

CRIAQ - a unique model for collaborative,
industry led research, involving Industry,
universities and research centres



Consortium de recherche et d'innovation en aérospatiale au Québec
Consortium for Research and Innovation in Aerospace in Québec



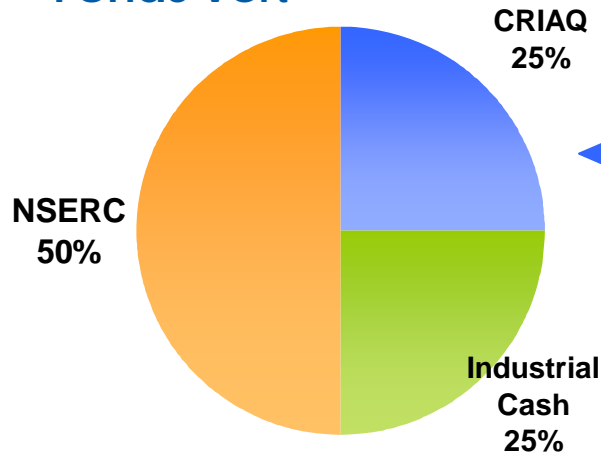
Photos : courtoisie de Bell Helicopter Textron Inc., Bombardier Inc.,
CAE Inc., Pratt&Whitney Canada Corp.

Agenda

- **CRIAQ GHG Project**
- **Methodology to evaluate the reduction potential**
 - Criteria and Scenarios
 - Qualitative and Quantitative
- **Application Content**
- **Process for the application**

CRIAQ GHG Project

- A CRIAQ Research project with a GHG reduction potential (GHG reduction potential is “approved” by MDDEP, Quebec Ministry for Sustainable Development & Environment)
- Same team composition (2+2 partners)
- Same financing package ... but CRIAQ contribution comes from “Fonds vert”




Fondsvert Québec 
Administered by MDDEP

Allocated to CRIAQ: 3M\$
Total cash value: 12M\$
Total project value: 18M\$

CRIAQ objectives for GHG Projects:

