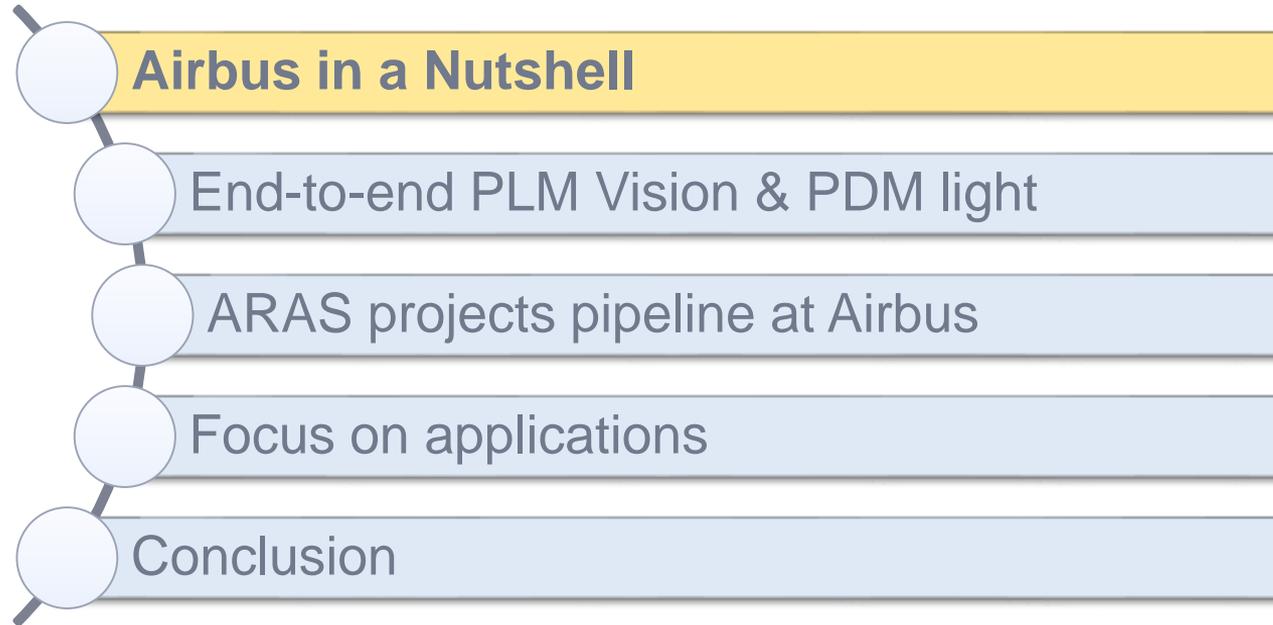


**Head of Functional Design**  
Vincent SOUMIER

**Soaring to New Heights  
with a PDM Light  
Backbone**



# Aviation drives our economy

**58m**

Jobs supported

**50.0m**

Tonnes of freight\*

**3.3bn**

Passengers\*

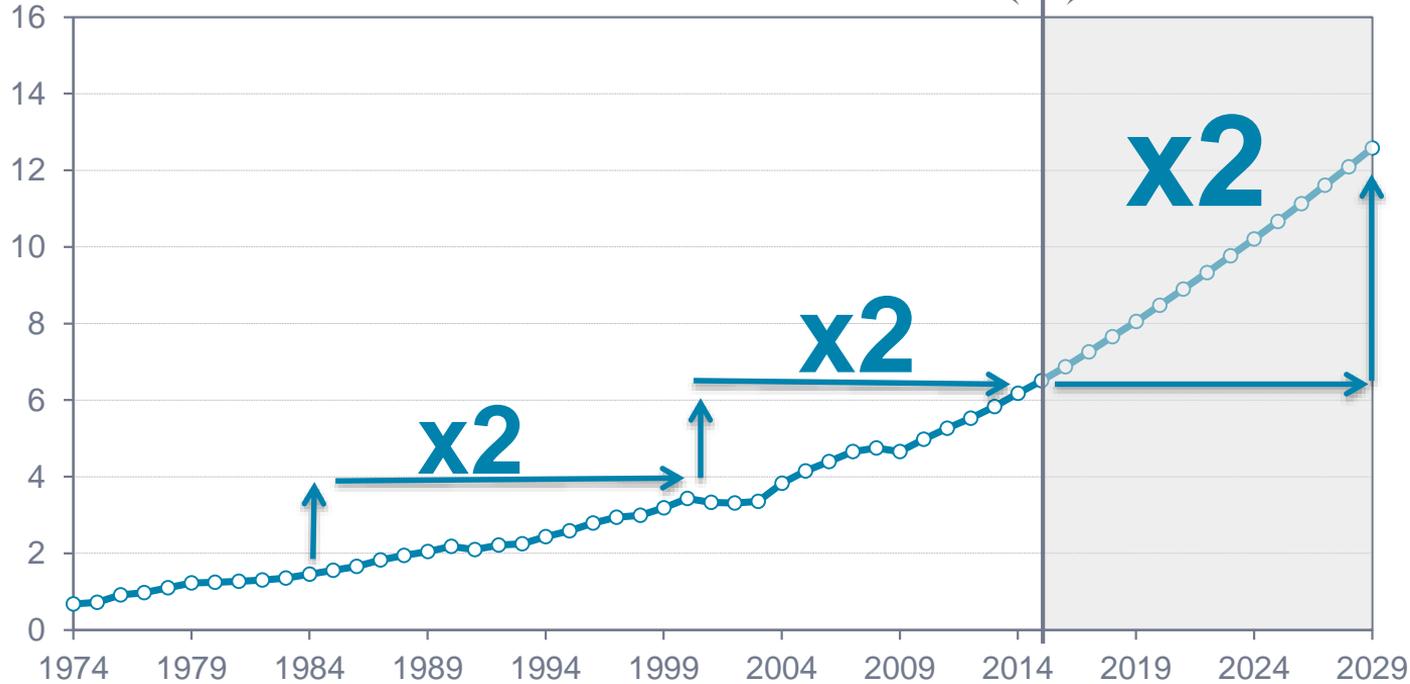
**\$2.4tr**

Global GDP

- \* Annual figures
- Source: ATAG

# World air traffic growth

World annual RPK\* (trillion)



# Market

**Air traffic forecast to double over the next 15 years**

**4.6% average annual traffic growth rate 2014-2034**

Source ICAO and 2015 Airbus Global Market Forecast

# Airbus Group

---

**136,500+**  
Total Workforce

**€1,006bn**  
Order book

**€64.5bn**  
Revenue

2015 figures





# Airbus

A global aircraft  
manufacturer  
with **55,000**  
Employees

**€45.9bn**  
Annual Revenue\*

\*2015 value

# The most global aerospace player – close to our customers worldwide

## The numbers

- 
- 11 Production sites
- 4 Assembly line locations
- 5 Training centres
- 4 Engineering centres
- 3 Customer support centres
- 10 Materials & logistics centres\*

