



Dassault Aviation Use Cases Presentation

CNDT Use Case (1)

CNDT general objectives

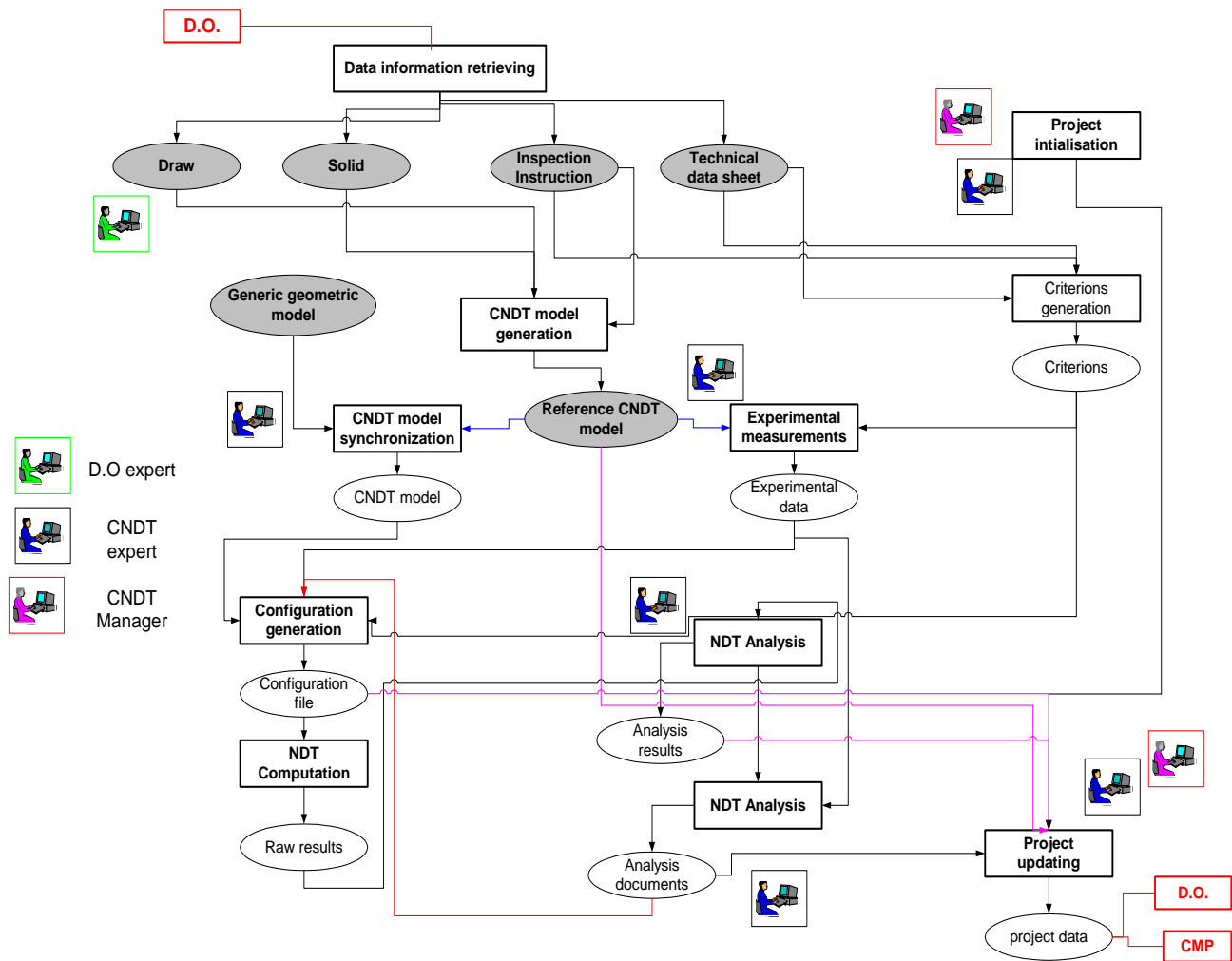
- **CNDT Simulation for developments and survey of**
 - **Manufacturing process setting and follow up**
 - **Maintenance of in service aircraft**
- **CNDT simulation integration with Product Life Cycle Management**
- **CNDT simulation reliability improvement**
 - **Perennially Repeatability and Traceability**
 - **Redundancy and Reduction of data volume**
- **CNDT technology transfer improvement**
 - **Synthesis**



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CNDT Use Case

CNDT diagram, Users identification





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CMP Use Case (1)

1. General Objective

To validate the Traceability software solution in the case of a real CMP simulation project

2. Underlying industrial process

- Wing Age Forming Simulation with ABAQUS software.

