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6 August 2021

**AGENDA**

AC/141(SDCG)A(2021)0002

+ NIAG distr

**NATO NAVAL ARMAMENT GROUP (NNAG)**

**SHIP DESIGN CAPABILITY GROUP (SDCG)**

**Industry Symposium on the design for maintainability and reliability for reduced manning and unmanned naval systems**

**Meeting to be held in Washington DC, USA hosted by the United States Navy Program Executive Office - Ships @**

**Serco, Inc.**

**1100 New Jersey Ave SE, Suite 200**

**Washington, DC 20003**

**01-05 Nov 2021**

**AGENDA**

**REFERENCES:**

- A. AC/225-N(2012)0010//AC/224-N(2012)0018//AC/141-N(2012)0004 dated 04/09/2012 (NATO Main Armaments Groups (MAGs) Handbook (version 2012))
- B. AC/141-DS(2021)0001 dated 9 March 2021 (123<sup>rd</sup> NNAG meeting Decision Sheet)
- C. AC/141(SDCG)DS(2021)0001 dated 2 June 2021
- D. AC/259-D(2020)0032 dated 20 December 2020

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### NOTES:

- i. Presenters are encouraged to limit their address to 10 minutes maximum and to forward them by e-mail to the secretariat [Trevethan.Sean@hq.nato.int](mailto:Trevethan.Sean@hq.nato.int) and [Wilson-Russell.sonia@hq.nato.int](mailto:Wilson-Russell.sonia@hq.nato.int). Specialist Teams (STs) Chairmen/Leaders are requested to submit respective updated quad-charts prior to the meeting and to ensure that, in the case of their absence a suitable representative will be attending who can present the Quad chart on their behalf. These will be posted on the SDCG pages of the Defence Investment Portal (DI Portal).
- ii. Delegates are requested to inform the Secretary in advance of any additional issues they would wish to table in the meeting.
- iii. Members to note that by default the meeting material is NATO UNCLASSIFIED and shared with Nations indicated in the releasability clause, and will be posted on the DI Portal in the appropriate meeting folder. Unmarked documents are taken to be releasable to the General Public. Members to inform the Secretary if they wish to present or discuss items above NATO UNCLASSIFIED.
- iv. Members are invited to consult the DI Portal, SDCG site, "Meetings" folder for the preparatory documentation in advance of the meeting. If there are any specific requests that could not be retrieved from the DI Portal please contact the Secretary.
- v. Dress code. The dress code for the meeting days will be business suit and business casual for the visits.

### Introduction.

1. The 2021-2 NNAG SDCG meeting will be held in Symposium format, building on the successful Industry Seminars held in 2017 (Stockholm), 2018 (Copenhagen), and 2019 (Delft). This meeting will consist a Government / Industry seminar on the design for maintainability and reliability for reduced manning and unmanned naval systems, including power & auxiliary management, future propulsion, energy storage, off board system tendering and cooling. This meeting will very kindly be hosted by the US Navy, and held at Serco, Inc., 1100 New Jersey Ave SE, Suite 200, Washington, DC 20003. The meeting will be open to the participation of Partners, PfP – MD - ICI Nations as well as Australia, Japan, New Zealand and Republic of Korea, although some sections of the core SDCG part of the meeting will be at NATO Only.

### Outline.

2. All Specialist Team Chairmen are encouraged to attend but in particular, the Chairman expects those with teams in the Naval Architecture Core Competency Area (CCA) to be present or represented by an appropriate deputy.

3. The themed topic for the symposium part of the meeting will be:

*"The design for maintainability and reliability for reduced manning and unmanned naval systems, including power & auxiliary management, future propulsion, energy storage, and off board system tendering"*

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4. Industry take up is anticipated to be strong and a separate schedule for the industry segment will be published in due course.

5. Delegates should also carefully consider their contribution to the Government only symposium day and be prepared to contribute, in particular with sharing thoughts and ideas on requirements and potential solutions as well as any national projects currently planned which would be pertinent.

6. Nations should provide an updated National Statement, which will be posted on the DI Portal, in accordance with the template at Enclosure 1. It would be helpful if nations could highlight their National Statement with one or two slides by way of illustrating the highlights.

