



C A R I C

CONSORTIUM FOR
AEROSPACE RESEARCH AND
INNOVATION IN CANADA

2019-2020 CARIC CORPORATE PLAN

Approved by CARIC Board of Directors on January 31, 2019

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Financial partner



Innovation, Science and
Economic Development Canada

Innovation, Sciences et
Développement économique Canada

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1 Introduction

On October 2nd, 2018, a request for an amendment to the current agreement was made to Innovation Science and Economic Development Canada (ISED) to extend the termination date of the program to September 30, 2020.

The objective of this extension is to support our partners involved in ongoing projects and to close the program. Indeed, even though all ISED funds allocated to research will be spent by 31 March 2019, some projects will be completed after that date. The extension will allow for the final industrial contributions to partners to be paid no later than October 1, 2019 and for the collection of financial and other final reports. To support these activities, no additional funds were requested. However, we have asked to extend the use of the envelope allocated to the administration/animation funds, i.e. the unused funds from the \$10 million envelope, which is approximately \$850,000, until September 30, 2020.

As of today, the amendment is in preparation and we have been asked to produce a 2019-2020 Corporate Plan which is submitted to ISED, in accordance with Article VII of the Contribution Agreement between CARIC and ISED. CARIC is requested to provide the Minister with an Annual Corporate Plan, approved by its Board, no later than two (2) months before the beginning of the fiscal year.

1.1 Context

As described in the previous Corporate plan, CARIC has engaged all its resources available to support collaborative R&D projects for its five-year mandate. CARIC's focus for the 2019-2020 Fiscal Year is thus to continue monitoring and supporting the projects in its current portfolio, keeping the momentum of its network to its maximum level and preparing for the renewal of its mandate, one way or another.

1.2 Mission

CARIC's mission is to generate and foster dialogue and collaboration between the research community and the aerospace industry and to provide financial support for launching industry-led R&TD projects in partnership between these organisations.

More specifically, the outcomes that CARIC is pursuing are:

- Delivering innovation to foster competitiveness
- Strengthening the network to create synergy coast-to-coast
- Educating personnel to ensure sustainability



1.3 Strategy

The nine strategic guiding principles developed in 2016 by the CARIC's Board of Directors still apply.

1. TRENDS

Identify key drivers of competitiveness for the Canadian industry and design the program accordingly.

The CARIC's Board has decided to postpone activities planned this fiscal year for identifying the Key S & T Drivers, to after the confirmation of CARIC renewal. However, an exhaustive bibliographic research and analysis, conducted by UQAM (Université du Québec à Montréal) for CRIAQ (Consortium for Research and Innovation in Aerospace In Quebec) in 2017-2018, would constitute a basis for the CARIC exercise at the Canadian level, as soon as CARIC's Board approves it.

2. Network

Build an all-inclusive and cohesive network across Canada to tap into the entire pool of expertise available.

Although the power of attraction of CARIC is limited during the final year of the program because of the project-funding constraints, CARIC will nevertheless further strengthen its networks across Canada, by participating in regional events, interacting with other relevant networks and encouraging inter-regional collaborations through other programs.

3. SMEs

Provide specific support to SMEs, a key element of prosperity for Canada.

In 2019-2020, taking into consideration the resources available, CARIC will seek initiatives that directly support the R&D requirements of SMEs in their pursuit of global value chains, using tools and means provided by other programs.

4. SERVICE OFFER

Fulfill all members' R&D needs by using existing programs and any other appropriate R&D funding vehicle. Act as the front door to R&D services in aerospace.

CARIC will continue facilitating access to other national and provincial programs to guide its members as appropriate. It will also continue its working synergy with CRIAQ to leverage all project and network opportunities.



5. INTERSECTORAL

Reach out to other scientific and technology sectors, especially through its industry, associations, and academic leaders, where mutually beneficial partnerships and collaborations may emerge.

CARIC will continue to reach out to organizations from other sectors for mutual benefits. Significant opportunities exist because of the supercluster program and new ones will emerge from the implementation of the Federal Government Innovation and Skills Plan.

