

Multi-Agency Planning Framework

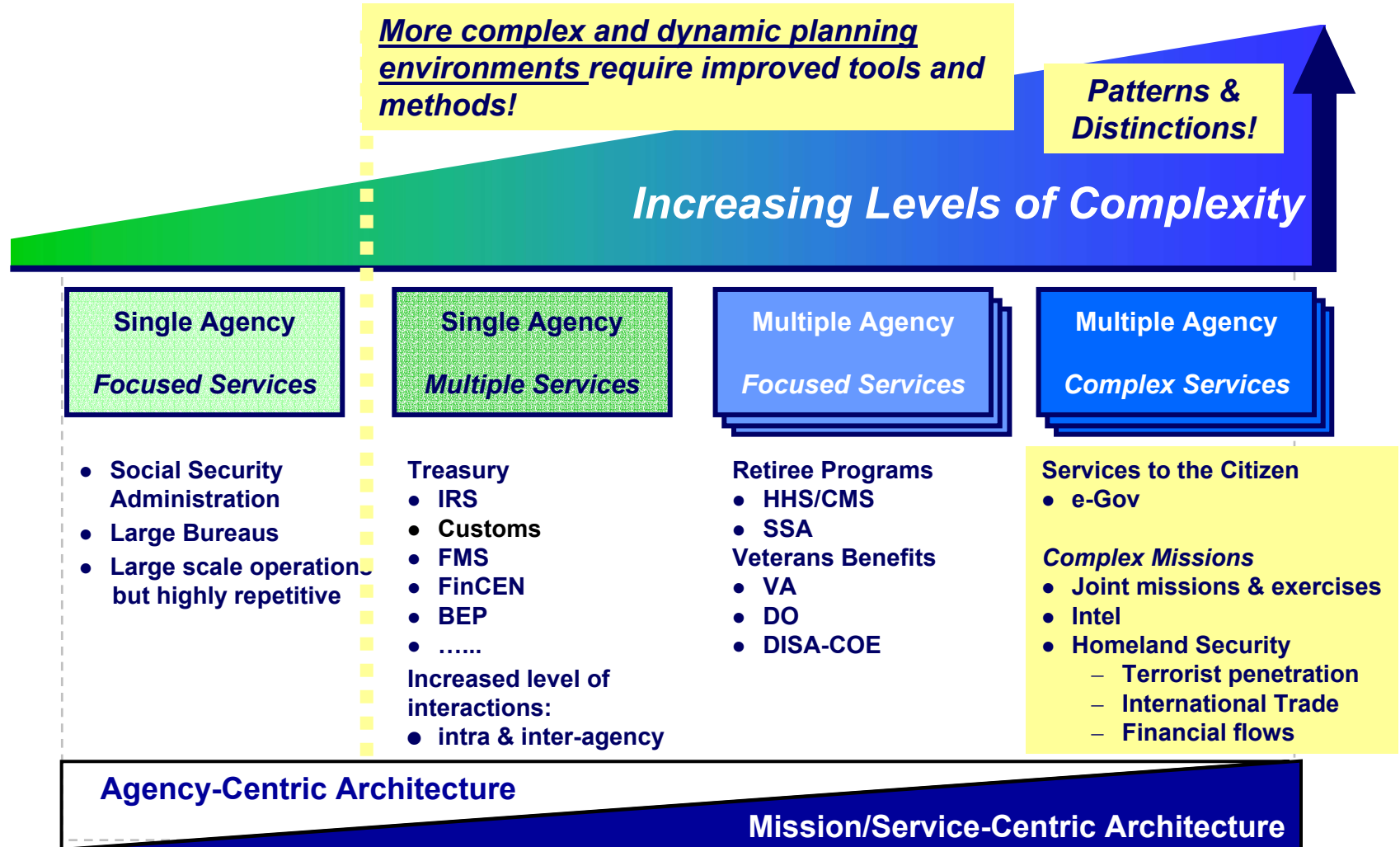
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MITRE Sponsored Research

The logo for the MITRE Technology Program, featuring a stylized graphic of stacked blocks in yellow, orange, and blue to the left of the text.

