A service-based Business Process Improvement effort utilizing the CMM-I:

One team's journey

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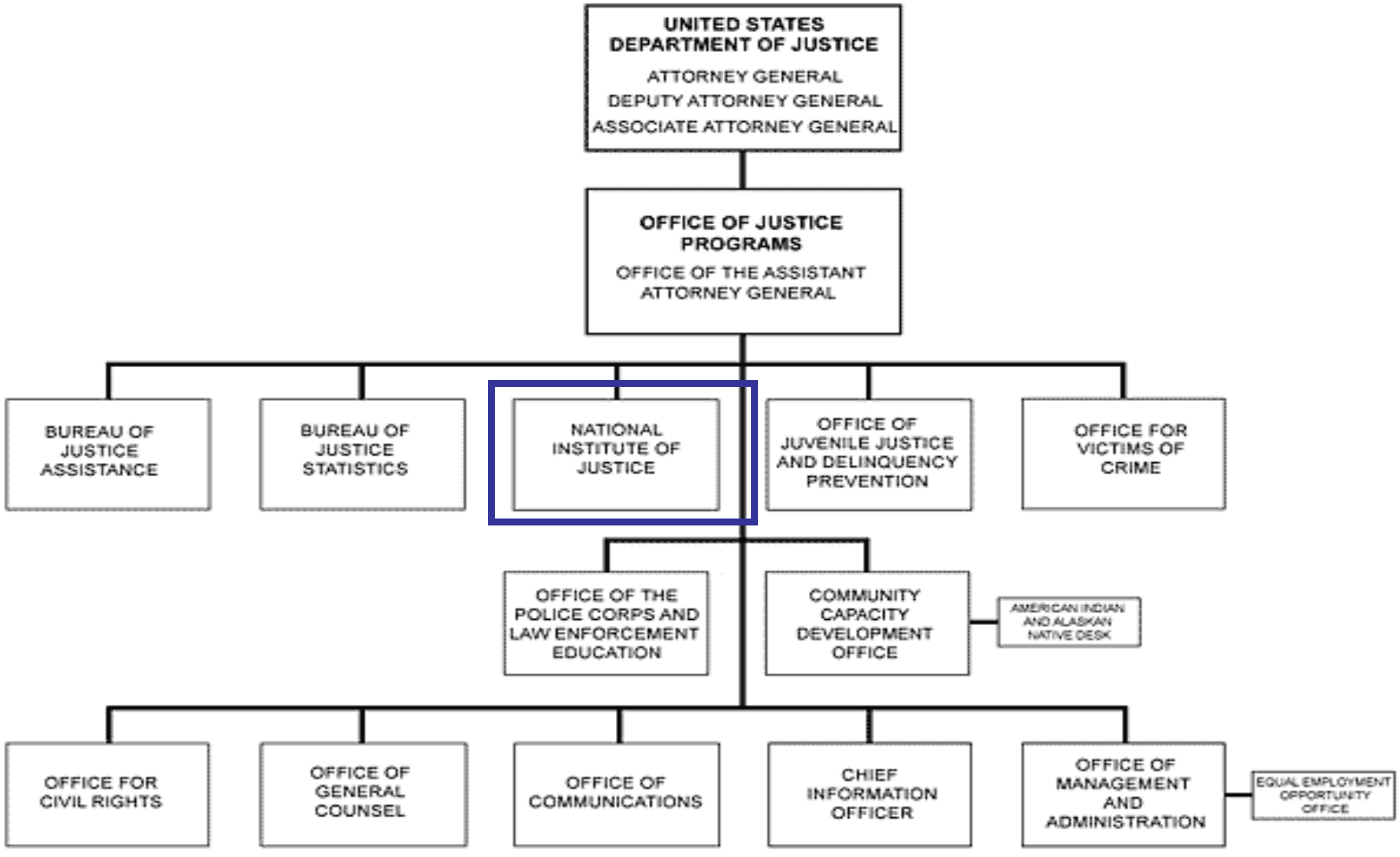
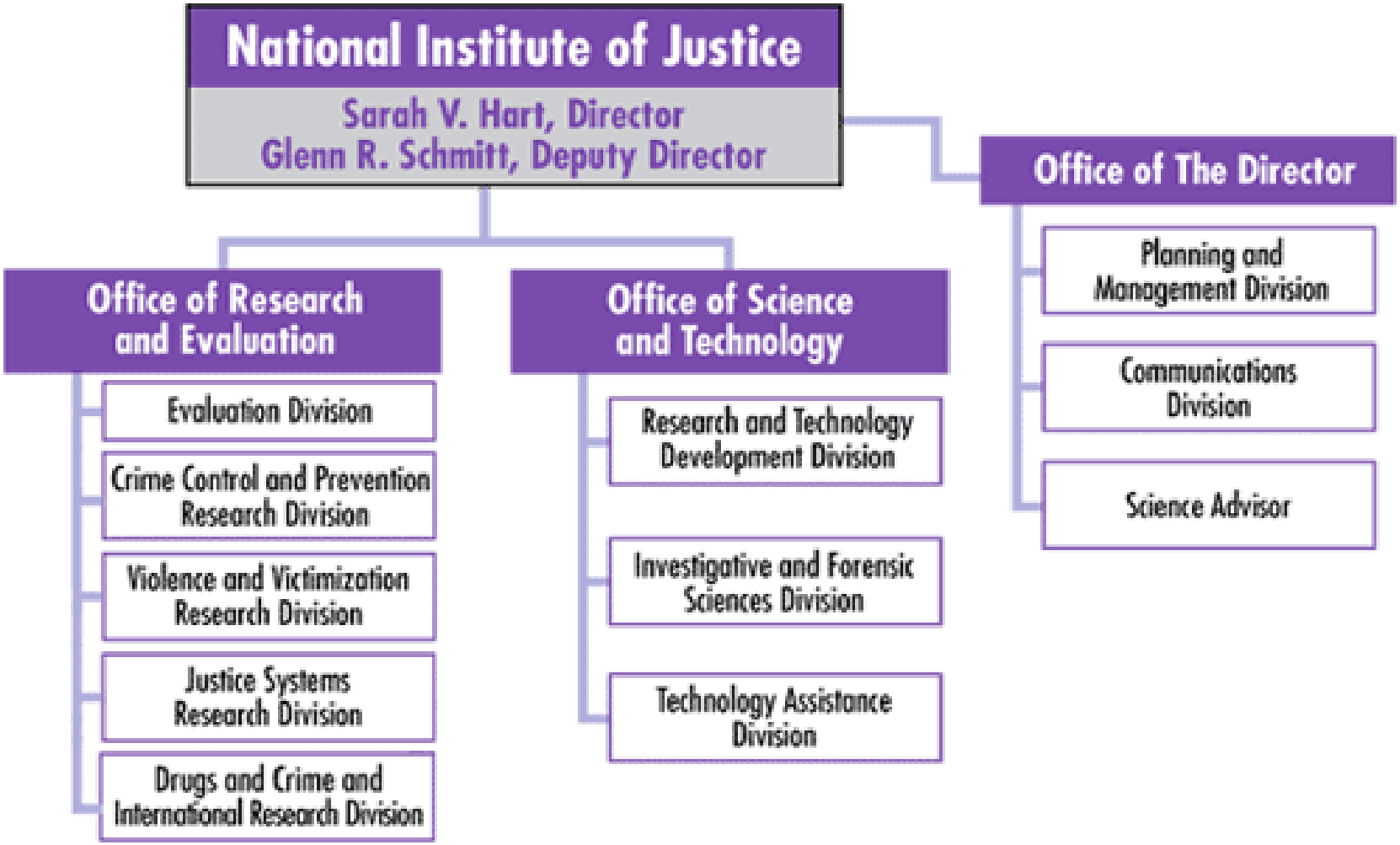
Topics