6. INTERNATIONAL

Stimulate international collaborative R&D to link partners and supply chains.

CARIC will continue to raise the international profile of the network and to ensure the global positioning of the Canadian innovation ecosystem. In particular, it will interact with the International Cooperation in Aviation Research group (ICARe) initiative, led by the European commission, to develop the next generation of cooperation program like CANNAPE.

7. COLLABORATION

Collaborate with other networks to benefit from new tools; participate in a network of networks.

CARIC will continue to collaborate with other networks across Canada like CRIAQ, while continuing its close collaboration with AIAC - Aerospace Industries Association of Canada.

8. RESOURCES

Tap into other sources of funding to support its plan.

CARIC will explore possibilities with other level of governments and entities to generate opportunities for its membership.

9. METRICS

Define performance metrics to monitor progress.

CARIC will prepare a final report covering its activities and impacts during the 2014-2020 period. This document will be submitted to ISED at the end of the program.



2 2019-2020 Corporate Plan

2.1 Objectives, Strategy for the Upcoming Fiscal Year

2018-2019 was the fifth and final year of the current contribution agreement. With the signing of the amendment, 2019-2020 will be CARIC's sixth year of operation before the closure of the program in 2020-2021. Therefore, over the next fiscal year, efforts will focus on supporting ongoing collaborative projects as well as closing projects planned to end during this period.

2.2 Summary of Planned Activities and Anticipated Results

The following activities are planned for FY 2019-2020. They have been designed to keep the momentum within the CARIC network for a smooth transition.

PLANNED ACTIVITIES	ANTICIPATED RESULTS
Hold meetings of the Board of Directors and its committees	<ul style="list-style-type: none"> 1 Board of Directors meetings 1 Executive Committee meetings 1 General Assembly meeting if necessary, other meetings of the Board, the EC and the other committees of the Board (Finance and Ethics) will be organised. The joint CRIAQ/CARIC Scientific Committee will sit four times
Hold regional workshops, network meetings and events	<ul style="list-style-type: none"> • Hold 4 Regional workshops and events • Collaborate to the CRIAQ's Forum (September 2019)
Retain members from industry and academia	<ul style="list-style-type: none"> • Maintain the members involved in projects. Members with projects will carry on paying full dues. Members without projects will remain members at no charge to keep the network together.
Participate in outreach events	<ul style="list-style-type: none"> • Main targeted events: CANSEC, AIAC Summit, ADSE, Le Bourget Airshow, DEFSEC, Best Defence.
Collaborate with CASI	<ul style="list-style-type: none"> • Deploy the CARIC/CASI collaboration agreement • Participate in the 2019 CASI Conference



2.3 Statement of Planned Expenditures for CARIC Operations and Collaborative R&TD Projects for the Upcoming Fiscal Year, by Source of Funding

The detailed budget presented in section 2.3.1 provides the detailed planned expenditures for the 2019-2020 fiscal year for both operations and collaborative R&TD projects. The budget requested for 2019-2020 operations is \$696,545, with a contribution of \$593,858 from ISED.

