Models of Collaborative Research

Strategic Workshop

National Network for Innovative Shipbuilding/Marine Research and Training

Vancouver, BC

6 July 2016

Overview

- A sample of existing successful models for cooperative research – ones that have been around a long time
  - Joint Industry Projects
  - Cooperative Research Ships (CRS)
  - Ship Structure Committee (SSC)
- A Proposed National Network Model
  - For discussion purposes

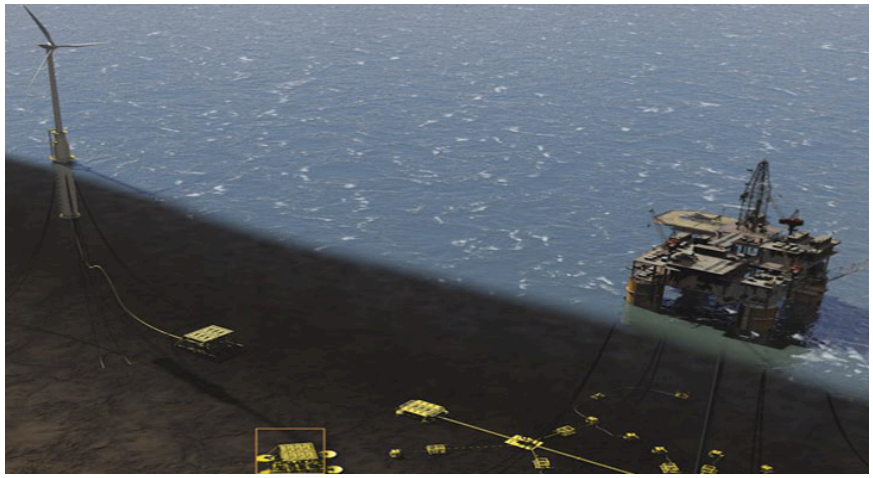
Joint Industry Projects

- Joint Industry Projects (JIP) are used in both the marine and offshore industries
- Typically
  - Lead organization/s proposes a project
  - Interested organizations
    - Join as partners
    - Contribute to the budget
    - May participate in the technical work of the JIP
  - Technology developed regarded as proprietary – results kept confidential for 2 or 3 years
- Sometimes “Super” JIPs are undertaken – several JIPs under a single umbrella

Joint Industry Projects

- A couple of examples

- WIN WIN JIP (DNV GL)
  - Use of wind power for oil and gas installations
    - Experiments
    - CFD modelling
    - Partners: ExxonMobil, Statoil + 5 others



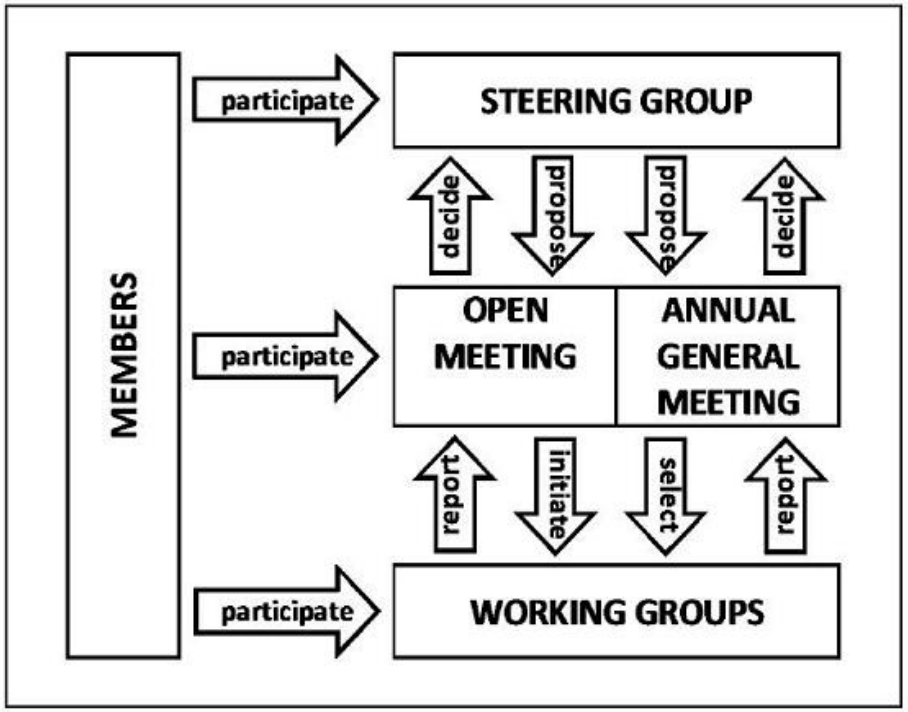
- FPSO Research Forum
  - "Super JIP" comprises 10 JIPs including
    - MONITAS: Intelligent Structural Health of FPSO's
    - **SCORCH**: Seawater Corrosion Of Rope & Chain
    - **DISCO**: Hydrodynamics of Disconnectable Turret Systems
    - Etc
    - Partners: Several oil majors, classification societies, engineering companies …