Data to end 2014

\*Satair Group

# Airbus is a global enterprise for a global business

France



Germany



United States



UK



Spain



China



# Family

---

Airbus builds a complete range of fuel efficient aircraft



**A330 Family**



**A380 Family**



**A320 Family**



**A350 XWB**

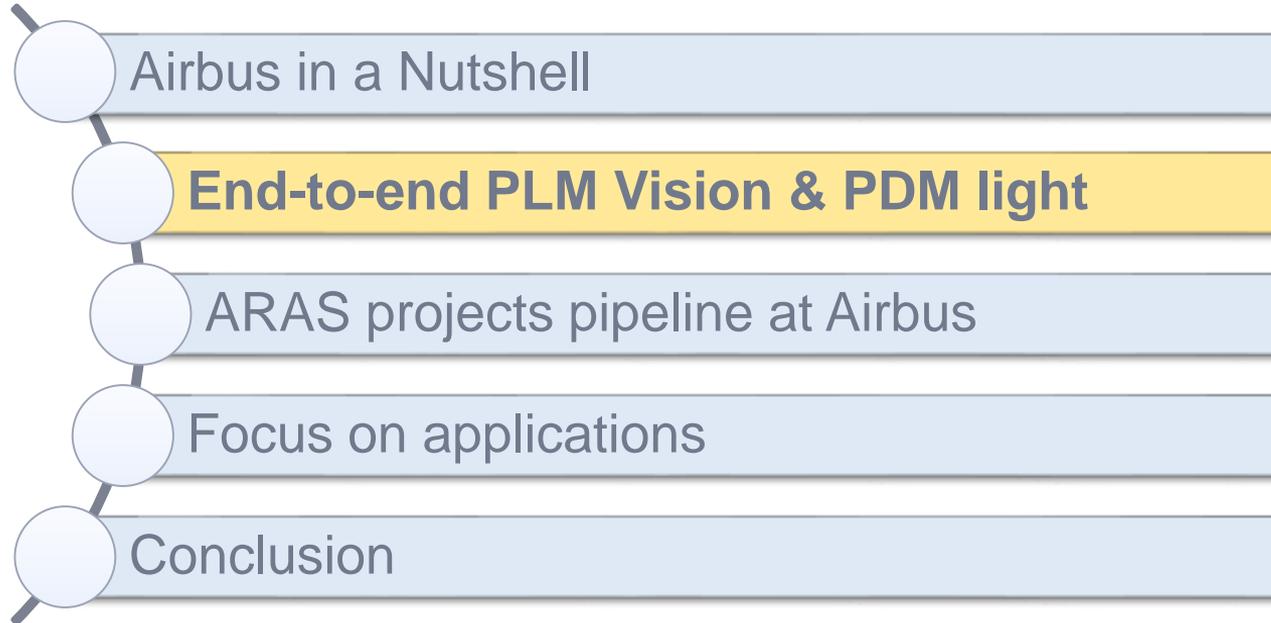
