"EDUCATION, AMBITION AND CHALLENGES: DESIGNING FOR AND OPERATING IN THE ARCTIC ENVIRONMENT"

By: Danita Burke

15 January 2014

(http://www.youtube.com/watch?v=R52HoSDtYDs)
PURPOSE OF THIS TALK

- This talk highlights some of the key interests and challenges with the Arctic region and aims to emphasize the opportunities the Arctic presents for people with an educational background in engineering studies and how you play an important role in Arctic politics.

Image from: www.worldatlas.com (Retrieved 12 January 2014)
OVERVIEW OF THE POLITICS OF THE ARCTIC

- Climate change has been a game changer in how the Arctic is perceived politically and economically.

- There is much political and commercial interest in the Arctic region.

- There are still unresolved disputes over ownership in the Arctic.

- Getting to the opportunities is a challenge.
SOME ISSUES WITH OPERATING IN THE ARCTIC

- High Costs of Operation
- Navigational Aids and Communication
- Isolation
  - Access to materials and skilled personnel
  - Psychological influence
- Limited Emergency Capabilities
  - Policing and Search and Rescue capabilities
  - Pollution response capabilities
- Darkness
- Environmental Factors
  - Temperature
  - Permafrost
  - Wind
  - Ice conditions - sheet ice and icebergs

Shell owned Kulluk ran aground in 2012 en-route from the North Slope in the Beaufort Sea to Seattle
Image from: http://en.wikipedia.org/wiki/File:KullukAground_1jan2013.JPG
WHERE DO YOU FIT INTO ALL OF THIS?

- Engineers are part of the political process!

- Micro-level:
  - Entrepreneurial Opportunities
  - Jobs - Government, Academic, Cooperate, Non-governmental Organizations (NGOs)
    - Research - e.g. infrastructure design and construction
    - Consultation - e.g. external reviewers for corporations, NGOs, government departments and agencies, as well as courts and lawyers.

- Macro-level:
  - Federal, Provincial, Regional and Local growth potential
    - Direct taxing and revenue opportunities
    - Indirect spin-off industries
SO URC ES:


ADDITIONAL SOURCES: