N4 Library Project and the Whole ANP Library.

CAPT Dave Walter

N4 Library Project

ANEP Library
N4 Library Project

The Affects of Change

New References
- NPIC
- AMSDOs
- AEOs

Training
- CLEOs
- Integrated Logistics

Projects
- ANPs
- Electronic Pubs

SPOs
- DSwMS
- NTRF

NAP
- DI(N)s & ABRs
- Sustainment

N4 Library Project

Schedule

Transition Schedule:
- Tranche 1 6 Dec 2016 - delivered
- Tranche 2
  - 2A 18 May 2017 - delivered
  - 2B 7 Sep – 18 Dec 2017 – delivered
- Tranche 3 Feb 2018 - delayed
- Tranche 4 Jun 2018
- Tranche 5 Nov 2018 - now includes Tranche 6
N4 Library Project

Tranche 3

UPKEEP
The Naval Engineering Maintenance System

N4 Library Project Transition

Tranche 3

Naval Materiel Delivery – Upkeep
- ANP2412-4000 – Naval Materiel Delivery (Policy)
- ANP2412-4200 – Naval Materiel Upkeep (Policy)
- ANP3411-0001 – Naval Seaworthiness Outcomes Publication
- ANP3412-4000 – Naval Materiel Delivery Publication
- ANP3412-4003 – Naval Materiel Job Control Publication
- ANP3412-4004 – Naval Materiel Configuration Baseline Publication
- ANP3412-4005 – Naval Materiel Configuration Audit Publication
- ANP3412-4006 – Naval Materiel Customer/Supplier Agreements Pub
- ANP3412-4200 – Naval Materiel System Conformance Monitoring Pub
- ANP3412-4204 – Naval Materiel Upkeep Evaluation and Approval Pub
- ANP3412-4205 – Naval Materiel Naval Upkeep Planning Publication
N4 Library Project Transition

Tranche 3

Tranche | Description
--- | ---
3 | Naval Materiel – Drive Delivery series – policy publication and ~four Level 3 publications
   | Naval Materiel Upkeep series – policy publication, ~six Level 3 and ~six Level 4 publications
   | Naval Infrastructure – Level 3 publication
   | Naval Support to Operations – Policy Chapter, Level 3 and Level 4 publications
   | (TBC) Naval Logistic Workforce Needs policy (1 chapter) – to enable cancellation of D(N)ADMIN70-6 Fleet Support
   | Unit
4 | Naval Materiel Delivery Strategy – ~four publications
   | Naval Materiel Upkeep series – remaining level 4 publications (~twenty, including Seaworthiness outcomes and potentially Industry, Skills and Technology Innovation)
   | Naval Materiel Optimisation – policy publication and ~eight level 3 publications
   | Logistic Support policy and publication (ILS and/or LiS)
   | Naval Material Delivery Planning Publication

N4 Library Project Transition

Tranche 3

<table>
<thead>
<tr>
<th>Tranche</th>
<th>Superseded Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>2412-4200 Naval Materiel Upkeep Policy (As Vol 3 of NAVMATSEAPOL)</td>
<td>Nil</td>
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<tr>
<td>3412-4200 Naval Materiel Upkeep Publication</td>
<td>Superseded Content (Across the series)</td>
</tr>
<tr>
<td>3412-4204 Naval Materiel Upkeep Evaluation and Approval</td>
<td>ABR 5230 Rev 5 Change 1 2008</td>
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<tr>
<td>3412-4205 Naval Materiel Upkeep Planning Pub</td>
<td>ABR 5225 Vol 1 Rev 5</td>
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<tr>
<td>3412-4206 Naval Ships Husbandry Pub</td>
<td>ABR 6429 Vol 2 Sect 1</td>
</tr>
<tr>
<td>3412-4207 Naval Materiel Upkeep Implementation Pub</td>
<td>ABR 6462 Ch 1 &amp; 2</td>
</tr>
<tr>
<td>3412-4208 Naval Materiel Pre-positioning, Stocking and Storing Pub</td>
<td>ADDP 4.3- Supply Ch 1-5</td>
</tr>
<tr>
<td>3412-4209 Naval Materiel Upkeep Assurance Pub</td>
<td>ADDP 3.5</td>
</tr>
<tr>
<td>3412-4210 Naval Materiel Upkeep Reporting Pub</td>
<td>NAVLOGSPT Pubs to be confirmed</td>
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N4 Library Project Transition
Tranche 3

