

**AIRBUS PROCUREMENT**  
We make it fly together.

# **Airbus Use of Nadcap**

## **EASA Workshop – May 10, 2011**

Presented by  
Pascal Blondet - PDQC

# Summary

1. What is Nadcap?
2. How Airbus is controlling Nadcap?

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- 1. What is Nadcap?**
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# What is Nadcap?

- ✓ The leading, worldwide cooperative program of major companies designed to manage a cost effective consensus approach to special processes and products and provide continual improvement within the aerospace industry by
  - Promoting and supporting common standards worldwide
  - Implementing common auditing and accreditation process
- ✓ More than 60 Subscribing Primes (50% Americas, 50% Europe)
- ✓ More than 4 000 Audits conducted per year
- ✓ More than 4200 active supplier/process accreditations
- ✓ About 80 Auditors (FTE)

# Nadcap Commodities

## ◆ Special Processes

- Nondestructive Testing (NDT)
- Metallic Material Testing Laboratories (MTL)
- Non Metallic Material Testing Laboratories (NMMT)
- Heat Treating (HT)
- Coatings (CT)
- Chemical Processing (CP)
- Welding (WLD)
- Nonconventional Machining & Surface Enhancement (NMSE)

## ◆ Systems & Products including Special Processes

- Sealants (SLT)
- Distributors (DIST)
- Aerospace Quality Management Systems (AQS)
- Fluid Distribution Standards (FLU)
- Elastomer Seals (SEALS)
- Composites (COMP)
- Electronics (ETG)

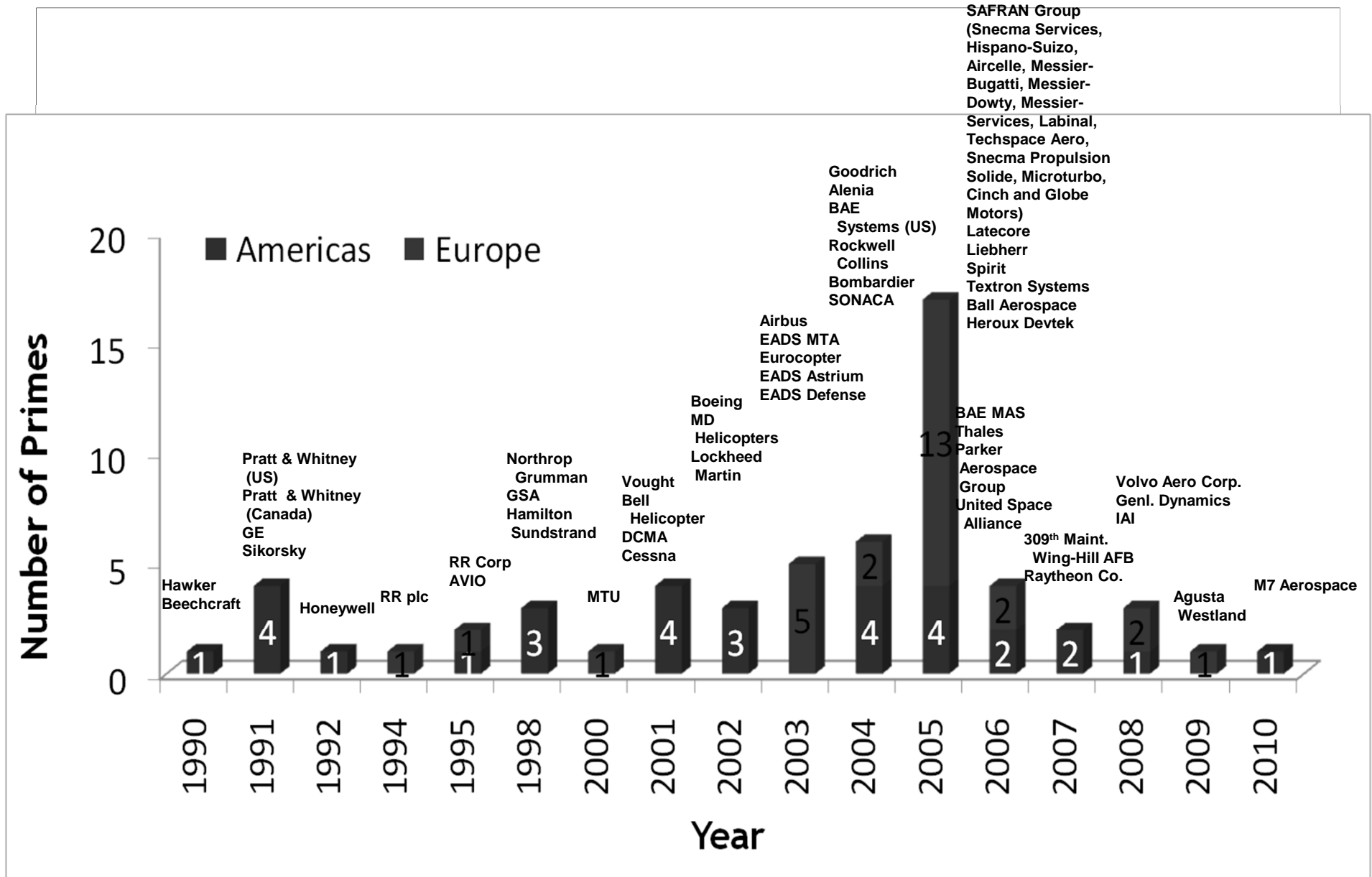
- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | <b>Already mandated by Airbus</b>                               |
| <input type="checkbox"/> | <b>Airbus engagement in Nadcap TGs<br/>but not yet mandated</b> |
| <input type="checkbox"/> | <b>No Airbus engagement to date</b>                             |