Cooperative Research Ships (CRS)

- Established in 1969 and focuses on:
  - Hydrodynamics
  - Structural and related problems
  - All kind of ship types from a fundamental, design and operational perspective
- Administered by MARIN in the Netherlands
- 27 members
  - Shipyards and suppliers
  - Classification societies
  - Research organizations
  - Navies and operators

Cooperative Research in Ships (CRS)

- Research work funded and typically performed by members
- Typical project:
  - ~3 years
  - 300K – 500K Euro
    (~ 430K – 720K C$)
- Example projects:
  - Broadband propeller noise
  - Ducted propellers
  - Maneuvering in waves
  - In-service monitoring



Source: MARIN Website

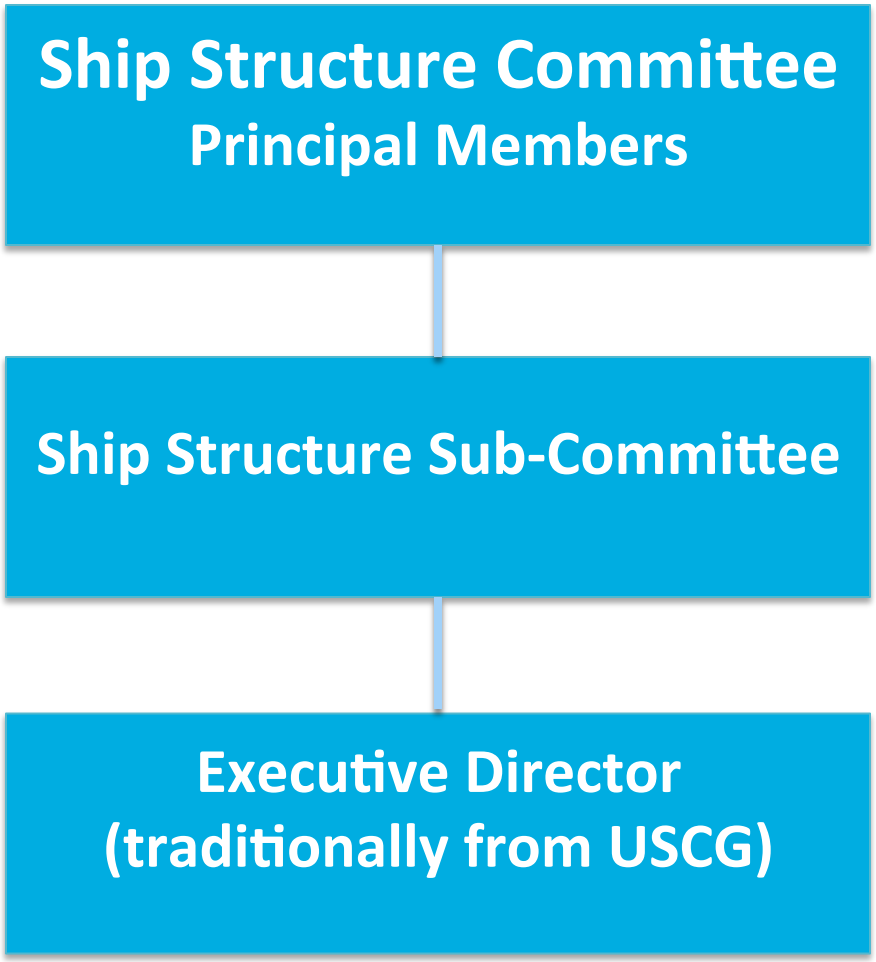
Ship Structure Committee (SSC)

