NIEM NBAC F2F 2021
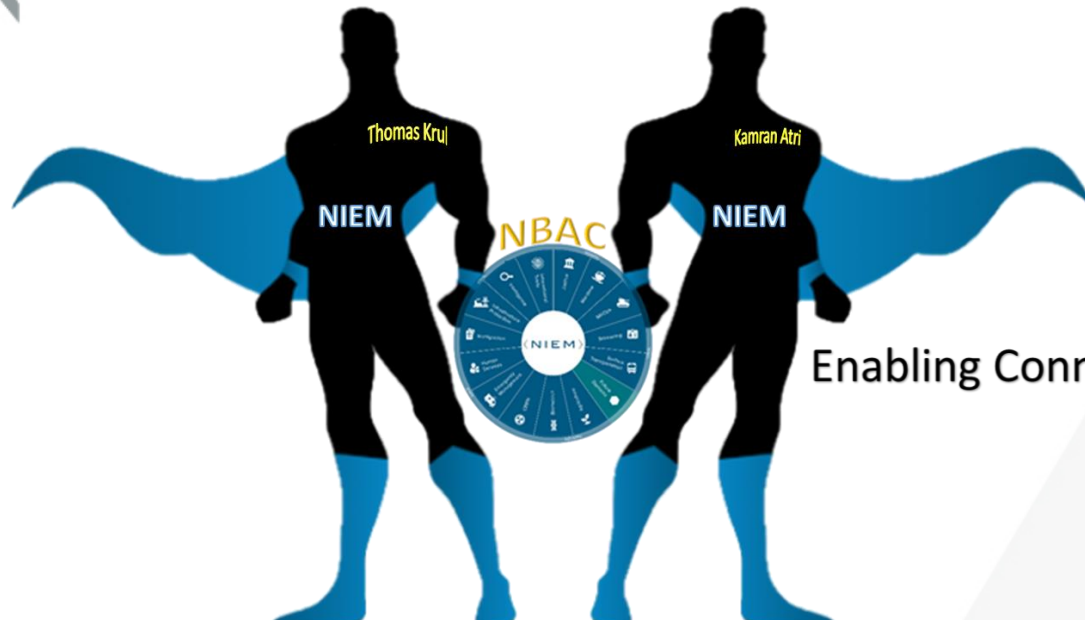
SESSION VI – SHARING & COLLABORATION

NBAC ANNUAL MEETING - DAY 3			
NBAC Annual Meeting (Thursday, 16 September 2021)			
PM Session			
Location: Virtual - MS TEAMS			
1 - 1:05	Introduction/Agenda	NBAC Co-Chairs (Mr. Kamran Atri & Mr. Thomas Krul)	• Welcome • Agenda
1:05-1:45	**Session VI – Sharing & Collaboration**	NBAC Co-Chairs (Mr. Kamran Atri & Mr. Thomas Krul) Domain Representatives	• Domain Open Floor Topics • Mentoring Program/Demos (NIEM.gov/Repo)
1:45 - 1:55	Break		
1:55 - 2:15	NTAC Annual Meeting Summary	NTAC Co-Chairs (Dr. Scott Renner & Mr. Mike Hulme)	• NTAC Summary
2:15 - 2:50	**NBAC Business Session**	NBAC Co-Chairs (Mr. Kamran Atri & Mr. Thomas Krul)	• New Domains • 2022 Work Plan
2:50-3	QA/Wrap-up/Action Items	NBAC Co-Chairs (Mr. Kamran Atri & Mr. Thomas Krul)	• Closing

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NIEM NBAC F2F 2021

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HOUSEKEEPING:

Session Speakers

- Primary Facilitator
  - Kamran Atri

- Primary Facilitator
  - Thomas Krul

- PMO Managing Director
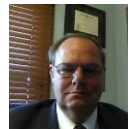 - Katherine Escobar

- Primary Facilitator
  - Stephen M.Sullivan

    Booz | Allen | Hamilton

- *MUTE your mic when you're not talking*

- *Identify yourself before you start to speak*

- *Speak clearly*

- *Disable "call waiting" feature*
  (the clicking noise can be heard by all)

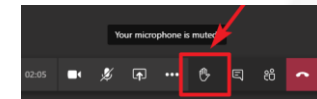**Please note:** All 2021 sessions are audio recorded for NIEM training & communications purposes

QUESTIONS & ANSWERS ARE ENCOURAGED!

To signal you want to contribute without interrupting the speaker
- Enter comments via **CHAT window** at any time

