

# THE PERFORMANCE REFERENCE MODEL VERSION 1.0

 A Standardized Approach to IT Performance



VOLUME I: VERSION 1.0 RELEASE DOCUMENT



**FEAPMO**

FEDERAL ENTERPRISE ARCHITECTURE  
PROGRAM MANAGEMENT OFFICE



The Federal Enterprise Architecture Program Management Office



*The Performance Reference Model Version 1.0:*

*A Standardized Approach to IT Performance*

**September 2003**

**Volume I: Version 1.0 Release Document**



## EXECUTIVE SUMMARY

Information Technology (IT) is one of the greatest potential enablers of government performance. As such, the President's Management Agenda focuses on "Expanding E-Government" and represents a critical opportunity for agencies to improve performance by leveraging IT. Agencies have shown uneven progress in managing IT in this respect. This is in part because a common and consistent framework for IT performance measurement did not exist.

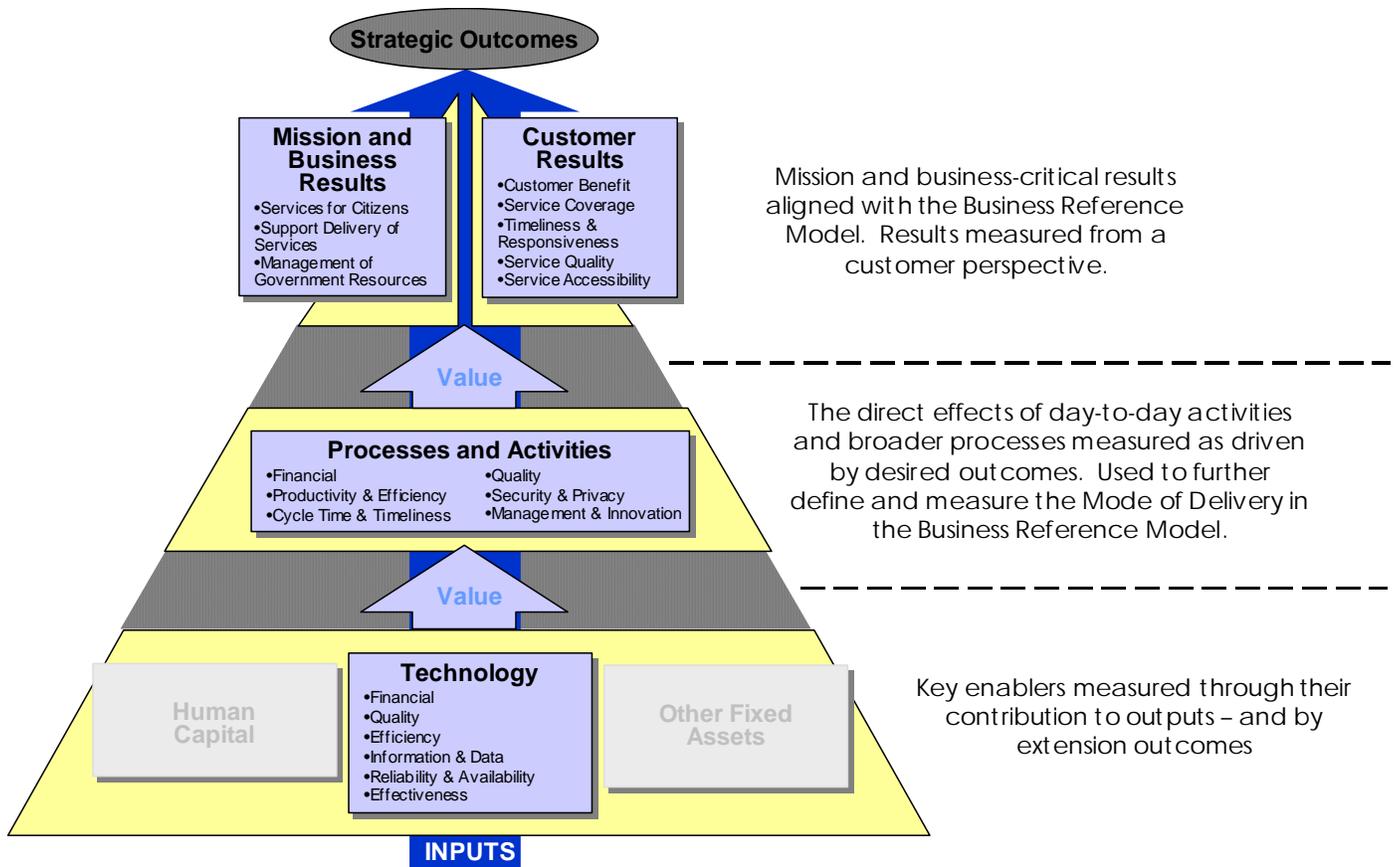
In response, the Federal Enterprise Architecture Program Management Office (FEA-PMO) is providing the Performance Reference Model (PRM). Below are some key facts about the PRM and how it is being applied during the FY 2005 budget formulation process.

