FEA'06 Revision Summary

Objectives and Purposes for the Revisions

- Simplification of the Federal Enterprise Architecture (FEA) reference models
- Increased usability of the FEA reference models
- Greater use of EA by agencies to improve investment decision-making and justification of investments

Through continual refinements to and use of the reference models, the FEA PMO is continuing to strengthen the concept that departmental EAs are the basic building blocks of the FEA.

Summarized Changes by Model

Business Reference Model (page 2)

- Mode of Delivery is no longer a valid primary mapping
- Significant sub-function updates for the following Lines of Business:
    - Health
    - Human Resource Management
    - Intelligence Operations

Service Component Reference Model (page 7)

- Introduction of Knowledge Discovery Service Type
- Component level additions and definition revisions
- Deletion of the following components:
    - Profile Management
    - Predictive
    - Financial Reporting

Technical Reference Model (page 10)

- Service specification layer eliminated

Performance Reference Model (page 11)

- No changes to model structure
- Emphasis placed on linkage of investment to agency program performance

Business Reference Model (BRM) – Mode of Delivery & Updated Sub-Functions

New Content

Overview of the BRM Structure

Exhibit (1) provides an overview of the BRM.

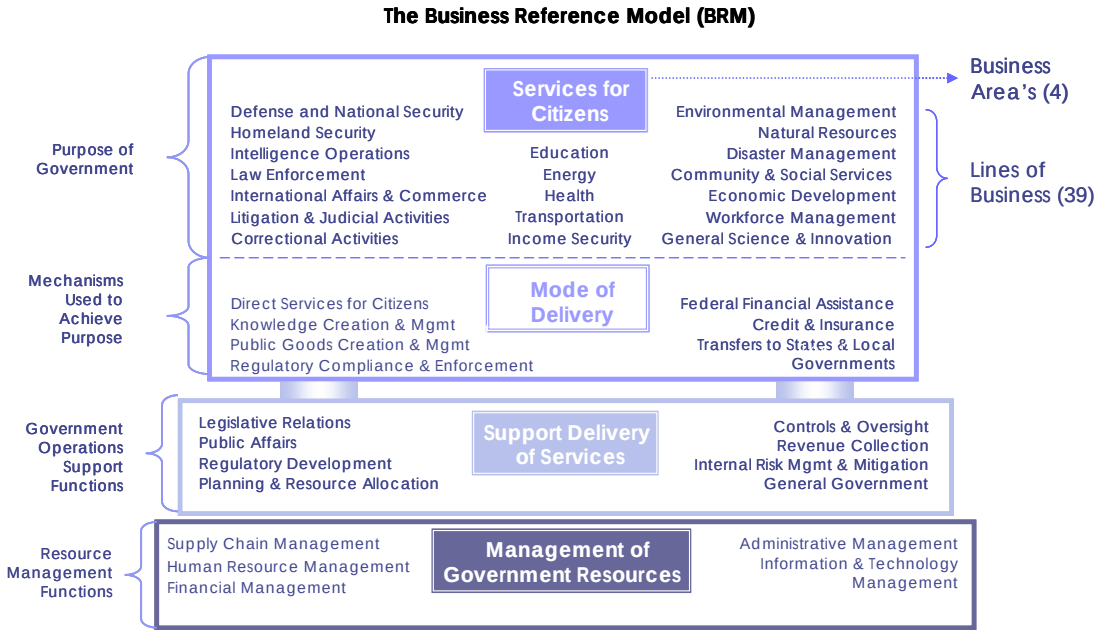

Exhibit (1) The Business Reference Model (BRM)

Services for Citizens Definition

The Services for Citizens Business Area describes the mission and purpose of the United States government in terms of the services it provides both to and on behalf of the American citizen. It includes the delivery of citizen focused, public, and collective goods and / or benefits as a service and / or obligation of the federal government to the benefit and protection of the nation's general population. The Lines of Business which comprise the Services for Citizens Business Area are considered *external* Lines of Business.

