

Defining an Integrated Criminal Justice Information System (ICJIS)

using the National Information Exchange Model (NIEM)

A sample planning document template, for establishing a program charter for Public Safety Canada



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Introduction to IJCIS/NIEM Planning Charter

This project is intended to provide guidance for Public Safety Canada in the pursuit of the on-going planning efforts for adopting the NIEM Data exchange standard and data sharing capabilities.

This phase of project work is limited to the discrete scope of the initial phase of planning and advice, as outlined by the RFP, and serves to provide context and foundation to the immediate short-range tasks therein. Although a full strategic planning effort for a nationwide integrated justice information using NIEM may be well-served by formalized governance processes, including a full program Charter and By-Laws, this scope of effort does not attempt to supplant that need. This effort, however, will attempt to address the same components and issues requisite in a full-scale governance program, and should be aligned as closely as possible, given the limited scope of this initial effort, to provide the structure and framework for future efforts in Public Safety Canada.

This scope of work should aim to define guidance and strategy deliverables in the following areas of a National NIEM Program Charter for Governance and Management.

A typical deliverable would include:

- Purpose and Context
- NIEM Program Vision and Mission Statements
 - Public Safety Canada ICJIS Vision Statement
 - Public Safety Canada ICJIS Mission Statement
- Values for NIEM Adoption
- Guiding Principles for NIEM Data Sharing
- Goals and Objectives of NIEM Data Sharing Program
- Benefits of NIEM Data Sharing
- Understanding and Documenting the Current IT System
- Defining Desired Future-State IT and NIEM Functionality
- High-Level Planning Roadmap for NIEM Capability
 - Business Case
 - Communication Plan
 - Governance
 - Funding
 - Development
 - Maintenance
- Future Considerations
 - Roles & Responsibilities
 - Performance Measures: Outcomes and Indicators



Purpose and Context

The ***Purpose and Context*** section *should* include the background and history of past and current efforts in the area of Public Safety Canada justice information systems improvements and sharing efforts. It would seek to articulate the needs and emerging business trends, interests and political motivations for such a project. It would include reference and citations to any laws, mandates, statutes, etc. compelling this effort. In short, it would serve as the context for why such a project should, or must, exist.

Throughout this effort, there is an attempt to provide the necessary context to complete high-level strategic planning and vision for the Public Safety Canada effort. The intention of this deliverable is to provide the foundation for a future Program Charter once the requisite NIEM Governance Body is in place.

For the duration of this project, much of the text of this charter will be based on best practice examples from other NIEM jurisdictions, and will serve until a full charter is engaged by Public Safety Canada to fully examine and consider the broader and long-term implications of an NIEM project and system, and the attending issues of governance and life-cycle maintenance.



Vision Statement Overview

The Public Safety Canada ICJIS/NIEM vision statement document will consist of the following elements:

- **Mission Statement and Goals:** a statement describing the desired “ideal world” or optimal state that will be achieved as a result of the overall project – the plan *and* the actual implementation - and a list of outcomes that would be part of the optimal situation.
- **Objectives:** specific results that the criminal justice community wants to achieve in three to five years; oftentimes they are incremental steps on the road toward achieving a certain goal. The objectives should be measurable and state specific measurements of success.
- **Benefits:** positive situations/effects that are created as a result of achieving the objectives, goals, and vision of the project.
- **Risks or Constraints:** potential issues that may compromise the success of the project. As the project progresses, risk management strategies will be developed for addressing these issues.



Vision and Mission Statements

Examples:

Public Safety Canada ICJIS Vision Statement

Enhance the safety of Public Safety Canada’s citizens through the creation and maintenance of a criminal justice information sharing framework that is complete, accurate, timely and responsive to the needs of the criminal justice community and those we serve.

Public Safety Canada ICJIS Mission Statement

The mission of Public Safety Canada’s ICJIS Committee is to leverage the NIEM specification in order to create a nation-wide framework of people, processes, data, standards, and technology to share accurate and comprehensive justice information.



Values (*Examples*)

- Public safety is our paramount concern.
- We will collaborate through meaningful involvement, consistent participation, and partnerships.
- We will respect each agency’s autonomy.
- We will act with integrity.
- We will communicate honestly, openly, accurately.
- We will deliver and acknowledge incremental successes.
- We will focus on cost-effective information sharing.
- We will balance business and technology perspectives.



