



NIEMOPEN



MILITARY OPERATIONS (MILOPS)

COMMUNITY OF INTEREST (COI)

Presented by:

Ms. Beth Smalley, IT Specialist

Ms. Darcy Staley, IT Specialist

Joint Staff, J-6

13 February 2025



NIEMOPEN

AGENDA

- Introduction / Opening Remarks
- Project Governing Board (PGB) Minute
- NIEMOpen Technical Advisory Committee (NTAC) Updates
- Military Operations Mission Specific (MOMS)
- MilOps Implementations Updates
- Change Request (CR)
- MilOps Goals
- Training Update
- Nominate Your Work
- Ideas for Next Meeting
- Discussion / Closing Remarks





INTRODUCTION / OPENING REMARKS



PROJECT GOVERNING BOARD (PGB) MINUTE

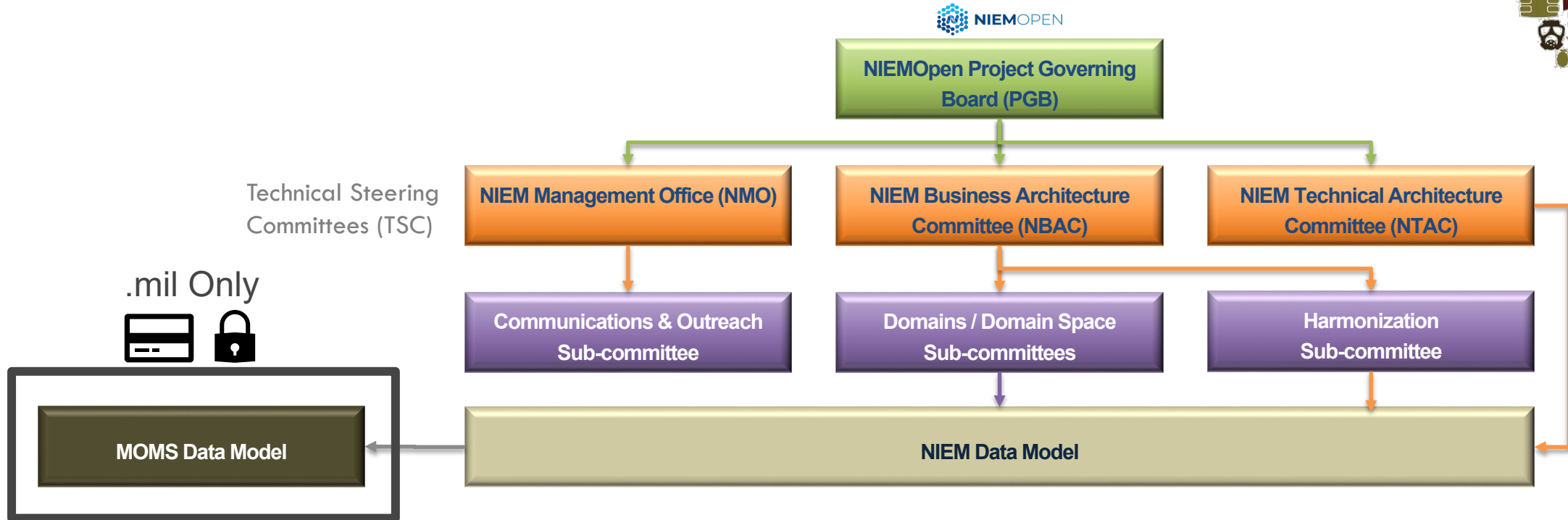
Mr. Stephen Sullivan
PGB & NBAC Secretary

PGB MINUTE AGENDA

- Organizational Support
- OASIS Staff
- Sponsors
- NIEM Model Version v6.0 PS02 Specification
Progress & Features
- Naming & Design Rules (NDR) v6.0 PSD01