**>16,300  
orders**

**>9,500  
deliveries**

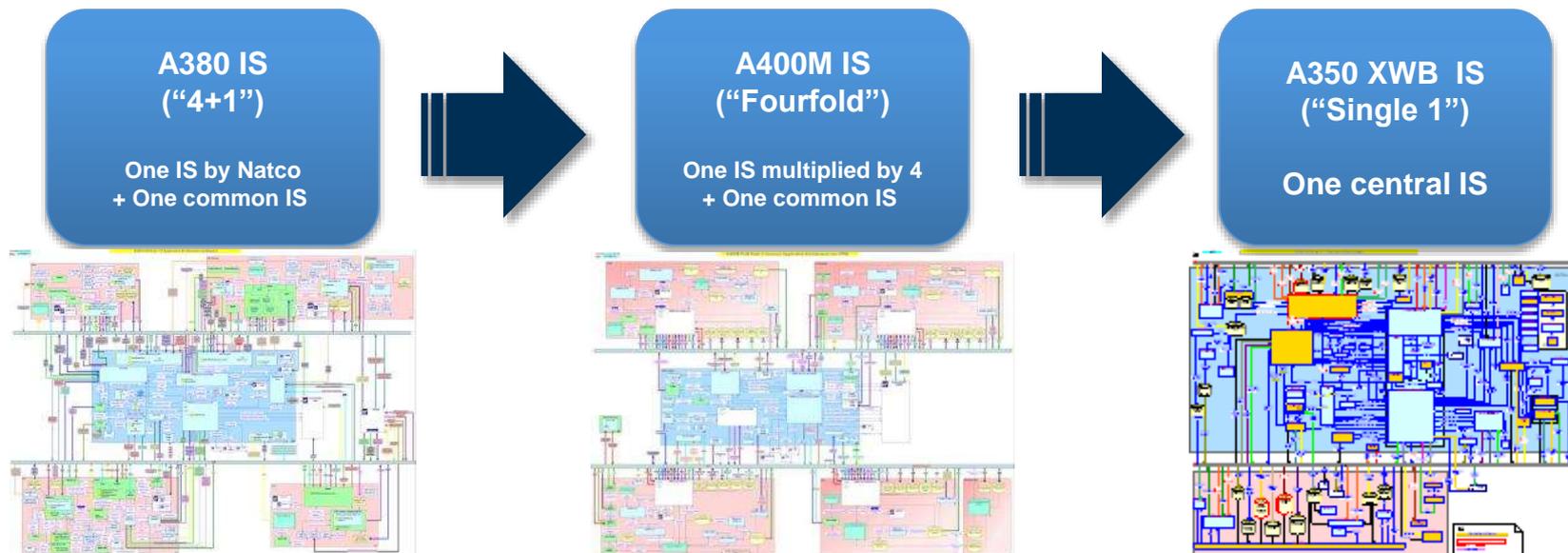
**>400  
operators**

End 2015

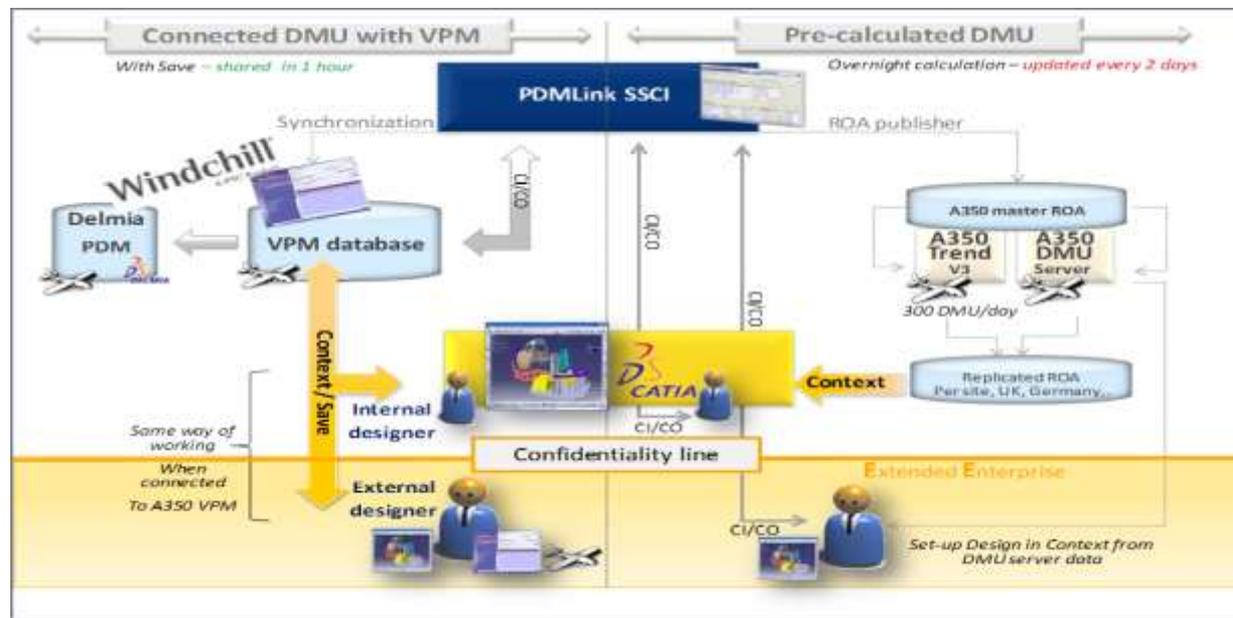
# Agenda



# PLM Information System “Ten years of evolution”



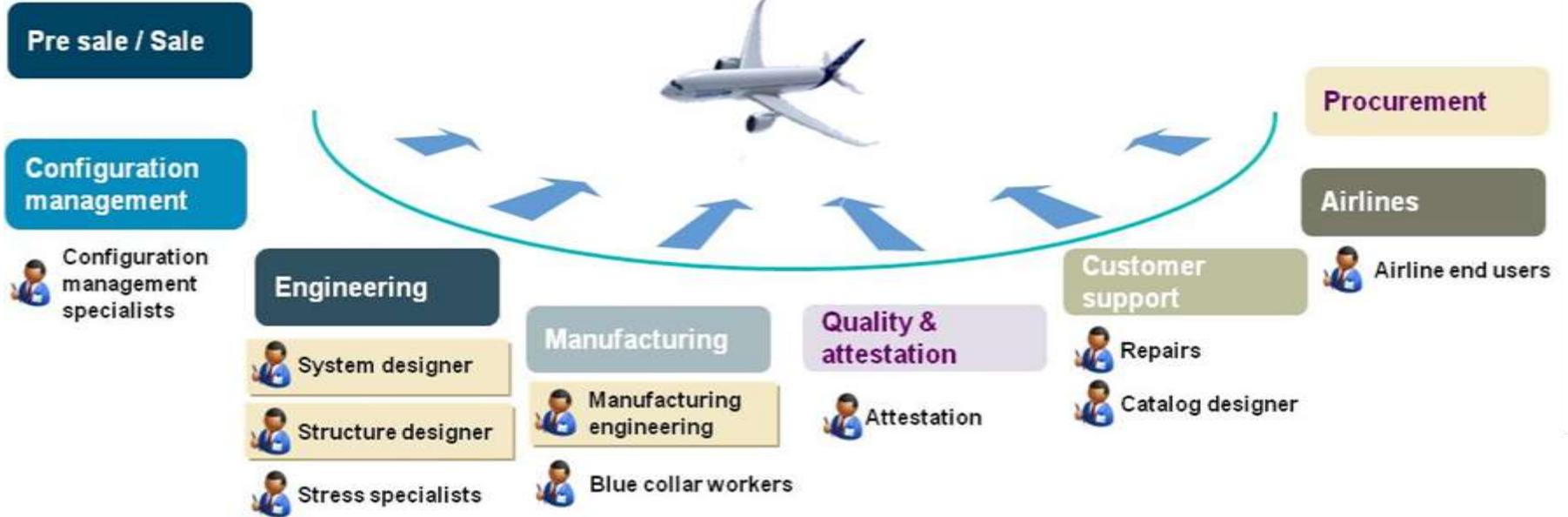
# One PLM system for A350 is a reality!