- Funding Organizational Structure
- Acquisition Organizational Structure
- Vendor Consortium Structure
- Process Improvement Structure
- The IDEAL Approach
- Challenges
- Threat of pain – CMMI and PART
- IDEAL Approach to PIINeS

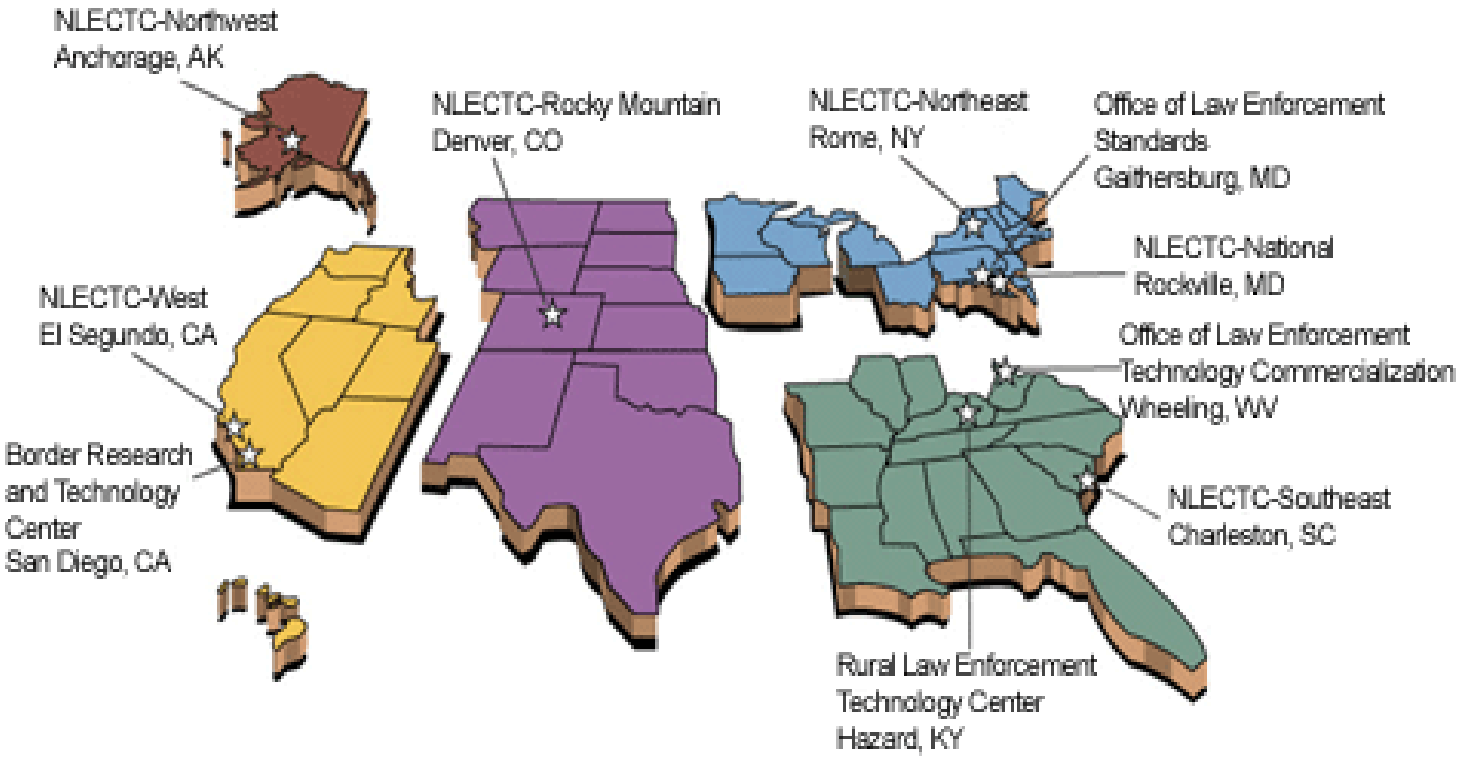
Funding Organizational Structure



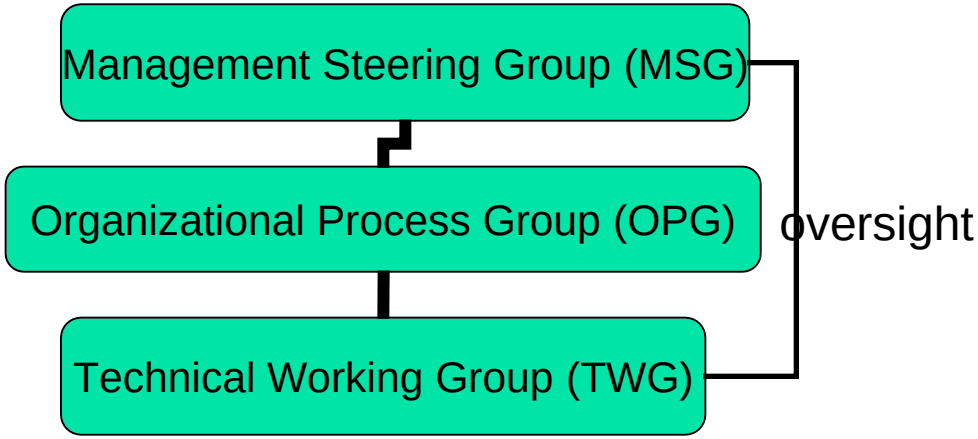
Acquisition Organizational Structure



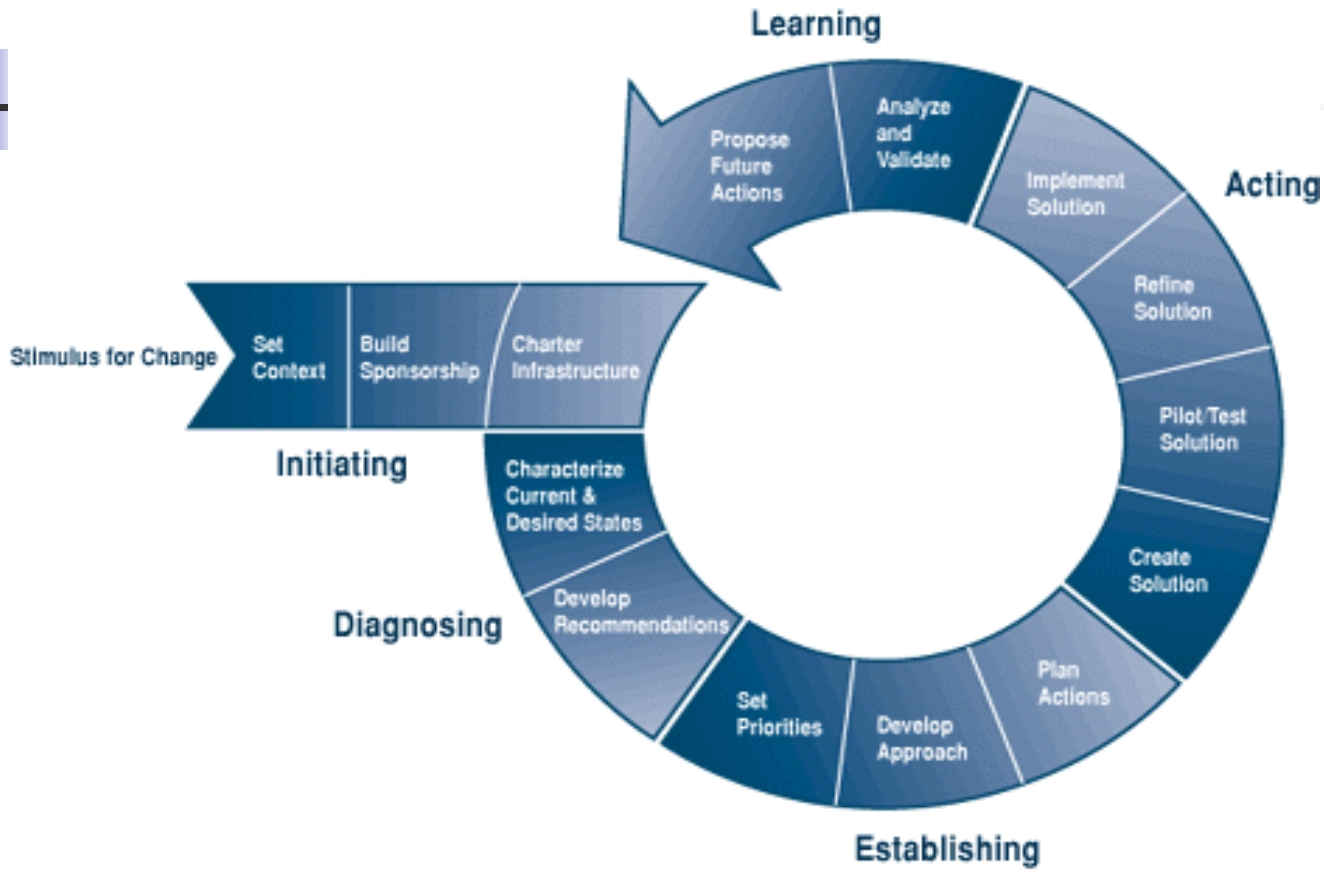
Supplier Consortium Structure
NLECTC System



Process Improvement Organizational Structure



The IDEAL℠ Approach



http://www.sei.cmu.edu/ideal/graphics/pc/

Challenges: Applying the CMM-I to Service

- Lack of Business Objectives/Business Case
- Maintaining Executive Support
- Lack of dedicated funding and personnel
- Lack of "hard" cost/benefit data
- Difficult to tie compensation to CMMI accomplishment
- Geographically distributed vendor consortium
- Heterogeneous vendor consortium
- No sense of urgency (pain)

CMM-I and PART

Giving meaning to CMM-I in a Grant-Making Organization

Set the Context/What is PART?