Needs :

- identify users
- describe the simulation project step by step.
- link with the Traceability software solution
- identify traceability points



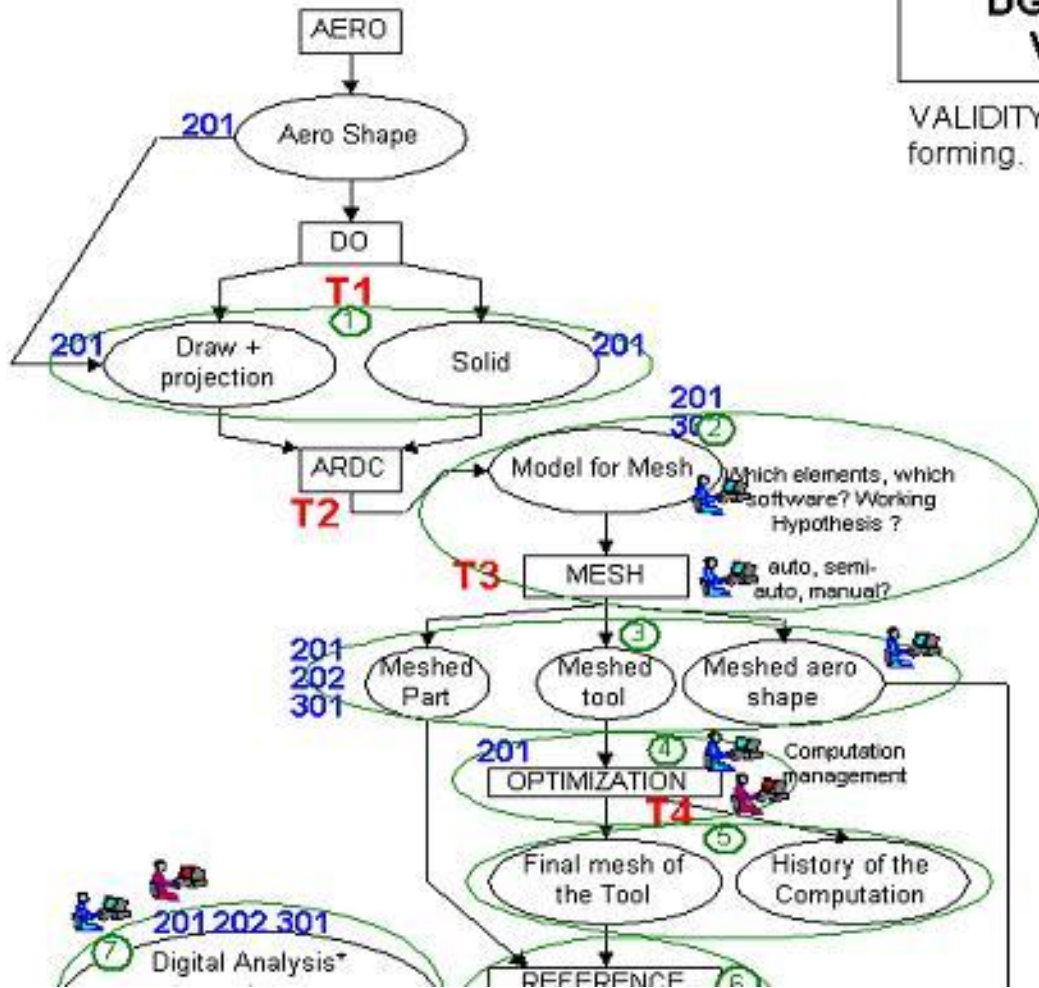
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CMP Use Case

2. Underlying industrial process, Scenario, Part 1

DGOI Demonstrator
VIVACE WP 1.4

VALIDITY : all metallic part forming.