## Facts & Figures

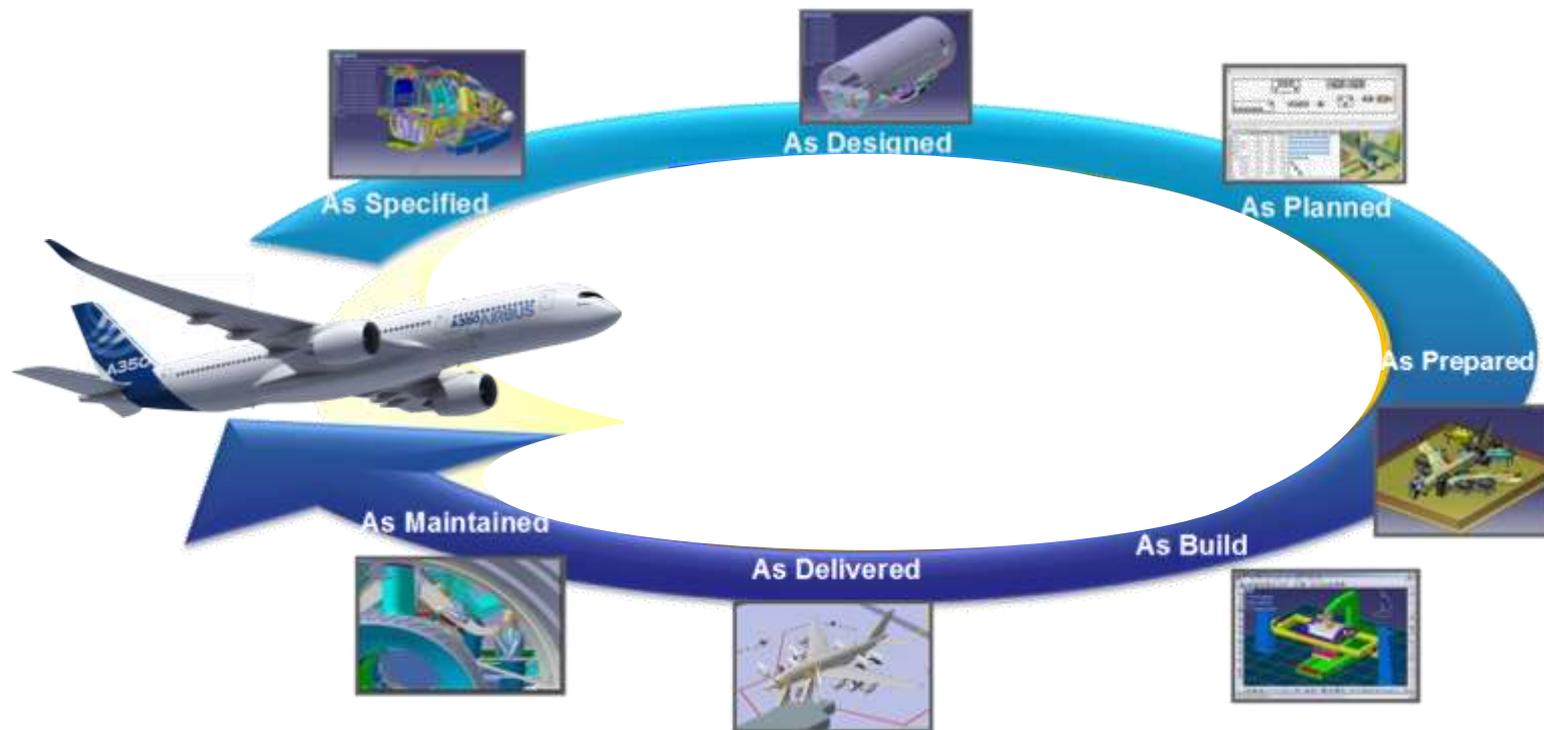
- ▶ About **100** Risk Sharing Partners connected
  - ▶ PDM Mecha : **7200** users weekly connected (20000 users declared)
  - ▶ VPM : **4000** users weekly connected
  - ▶ **85%** users in Extended Enterprise
  - ▶ **7x7 24/24** availability
  - ▶ **Data doubled** every 6 months (vs 12-18 months in other industries)
  - ▶ **>700** DMU computed daily
  - ▶ cDMU updated **every 60 min** EE included – (no exchanges anymore)
- 
- ▶ **DMU review** of full A/C
  - ▶ Extended Enterprise connected in real time through a **configured Digital Mock-up (cDMU)**
  - ▶ Design in context with **VPM**
  - ▶ **Full 3D process** (Manufacturing + Engineering)

# End to End PLM = Broadening the Digital Product beyond Engineering



# End to End PLM = Broadening the Digital Product beyond Engineering

February 2014

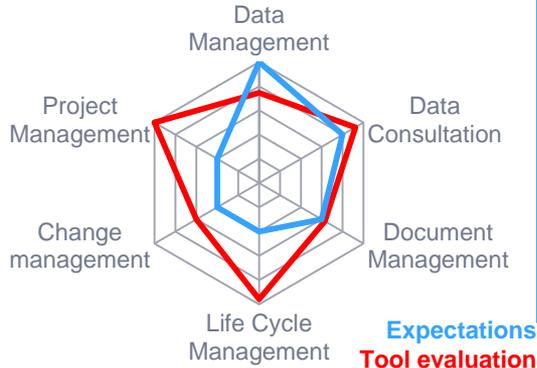


In this context, ARAS was selected to answer 'PDM Light' needs arising

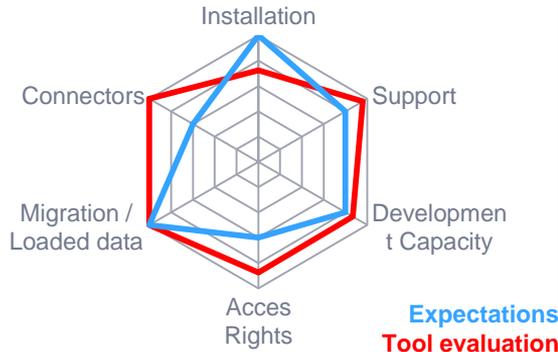
- Target:
  - Selection of a PDM platform that enables simple, agile PDM solution delivery
  - Focus on small and medium scale projects with contained functional scope
  - Product Development PLM not in the scope of 'PDM Light'