- PART - Is the **P**rogram **A**ssessment **R**ating **T**ool which was developed by the Office of Management and Budget
  - PART seeks to answer whether a program is demonstrating value to the taxpayer. Ideally, it seeks to demonstrate that a program 1) has a track record of results, and 2) warrants continued or additional resources.
  - http://www.whitehouse.gov/omb/part/

Program Purpose and Design

- Is the program designed to have a significant impact on addressing the interest, problem or need?
- Is the program designed to have a unique contribution in addressing the interest, problem, or need?
- Is the program optimally designed to address the interest, problem or need?
  - Is the design likely to yield the intended outcomes?

Strategic Planning-1

- Does the program have a limited number of specific, ambitious long-term performance goals that focus on outcomes and meaningfully reflect the program's purpose?
- Does the program have a limited number of annual performance goals that demonstrate progress toward achieving the long-term goals?
- Do **all** partners (grantees, contractors, etc) support program planning efforts by committing to the annual and/or long-term goals of the program?

Strategic Planning-2

- Does the program collaborate and coordinate effectively with related programs that share similar goals and objectives?
- Are independent and quality evaluations of sufficient scope conducted on a regular basis to fill gaps in performance information to support program improvements and evaluate effectiveness?
- Is the program budget aligned with program goals in such a way that the impact of funding, policy, and legislative changes on performance is readily known?

Program Management

- Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?
- Are Federal manager, and program partners, held accountable for cost, schedule and performance results?
- Are all funds obligated in a timely manner, and spent for the intended purpose?
- Does the program have incentives and procedures to measure and achieve efficiencies and cost-effectiveness in program execution?

Program Management

- Does the agency estimate and budget for full annual costs of operating the program, so that program performance changes are identified with changes in funding levels?
- Does the program use strong financial management practices?
- Has the program taken meaningful steps to address identified management deficiencies?

Program Management Competitive Grant Programs

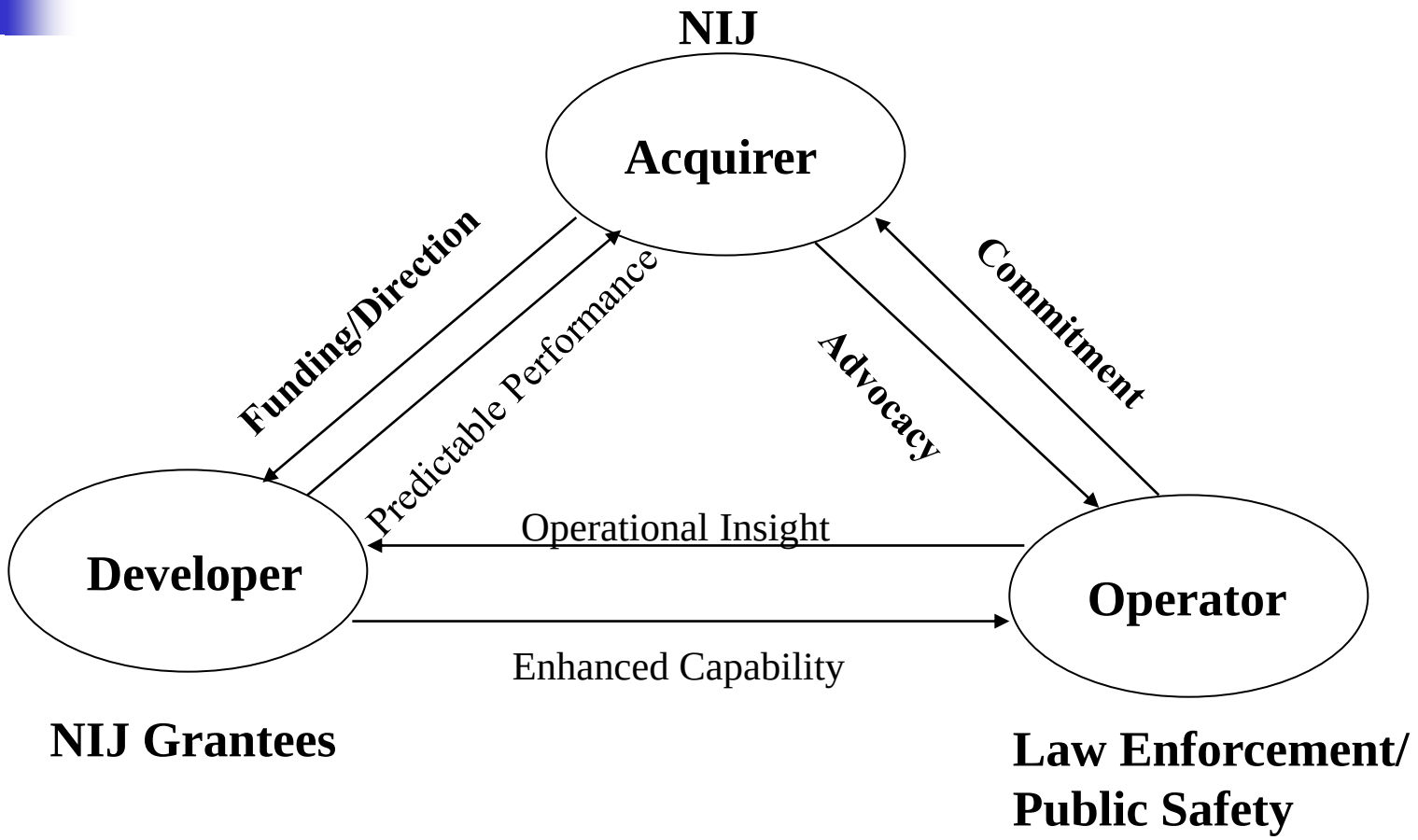
- Does the program have oversight practices that provide sufficient knowledge of grantee activities
- Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful way?