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Problem



Background

Define Scope of Planning Framework

Governance:

Enterprise Level

- ◆ Capital planning & investment
- ◆ Risk management
- ◆

National impacts

- ◆ Economic Impacts
- ◆ ...

Planning Areas:

Management

- ◆ Activity-based management
- ◆

Business

- ◆ Organizational planning
- ◆ Resource allocation; staffing
- ◆ ...

Data & Applications

- ◆ Service capabilities
- ◆
- ◆ Technology
- ◆ Systems engineering & integ.
- ◆ ...

Research Plan

- ◆ Define planning framework scope and requirements
- ◆ Collaborate with MITRE Teams
- ◆ Establish planning and management systems and EA repositories

Test and Refine the Framework with Test Case EAs

Energy R&D

Financial Flows

Passenger Flow

International Trade

Business

- ◆ Org view
- ◆ Operations view
- ◆ Business model
- ◆ Activity models

Applications

- ◆ Service capabilities
- ◆ Clusters

Data

- ◆ Info exchange matrix

Technical

- ◆ TRM
- ◆ Performance model

Make maximum use of full content of EAs

Add to Content of the EAs & Related Tools

Build Test Environment

Objective

- **Develop state-of-the-art planning framework for complex multi-agency challenges**
- **Exploit the full information content of architectures for multi-agency governance**
- **Integrate a heterogeneous set of dynamic planning tools and methods in a planning framework**
- **Contribute to Federal Architecture methods**

Integrated Planning Framework – All Resources

A New Kind of Architecture

Activities

Current Activities

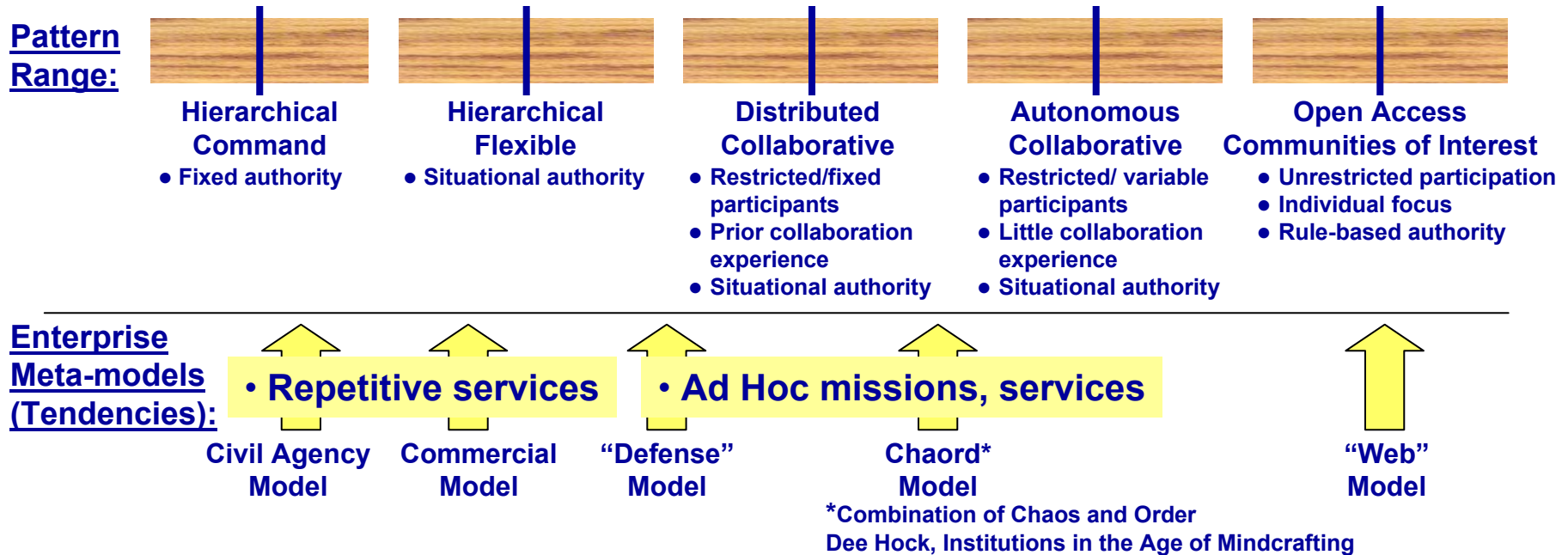
- **Planning Framework—define scope and requirements**
 - Identify full range of modernization patterns
- **Planning Tools and Methods—identify and evaluate**
 - GIS, Simulation models, EA Frameworks
- **Integration Testbed**
 - Comprehensive architecture-based framework
 - Multi-agency environment with GIS