## Assessment Results – ARAS v10 OOTB without developments

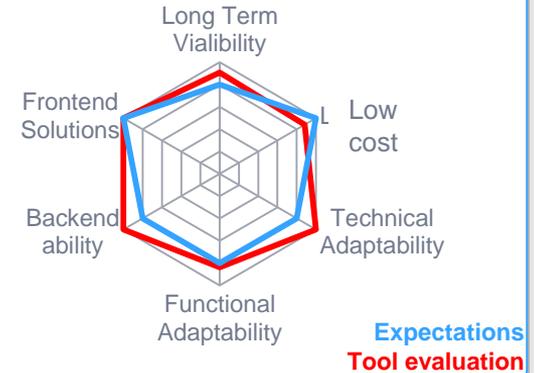
### Functional Coverage



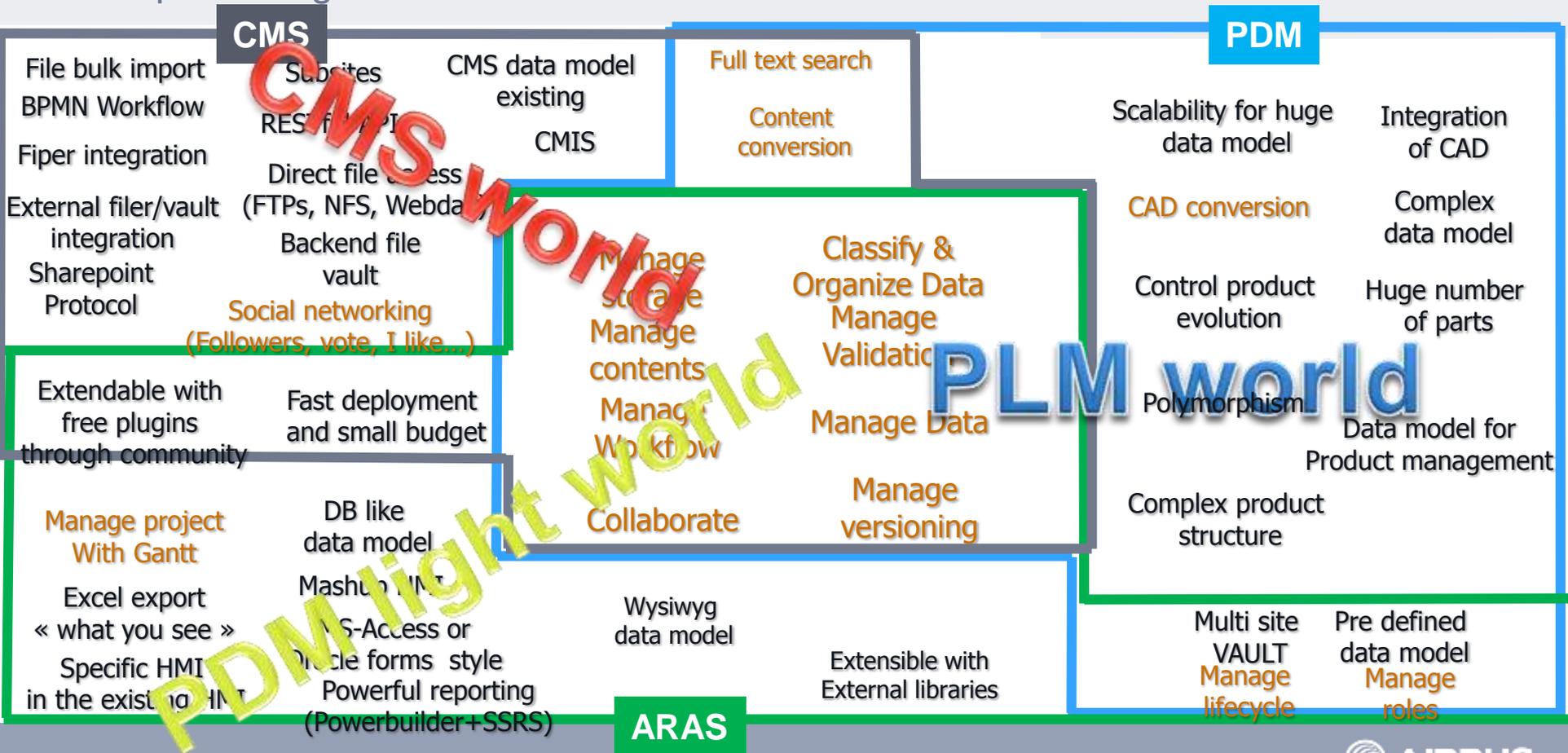
### Technical Coverage



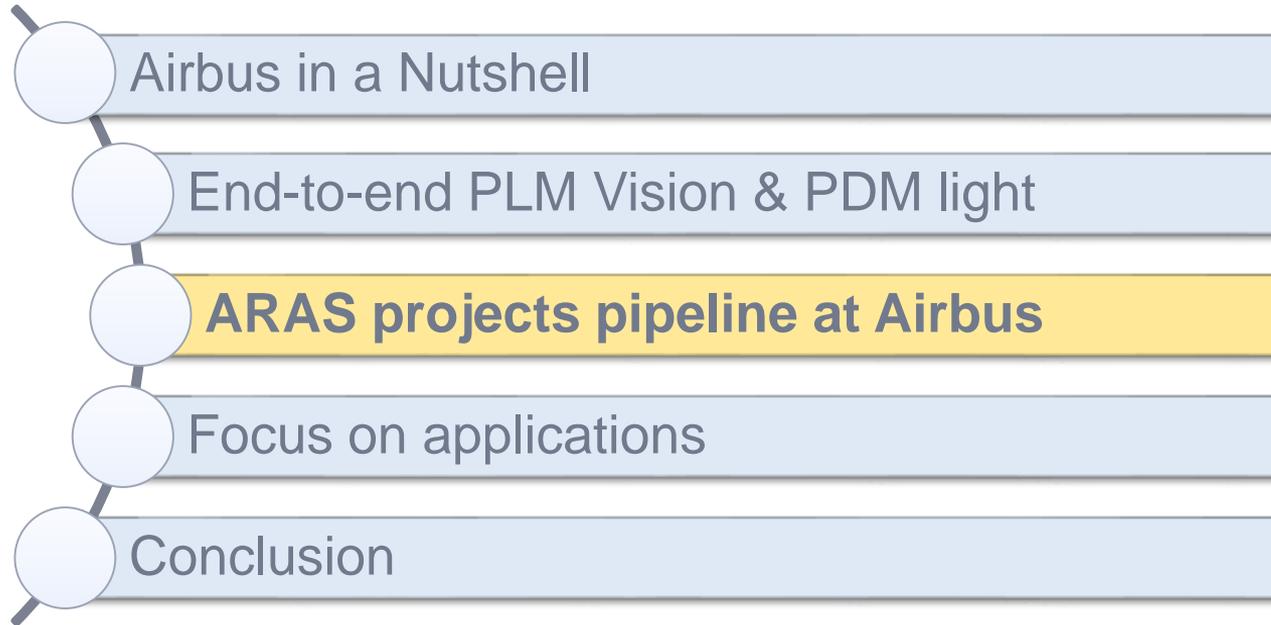
### PDM Light Ability



# ARAS positioning versus other