Mode of Delivery Definition

The Mode of Delivery Business Area describes the mechanisms the government uses to achieve the purpose of government, or its Services for Citizens. It includes Financial Vehicles, Direct Government Delivery, and Indirect Government Delivery. The Lines of Business which comprise the Business Area's outside of the Services for Citizens Business Area *(including Mode of Delivery)* are considered *internal* Lines of Business.

Agency investments which support an external line of business function require an internal line of business delivery mechanism to provide that service to the citizen. For this reason, an additional mapping to the appropriate line of business within the Mode of Delivery Business Area is required. To clarify this association, we have combined the definitions and graphical representation of these two business areas.

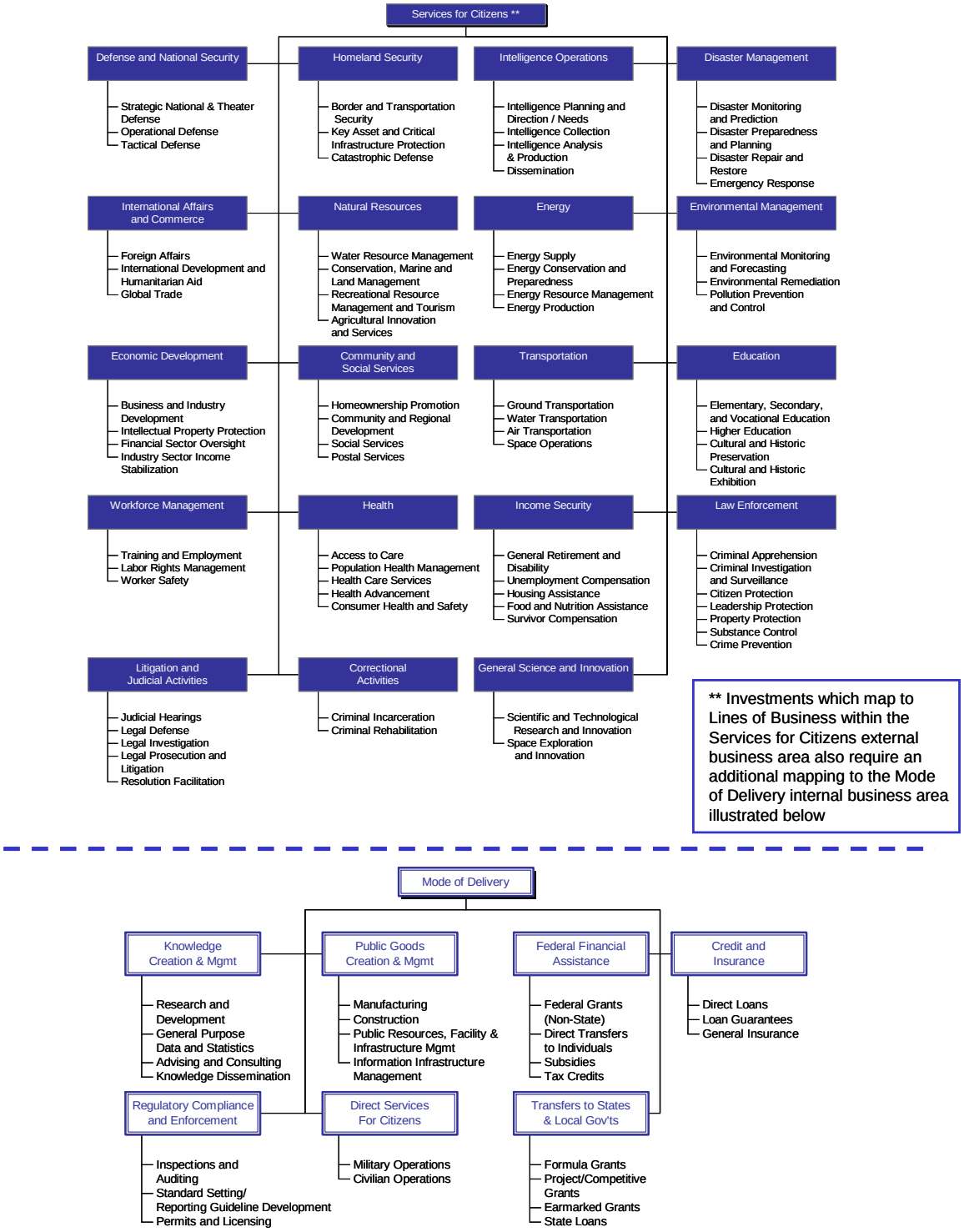

Exhibit (2) Service for Citizens & Mode of Delivery Business Areas

Note: The sub-functions for Defense and National Security were provided by the DoD supplement version 2.1.

Updated Sub-function Definitions

Health

Health involves federal programs and activities to ensure and provide for the health and well being of the public. This includes the direct provision of health care services and immunizations as well as the monitoring and tracking of public health indicators for the detection of trends and identification of widespread illnesses / diseases. It also includes both earned and unearned health care benefit programs.

- *Access to Care – processes focus on the beneficiary population, including the under-served, receiving care and ensuring the care received is appropriate in terms of types of care. A successful implementation of these processes will result in the population receiving the appropriate guidance to care/appropriate care, at the right location for the most appropriate cost.*
- *Population Health Management – involves activities associated with the management and monitoring of health, health planning, and health management of humans, animals, animal products, and plants, as well as tracking the spread of diseases and pests. It promotes a focus on population monitoring, health promotion, disease and injury prevention and wellness. As a result of these efforts, the services are delivered under Health Care Services.*
- **Health Care Services** – involves programs and activities that *provide the direct delivery of health and medical care (inpatient and outpatient) to the American public, including health care benefit programs.*
- *Health Advancement – addresses the evolutionary process in healthcare, quality improvements, and delivery of services, methods, decision models and practices. These processes cover all aspects of health.*