# Nadcap Members

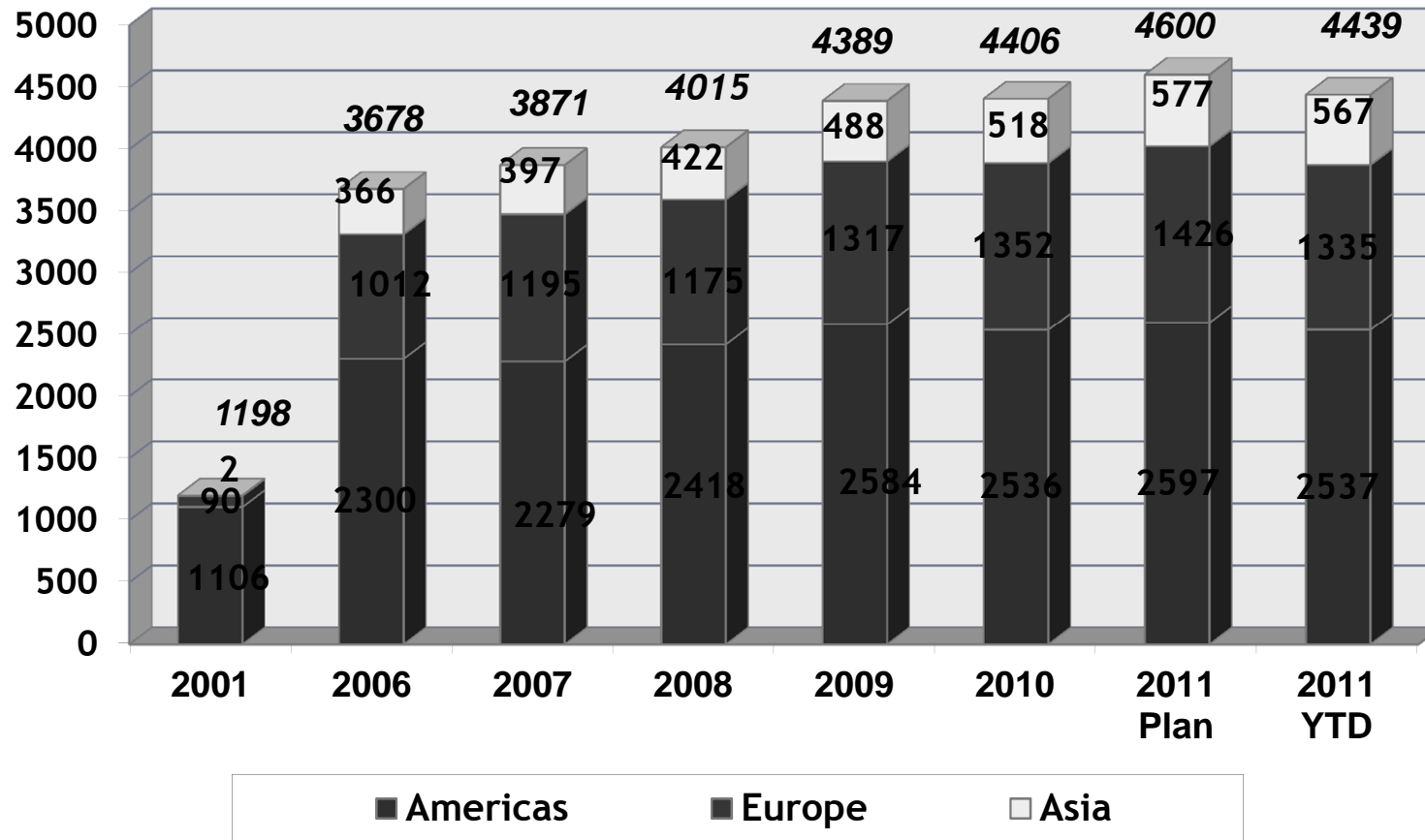
- 309th Maintenance Wing-Hill AFB
- AgustaWestland
- Air Force
- Alenia Aeronautica SpA
- Avio SpA
- BAE Systems – Military Air Solutions (MAS)
- BAE Systems
- Ball Aerospace & Technology Corporation
- The Boeing Company
- Bombardier Inc.
- Defense Contract Management Agency (DCMA)
- EADS Corporation
  - Airbus
  - Airbus Military
  - Eurocopter
  - Astrium
  - Cassidian
  - Aerolia
  - Premium Aerotech
- GE Aviation
- General Dynamics
- General Services Administration (GSA)
- Goodrich Corporation
- Hawker Beechcraft Corporation
- Heroux Devtek Inc. (Landing Gear Division)
- Honeywell Aerospace
- Israel Aircraft Industries
- Latecoere
- Liebherr-Aerospace SAS
- Lockheed Martin Corporation
- M7 Aerospace LP
- MTU Aero Engines GmbH
- Northrop Grumman Corporation
- Parker Aerospace Group
- Raytheon Company
- Rockwell Collins, Inc.
- Rolls-Royce Corporation
- Rolls-Royce PLC
- SAFRAN Group
- Sonaca
- Spirit AeroSystems
- Textron Inc.
  - Bell Helicopter
  - Cessna Aircraft Company
  - Textron Systems
- Thales
- Triumph Group Inc.
- United Technologies Corporation
  - Hamilton Sundstrand
  - Pratt & Whitney
  - Pratt & Whitney Canada
  - Sikorsky Aircraft
- United Space Alliance
- Volvo Aero