To signal a question or respond to a question
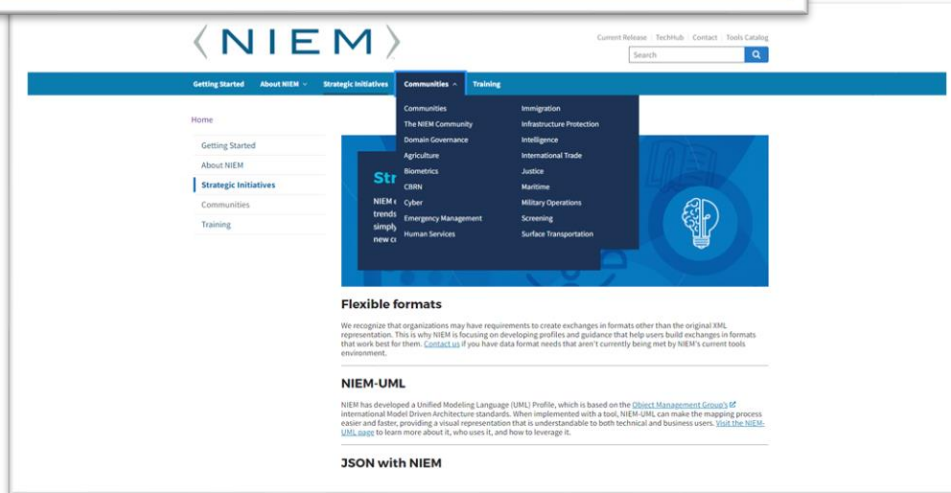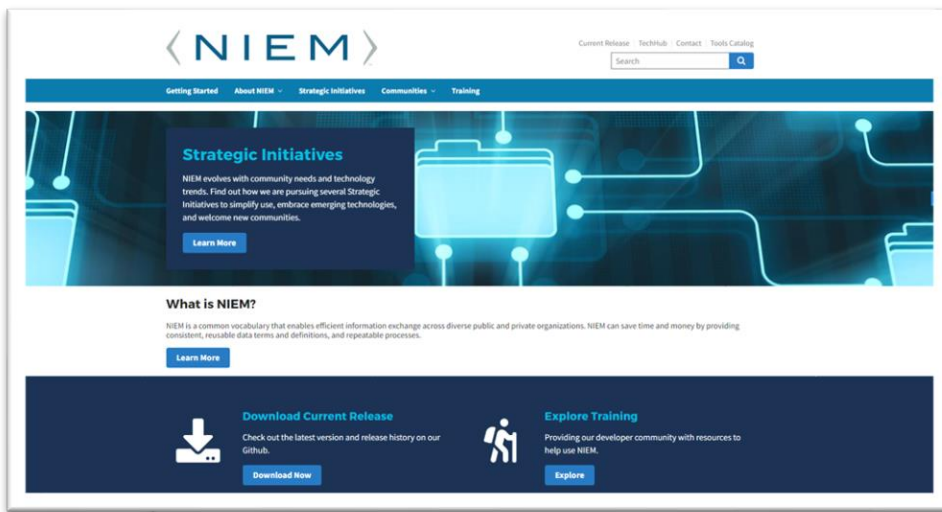- Click on '**Raise your hand**' button on meeting toolbar

(Lower hand after you've talked by clicking hand button again)

All session briefings are available on **NIEM's GitHu**b for download as they occur

https://github.com/NIEM/NIEM-Annual-Meetings/tree/master/2021

REMINDER:

- *Every NBAC member shares and is part of NIEM decision-making process.*

- *We will seek consensus for decisions arising from the NBAC F2F 2021.*

- *The TEAMS meeting (s) will be recorded, action items assigned, and decisions implemented.*

- *We plan to adhere to the topics and schedule as outlined in the Agenda.*

- *Don't be shy, speak up when you have something to say.*

- *Ask questions if you are unclear or unsure… share your views.*

- *Expand your professional network here with your fellow data standards gurus.*

ENHANCED NIEM.GOV

DEMO

NIEM IEPD Repository

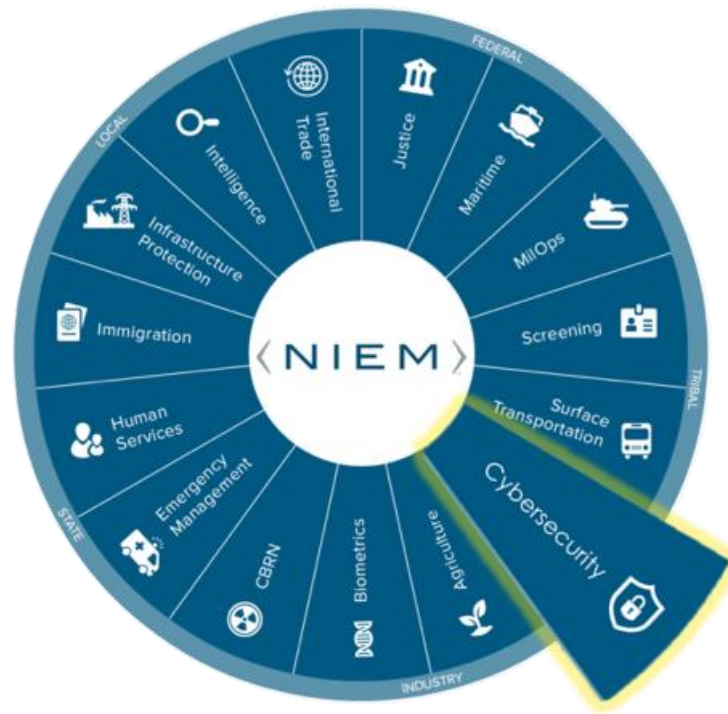NATIONAL INFORMATION EXCHANGE MODEL

NIEM.gov
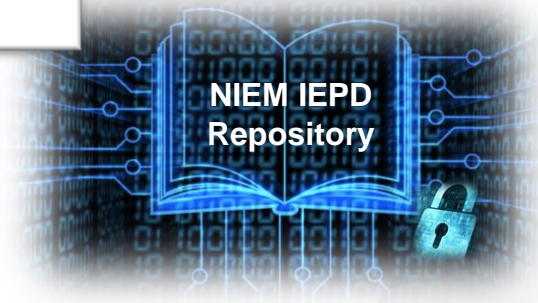
FROM DOMAINS

FROM DOMAINS

〈NIEM〉

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NBAC Annual Meeting

Cyber

DOMAIN UPDATES

⟨ N I E M ⟩

Cyber Domain Update

Domain Steward & Stakeholders: Juan Gonzalez (Domain Representative) on behalf of Brian Gattoni (Domain Steward)

Description

2021 Highlights: Newly developed content to be included as part of NIEM 5.1 Release.
2022 Objectives: IEPD development and community engagement.
NIEM Recommendations:

2021 Highlights	2022 Objectives	NIEM Recommendations

• Developed new content to be included as part of the NIEM 5.1 Release for the following:
 	
  • Federal Incident Reporting content developed by MITRE and in collaboration with CISA and GTRI.
 	
  • State, Local, Tribal and Territorial (SLTT) Cyber Incident Reporting content developed by the Cybercrime Support Network (CSN) and in collaboration with CISA and GTRI.
 	