- *The PRM is a standardized framework to measure the performance of major IT initiatives and their contribution to program performance;*
- *Agencies can "operationalize" the PRM for their specific environment and IT initiatives;*
- *How agencies "operationalize" the PRM will define the actual contents of the model;*
- *The PRM can be used by agency-specific IT initiatives and by cross-agency IT initiatives;*
- *The PRM does not create new management processes, but rather reinforces and informs those that exist, including the strategic planning process, Program Assessment Rating Tool (PART), and IT budget process;*
- *Agencies will be required to use the PRM in their FY 2005 Exhibit 300s ONLY for major IT initiatives classified as new Development, Modernization, or Enhancement; and*
- *The PRM Version 1.0 is a starting point from which to evolve towards ever-improving performance measures for IT.*

The PRM is designed to serve three main purposes:

1. Help produce enhanced IT performance information to improve strategic and daily decision-making;
2. Improve the alignment—and better articulate the contribution of—IT to business outputs and outcomes, thereby creating a clear "line of sight" to desired results; and
3. Identify performance improvement opportunities that span traditional organizational structures and boundaries.

As shown on the following page, the PRM includes four Measurement Areas for FY 2005: Mission and Business Results, Customer Results, Processes and Activities, and Technology. In each area, there are Measurement Categories. Each of these categories includes Generic Measurement Indicators that agencies can tailor or "operationalize" indicators for their environment.



The PRM structure is designed to clearly articulate the cause and effect relationship between inputs, outputs, and outcomes. This “line of sight” is critical for IT project managers, program managers, and key decision-makers to understand how and to what extent technology is enabling progress towards outputs and outcomes.

The transformation required to implement the President’s Management Agenda—and E-Government in particular—requires the PRM to be either directly used or understood by OMB, Chief Information Officers, Chief Technology Officers, Chief Financial Officers, and most important program and IT project managers. Each has a critical role in (1) using the PRM to identify indicators and/or (2) using progress towards PRM indicators to make more informed and data-driven IT management and funding decisions.

The PRM Version 1.0 was developed using a collaborative and iterative process designed to leverage existing approaches and best practices, while also creating a practical framework that would achieve the purposes required.

In summary, the PRM is a flexible tool designed to help agencies improve IT performance. While PRM Version 1.0 is a starting point, lessons learned from its preliminary use for new IT investments and further discussion with agencies and key councils, such as the CFO Council, will drive the improvement from this version to future versions.

# TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	II
TABLE OF CONTENTS .....	IV
INTRODUCTION.....	6
<b>1. THE CASE FOR IMPROVEMENT.....</b>	<b>7</b>
THE MANDATE FOR CHANGE.....	7
THE CHALLENGE AHEAD .....	8
<b>2. A FRAMEWORK FOR IMPROVEMENT .....</b>	<b>10</b>
WHAT IS THE PERFORMANCE REFERENCE MODEL?.....	10
What Are the Key Facts About the PRM?.....	10
What is the PRM’s Purpose and How is it Structured? .....	11
Mission and Business Results Measurement Area .....	13
Customer Results Measurement Area .....	14
Processes and Activities Measurement Area .....	15
Technology Measurement Area .....	17
Human Capital Measurement Area.....	18
Other Fixed Assets Measurement Area .....	18
Measurement Areas Build “Line of Sight” to Results .....	18
<b>3. WHO CAN BENEFIT FROM USING THE PRM.....</b>	<b>19</b>
WHO CAN USE THE PRM? .....	19
Office of Management and Budget.....	19
Chief Information Officers and Chief Technology Officers.....	20
Chief Financial Officers and Budget Officials.....	20
Program and IT Project Managers.....	20
WHEN WILL THE PRM BE USED? .....	21
<b>4. HOW WAS THE PRM DEVELOPED AND HOW DOES IT FIT WITH THE REST OF THE FEA? .....</b>	<b>22</b>
HOW WAS THE PRM DEVELOPED? .....	22
WHAT IS THE FEDERAL ENTERPRISE ARCHITECTURE? .....	24
Business Reference Model.....	25
Service Component Reference Model .....	25
Technical Reference Model .....	26
Data and Information Reference Model .....	26
Federal Enterprise Architecture Management System .....	27
<b>5. WHAT HAPPENS NEXT WITH THE PRM?.....</b>	<b>28</b>
THE PRM IS A RESOURCE TO IMPROVE PERFORMANCE .....	28
THE FEA-PMO WILL CONTINUE TO COMMUNICATE WITH AGENCIES.....	29
PROVIDING COMMENTS ON THE PRM AND OTHER FEA REFERENCE MODELS.....	30
NEXT STEPS FOR THE PRM .....	30
<b>APPENDIX A: MISSION AND BUSINESS RESULTS MEASUREMENT CATEGORIES AND GENERIC MEASUREMENT INDICATORS .....</b>	<b>31</b>
MISSION AND BUSINESS RESULTS (SERVICES FOR CITIZENS) .....	32
MISSION AND BUSINESS RESULTS (SUPPORT DELIVERY OF SERVICES) .....	38

MISSION AND BUSINESS RESULTS (MANAGEMENT OF GOVERNMENT RESOURCES) .....	41
<b>APPENDIX B: CUSTOMER RESULTS, PROCESSES AND ACTIVITIES, AND TECHNOLOGY MEASUREMENT CATEGORIES AND GENERIC MEASUREMENT INDICATORS .....</b>	<b>45</b>
CUSTOMER RESULTS .....	46
PROCESSES AND ACTIVITIES.....	48
TECHNOLOGY .....	50
<b>APPENDIX C: KEY TERMS AND LIST OF SOURCES .....</b>	<b>52</b>
KEY TERMS AND ACRONYMS .....	52
LIST OF SOURCES .....	54

## INTRODUCTION

E-Government is one of the five initiatives that comprise the President's Management Agenda because of its importance in facilitating a more responsive and effective government. To achieve the President's objectives, the federal government must derive more productivity from its information technology (IT) spending, currently nearly \$60 billion. A cornerstone to success is the development of a federal enterprise architecture that enables agencies to derive maximum benefit from applying IT to their missions. The Federal Enterprise Architecture (FEA) reference model framework is a set of tools that enable the federal government to improve performance, increase collaboration, and reduce costs across the federal IT portfolio. The FEA will facilitate horizontal (cross-federal) and vertical (federal, state, and local governments) integration of IT resources, and establish the "line of sight" contribution of IT to mission and program performance. The result will be a more citizen-centered, customer-focused government that maximizes technology investments to better achieve mission outcomes.

The FEA consists of a series of "reference models" designed to facilitate cross-agency analysis and improvement:

- The Performance Reference Model (PRM) - The PRM is a framework to measure the performance of major IT initiatives and their contribution to program performance. The PRM will help agencies produce enhanced performance information; improve the alignment and better articulate the contribution of inputs, such as technology, to outputs and outcomes; and identify improvement opportunities that span traditional organizational boundaries.

- Business Reference Model (BRM) - The BRM is a function-driven framework to describe the Lines of Business and Sub-functions performed by the federal government independent of the agencies that perform them.

