



HORIZON 2020

International Collaboration in Aviation Research - Why and how ? **National Aviation University, Kyiv, Ukraine** **2018-10-12**



Call: H2020 - 2016-2017 Mobility for Growth

Topic: MG-01-05-2016 Area 1 - Identification of barriers for increased collaboration in aviation research at EU level involving countries and regions with lower participation in the EU Framework Programmes and recently Associated Countries such as Ukraine.

Project: RADIAN - Facilitating Collaboration in ReseArch and Development to Foster Further Innovation in European AeroNautics - GA 724109

Partners: 10 Partners from BE, DE, EE, FR, GR, HU, PL, UA // HES, REC, SME, OTH (cluster & agencies)

Efforts: 235 PM

Duration: 36 months from 2016-10-01 to 2019-09-30

Grant: 1,996,662.50 €

UAV-HUB-2018: TRENDS, APPLICATION, REGULATION - 2018-10-12

Date: October 12th, 2018

Location: International Exhibition Centre Kyiv



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 724109.

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TO FOSTER FURTHER INNOVATION
IN EUROPEAN AVIATION



Fraunhofer Institute for Manufacturing Technology and Advanced Materials
IFAM – Fraunhofer IFAM



Agenzia per la Promozione della Ricerca Europea – APRE



Aerospace Valley – AV



Centro Italiano Ricerche Aerospaziali
SCPA – CIRA



EASN-Technology Innovation Services
– EASN TIS



Invent Baltics Ltd. – IB



National Aerospace University Kharkiv
Aviation Institute – KhAI



Slot Consulting Ltd. – Slot



Association of Polish Aviation Industry
– APAI



Thelsys Gmbh – Thelsys



Why a European Approach?



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Source: European Commission

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FP3 (1993): ECARP - European Computational Aerodynamic Research Project - FP3 (1993): EPICA Electrically Powered with Integrated Control Actuators - FP4 (1996): ADPRIMAS - ADvanced concepts for PRImary Metallic Aircraft Structures - FP4 (1996): APRICOS - Advanced PRImary Composites Structures - FP4 (1996): ADPRIMAS - ADvanced concepts for PRImary Metallic Aircraft Structures - FP4 (1996): ELGAR - European Landing Gear Advanced Research - FP4 (1997): ELISA - Electrical Innovative Surface Actuation - FP4 (1998): NEVADA - Open Integrated Avionics for European Air Transport Aircraft - FP5: EHA - Electro-Hydraulic Actuators - FP5 (2000): ASICA - Air management Simulation for aircraft Cabins - FP5 (2000): EUROLIFT - EUROpean high-LIFT Programme - FP5 (2000): C-WAKE - Wake Vortex Characterisation and Control - FP5 (2000): TANGO - Technology Application to the Near-term business goals and Objectives - FP5 (2000): WAFS - Welding of Airframes by Friction Stir - FP5 (2000): PAMELA - Prospective Analysis of Modular ELectronic integration in Airborne systems - FP5 (2001): CABINAIR - Improving Air Quality in Aircraft Cabins Using "Measurements in the Sky" and Innovative Designs and Technologies - FP5 (2001): VICTORIA - Validation platform for Integration and standardised Components, Technologies and tools in an Open, modular and Improved Aircraft electronic system - FP5 (2002): AWIATOR - Aircraft Wing with Advanced Technology OpeRation - FP5 (2002): POA - Power Optimised Aircraft - FP5 (2002): NATACHA - Network Architectures and Technologies for Airborne Communication of internet High-bandwidth Applications





Industry:

EuroMart IMG (Leonardo, Airbus, Saab, SABCA, ...)

Engine IMG (Alstom, AVIO, ITP, MTU, Rolls-Royce, SNECMA, ...)

Equipment IMG (Galileo Avionica, BAE systems avionics, Liebherr Aerospace, ...)

ATM IMG (Airbus, Leonardo, Dassault Aviation, Thales ATM, Thales Avionics, ...)



Research Organisations: (DLR, ONERA, NLR, Fraunhofer, CIRA, ...)

