



ACARE

Advisory Council for Aviation Research and Innovation in Europe

TRA2022 Webinar with ETPs

May 19, 2022



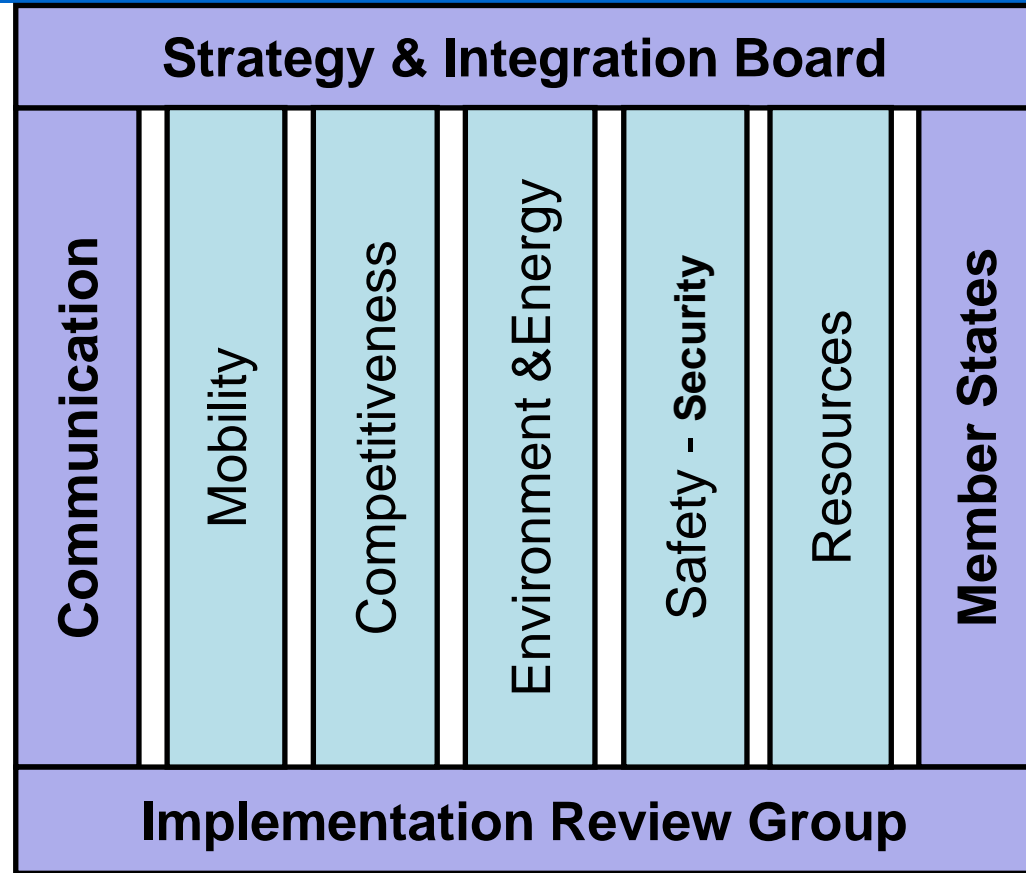
ACARE BRINGS TOGETHER HUNDREDS OF STAKEHOLDERS



Strategy, Networking, Monitoring

General Assembly

- ☐ 28 Member States
 - ☐ European Commission
 - ☐ Manufacturing Industry
 - ☐ Airlines
 - ☐ Airports
 - ☐ Air Navigation
 - ☐ EASA
 - ☐ Eurocontrol
 - ☐ Research Centres
 - ☐ Universities
 - ☐ Energy
 - ☐ Regulators
- Over 50 members



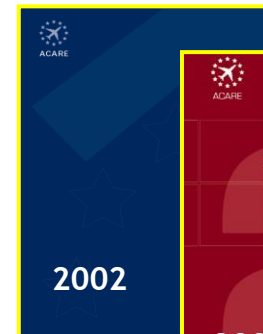
ACARE timeline



*A comprehensive
response to Vision 2020*



*Maintaining global
leadership
& serving society's needs*



2002
SRA-1



2004
SRA-2



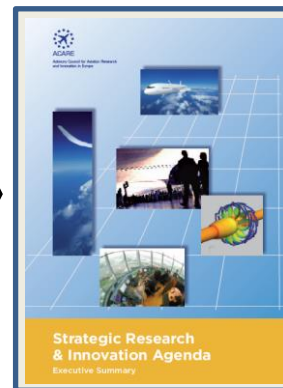
2008
Addendum



Flightpath 2050



SRIA- 2012



**15 years of
successful
Innovation**



Strategic Research and Innovation Agenda (SRIA)



Road map for aviation research, development & innovation

Content aligned to five goals of Flightpath 2050:

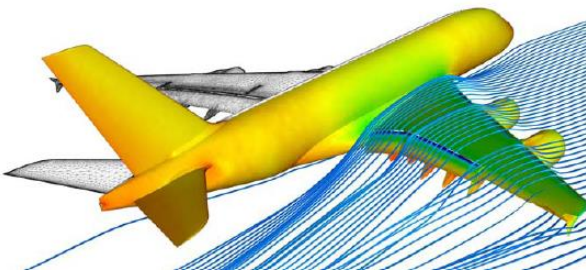
Meeting Societal and Market Needs

Maintaining and Extending Industrial Leadership

Protecting the Environment and the Energy Supply

Ensuring Safety and Security

Prioritising Research, Testing Capabilities & Education





Prioritise Research, Testing Capabilities and Education

European research and innovation strategies are jointly defined by all stakeholders

A network of multi-disciplinary technology clusters is created

Strategic European aerospace test, simulation and development facilities are identified, maintained and further developed

Students are attracted to careers in aviation. Courses offered by European Universities closely match the needs of the Aviation sector.

Flightpath 2050



Ensuring Safety and Security

The European air transport system has less than one accident per ten million commercial aircraft flights.

Weather and other hazards are precisely evaluated and mitigated.

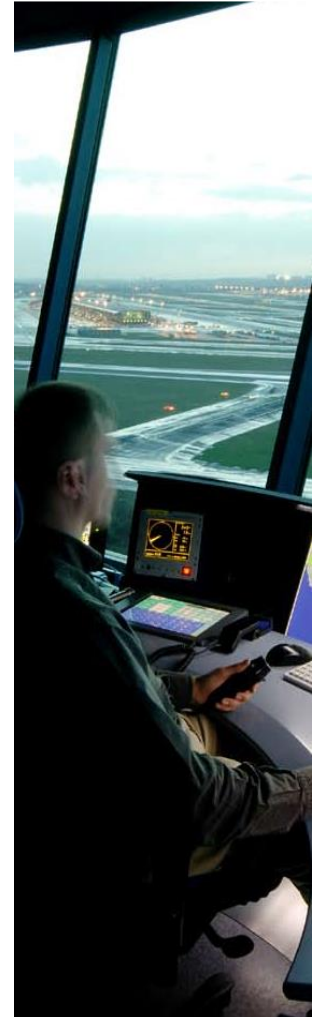
Seamless operations through fully interoperable and networked systems (including manned and unmanned vehicles)

Efficient boarding and security checks allow seamless security

Air vehicles are resilient by design to security threats

The air transport system has a fully secured global high bandwidth data network.

Flightpath 2050





Protecting the Environment and the Energy Supply

In 2050 technologies and procedures available allow

- ❑ 75% reduction in CO₂ emissions per passenger kilometer,
- ❑ 90% reduction in NO_x emissions, and
- ❑ 65% reduction in perceived noise emission of flying aircraft

relative to the capabilities in 2000.

Aircraft movements are emission-free when taxiing.

Air vehicles are designed and manufactured to be recyclable.

Europe is established as a centre of excellence on sustainable alternative fuels

Europe is at the forefront of atmospheric research



Maintaining & Extending Industrial Leadership

The whole European Aviation industry is strongly competitive

Europe maintains leading edge design, manufacturing and system integration capabilities and jobs

Streamlined systems engineering, design, manufacturing, certification and upgrade processes have addressed complexity and decreased development costs.

Flightpath 2050



Meeting Societal & Market Needs

European citizens are able to make informed mobility choices

90% of travellers within Europe are able to complete their journey, door-to-door within 4 hrs

A coherent ground infrastructure is developed

Flights land within 1 minute of the planned arrival time

An air traffic management system is capable of handling 25 million flights a year in Europe



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Aviation research partnerships



ACARE

Strategic Research and Innovation Agenda



Digital 
European Sky



Strategic Research and Innovation Agenda

Version December 2021



We all share the same trends



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The pace of societal development & change has increased enormously