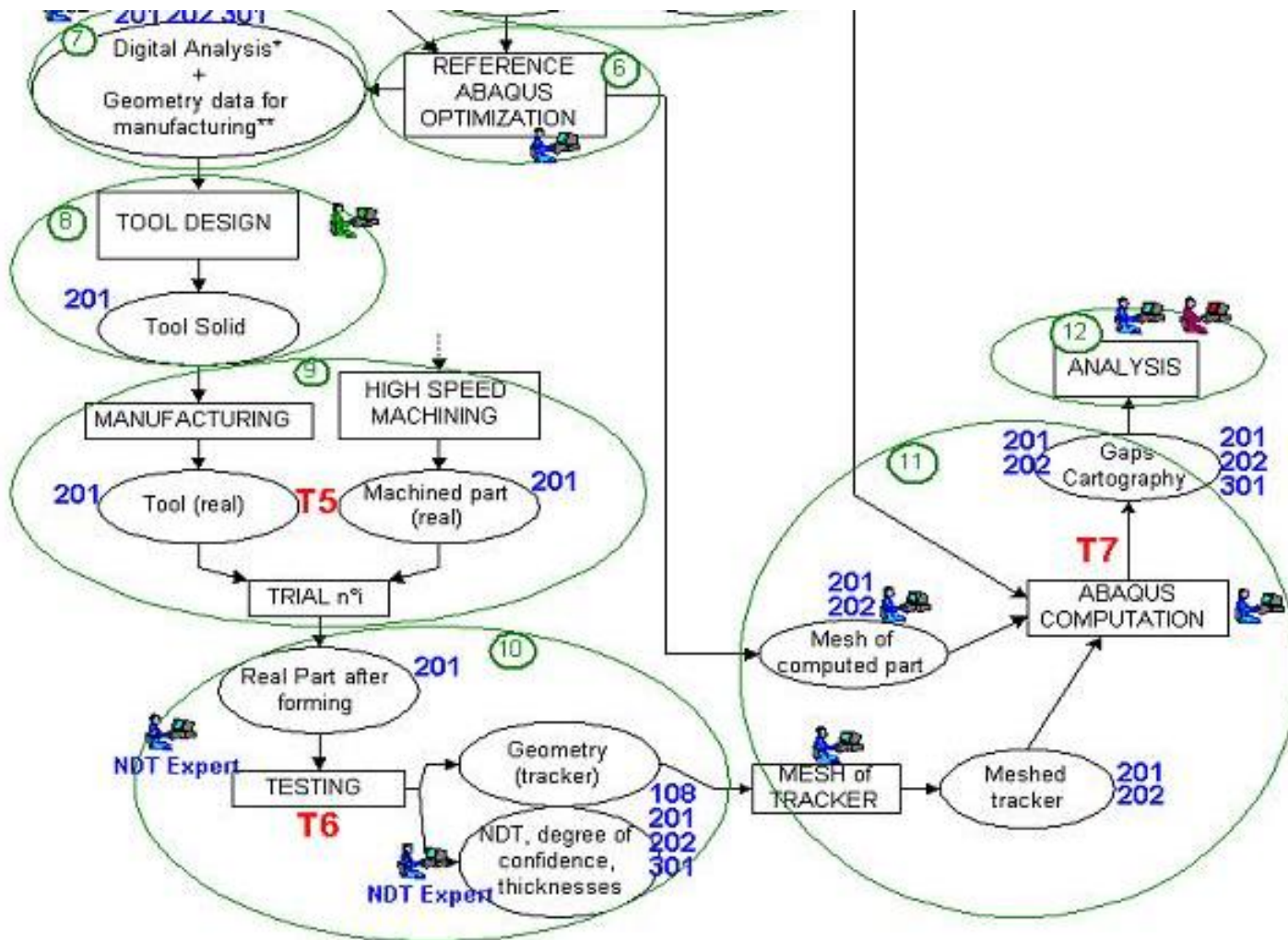
* Data cartographies (stress, distortion, loads)
** Kinematics of stiffeners, sections positions