- **Consumer Health and Safety** – supports activities associated with the inspection, education, and evaluation of consumer products *(both consumable and non consumable)* to assess the potential risks and dangers they may present to the consumer (both humans and animals), (i.e. food, cosmetics, pharmaceuticals, and other consumer products) *in either the pre or post market environments.*

Human Resource Management

Human Resource Management involves all activities associated with the recruitment and management of personnel.

- *Applicant Intake and Recruiting – includes receiving, processing, rating, and ranking applicants for federal jobs and involving preparation of lists of eligible candidates for consideration by management.*
- *Benefit Administration – includes providing guidance and consultation to agencies, employees, former employees, annuitants, survivors, and eligible family members regarding retirement, insurance, health benefits, injury compensation, and death and survivor benefits.*
- *Discipline and Grievance – includes providing advice and assistance to employees and managers, program administration, research, and case management in matters related to conduct, performance, attendance, and dispute resolution.*
- *Evaluation – includes assisting managers and supervisors in establishing, maintaining, and monitoring effective performance management programs to plan, monitor, develop, rate, and reward employee performance, and services that support formal and informal award programs to provide employee incentives and recognition.*
- *Labor Relations – involves establishing and maintaining effective relationships with labor organizations that represent federal employees, negotiating and administering labor agreements, and providing guidance and consultation to management on a variety of labor relations matters.*
- **Payroll Management and Expense Reimbursement** – involves the administration and determination of federal employee compensation. Note: See Payments sub-function *within Financial Management line of business* for the actual payment of salary and expenses.
- *Personnel Action Processing – involves processing Requests for Personnel Actions, changes to employees' official personnel records or history, or involving establishing, maintaining, and monitoring the agency's official personnel system of record.*
- *Position Classification and Management – involves position evaluation, establishing and maintaining a position classification program to determine appropriate pay systems, occupational grouping, title and grade of positions, and advising on position and organizational design.*
- *Pre employment (medical, testing, drug testing, etc.) – includes determinations of applicants' fitness for duty (medical, drug testing, background investigations) before they are brought on board the agency's payroll.*