Guiding Principles (*Examples*)

Integration is designed to address the operational needs of justice agencies, as well as a host of outcome-based societal objectives. In spite of these varying objectives, there are several fundamental principles that guide the development of integrated justice information systems.

1. Information is captured at the originating point, rather than reconstructed later.
2. Information is captured once and reused, rather than re-captured when needed again.
3. Integrated systems fulfilling these functions are comprised of, or derived from, the operational systems of the participating agencies; they are not separate from the systems supporting the agencies.
4. Justice organizations retain the right to design, operate and maintain systems to meet their own operational requirements. However, as with any network capability, participants must meet agreed-upon data, communication and security requirements and standards in order to participate.
5. Whenever appropriate, standards will be defined, with user input, in terms of performance requirements and functional capabilities, rather than hardware and software brand names.
6. Security and privacy are priorities in the development of integrated justice capabilities, and in the determination of standards.
7. Integration builds on current infrastructure and incorporates capabilities and functionality of existing information systems, where possible.
8. Because of the singular consequences of decision making throughout the justice enterprise, establishing and confirming the positive identity of the record subject is crucial.

These guiding principles are fundamental to integrated systems development in justice, and clearly apply to information technology systems development generally as well.



Goals & Objectives (Examples)

Implementation of NIEM/ICJIS is expected to support the following goals:

- Recommend policies with respect to the philosophy, concept and operational principles of the Public Safety Canada charter including: collection, processing, storage, and dissemination.
- Assess the current state of electronic justice information.
- Recommend policies and strategies (including standards and technologies like XML and NIEM) for promoting electronic justice information sharing and coordinate among the necessary criminal justice agencies and institutions.
- Provide guidance regarding the use of any federal or local funds appropriated for promoting electronic information sharing using NIEM.
- NIEM/ICJIS Program Communications Plan

Implementation of the NIEM/ICJIS is expected to support the following objectives:

- We will promote and maintain the framework necessary to ensure an accurate, timely and comprehensive collection of criminal justice information that meets local, provincial and Federal standards for data quality and timeliness.
- We will adopt national and international industry best practices
- We will adopt a holistic approach to grant planning, resource management and funding while ensuring the individual agency autonomy.
- We will ensure the framework's flexibility to adapt over time.
- We will seek ways to maximize the efficiency and effectiveness and functionality of information sharing.



Benefits (*Examples*)

Implementation of NIEM/ICJIS is expected to create the following benefits:

- Public Safety/Homeland Security
- Accurate identification of individuals
- Complete and timely information for informed decision-making
- Effective and efficient sharing of justice information
- Elimination of redundant data entry
- Availability of information for administrative and management decisions
- Leverage legacy investments
- Technology improvements that are flexible, extensible and re-usable
- Technology solutions are standards-based and “open”



As – Is Analysis (Examples)

Understanding and Documenting the Current IT System

An architecture migration strategy should build on the strengths of the current environment and establish a road map for methodically replacing or improving its weak points and gaps. Therefore, the current environment will be documented. To accomplish this, available documentation will be reviewed and surveys will be distributed to participating agencies. A table of the results will be produced to help summarize, in a single view, the “As Is” Environment.

The goal will be to develop a high-level understanding of the process, data and technology models of the current criminal justice environment. Public Safety Canada and its Program Team will seek to examine and understand the current strengths, weaknesses and constraints (internal and external). Some weaknesses that might exist in the current environment could include:

- ✓ The exchange of data between agencies is still dependent on the completion and distribution of paper forms. The information on these forms is subsequently keyed into the receiving agency’s system.
- ✓ Incompatibility of information systems, including data definitions and technical platforms, make automated exchange of information cumbersome at best and in many cases impossible.
- ✓ No single source of information about an individual or an incident and the resulting court case or disposition. Building the complete criminal history of an individual requires time-consuming calls to individual criminal justice agencies in addition to accessing local, regional and national Computerized Criminal History systems.

With the “As Is” analysis in hand, Public Safety Canada will have a clear foundational view that will serve as the foundation for this project, but will also be pertinent to future planning, improvements and integration. It is recommended that the results of this analysis be maintained by Public Safety Canada as a “current system view” for future projects and planning efforts.

To-Be Analysis (*Examples*)

Defining Desired System Functionality

The logical next planning step for Public Safety Canada will be to conduct analysis of current and emerging technologies and architectures, and to create and agree upon a “To Be” state for the Public Safety Canada ICJIS system.

