



CANADIAN NETWORK
FOR INNOVATIVE SHIPBUILDING,
MARINE RESEARCH AND TRAINING

RÉSEAU CANADIEN POUR L'INNOVATION
DANS LA CONSTRUCTION NAVALE,
LA RECHERCHE MARINE ET LA FORMATION

Breakout Session – I: Education

Workshop on Education and Training

Ottawa, ON

11 July 2017

Scope & Definitions

- Scope
 - The education and training of engineers and technologists in marine technology subjects
- Definitions
 - Education – formal education received by naval architects, engineers, technologists etc. leading to degrees, diplomas and certificates and similar.
 - Training – other education received by naval architects, engineers, technologists etc. Typically this would include short courses, mid-career training

Key Findings - Education & Training

- At the UBC Workshop (July 2016) the following were considered the five most important issues:
 - Greater use of work terms
 - Curriculum improvements
 - Mid-career training
 - Preparing high school students (especially skills in math, physics and science) and middle school awareness/attraction
 - Practical shipyard experience

Breakout Sessions

- Eleven questions are posed ranging from general to more specific questions
- Four categories
 - General
 - Curriculum
 - Practical experience
 - Casting the net wider
- Each team to spend
 - 45 minutes to develop answers to the question
 - 5 - 6 minutes to present answers to the posed questions

What Questions Are We Trying to Answer?

- Are we doing the right things?
- Are we doing it well?
- If not, what do we need to do?
- What is coming down the road that we need to worry about?
- Are we prepared for the future?

Questions

General

- Qs 1-3
 - General impressions of current state of marine technology education in Canada
- Q 4 – Personnel Requirements for NSS
 - What can we do to be prepared?

Questions

Curriculum

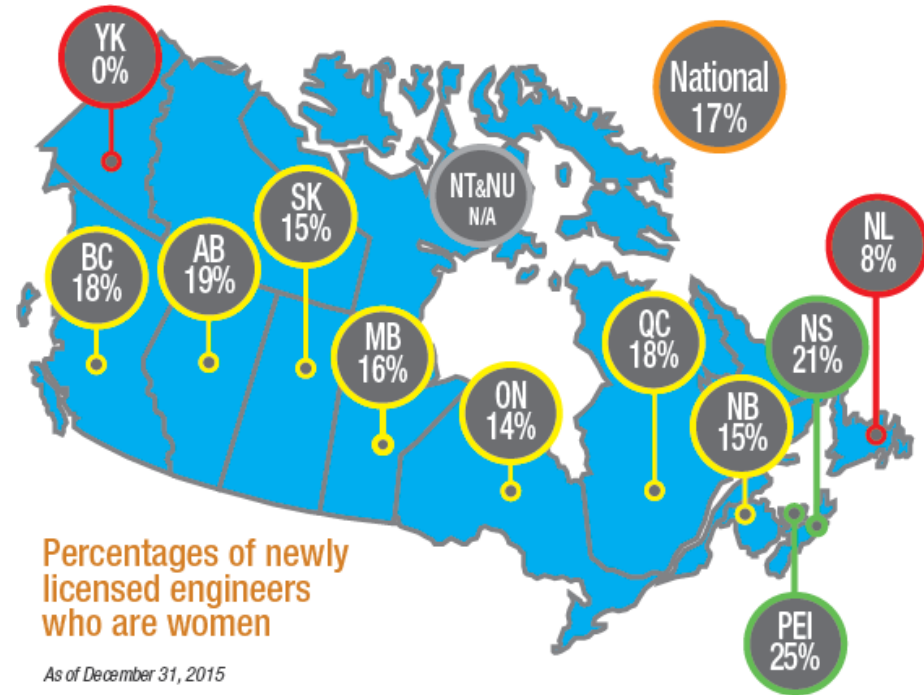
- Q 5 – Additional academic programs that reflect current needs
- Q 6 – Newer Technologies
 - Should universities & colleges introduce newer technologies into the curriculum? If so, how?
- Q 7 – “Soft” Skills
 - Are there “soft” skills that students should acquire or improve?

Questions

- Q 8 – Work terms
 - The use of work terms as part of engineering programs have been universally praised
 - Should the concept be extended?
 - Can we improve program?
- Q 9 – Practical shipyard experience
 - Practical ideas on how this might be included.

Questions: Casting the Net Wider

- Q 10 – Diversity
- Engineers Canada* encourages greater participation of women in engineering
 - Initiative “30 by 30” aims to raise %age of women as licenced engineers to 30% by 2030
 - Limited data suggests we are not doing too badly
 - For example, over the last 10 years an average of about 25% of MUN NA graduates have been female
 - Can we do better?



* National organization of the 12 provincial and territorial associations that regulate the practice of engineering in Canada and license the country's more than 280,000 members of the engineering profession.

Questions : Casting the Net Wider

- Q 11 – Introducing marine technology to secondary school students
 - Exposing young students to the marine industry
 - May be the EIR* program can be adapted?

* The Engineers-In-Residence in Ontario program arranges for P.Eng volunteers to talk to schools about engineering as a means of encouraging interest in young students.