



# aerodays2015

Aviation in Europe – Innovating for Growth

The 7<sup>th</sup> European Aeronautics Days



L O N D O N



20 – 23 OCTOBER 2015



aerodays2015

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# ACARE Italy and the New National Aeronautics Strategy



M. Protti

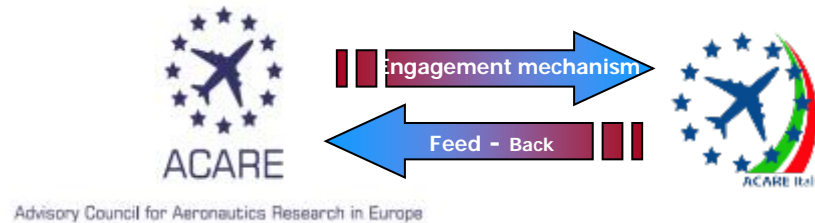




# ACARE-Italia



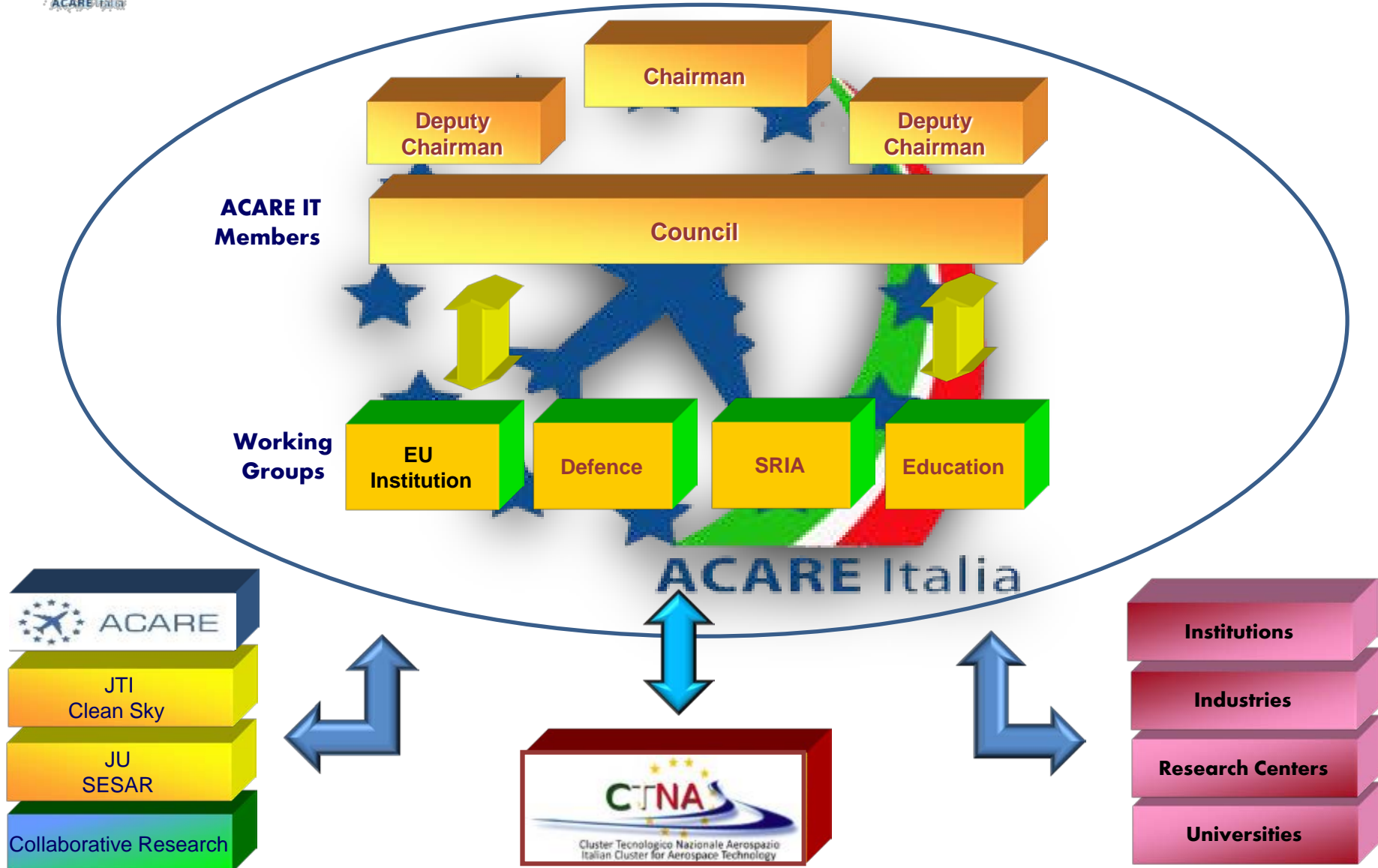
- ❑ Italian stakeholders fully adopted the ACARE approach and created in 2003 the Advisory Council for Aeronautics Research in Italy (ACARE-Italia) to turn the European and National SRAs into practice.