- *Random Drug Testing – entails managing and monitoring work associated with obtaining periodic drug tests for employees or contractors selected randomly from among the agency's workforce population.*
- *Reporting and Metrics – entails providing information (both current and historical) for management decision making, tracking workload, and overall health of an organization.*
- **Security Clearance Management** *– refers to the processes associated with ensuring employees, contractors, and others have been approved to enter federal buildings, utilize federal services, and access sensitive information. This includes eligibility determination, badge issuance, clearance tracking, and security verification services.*
- *Time and Labor Distribution – includes establishing, maintaining, and monitoring time and attendance systems.*
- *Training Management – refers to planning, administering, or evaluating programs designed to develop employees and manage learning in the organization.*
- *Vacancy Tracking – includes creating, issuing, and managing vacancy announcements.*

Intelligence Operations

Intelligence Operations involves collecting and analyzing information to meet the national security challenges of the US by processing reliable, accurate foreign intelligence, and disseminating intelligence products to policymakers, military commanders, and other consumers.

- *Intelligence Planning and Direction/Needs – establishes the intelligence requirements of the policymakers, the President, the NSC, military commanders, and other officials in major departments and governmental agencies.*
- *Intelligence Collection – involves the gathering of raw data from multiple sources from which finished intelligence is produced.*
- *Intelligence Analysis and Production – converts large amounts of data to a form suitable for the production of finished intelligence to include translation, decryption, and interpretation of information stored on film and magnetic media through the use of highly refined photographic and electronic processes.*
- *Dissemination – consists of delivering the intelligence products to consumers.*

Natural Resources

- **Agricultural Innovation and Services –** involves the creation of better methods for farming, *the dissemination of those methods to farmers,* and the development of better and healthier crops.

Deleted Content

Line of Business - Health

Sub-function deleted	Reason for deletion
Illness Prevention	*Subsumed by Population Health Management sub-function*
Immunization Management	*Subsumed by Population Health Management and Health Advancement sub-functions*
Public Health Monitoring	*Subsumed by Population Health Management sub-function*

Line of Business - Human Resource Management

Sub-function deleted	Reason for deletion
Benefits Management	*Subsumed by Benefit Administration sub-function*
Personnel Management	*Activities now defined within other sub-functions (primarily Personnel Action Processing, Position Classification and Management.)*
Resource Training & Development	*Subsumed by Training Management sub-function*

Staff Recruitment & Employment	*Activities now defined within other sub-functions (primarily Applicant Intake and Recruiting.)*

Service Component Reference Model (SRM) – FY05 Findings

New Content

Updated Components and / or Definitions

Customer Services Domain – Customer Relationship Management

Service Component	Defines the set of capabilities that
Partner Relationship Management	*Provide a framework to promote the effective collaboration between an organization and its business partners, particularly members of the distribution chain (e.g. Channel and alliance partners, resellers, agents, brokers, and dealers) and other third parties that support operations and service delivery to an organization's customers*
Contact and Profile Management	*Provide a comprehensive view of all customer interactions, including calls, email, correspondence and meetings; also provide for the maintenance of a customer's account, business and personal information.*

Business Management Services Domain – Supply Chain Management

Service Component	Defines the set of capabilities that
Inventory Management	*Provide for the balancing of customer service levels with inventory investment*
Warehouse Management	*Provide for the storage and movement of materials within a warehouse, including these processes: material receipt, order picking, packaging, labeling and shipping*
Logistics and Transportation	*Provide for efficient freight and traffic management*

Digital Asset Services Domain – Knowledge Management

Service Component	Defines the set of capabilities that
Smart Documents	*Support the interaction of information and process (business logic) rules between users of the document. (i.e. the logic and use of the document is embedded within the document itself and is managed within the document parameters)*

Business Analytical Services Domain – Analysis and Statistics

Service Component	Defines the set of capabilities that
Mathematical	*Support the formulation and mathematical analysis of probabilistic models for random phenomena and the development and investigation of methods and principles for statistical inference*