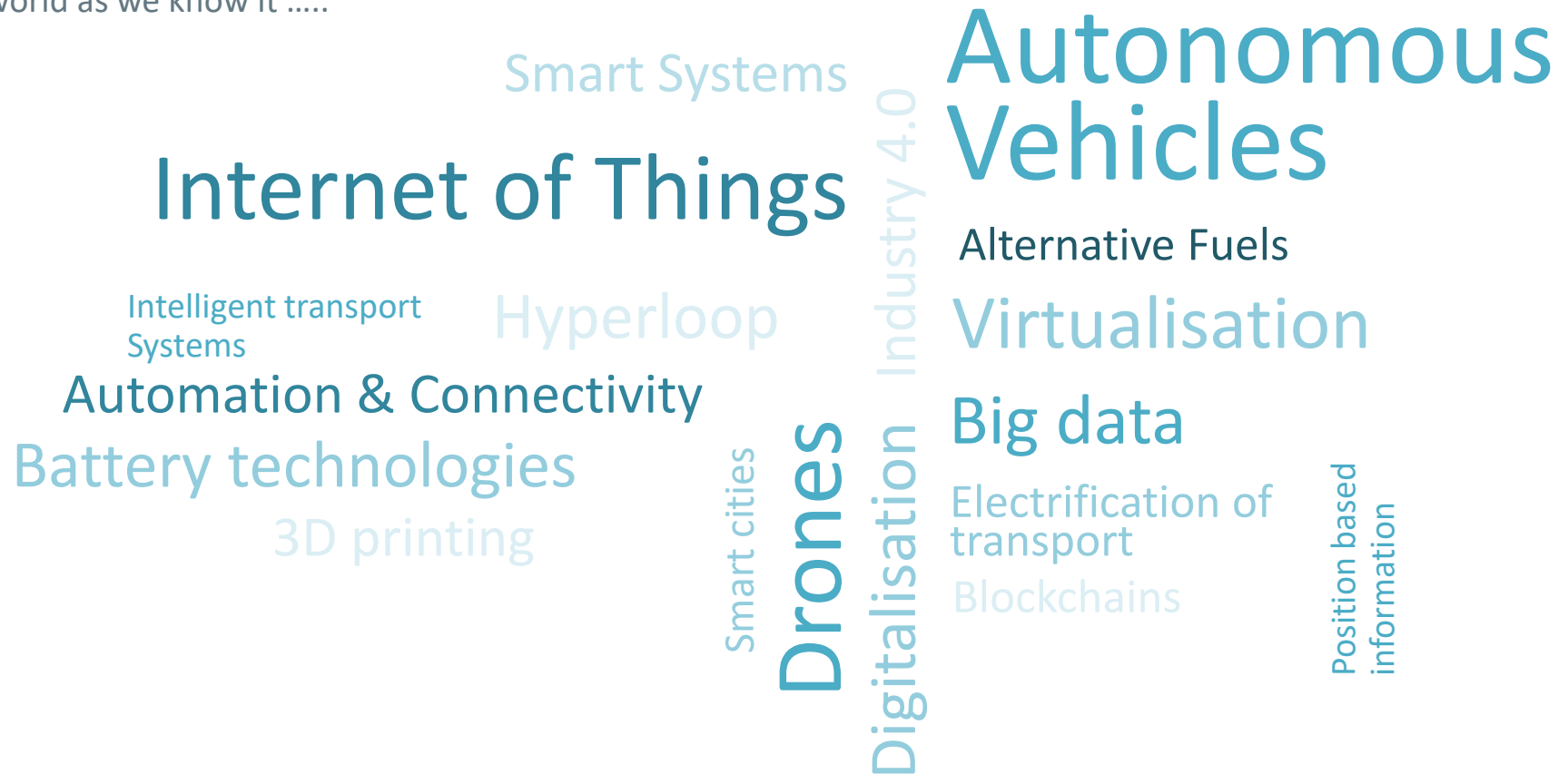


Disruptive change is in the air for all of us...



ACARE

The application and integration of new technologies offer a plethora of new services that can shake up the world as we know it



...and we all face similar uncertainties



Just because something is technically feasible and sounds good on paper does not mean it will be a huge market success or trigger disruptive change. Innovation has its own rules and dependencies....



....as do topics of TRA 2022.



TRANSPORT RESEARCH ARENA



ACARE

LISBON 2022
14 - 17 NOVEMBER

Smart Solutions and Society

- User-focus and inclusive mobility
- Connected and automated multimodal mobility
- Innovation and the use of data, ITS and AI
- Efficient and Innovative logistics

Green Mobility and Decarbonisation

- Carbon neutrality and zero-emission vehicles
- Energy efficiency, electrification and alternative fuels
- Sustainable interurban and urban mobility
- Greening freight transport

Innovative Infrastructure for Europe 2030

- Single market for TEN-T and the wider Europe.
- Intelligent, resilient and cooperative infrastructure systems
- Innovative hubs
- Safety and security

Policies and Economics for a Competitive Europe

- Transport Planning and Policy for Recovery and Resilience
- Innovative Business and Governance Models
- Internalisation of Transport Externalities and Pricing Carbon
- Supporting Competitiveness & Industrial Policy

ACARE vision 2050



Vision

The European Green Deal in Aviation: Climate neutral, seamless, competitive, safe, secure, resilient & affordable air mobility

Goals

Achieving climate neutral aviation

Putting the citizen at the centre

Extending global leadership & improving competitiveness

Actions and actors

Aviation in the European mobility system

Vehicles & propulsion

Education, training & research

Digital transformation

Development, demonstration & deployment

Safety, security & resilience

Infrastructure, operations & services

Aviation in the European energy & fuel system

Policy framework

Instruments (policy enablers, regulation & incentives)

Measuring and monitoring impacts

Thank you !!



ACARE – ADDRESSING NEW HORIZONS IN AVIATION

www.acare4europe.org

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