



MTS DP WORKSHOP NORWAY

3rd and 4th of September 2019

OSLO



DP DESIGN FOCUSED MTS FACILITATED WORKSHOP IN NORWAY 3rd AND 4th SEPTEMBER 2019

WORKSHOP SPONSOR – EQUINOR

Supported by DNV GL & MTS DP GUIDANCE AND STANDARDS SUB COMMITTEE

M3 Marine Group Pte. Ltd. (Singapore), Aqualis Offshore Ltd. (Singapore), Global Maritime AS (Norway), Sebastian AS (Norway), Keelson Marine Assurance L.L.C. (USA), Vard Group AS (Norway)

WORKSHOP CHAIRS: BJORN NYGARD (EQUINOR) & CARL ANNESSA (EXECUTIVE VP AND COO HORNBECK OFFSHORE), ALEKS KARLSEN (DNV GL MARITIME)

WORKSHOP FACILITATOR: DR STEVEN CARGILL (MEMBER MTS DP SUB COMMITTEE ON GUIDANCE AND STANDARDS - DNVGL NDms TECHNICAL AUTHORITY FOR DP)

WORKSHOP CO FACILITATOR: JOEY FISHER, KAI ARNE SMEBY-LERSTAND, JOHANNES KRISTIAN BJØRINGSØY, CHRIS RICHARDSON, MATT BATEMAN, BENT ERIK NEDREVOLD

The DP DESIGN FOCUSED, MTS DP COMMITTEE facilitated workshop event in Norway will be conducted on **3rd and 4th of September** at venues in Oslo:

Day 1 – DNV GL - Veritasveien 1, 1363 Høvik

Day 2 – DNV GL - Veritasveien 1, 1363 Høvik

This workshop is being conducted at the behest of the DP community in Norway. This workshop will follow the familiar pattern of the MTS DP conference workshops conducted in Houston on the day preceding the Annual MTS DP Conference.

The topics for the first DP design focused workshop were chosen by the sponsors and participants at the previous workshop for their significance. Topics will be covered in four sessions over the two-day period.

- Design Fundamentals – Are they being addressed effectively in DP design
 - Segregation of control, protection & monitoring
 - Systems thinking, Systems engineering – (Integrated thinking?)
- Design Philosophy
 - Integrated vs autonomous / distributed designs
 - Complexity vs 'elegance' in simplicity
 - Integration-factors to be considered
 - Transparency as relevant to DP design
 - Interfaces and influences – are they adequately considered / understood?
 - Built to test – test on demand capability – healthy to operate (foundation of V&V)
 - Overview of MTS DP design philosophy document (DNVGL RP E306)
- Basis of Confidence
 - Verification and validation
 - Expectations – whose expectations do we need to meet?
 - Traditional methods
 - Disruptive technologies – should we fear them or embrace them?
 - Leveraging digitalization and advanced modelling techniques
 - Defense in depth
 - Application of barrier thinking / barrier management



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- People and process - (design influences and demands)
- Points to ponder
 - Are we addressing:
 - Lifecycle (costs, efficiency, obsolescence, changing societal expectations)
 - Human factors engineering (ergonomics, demographics (multi-generational workforce))
 - Rapid technology development (impacts of unruly technology)

The theme for the workshop based on the topics will be “**DP Design – driving delivery of predictable incident free DP operations**”.

This workshop will focus on enhancing awareness of DP related issues associated with the above topics and the steps that can be taken to address these issues (including leveraging the guidance documents published by MTS DP Committee). The workshop is expected to bring focus on means to enhance value and effectiveness in the management of DP operations across the Supply Chain.

Registration: Attendance at this workshop is limited to 45 persons (limit 2 per company – Exception requests, if any, to be forwarded to workshop organizers). Registration for this workshop will be managed by **Global Maritime AS** and **Sebastian AS** (Volunteers):

- [Kai Arne Smeby-Lerstad](#)
- kai.lerstad@globalmaritime.com
- [Johannes Kristian Bjøringsøy](#)
- bassa@sebastian.no

Please register early by sending an email **to both email addresses** listed above using the links provided.

(registration will be on ‘first come - first served’ basis as places are limited) Confirmation of attendance will be requested by email the week before the workshop. A waiting list will be developed if needed.