Today, there are two ways to implement information exchange in the justice domain using national standards for data encoded in XML (eXtensible Markup Language). The first way is through one-to-one “data exchanges”. Data exchanges are implemented through Information Exchange Package Definitions (“IEPDs”) using the GJXDM of the National Information Exchange Model (NIEM).

Many NIEM IEPDs have been created across the United States and are available through the Global IEPD clearinghouse. (See <http://www.it.ojp.gov/iepd/> for more information). In a data exchange, information in one system is translated from the internal language of that system into XML and then from XML to the internal language of the second system.

The second way is through service-oriented architecture (“SOA”). SOA also utilizes XML, but has the further ability to add many additional features. More specifically, SOA is a paradigm for organizing distributed systems and capabilities that are under the control of different owners. The power of SOA lies in the fact that the systems operate independently of each other: they are not tightly coupled, and they do not even need to be aware of each other.). Additionally, business processes can be automated, eliminating steps that currently require human action.

The following list details inputs they may be considered:

- *Business Process Requirements*
- *Data Capture Requirements*
- *Technical Requirements*
- *Network and Communication*
- *Current Technology Model(s)*
- *State Justice Data Requirements*
- *GJXDM / NIEM*
- *Global Reference Architecture*

Public Safety Canada NIEM/ICJIS Team will evaluate the information available in the marketplace, information gathered from vendor materials, and information from other projects to conduct the “To Be” analysis. We may also evaluate information such as:

- ✓ Functional capabilities
- ✓ Standards compliance
- ✓ Platform requirements
- ✓ Reporting requirements
- ✓ Maintenance requirements
- ✓ Security requirements
- ✓ Implementation issues



The output of the “To Be’ Analysis will be an overall view of the solution that will suit the goals of project. We will deliver high-level architectural designs and generate, details, diagrams and rough costing estimates. These descriptions and artifacts can also be maintained for future planning efforts in Public Safety Canada.



High-Level Strategic Plan

Ultimately, Public Safety Canada and its NIEM/ICJIS Team will require a high-level strategic plan that will consolidate the deliverables and serve as a roadmap for bringing Public Safety Canada’s vision for an integrated justice system using NIEM to fruition.

The Strategic Plan will outline the future steps to be taken to achieve the objectives sought. Each specific objective will be chosen in response to the questions,

- ✓ *“What are the most pressing issues we are facing?”*
- ✓ *“How will we accomplish our overall objective?”*

The preceding components will be developed and complement the final strategic issues and recommendations. The High-Level Strategic Plan will address the “gaps” between the current Public Safety Canada “As-Is” environment and the stakeholders’ collective “readiness” for integration -- as compared with the future Vision, Goals, Objectives and the articulated “To-Be” model for the Public Safety Canada NIEM/ICJIS system.

Outputs of this analysis will identify a number of requirements for: remediation of systems; adaptation to existing technologies; and issues which reside in governance and execution of the “To-Be” model, on behalf of the agency as a whole.

Upon completion of the High-Level Strategic Plan, Public Safety Canada NIEM/ICJIS executives in governance will consider tactical plans for the detailed strategic issues, and weigh the options for next steps beyond the initial scope of this project definition and planning phase.

Future Considerations

Within the scope of this initial NIEM/ICJIS phase, several issues will be identified, but may be considered “out of scope” for this phase.

Governance

For information sharing to take place organizational boundaries must be bridged by bringing stakeholders together and gaining commitment to common goals.

While information sharing does exist today, projects are typically limited to simple interfaces between two systems or agencies. Technical solutions developed at lower levels within criminal justice agencies have provided limited improvements. Broader, systemic improvements will require more coordination and leadership. Difficult decisions to implement policy changes will need to be made to support or drive technical solutions.

The establishment of a formal governance structure will create a mechanism for broad based strategic planning and implementation of criminal justice information sharing initiatives. Shared decision making and extensive communication will be critical success factors as the governance structure is implemented. The committee structure will ensure involvement by stakeholders and create a communication network across the county. At the same time, the structure must include involvement of high-level decision makers within the executive and judicial branches when policy issues need to be resolved.

The development of a Public Safety Canada NIEM/ICJIS Executive Committee will provide policy direction for the operation of the ICJIS project and subsequent systems. This committee would have the responsibility to recommend policies with respect to the philosophy, concept, and operational principles of the NIEM/ ICJIS Executive Governing Committee.

