

Canadian Network for Innovative Shipbuilding, Marine Research and Training (CISMaRT):

Steering a Course for Collaborative Marine Innovation in Canada

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Outline

- Objectives of the National Network
- Outcomes of Network Workshops
- Technical and Training Priorities
- Network Governance and Structure
- Next Steps

Who Are We?

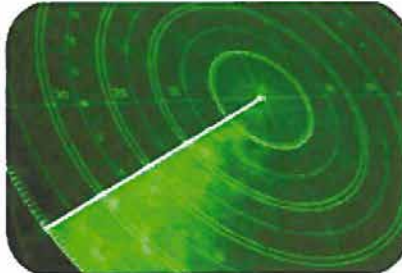
- CISMaRT is a **NATIONAL** network formed on September 26, 2016.
- It currently has 41 organizations across Canada representing the broader marine sector including three key stakeholders: industry, government and academia.
- Its research and training priorities focus on engineering and technological aspects important to the marine sector.
- CISMaRT is a unique national network in the marine sector complementary to other ocean science focused networks.

What is the Broader Marine Sector?

- Examples of Sub-Sectors (source: ISED)



**Shipbuilding, Repair,
Maintenance and Refit**



Mission Systems



Ship Platform Systems



**Offshore Oil and Gas Structures
and Equipment**



Ocean Technologies



**Design, Engineering and Related
Professional Services**

Objectives of CISMaRT

- Encourage collaborative and innovative marine research among industry, Canadian universities/colleges, research institutions, and government agencies that reflects the needs of the Canadian marine community and supports Canadian competitiveness on the global stage.
- Undertake relevant applied research and contribute to the development of innovative technologies.



Objectives of CISMaRT

- Improve marine-related educational / training programs to yield highly-qualified graduates for employment in Canadian industry and government.
- Provide contractors with potential areas for investment that could generate long-term economic benefits for the broader marine sector in Canada while helping the contractors meet their obligations under the Industrial and Technological Benefits (ITB) Policy.

Workshops Seeking Input from Stakeholders

- In developing CISMaRT, the Canadian marine community was engaged to gain their input and a level of commitment to the national network.
- Two one-day workshops were held for seeking input from 41 organizations (23 industry, 9 academia and 9 government):
 - UBC Workshop on July 6, 2016
 - MUN Workshop on September 26, 2016



Participants

Industry

American Bureau of Shipping	Schneider Electric Canada Inc.
BMT Fleet Technology	Seaspan
Fleetway Inc.	SSI
Genoa Design International Ltd.	VARD Marine
Irving Shipbuilding Inc.	Virtual Marine Technology
Lloyd's Register	...

Government

Innovation, Science & Economic Development Canada	Dalhousie University
Ocean, Coastal and River Engineering - National Research Council	Memorial University
NSERC	University of British Columbia
Royal Canadian Navy	University of New Brunswick
Atlantic Canada Opportunities Agency	University of Victoria
Defence R&D Canada - Atlantic	...
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Universities / Colleges