# Timeline of Primes (date of entry in Nadcap)



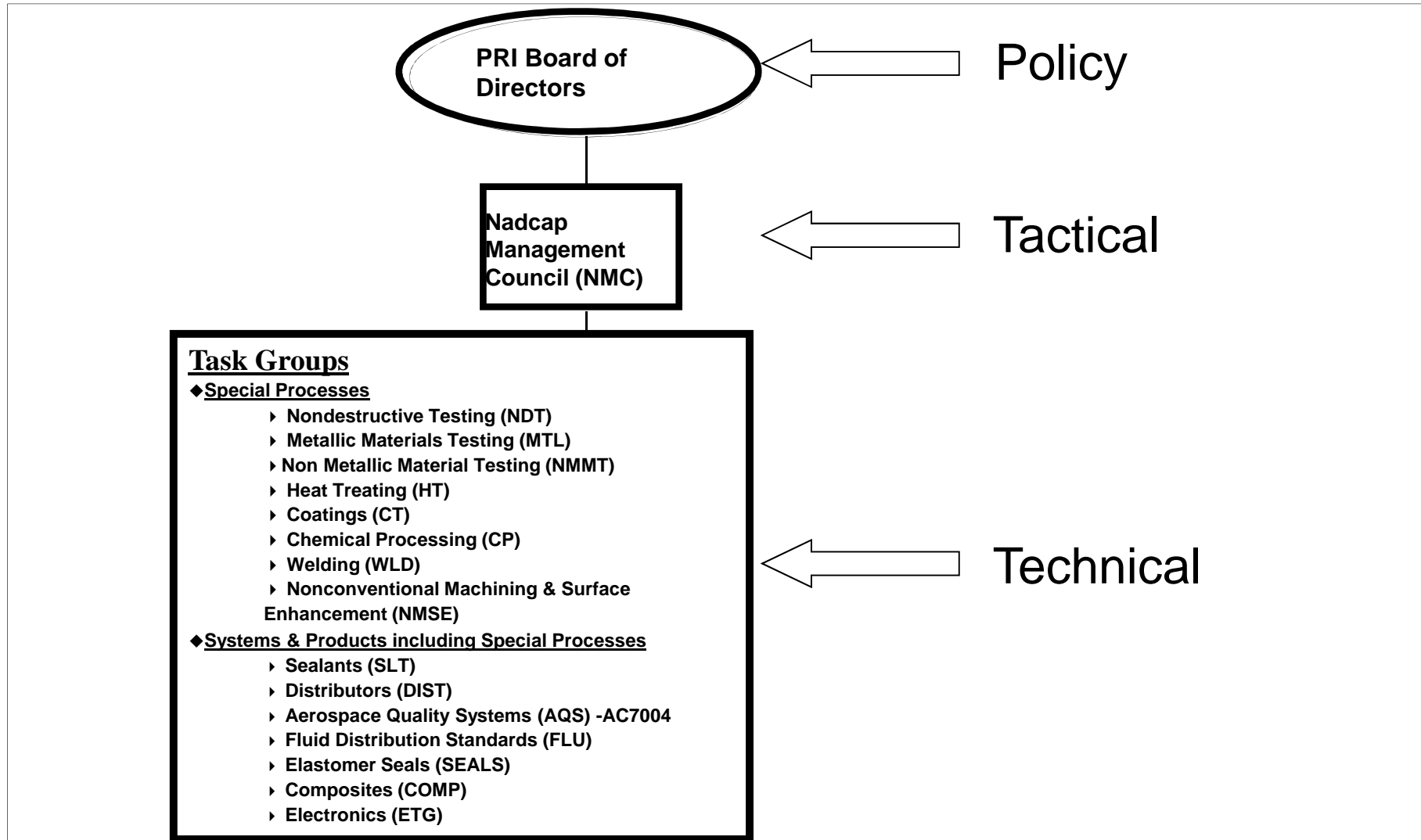
# Number of Audits



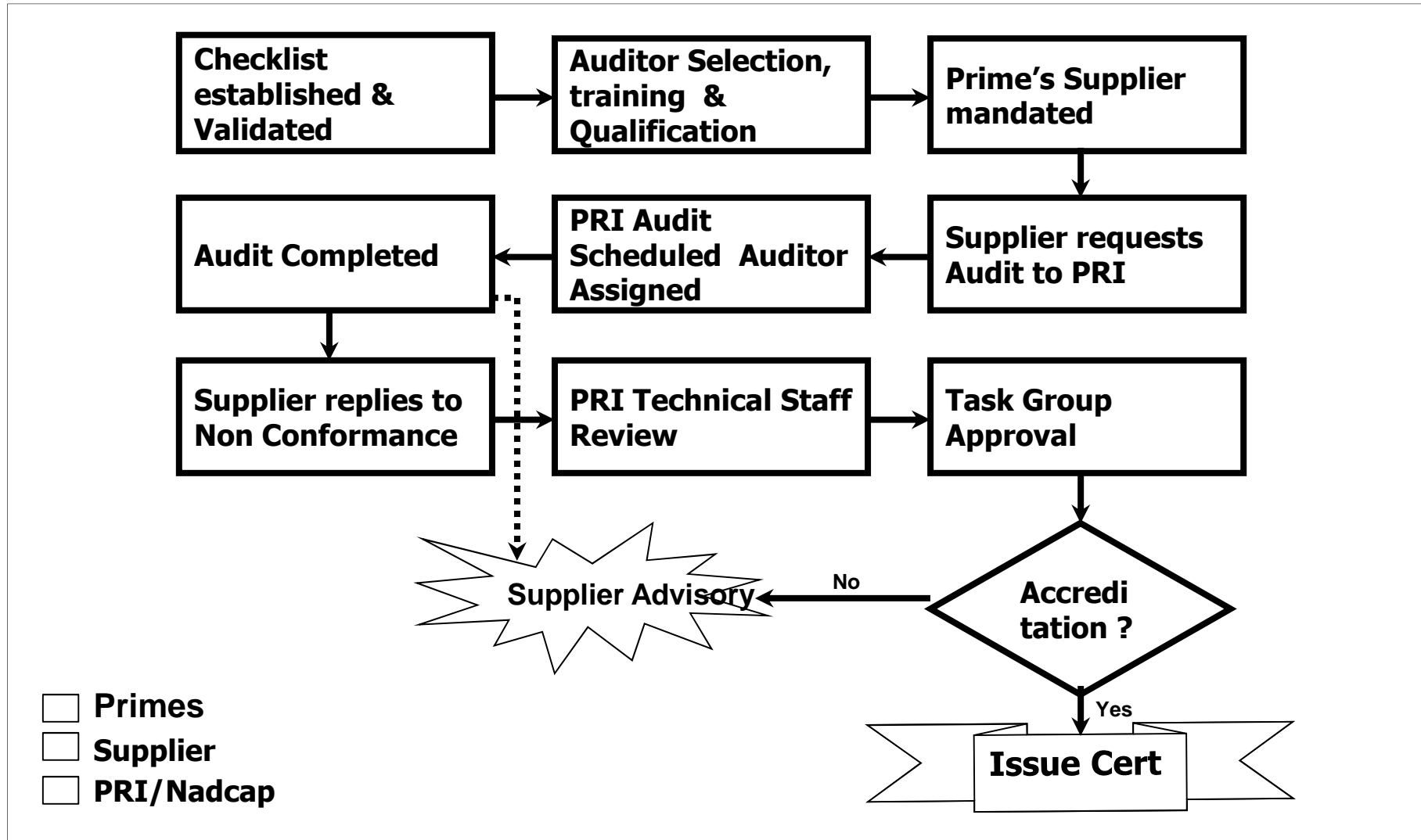
As of February 4, 2011



# Nadcap Structure

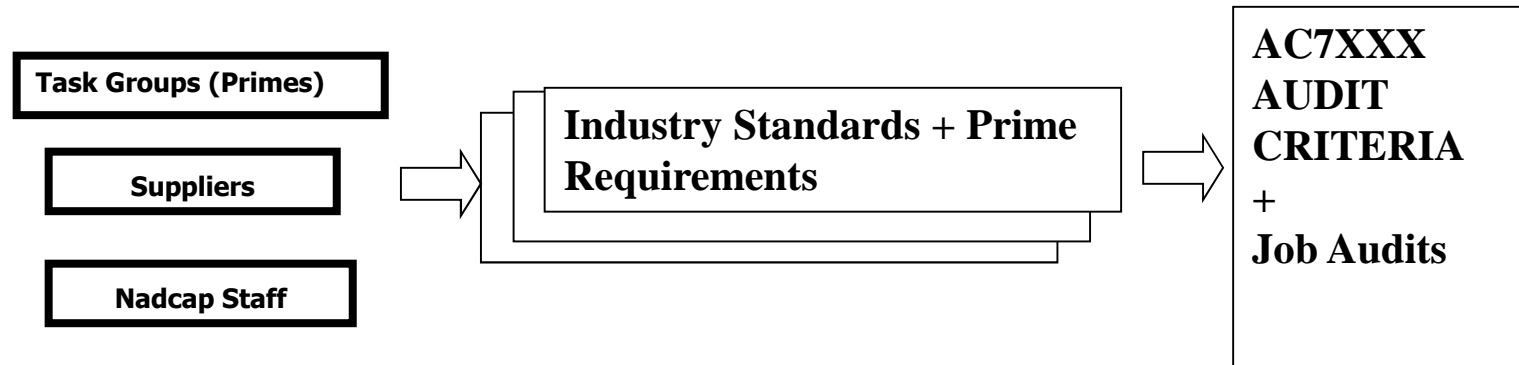


# Nadcap Accreditation Process



# Nadcap Audit Checklists

- Primes representatives in Task Groups are responsible to identify their requirements to be integrated in the Nadcap Checklist.



- Requirements are periodically reviewed, revised and balloted through Nadcap meetings.
- Nadcap audit Checklists include:
  - Baseline Checklist
  - “Supplementals” (Primes specific requirements)

# Summary

1. What is Nadcap?
- 2. How Airbus is controlling Nadcap?**

# Nadcap Special Process Accreditation

- As part of its engagement in Nadcap, Airbus:
  - Recognizes certificates granted by **Nadcap**
  - Mandates its Suppliers to:
    - **Gain and maintain Nadcap accreditation**
    - **Flow down** this mandate to their sub-tiers as applicable
  - Participates in **Nadcap Management and Oversight** activities

**Airbus performs the initial qualification of Suppliers' Special Process**

**During the on-going surveillance phase, Airbus will conduct/repeat SP assessments only in case of poor performance or doubt about SP effectiveness**

# Why is Airbus using Nadcap ?

- Nadcap is the single mature structure, worldwide recognized, to respond to Airbus requirements.
- Nadcap audit process is technical and in-depth, complementary to Quality Management System audits.
- Nadcap auditors are process experts in their technologies.
- Nadcap provides overall industry cost reductions (Airbus and suppliers) by:
  - Improving Product Quality and increasing Productivity,
  - Eradicating redundant audits at Suppliers,
  - Allowing Airbus to focus resources on Airbus specific issues and concerns based on supplier risk assessments.