CANCELLATION OF ABR5225 – RAN MARINE ENGINEERING MANUAL

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>ANP3412-4200</td>
<td>Naval Materiel Upkeep Publication</td>
</tr>
<tr>
<td>ANP3412-4202</td>
<td>Naval Materiel Upkeep Conformance and Control</td>
</tr>
<tr>
<td>ANP4412-4313</td>
<td>Maintenance of Navy Ships Boats Publication</td>
</tr>
<tr>
<td>ANP4412-4317</td>
<td>Maintenance of Navy Propulsion and Maneuverability Systems</td>
</tr>
<tr>
<td>ANP4412-4318-1</td>
<td>Maintenance of Navy Electrical Power Systems - Volume 1</td>
</tr>
<tr>
<td>ANP4412-4318-2</td>
<td>Maintenance of Electrical Power Systems- Volume 2</td>
</tr>
<tr>
<td>ANP4412-4319</td>
<td>Maintenance of Navy Vessel Mechanical Auxiliary Systems</td>
</tr>
<tr>
<td>ANP4412-4320</td>
<td>Maintenance Upkeep of Vessel Habitability Systems</td>
</tr>
<tr>
<td>ANP4412-4323</td>
<td>Maintenance of Navy Test Equipment Assets Publication</td>
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</table>

N4 Library Project Transition
Tranche 3

CANCELLATION OF ABR5230 – SHIP MAINTENANCE ADMINISTRATION MANUAL

<table>
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<th>Description</th>
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<tbody>
<tr>
<td>ANP3412-4200</td>
<td>Naval Materiel Upkeep Publication</td>
</tr>
<tr>
<td>ANP3412-4202</td>
<td>Naval Materiel System Conformance and Control</td>
</tr>
<tr>
<td>ANP3412-4205</td>
<td>Naval Materiel Upkeep Planning Publication</td>
</tr>
<tr>
<td>ANP3412-4207</td>
<td>Naval Materiel Upkeep Implementation Publication</td>
</tr>
<tr>
<td>ANP3412-4209</td>
<td>Naval Materiel Upkeep Assurance Publication</td>
</tr>
<tr>
<td>ANP4412-4201</td>
<td>Naval Materiel Maintenance Reports and Returns</td>
</tr>
</tbody>
</table>
Not a Canberra Enforced Solution.

- With your Inventory – The good needs to be retained, and the rest retired.
- What does our AMSDO look like?
- What plans are actually used, verses being there for compliance audits?

Not a Canberra Enforced Solution.

- With your Inventory – The good needs to be retained
- What have you got in volume?
- Have you documents that have catered for policy short falls?
- What is your commitment to the DSWMS?
- Can you develop a migration strategy?
- Is it logical or is a complex challenge?
N4 Library Project

So how does it all work?

- Getting rid of disparate and antiquated information sources
- Introducing new policies in a structured hierarchical framework that logically points to the consistent delivery of seaworthy materiel
- One Defence Approach to the Delivery of Seaworthy Materiel
- A component of Naval Enterprises response to the DSWR.

N4 Library Project

So how does it all work?