• Continue community engagement.
 	
• Plan for a Cyber Domain Symposium in December.
	• Message Exchange Package development for incident reporting for Federal and SLTT exchanges.
	• Piloting of IEPD(s) developed at the Federal and/or SLTT levels.
	• Strong community engagement for usage and implementation of newly released content.
		• Insert Bullets Here

NBAC Annual Meeting

Biometrics

DOMAIN UPDATES

"Biometrics" Domain Update

Domain Steward & Stakeholders: **(AD John M Boyd - Chair Biometrics Domain/DHS OBIM)**
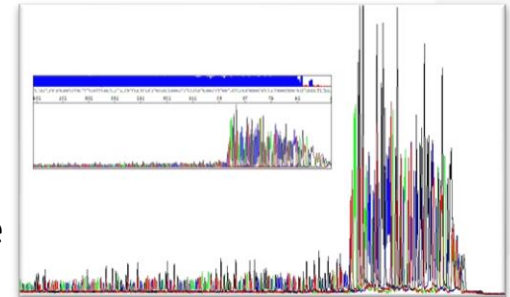
2021 Highlights

Mature the Domain:

- The NIEM Biometric Domain (NBD) Team at OBIM **led bi-weekly NIEM Biometric Domain Working Group** (NBDWG) meetings where **DNA SME's**, **NIST**, & the NBD Executive Committee (**NBDEC – DHS, DoD, DOJ, & NIST**) to **expand DNA** related attributes.

- Additional **DNA attributes** were **added** to the **NIEM 5.1 Biometrics Domain release**.

2022 Objectives

Open-Source Project:

- The NBD Team is working with the DNA Store Match Share team, on a **DNA Open-Source Project** to replace the 16-bit integer field with a 32-bit integer field by **producing a new file format**, .fsax. The need was identified in the HLT NBDWG meetings.

- We stood up a **GitHub Repository** for this effort, which will enable **peak heights** to be expressed as the maximum of a **32-bit integer** (2.14 billion).

Recommendations

- We would like to know if there are any other agencies working on maturing the DNA standard.

"Biometrics" Domain Update

Domain Steward & Stakeholders: **(AD John M Boyd - Chair Biometrics Domain/DHS OBIM)**

2021 Highlights

- We held NBDWG meetings for **identification of voice related attributes** to support OBIM's Human Language Technology (**HLT**) initiative.

- We **performed** a **NIEM, NIST,** and Open Language Interface for Voice Exploitation (OLIVE) Software **standards gap analysis** to as part of the NBDWG HLT effort. OLIVE is being utilized by OBIM in their HLT pilot.

- This effort is **to identify possible attributes for NIST & NIEM updates** (5.2 release) to mature HLT in the NBD domain.

2022 Objectives

- We would like to know if there are any other agencies working on voice as a biometric modality, so we gather broader use cases to factor into the NBDWG discussions.

Recommendations

- The "way ahead" for the Biometrics Domain will be to **advance** the **NIEM** model for **HLT/Voice** & collaborate with NIEM on the **NIEM Biometrics Domain 5.2 release**.

"Biometrics" Domain Update

Domain Steward & Stakeholders: **(AD John M Boyd - Chair Biometrics Domain/DHS OBIM)**

We Promote NIEM!

2021 Highlights

Activities for 2021 include, but are not limited to, the briefings which we provided to promote NIEM adoption for the below agencies and groups:

- The **DHS** Office of the Chief Information Officer (**OCIO**) **Chief Data Officer** & team

- The Data Stewardship Tactical Working Group (DSTWG**) Immigration Technology Summit**

- **DHS Management's** Mission Support & Management Domain (**MSMD**) briefing is scheduled

- **We support** the **NTAC** & **NBAC**, **Tiger Teams**, and we review technical specifications related to NIEM, e.g. **Metamodel Primer**.
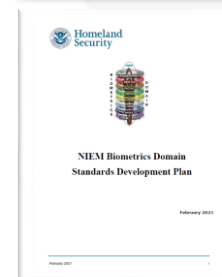
2022 Objectives

- The NBD Team will **continue to promote** & **support NIEM** through briefings, outreach, NBDWG sessions, NBAC, NTAC, & Tiger Teams, Newsletters, and more.

- The NBD Team will continue contributing to the NTAC as a member.

Recommendations

- Please let us know if you have any feedback or recommendations.

"Biometrics" Domain Update

Domain Steward & Stakeholders: **(AD John M Boyd - Chair Biometrics Domain/DHS OBIM)**

2021 Highlights

- The NBD Team worked with the NIEM Management Office (NMO) to launch a **NBD GitHub site** to provide **domain documentation** to the NIEM community. https://niem.github.io/community/biometrics/

  - **NBD Standards Development Plan**
  - **NBD Governance Process Plan**
  - **NBD Enterprise - Level Data Standards Execution Plan**
  - **NBD Domain Management Plan**
  - **How to Guide for Creating NIEM Biometric Exchanges**

- We provide quarterly biometrics **newsletters** for NBD Members.

- We maintain & update the member list.

2022 Objectives

- The NBD will **continue the outreach** to the biometrics community through development of domain documentation and newsletters.

- The NBD Team will keep the **GitHub site up to date** with new information, activities, and updates to keep the community posted.

Recommendations

- Please let us know if anyone is interested in NBD membership. We can be contacted via: OBIMFuturesIdentityNIEM@obim.dhs.gov

- We would appreciate hearing success stories from other domains for engaging members.