# Airbus Strategy & Objectives on Special Processes

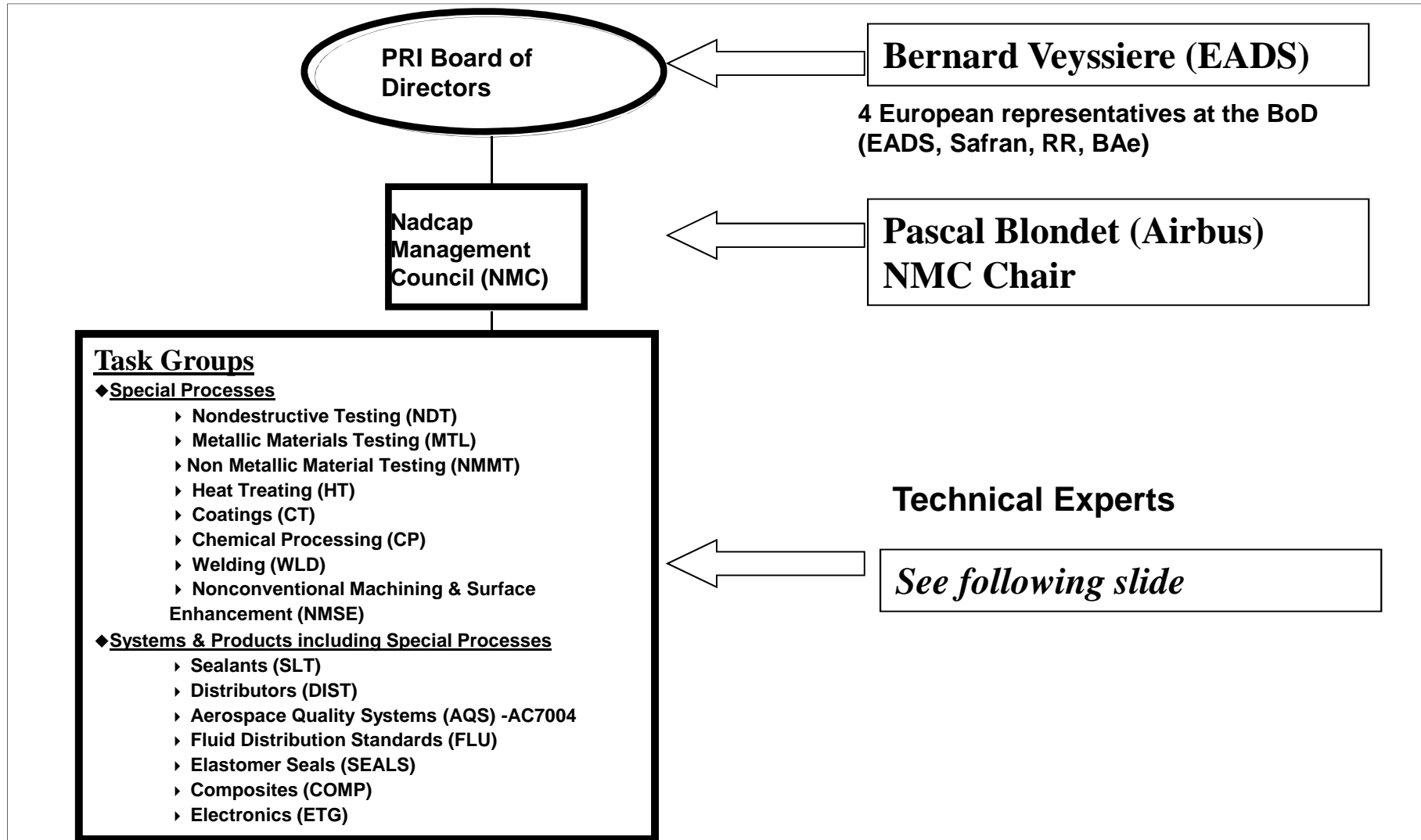
## Airbus Strategy

- Work together as one Airbus Company and with the Aerospace Industry (including suppliers) to continuously improve the oversight of Suppliers' Special Processes.
- Initial Qualification of Suppliers' Special Process remains an Airbus activity.

## Airbus Objectives

- Harmonise Specifications on Special Processes across Airbus.
- Build International Standard on Special Processes that include Airbus requirements.
- Implement a robust oversight of Suppliers' Special Processes (rigorous and systematic).
- Continuously improve Suppliers Special Processes reliability and prevent escape.
- Provide overall industry cost reductions (Airbus and suppliers).