WHY

- A tiered approach
- Governance bounded by a feedback loop from the practical application.
N4 Library Project
Policy Conformance with the Procedures

N4 Project
ANEP 1-4

Utopia

Futures
ANEP 4 - 6

Fleet
ANEP 4 - 6

N4 Library Project
Policy Conformance with the Procedures

N4 Project
ANP 1-4

Feedback loop

Futures
ANP 4 - 6

Fleet
ANEP 4 – 6 Shows better conformance with ANP Level 2, all relevant Level 3s must change.
N4 Library Project
Policy Conformance with the Procedures

ANP level 4 Publications:
• Direction or Guidance
  • Electrical Publication – Direction
  • Ship’s Boats – Guidance
## N4 Library Project

### Policy Conformance with the Procedures

**ANP level 4 Publications:**
- **Direction or Guidance**
  - **Electrical Publication – Direction**
    - It is direction that must be complied with to ensure compliance with Legislative requirements.
  - **Ship’s Boats – Guidance**

<table>
<thead>
<tr>
<th>N4 Library Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy Conformance with the Procedures</td>
</tr>
<tr>
<td>ANP level 4 Publications:</td>
</tr>
<tr>
<td>• <strong>Direction or Guidance</strong></td>
</tr>
<tr>
<td>• <strong>Electrical Publication – Direction</strong></td>
</tr>
<tr>
<td>• <strong>Ship’s Boats – Guidance</strong></td>
</tr>
<tr>
<td>Meaning it provides a method that the mission systems <em>could</em> follow to address the policy settings.</td>
</tr>
</tbody>
</table>
N4 Library Project
Policy Conformance with the Procedures

ANP level 4 Publications:
• Direction or Guidance
  • Electrical Publication – Direction
  • Ship’s Boats – Guidance
    • RHIBs
    • Workboats
    • Unmanned Autonomous Vessels ???

N4 Library Project
Policy Conformance with the Procedures

• Whilst not conforming with the Level 4 Direction for Ships Boats the ANP 5 and 6 for the UAVs conform with the policy settings in ANP 3.
  • This results in mandatory review and revision of some, or all of the ANP level 4 publications.
  • This same process applies for any level in the library.
Navy Publication Identification Code (NPIC) – Is a reflection of what the Publication is!

ANP 3 4 12 - 4207 - XXX00XX00 - XXXXXX

ANP = Australian Navy Publication

3 = Level 3 Application

4 = Level 4 Application

5 = Level 5 Application

1 = Material Seaworthiness

2 = Material Delivery

4207 = Material Upkeep Implementation Application Publication (see Annex A)

XXX00XX00 = Unique Identifier (Optional)

XXXXXX = Publication Title

Navy Publication Identification Code (NPIC) – Is a reflection of what the Publication is and not its authority!

<table>
<thead>
<tr>
<th>ANP Document Level</th>
<th>Document Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Doctrine</td>
</tr>
<tr>
<td>1</td>
<td>Naval Doctrine – Library Intent</td>
</tr>
<tr>
<td>2</td>
<td>Strategic Policy</td>
</tr>
<tr>
<td>3</td>
<td>Policy</td>
</tr>
<tr>
<td>4</td>
<td>Direction and Guidance Publications</td>
</tr>
<tr>
<td>5</td>
<td>Mission System / Organisation Plans and Corporate Processes</td>
</tr>
<tr>
<td>6</td>
<td>Data and Procedures</td>
</tr>
</tbody>
</table>
Forgot where the N4 is?

N4 Library Project
One last topic – Engineering Authority

Principal Engineers - Risk
Changes to Navy’s risk management philosophy

• Difference ABR 6492 and DSwMS seaworthiness regulatory system is grounded in the *Work, Health and Safety (WHS) Act 2011*.

• The WHS Act requires the elimination of risk, or its minimisation SFARP.

• A risk-averse approach must not to be taken as justification for not undertaking a hazardous task. Equally, hazardous tasks are not to be handed off to an external source of support when inherent mission, time and cost penalties are evident.

**Principal Engineers - Risk**

• Warrant to Principal Engineer
Principal Engineers - Risk

• Warrant to Principal Engineer
Principal Engineers - Risk

- Warrant to Principal Engineer

Executive Authority → Advice → Delegated Engineering Authority → Advice → Warrant Holder → System SME → Advice → OEM - Advice → Industry Specialist Advice → MBOK

Principal Engineer - Delegate → Advice → Warrant Holder → Advice → MBOK
Principal Engineers - Risk

- Warrant to Principal Engineer

Questions
Introduction to the Naval Materiel Seaworthiness Assurance Agency (NMSwAA)

CAPT Mona Shindy, CSC, RAN – Director NMSwAA

Who Are We?

