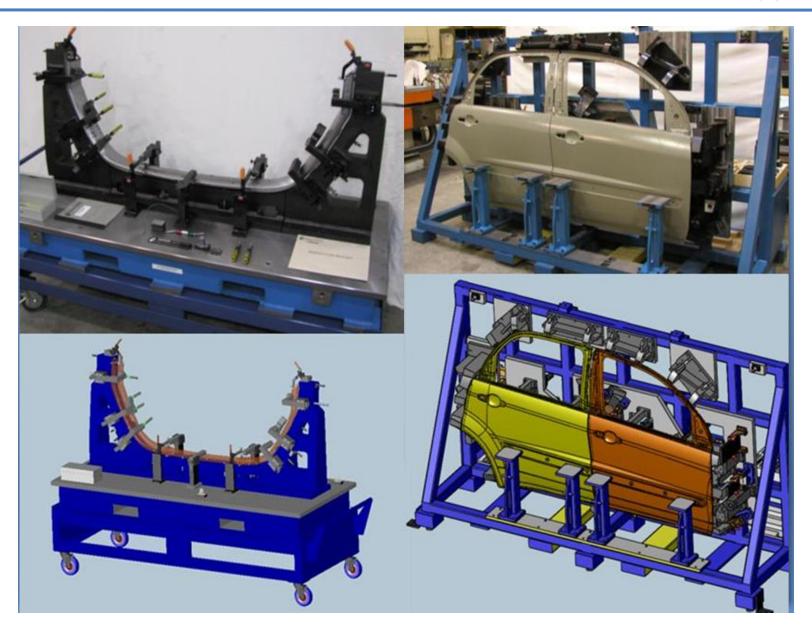
and

bill of materials

Type of welding :- Manual spot welding

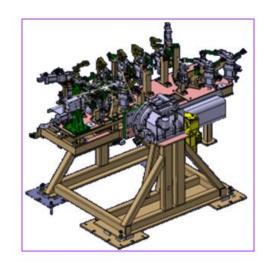
## **Checking Fixtures**



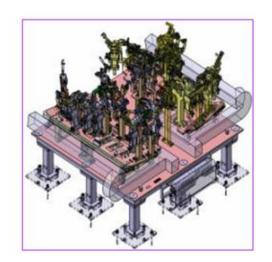


## Examples from 3D Design- GEO STATIONS

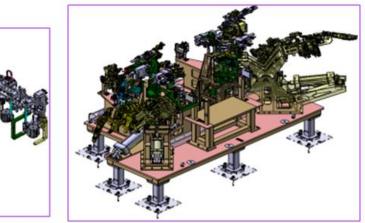


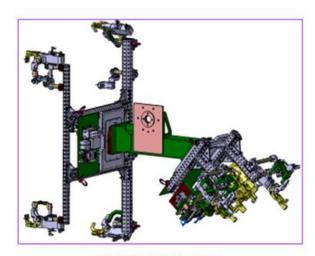


MAG welding

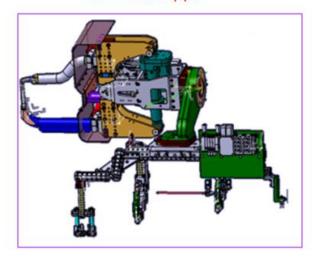


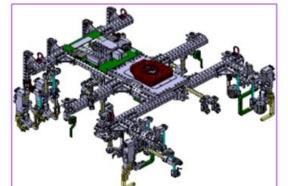
Geo Station





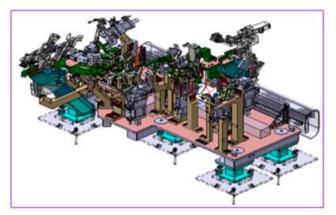
Combo Gripper

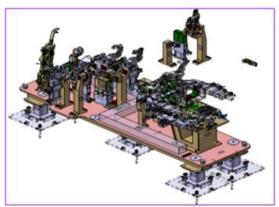


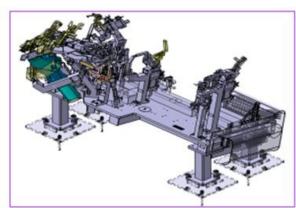


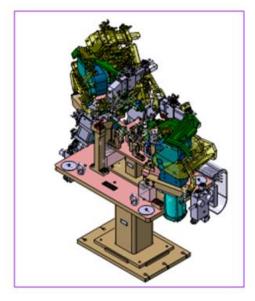
## Examples from 3D Design- GEO STATIONS