# How Airbus is controlling Nadcap?



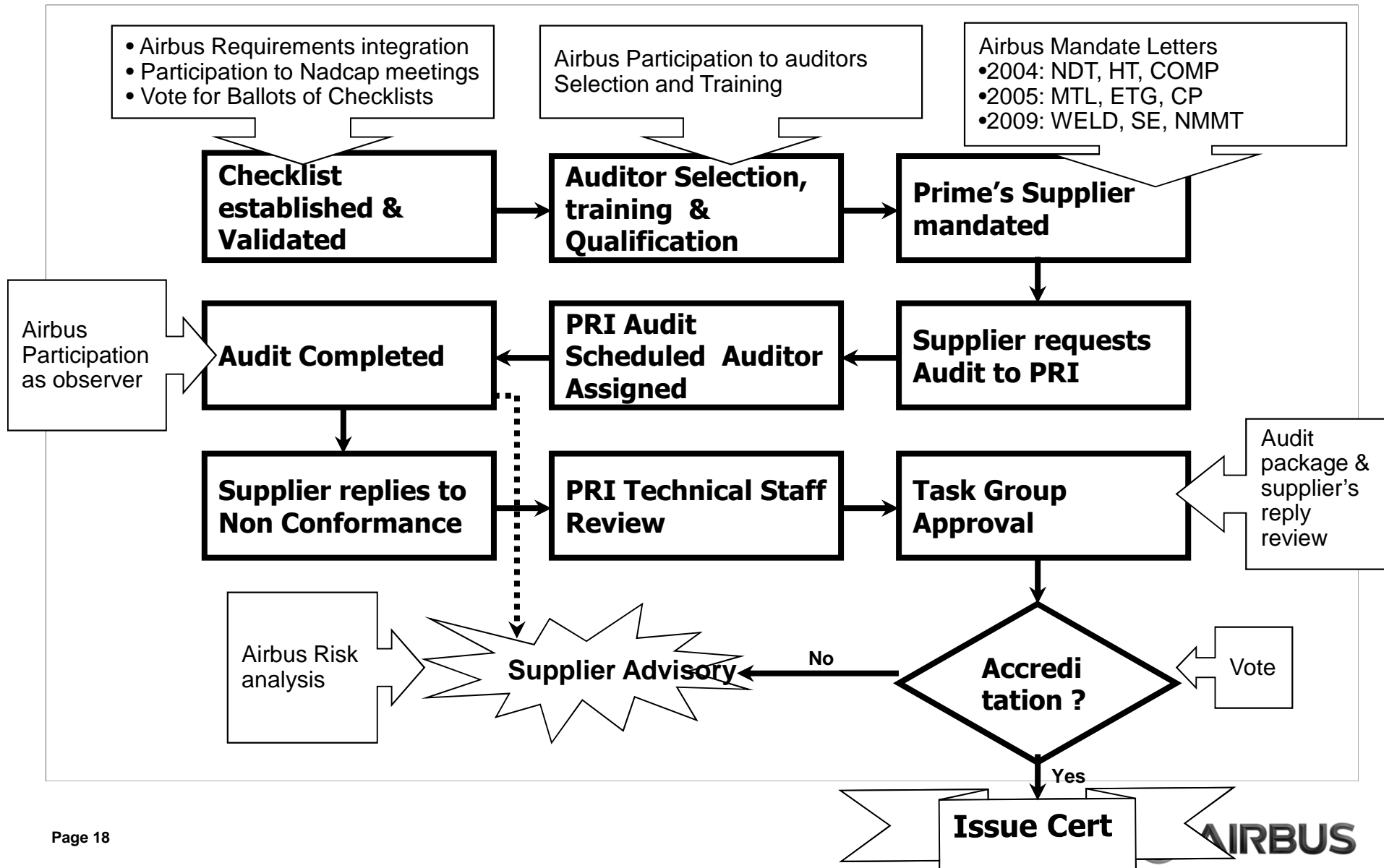


# How Airbus is controlling Nadcap?

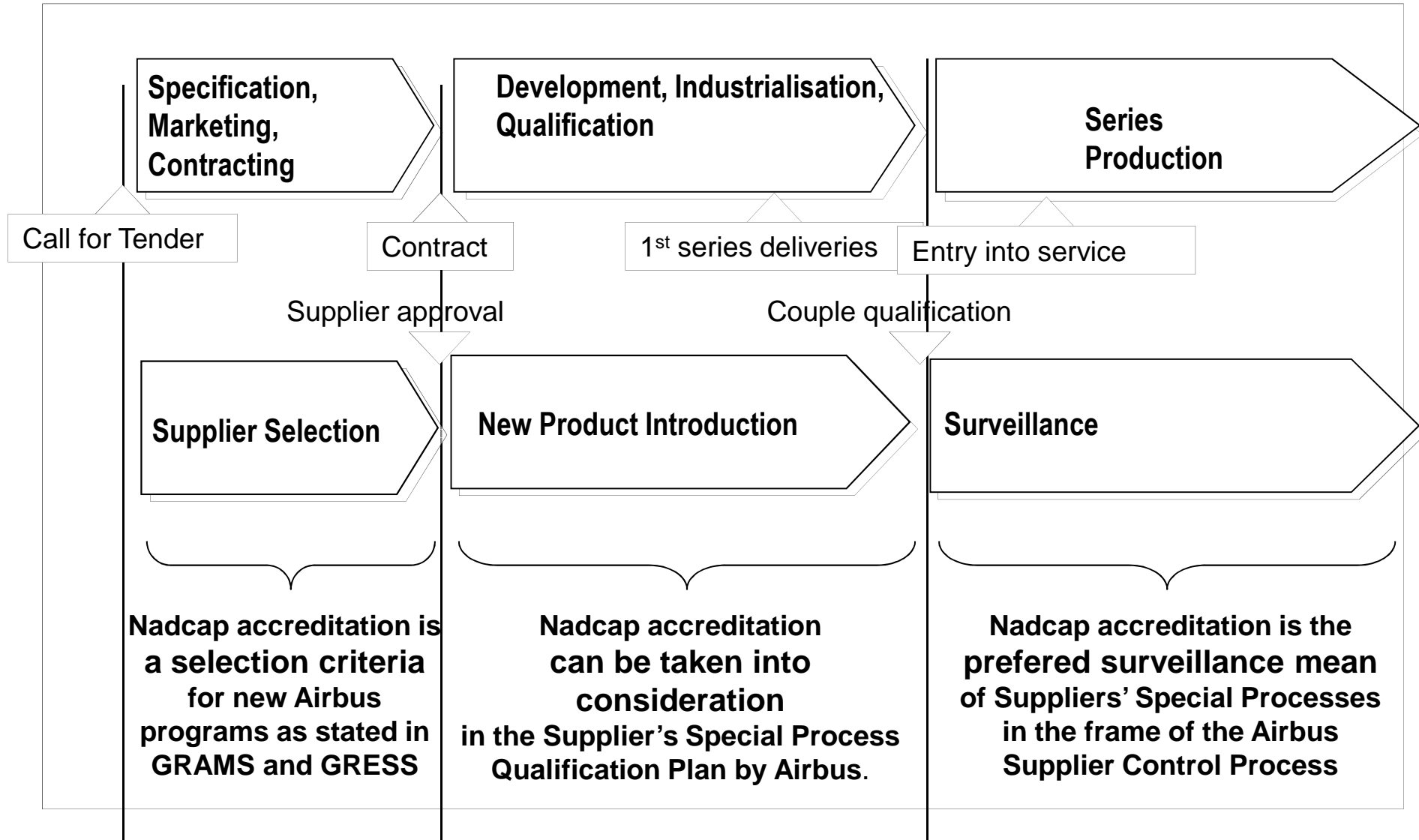
## Airbus representatives in Nadcap Task Groups