The NMSwAA will provide the Chief of Navy with risk-based assurance that seaworthy materiel is being delivered throughout a mission system’s Capability Lifecycle (CLC). This includes:

a) surveillance and assurance activities across the entire CLC; and

b) authorisation of organisations and Suitably Qualified and Experienced Personnel (SQEP)
   1) AEOs, AMSDOs
   2) PEs, WHs.
Ensuring Naval Material Seaworthiness

Who Are We?

Rizzo Reform Program
Defence Seaworthiness Management System (DSwMS) 27 Feb 2017
NAVGOVMAN and NAVMATDELSTRAT (high-level materiel seaworthiness N4 policy)

NMSwAA

Navy’s Proposed Means of Compliance (PMOC)

ACCOs
N4 Library (and N8, as it applies to projects)
MSwFMS

Assurance of seaworthy materiel

Organisational Context

Beliefs
Beliefs

Functions
Functions

Policy
Policy

Plans
Plans

Procedures, Processes and Commercial Systems
Procedures, Processes and Commercial Systems

Checked through Assurance (NMSwAA) and an Integrated Surveillance Schedule
Checked through Assurance (NMSwAA) and an Integrated Surveillance Schedule

People with Designations and Authorities accountable for Seaworthy Material
People with Designations and Authorities accountable for Seaworthy Material
NMSwAA conducts surveillance and assurance activities against Navy’s PMOC.

From a NMSwAA perspective, we want to check the following through surveillance and assurance activities:

CLAIM of materiel seaworthiness
+ ARGUMENT (PMOC, i.e. the method of conformance documented in N4/N8 and MSwFMS)
+ EVIDENCE that the method of conformance is being enacted
+ EVIDENCE of seaworthy materiel

= SEAWORTHY MATERIEL OUTCOME
### Purpose/Functions – Authorisation of Organisations

**Authorised Materiel Seaworthiness Delivery Organisations (AMSDOs)**

- NMSwAA has a holistic interest in AMSDOS regarding the delivery of seaworthy materiel

#### Table: Authorised AMSDO Personnel

<table>
<thead>
<tr>
<th>Projects</th>
<th>CM Sponsor</th>
<th>Integrated Project Manager</th>
<th>FuLEO</th>
<th>CLEO</th>
<th>FC</th>
<th>WH</th>
<th>IN-SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMR</td>
<td>Integrated Product Manager</td>
<td>FuLEO</td>
<td>CLEO</td>
<td>FC, PMF, FDM</td>
<td>WH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Table: Required AMSDO Personnel

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>QSL, MMRP (Assurance Basis) are in place and maintained, authorised by the CMS/CMR, and endorsed by DEng-N and DLog-N.</td>
</tr>
<tr>
<td>B</td>
<td>The MSAP, MSAP (May have PBP as subset), SMP, and EMP have been authored by the CMS/CMR, endorsed by DEng-N and DLog-N, and are appropriately governed.</td>
</tr>
<tr>
<td>C</td>
<td>The MSMP, MSAP address all necessary elements of the MSwFMS for various stages of the Capability Lifecycle, and NA policy requirements are enacted.</td>
</tr>
<tr>
<td>D</td>
<td>The Engineering Organisation’s composite entities, as detailed in the MSMP, have the capability and capacity to execute the defined engineering functions. The AEO will be authorised by the NMSwAA following a positive assessment. An appropriate PE must be authorised and in place and able to utilise the broader engineering community (e.g., WHs) to generate technical advice.</td>
</tr>
<tr>
<td>E</td>
<td>The Maintenance Organisation’s composite entities as detailed in the MSMP have the capability and capacity to execute AEO-approved Uphold and Update functions. The AMO will be authorised by the NMSwAA following a positive assessment. There must be a Principal Maintenance Manager (PMM) appointed by the relevant CASG-appointed Integrated Project/Product Manager.</td>
</tr>
<tr>
<td>F</td>
<td>The Support Organisation’s composite entities as detailed in the MSMP have the capability and capacity to provide logistic support products required by the AMO, and assist both the AEO and AMO. The authorisation of ASOs will be coordinated by the NMSwAA in conjunction with DLog-N. There must be a Principal Support Manager (PSM) appointed by the relevant CASG-appointed Integrated Project/Product Manager.</td>
</tr>
</tbody>
</table>