Program Results

- Has the program demonstrated adequate progress in achieving its long-term outcome goal(s)?
- Does the program (including program partners) achieve its annual performance goals?
- Does the performance of this program compare favorably to other programs with similar purpose and goals?
- Do independent and quality evaluations of this program indicate that the program is effective and achieving results?

How does this all relate to CMM-I?

Framework – Operational Organization



http://www.sei.cmu.edu/pub/documents/02.reports/pdf/02tn006.pdf

How PART relates to CMM-I

Program Purpose & Design

Mission Engineering

- **Mission Requirements Management**
- **Mission Requirements Development**
- **Mission Verification**
- **Mission Validation**

How PART relates to CMM-I

Strategic Planning

Mission Management

- **Operational Risk Management**

Mission Support

- **Configuration Management**
- **Measurement and Analysis**
- **Operational Readiness**
- **Decision Analysis/Resolution**

How PART relates to CMM-I

Program Management

Mission Management

- **Task Planning**
- **Task Monitoring and Control**
- **Integrated Mission Management**
- **Quantitative Mission Management**

Mission Support

- **Process and Mission Quality Assurance**
- **Measurement and Analysis**
- **Causal Analysis and Resolution**
- **Operational Training**

How PART relates to CMM-I

Program Results

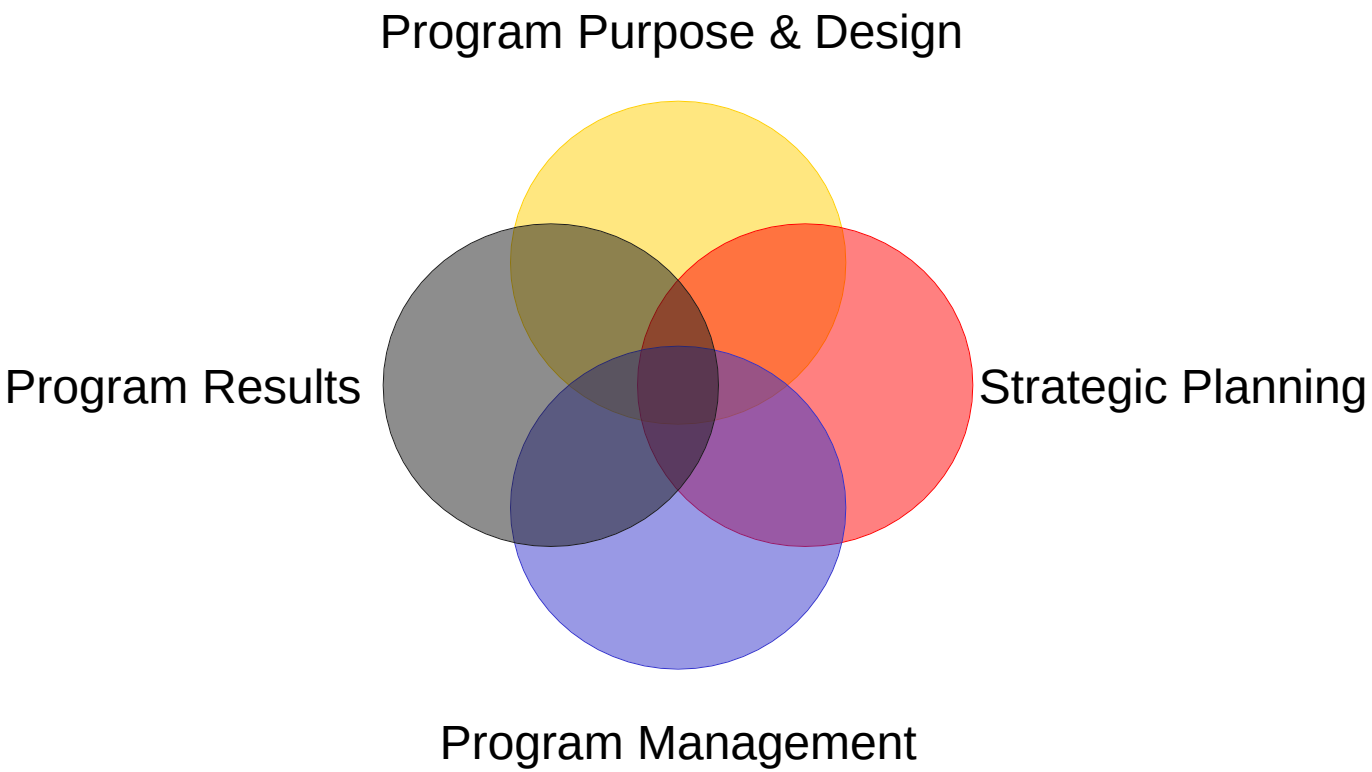
Mission Management

- **Operational Process Focus**
- **Operational Process Definition**
- **Operational Process Performance**