Business Analytical Services Domain – Visualization

Service Component	Defines the set of capabilities that
Mapping, geospatial *(GIS)*, elevation, GPS	*Provide for the representation of position information through* the use of attributes such as elevation, latitude, and longitude coordinates

Business Analytical Services Domain – *Knowledge Discovery*

Defines the set of capabilities that facilitate the identification of useful information from data

Service Component	Defines the set of capabilities that
Data Mining	*Provide for the efficient discovery of non-obvious, valuable patterns and relationships within a large collection of data*
Modeling	*Develop descriptions to adequately explain relevant data for the purpose of prediction, pattern detection, exploration or general organization of data*
Simulation	*Utilize models to mimic real-world processes*

Back Office Services Domain – Financial Management

Service Component	Defines the set of capabilities that
Internal Controls	*Support the methods and procedures used by the organization to safeguard its assets, produce accurate accounting data and reports, contribute to efficient operations, and encourage staff to adhere to management policies and mission requirements*

Back Office Services Domain – Human Capital / Workforce Management

Service Component	Defines the set of capabilities that
Resource Planning and Allocation	*Support the determination of strategic direction, the identification and establishment of programs and processes, and the allocation of resources (capital and labor) among those programs and processes*

Deleted Content

Customer Services Domain – Customer Preferences

Service Component	Reason for deletion
Profile Management	*Moved to Customer Relationship Management Service Type under Contact and Profile Management component description*

Business Analytical Services Domain – Analysis and Statistics

Service Component	Reason for deletion
Predictive	*Moved to Knowledge Discovery Service Type under Modeling component description*

Back Office Services Domain – Financial Management

Service Component	Reason for deletion
Financial Reporting	*Moved to Internal Controls component description*

Technical Reference Model (TRM) – Service Specification Layer

Revised and Deleted Content

Summary of Changes

This revision to the TRM recognizes that the TRM guidance should be more general and less vendor specific. To that end, the FEA PMO removed the service specification layer formerly included in the model.

To provide clear examples of the technology included under each service standard, the former specifications have been included as examples. As a practical matter, each department and agency will continue to maintain an inventory of technology at the vendor, product or specification level. The agency enterprise architecture will maintain this profile as outlined by the CIO Council's Technical Reference Model. The relationship between the TRM and the CIO Council's TRM is described more fully later in this document.

Rather than establishing standards, the TRM provides a common structure for classifying and organizing in-use technologies. Granularity at the Service Standards level is sufficient to facilitate cross-agency analysis and identification of duplicative investments, gaps, and opportunities for collaboration within and across federal agencies.

PRM – Business Integration

New Content

Integrating Agency Planning and Performance

Integrating Strategy and Performance

An agency's strategic and performance planning process establishes specific mission and program objectives that the agency will implement to meet the needs of its citizen stakeholders, and fulfill legislative, regulatory and executive mandates. Programs that support these objectives are required to articulate and measure their accomplishment of performance objectives. The agency's EA, at the layer of the PRM, allows the linkage of IT investments back to this infrastructure of program performance at the Agency level. As such, it is critical to the creation of a "line of sight" from IT investments back to the mission of the Agency, and justification of resource expenditures.