Key Findings – Education and Training

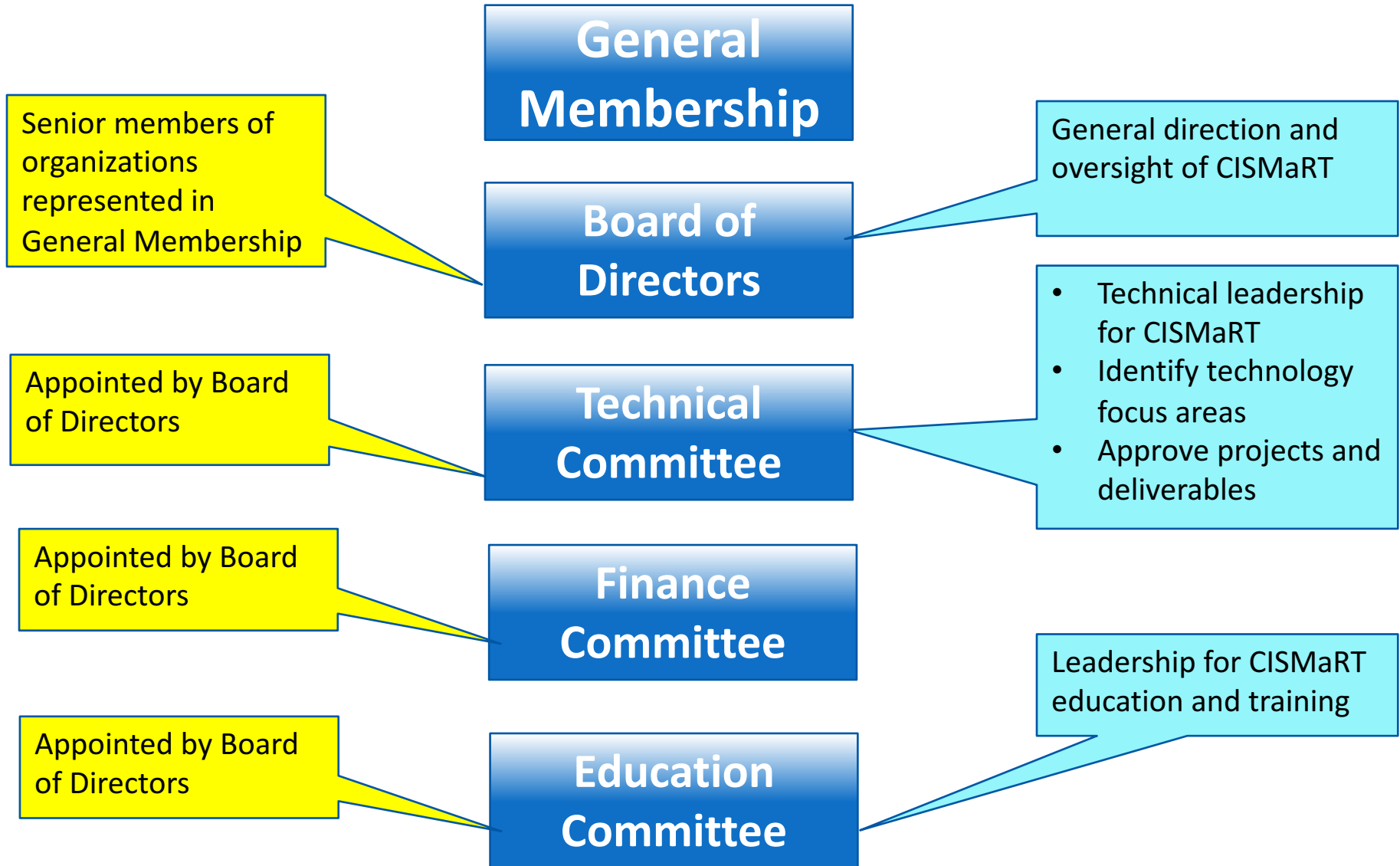
- The main recommendations for improving education and training in the marine sector are
 - **Greater use of work-terms**
 - **Curriculum improvements**
 - **Mid-career training**
 - **Better preparation for high school students / greater awareness**
 - **Practical shipyard experience**



Key Findings – Model for CISMaRT

- The model for CISMaRT is based on the successful experiences of CARIC (Consortium for Aerospace Research and Innovation in Canada).
- CISMaRT recognizes the differences between Canada's aerospace and marine industries.