**Schedule.**

7. The 2021-2 Industry Symposium format SDCG meeting will be held over 5 days. It will have the following outline:

	<i>1<sup>st</sup> November (Monday)</i>	<i>2<sup>nd</sup> November (Tuesday)</i>	<i>3<sup>rd</sup> November (Wednesday)</i>	<i>4<sup>th</sup> November (Thursday)</i>	<i>5<sup>th</sup> November (Friday)</i>
<i>am</i>	<b>09:00 Start Government Only Symposium Theme Topic</b>	<b>Industry Partners Symposium Theme Topic (See Separate Schedule)</b>	<b>Industry Partners Symposium Theme Topic (See Separate Schedule)</b>	<b>09:00 Start SDCG NATO Meeting with Partners</b>	<b>09:00 Start SDCG NATO Meeting with Partners</b>
<i>pm</i>	<b>Government Only Symposium Theme Topic</b>	<b>Industry Partners Symposium Theme Topic (See Separate Schedule)</b>	<b>Technical Visit for NATO &amp; Partners (Details to follow)</b>	<b>SDCG NATO Meeting with Partners</b>	<b>SDCG NATO Meeting with Partners 14:00 Finish</b>
<i>Evening</i>	<b>Icebreaker</b>	<b>No Host Dinner Restaurant TBC</b>		<b>Hosted Dinner for NATO and Partners</b>	

8. Delegates should be prepared for a full working week and plan travel accordingly. It is recognised that this may necessitate some travel out of the working week and it is requested that this is factored in so that maximum benefit can be obtained from the meeting.

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**MEETING AGENDA**

**MONDAY, 01/11**

**1. Introductory Remarks.**

- 1.1. Opening Remarks -Chair
- 1.2. Administrative Remarks – Secretary / Host Nation – USA
- 1.3. Social / Networking calendar and events - Chair
- 1.4. Introductions
- 1.5. NNAG War Room Back Brief - Secretary

**2. Symposium X-Brief  
(Part 1 – Government only)**

- 2.1. Introduction to symposium – Chairman
- 2.2. Brief - AVT 355 Improved Mission Readiness of Military UxVs
- 2.3. National Perspectives on Symposium (Desired outcomes/interests)
- 2.4. ST/SCS Brief
- 2.5. ST/MM Brief
- 2.6. ST/SM Brief
- 2.7. Briefs by other STs – To be advised to Secretary
- 2.8. Preview of Industry presentations – Sec
- 2.9. Review of issues - All
  - 2.9.1. Identification of common concerns / Scope for collaborative work
  - 2.9.2. Guidance to Specialist Teams on their POW
- 2.10. Wrap up – Chairman

**TUESDAY, 02/11 & WEDNESDAY 03/11**

**3. SDCG Industry Symposium. “The design for maintainability and reliability for reduced manning and unmanned naval systems”  
(Part 2 – Industry Perspectives))**

- 3.1. IAW Schedule published separately

**THURSDAY, 04/11 – FRIDAY, 05/11.**

**(NATO & Partners)**

- 4. **Post Industry Engagement Discussion** (Future NIAG Studies/SDIs/Standards) - Secretary

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**5. National Statements (including placemat presentations)**

- 5.1. National updates, **HIGHLIGHTS ONLY**, outlining especially opportunities for multinational cooperation. Nations are invited to forward via e-mail to the International Staff (IS) the soft version of respective National Statements, iaw the template provided at the Annex, on national shipbuilding acquisition programs and any additional or updated placemats in advance of the meeting<sup>1</sup> - (Nations).<sup>2</sup>

**6. Specialist Team (ST) Brief report – Quad Chart Format<sup>3</sup>**

**6.1. Electrical Power and Control (EPC)**

- 6.1.1. Quad Chart Report ST/EPC (ST Leader)  
6.1.2. Tasking and Way Ahead (Chairman, Nations)

**6.2. Seaway Mobility (SM)**

- 6.2.1. Quad Chart Report ST/SM (ST Leader)  
6.2.2. Tasking and Way Ahead (Chairman, Nations)

**6.3. Naval Ship System Engineering (NSSE)**

- 6.3.1. Quad Chart Report ST/TSSE (ST Leader)  
6.3.2. Tasking and Way Ahead (Chairman, Nations)

**6.4. Ship Combat Survivability (SCS)**

- 6.4.1. Quad Chart Report ST/SCS (ST Leader)  
6.4.2. Tasking and Way Ahead (Chairman, Nations)

**6.5. Energy Efficiency and Environmental Protection (EEEP)**

- 6.5.1. Quad Chart Report ST/EEEP (ST Leader)  
6.5.2. Tasking and Way Ahead (Chairman, Nations)

**6.6. Mission Modularity (MM)**

- 6.6.1. Quad Chart Report ST/MM (ST Leader)  
6.6.2. Tasking and Way Ahead (Chairman, Nations)

**6.7. Polar Ship Design and Safety (PSDS)**

- 6.7.1. Quad Chart Report ST/PSDS (ST Leader)

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<sup>1</sup> National Statements will be made available to SDCG Members prior to the meeting; the purpose of the present agenda item is to recall the main ~ 4-5 items in a quick *tour-de-table* accompanied by some visual prompts.