Future Activities

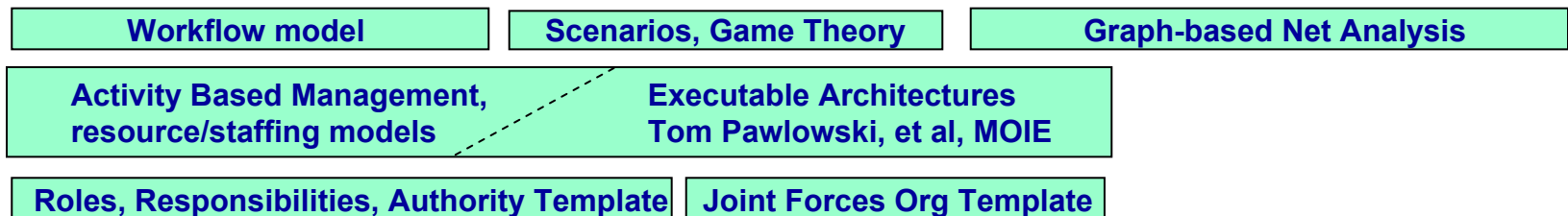
- **Repositories—planning and management**
- **Advanced integration technology**
 - Global asset tracking and dynamic situation map capabilities

Highlight

Organizational & Mission Patterns Drive Tools & Methods

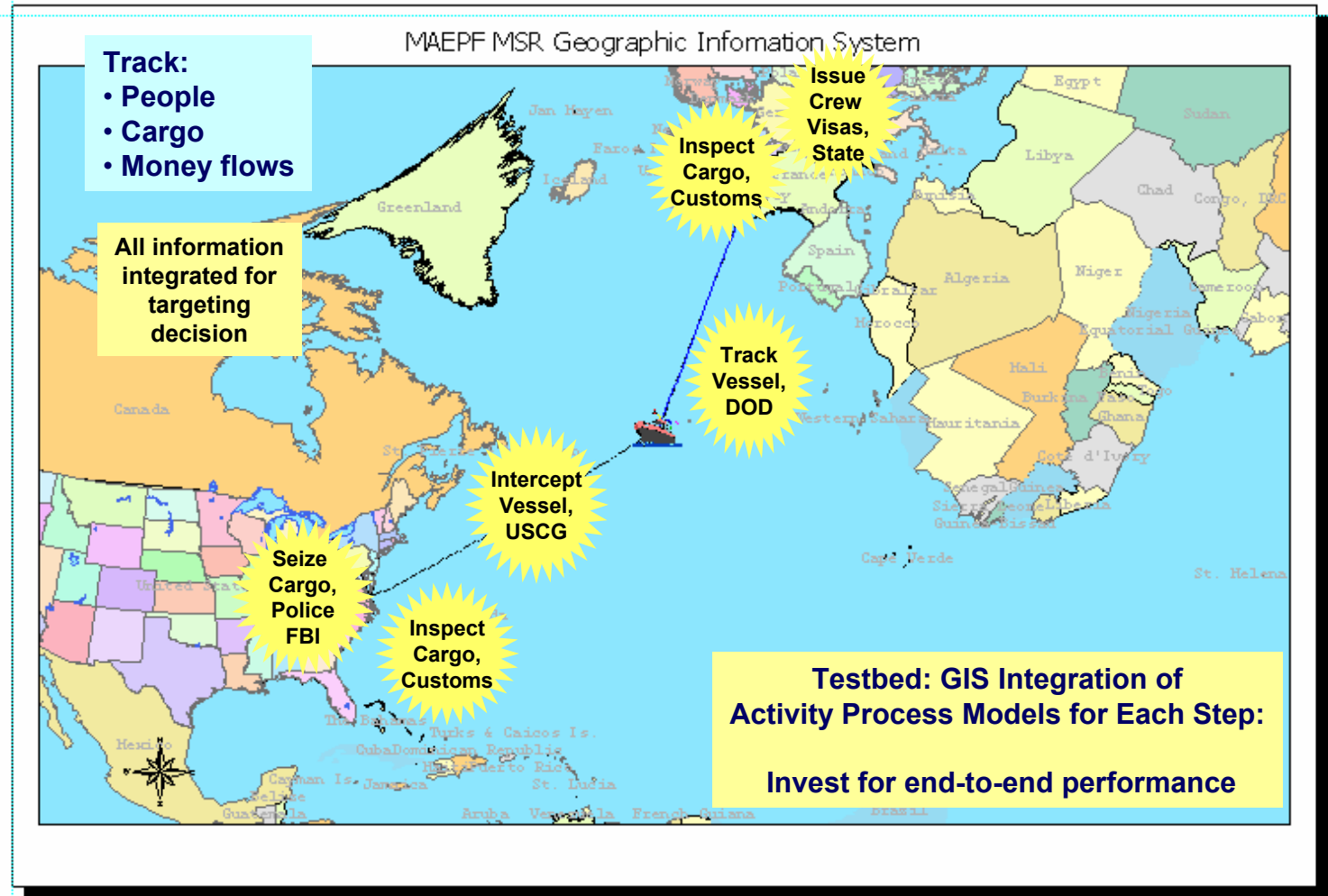


Planning & Management Tools/Methods:



Tools, methods, & work products must address characteristics of specific patterns.