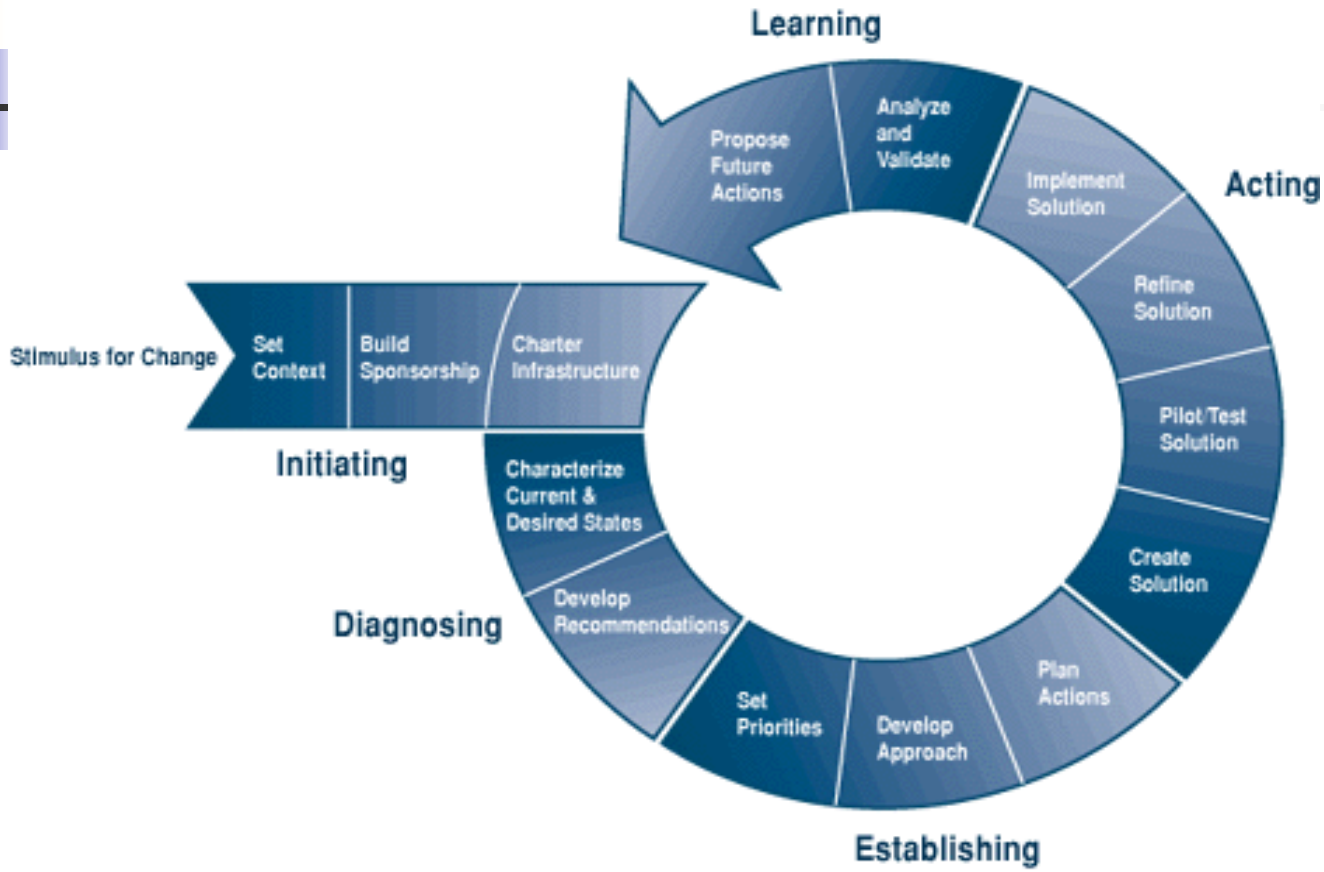
Mission Support

- **Process and Mission Quality Assurance**
- **Measurement and Analysis**
- **Causal Analysis and Resolution**
- **Operational Training**

CMMI and PART



The IDEAL℠ Approach



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Build Sponsorship/Charter Infrastructure

- CMMI Distilled: A Practical Introduction to Integrated Process Improvement, Ahern, Clouse, & Turner
- Raise awareness and build support
- Project charter/PIINeS is born
- Nearly monthly teleconferences supplemented by bi-annual meetings
- A session entitled "Introduction to Model-based Process Improvement" was presented by SEI staff
- Creation of an online process asset library

Characterize Current and Desired States/Gap Analysis

- Project management - training
- Gap analysis administered/identified need: tailored examples (next slide)
- Strategic planning - both Center System and PIINeS
- Pilot projects:
  - project and program cost and schedule tracking template
  - PAL/collaboration tool implementation

Sample Gap Analysis Questions

- Establish and maintain a top-level work breakdown structure (WBS) to estimate the scope of the project. SP 1.1-1
- *Example:* Is there a list of all the work that needs to be done, beginning to end, to accomplish this project? Is it arranged in tasks and subtasks? Is it orderly, perhaps chronological?
- Establish and document estimates of the attributes of the work products and tasks. SP 1.2-1
- *Example:* Is there a size associated with any of the tasks or products? Like "TechBeat – Winter 2003 – 8 pages, 14 articles" or "Assist in the installation of the repeater – 2 people, 4 days", or "technical report – 9 pages"?
- Define the project life-cycle phases upon which to scope the planning effort. SP1.3-1