<sup>2</sup> Nations are encouraged to illustrate their National Statement highlights with one or two slides.

<sup>3</sup> Full reports are required at the Spring Management Format meeting

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**6.7.2. Tasking and Way Ahead (Chairman, Nations)**

**6.8. Naval Ship Safety**

**6.8.1. Liaison Report from International Naval Safety Association (INSA) – INSA Rep**

**7. Additional Topics as requested by Nations**

**7.1. Future of AFFF - European Chemicals Agency development plan**

**7.2. Additional topics as proposed – Provide proposals for additional topics in advance of meeting if possible**

**8. Liaison with Other Bodies**

**8.1. NATO Science and Technology Organization (STO)**

**8.1.1. Update on NATO Science and Technology Organization (STO), dependent Panels and studies relevant to SDCG POW – Sec**

**8.2. NATO Industrial Advisory Group (NIAG)**

**8.2.1. Status of SDCG-Sponsored NIAG Studies – Study Leads**

**8.2.2. Status of NIAG-Proposed Studies – IMS.**

**8.3. JCG CBRN/ CBRN OPS WG – ST/SCS**

**8.4. AWWCG – Secretary**

**8.5. UWWCG – Secretary**

**9. Standardization Update and Audit – Secretary**

**10. Future of AFFF - European Chemicals Agency development plan - Lutz Mouton**

**11. SDCG preparations for the next NNAG**

**11.1. Contribution to NNAG themed Topic - Chairman**

**11.2. Proposals for future NNAG themed Topic - Chairman**

**12. Review of Actions**

**13. Next SDCG Meetings<sup>4</sup>**

**13.1. Update on outline plans for 2022.**

**13.2. Theme Topic(s) for 2022 SDCG Symposia - Chairman**

**14. Future Meetings**

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<sup>4</sup> Nations to consider hosting meetings in fall 2023 and beyond.

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**15. AOB & Final Remarks**

**15.1.** Points to be brought to the NNAG's Attention - Chairman / Nations

**15.2.** Revision of the Decision Sheet - Chairman, Secretary and all participants

**15.3.** Valedictions - Chairman

**15.3.1.** SDCG members for whom this is their last meeting should make this known to the Secretary in advance – Nations

(Signed) James Harrison  
Chairman SDCG

\* Enclosure 1, if separated from the Agenda is public releasable.

Annex 1: National Template  
Enclosure 1: Invite industry

Action Officer: Sean Trevethan  
Trevethan.sean@hq.nato.int  
Ext 4060  
Original: English

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ANNEX 1  
AC/141(SDCG)A(2021)0002

**NATIONAL STATEMENT TEMPLATE**

1. **Defence Policy, Concepts, Organisation**
2. **Procurement Programmes (Platforms)**
3. **Procurement Programmes (Equipment)**
4. **Research and Development Future Requirements Programmes**
5. **Cooperation Programmes**
6. **Contribution to NATO/CNAD Priorities / Activities**
7. **Contribution to CG Program of Work (POW)**
8. **CG meeting management / contributions**

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NORTH ATLANTIC TREATY ORGANISATION  
ORGANISATION DU TRAITÉ DE L'ATLANTIQUE NORD

DI(AAC)(2021)0041 (ILM-MARITIME)

Distr. NIAG

6 August 2021

**NATO NAVAL ARMAMENTS GROUP (NNAG)**

**SHIP DESIGN CAPABILITY GROUP (SDCG)**

**INVITATION FOR INDUSTRY PARTICIPATION**

**SDCG INDUSTRY SYMPOSIUM – 2<sup>nd</sup> and 3<sup>rd</sup> Nov 2021**

Reference: AC/141(SDCG)DS(2021)0001, dated 2 June 2021  
AC/141(SDCG)A(2021)0002, dated 6 August 2021

1. The NATO Ship Design Capability Group (SDCG) is seeking industry participation during their forthcoming Symposium in Washington DC, USA, to inform and widen the interest and debate in specialist ship design and construction topics, stimulate discussion on NATO standards and tools leading towards a refined focus for the SDCG programme(s) of work. In addition to the opportunity to share information, another benefit to industry might be a follow-up NIAG study proposal, sponsored by the SDCG that investigates a technology's benefit to improved interoperability or cost-effective warfighting capability.

**Symposium Theme**

2. The topical area under consideration is:

**“The design for maintainability and reliability for reduced manning and unmanned naval systems, including power & auxiliary management, future propulsion, energy storage, and off board system tendering”**

3. Included within this overall theme we hope to address a wide spectrum of related topics which might include such areas as:

- Power and Auxiliary Management
- Propulsion (inc Alt Fuels)
- Energy Storage
- Cooling
- Damage Control and incident management

NATO HQ, Defence Investment – AACAP – ISR & Land and Maritime (ILM) Section,  
Maritime Desk Office/ NNAG Secretariat, B-1110, Belgium

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- Extending commercial technologies to meet naval warship capability requirements
- Hosting, operating and tendering off-board systems/mission modules
- Accreditation of Autonomous Systems and Platforms

The group will be interested to engage on the above theme as it relate to existing systems, future systems, future technology and potential opportunities for military applications.

