

# **Engine/APU Halon Replacement Industry Consortium – Halon Alternatives for Aircraft Propulsion Systems (HAAPS)**

*18-19 May 2016*

*INTERNATIONAL AIRCRAFT SYSTEMS FIRE PROTECTION WORKING GROUP  
MEETING*

*Toulouse, France*

*By*

*Thibault PELLETIER (Airbus)*

# In Review...Industry is leading a broad stakeholder approach

The consortium will . . .

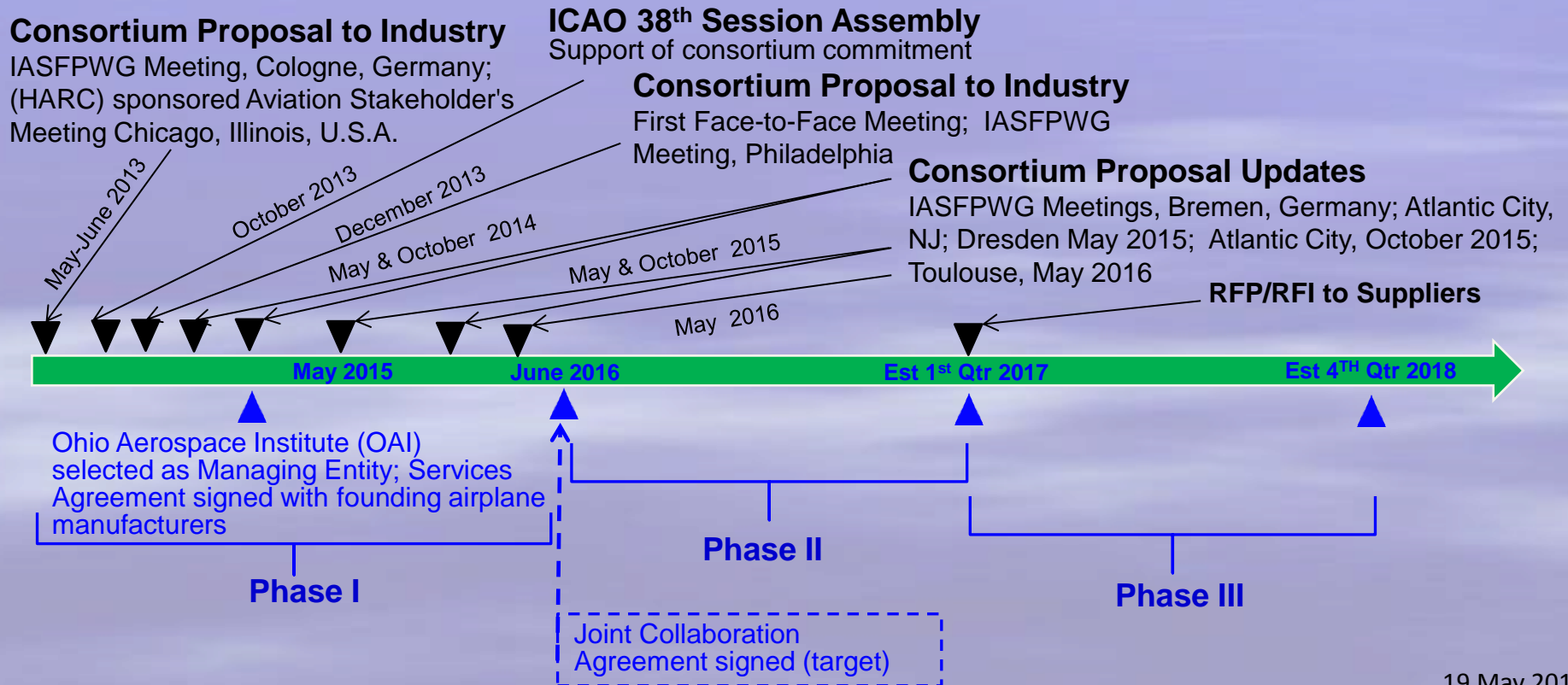
- Define common non-halon fire extinguishing solution(s) for use in engine/APU fire zones that...
  - is compliant to basic industry and regulatory requirements
  - meets multiple OEM (airframe, engine, APU, nacelle, etc.) requirements
  - meets multiple governmental agency regulatory requirements;
  - provides a viable business solution for Consortium partners; and
  - is production-ready
- Engage...
  - Primary Stakeholders = Airframer OEMs
  - Members = Firex Agents/System Suppliers, Airlines, engine companies, nacelle suppliers, airworthiness authorities, etc.
  - A focal point, facilitator & fiscal/contracting “Managing Entity” (ME)