NBAC Annual Meeting

MilOps
DOMAIN UPDATES
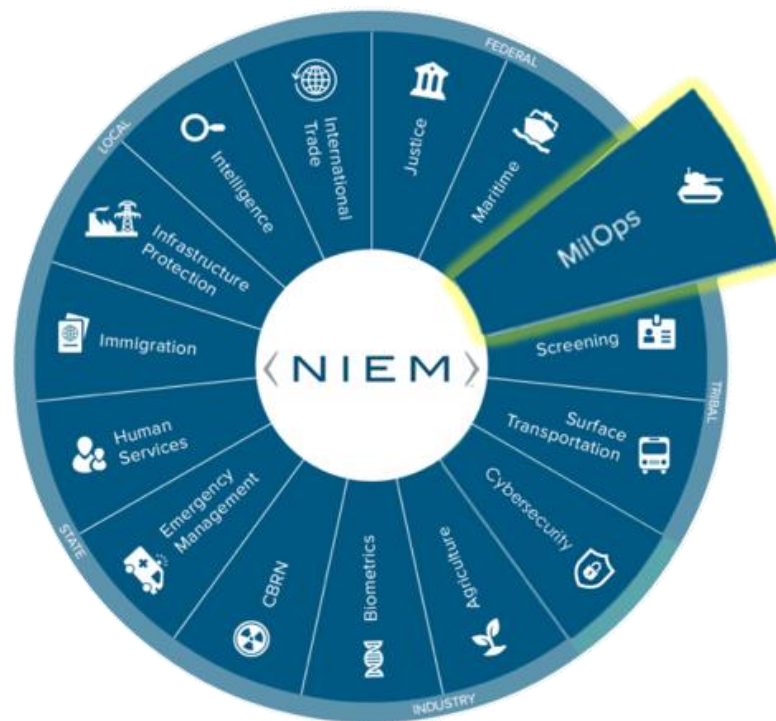
MilOps Domain Update

Domain Steward & Stakeholders: Mr. Adrian Francis, Ms. Beth Smalley; DoD Joint Staff J6

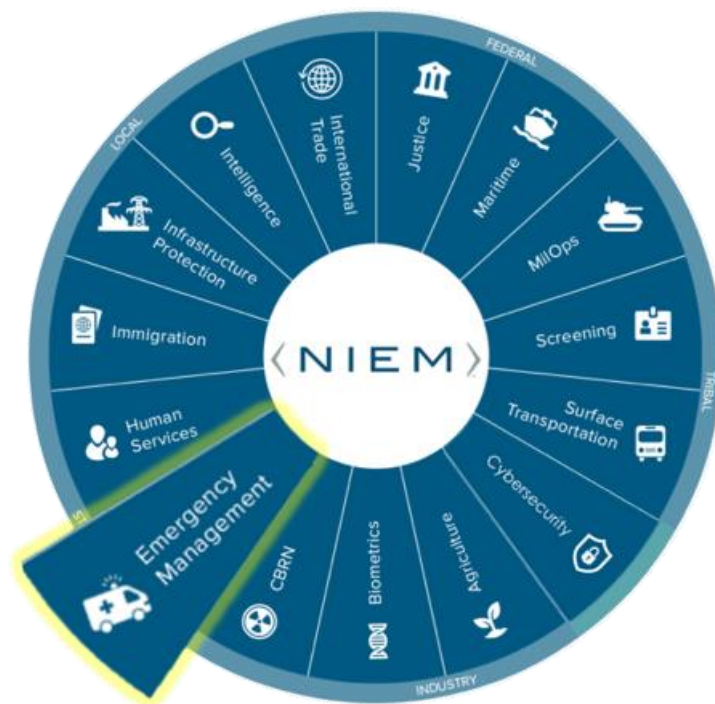| Description |
|---|
| **2021 Highlights**: Describe your NIEM domain accomplishments, activities, best practices
2022 Objectives: Describe your NIEM domain goals and plans for next year
NIEM Recommendations: Describe how NIEM should evolve to the "next level" |

2021 Highlights	2022 Objectives	NIEM Recommendations

• Added 485 JNKE IEPD cyber-related data objects to the model
 	
• Completing USMTF conversion to NIEM; will result in 1000s of elements and types for MilOps data model, 325 IEPDs
 	
• Migrated MOMS restricted content tools (SSGT, ConTesA) from Virtual Machine to Docker containers
 	
• Demonstrated additional NCDF capabilities at CWIX 2021
 	
• Submitted NCDF as a NATO STANAG (5653), integrating into FMN Spiral 5
 	
• Supporting VA and DMDC IEPD development for DD-214. Additional IEPDs planned.
	• Showcase improved NCDF capabilities in CWIX 2022
	
	• Add USMTF content to data model, publish USMTF IEPDs
	
	• Continue to support VA and DMDC IEPD development
	
	• Increased adoption of NIEM:
	  ✓ Counter Improvised Explosive Device (C-IED) JPO
	  ✓ JADC2 enterprise stakeholders
	  ✓ Army enterprise
	  ✓ Universal Command & Control (UC2)
	  ✓ Multi-X Security (MXS)
	  ✓ Defense Incident-Based Reporting System (DIBRS)
		• Engage newly assigned DoD and Federal Agency Chief Data Officers (CDOs)
		
		• Continue to collaborate with US and Coalition Executives on enterprise data efforts (e.g. JADC2, Open Data Act, UC2, etc.)
		
		• Improve user-friendly tools for browsing NIEM
		
		• Mature NIEM JSON tools and training
		
		• Provide end-to-end IEPD Lifecycle tool capability to trace information exchange requirements from scenario planning architecture artifacts with automated mapping and extract transform load (ETL) services

NBAC ANNUAL MEETING

EMERGENCY MANAGEMENT

DOMAIN UPDATES

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Emergency Management Domain Update

Domain Steward & Stakeholders: DHS S&T SESD – Kamran Atri

Description

**2021 Highlights**: Describe your NIEM domain accomplishments, activities, best practices
2022 Objectives: Describe your NIEM domain goals and plans for next year
NIEM Recommendations: Describe how NIEM should evolve to the "next level"

2021 Highlights	2022 Objectives	NIEM Recommendations
• the DHS Science and Technology Directorate (S&T), Office of Science and Engineering (OSE), Systems Engineering and Standards Division (SESD) is not the Steward – in progress • Supported FEMA Data Exchanges Development from different FEMA offices • Outreach sessions to FEMA and other key stakeholders • Identified new attributes and contributed to NIEM Release (5.0) • Supported DHS Acting CDO with State of As-Is and suggestions on next steps • Attended justification meetings and or provided talking points for different DHS FEMA offices in using NIEM	• Continue support NIEM Releases • Continue supporting DHS S&T and FEMA in developing new NIEM Data Standardized attributes • Plan and conduct quarterly EM Domain Internal training sessions • Customized Internal IEPD processes to better help implementation teams • Provide more support to SLTT organizations • Continue engaging NBAC and NTAC and NIEM PMO	• Develop self guided training videos or metrical.