- Service Component Reference Model (SRM) - The SRM provides a common framework and vocabulary to characterize the IT and business components that collectively comprise an IT investment. The SRM will help agencies rapidly assemble IT solutions through the sharing and re-use of business and IT components. A component is a self-contained process, service, or IT capability with pre-determined functionality that may be exposed through a business or technology interface.

- Technical Reference Model (TRM) - The TRM provides a foundation to describe the standards, specifications, and technologies supporting the delivery, exchange, and construction of business or service components and E-Government solutions. The TRM unifies existing agency TRMs and E-Government guidance by providing a foundation to advance the re-use of technology and component services from a government-wide perspective.

Additionally, a Data and Information Reference Model (DRM) is currently under development.

This release document, Performance Reference Model Version 1.0 "*Volume I: Version 1.0 Release Document*," describes in detail the Performance Reference Model. The FEA-PMO has also published guidance and user information about the PRM in "*Volume II: How to Use the PRM*."

# 1

## The Case for Improvement: Why a PRM is Necessary

FEAPMO

### 1. THE CASE FOR IMPROVEMENT

This section provides an overview of why the federal government needs a Performance Reference Model (PRM).

#### THE MANDATE FOR CHANGE

Information Technology (IT) is one of the greatest enablers of government performance. Recognizing this, the President's Management Agenda (PMA) focuses on "Expanding E-Government" and represents an important opportunity for agencies to deliver quantum leaps in achieving results and serving citizens at lower cost.<sup>7</sup>

*"Implementation of E-Government is important in making government more responsive and cost-effective."*

President George W. Bush  
July 10, 2002

However, many federal agencies are still struggling to appropriately capitalize on the opportunities IT presents—and do so in a way that achieves results and improves services for citizens. In some areas, IT has already proven to be an enabler to not only improve the performance of an individual agency, but a catalyst for improvements across agencies. For example, some of the 24 Presidential E-Government Initiatives

<sup>7</sup> "Implementing the President's Management Agenda for E-Government: E-Government Strategy," U.S. Office of Management and Budget. April 2003.

are showcases of how agencies can work together—enabled by IT—to achieve results and deliver improved services to citizens:

- [GovBenefits](#) now provides one-stop access to information and services on over 400 government programs. A half-million citizens visit the site per month to determine their potential eligibility for government benefit programs.

- [IRS Free Filing](#) is a single point of access to free on-line tax preparation and electronic filing services. The site is a joint government-industry effort to reduce burden and cost to taxpayers.

- [Recreation.gov](#) provides one-stop access to America’s national parks and public recreation areas. Three-quarters of a million citizens visit the site per month to access information about nearly 2000 recreation opportunities.

Beyond the world of just IT, agencies are also being challenged to improve the quality of their performance information and integrate that information with budget decision-making. The PMA also focuses on “Budget and Performance Integration.” This effort includes using performance information to make budget decisions and linking performance and cost in a performance budget format. During FY 2004 budget formulation, standardized program evaluations were performed on federal programs comprising 20 percent of the total federal budget. The Program Assessment Rating Tool (PART) asks questions about the program’s purpose, planning, management, and results. The findings of these PART assessments were considered during the budget decision-making process. An additional 20 percent of programs will be assessed through PART during the FY 2005 budget formulation process.

Other initiatives that comprise the PMA, including the Strategic Management of Human Capital, also bear an important relationship to the effective management of not only IT, but overall government resources. Collectively, the President’s Management Agenda, especially the Expanding E-Government and Budget and Performance Integration initiatives, present a significant challenge—and tremendous opportunity to improve federal performance.

## THE CHALLENGE AHEAD

---

Over the last decade agencies have made progress in the areas of IT performance management and measurement. Nevertheless, significant work still remains if agencies are to make the needed performance improvements and meet the existing performance requirements.<sup>2</sup>

More specifically, IT management and measurement practices still need significant improvements. For example, more than half of the roughly 1400 major IT initiatives in the federal portfolio were identified on OMB’s “At-Risk-List” in the President’s FY 2004 Budget. Many of these initiatives were at risk because of their inability to demonstrate their value consistent with the principles of performance management and measurement. More broadly, 17 of the 26 federal agencies evaluated received a “red” in Budget and Performance Integration on the most recent President’s Management Agenda scorecard.