backbones



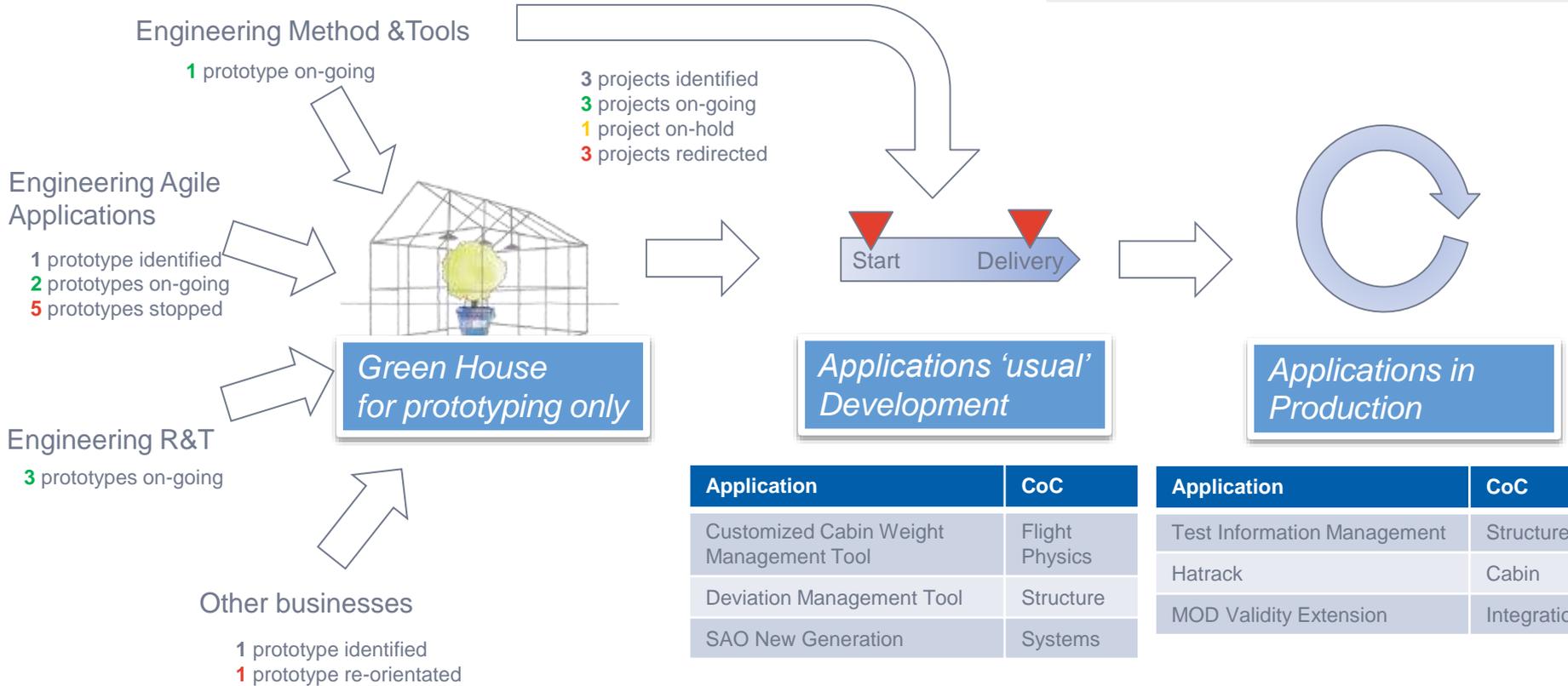
# Agenda



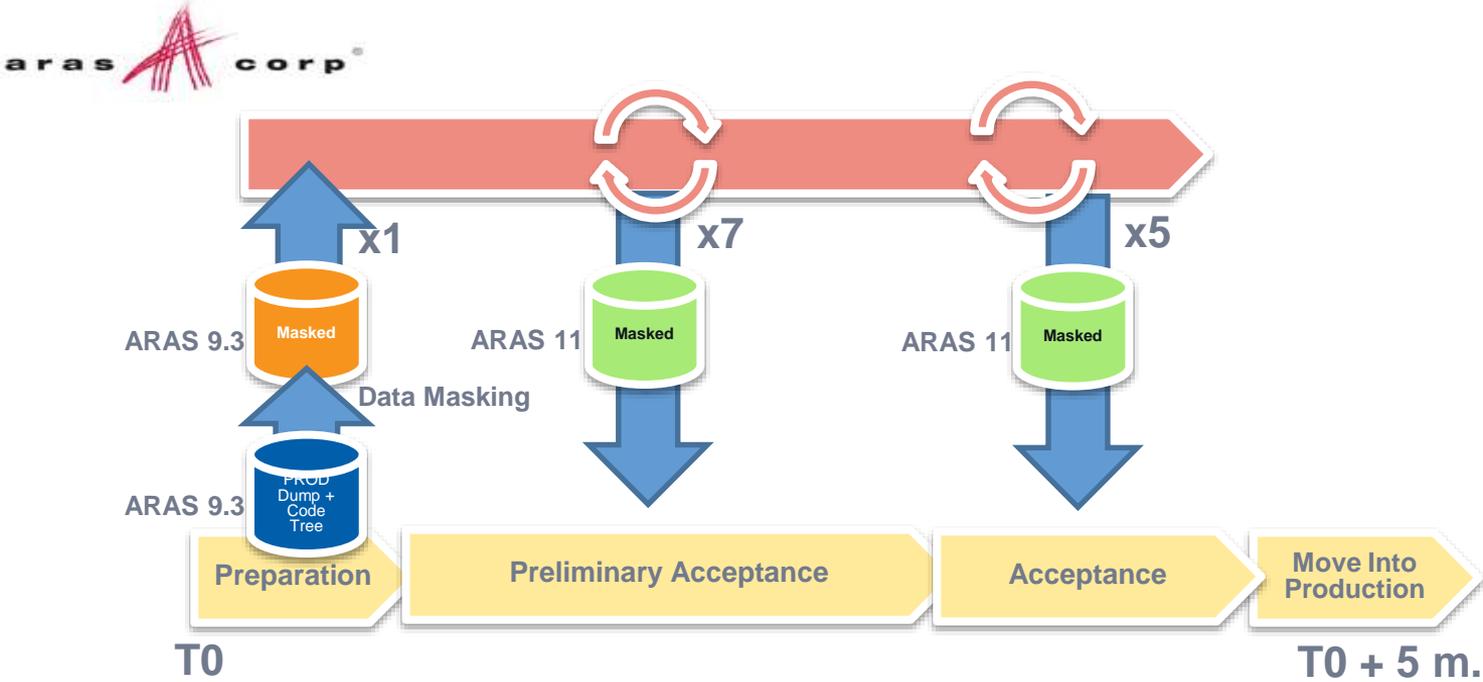
# A 'Green House' for rapid prototyping leveraging ARAS agile development capabilities



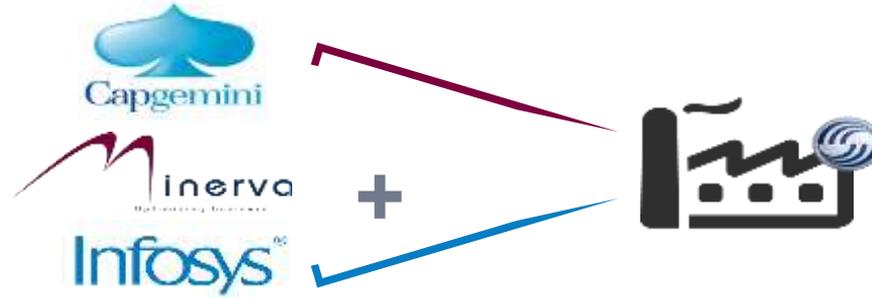
# A project pipeline from rapid prototyping to production