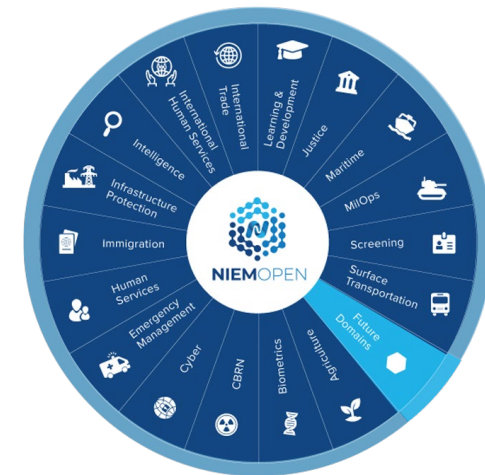


ORG CHART



NIEMOpen support facilitates

- 17 functional domains
- Multiple sub-committees, including MilOps



PGB-APPOINTED VOTING MEMBERS

 <p>Acting Division Chief Data & Standards Division, JS J6 NIEM Managing Director</p> <p>Katherine Escobar ★</p>	 <p>Science and Technology Directorate, US DHS</p> <p>Christina Bapst-Stump</p>	 <p>Director Business Development, Equivalent</p> <p>Gary Egner</p>	 <p>Principal Research Scientist, GTRI</p> <p>John Wandelt</p>	 <p>Executive Director, IJIS Institute</p> <p>Maria Cardiellos</p>
 <p>Data Engineer, Office of the Secretary of Administration, Office of Data Governance and Analytics, Virginia</p> <p>Payton Lamb</p>	 <p>IT Specialist & Technical Lead of Data Standards in the CJIS Division, FBI</p> <p>April Mitchell</p>	 <p>Data Scientist, Office of the Principal Deputy Director, NIJ</p> <p>Erin Partin</p>	 <p>Data Scientist, Unit Chief - Law Enforcement Incident- Based Statistics Unit, BJS</p> <p>Erica Smith</p>	 <p>Director of Information Technology, OH HIDTA, including Northern KY, and Western PA</p> <p>Tom Welch</p>

PGB EXPERT VOTING MEMBERS

 <p>IT Specialist, JS J6</p> <p>Beth Smalley 🌐 🌱</p>
 <p>Enterprise Architect, Department of National Defence (CA)</p> <p>Thomas Krul 🖥️</p>
 <p>Principal Engineer, MITRE</p> <p>Dr. Scott Renner 📄</p>

PGB EXPERT NON-VOTING MEMBERS

 <p>Director, A4SAFE</p> <p>Kamran Atri 🖥️</p>	 <p>Manager, AI & Data, Technology Consulting, EY</p> <p>Brad Bolliger 📄 🌐</p>	 <p>Executive Director, IJIS Institute Chairman, Justice Industry Advisory Group</p> <p>Paul Wormeli</p>	 <p>IT Specialist, JS J6</p> <p>Darcy Staley 🌐 🌱</p>
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GITHUB REPOSITORY MAINTAINERS

 <p>System Administrator, Joint Staff J6 GitHub Maintainer</p> <p>Aubrey Beach 🌐</p>	 <p>Data Architect, GTRI</p> <p>Christina Medlin 🌐</p>	 <p>Analyst, BAH</p> <p>Steve Sullivan 🌐</p>
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Key:

★ PGB Chair

🖥️ NIEM Business Architecture Committee (NBAC) Technical Steering Committee (TSC) Co-Chair

📄 NIEM Technical Architecture Committee (NTAC) TSC Co-Chair

🌐 NIEM Management Office

🌱 MilOps Co-Chair

🌐 GitHub Repository Maintainer

OASIS STAFF



Interim Executive
Director

Jim Cabral



CFO

Cathie Mayo



General Counsel

James Bryce Clark



Head of Events

Jane Harnad



Sr. Director of
Standards
Development

Kelly Cullinane



Business
Development
Manager

Holly Peterson

CURRENT SPONSORS



POTENTIAL FUTURE SPONSORS



Canada

Department of National Defense



Microsoft

MITRE



NIEMOPEN

NIEM MODEL V6.0 PS02



- NIEM Model v 6.0 PS02
 - **Approved by PGB 10 Feb 2025 Vote**
 - Minor adjustments to the structure's namespace to support Naming & Design Rules (NDR) updates
 - Update internal draft version numbers
- PS02 available: <https://github.com/niemopen/niem-model/tree/dev>
- Motion to Advance NIEM Model v6.0 PS02 to an OASIS Standard -
 - **Approved by PGB 30 Jan 2025**