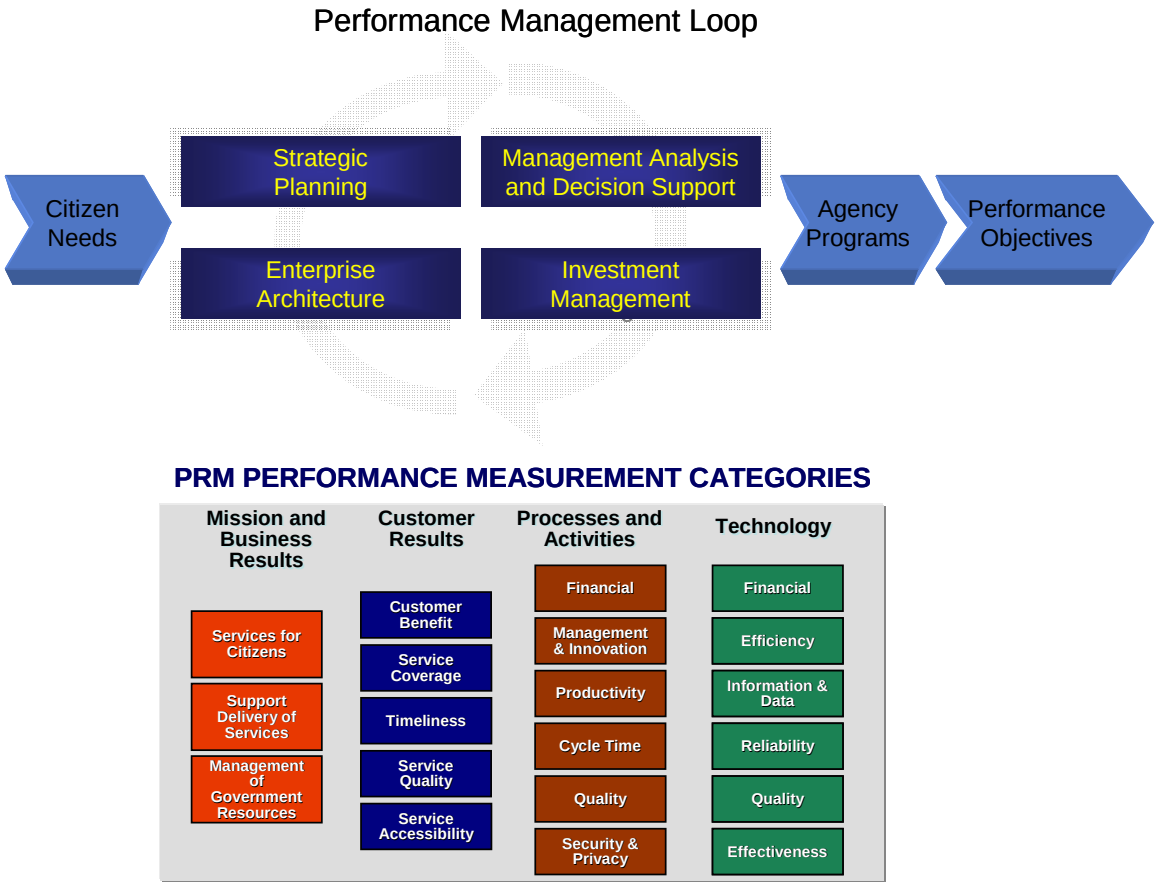

Exhibit (3) Performance Management Loop

An agency's EA is the tool by which program managers can demonstrate how IT investments support agency performance objectives through a mature performance management process. Using the PRM and the EA in performance management creates a clear and explicit linkage between an agency's IT investments and the agency's performance objectives. Through the structured use of measurement categories that mirror typical agency performance planning categories, the PRM translates the language of IT investment into the language of agency planning and budgeting. Exhibit (3) illustrates the high level measurement categories of the PRM and the "Performance

Management Loop" in which these measures are utilized. Exhibit (4) further elaborates this "Performance Management Loop".

The strategic planning process establishes the relationships between specific programs that the agency will implement and the mission-based objectives those programs support. The PRM provides a common language by which the agency EA can connect IT investments to the agency's ability to achieve agency and program performance objectives.