Universities and institutes: (TU Delft, RWTH Aachen, Uni Stuttgart, KIT, Uni Patras, EPF Lausanne, Uni Cranfield, ...)



Further players: (aeronautical authorities, policy makers, ...)



Sources:

<http://www.asd-europe.org>, <http://www.erea.org/>,

<http://www.easn.net/>, <http://www.pegasus-europe.org>



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Contribution to achieve a more integrated AAT European research environment:

- Researchers at both HES & RTO cooperate in a fully integrated AAT network*)
- Stronger involvement of companies located in European regions with less AAT activities*)
- Europe is getting more competitive in emerging new developments (such as UAS market) by building new supply chains if necessary thus opening opportunities for further European commercial companies.
- All supply chains fully utilise the possibilities of new and emerging companies, especially SMEs to strengthen the competitive European position in the global fight for industrial leadership.
- The European AAT industry integrates organisations from geographic Europe (beyond member states) in order to provide an added value at the European scale

*) provided they can give useful contribution





A two-fold approach to achieve the goals:

- Objectives on European level
 - Analysis of the AAT landscape and the barriers
 - Development of guidelines for regions and cooperation
 - Development of a platform to establish & maintain sustainable cooperation
- Objectives on organisational level
 - Identification of promising regions and organisations considering strengths and shortcomings
 - Set up and implementation a tailored coaching plan
 - Development and start of a sustainable web-based networking platform & tailored D&E





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“There is neither a simple “lead indicator” nor a set of figures derivable from proposal and project statistics of European research programs (e.g. eCORDA) which correlate with the performance of a region in AAT research.”