- Started in 1943 primarily to address brittle fracture problems experienced in welded ships built during WWII
- Quickly broadened scope to sponsor research into other aspects of ship structure
- Mission: Eliminate marine structural failure
- Reports are available without restriction
- Current membership:
  - ABS*
  - MARAD*
  - Military Sealift Command
  - NAVSEA*
  - DRDC
  - Transport Canada
  - U. S. Coast Guard* (Chair)
  - The Society of Naval Architects and Marine Engineers

* founder members

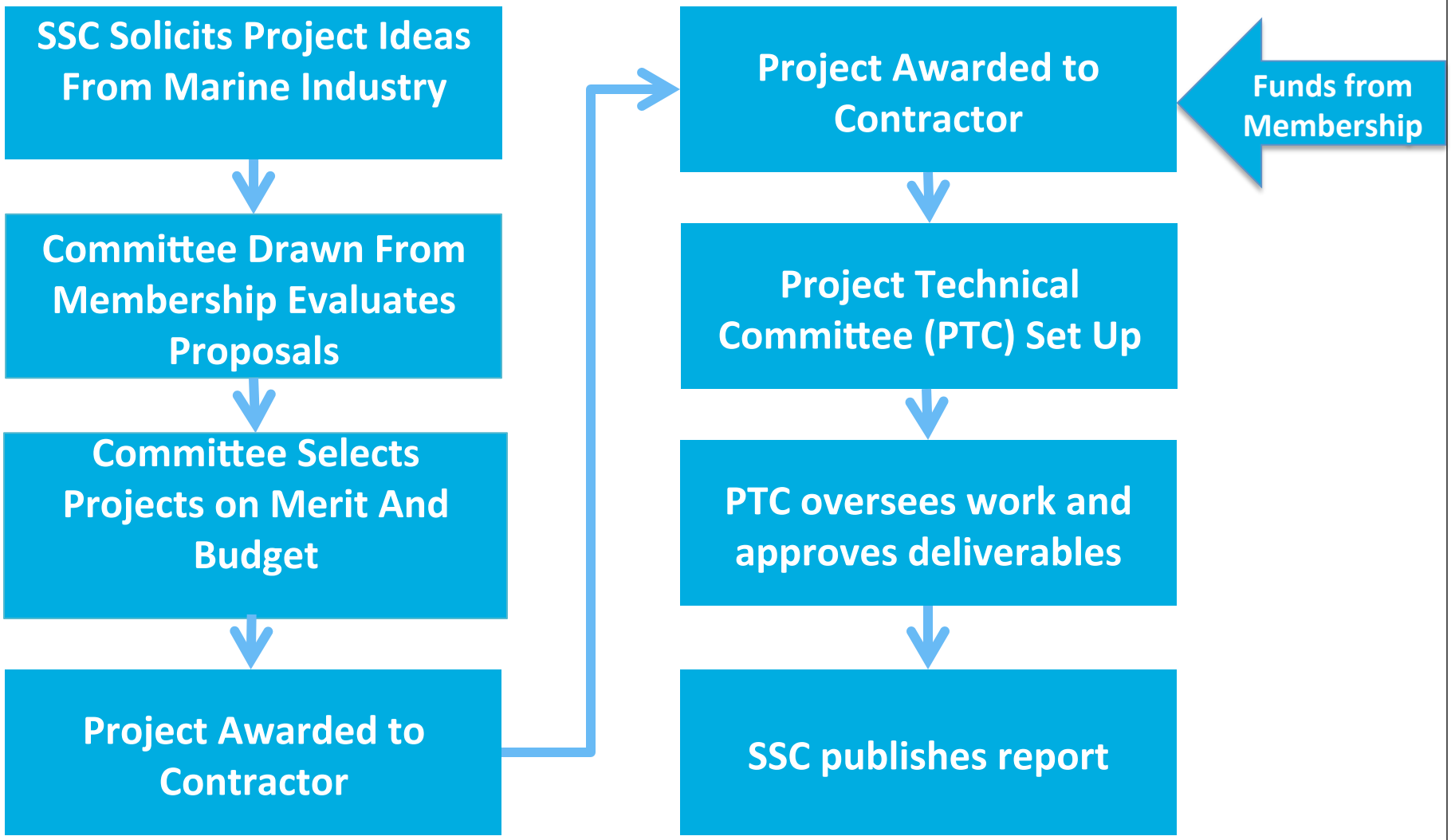
Ship Structure Committee (SSC)