Governance

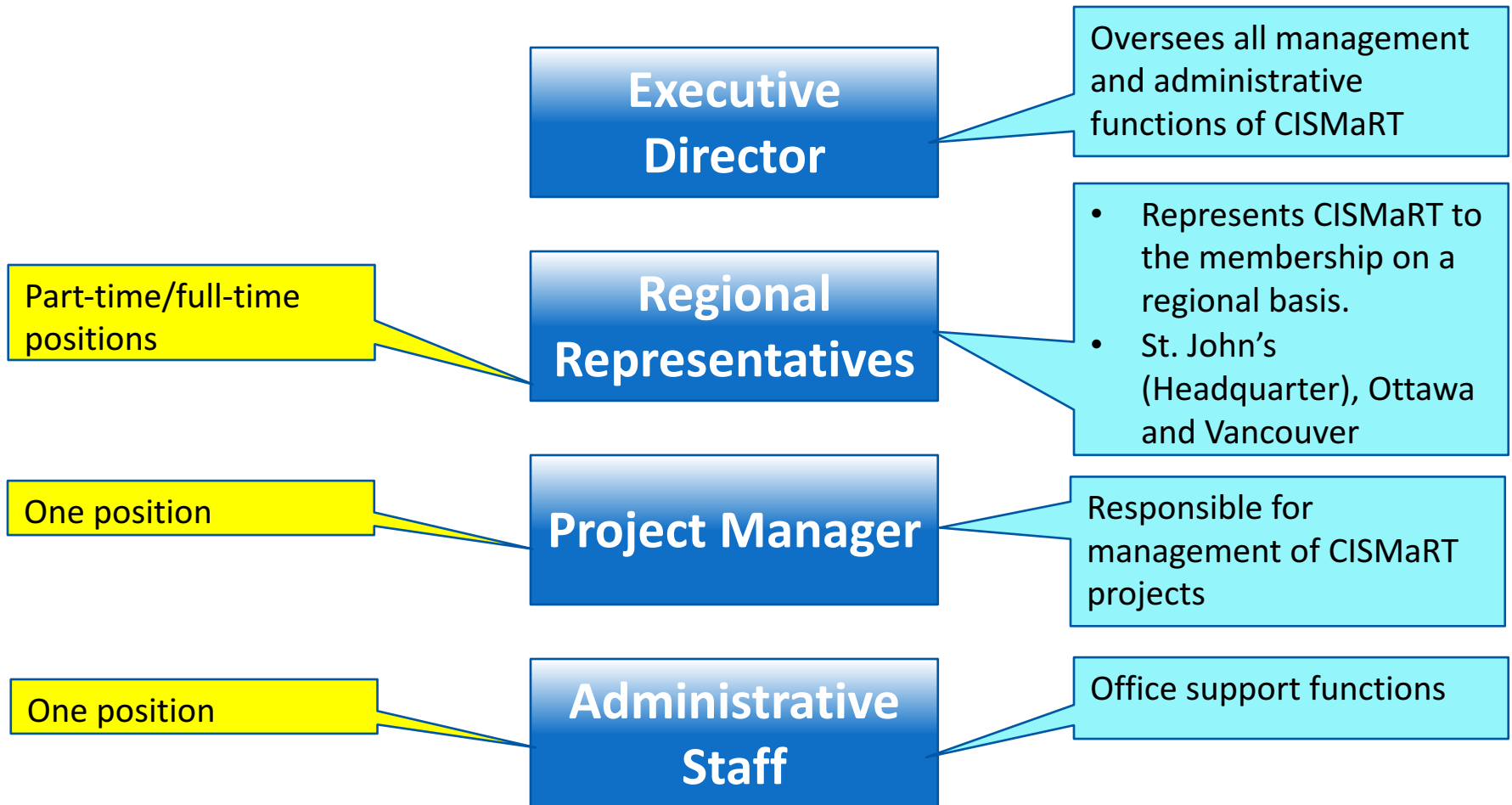


Membership

- Initial membership of CISMaRT is based on organizations that participated in the two workshops.
- CISMaRT will extend invitations to the wider marine community.
- CISMaRT plans to hold workshops and participate in conferences etc. as a means of publicizing the network and attracting new members.

Management and Administration

- Management and administrative services are to be provided by a small dedicated team.



Interim Structure

- The Interim Board consists of three industrial representatives, three members from the government agencies / research institutions, and two academic members.
- Primary tasks of the Interim Board are to attract more members from the marine sector and to fully implement the network.
- After a two-year term, the Interim Board will be replaced by a Board elected by the membership.
- During the interim period, Memorial University will act on behalf of the network for funding applications and provide cash / in-kind contributions to the implementation of CISMaRT.

Financial Support

- To seek funding to support the CISMaRT network, activities and collaborative projects:
 - Core funding from the federal government.
 - Industrial leveraged fund including potential ITB related industry contribution.
 - Additional funding from traditional programs such as NSERC, and possibly from regional and provincial funding agencies.
- Collaborative projects will typically involve partners from three stakeholder groups (industry, academia and government agencies). Industry-led collaborative projects are particularly encouraged.

Next Steps (within Three Months)

- Developing the strategic plan for CISMaRT.
- Developing detailed implementation plan for the national network.
- Preparing a proposal for the core funding.
- Seeking support through the NSS ITB opportunities.

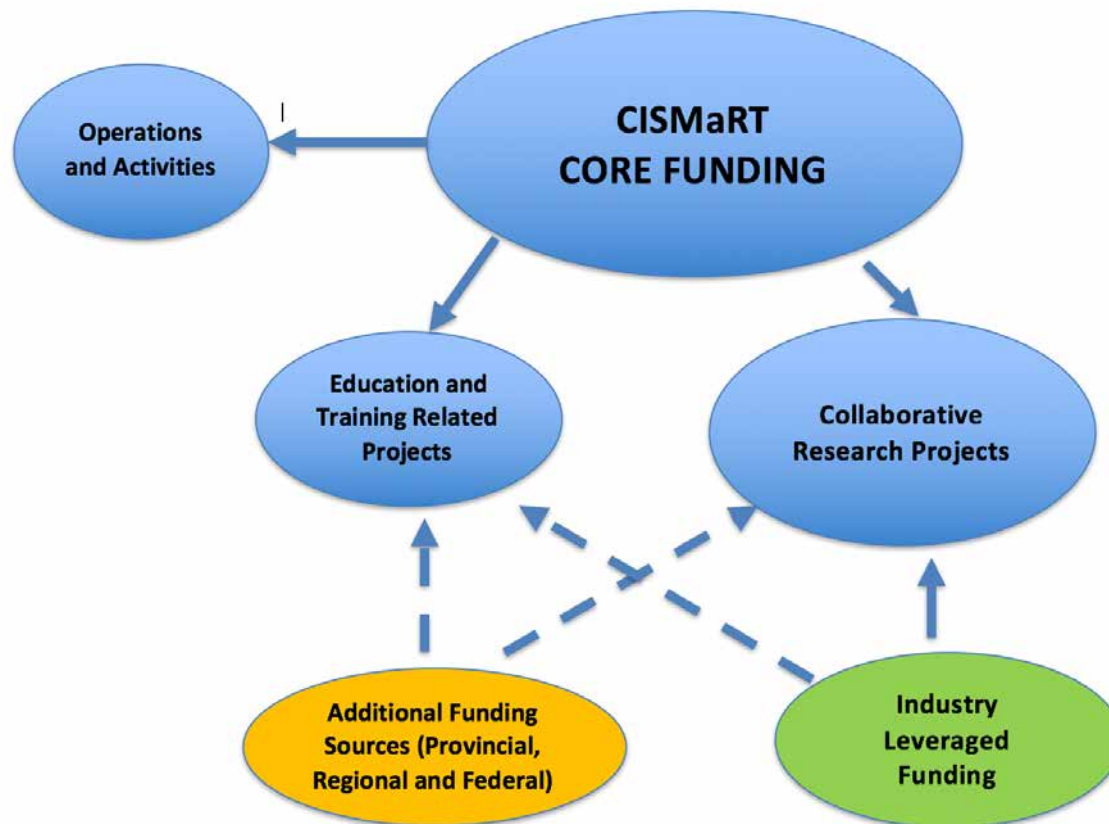
Next Steps – Immediate Actions

- Kicking off network activities by making use of existing funding programs:
 - NSERC CREATE program to train highly qualified personnel in the area of marine and shipbuilding technologies involving pan-Canadian universities and industry.
 - Carrying out research projects in collaboration with industry and government agencies through NSERC Engage and Collaborative Research Development (CRD) programs.
 - Examples of planned projects:
Arctic Ship Operations



Next Steps – Long-term Actions

- To support collaborative research and training projects with CISMART's core funding, leveraged funds from industry, federal, provincial and regional funding sources.



Summary

- The national network, CISMaRT, reflects the needs of the broader marine community.
- CISMaRT encourages collaborative and innovative marine research and training among the private sector, universities / colleges, research institutions and government agencies.
- The network will support Canadian competitiveness on the global stage.
- CISMaRT will provide many benefits to Canada in terms of new technologies, highly qualified workforce, economy and international competitiveness.

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