# Upgrade process was successfully tested



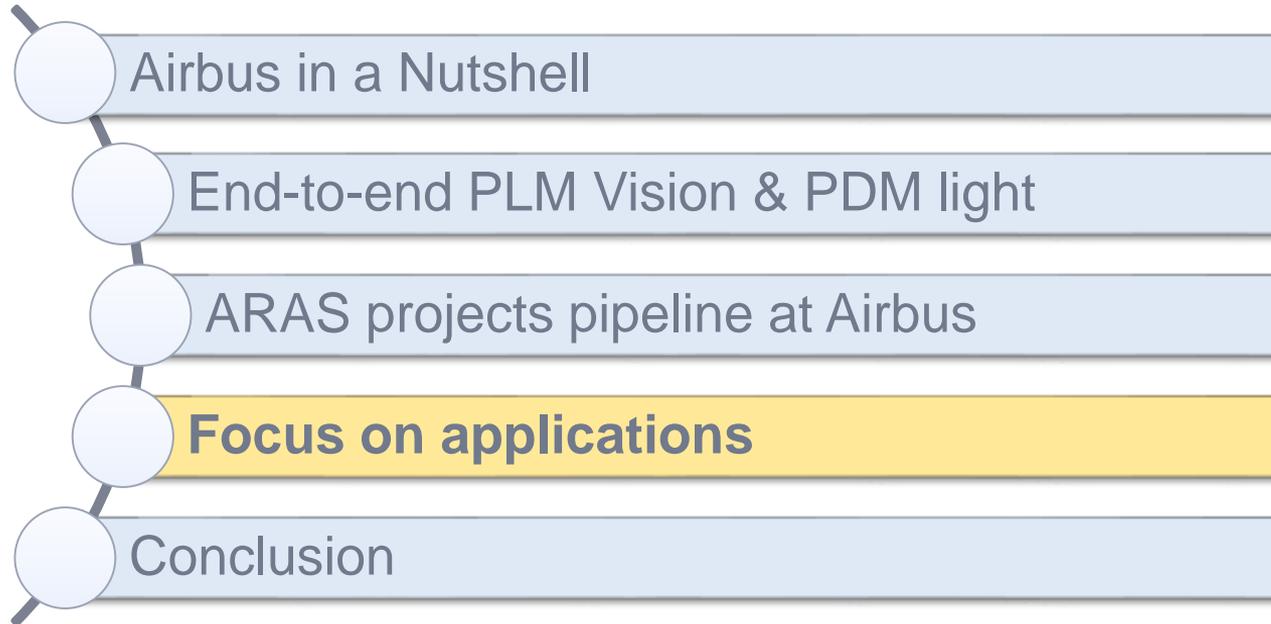
# ARAS - Supply Chain supporting Centre of Competence



**ARAS Center of Competence for AIRBUS**

-  Architecture bundle
-  Architecture + Expertise + Development + Run
-  Integration + Development + Project Management + Run

# Agenda

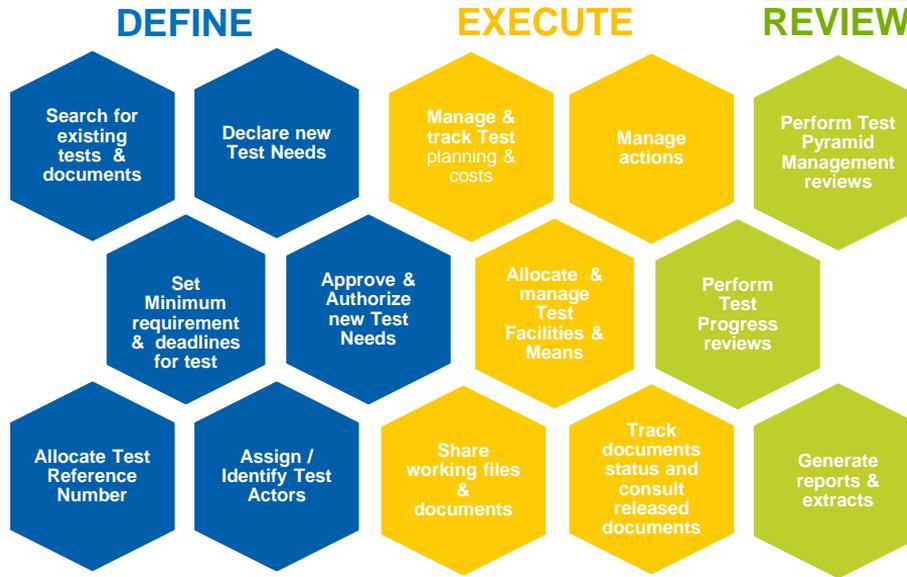


# TIM – The First ARAS based application @ Airbus

## WHAT IS TIM ?

### Test Information Management

The **Web-based** application for **Structure Tests Management**



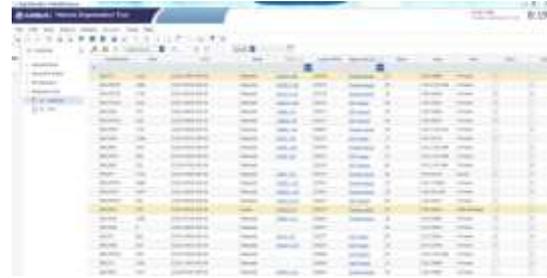
- ✓ Manage test projects End to End across Structure Test Pyramid
- ✓ Daily business data management
- ✓ KPI
- ✓ Data consistency & robustness, control & secure access to data
- ✓ Support the entire Process « Define and Perform Structure Test »
- ✓ Multi-site operation incl. our extended enterprise



# Hatrack – 2<sup>nd</sup> ARAS based solution at Airbus

## Context

- Hatrack is a tool for customizing Overhead Stowage Compartments (OSHC) for A320 - family (Single Aisle). It is used to finalize the description of overhead stowage compartment (hatrack), in order to generate specifications sent to suppliers.
- Change a **Legacy business tool** to a modern COTS solution to manage Hatrack information.
- Used **core ARAS features** to manage and define workflows for end users and implement business logic.
- Delivered **improved user experience** taking benefit of **standard ARAS features** for search and workflow management along with customized technical specification sheets required by business.
- **Business:** Cabin
- **Implementation timeline:** 8 months
- **Delivery Model:** Iterative

A screenshot of a data table within the Hatrack software. The table has multiple columns, including what appears to be a list of items or components, and several columns of numerical or text data. The table is presented in a standard grid format with alternating row colors for readability.