NBAC Annual Meeting

Maritime
DOMAIN UPDATES
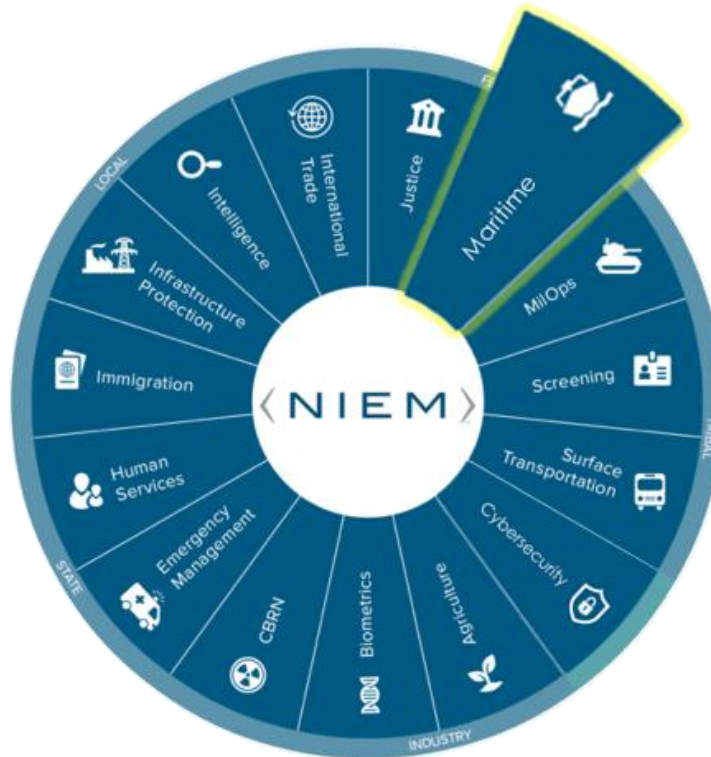
Maritime Domain Update

Domain Steward & Stakeholders: Navy Information Warfare, Office of Naval Intelligence

Description

2021 Highlights: Explore opportunities to use NIEM
2022 Objectives: continue exploration and participate in `best practices' activities
NIEM Recommendations: Widely distribute practical standards (a.k.a. de facto best practices)

2021 Highlights	2022 Objectives	NIEM Recommendations
• Conducted the 03-15AUG LSE21 that tested "war-fighting concepts that are not fully refined," across 17 time zones with 30+ live, 50+ virtual / constructive units.	• Leverage afloat opportunities to improve associated management, automations, monitoring and interoperations. And derive inferences and insights to support timely and accurate decision making.	• Maximize the use of de-facto best practices (e.g. NIEM-M "lite") to expand participation and gain insights from data exposure via machine-to-machine interfaces.
• Jupiter (Advana) 2.0 dashboards demonstrated better ability to access, correlate, visualize and model data in various forms throughout the DoN.	• "Plug into JADC2" to develop the networks, infrastructure, data architecture, tools, and analytics" to support Distributed Maritime Operations.	• Incorporate more live, virtual and constructed interoperability experiments.
• Continued investments in network modernizations and PED improvements.	• Publish SECNAVINST 5000.36B	• Leverage emerging capabilities against legacy systems to maximize benefit indicators (More best practices using whatever works works).
• Publishing SNI 5000.36B establishing guiderails for strategic use of data		

DOMAIN MENTORING PROGRAM

Advice

Help

Support

Guidance

Developed
NIEM
Mentorship Program

NIEM Domain Maturity
Mentoring Template

EXCHANGE MODEL

NIEM.gov

NTAC UPDATES

NTAC ANNUAL F2F

10-12 August 2021

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- NIEM 6 architecture – potential changes
  - Changes for simplicity and consistency
  - Metadata
  - Ordered properties
  - Adopt XML Schema 1.1?
  - Life after metamodel tools
- NIEM as a standard
  - NTAC consensus: We like OASIS Open Project
- NBAC
  - Heard about NBAC upcoming plans and needs
  - Help with internationalization use cases

⟨ N I E M ⟩

- Metamodel
  - Simplifications!
  - Separate model instance from technology-specific configuration
  - Tool status; goals and metamodel refinement
- Message specification rules and conventions
  - Consensus on approach, nature of content
  - Developing document outline, work plan

NBAC PROVIDED REQS DURING NTAC F2F 2021:

NTAC asked for NBAC to provide new business needs and features. Some topics that was discussed:

- Activities to support the NIEM Standard

- JSON development tools and or maturing NIEM and JSON

- IoT, AI, advanced technology implementation

- ConTesA (Lookup tool to help make older exchanges conformant with rationalized or newer versions of NIEM) – is it user-friendly?

- XML, XML Schema, JSON done… what's next? Harmonization between XML and JSON

- Best approach in creating an internal ring to the existing NIEM ring (Core, Domains, International)...