NDR V 6.0 PSD01



- NDR v 6.0 Project Specification Draft (PSD) 01
Approved by PGB 20 Jan 2025
- What: A major rewrite of NDR 5.2
 - A new abstract UML metamodel defining the information content of a NIEM model
 - Two concrete model formats: XSD and CMF
 - Two supported message formats: XML and JSON
 - Simplified conformance rules for message schemas
 - Changes to augmentation and metadata
 - More explanation, (slightly) less technical detail
- PSD01 available: <https://github.com/niemopen/niem-naming-design-rules>
- Motion to Advance NDR from Draft to Project Specification

Approved by PGB 30 Jan 2025

NTAC - CMF TOOL INTRO



- CMFTool is a free and open-source software tool for NIEM developers
- Very important for NIEM 6.0
 - Converts a NIEM model from XML Schema (XSD) to CMF
 - Converts a CMF model to NIEM XSD
 - Generates simplified XSD for message validation, code binding, etc.
- A swiss-army-knife command-line tool
 - But functionality can be embedded in developer IDEs; for example, NIEM API 2.0
- Version 1.0 rewrite in progress
 - 1.0-alpha.2 available now at <https://github.com/niemopen/cmftool/>

```
sar[250]$ cmft help
Version: 1.0-alpha.2 (2024-04-09)
Usage: cmftool [command] [command options]
Commands:
    m2m          canonicalize a NIEM model instance
    m2o          convert a NIEM model instance to OWL
    m2x          write a NIEM model instance as a NIEM schema
    x2m          convert a NIEM schema into a NIEM model instance
    xcanon       canonicalize an XML Schema document
    xcmp         compare two XML schemas
    help(usage) list of cmftool commands
```

NTAC - API 2.0 AND NIEM TOOLBOX – 1

Transition legacy NIEM tools into updated open-source products. Move key functionality out of tools into the API for reusability.



Feature	NIEM API	NIEM Toolbox
(Background)	<ul style="list-style-type: none">• Java / Spring Boot and PostgreSQL database• Hosted via GTRI	<ul style="list-style-type: none">• Nuxt (JS) SPA• Hosted via GitHub Pages (<i>free</i>)
Transforms	<ul style="list-style-type: none">• Transform models into other formats• Inputs – CMF or NIEM XSD• Outputs – CMF, XSD, JSON Schema, or OWL• Leverages the CMF tool	<ul style="list-style-type: none">• Form to upload file and set options• API request• Download results
Validation	<ul style="list-style-type: none">• XSD – Validate and check NDR conformance• XML – Validate against provided schema• CMF – Validate against schema (NTAC)• IEPD catalog – Validate against schema (NTAC)• XML catalog – Validate against schema (OASIS)	<ul style="list-style-type: none">• Form to upload file and set options• API request• Download and view results
Migration	<ul style="list-style-type: none">• Migrate from one supported model version to a more recent version• Can iterate over multiple versions in one call• Accepts input and generates results as CMF	<ul style="list-style-type: none">• Form to upload file and set options• API request• Download and view results

A circular collage of military and tactical icons. The icons include a tank, a helicopter, a ship, a gun, a rifle, a handgun, a grenade, a helmet, a star, a compass, a target, a crosshair, a binoculars, a map, a flag, a shield, a sword, a dagger, a spear, a bow, an arrow, a cross, a circle, a square, a triangle, a diamond, a pentagon, a hexagon, a heptagon, an octagon, a nonagon, a decagon, a circle, a square, a triangle, a diamond, a pentagon, a hexagon, a heptagon, an octagon, a nonagon, a decagon.