2.3.1 Detailed Budget 2019-2020 (Approved on January 31, 2019)



Budget 2019-2020 Approved BoD Jan. 31, 2019			
		Administration & Animation	Research projects
Revenues			
ISED Canada - Administrative fees		593,858 \$	
ISED Canada projects			150,000 \$
Membership - Industries	51,344 \$		48,657 \$
Membership - Universities and research centres	51,344 \$		20,657 \$
NRC-IRAP Program	-		
Special events (Workshops, Forum)	-		
Interest Income	-		
Revenues - TOTAL		696,545 \$	219,313 \$
Expenses			
Head office: Personnel and administrative charges (+ head office costs)		412,742 \$	-
Ottawa office: Personnel and administrative charges		30,000 \$	-
Regional offices: Personnel and administrative charges		120,000 \$	-
Support, services and other expenses			
Telecommunication and other supplies		10,000 \$	
Travel and representation expenses		40,803 \$	
Audit, accounting and legal (IP agreement and others)		18,000 \$	
Consultants (Scientific, technical advisor and others)		10,000 \$	
Support, services and other expenses - TOTAL		78,803 \$	0
Liaison and network activities			
Workshops and other events		20,000 \$	
Forum		-	
AGM, Board of Directors and other meetings		10,000 \$	
Tools (Web platform, website & online network community, database)		10,000 \$	
Communication, sponsorship, advertisement and promotion expenses		5,000 \$	
Simultaneous translation and document translation		10,000 \$	
SME Program (NRC-IRAP)		-	
Liaison and network activities - TOTAL		55,000 \$	- \$
Research Programs			
SPENT - Research projects - TRL 1-5 and Int/CANNAPE			150,000 \$
Research support projects and program, special projects (Private Fund)			
Projects evaluation			
Research Programs (Spent) - TOTAL		- \$	150,000 \$
TOTAL Expenses		696,545 \$	150,000 \$
Total eligible expenses		593,858 \$	150,000 \$
Balance		- \$	69,313 \$
Non reclaim taxes (to cover with private revenue)		52,241 \$	
Ineligible expenses (to cover with private revenue)		1,000 \$	
Eligible expenses to cover with private revenue		49,446 \$	



2.4 Risk Assessment and Mitigation Strategies

The following risks apply.

RISK ASSESSMENT	MITIGATION STRATEGIES
<p>1. ISED withhold up to 10% of the Contribution until all required audits, evaluations and reporting have been completed.</p>	<p>High risk: This holdback would cause a cash flow issue. Budget will need to be revised if the maximum of 10% is applied.</p>
<p>2. Uncertainties related to late confirmation of renewal</p>	<p>Lack of motivation or departure of CARIC staff High risk: CARIC will keep CARIC staff well informed of the renewal process. The outsourcing contract model used by CARIC allows for better management of this risk because of other opportunities our personnel can have within the company.</p> <p>Departure of members or demobilization of the community High risk: CARIC will continue to provide services to members (except new project funding) in accordance with current practices. The budget presented takes into account the non-renewal of members whose projects will be completed in 2019-2020.</p>
<p>3. CARIC and GARDN are not renewed</p>	<p>CARIC efforts will be limited to monitoring the progress of the projects within the existing portfolio and administrative obligations, under the current contribution agreement.</p> <p>Alternate options will be investigated to carry-on operations, albeit in a different form, after the end of the CARIC Program as it stands. Network-building/maintaining strategies will be defined to preserve the network.</p> <p>CARIC projects completing before September 30, 2020 would be monitoring by CARIC, and, beyond this date, would be monitored by CRIAQ, under a special agreement for this purpose.</p> <p>The appendix 1 presents the current projects to be monitoring after the end of current mandate.</p>



2.5 Statement of CARIC's Annual Cashflow Requirements for the Upcoming Fiscal Year

Operations: \$593,858

Projects: \$150,000

For reference, the expenditures over the duration of the whole program are:

ISED contribution	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	Total
Operations	1,302,909	1,697,027	1,752,042	1,797,712	1,978,964	593,858	112,636	9,235,148
Research	1,275,093	5,427,736	5,638,072	4,902,288	3,295,745	150,000	0	20,688,934
Recherche (Interest income)	4,087	35,709	22,425	7,976	5,721	0	0	75,918
sub-total	1,279,180	5,463,445	5,660,497	4,910,264	3,301,466	150,000	0	20,764,852
Total ISED	2,582,089	7,160,472	7,412,539	6,707,976	5,280,430	743,858	112,636	30,000,000

2.6 Statement of all Amounts Owing to the Crown Pursuant to Legislation, this Agreement, any Other Agreement or any Other Authority

Interest income: \$5,491 (November 30, 2018)
\$5,721 (expected by the end of the fiscal year)