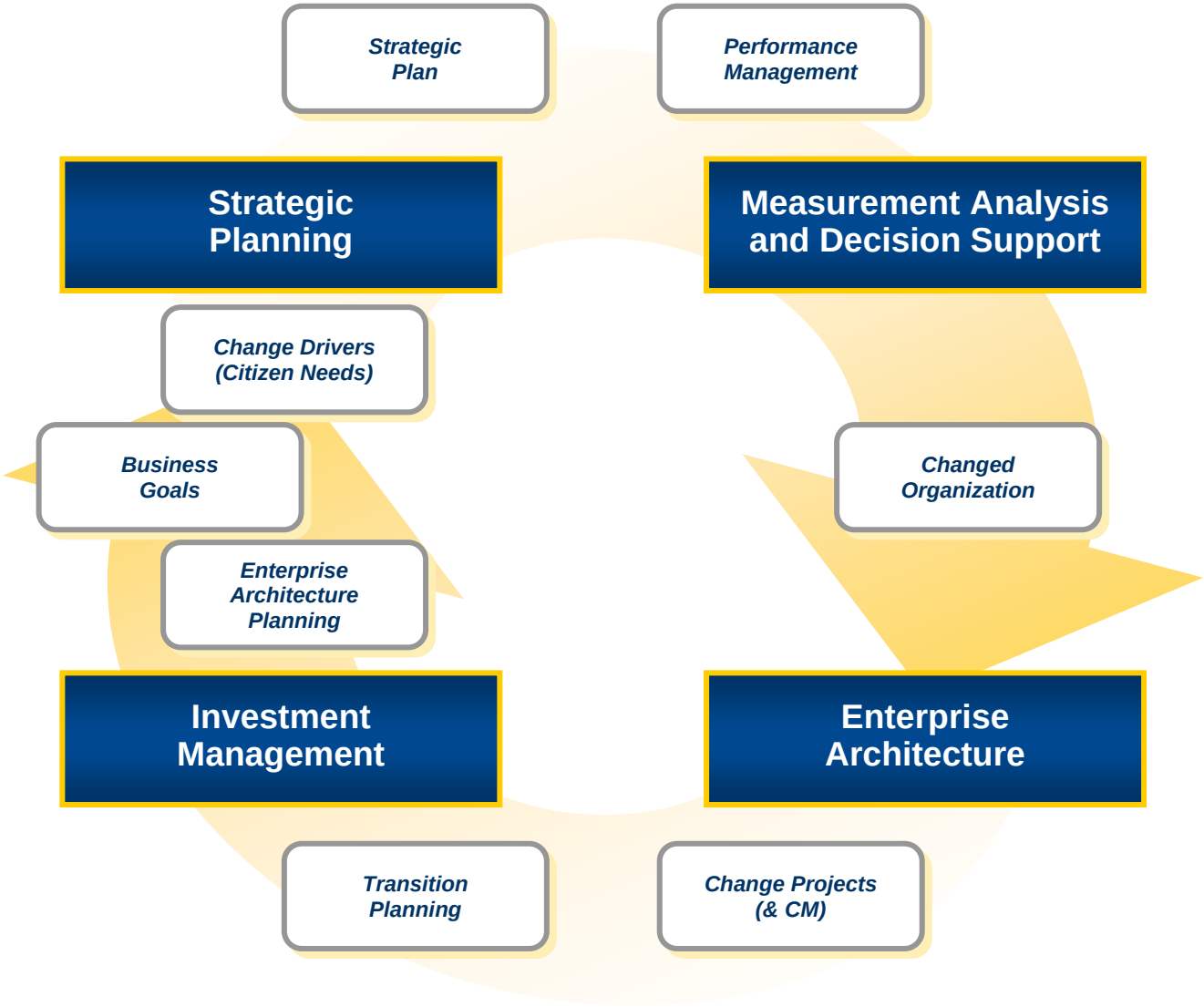

Exhibit (4): Organizational Performance Loop

With a well-integrated performance loop, agencies can collaborate with other agencies on investments that enable similar business functions and have similar performance objectives.

PRM Phase I – Align with the PRM

Understanding the "line of sight" from an IT initiative from outputs through outcomes constitutes a critical first step in aligning with the PRM. IT initiatives generally contribute to outputs, but rarely achieve them on their own. Accordingly, IT initiatives should be developed and driven in the context of the organization's mission and the related outputs to which the initiative contributes. This first step consists of two key tasks (detailed further in the PRM):

- *PRM Phase I.1.A – Understand Context and Performance Drivers*
- *PRM Phase I.1.B – Understand What Contributes to Performance and How*