Feature	NIEM API	NIEM Toolbox
Model data	<ul style="list-style-type: none">• Return information about models, versions, namespaces, properties, classes, datatypes, and facets• Supports NIEM and published community models• NIEM data 1.0 – 5.2 currently available	<ul style="list-style-type: none">• Browse model data• View information about components• View information about curated list of common components
Search	<ul style="list-style-type: none">• Search properties, types, and codes• Supports fuzzy searching, including tokens and substrings• Filter results by namespace• Component-specific search fields	<ul style="list-style-type: none">• Search models• View results• View information about components
Model management	<ul style="list-style-type: none">• Add, edit, and delete model content• Model and component QA• Load change request spreadsheets• Generate release artifacts• Generate model stats	

In progress

MILITARY OPERATIONS MISSION SPECIFIC (MOMS)



- Separate release for distribution restricted content, typically published 3 months after public release; currently includes:
 - Distribution Statement C – Federal gov't and contractors
 - Distribution Statement D – DoD and contractors
 - Option for Controlled Unclassified Information (CUI) content
- MOMS Distribution Statement D release includes the Distribution Statement C content since D is more restrictive
- MOMS content is and can be separated by namespaces; for example, DCSA and USMTF have sub-namespaces in the MOMS release
- MOMS content submissions are provided to the MilOps Co-Chairs in the form of a change request (CR) that gets reviewed by the MilOps (.mil) community
- MOMS releases include restricted content versions of the Conformance Testing Assistant (ConTesA) and the Schema Subset Generation Tool (SSGT) (future state API 2.0)

MILOPS IMPLEMENTATIONS UPDATES



- UC2 - DoD
- USMTF to NIEM - DISA
- NCDF STANAG 5653 & Data Lake – NATO
- MIP/MIM – Army & MIP Community
- Use Case – DISA – Sarah Bauer, DoD Spectrum Data Administrator, PEO Spectrum
 - Electromagnetic Spectrum Data Semantics in NIEMOpen



Electromagnetic Spectrum Data Semantics in NIEMOpen

Sarah Bauer

DISA

February 13, 2025



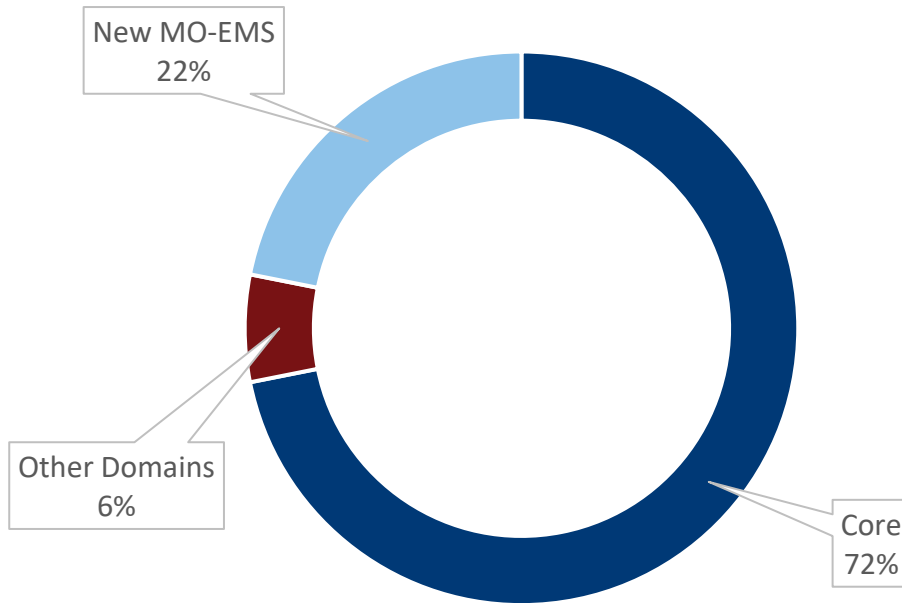
NIEMOpen EMS Maneuver space messages

- Electromagnetic Spectrum critical maneuver space for military operations particularly with the expansion of unmanned systems.
- Very few EMS related technical data elements incorporated into NIEMOpen
- Effort adds over 40 EMS data semantics to NIEMOpen for future electromagnetic spectrum related messages or other message requirements
- With minimal implementation to date: EMS data semantics requested to be added to MILOPS as mo-ems