Demonstration

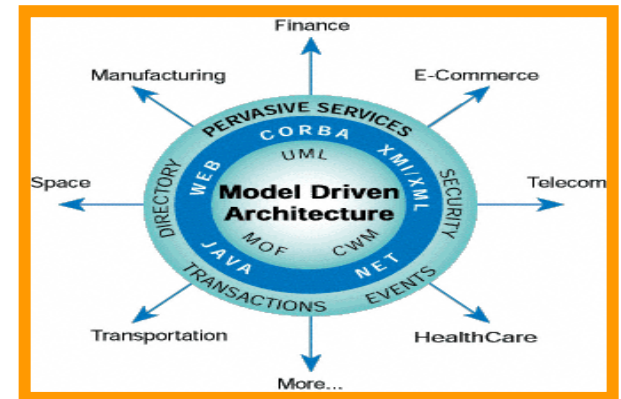
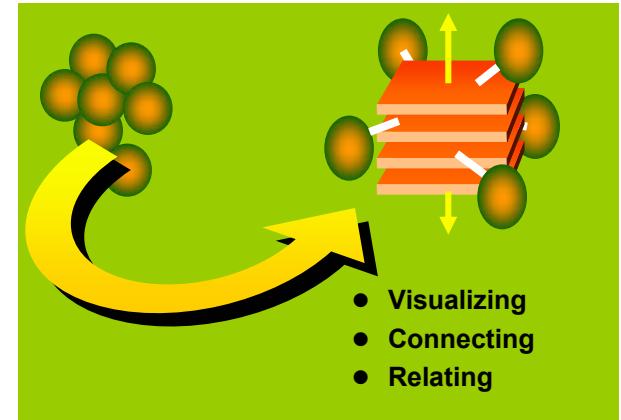


Integration Options

- **Customer Code: Programming (too much)**
 - Any change in any system requires recoding.
 - Nothing is reusable.
- **Customer Code: Data Driven**
 - Parameters and variables from files
- **Native Product Languages (GIS, Simulation Models)**