- Language conversion (Spanish, French....) – "defense/defence", "colour/color"

- Impact on NIEM/JSON implementation in using NIEM Core and Code ISO-639-3 (i.e. the size of language code table exceeds the possible enumerated value)

- Defining API 3.0 that produces a valid NIEM XML payload and JSON payload

- The code generators that produce the Java, ASP .Net, or other languages don't always generate the expected XML annotations. Java is the only language so far we have been able to confirm that it does generate the annotations for most of the definitions.
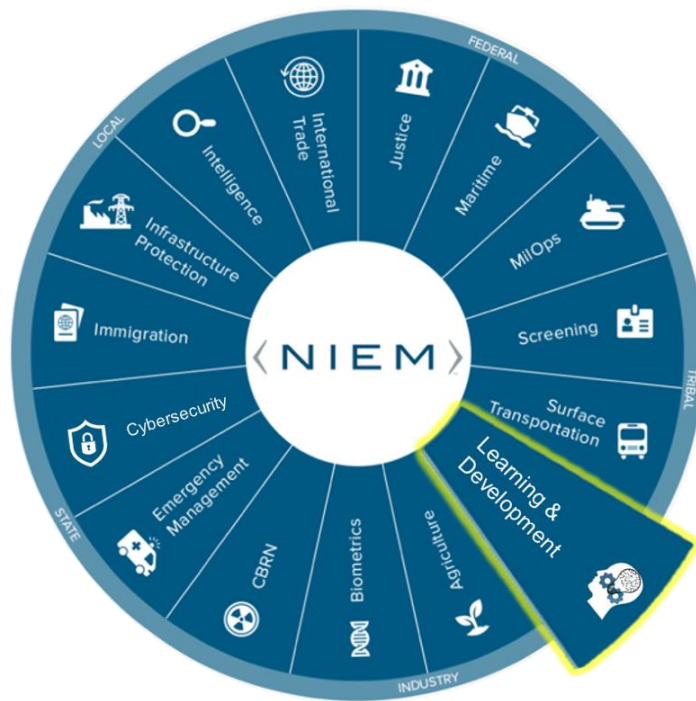
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NEW NIEM DOMAINS

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NBAC ANNUAL MEETING

Learning and Development Domain

DOMAIN UPDATES

Learning and Development Domain Update

Domain Steward & Stakeholders: (Insert Personnel Names & Organizations Here)

Description

2021 Highlights: Describe your NIEM domain accomplishments, activities, best practices
2022 Objectives: Describe your NIEM domain goals and plans for next year
NIEM Recommendations: Describe how NIEM should evolve to the "next level"

2021 Highlights	2022 Objectives	NIEM Recommendations
• NIEM "Homework" • Coordination for Establishment • Domain Charter • Domain Value Proposition • Presentation to other Domains	• Recruit Co-Chairs • Recruit Members/Volunteers • Domain Kickoff Meeting • Domain Working Group Meetings • Data Element Planning • Preliminary crosswalk with Specifications and Standards	• Tighter Integration with Technical Specifications, Standards, and Existing Data Schemas • Will have more as we learn more as a Domain!
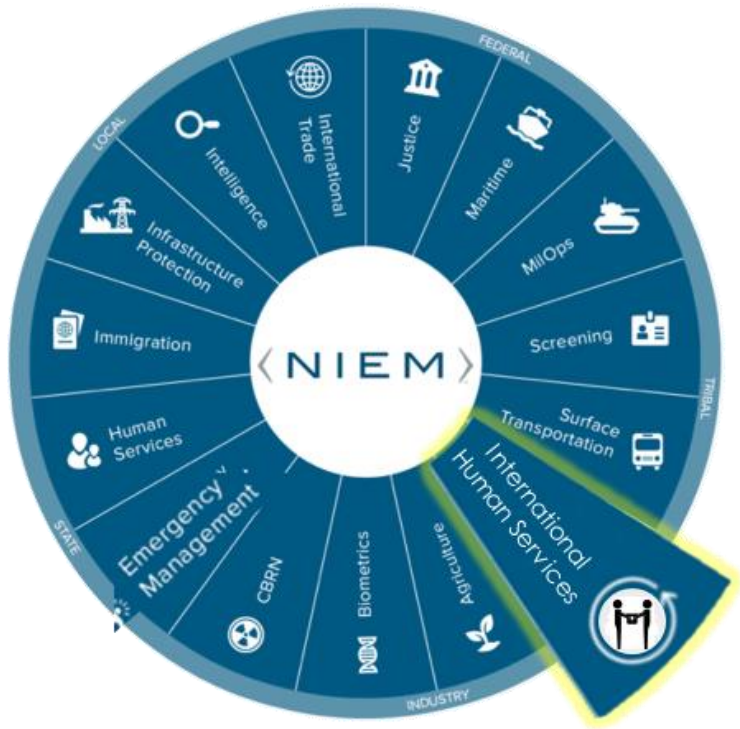
NEW NIEM
INTERNATIONAL HUMAN SERVICES
DOMAIN

Employment and Social Development

Emploi et Développement social

Canada

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About Employment and Social Development Canada

- Employment and Social Development Canada (ESDC) works to improve the standard of living and quality of life for all Canadians.
- With over 27000 public servants, ESDC is the second largest department (information based on **open government data** 2020 numbers).
- ESDC provide service that benefits Canadians through different life events in these three areas
  1. **Employment, Workforce Development and Disability Inclusion**
     a. Employment Insurance
     b. Training
     c. Funding programs
  2. **Families, Children and Social Development**
     a. Public pensions
     b. Family benefits
     c. Disability benefits
     d. Housing benefits
     e. Education
  3. **Labour**
     a. Find a job
     b. Workplace standards

NOTE: Information is extrapolated form publicly available information here.

