How to reduce cost in Documentation

DNVGL-RP-O101

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TECHNICAL DOCUMENTATION FOR SUBSEA PROJECTS

Agenda

Nov 2015

- Improvement Project
  - How to reduce cost in documentation?

Jan 2016

- Subsea Alliance Projects
  - Work smarter
  - Long term frame agreements
  - One integrated team
  - Shared passion for high performance
  - “One team” with a common culture

Q4 2016

- Implementations of new requirements
  - New LCI Procedure
  - DNVGL-RP-O101
  - Joint review
  - Retain documentation
  - Copy effect

Future

- Results
  - Cut total execution time by 25%
  - Reduce engineering hours per ton platform by 50%
Improvement project
TECHNICAL DOCUMENTATION FOR SUBSEA PROJECTS

Improvement project

- **November 2015 – Kick-Off – Goal 20% reduction**
  - How can we reduce cost in documentation?
  - Recommend minimum requirements for documentation for review / approval / information
  - Recommend standard documents and project specific documents

- **The project was split in three separate workshops**
  1. Internal review
  2. DNVGL review (project vs RP)
  3. Contractors recommendations

- **Viper Kobra, a small tie-back project was used as a case**
  - Manifold
  - 2 X-Mas trees and controls
  - Spools
  - Installation
## TECHNICAL DOCUMENTATION FOR SUBSEA PROJECTS

### Mapping process

- **All documents in VIK (1025 doc.) from Viper Kobra has been evaluated and listed in 3 categories**
  - Engineering / Contractors
  - Company Provided Item
  - Sub Suppliers

- **Each document is categorized into 5 categories**
  - Is this recommended by (Old) DNVGL-RP-0071?
  - Do we need to review this document?
  - Document Type (Standard or project Specific)
  - Minimum Requirements
  - Can we update the document with minor information (Copy effect)?
By reducing reviewers internally and reducing documentation to a minimum, we can have a significant cost saving in the project.
Copy effect is when we reuse existing documents that are in the system when we reorder the same product.

- “We don’t need custom-made drawing for a standard product”

- By re-using documentation (Copy effect), there will be a significant cost reduction for the Company. This can be implemented if Company order the same equipment as earlier and reuse the documentation.
Reduction in cost of documentation without Manifold

- Current Cost: $21
- Hardware (XMT, PGB & Controls): -$11
- Spools, Flange, Installation, Documentation Etc.: -$6
- Future cost for Documentation: $4

Reduction in cost of documentation incl. Manifold

- Current Cost: $31
- Manifold: -$9
- Hardware (XMT, PGB & Controls): -$11
- Spools, Flange, Installation, Documentation Etc.: -$6
- Future cost for Documentation: $5
Subsea Alliance Projects
Goal to sanction new stand-alone projects at break-even prices below 35 USD/boe

TECHNICAL DOCUMENTATION FOR SUBSEA PROJECTS

Working together with suppliers through strategic partnerships

- **New project delivery model**
  - Reduce engineering hours per ton platform by 50%
  - Cut total execution time by 25%

- **Common KPIs and incentives**
  - Long term frame agreements
  - Sharing of risk, both upside and downside

- **Alliance team organized to deliver total scope**
  - Best qualified person for the job
  - One integrated team
  - All positions accountable to deliver on quality/schedule/cost

Alliance organization
Best man for the job
(no competency overlap)
Implementation of new requirements
We are establishing a new LCI procedure
- Det norske has implemented DNVGL-RP-O101 as a requirement

New contracts
- DNVGL-RP-O101 is a requirement in new subsea contracts

Sitting in the driver's seat
- Det norske to reduce documentation, Company specific requirements and work with the industry to ensure correct quality in a standard equipment.

Det norske will use DNVGL-RP-O101, but will continually search for better, smarter and more cost effective solutions
- Copy effect
- Joint review
- Strategic partnerships
- Lean principle
Results
75% reduction in Volund Infill documentation for review and we are still working!
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