---

<sup>2</sup> “Budget of the United States Government, Fiscal Year 2004,” U.S. Office of Management and Budget. February 3, 2003; and “Urgent Business for America: Revitalizing the Federal Government for the 21<sup>st</sup> Century,” The National Commission on the Public Service. January 2003.

Further evidence of the improvements needed has been presented by key oversight organizations during the last few years.

■ Senate Committee on Governmental Affairs – In its 2001 report, “Government at the Brink,” highlighted numerous examples demonstrating overall weakness in performance management and measurement.

■ U.S. General Accounting Office – In its 2003 report “Major Management Challenges and Program Risks: A Governmentwide Perspective,” cited the limited ability of agencies to articulate how IT contributes to program outcomes. GAO has also on numerous occasions identified the improvements needed in collaborating around cross-cutting programs and functions.

■ U.S. Office of Management and Budget – Reported in the President’s FY 2004 Budget the findings of the first PART assessments, which concluded that half of the more than 230 federal programs rated could not demonstrate results. Another 20 percent were adequate or ineffective.

Moreover, there is a legislative framework—much of which has existed for some time—that governs how agencies are to make these improvements in performance management and measurement.

■ E-Government Act of 2002 - Collaborate and develop consistent IT performance measures.

■ Clinger-Cohen Act of 1996 - Make technology investment decisions based on contribution to program performance.

■ Government Performance and Results Act of 1993 - Plan and report how resources are used to achieve outputs and outcomes.

■ Chief Financial Officers Act of 1990 and other related Acts – Provide timely, reliable, useful, and consistent financial information to improve decision-making.

Agencies have shown uneven progress in meeting these requirements. This is in part because a common and consistent framework for IT performance measurement did not exist. To assist agencies, OMB’s Federal Enterprise Architecture Program Management Office (FEA-PMO) is providing the Performance Reference Model (PRM) to help agencies make the needed improvements in IT performance and meet existing requirements related to IT.

# 2.

## A Framework for Improvement: What is the PRM?

FEAPMO

## 2. A FRAMEWORK FOR IMPROVEMENT

This section provides an overview of the PRM and examples of how it can be applied.<sup>3</sup>

### WHAT IS THE PERFORMANCE REFERENCE MODEL?

U.S. citizens are demanding that their government be more efficient and effective. To meet these demands, agencies and OMB must be certain that all investments, including IT initiatives, contribute to improving performance and producing results. In this context, the FEA-PMO is providing the PRM as a tool to help agencies more clearly justify and better manage their proposed IT investments.

### What Are the Key Facts About the PRM?

In addition to understanding the purpose and structure of the PRM, it is important that agencies understand how the PRM will be applied during the FY 2005 budget formulation process.

- The PRM is a standardized framework to measure the performance of major IT initiatives and their contribution to program performance.
- Agencies can “operationalize” the PRM for their specific environment and IT initiatives.

<sup>3</sup> The FEA-PMO has also published detailed guidance on using the PRM consistent with existing management processes in *Volume II: How to Use the PRM*.

- The PRM can be used by agency-specific IT initiatives and by cross-agency IT initiatives.
- The PRM does not create new management processes, but rather reinforces and informs those that exist, including the GPRA planning and reporting process and IT budget process.
- Operationalized Measurement Indicators agencies use in the PRM will be informed and determined by the GPRA and budget planning process, PART assessments, and other drivers.
- Agencies are required to use the PRM in their FY 2005 Exhibit 300s ONLY for major IT initiatives classified as new Development, Modernization, or Enhancement (DME).
- For each major DME IT Investment, the Exhibit 300 requires agencies to identify at least one Operationalized Measurement Indicator in each of four Measurement Areas: (1) Mission and Business Results, (2) Customer Results, (3) Processes and Activities, and (4) Technology. The collective use of Measurement Indicators in these four areas is imperative to providing a clear “line of sight” from an IT initiative to results.
- Agencies should use the PRM to demonstrate how a proposed IT investment will help close existing performance gaps and contribute to achieving goals and objectives.
- The PRM Version 1.0 is a starting point from which to evolve towards ever-improving performance measurement. All of the FEA-PMO reference models, including the PRM, are meant to evolve over time. The FEA-PMO will use the lessons learned from applying the PRM to DME IT initiatives and increased outreach to develop and release PRM Version 2.0.