International Human Services Domain

The Need For IHS

- Employment and Social Development Canada (ESDC) has subject matter and business experts in the area of service delivery to citizens

- NIEM's and Human Services have rich data model, however they do not cover the needs of international partners such as Canada

- Employment and Social Development Canada (ESDC), as a steward and leader, would like to bridge this gap

- The diverse programs and services ESDC is responsible for makes it the ideal candidate to be the steward of ISH domain

- ESDC has already been using NIEM and developing it's own extension schema since 2017

- ESDC has a large benefit delivery modernization project which requires additional exchanges. The work that ESDC is embarking on will enrich the data model that is used by the NIEM community

- ESDC is working to take NIEM to the next step by defining the steps required for data exchange using NIEM in a microservices architecture which implements Contract First approach when developing Application Programming Interface (API)

Value Proposition

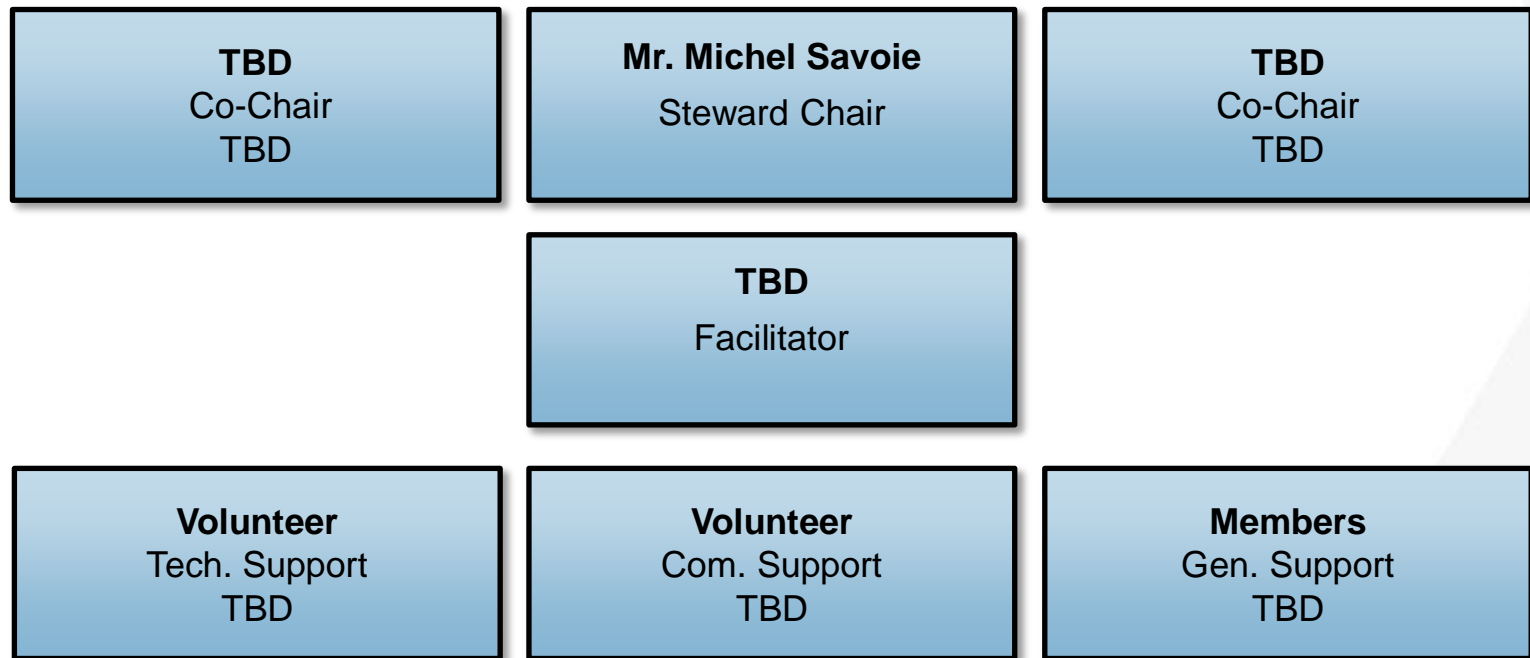| International Human Services COI	NIEM Community
• **International Human Services COI** • Enhance HIS to support the international human services data needs by engaging with stakeholders • Promotes community-based agreement on data element names and definitions • Provides a framework for information exchange specifications with guide on how to define NIEM-conformant Representational State Transfer (REST) Application Program Interface (API) • Improves interoperability – making data visible, accessible, and understandable enterprise-wide	**NIEM Community** • Increases use of a common and standard data and information sharing model for international human services • Using NIEM increases interoperability within ESDC and other international organizations including federal, state, local, and tribal entities • Engage and increase the application developer community involvement with NIEM • Reduces development and maintenance costs for any entity seeking information sharing links • IHS Domain broadens accessibility of information to the NIEM international community

NIEM IHS tentative Org-chart

Proposed Organization Chart
International Human Services Domain

TBD Co-Chair TBD	**Mr. Michel Savoie** Steward Chair	**TBD** Co-Chair TBD

TBD

Facilitator

Volunteer Tech. Support TBD	**Volunteer** Com. Support TBD	**Members** Gen. Support TBD

International Human Services Domain Update

Domain Steward & Stakeholders: Michel Savoie, Employment and Social Development Canada (ESDC)

Description

2021 Highlights: Describe your NIEM domain accomplishments, activities, best practices
2022 Objectives: Describe your NIEM domain goals and plans for next year
NIEM Recommendations: Describe how NIEM should evolve to the "next level"

2021 Highlights	2022 Objectives	NIEM Recommendations
• Discussion on establishment of IHS as prospective domain • Shared potential candidates for additions to NIEM core with NMO • Shared ESDC internal team best practice and process with NMO	• Expand the IHS by enriching the data model with new elements based on ESDC projects • Inclusion of new attributes to support the international community of NIEM based on CIO request and engagement	• Having a transformation /translation tool to convert NIEM XSD to JSON schema or Open API YAML will encourage the developer community to be more open to using NIEM based data standardization.