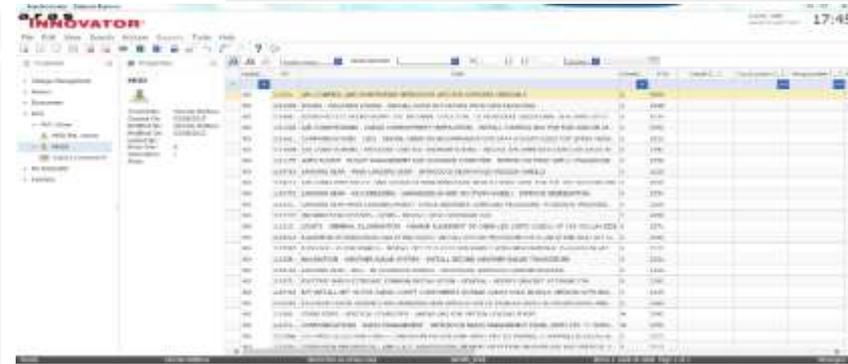
## Results

- ✓ Project delivered **on Time, on Budget, on Quality.**
- ✓ **Excellent feedback** from business for the delivered tool
- ✓ A **high performance solution** with powerful search capabilities
- ✓ High level of customization feasibility in tool **allowing business administrator to make future changes** without external support.
- ✓ **Enhanced user experience** and functionalities developed within the framework of Airbus IT standards.
- ✓ Increased **operational efficiency** through improved and faster specification process

# MVE – MOD Validity Extension – 3rd ARAS based solution

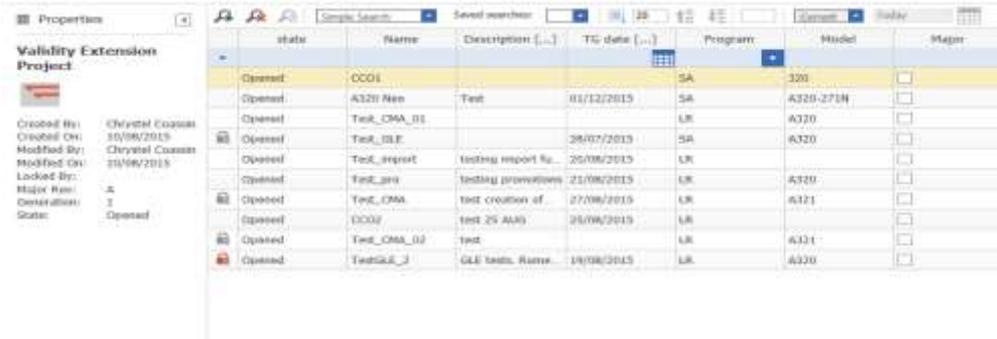
## Context

- Objective of MVE tool is to improve efficiency through complete, correct and rapid availability of the applicable requirement list and to qualify the MODs when a new extension project is launched on a program
- Used core ARAS features to manage and define workflows for end users and implement business logic.
- Providing a new solution developed on ARAS platform to replace existing excel based way of working



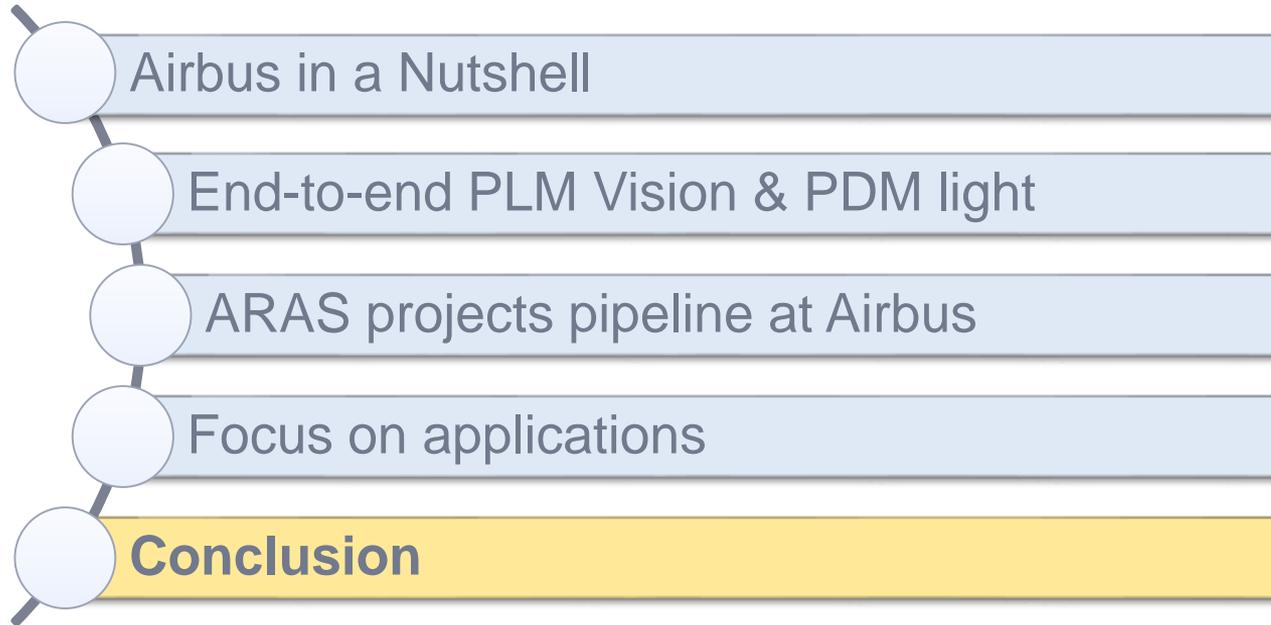
## Results

- ✓ A high performance solution with excellent search and import functionalities.
- ✓ Feasibility for business administrator to define import formats for files
- ✓ User role and Identity management to manage various actors using the application
- ✓ Customization possible in defining attributes used during import of data to tool
- ✓ Effective use of Save Search functionalities to perform customised search and sharing between various users.



state	Name	Description [...]	TC date [...]	Program	Model	Major
Opened	CC01			SA	3201	<input type="checkbox"/>
Opened	A320 Neo	Test	01/12/2015	SA	A320-271N	<input type="checkbox"/>
Opened	Test_OMA_01			LR	A320	<input type="checkbox"/>
Opened	Test_GLE	testing report file	28/07/2015	SA	A320	<input type="checkbox"/>
Opened	Test_Report	testing report file	25/08/2015	LR		<input type="checkbox"/>
Opened	Test_Sys	testing promotions	21/08/2015	LR	A320	<input type="checkbox"/>
Opened	Test_OMA	test creation of	27/08/2015	LR	A321	<input type="checkbox"/>
Opened	CC02	test 2S A320	05/08/2015	LR		<input type="checkbox"/>
Opened	Test_OMA_02	test		LR	A321	<input type="checkbox"/>
Opened	TestGLE_3	GLE tests. Ramp	19/08/2015	LR	A320	<input type="checkbox"/>

# Agenda



## Conclusion

- ARAS was selected as a **backbone to answer 'PDM Light'** needs in the Airbus application landscape
- It enables **rapid prototyping** in the '**Green House**'
- Project pipeline leverages ARAS **agile development capabilities and upgrade process**
- The needed competence, supply chain and infrastructure is now **fully set-up and in operation**
- **Positive start** and good customer feedbacks
- Upcoming projects will **confirm benefits** and will allow **exploration of further potential**

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