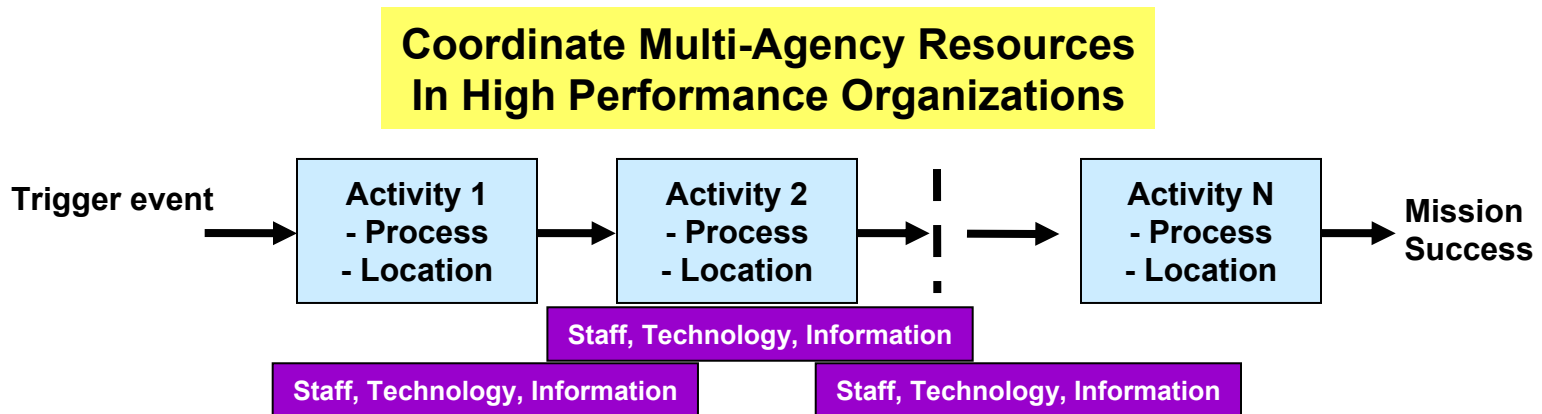
Research Direction

- **Model driven (MDA)**
 - Best integration architecture for future
 - Unites OMG's modeling standards—to integrate what you've built, with what you're building, with what you're going to build
 - Focus on integrating legacy applications
 - Ensure smooth integration of COTS applications
- **Supports MOF, UML, XMI, CDW Standards**