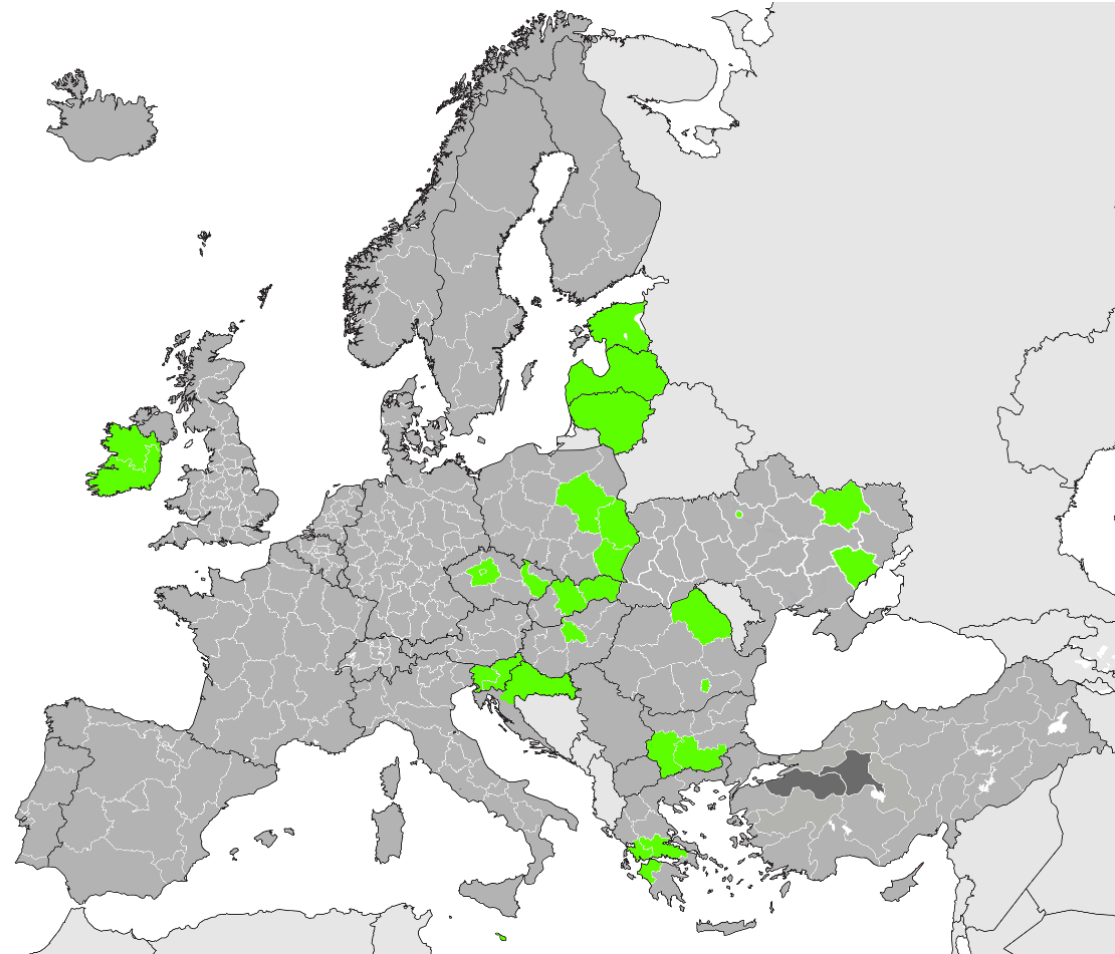
n) ✓

pon) ✓



- ▶ **NUTS**
(Nomenclature of Units for Territorial Statistics)
 - ▶ 28 EU member countries
 - ▶ 98 NUTS 1 regions
 - ▶ 273 NUTS 2 regions
- ▶ **S³ regions / RIS³**
(smart specialisation strategy)
 - ▶ 18 S³ countries (EU)
 - ▶ 169 S³ regions (EU)
- ▶ **additional “own” regions**
 - ▶ “A regions”
 - ▶ “B regions”







	Region	Country	Region
Croatia	NUTS2: HR04 - Kontinentalna Hrvatska (Continental Croatia)	Romania	NUTS2: RO32 - București-Ilfov
Greece	NUTS2: EL63 - Δυτική Ελλάδα - Dytiki Ellad (Western Greece)	Slovenia	NUTS2: SI03 - Vzhodna Slovenija (Eastern Slovenia)
Greece	NUTS2: EL64 - Στερεά Ελλάδα - Sterea Ellada (Central Greece)	Slovenia	NUTS2: SI04 - Zahodna Slovenija (Western Slovenia)
Hungary	NUTS2: HU10 - Közép-Magyarország (Central Hungary)	Slovakia	NUTS2: SK03 - Stredné Slovensko (Central Slovakia)
Poland	NUTS2: PL32 - Podkarpackie	Turkey	NUTS2-like region: TR41 - Bursa Subregion
Romania	NUTS2: RO21 - Nord-Est (North-East Romania)	Ukraine	NUTS2-like region: UA11 - Kiev City





- **Bilateral events**
 - bilateral process as tailored meeting with individual organisations
- **Multilateral events**
 - Event as follow-up of bilateral meetings
 - Merged bilateral events
 - Event linked to AeroDays 2019
 - Matchmaking workshop with ETNA 2020
 - Event with EACP members for promotion of ARCPORT
- **Setting up ARCPORT as facilitating platform**
 - Networking & search for partners / proposals / collaboration opportunities
 - Source of information
 - Protected workspace for creation of ideas and preparation of proposals





A first view on ARCPORT

- Beta test phase under preparation
- Domain blocked
- ARCPORT brand application to be decided

The screenshot displays the ARCPORT web application interface. The browser address bar shows 'arcport.local'. The page header includes the ARCPORT logo and navigation links: HOME, MEMBERS, GROUPS, TOPICS, EVENTS, REPOSITORIES, ABOUT, FAQ, CONTACT US. A progress bar at the top indicates six steps: 1. Contact Details, 2. Main business, 3. Calls, 4. Capabilities & Area of interest (currently active), 5. Maturity level of RDI activities, and 6. Complete. The main content area is titled 'Capabilities & Area of interest' and contains three dropdown menus for 'Own skills and capabilities (current)', 'Own skills and capabilities (planned)', and 'Partner search (active in)'. Below this is a 'Call interests' section with checkboxes for H2020 AAT, Clean Sky, SESAR ER, SESAR ther, SME Instrument, Other, Lack of knowledge about the Framework Program, general information needed, Interest as coordinator, and Interest as participant. A sidebar on the left shows a vertical list of icons and the text 'Welcome t'.