### What is the PRM’s Purpose and How is it Structured?

The PRM is a standardized framework to measure the performance of major IT initiatives and their contribution to program performance. This standardized framework has three main purposes:

1. Help produce enhanced IT performance information to improve strategic and daily decision-making;
2. Improve the alignment—and better articulate the contribution of—IT to business outputs and outcomes, thereby creating a clear “line of sight” to desired results; and
3. Identify performance improvement opportunities that span traditional organizational structures and boundaries.

The PRM is driven by a legislative framework for IT performance consisting of the E-Government Act of 2002, the Clinger-Cohen Act of 1996, and the Government Performance and Results Act of 1993. The PRM also leverages the best of existing approaches to performance measurement in the public and private sectors, including the Balanced Scorecard, Baldrige Criteria, Value Measurement Methodology, program logic models, the value chain, and the theory of constraints. In addition, the draft PRM was informed by what agencies are currently measuring through GPRA, Enterprise Architecture, IT Capital Planning and Investment Control, and PART assessment findings. Section 4 of this document provides more detail on how the PRM was developed.

The PRM is structured around Measurement Areas, Measurement Categories, and Measurement Indicators.

■ **Measurement Areas** – The high-level organizing framework of the PRM that captures aspects of performance at the input, output, and outcome levels. The PRM includes six measurement areas: Mission and Business Results, Customer Results, Processes and Activities, Human Capital, Technology, and Other Fixed Assets. Human Capital and Other Fixed Assets will not be used in FY 2005 budget formulation.

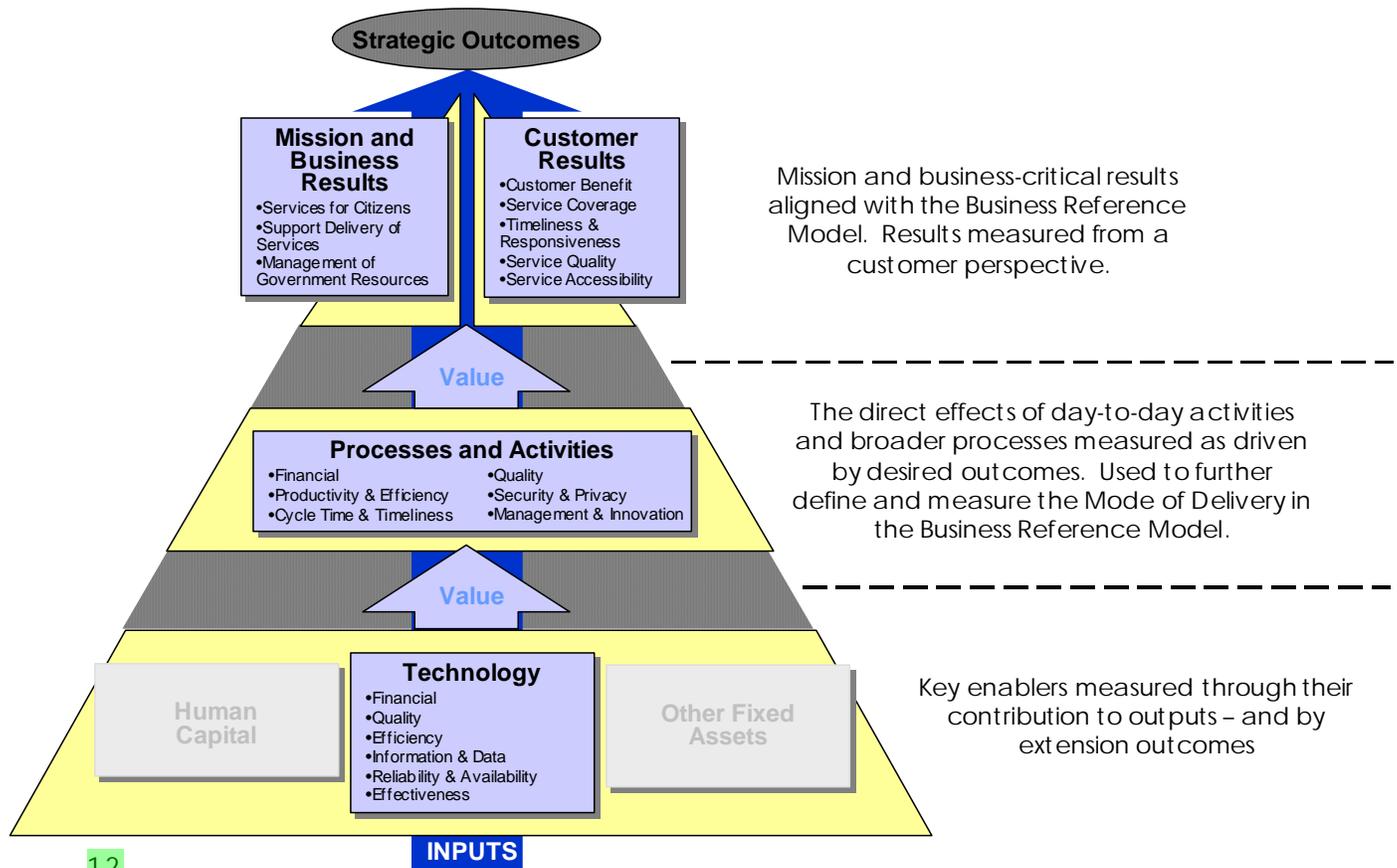
■ **Measurement Categories** – Groupings within each Measurement Area that describe the attribute or characteristic to be measured. For example, the Mission and Business Results Measurement Area includes three Measurement Categories: Services for Citizens, Support Delivery of Services, and Management of Government Resources.