Applicability: Those likely to benefit from the workshop include:

- Representatives from Shipyards, Key DP equipment vendors
- Representatives from Vessel Owners / Contractors’ Project Teams, Technical departments (with accountability for specifying DP Equipment, FMEAs, providing technical support for Operations, Managing Operations)
- Representatives from Class responsible for approval of DP systems
- Consultant community (Independent 3rd Party assurance and providing technical and operational support to Charterers and Vessel Managers)
- Representatives from Oil Companies / Operators with accountability for chartering of and assurance on DP related matters
- Representatives from Statutory Bodies (Flag State / Coastal State)
- Vessel’s Operational Management teams (Chief Engineers, Chief Electricians, Master & DPOs optional)
- Representatives responsible for training personnel / stakeholders engaged in DP operations. (not limited to DPO training) - Optional

The format of the workshop will follow that used at the MTS DP Conference in Houston. Participants work in small groups of 8 to 9 persons per table. Coaching and mentoring will be provided to the participants by the facilitators and cofacilitators to allow them to be effective and achieve the stated objectives. Results and conclusions from the workshop will be summarized and presented to the MTS DP Technical Committee and to the sponsors.



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The workshop will focus on enhancing awareness of issues and steps that can be taken to address the same and means to enhance value of managing DP operations effectively across the Supply Chain. Additionally, the workshop will provide a venue for the participants to gain awareness of the Technical and Operations guidance (TECHOPs) published by the MTS DP Committee.



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TOPICS AND AGENDA

DAY 1

MORNING SESSION (0800~1200):

INTRODUCTION & OVERVIEW

0800~0820: Opening address EQUINOR, HOS & DNVGL

0820~0830: A designer's perspective (VARD)

0830~0900: Group Activity #1

0900~1200:

DESIGN FUNDAMENTALS – ARE THEY BEING ADDRESSED EFFECTIVELY IN DP DESIGN

- Segregation of control, protection & monitoring
- Systems thinking, Systems engineering – (Integrated thinking?)
- Introduction - slides / Chalk and talk (45 mins)

15 min break

- Workshop topics (1 hr. 30 mins)
- Report out (30 mins)

LUNCH BREAK: (1200~1300):

AFTERNOON SESSION (1300~1700):

DESIGN PHILOSOPHY

- An introduction to the “3 Pegs” thinking / Seven Pillars / Staircase / Basis of Confidence (30 mins)
- Group task – (Reflections on Design issues from experience) (30 mins Reflections + 15 mins Report out)

15 mins break

- Workshop topics – Chalk and talk slides (30 mins)
 - Cross connections
 - Interfaces and external influences (ESD, E-stops, load sharing, dual feeds)
- Breakout
- Group 1 topics (Tables 1 and 3) (45 mins + 15 mins break + 30 mins) –
 - Integrated vs autonomous / distributed designs
 - Integration-factors to be considered
 - Transparency as relevant to DP design
 - Built to test – test on demand capability – healthy to operate (foundation of V&V)
- Group 2 topics (Tables 2 and 4) (45 mins + 15 mins break + 30 mins) -
 - Complexity vs ‘elegance’ in simplicity
 - Integration-factors to be considered
 - Interfaces and influences – are they adequately considered / understood?
 - Overview of MTS DP design philosophy document (DNVGL RP E306)
- Report out – 15 mins
- Feedback – 15 mins



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DAY 2

MORNING SESSION (0800~1200):

BASIS OF CONFIDENCE

- Chalk and talk slides (30 mins)
- Reflections and experience from testing (30 mins)
- Report out (15 mins)

15 mins break

- Workshop topics – Verification and Validation (1 hr. 15 mins)
 - Challenges
 - Opportunities
 - Barriers to realizing opportunities
 - How to overcome aforementioned barriers

15 mins break

- Workshop topics – Defense in Depth
- Group 1 topics (Tables 1 and 3) (40 mins) –
 - Application of barrier thinking / barrier management
- Group 2 topics (Tables 2 and 4) (40 mins) -
 - People and process - (design influences and demands)
- Report out (20 mins)

LUNCH BREAK: (1200~1300):

AFTERNOON SESSION (1300~1630):

POINTS TO PONDER

- Group task (45 mins + 15 mins report out)

15 mins break

- Workshop topics (1 hr.)
- Are we addressing:
 - Lifecycle (costs, efficiency, obsolescence, changing societal expectations)
 - Human factors engineering (ergonomics, demographics (multi-generational workforce))
 - Rapid technology development (impacts of unruly technology)
- Report out (30 mins)
- Review on workshop output – Day one and two (15 mins)
- Feedback on workshop (25 mins)
- Closing comments (5 mins)

END

Suggested pre-reading available from the MTS DP Committee website - [Dynamic Positioning Committee](#) using the links below:

<https://dynamic-positioning.com/documents/design/>

<https://dynamic-positioning.com/documents/technical-and-operational-guidance-notes/>