- *Example:* When are you done planning? When do you start the work? When do you know you are finished? There should be phases for your project, perhaps different depending on the project. Possible phrase names might include "initiation", "planning", "analysis", "design", "testing", or "project closure".

Summary

- A journey of a thousand miles begins with a single step.

Presenters' Background

- **Cathy Strabala**
  - Program manager for NLECTC- NW, based in Anchorage, Alaska and administered under a contract with Chenega Technology Services Corporation (CTSC)
  - Expertise includes software process and product audits, project planning, process improvement implementation, software testing, configuration management, technical writing, and user training; six years of teaching Kdg. to college
  - Certified Software Quality Engineer through the American Society for Quality
- BS in Information Management, a BS in Elementary Education, a MS in Education, and was A.B.D. in a Ph.D. program in Education
- Cathy resides in Aurora, Colorado with her husband, Andrew, and a 4-year old English Springer Spaniel, Jibby, who both enjoy her home-based process improvement initiatives, until they involve them.

- **Martin Novak**
  - Program manager with the National Institute of Justice, a component of the U.S. Department of Justice in Washington, DC
  - Expertise includes program management, electronic crime technologies, information sharing technologies, budgeting and administration.
  - Mr. Novak has been with the National Institute of Justice for five years, with previous federal experience at the Federal Deposit Insurance Corporation.
- BS in Business Administration, and a Master's in Public Administration.
- Martin resides in Springfield, Virginia with his wife Debra, and their daughters Katherine (6) and Lauren (3).