- Finmeccanica, AgustaWestland, Alenia Aermacchi, Avio, Elettronica, Selex ES, S3Log, Vitrociset, IDS, DEMA e le PMI del settore confederate in AIAD
- CIRA, CNR, CSM
- CRUI
- MIUR , ASI, ENAC, ENAV, Assaereo, Assaeroporti
- Cluster Nazionale Aerospaziale (CTNA)
- Confederazione AIAD
- APRE



# ACARE-Italia: organisation and primary relationship





# ACARE-Italia - Vision and Road-Mapping





# SRIA It - The structure of the document



- ❑ SRIA-IT is made of two volumes following the same approach of the European SRIA.
- ❑ Volume 1 is mainly targeting decision & policy makers; the following key elements are treated
  - Challenges
  - National Peculiarities
  - Long-Term perspective
  - Dual goals

- Challenge 1: Meeting market & societal needs
- Challenge 2: Maintaining and extending industrial leadership
- Challenge 3: Protecting the environment and the energy supply
- Challenge 4: Ensuring safety and security
- Challenge 5: Prioritising research, testing capabilities and education





# SRIA It - National Peculiarities



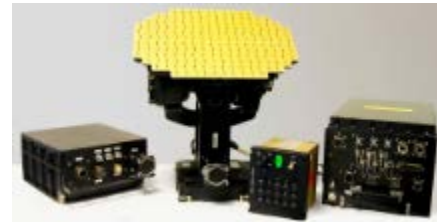
The national peculiarities are:

- **Rotorcraft and Tilt Rotors**
- **Fixed Wing Aircraft:**
  - training,
  - regional transport,
  - combat and transport military aircraft
  - general aviation.
- **ATM**
- **Radar Systems**



In terms of specific technologies and specialisations:

- **Engines and subsystems**
- **Avionic systems and equipment**
- **Surveillance systems**
- **RPAS**
- **Electronics for defence applications**
- **Safe communications**





## SRIA It – Dual Goals



The national dual goals are:

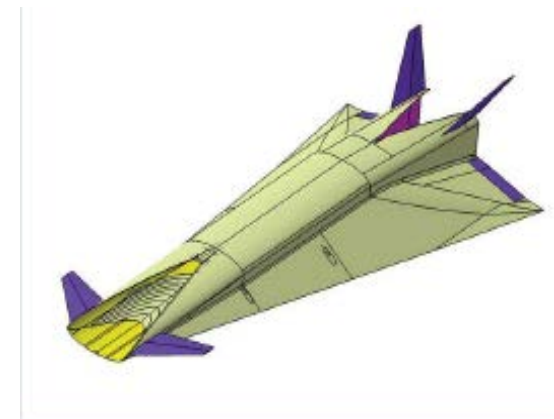
- **RPAS:** innovative platforms and enabling technologies for civil and dual missions; insertion of RPAS in civil airspace.
- **Cyber Security** : advanced data protection and cyber defence for both on board and on ground systems and for communications
- **Special Operations:** special systems and sensors for special missions like SAR, surveillance, border monitoring, rescue and support in case of natural disasters, etc.
- **Secured data-link:** innovative technologies for safe broadband data link, HMI for critical operations, innovative Modelling and Simulation.