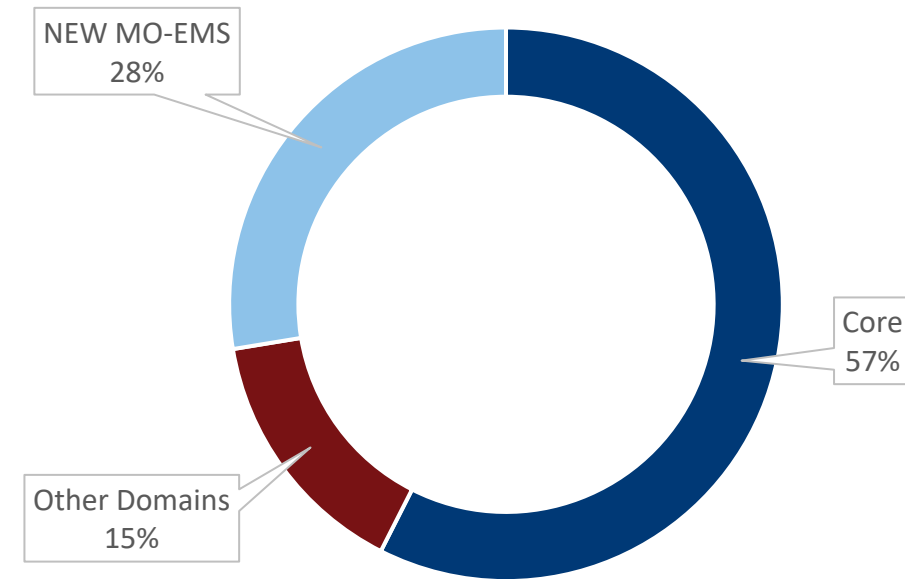


NIEMOpen Reuse and New Contributions

Interference Incident



EMS Scheduling



New NIEMOpen elements add to the MILOPS Domain with the suffix EMS.



NIEMOpen Update

- Interference Reporting and Spectrum Sharing messages completed
- Interference reporting Office365 form created for demonstration purposes
- Demonstrate Interference reporting form
 - <https://forms.osi.apps.mil/r/BhBgraK7En>