The composition of the Public Safety Canada NIEM/ICJIS Governing Committee should assure the independence of the NIEM project from any one component of the criminal justice system. The Committee's authority to recommend policy with respect to the philosophy, concept, and operational principles of the Public Safety Canada charter allows for an objective analysis of the criminal justice services being provided.

Roles & Responsibilities

The definition of “integration” implies different roles and responsibilities for agencies at the local, regional and federal levels. While the practical business re-engineering of the justice system in Public Safety Canada can only be defined by the practitioners in that system, it is also important to recognize the efforts and roles of regional, local and federal partners in the criminal justice information cycle. Public Safety Canada justice executives and practitioners will examine and offer thoughtful re-engineering concepts to this on-going integration effort, while seeking greater efficiency and effectiveness in the



delivery of public safety and the administration of justice for its citizens. Concurrently, Public Safety Canada will examine its role, in the information sharing community, and take into account, for planning purposes, the following concepts.

The concepts below depict the typical, or ideal expectations for the roles and responsibilities with respect to the focus areas between the local jurisdictions and the regional and/or Federal agencies in that chain of information exchange. It is, therefore, a critical aspect of planning and the environmental assessment phase, to research, acknowledge and align those collateral efforts as a part of the strategic outlook for the county and how it seeks to meet its NIEM/ICJIS goals and objectives, both in the near-term and in the future:

Local agencies and jurisdictions have primary responsibility to:

- Use their existing systems and commit to supporting an interoperability interface, or acquire solutions of their choice that supports an interoperable interface, or utilizes a state provided solution that would have an interoperable interface.
- Support and maintain *information systems* within their own, individual agencies.
- Establish and enable the *sharing* of the day-to-day information that serves as the operational currency of locally integrated systems (for example, sharing of general case information, court calendar and scheduling information, etc.).
- Participate in statewide integrated *systems planning* efforts.
- Implement *standards* jointly developed with the State in support of statewide systems and integrated justice.
- Accept and implement an *interface with State systems* or other solutions that support statewide integrated justice initiatives.

Federal agencies have primary responsibility to:

- Build *national and/or regional information repositories/systems* that support the operational information needs of local and federal users (for example, criminal history records, statewide warrants database, correctional information systems), and including non-justice systems and users, such as social services, education and the general public, etc.
- Develop and support *standards* consistent with national standards to enable sharing of information between local jurisdictions, to State systems and other States, as well as with national systems.
- Operate as a *gateway* to relevant national/Federal information repositories/systems



- Develop the *infrastructure* that will support and enable integration of local agencies statewide (that is, to share data within their local environment, as well as with the Regional and National systems). Infrastructure development in this sense means that the Provinces have responsibility for technical systems (for example, statewide fiber optic lines that permit sharing of information, law enforcement teletype systems, radio systems, and programs that will support general levels of automation within justice agencies), as well as the development of open system standards that will lay the foundation for integrated systems planning and implementation at the regional and local levels.
- Mandate *statewide coverage* for critical systems, functions and capabilities.
- Enable *sharing* of information statewide.
- Enable local agencies and jurisdictions to *buy IT resources and solutions* off federal contracts.
- Provide *leadership* for statewide IT planning and development and, in the context of this effort, particularly focusing on integrated justice.
- Provide *funding* for statewide IT and integrated justice initiatives, and in support of local jurisdictions and agencies to enable their active participation.

Performance Measures: Outcomes and Indicators

In the process of planning and strategic alignment of goals and resources, it is prudent to set into that planning cycle the balancing act of **Performance Measurement**. Where **Vision** is specifically derived from the **Mission**, and **Goals** tactically aligned with their subordinate **Objectives**, each stated objective should be considered, first, in terms of the desired outcome.

- Outcomes are the benefits or results gained by reaching goals, achieving objectives and resolving strategic issues
- Performance Measures are specific, measurable, time-bound expressions of future accomplishment that relate to goals, objectives and strategic issues

As planning for NIEM moves forward into detailed and future stages of planning and development, more weight will be placed on careful planning. As projects within an IJCIS program become more expensive, it will be incumbent to demonstrate the *Return on that Investment*. The planning component of **Performance Measures** ensures that thoughtful end-to-end strategies are considered, and moreover, expectations and a means and opportunity for the base-lining and evaluation of these programs can be meaningfully articulated over time.