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Time schedule



WP ID Task ID	Work package title	Start month	End month	Duration	M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8	M 9	M 10	M 11	M 12	M 13	M 14	M 15	M 16	M 17	M 18	M 19	M 20	M 21	M 22	M 23	M 24	M 25	M 26	M 27	M 28	M 29	M 30	M 31	M 32	M 33	M 34	M 35	M 36	Sum WP	Sum Task				
					Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 18	Dec 18	Jan 19	Feb 19	Mar 19	Apr 19	May 19	Jun 19	Jul 19	Aug 19	Sep 19						
WP1	Methodology and Analysis of the AAT landscape in Europe	1	12	12																																						31,50				
T1.1	Design of study	1	7	7																																							4,20			
T1.2	Identification of regional actors and their stakeholders	1	8	8																																							10,30			
T1.3	Internal assets of actors in each S3-region	3	11	9																																							3,00			
T1.4	Regional impact on actors in each S3-region	5	11	7																																							5,00			
T1.5	External impact on actors in each S3-region	5	11	7																																							4,00			
T1.6	Identification of discrepancies and listing of barriers for cooperation	9	12	4																																							5,00			
WP2	Understanding the needs of the target regions	5	22	18																																								37,50		
T2.1	Tailoring of the preliminary action plan to individual regions and actors	5	11	7																																							11,00			
T2.2	Organisation and performance of meetings, events etc.with identified actors	10	19	10																																							14,50			
T2.3	Analysis of the performed activities and assessment of achieved results	16	22	7																																							12,00			
WP3	Detailed implementation plan	9	32	24																																								37,00		
T3.1	Definition of detailed results to be achieved by the RADIAN Cooperation Campaign	12	15	4																																								10,00		
T3.2	Methodology and mechanism to achieve the intended results	9	30	22																																								10,50		
T3.3	Preparation of the detailed implementation plan	14	22	9																																								8,00		
T3.4	Preparation of coaching guidelines training material amd supporting documents	9	32	24																																								8,50		
WP4	RADIAN Cooperation Campaign	16	32	17																																								62,00		
T4.1	Coaching program addressing organisations from target regions	16	32	17																																								29,50		
T4.2	Thematic workshops for organisations in emerging value chains	16	32	17																																								21,50		
T4.3	Identification of best practices and setting up a cooperation know-how	17	32	16																																								11,00		
WP5	Collaboration platform	10	36	27																																									27,00	
T5.1	Definition of the self-sustaining platform (organisational & procedural structure)	10	13	4																																								6,50		
T5.2	Design and Development	14	24	11																																								11,00		
T5.3	Platform viability plan	14	25	12																																								3,50		
T5.4	Review and update	25	36	12																																								5,00		
T5.5	Maintenance of the daily activities	25	36	12																																								1,00		
WP6	Dissemination & Exploitation of RADIAN findings and results	1	36	36																																									25,00	
T6.1	Dissemination and Exploitation Plan	1	36	36																																								3,00		
T6.2	Communication and promotional tools and channels	1	36	36																																								4,00		
T6.3	Dissemination to the target groups	1	36	36																																								12,00		
T6.4	Organisation and performance of an external final review and public conference	30	36	7																																								6,00		
WP7	Ethics requirements	1	36	36																																								0,00		
T7.1	Ethics / protection of personal data	1	36	36																																								0,00		
WP8	Management	1	36	36																																								15,50		
T8.1	Scientific coordination	1	36	36																																								6,00		
T8.2	Administrative and financial management incl. periodic reporting	1	36	36																																								6,00		
T8.3	Compliance management	1	36	36																																								3,50		
	Total activities																																											235,50	235,50	

Self-sustaining
web platform



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THANK YOU FOR YOUR ATTENTION