Ohio Aerospace Institute (OAI) Selected 1 Oct. 2014 as ME

- Services Agreement signature initiated activities to form the Halon Alternatives for Aircraft Propulsion Systems (HAAPS) consortium
- Signatories: OAI and founding OEM Airframers (Airbus SAS, The Boeing Company, Bombardier Inc., Embraer S.A., Textron Inc.)

# In Review...Executing to a Plan

- Phase I – initial engagement, confirm interest, launch consortium formation activities, engage ME, business & working together agreements
- Phase II – develop technical statement of work (requirements, performance validation, down selection criteria, certification path, suppliers requests for proposal, etc.)
- Phase III – execute activities required to produce the solution(s)



# Phase I is Nearing Completion

- HAAPS Joint Collaboration Agreement (JCA) Final Draft in Review
  - Primarily a working together agreement between air framers and OAI:
    - Administration and governance rules
    - Proprietary data sharing & protection
    - Intellectual Property protection & ownership
    - Member rights, benefits, integration
    - Cost & resource sharing
    - Etc.
  - Draft is in review at founding air framers OEMs & OAI
  - Goal to sign JCA before Mid of 2016
- JCA Approval by OAI and Founding Airframers Enables Next Steps
  - Start of Phase II
  - Development of Industry and Advisor Member agreements
  - Development & transmittal of solution(s) requests for proposals from industry members

# Contacts, Announcements & History

- Ohio Aerospace Institute (OAI) <http://www.oai.org/>
  - Carol Cash, HAAPS Project Manager [CarolCash@oai.org](mailto:CarolCash@oai.org), Phone: 440-962-3073
- OAI's HAAPS Press Release
  - <http://www.oai.org/docs/Final-Approved-HAAPS-Press-Release-2015-01-26.pdf>
- ICCAIA Support of HAAPS Consortium
  - [http://www.aia-aerospace.org/sectors/civil\\_aviation/news/iccaia\\_supports\\_international\\_consortium\\_seeking\\_alternatives\\_to\\_halon\\_fire](http://www.aia-aerospace.org/sectors/civil_aviation/news/iccaia_supports_international_consortium_seeking_alternatives_to_halon_fire)
- IASFPWG Meeting, Cologne, Germany, May 22-23, 2013 – Consortium Proposal
  - <https://www.fire.tc.faa.gov/pdf/systems/May13Meeting/BennettMacias-0513-ICInterestEgineAPU.pdf>
- Halon Alternatives Research Corporation (HARC) sponsored Aviation Stakeholder's Meeting Chicago, Illinois, U.S.A., 11 June, 2013 – Consortium Proposal
- 2013 ICAO Assembly recognized consortium commitment , Resolution 31/1: Halon replacement ([link](#))
- IASFPWG Meeting, Atlantic City, NJ, USA, October 2015\*
  - [https://www.fire.tc.faa.gov/pdf/systems/Oct15Meeting/Macias-1015-HAAPS\\_Status.pdf](https://www.fire.tc.faa.gov/pdf/systems/Oct15Meeting/Macias-1015-HAAPS_Status.pdf)

\* Only most recent IASFPWG update of HAAPS activities is listed here.

**Thank you!**