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CMP Use Case

2. Underlying industrial process , Scenario, Part 2





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IT Use cases

1. General Objective

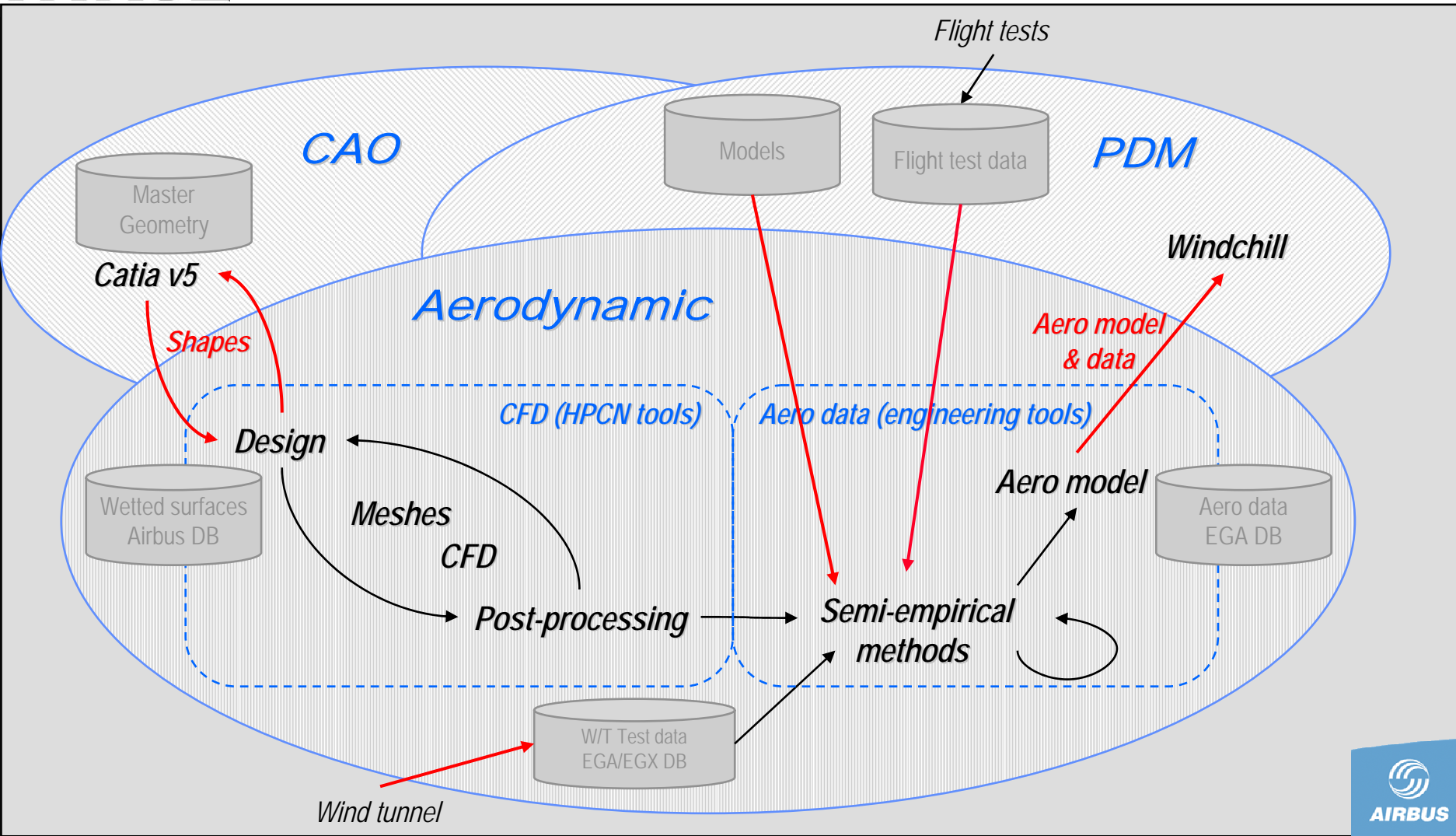
1. Checking compatibility of the Traceability Software solution with Dassault Aviation IT infrastructure, processes and requirements.

2. Several steps during the software service time

1. Software installation
2. Administration and exploitation during operation
3. Software solution upgrade
4. Multi-sites and multi-user operation
5. Disconnected operation
6. Integration with scientific IT legacy



AIRBUS Use Cases Presentation





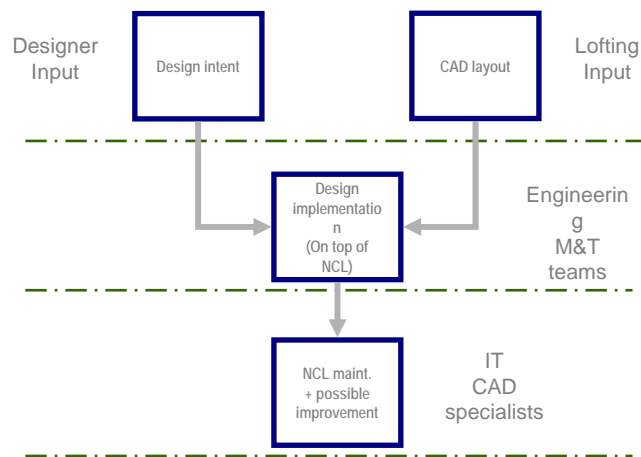
AIRBUS Use Cases Presentation

Airbus Use Case: Improving the interface between CFD and other disciplines

→ 2 scenarii:

1. Improving CAD interface in the design process

1. Traceability of the automated creation of CAD models based on engineers description of the design step



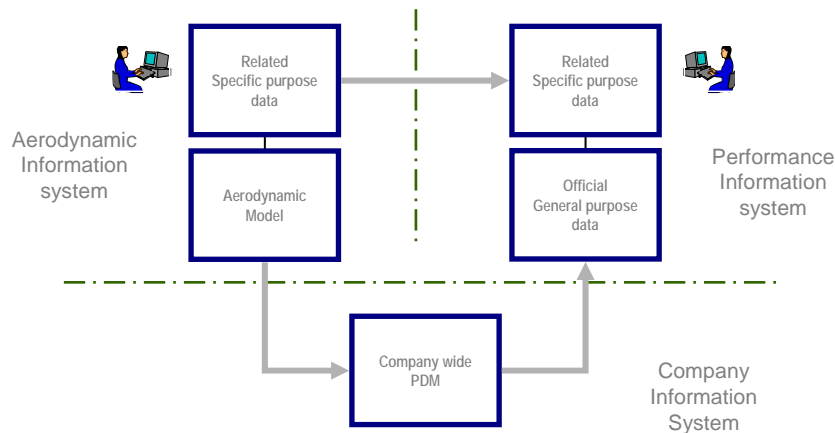


AIRBUS Use Cases Presentation

Airbus Use Case: Improving the interface between CFD and other disciplines

2. Improving the CFD data interface

1. Within a company, traceability of data exchanged between different disciplines (one PDM)



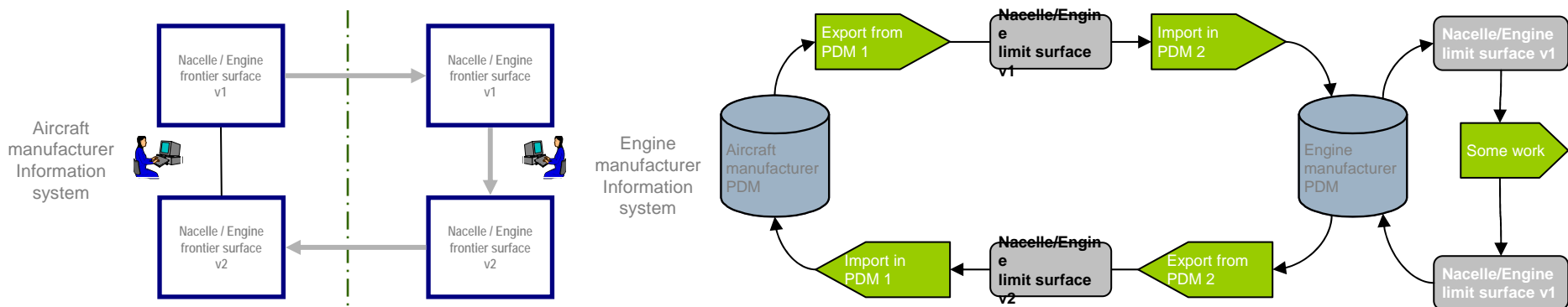


AIRBUS Use Cases Presentation

