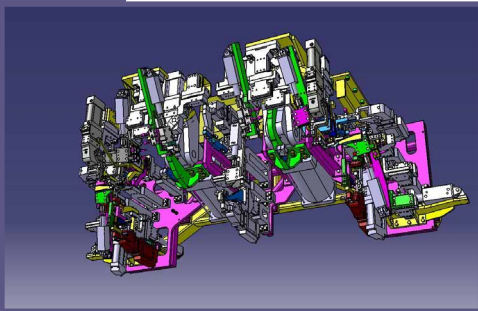


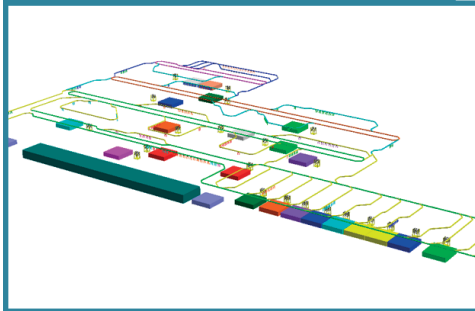
## Study, development and implementation of new turnkey processes

- ▶ Process design using 3D simulation tools
- ▶ Machines and equipment implementation
- ▶ Verification of technical features using simulation tools
- ▶ Implementation at client manufacturing

### CATIA



### DELMIA PROCESS SIMULATION



### ROBCAD/DELMIA ROBOTICS



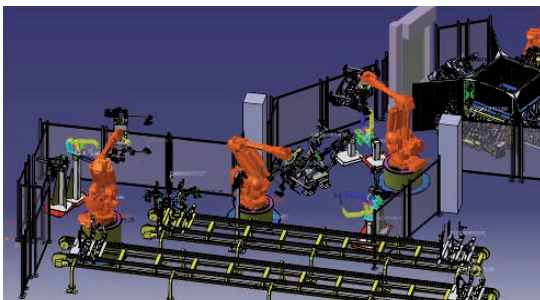
### FACTORIES OF THE FUTURE LABORATORY

- ▶ 120 m<sup>2</sup> for the integration and validation of cells for prototyping and fine-tuning
- ▶ Robots: ABB and Yaskawa
- ▶ Automata: Siemens, Rockwell, VIPA...
- ▶ Equipment, tooling
- ▶ Cameras, sensors, illumination...



## Virtual industrialisation

- ▶ CTAG carries out specific design, development and off-line programming using DELMIA and ROBCAD



## Intelligent control systems

- ▶ Development of machine vision quality control systems
- ▶ Use of artificial intelligence technologies
- ▶ Support for different applications: quality control, surface inspection, object recognition and detection, automatic classification, pick & place, OCR and augmented reality
- ▶ **Paperless Factory:** incorporation of data provided by the control system for the detection of malfunctions and the development of preventive and predictive actions based on the process trend

## Industrial software

- ▶ Commissioning custom software adapted to each manufacturing process to help decision-making at all levels
- ▶ Analysis of customers' needs for total integration of the tool in their every day life
- ▶ **Production management systems and on-site integral management systems:** monitoring, traceability, production control, quality, human resources and maintenance software
- ▶ Multi-device systems for PC, web and mobile devices

### PAPERLESS FACTORY

- ▶ Knowledge of the real cost of the part produced (carbon footprint)
- ▶ Decision-making help
- ▶ Team involved in reaching the objectives
- ▶ Help in the search of economic optimisation

### CHARACTERISTICS OF THE SYSTEM

- ▶ Coherent, consistent and standardised information storage
- ▶ Scalable system (scalable and configurable reports)
- ▶ Compatibility with auxiliary systems beyond production
- ▶ Integration of "Big Data" systems
- ▶ Interconnection with external tools for data analysis

## Process improvement