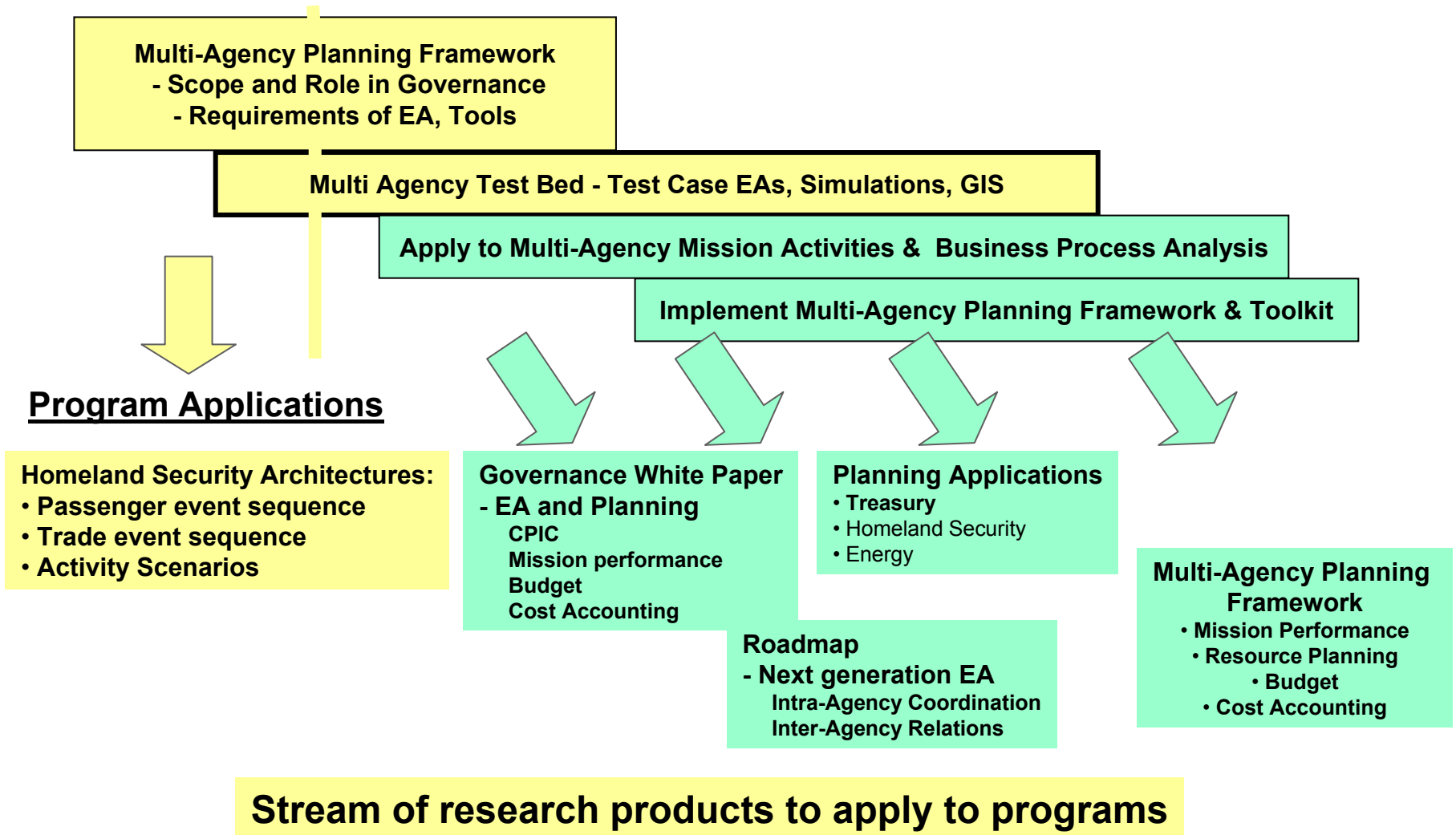


Impacts

- A systematic approach to multi-agency planning and analysis
- Effective multi-agency planning with improved enterprise architectures
- Implement FEA Frameworks and Reference Models
- Mission success for multi-agency initiatives



Future Plans



Background Charts

Research Plan

Multi-Agency Planning Framework

Problem

- ◆ **Multi-agency responses are required to deal with the most urgent national priorities**
 - Homeland Security
 - Joint Missions
 - Integrated Services-to-the-Citizen
- ◆ **In comparison with the single-agency problem:**
 - Missions and their governance are very complex
 - Planning and resource allocation must be dynamic
 - Architecture must deal with increased complexity

Planning in a complex and dynamic environment

Activities

- ◆ Define planning framework scope and requirements
- ◆ Evaluate EA and planning tools and methods
- ◆ Identify full range and aspects of modernization patterns in multi-agency enterprises
- ◆ Develop and integrate:
 - A comprehensive multi-agency planning framework
 - Multi-agency EA views and related planning tools
 - Multi-agency test environment with GIS

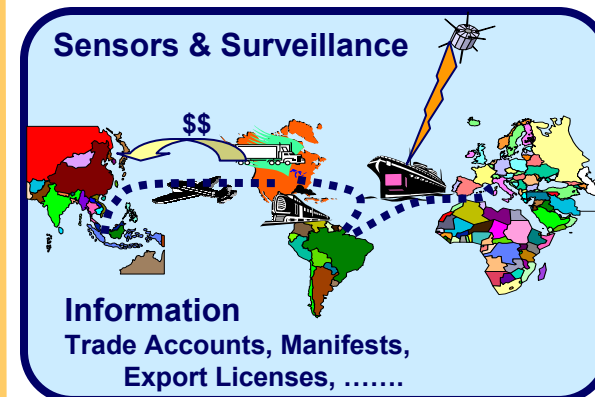
Collaboration and cross-fertilization
across Centers & Agencies

Objectives

- ◆ Advance the state-of-the-art in planning for complex multi-agency challenges
- ◆ Exploit the full information content of architectures
- ◆ Integrate a heterogeneous set of dynamic planning tools and methods in a planning framework
 - Appropriate to modernization patterns
 - Integrated with a multi-agency EA framework
- ◆ **Contribute to Federal Architecture methods**

Requires Next Generation Architecture!

Highlight Multi-agency Test Environment: Trade, Passengers, \$: end-to-end activities



Multiple Agencies

Overseas:

Intel, Customs, ...
Department of State

Offshore:

US Coast guard, ...