Airbus Use Case: Improving the interface between CFD and other disciplines

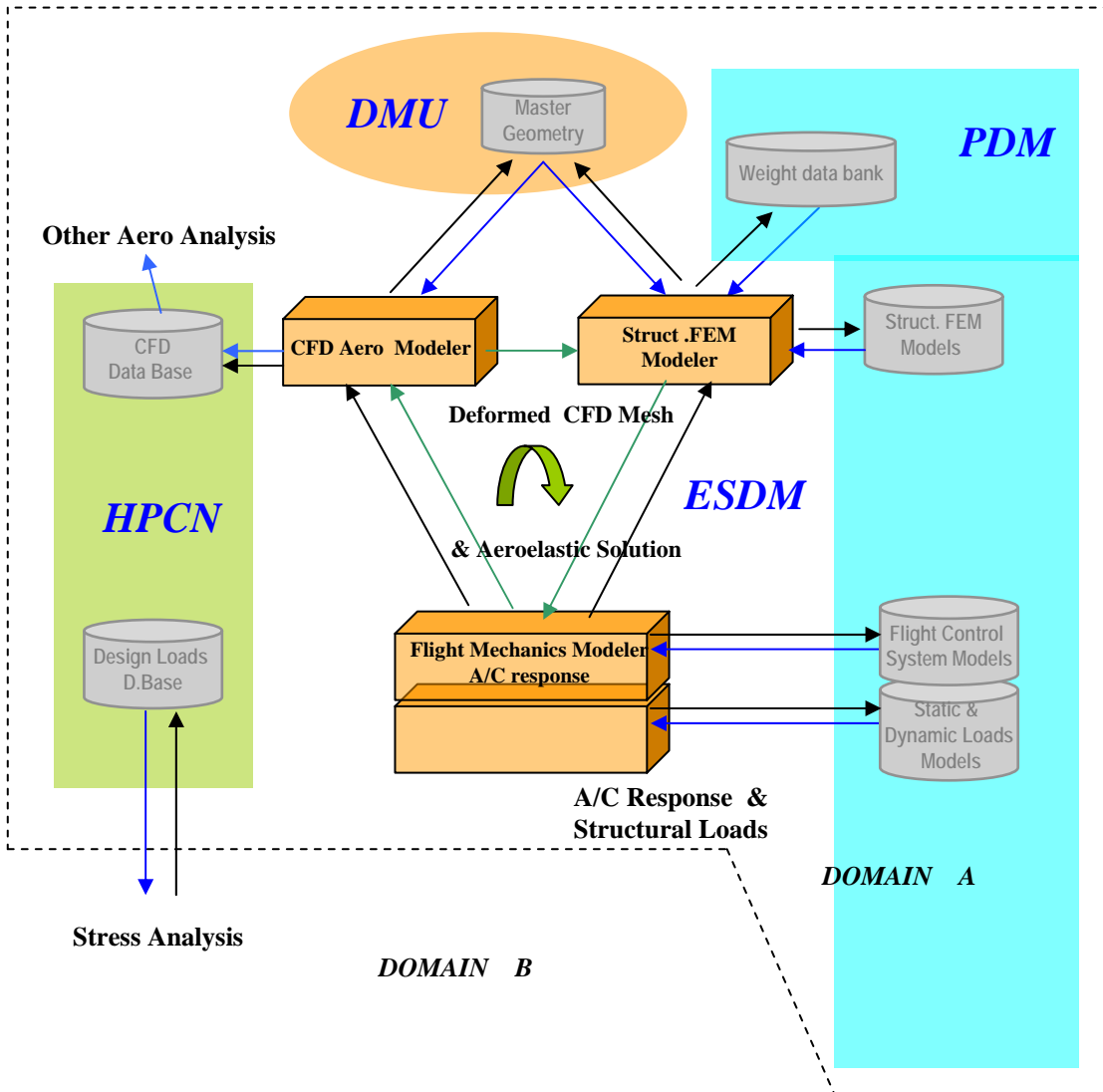
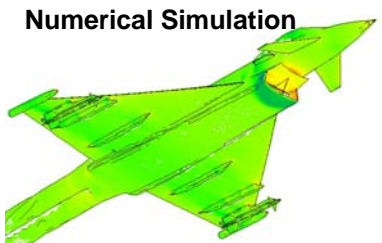
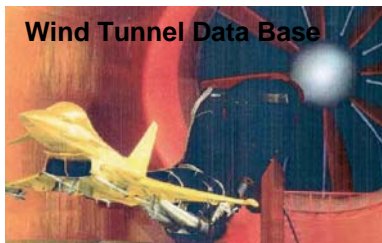
2. Improving the CFD data interface (cont'd)

2. Between two different sites, traceability of data exchanged and coming out from different PDM systems



Alenia Aeronautica Use Cases Presentation

ALA Use Case: Manoeuvre loads simulation process





Alenia Aeronautica Use Cases Presentation

ALA Use Case: Traceability of Aerodynamics-Loads- Aeroelasticity-Flight mechanics design process