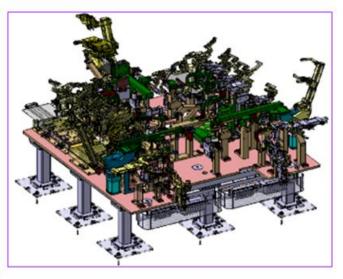






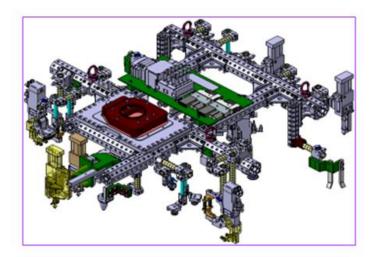


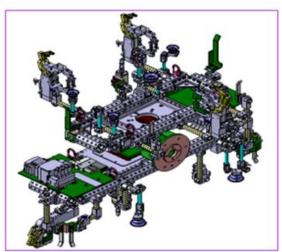


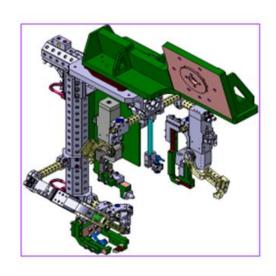


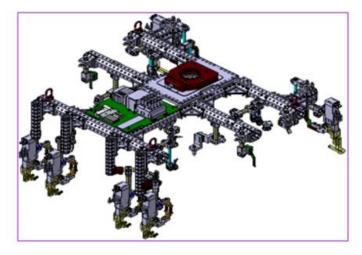
## **Examples from 3D Design- Grippers**