Entry:

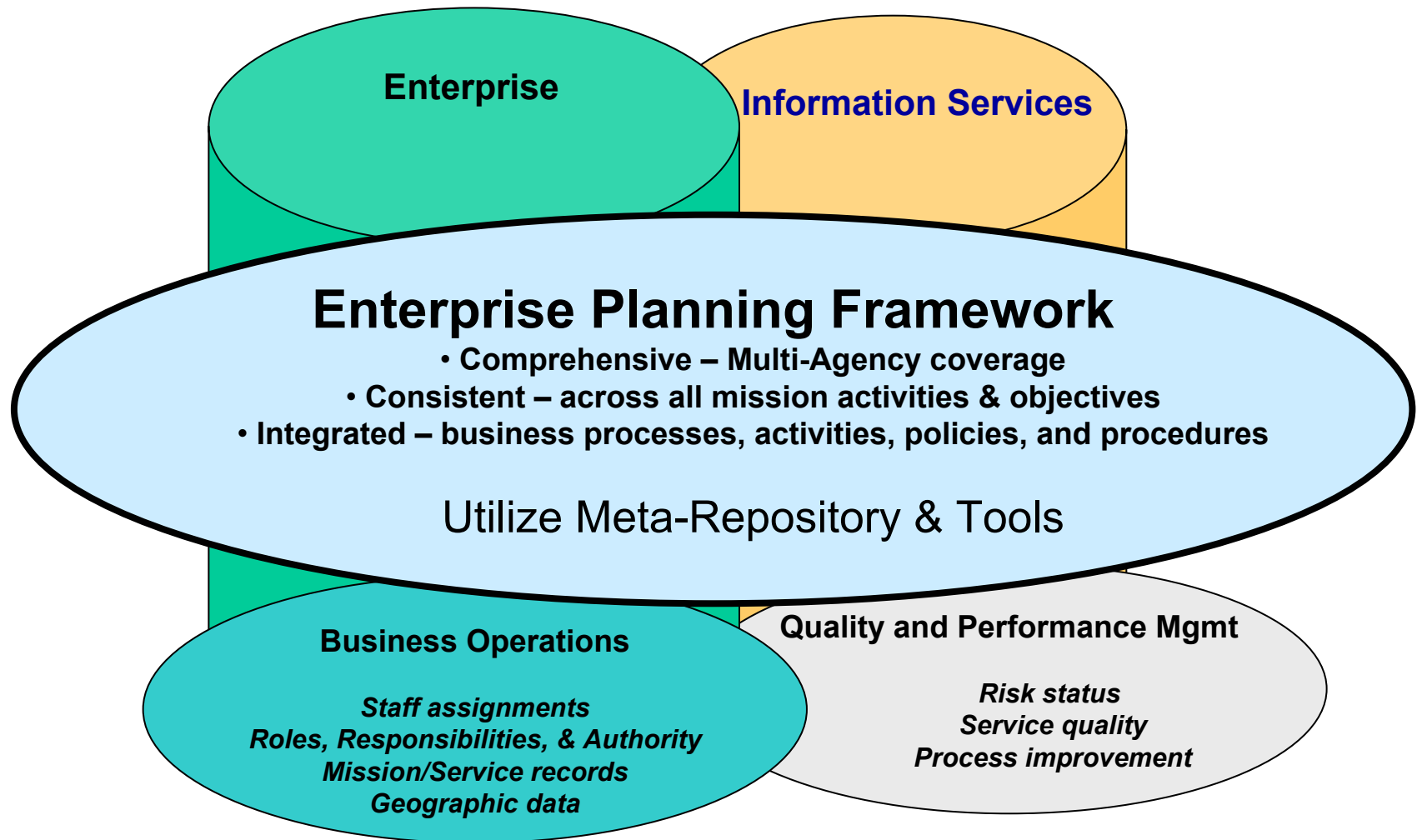
Customs, INS, FAA
Border Patrol, ...

Inland:

FBI, ...
State and local
Private sector

Highlight

Integrated Planning



Problem

- **Multi-agency responses are required for the most urgent national priorities**
 - **Homeland security**
 - **Joint or combined missions**
 - **Integrated services-to-the-citizen**
- **Compared to single-agency problems**
 - **Missions and governance are very complex**
 - **Dynamic planning and resource allocation**
 - **Architecture is increasingly complex**