The NMSwAA will then assess each component of the AMSDO and its functions to obtain assurance that:
4. All Principal Engineers will be interviewed by DGEng-N.

5. Level 2 Engineering Warrant Holders will be assessed and authorised by a review board comprising DGEng-N as the chair, DNMSwAA or ED NTB and an appropriate SME.

6. All other Warrant Holders will be assessed and authorised by a review board comprised of DNMSwAA as the chair, ED NTB, and a relevant SME.
**Goals - 2018**

- Baseline N4 conformance
- Baseline MSwFMS conformance
- Progressive assessment of ACIO compliance strategies as built in N4

**BASELINE RISK PROFILE**

**Surveillance and Assurance Process**

1. **QUALITY**
   - Is it acceptable as OQE?

2. **CONTENT**
   - Does it meet the policy requirement(s)?

3. **PRACTICE**
   - Is it being enacted?

4. **EVIDENCE**
   - Is it delivering seaworthy materiel?

   - **YES**
     - Lower priority for future surveillance
   - **NO**
     - Is continuous improvement and risk mitigation occurring against the OQE?
Corrective Action Requirements (CARs)

1. CARs will be issued by NMSwAA in response to non-conformances with policy requirements.

2. Duty holders will receive documentation that specifies the nature, timeframe, and close-out criteria of each CAR.

3. NMSwAA can provide field support, additional surveillance, and education and advice to help resolve CARs.

4. NMSwAA will assess the OQE provided by duty holders and notify them of closure via a minute.
### Surveillance Schedule - EXTRACT

<table>
<thead>
<tr>
<th>01/01/18</th>
<th>02/01/18</th>
<th>03/01/18</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Resources

<table>
<thead>
<tr>
<th>RESOURCE</th>
<th>ACCESS</th>
</tr>
</thead>
</table>
| Factsheets – PEs and WHs  | • hard copies in your resource pack  
   • soft copies on the intranet |
| ADELE – General Awareness | • via NMSwAA intranet                       |
| NMSwAA Strategy           | • hard copies in your resource pack  
   • soft copies on the intranet |
| FAQs                      | • NMSwAA intranet                           |
| N4 Library Correlation Matrix | • hard copies in your resource pack |
The Naval Material Seaworthiness Assurance Agency (NMSwAA)

The Naval Material Seaworthiness Assurance Agency (NMSwAA) was established on 3 July 2017, and superseded the Directorate of Technical Requirements - Navy (DTRN-A), which ceased on 1 December 2017. The NMSwAA will take upon existing processes and handbooks where relevant, as well as implementing new assessments which will broaden naval vessel maintenance.

The purpose of the NMSwAA is to provide the Chief of Navy (CN) with the best personnel, at the lowest naval defence, the seaworthiness of naval material being delivered throughout the mission system's Capability Life Cycle (CLC).

The NMSwAA will achieve this by performing the primary role, there are:

1. Providing expert advice in seaworthiness.
2. Assessing and monitoring seaworthiness material compliance and development of risk profiles across the various stages of mission system's Capability Life Cycle (CLC).
3. Providing expert advice and support.
4. Ensuring a culture of continual improvement.

