

H2020 EPICEA PUBLIC WORKSHOP 13 JUNE 2019

ELECTROMAGNETIC PLATFORM FOR LIGHTWEIGHT
INTEGRATION/INSTALLATION OF ELECTRICAL
SYSTEMS IN COMPOSITE ELECTRICAL AIRCRAFT

WELCOME MESSAGE CANADIAN CONSORTIUM

OFFICE NATIONAL
D'ETUDES ET DE
RECHERCHES
AEROSPATIALES
(ONERA)

Toulouse, France

Speaker: Ke Wu



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PROJECT FACT SHEET



Electromagnetic Platform for lightweight Integration/Installation of electrical systems in Composite Electrical Aircraft

- Call: **H2020** International cooperation in aeronautics with Canada 1.9-2015
- Start date: **01 February 2016**
- End date: **31 July 2019**
- Duration: **42 months**
- **Collaborative** Project
- Consortium: **9 partners** (industrials, academics, research centers, SMEs)



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OVERVIEW OF TARGETS

More electrical systems
→ IS and EMC

Higher
→ Cosmic Radiations

Lighter
→ Composite structure

More connected
→ Antennas

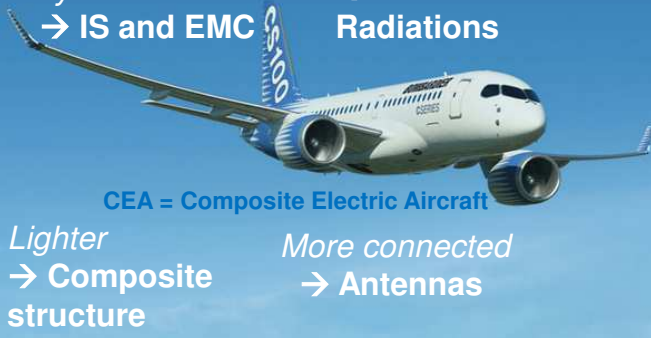
CEA = Composite Electric Aircraft


EPICEA = Electromagnetic Platform for lightweight Integration/Installation of electrical systems in Composite Electrical Aircraft

Decision making on System Design

- Protection of equipment
- New antenna concepts
- Electrical System Installation
- Weight control

A computer modelling platform



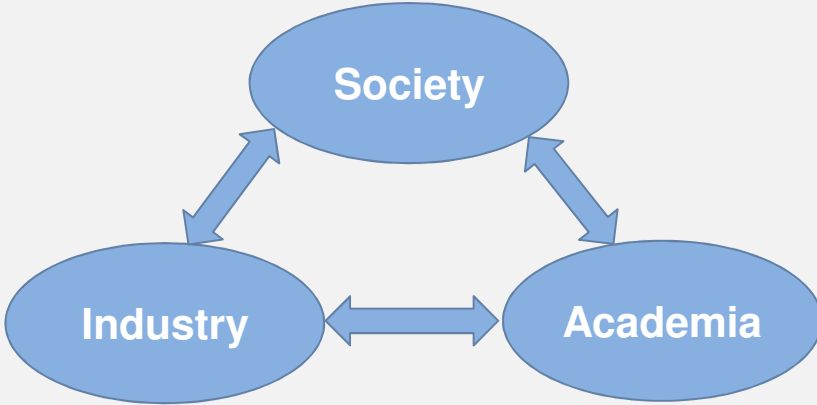



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IMPORTANCE OF EPICEA





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EXTENT OF EPICEA

EPICEA aims for the benefit of the Global society

Unique cooperative framework between Canada and Europe

- Professional exchange
- Modeling/Simulation tools
- Design methodologies
- Experimental validations
- Insightful analysis
- Educational activities






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PROJECT CONSORTIUM CANADA / EUROPE PARTNERSHIP



Experiences




BOMBARDIER
the evolution of mobility

ÉTS
Le génie pour l'industrie

isoneo
solutions

NSERC
CRSNG

POLYTECHNIQUE MONTRÉAL
LE GÉNIE EN PREMIÈRE CLASSE



ARTIC
INTERNATIONAL MANAGEMENT SERVICES


AxesSim

IDS
INGEGNERIA DEI SISTEMI

ONERA
THE FRENCH AEROSPACE LAB

Fokker

GKN AEROSPACE




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EXPECTED BENEFITS

- **Industrial side**
 - Expand R&D horizons through multi-dimensional exposures of industrial technical staff and research engineers
 - Support the avionics industry with practical and state-of-the-art solutions which help a rapid development of new and improved products to meet the requirements of the future



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THANK YOU



ONERA
THE FRENCH AEROSPACE LAB



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MONTREAL
LE GÉNIE
EN PREMIÈRE CLASSE



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<https://ec.europa.eu/programmes/horizon2020>



<http://www.nserc-crsng.gc.ca>



<http://caric.aero>



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THANK YOU FOR YOUR ATTENTION!
ANY QUESTION?



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