- Organization



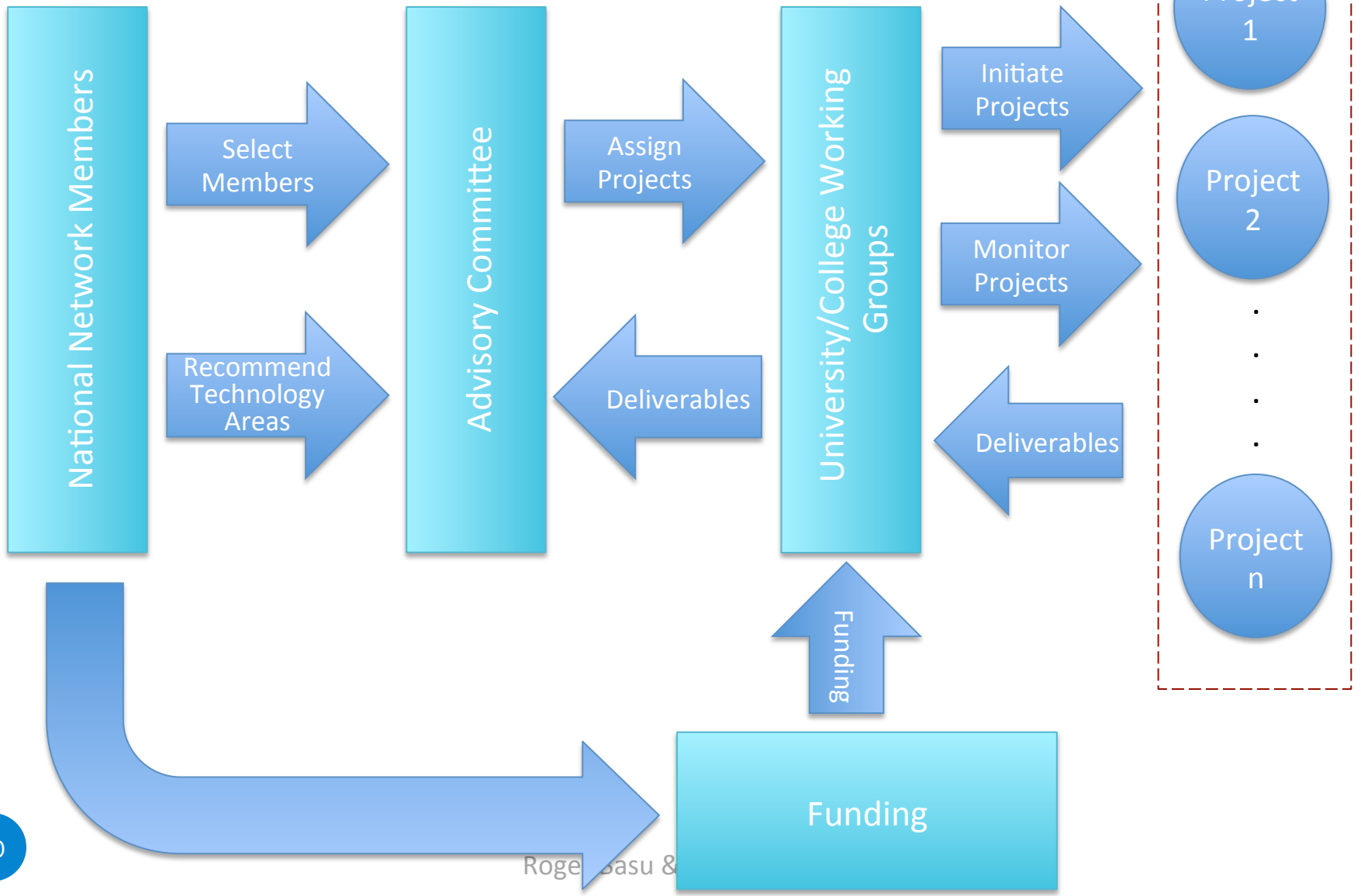
Ship Structure Committee (SSC)

- How Projects Are Initiated And Run



A National Network Model

- For discussion purposes



Questions/Issues

- Will membership be open to all who are interested?
- How will priorities be set for research?
- How will IP be treated?
- What are likely funding sources?
- How can the network address education/training?
- What kinds of project?
  - Undertaken by a university alone
  - Or a group of universities
  - Collaborative research in which university researchers work with industrial partners
  - Engineers seconded to university to jointly lead projects
  - Etc.
- What are the next steps?