APPENDIX 1: CURRENT FUNDED PROJECTS

Project Number	Project Status on January 11, 2019	Total project value (\$)	Total CARIC contribution (\$)	Remaining disbursement on April 1st, 2019 (\$)	Remaining disbursement on March 31, 2020 (\$)
CARIC projects to be completed before March 31, 2019					
AUT-1629_TRL4+	Completed	3,216,050	1,393,728	0	0
AUT-703_TRL4+	Completed	2,317,675	1,105,922	0	0
AVIO-1601_TRL4+	In progress	689,298	328,484	0	0
AVIO-718_TRL4+	Completed	255,570	126,575	0	0
COMP-1601_TRL4+	In progress	1,802,735	665,967	0	0
COMP-709_TRL4+	In progress	2,383,686	1,020,000	0	0
DPHM-702_TRL4+	Completed	1,835,402	910,320	0	0
DPHM-711_TRL4+	Completed	1,472,978	687,322	0	0
MANU-1622_TRL4+	In progress	951,784	312,610	0	0
MANU-706_TRL4+	Completed	349,514	135,755	0	0
MANU-710_TRL4+	Completed	1,520,736	693,818	0	0
MANU-711	In progress	603,664	38,970	0	0
MANU-721_TRL4+	Completed	780,851	377,623	0	0
MANU-724_TRL4+	Completed	764,684	318,238	0	0
MDO-714_TRL4+	Completed	1,380,659	598,696	0	0
OPR-706_TRL4+	Completed	612,578	267,010	0	0
PLE-P-1652_TRL4+	In progress	654,840	198,963	0	0
CARIC projects to be completed during 2019-2020					
AVIO-1503_TRL4+	In progress	3,304,100	1,602,000	0	0
AVIO-1603_TRL4+	In progress	758,538	328,556	0	0
AVIO-707	In progress	862,476	60,000	0	0
COMP-1602_TRL4+	In progress	3,824,275	1,696,795	0	0
ENV-1601_TRL4+	In progress	1,425,800	702,760	0	0
ENV-702	In progress	1,122,978	73,650	0	0
ENV-708	In progress	916,205	58,680	0	0
ENV-709	In progress	1,150,230	80,080	0	0
ENV-715	In progress	353,645	28,087	0	0
EUCA-AMOS	In progress	1,463,950	481,000	0	0
EUCA-EPICEA	In progress	1,908,328	755,180	0	0
EUCA-PHOBI2ICE	In progress	1,248,097	488,300	0	0
LEAN-702_TRL4+	In progress	1,402,046	639,212	0	0



Project Number	Project Status on January 10, 2019	Total project value	Total CARIC contribution (\$)	Remaining disbursement on April 1st, 2019	Remaining disbursement on March 31, 2020
MANU-1613_TRL4+	In progress	2,012,362	863,675	0	0
MANU-1625	In progress	574,172	39,600	0	0
MDO-1601_TRL4+	In progress	3,699,828	1,550,838	0	0
MDO-1650_TRL4+	In progress	1,442,346	610,381	0	0
MDO-710	In progress	989,892	69,526	0	0
CARIC projects to be completed beyond March 31, 2020					
COMP-1633_INTL	In progress	1,290,651	300,257	0	0
ENV-1605	In progress	1,097,100	19,520	0	0
ENV-1648_INTL	In progress	1,625,933	451,682	0	0
IDIR	In progress	1,092,500	150,000	150,000	0
MANU-1708	In progress	1,466,486	20,675	0	0
MDO-1649_TRL4+	In progress	1,234,019	490,421	0	0
OPR-1618	In progress	2,002,835	38,976	0	0
Approved projects not funded					
ENV-1656_TRL4+	On hold (waiting for funding approval)	6,059,817	2,620,900	0	0
MDO-1704_TRL4+	On hold (waiting for funding approval)	3,607,938	1,610,530	0	0
Projects not funded by CARIC with participation of CARIC's members					
FlawDetect	In preparation	636,041	0	0	0
HEPOS	In preparation	727,407	0	0	0
MANU-1615	In progress	775,675	0	0	0
MANU-1707_TRL4+	In progress	1,248,176	0	0	0
MANU-1712_TRL4+	In progress	6,616,405	0	0	0
NEXTGen SDAR	In preparation	2,614,822	0	0	0
UAS MaSu	In preparation	3,331,550	0	0	0