### **Background to SDCG**

4. The meeting is part of the Conference of National Armaments Directors (CNAD) substructure. The NATO Ship Design Capability Group (SDCG) is one of the four groups that sit under the NATO Naval Main Armament Group, representing each of the main maritime capability areas, the other being the Underwater Warfare Capability Group, the Above Water Warfare Capability group and the Joint Capability group on Unmanned Air Systems. Together this substructure controls and directs the NATO work (often done within further sub groups and specialist teams) to drive collaborative projects, oversee and shepherd new and existing NATO Standards and Recommendations (STANAGs and STANRECS) that underpin NATO interoperability.

5. The SDCG is formed from the Senior Naval Architect and Naval Engineering community of all of the major NATO maritime nations.

### **Recognition of a need for greater industry participation**

6. In recent meetings of all the Naval groups, including the NATO Naval armaments group itself, there have been discussions recognising the advantages of greater industry participation in NNAG and its sub groups.

7. The background to the themed topic symposiums stems not only from the previous SDCG discussions, but also from discussions at the last NNAG surrounding how the NATO Industrial Advisory Group (NIAG) in particular and industry more broadly could play a role in the both the sharing of important topical information at one end of the spectrum and direct involvement in the definition of interoperability standards at the other.

8. The 2021 Symposium is building upon a highly successful symposiums held by the SDCG on Marine Engineering related topics, in Stockholm in 2017 and Copenhagen 2018.

### **Symposium Structure**

9. This meeting will be held at Serco Inc, 1100 New Jersey Ave SE, Suite 200, in Washington DC, USA as guests of the US Navy Program Executive Office - Ships. The outline schedule of events will be as follows:

Day 1 Monday 1<sup>st</sup> Nov 21

- The SDCG will consider the themed topic at a Government representatives only level.

Day 2 Tuesday 2<sup>nd</sup> Nov 21

- Welcome to industry.
- Industry partner presentations to the SDCG including time for questions and discussion.
- Evening social and networking function

Day 3 Weds 3<sup>rd</sup> Nov 21

- Industry partner presentations to the SDCG including time for questions and discussion.
- Farewell drinks with Industry partners

Days 4&5 Thursday / Friday

- Core SDCG meeting (SDCG Members only)

10. Industry is invited to express their interest in attending, with any specific requests, for example over timings of their slot or specific IT support, through their national NIAG representatives to the Naval Armaments team in the NATO HQ by 30 Sep 21.

11. Naval Armament POCs:

- Mr Sean Trevethan – [Trevethan.Sean@hq.nato.int](mailto:Trevethan.Sean@hq.nato.int) Tel +3227074060
- Ms Sonia Wilson-Russell - [Wilson-Russell.sonia@hq.nato.int](mailto:Wilson-Russell.sonia@hq.nato.int) Tel +3227074310

12. Full Administrative Instructions regarding the venue, recommended hotels etc. for the meeting will follow receipt of intention to attend.

<< Signed >>

James Harrison  
Ship Design Capability Group Chair

Annex 1:

Action Officer: Sean Trevethan  
SDCG Secretary: [trevetha.sean@hq.nato.int](mailto:trevetha.sean@hq.nato.int)  
Original: English



NORTH ATLANTIC TREATY ORGANISATION  
NATO NAVAL ARMAMENTS GROUP  
Ship Design Capability group



**SDCG Industry Symposium Registration Form**  
(please read the below instructions carefully prior to filling out the form)

PERIOD: 2-3 November 2021

PERSONAL INFORMATION	
Full Name	
Title	
Company Represented	
Potential topic/theme of briefing	
Gender	
Nationality	
Date of Birth	
Type of ID (Passport preferred)	
Date of Birth	
Tel:	
E-mail:	
Accommodation if already known	
Special facilities requested	
COMMENTS / REMARKS	
Attending if any Social Events: YES/NO	
<i>If yes any Special Dietary needs ?</i>	

This form must be completed in capital letters and be submitted to USA host POC:

Ms Jennifer LIN [jennifer.lin@navy.mil](mailto:jennifer.lin@navy.mil)  
copy to : [Trevethan.sean@hq.nato.int](mailto:Trevethan.sean@hq.nato.int) and [Wilson-russell.sonia@hq.nato.int](mailto:Wilson-russell.sonia@hq.nato.int)