Looking to Long-Term some focus is given to innovative:

- **Innovative systems** and related **enabling technologies**
- **RPAS and UAS** adoption in the civil market
- **Lighter than Air Platforms (LTA)**: development of innovative platforms and technologies and of services for communications, earth observation, remote sensing, surveillance, etc.
- **Hypersonic Vehicles**: development of innovative configurations and technologies for specific Air Transport applications: perishable commodity air cargo (pharmaceuticals, organs transplant), special commodity air cargo, business transport.





# SRIA It: Volume 2



- ❑ The same approach with tables is adopted
- ❑ The structure of the SRIA It tables is built with two objectives:
  - Highlight the national priorities and peculiarities
  - Direct mapping onto European SRIA Vol. 2

## Strategic Research and Innovation Agenda - Volume 2

### Challenge 1: Meeting Societal and Market Needs

Cluster of Enablers	Enabler	Capability	Sub-Capability	R&I-Needs	Domain	Achievements 2020	Innovative A/C	Integrated design tools for complex systems	Innovative Materials	Advanced Manufacturing	Avionics and equipment	Autonomous flight	Technology for Greening	Innovative systems for ATM and Airports	Safety & Security	NOTE					
Description	Description	Description	Description	Description	Category	2020															
Creating the Basics	Understanding customer <u>expectation</u> and their role in transport and mobility	To know Customer profile	n/a	Identify customer profiles and properties (e.g. demographical and ethnical aspects, reason and preferences of travel, economical background, technology acceptance and use, security acceptance and awareness)	Knowledge	The future (2030) customer profile and expectations are known by means of a finished update study; variety and evolution of customer expectations for very different groups for individuals of different culture, age, familiarity with technical gadgets, purpose of trip and ethnical origin are clearly understood for a timeframe of about 10 years. First studies to be finished by 2015 and updated every 5 years											Non Allocable				
				Investigate if changes to customer needs and reasons for travel change our current view on customer profiles	Knowledge													Non Allocable			
				Investigate changes in human factors, particularly weight and height.	Knowledge															Non Allocable	
				Identify customer needs in light of the 2050 goal and ensure diversification to regional markets with diverse requirements.	Knowledge																Non Allocable
				Define which infrastructure is needed to satisfy customer needs	Infrastructure																Non Allocable
				Define methodology to predict profiling and expectations	Concepts																



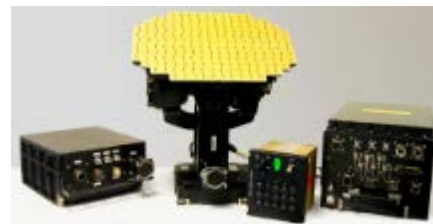
## SRIA It: National priorities in Volume 2



In order to highlight the national priorities and peculiarities additional columns are added to the tables in volume two and priorities are indicated.

The national targets are:

- Innovative aircraft
- Tool for integrated design of complex systems
- Innovative materials
- Advanced manufacturing
- Avionics and equipment
- Autonomous flight
- Greening technologies
- Innovative systems of ATM and airport operations
- Safety & Security





# ERA It: Volume 2



Strategic Challenge 2: M	Innovative A/C	Integrated design tools for complex systems	Innovative Materials	Advanced Manufacturing	Avionics and equipment	Autonomous flight	Technology for Greening	Innovative systems for ATM and Airports	Safety & Security	NOTE
Cluster of										
Description										
Competitiveness										
CC										
	H			H	H		H	H		
	H	H	H	H	H	H	H	H	H	



# SRIA It - Accessibility



- ❑ SRIA-It can be downloaded from three websites: AIAD/ACARE Italia, APRE, and AIDAA
- ❑ The SRIA-It can be found through search engines by the title or the ISBN code.