The NMSwAA will provide assurance that seaworthiness material is being delivered in accordance with the Naval Material Seaworthiness Functional Plan (NMSFP) and the policy set in the ND Library.

nmsw.aa@defence.gov.au

Ph: (02) 6266 2800
Questions

Navy-CASG Relationships for the Delivery of Naval Materiel

- FLEO
- CO
- CLEO
- OSI
- Force Commander
- CMR/CProjS
- DGMSS, DGSS, DGCCSM
- SPO-D
- PE
- PMM
- PSM

MSA (Material Sustainment Agreement) including PDS (Product Schedule)

Technical advice
Management of maintenance outcome
Management of support outcome
Finance

Section 32
How Materiel Assurance is Conducted by NMSwAA

[Diagram showing the process of materiel assurance conducted by NMSwAA]

Naval Materiel Seaworthiness Assurance Agency

Materiel Assurance Process:
- Governance
- Capability Manager
- Surveillance
- Mission System
- Business and Support
- Data Analysis

[Diagram elements and processes explained in detail]
Simon Sykes – Executive Director Naval Technical Bureau

Naval Technical Bureau
Naval Enterprise Senior Engineers Conference 2018

Topic

- Conference Theme - Implementation of Navy’s Materiel Governance Regime post the Naval Regulatory System and in particular the Naval Technical Regulatory Framework (NTRF)
- How the Naval Technical Bureau fits into the puzzle
Outline

- Reflect on NTB’s predecessor organisations and roles within the NTRF
- Discuss the preferred roles and functions of the NTB post NTRF and how this is described within the extent parts of the ANP Library
  - From “Cop” to “Trusted Friend”
  - Engineering ships specifically designed to meet Navy’s requirements is desirable and achievable

NTRF

- Certification Basis
- Design Acceptance Representatives
- Technical Regulatory Authority
  - Policeman supported by a group of SMEs
Post NTRF

- Defence Seaworthiness Regulator
- Capability Manager at the centre
- Engineering Community consolidated in support of the CMR
- NTB
  - 25+ technology based cells
  - Majority of Warrant Holders

NTB through the lens of the ANP

- ANP2411-0002 (NAVMATDELSTRAT) HNE forward
  - “... I expect the newly established Naval Technical Bureau to nurture a Maritime Materiel Body of Knowledge, and to become a trusted source of leading edge technological support to achieve the warfighting effect, balanced by the pragmatism of professional knowledge, real world experience and value for life cycle cost....”

- ANP2411-0002 (NAVMATDELSTRAT) Ch 6 Naval Materiel Knowledge Management
  2.3.6.3 The Naval Technical Bureau (NTB) is to actively build and continuously nurture the growth of knowledge and mastery in leading edge maritime technology.
Warrant Holders

- Described in ANP 3411-0010 Naval Materiel Risk Management
- Implementation is a work in progress
- NMSwA managing process for authorisation
- DARs not necessarily Warrant Holders
- Majority will come from NTB
- Industry Partners?
- Relationship to ACCOs?

ANP2800 (V2)

Figure 4: Navy FIC Leads for Requirements Development

1 To ensure the development of practicable requirements and associated assurance, Navy FIC Requirement Leads are to consult with their counterparts in the relevant Delivery and Enabler Groups. DGENG-N, as the Materiel Governance Authority is accountable to Head Navy Engineering for the provision of effective and efficient engineering policy for naval capability and to provide a Materiel Seaworthiness Reference Set for each specific naval capability to the Program Sponsor for use during the Risk Mitigation and Requirements Setting Phase of the CLC.
6. Where capability specific requirements are developed that are not in accordance with FIC Policy or the generic CNRs, the Capability Program Sponsor or FIC Requirements Lead must inform the relevant FIC SME.
NTB – Functional Perspective

- Knowledge Management
- Integration across:
  - Technology
  - Platform types
  - Capability Life Cycle Stages
- Ideal Outcome
  - Specification and Production of more effective ships and systems

SWOT

- **Strengths**
  - Smart people with long term ownership

- **Weaknesses**
  - Historical perceptions remanent from NTRF

- **Threats**
  - Perception that requirements driven design brings with it an unacceptable level of program risk

- **Opportunities**
  - Naval Ship Building Program
  - Batching within the major projects