The National Information Exchange Model and making data relevant

Paul Wormeli
Wormeli Consulting, LLC

Follow this and additional works at: https://repository.upenn.edu/admindata_conferences_presentations_2018


DOI https://doi.org/10.23889/ijpds.v3i5.1054

This paper is posted at ScholarlyCommons. https://repository.upenn.edu/admindata_conferences_presentations_2018/31
For more information, please contact repository@pobox.upenn.edu.
The National Information Exchange Model and making data relevant

Abstract
The National Information Exchange Model (NIEM) has been widely adopted as a basis for creating standards that foster information exchanges across disparate disciplines in justice, health, human services and other fields. NIEM can be a driver for transforming legacy data into meaningful cross-disciplinary exchanges that can support advanced analysis of impacts of programs and strategies in improving government services of all categories. This presentation will review the basic NIEM principles in terms of how they can enable more meaningful results as administrative data is applied to research on the efficacy of government services across organizations and disciplines.

Comments
DOI https://doi.org/10.23889/ijpds.v3i5.1054

This presentation is available at ScholarlyCommons: https://repository.upenn.edu/admindata_conferences_presentations_2018/31
And leveraging administrative data

Paul Wormeli
Innovation Strategist
Wormeli Consulting, LLC
NIEM intentionally does not address standardizing data inside legacy systems. NIEM serves as a translation layer (providing a common understanding) between and across disparate systems.
What NIEM Is...

A Standard that facilitates information sharing:
- Across organizational and jurisdictional boundaries
- At all levels of government

A Structured Approach that provides:
- Development tools, processes, and methodologies

A Data model that provides:
- Agreed-upon terms, definitions, and formats for various business concepts
- Agreed-upon rules for how those concepts fit together
- Independence from how information is stored in individual agency systems
NIEM Domains

Built and governed by the business users at Federal, State, Local, Tribal and Private Sectors
NIEM’s governing structure is comprised of Federal, State, Local, Tribal and private organizations.

NIEM is jointly managed at an executive level by the Department of Homeland Security (DHS), Department of Justice (DOJ), and Department of Health and Human Services (HHS).

- **ESC** (Executive Steering Council)

  - Executive Director
  - Deputy Director

- **NIEM PMO**

  - NIEM Communications & Outreach Committee (NC&OC)
  - NIEM Technical Architecture Committee (NTAC)
  - NIEM Business Architecture Committee (NBAC)
## Who governs NIEM Domains?

<table>
<thead>
<tr>
<th>Domain</th>
<th>Executive Steward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justice</td>
<td>Global Justice (State &amp; Local)</td>
</tr>
<tr>
<td>Screening</td>
<td>DHS Screening Coordination Office</td>
</tr>
<tr>
<td>Immigration</td>
<td>DHS/ICE &amp; USCIS</td>
</tr>
<tr>
<td>CBRN</td>
<td>DHS/DNDO</td>
</tr>
<tr>
<td>Maritime</td>
<td>DOD/DON/MDA</td>
</tr>
<tr>
<td>Cyber</td>
<td>DHS/NPPD/CS&amp;C</td>
</tr>
<tr>
<td>Family Services</td>
<td>HHS/ACFS &amp; DOJ</td>
</tr>
<tr>
<td>Emergency Management</td>
<td>DHS/FEMA, DHS/S&amp;T (state &amp; local)</td>
</tr>
<tr>
<td>Infrastructure Protection</td>
<td>DHS/NPPD</td>
</tr>
<tr>
<td>International Trade</td>
<td>DHS/CBP</td>
</tr>
<tr>
<td>Biometrics</td>
<td>DHS/NPPD, DOJ/FBI, DOD, NIST</td>
</tr>
<tr>
<td>*Health</td>
<td>HHS/ONC &amp; HHS/OCIO</td>
</tr>
<tr>
<td>*Human Services</td>
<td>HHS/ACFS &amp; NYC/HHS</td>
</tr>
<tr>
<td>*Financial (Budget, Planning, Accountability, Grants)</td>
<td>TBD (currently HHS, OMB)</td>
</tr>
</tbody>
</table>
NIEM Value Proposition
Value Proposition - Standardization

The formalization of NIEM as a standard enables:

**Community of Support**
- NIEM Practitioners can leverage information sharing practitioners to decrease development time for exchanges and increase conformance.

**Structured Approach**
- Repeatable approach that decreases the inconsistencies and duration of development.

**Value to Organizations:** A larger community working with and developing agreed upon semantics combined with a structured approach can increase data compatibility between agencies, cost avoidance by building reusability of exchanges, and ease the development of information exchanges.
Value Proposition - Interoperability

NIEM facilitates interoperability through the use of:

- **Common Language and Vocabulary**
  - Eliminates confusion by providing consistency of data definitions between agencies

- **Agnostic Implementation**
  - NIEM does not dictate how agencies’ systems are implemented, but enables these systems to work together

**Value to Organizations:** Interoperability is the ability of many diverse systems to work together. By increasing interoperability between mission areas and jurisdictions, government can enhance its services across key functional areas such as law enforcement and emergency response.
Example: FBI NIBRS

Define data components

- Discover NIEM coverage
- Expand NIEM if needed
- Create NIEM IEPD

- Law enforcement RMS
- Extract NIBRS Data

Share with FBI
Value Proposition - Reusability

The reuse of IEPDs, in part and whole, within NIEM will:

**Decrease Development Time**
- Decrease the development time for information exchanges that use similar sets of data

**Increase Consistency**
- Allows practitioners to increase the level of consistency in data definitions across their information exchanges

**Value to Organizations**: Reuse through NIEM can help organizations avoid costs associated with the development and maintenance of information exchanges, leading to an increased budget available to spend in mission areas.
Explore the resources at www.niem.gov

pwormeli@wormeliconsulting.com