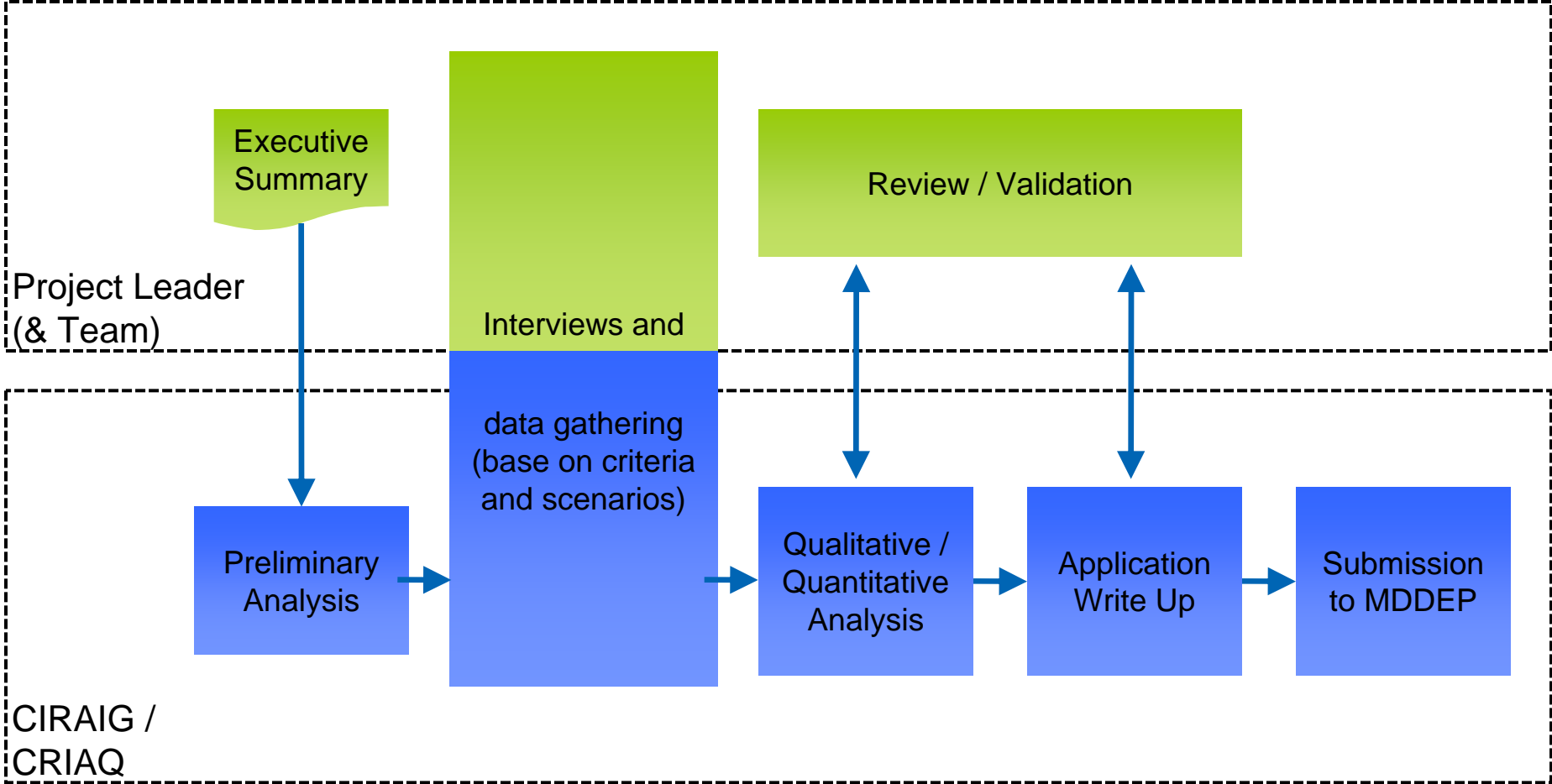
3-8 projects from 5th forum
3-8 projects from GHG workshop
5-10 projects from 6th forum

Methodology

- **Objectives are:**
 - to provide the proper information to MDDEP for approval
 - to ensure that all potential CRIAQ GHG Projects will be evaluated on a common basis
- **The Methodology:**
 - has been developed in collaboration with experts from CIRAIG (Geneviève Martineau), and aeronautic industry (Carlos Trindade)
 - is validated by MDDEP
 - will be improved
- **The Methodology is designed to minimize the time and effort required from the project team**



Application process



Methodology - Criteria

- **The Methodology includes a list of 9 criteria:**
 1. Aircraft weight reduction
 2. Aircraft drag reduction
 3. Engine energy efficiency
 4. Flight operations
 5. Life span of parts and components
 6. Energy and materials usage, and generation of scrap and waste, during manufacturing
 7. Potential for recycling of parts and components
 8. Ground operations
 9. Origin and packaging of materials and consumables
- **In order to analyze the GHG reduction potential, a project must describe how it influences criteria (one or more)**

Methodology - Scenarios

- For each Criteria, the GHG reduction is evaluated by comparing a “Project Scenario” with a “Reference Scenario”
 - The reference scenario represents the criteria, if the project results are not implemented (current practices conditions)
 - The project scenario represents how the criteria is impacted / improved, if the results from the research project are implemented and deployed on a large scale

Methodology - Qualitative and Quantitative

- The evaluation for each Criteria must be qualitative
- The project impact evaluation for each Criteria can also be quantitative, if data is available
 - For potential quantitative estimations, the Methodology specifies the same Airplane / Helicopter typical usage scenario that all Projects must use.

Application Content

A CRIAQ GHG Project application includes:

- Project description (1 to 2 pages)
- Reduction potential for each criteria
- Other potential environmental, economic and social benefits and impacts
- List of the indicators

It also is:

- Written in French
- Submitted to MDDEP by CRIAQ



Application process