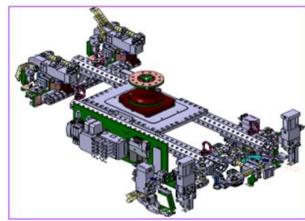


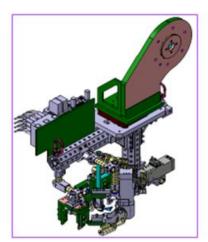






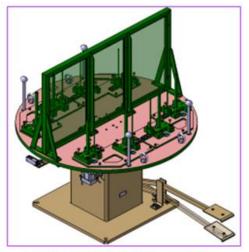






## **Examples from 3D Design**

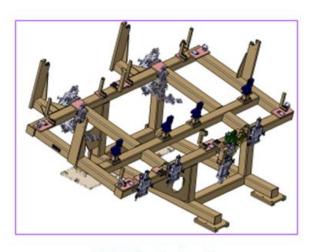




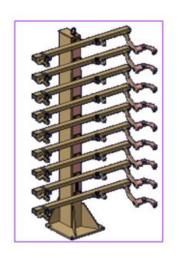
LCA rack with turn table



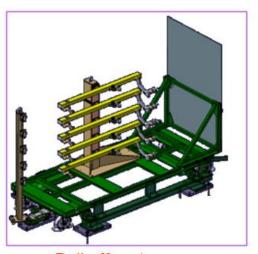
Checking fixture



Weldfast stand



**Buffer stand** 



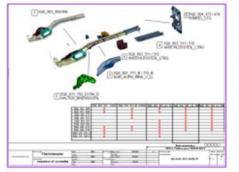
Pull off cart

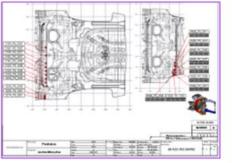


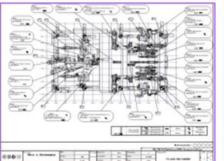
Panel lifter

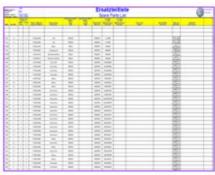
### **Project Deliverables**









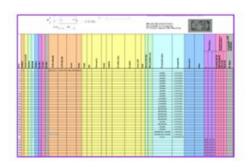


Panel loading sequence

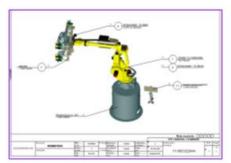
Spot welding plan

Shim plan

Spare & wear parts list



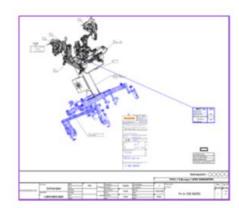
**Engraving list** 



Robot assembly drawing



Line BOM



Lubrication plan

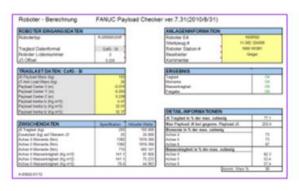
### **Project Deliverables**



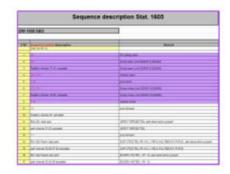
#### KSL BOM

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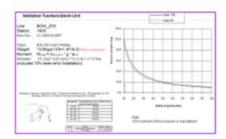
Agile BOM



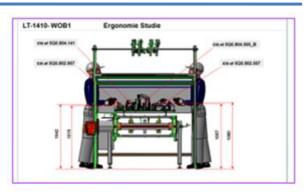
#### Payload Calculation



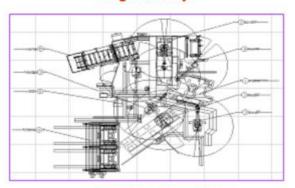
#### Sequence sheet



Clamp validation



Ergo Study



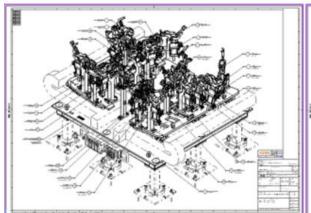
Station overview

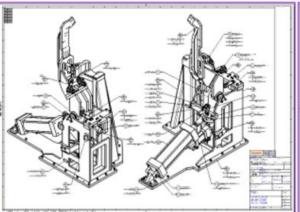
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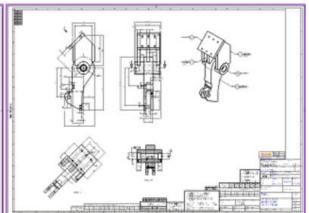
Components list

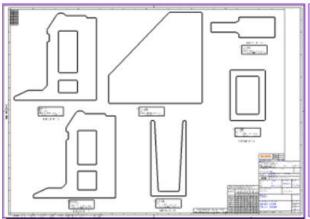
## Project Deliverables-2D Drawings

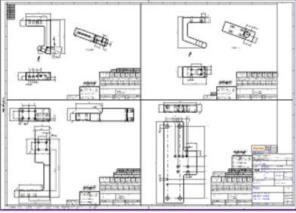


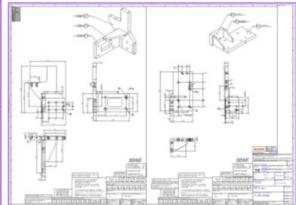






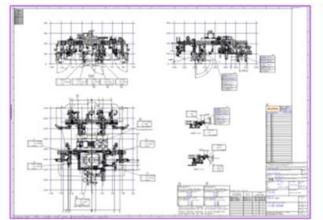


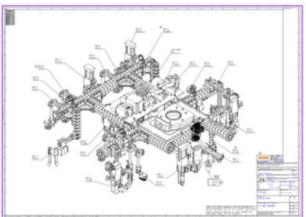


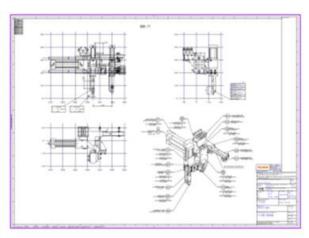


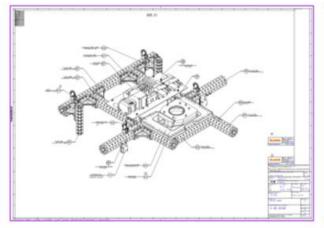
## Project Deliverables-2D Drawings

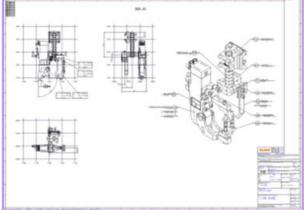


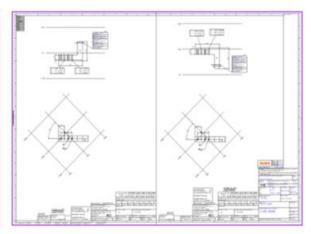














# **THANK YOU**