Interference Report Form

Interference Report Form

* Required

Authentication

Email Address *

Enter your registered email address

Authentication Token *

Enter the authentication token provided to you via separate correspondence

Next

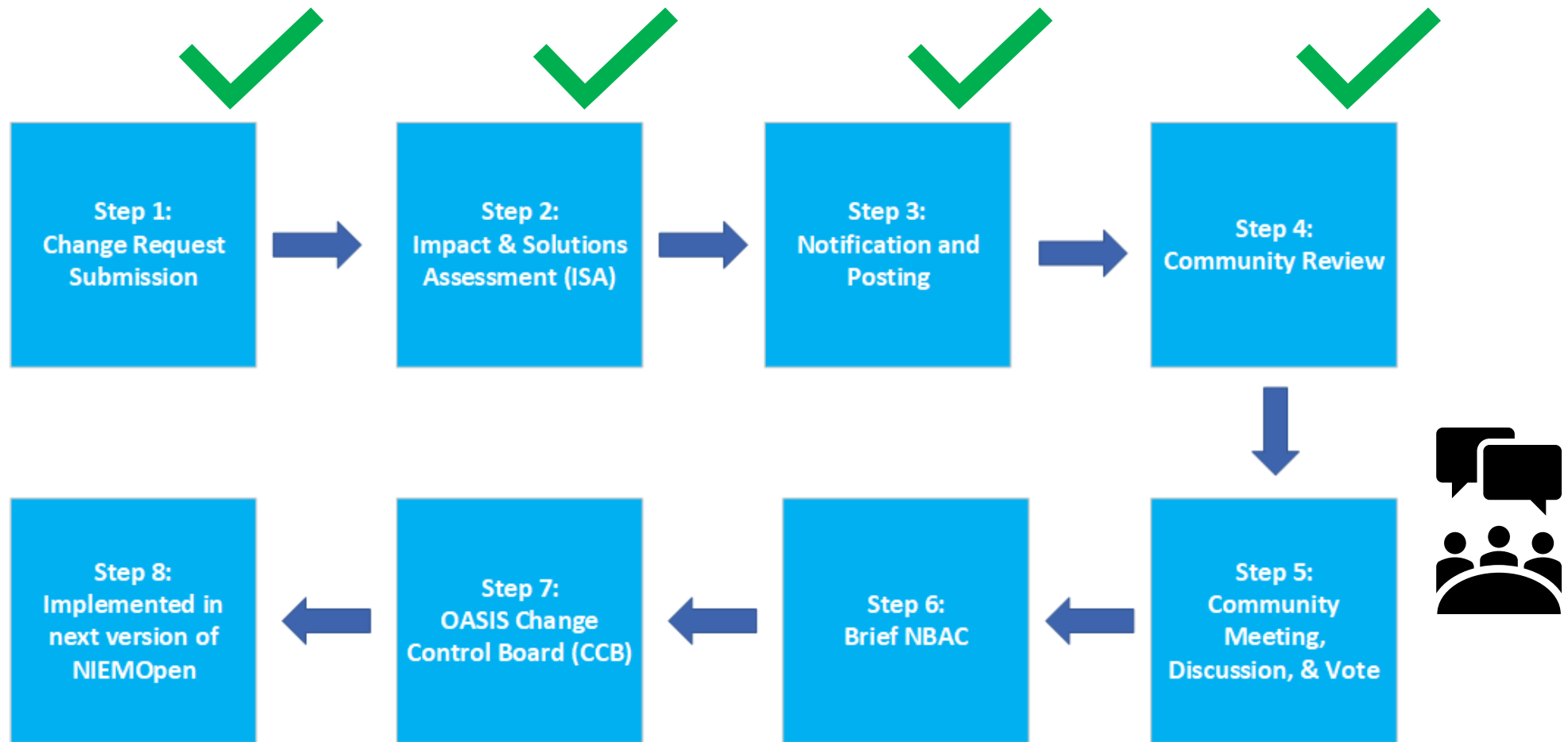


DISA: The premier IT and telecommunications provider for the US military



CHANGE REQUEST (CR) PROCESS

MilOps Change Request Process



EMS CR REVIEW & VOTE

- Review current Electromagnetic Spectrum (EMS) CR
- Discussion
- Vote



MILOPS GOALS

- Establish a quarterly newsletter
- Participate in CWIX 2025
- Complete USMTF transition to NIEM
- Increase awareness & continue support of NIEM



TRAINING UPDATE



- TBD (April/May) – 6.0 Release Beta Training Webinar via Teams
- Email MilOps to request an invite: Js.dsc.j6.mbx.milops@mail.mil

[illegible]

-

Q&A to help craft your submission.

- + What problem was addressed?
- + Why does it matter?
- + What makes it different?

- + What was the roadmap?
- + Who was involved?
- + How did you do it?

- + What did the project make better?
- + How do you know?
- + What now?



IDEAS FOR NEXT MEETING



- Potential Highlights
 - Use Case(s) – Volunteer(s)?
 - CRs
 - CR2025-01 – Addition of MIL-STD 2525-E (Symbology)
 - 6.0 Training Status
 - NIEM Excellence Awards Nominees



DISCUSSION / CLOSING REMARKS

SUB-COMMITTEE CONTACTS



Sub-Committee Co-Chairs

- Beth Smalley
- Darcy Staley

Secretariat

- Nicholas Ballard

Website

- niem.github.io/community/milops/

MilOps Email

- Js.dsc.j6.mbx.milops@mail.mil

[illegible]

niem.gov/



NIEMOpen: niem.github.io/niem-releases/

MOMs: wmaafip.js.mil/ (CAC required)



github.com/NIEM/NIEM.github.io

NIEMOpen: github.com/niemopen

NTAC TSC (admin): github.com/nimopen/ntac-admin

NBAC TSC (admin): .../nbac-admin

NMO TSC (admin): .../nmo-admin

NIEMOpen: lists.oasis-open-projects.org/g/niemopen

NTAC TSC: [.../niemopen-ntactsc](#)

NBAC TSC: [.../niemopen-nbactsc](#)

NMO TSC: [.../niemopen-nmotsc](#)

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THANK YOU!