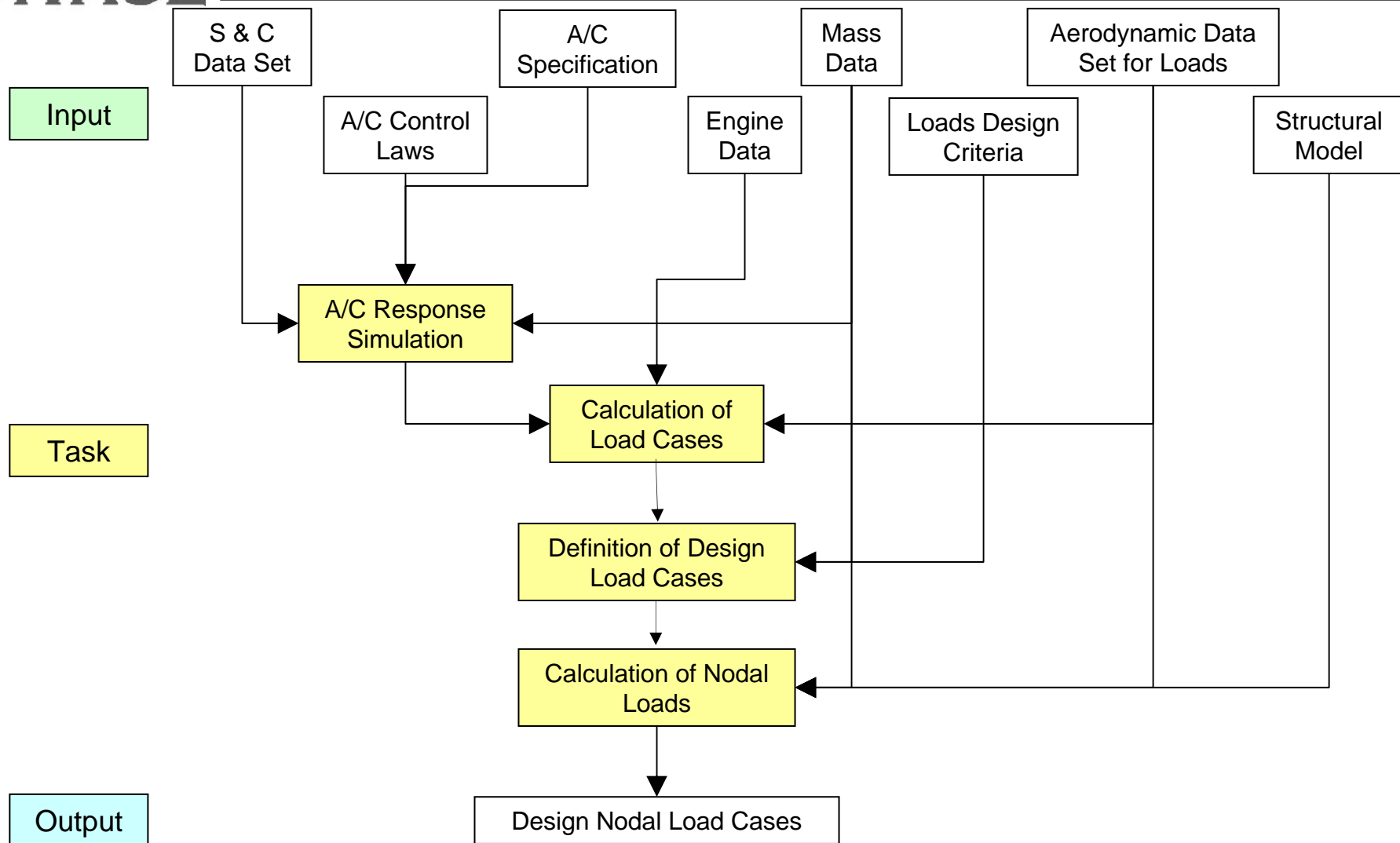
→ 3 scenariii:

1. Design nodal load cases definition

1. Traceability of the dataflow and process used to define the nodal load case mandatory to design the structure of an high performance combat A/C



Alenia Aeronautica Use Cases Presentation





Alenia Aeronautica Use Cases Presentation

ALA Use Case: Traceability of Aerodynamics-Loads- Aeroelasticity-Flight mechanics design process

2. Aircraft qualification

1. Traceability of the dataflow and process of one of the generic step of the qualification process of an high performance combat A/C



Alenia Aeronautica Use Cases Presentation

ALA Use Case: Traceability of Aerodynamics-Loads- Aeroelasticity-Flight mechanics design process

1. Numerical simulation of a manoeuvring aircraft
 1. Traceability of data coming out from the purely numerical simulation of an *A/C* that performs a given manoeuver



Alenia Aeronautica Use Cases Presentation

