Company Introduction

Dassault Systemes activities:
- PLM Solutions
- System Engineering, digital muck-up, realistic simulation, 3D, collaborative innovation

Location: HQ in France, operates WW
Brand: CATIA, PLM for Systems
Expertise:
- Collaborative development platform
- Multidiscipline modeling (electronics, chemicals, electrical, mechanical, hydraulic, etc)
- Complete virtual product design
- Complete virtual product validation
- Software architecture: Autosar
- Safety: iso 26262 compliance
System skills for automotive industry examples

- **Complete Car Conception**
  - Optimization of combustion/hybrid engine
  - Energy management
  - Car electrification / hybridation
  - Low global resistance
  - Software management (Autosar) including car embedded system & Telematics systems (performance, diagnostic, safety)
  - Battery/Fuel cell challenges: cost, performance, energy, power, durability, recharging time
  - Compliance with regulations and market requirements, iso 26262, Autosar, etc
System skills for automotive industry exemples

- Car Environment Conception
  - Infrastructure
    - Technical components
      - Refuelling / recharging technology / tools
      - Sustainable electricity generation
  - Geographie
    - Best global distribution of the global infrastructure
- Trafic scenarios
PLM Systems Engineering – Skills

1. Requirements Engineering Solutions

2. Systems Functional & Architecture Design Solutions

3. Systems Modeling Solutions & Libraries

4. Embedded Systems & Software Solutions

5. Systems Functional Safety & Failure Analysis Solutions

Improved Embedded Software & Electronic Systems development capabilities are needed to simplify the delivery of high quality and robust embedded systems.

Smart Products require Multi-Discipline Collaboration

Smart Vehicle

2011 Model Year Luxury Automobiles
- 50-120 CPUs
- 2GB of Software
- 100 Million LOC
- 5,000 Software Parameters
- 30,000 Functional Requirements
- 600,000 Pages of E/E Specifications
3. Model Driven Development – Today’s Challenge

Tools and data are distributed across the company in many different systems.
Looking for Partners and projects

- **Open projects, shared: 40 FIRES**
- **Virtual product**
  - Projects with special process: TESLA
  - provide a happy ending: SIM-DRIVE
- **Share a know-how:**
  - Hybrid Library DLR
- **Closed projects**
Topics & previous projects

- 1. Energy and environmental policy approach
- 3. Strategic Research on technical dimensions of the recharging, storage and distribution systems
- 4. Testing, trials and normative standards
- 5. Technology based Innovation

- O2M Mechatronics Project
- MODELISAR Project (Autosar-Modelica and HIL Integration)
- EUROSYSLIB Project (Modelica Libraries)

Further information: [www.3ds.com](http://www.3ds.com)  
[http://www.3ds.com/solutions/automotive/overview/](http://www.3ds.com/solutions/automotive/overview/)  
Thank You!