<b>HT</b>	<b>Alex RICHEZ Peter X EDWARDS</b>	<b>MTL NMMT</b>	<b>Muriel AUZANNE Uta DIETRICH</b>
<b>NDT</b>	<b>Tony WARREN Holger SPECKMANN</b>	<b>ETG</b>	<b>Philippe PONS Nathalie LE TRAN</b>
<b>COMP</b>	<b>Peter ATWELL David CONSTABLE</b>	<b>WELD</b>	<b>Holger KRUEGER Peter X EDWARDS</b>
<b>CP</b>	<b>Peter DROSTE John E FERGUSON</b>	<b>NMSE</b>	<b>Paul GRAHAM Peter X EDWARDS</b>

# How Airbus is controlling Nadcap?



# Nadcap in Airbus Procurement Process AP2131-5 and AP5119

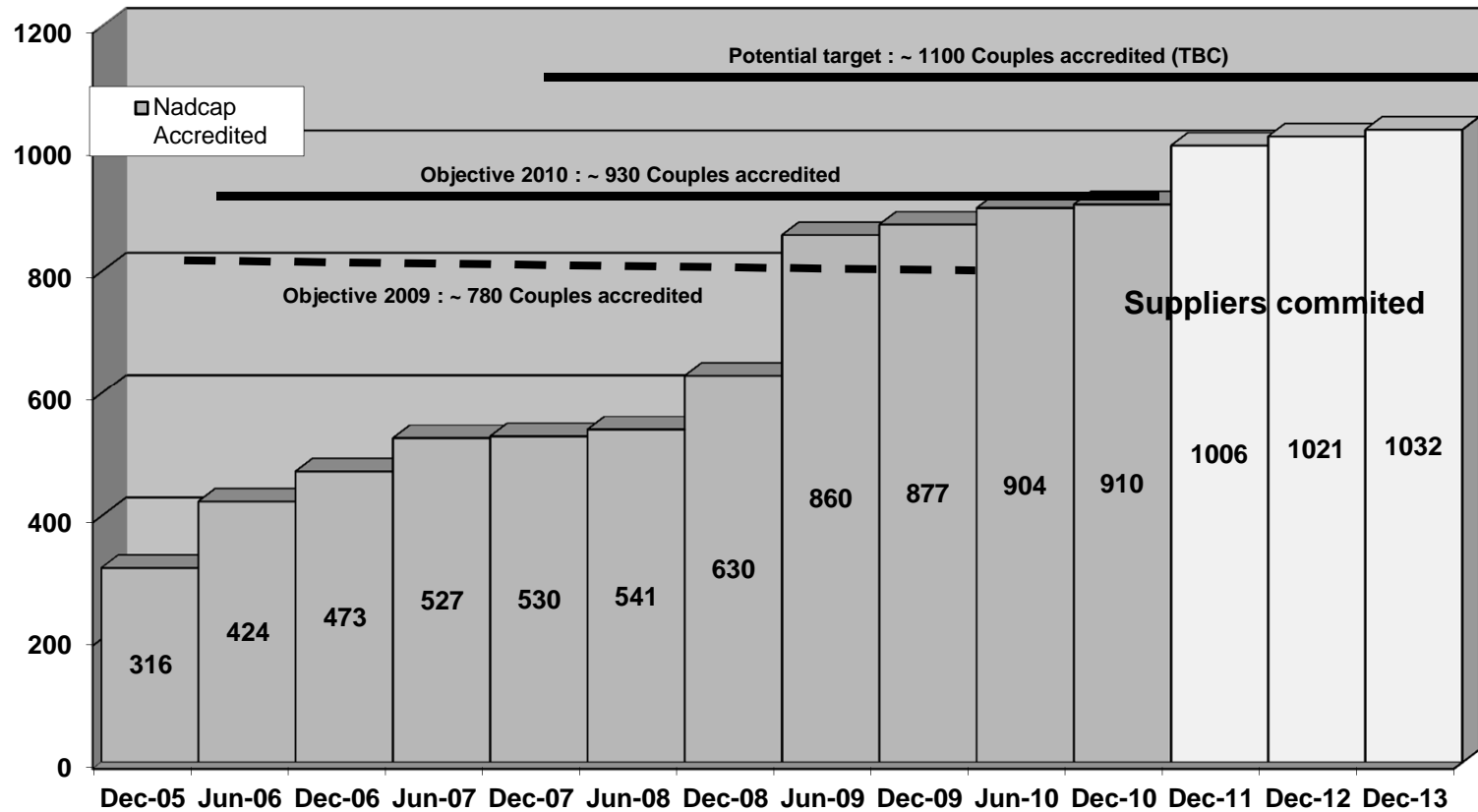


# Airbus Policy and Nadcap deployment

- Airbus Policy regarding Nadcap Accreditation is given in:
  - GRAMS: General Requirements for Aerostructure & Material Suppliers,
  - GRESS: General Requirements for Equipment & System Suppliers.
  