NBAC Action Tracker

- Onboarding / Maturing Domains
- Mentoring Program
- Leveraging Tiger Teams
  - Internationalization
  - State, Local, Tribal, Territorial
- NIEM as a Standard
- Training Offerings
- …

NBAC
- NIEM Adoption
- NIEM Releases
- NIEM Domains
- NIEM Growth
- NIEM Implement
- Tiger Teams
- Governance

- Continue adding/maturing NIEM Domains Content …

Onboarding VA Domain

Data Standardization

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2021/2022 WORK PLAN (CONT.)

- *Future NIEM Release Plan (Christina to provide her thoughts)*

- *NIEM Documentation Review (Governance and Process) as we move to tag NIEM as a Data Standard Organization*

  - *PMO, NBAC or NTAC Charters and Governance Documents*

    - *NIEM Openness / Transparency*

      - *Are there any Barriers to Participation,*

      - *What are NIEM Voting and Decision-making process,*

      - *What are the NIEM Membership Requirements (to Gov and non-Gov orgs),*

      - *What are the Technical Qualifications for joining NIEM*

      - *What are NIEM Objection process in accessing documents or Evaluating new content*

      - *What is NIEM Appeal process for Domain On-boarding, Standard development, or Conflict Resolution*

      - *What are NIEM Terms and Conditions regarding Privacy, Patent, Security, Antitrust, Adjudication…*

      - *What are NIEM Established and Enforced Processes: Proxy voting, Technical Assistance (i.e. Help desk), Active or Inactive status of standard, Release (emergency or normal)*

2021/2022 WORK PLAN (CONT.)

- *Internationalization*

    - *Language*

    - *Vnvigorating the tiger team (Meetings, charter…)*

    - *Which partner do we cultivate next*

- *Tiger team*

    - *Way ahead for ETS*

- *NIEM Adoption 2022*

    - *VA?*

    - *USCB?*

- *NIEM Training*

    - *What would be the NBAC role?*

- *Mentoring Program*

    - *Next Steps*

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2021/2022 WORK PLAN (CONT.)

- *2020 Annual Report*

- *Should the NBAC Have a Github Site?*

SHARING AND COLLABORATION

- *It's your model/it's our model/it's their model.*

- *In a modern, **digitally-enabled** world where the risk of NOT interoperating remains high, Interoperability begins with all of us.*

- *NIEM Plays a Key Role in:*

    - Designating an Organization as a " **Data Driven Organization** ".

    - Organizations that must Consume, Access, Manipulate, Manage, Analyze, Standardize, Share and Distribute all

        Available Data from Existing or New Potential Data Sources.

    - Data Architecture, Data Management and Data Engineering, the Key Components of any IT Modernization Life Cycle.

Enabling Connected ~~Future~~ Now

QUESTIONS?
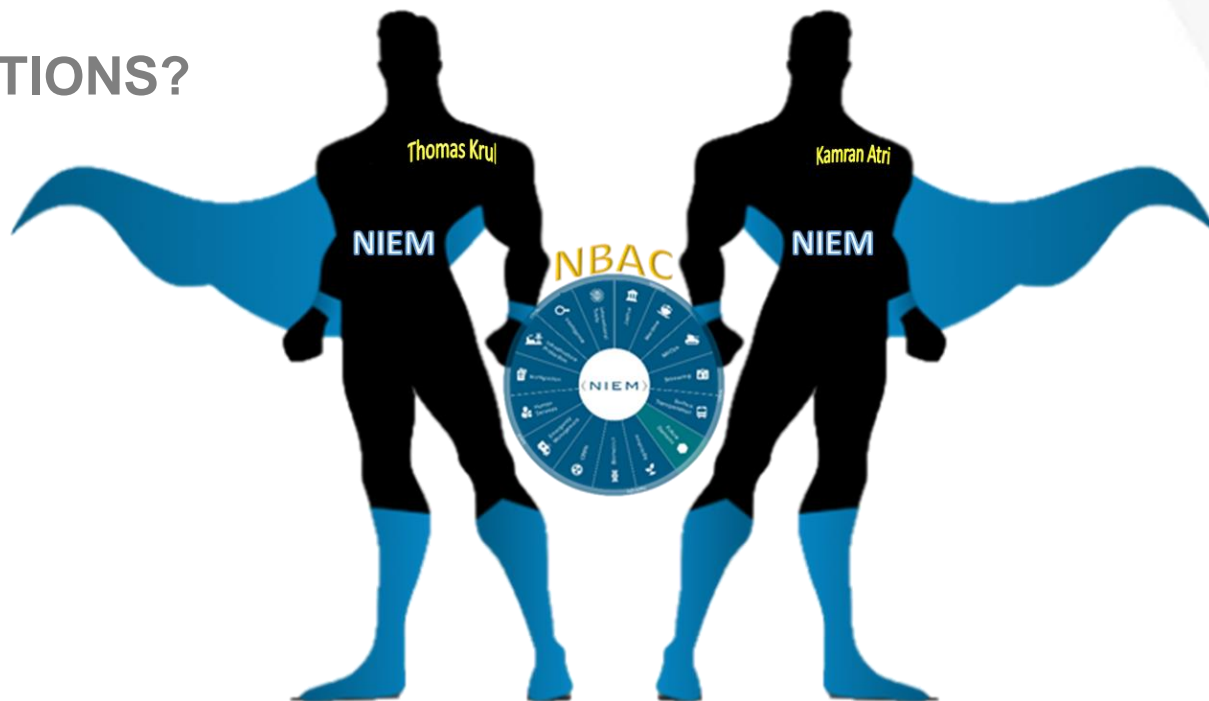
> Thomas Krul

thomas.krul@canada.ca

NBAC Co-Chairs

> Kamran Atri

katri@A4SAFE.COM

NBAC Co-Chairs

> Stephen M. Sullivan

Stephen.m.sullivan14.ctr@mail.mil
Sullivan_Stephen@bah.com

NBAC Secretariat –NIM PMO

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