From the Captain to the Cook
What do the Captain and Cook have to do with construction mega projects?

Nothing!

But! There is something to be learned

• Shared Goals
• Shared Training
• Shared Language
• Well defined organization structure
Problems for Mega-Projects

• Large cost over runs and schedule delays
  — People shortages
  — Material shortages
  — No shared or at best inconsistent goals
  — Little or no shared training
  — No or defacto shared language

• Litigious

• Outdated business model
  — Minimize costs
Workface Planning

- Establish Common Framework
- Establish Common Priorities
  - Construction Driven
- Use of similar terminology
  - Is FIWP or FWP
- Documentation
Workface Planning Issues

- New concept- not fully developed or proven
- Varies from Org to Org
- No shared training
- No common language
- Support systems
  - WFP Systems are new and do not address complete scope
  - Few standards
  - Data integration issues
  - Many ad hoc programs
- Not a complete solution
The Multi-Objective Problem

Minimize Costs

Workface Planning

System Optimum
Captain to Cook Redux

How did we get the Captain and Cook on the same page?

• Training!
• Training!
• Qualification
• Organization!
• And assessment.
The Submarine Model

- Expert training – Each prospective crewmember is already trained in a specialty area
- Platform Training – 3 to 6 month Submarine School
- Qualification – One year on board training lead to qualification as Submariner
- Continued training – Leading to increased responsibility
- Assessment
Expert Training

- Machinist
- Electrician
- Electronic Tech
- Commissaryman (the Cook)
- Engineering (the Officers)
- Management Trainees (the Officers)
- Management (the Captain)
Platform Training

- Submarine School – All
  - Training in all aspects of submarine operations
  - Classroom
  - Simulator training
  - Safety training
  - Common Language
Onboard Training Training

• On board training – All
  – Overall training on all aspects of operations and systems
  – Hands on training on unique systems
  – Conducted by senior crewmembers
Qualification

• Earning your Dolphins
  – *Written exam*
  – *Oral exams and walk through*
  – *Recognition*
Captain Qualification

- Successfully performed in all division officer billets
- Served as Executive Officer
- Attend Prospective Commanding Officer program – 3 to 6 month assignment
- Qualify for Command
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Organization

The Captain

Executive Officer

Mechanical
Electrical
Aux

The Cook

Storekeeper

Weapons
Sonar
Comms

Project Manager

Construction

Concept

Mechanical
Electrical
Civil

Engineering

Mechanical
Electrical
Civil

Pipe
Structural

Coatings

Corrosion

Pipe
Structural

Pipe
Structural
Recommendation

- Establish universal Workface Planning program
- Establish company specific training programs for all levels
- Develop qualification program for all levels
- Develop Assessment tools for individual and team
Universal Training

- All must attend
- Standardized across stakeholders
- Available online or through stakeholder networks
- Cost effective
- Continuing education
Company Specific Training

• All must attend
• Train in company specific implementation
• Available online or through stakeholder networks
• Cost effective
• Continuing education
Qualification Program

- On the job demonstration of Workface Planning knowledge
- Recognize qualification
- Qualification transferrable
- Renew qualification by project or employer
Recommendations

• Establish Project Manager Career Path and Qualification program
• Need to move beyond PMI or upgrade PMI training
• Develop contact language to give Project Manager “Captain Like” authority over project resources and performance