- 2004: Airbus mandate for
  - NDT (Non Destructive Testing)
  - HT (Heat Treatment)
  - COMP (Composites)
  
- 2005: Airbus mandate for
  - MTL (Metallic Material Testing)
  - ETG (Electronics)
  - CP (Chemical Processes)
  
- 2009: Airbus mandate for
  - WELD (Welding)
  - SE (Surface Enhancement)
  - NMMT (Metallic Material Testing)
  
- Airbus is currently engaged in
  - NM (Non Conventional Machining)
  
- The use of Nadcap for the surveillance of Special Processes (SP) at suppliers is mentioned in the airbus POM and is accepted by EASA.
  
- More than 900 Airbus Suppliers' Special Processes are currently accredited.

# Airbus Policy and Nadcap deployment

## Airbus Suppliers transition to Nadcap – Status Jan 14, 2011



## Compliance to AMC No.2 to 21A.139(b)(1)(ii)

Conditions and criteria, coming from AMC No.2 to 21A.139(b)(1)(ii), assessed and surveyed by EASA so Airbus may use Nadcap in the frame of its Single POA:

- **§3(a):** *The POA holder should include the use of OP for supplier assessment and surveillance in the POA holders' quality system to demonstrate compliance with the applicable requirements of Part-21.*
  - ✓ **See POM, AP2131-5, AP5119**
- **§3(b):** *Procedures required for using OP for supplier assessment and surveillance should be consistent with other procedures of the POA holders' quality system.*
  - ✓ **See POM, AP2131-5, AP5119**

# Compliance to AMC No.2 to 21A.139(b)(1)(ii)

- §3(c)

*Procedures of the POA holder that uses supplier certification for the supplier assessment and surveillance should include the following:*

- (1): *Listing of the OP that has certified or will certify suppliers and will conduct supplier assessment and surveillance or the scheme under which the accreditation of the OP is controlled. This listing should be maintained by the POA holder and made available to the Competent Authority upon request.*

✓ **POM, AP2131-5, AP5119 / PRI Nadcap**

- (2): *A listing of the certified suppliers under surveillance by the OP and used by the POA holder. This listing should be maintained by the POA holder and made available to the Competent Authority upon request.*

✓ **Suppliers Nadcap accreditations are registered in Airbus ARP Database and Nadcap database (eAuditNet).**

**Those data are made available to the Competent Authority upon request.**

# Compliance to AMC No.2 to 21A.139(b)(1)(ii)

- (3)

*The method used by the POA holder to evaluate and monitor the certification process of any OP certification body or OP certification scheme used. This applies not only to new suppliers, but also to any decision by the POA holder to rely on OP certification of current suppliers. The method should include the following as a minimum:*

- (i): *Verification that certification standards and checklists are acceptable and applied to the applicable scope.*

✓ **All Nadcap checklists are balloted by Airbus experts participating to Nadcap Task Groups (TG)**

- (ii): *Verification that the OP is appropriately qualified and has sufficient knowledge, experience and training to perform its allocated tasks.*

✓ **Airbus is involved in the Nadcap organization, participates to the annual oversight of Nadcap, participates to the selection, qualification and annual training of Nadcap auditors**



## Compliance to AMC No.2 to 21A.139(b)(1)(ii)

- (iii): *Verification that the OP surveillance frequency of the suppliers is commensurate with the complexity of the product and with the surveillance frequency established by the POA holder's suppliers control programme.*
  - ✓ **Nadcap audits frequency is agreed by Airbus (every year or 18 or 24 months based on Supplier Merit status)**
- (iv): *Verification that the suppliers' surveillance is conducted on-site by the OP.*
  - ✓ **All Nadcap audits are conducted on site. Airbus TG experts participate to Audit package reviews**
- (v): *Verification that the surveillance report will be made available to the Competent Authority upon request.*
  - ✓ **All Nadcap audits are recorded in eAuditNet and are made available**

## Compliance to AMC No.2 to 21A.139(b)(1)(ii)

- (vi): *Verification that the OP continues to be recognised or accredited.*
  - ✓ **Airbus continuously participates to Nadcap**
- (vii): *Verification that the OP has access to applicable proprietary data to the level of detail necessary to survey suppliers functions.*
  - ✓ **Airbus conducts observation audits and review audit packages**
- (4): *A definition to what scope the OP will conduct suppliers surveillance on behalf of the POA holder. If the OP replaces surveillance in part, the POA holder should identify the functions that will continue to be surveyed by the POA holder.*
  - ✓ **Applicable Special Process List is given in Airbus Policy and mandate letters to Suppliers**
- (5): *Procedures that ensure that the POA is aware of the loss of an existing certification.*
  - ✓ **A Nadcap Supplier Advisory is received by Airbus when a Supplier fails a Nadcap Audit**

# Compliance to AMC No.2 to 21A.139(b)(1)(ii)

- (6): *Procedures that ensure that the POA holder is aware of nonconformities and has access to detailed information of these nonconformities.*
  - ✓ **All nonconformities and Supplier answers are recorded in eAuditNet and are made available**
- (7): *Procedures to evaluate the consequences of nonconformities and take appropriate actions.*
  - ✓ **Nonconformities and Supplier answers are closed prior ballot by Airbus TG experts**
  - ✓ **In case of Potential or confirmed product impact, a Nadcap Supplier Advisory is received by Airbus**
- §3(d): *The POA should make arrangements that allow the Competent Authority to make investigation in accordance with 21A.157 to include OP activities.*
  - ✓ **POM, AP5119**

# Many Thanks

# Questions ?



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