■ **Generic Measurement Indicators** – The generic indicators, for example delivery time, that agencies then “operationalize” for their specific environment.

Importantly, the Generic Measurement Indicators included in the PRM are merely starting points for agencies. In their FY 2005 Exhibit 300s, agencies “operationalize” the four Generic Measurement Indicators they propose to use for each major IT initiative classified as DME. Agencies are free to tailor these operationalized Measurement Indicators so that they fit the agency’s specific environment and the IT initiative’s specific goals. As agencies use the PRM over time, these Operationalized Measurement Indicators will evolve and comprise the actual and most useful contents of the PRM. The development of these will be more difficult in some cases than in others and the links between inputs and outcomes will not always be easy to define. For IT initiatives that support programs that have been subject to the PART, a useful starting point would be to use the PART key performance measures.

Figure 1 below provides a graphical representation of the Performance Reference Model.

**FIGURE 1: PERFORMANCE REFERENCE MODEL VERSION 1.0**



The PRM structure is designed to clearly articulate the cause and effect relationship between inputs, outputs, and outcomes. Though this relationship is rarely direct cause and effect, the PRM structure seeks to “tease out” the contribution an IT initiatives makes to improved process and business performance (which when measured may only be a mere association).

This “line of sight” is critical for IT project managers, program managers, and key decision-makers to understand how and to what extent technology is enabling progress towards outputs and outcomes. The PRM captures this “line of sight” to reflect how value is created as inputs (such as Technology) are used to help create outputs (through Processes and Activities), which in turn impact outcomes (such as Mission and Business). This structure builds from the concepts of the value chain, program logic models, and the theory of constraints. Guiding the entire PRM are “Strategic Outcomes,” which represent broad, policy priorities that drive the direction of government (such as to Secure the Homeland or Expand E-Government). Conversely, the PRM is also structured to allow the desired outcomes an organization seeks to achieve to determine the outputs and technology needed.

## Mission and Business Results Measurement Area

The Mission and Business Results Measurement Area of the PRM is intended to capture the outcomes that agencies seek to achieve. These outcomes are usually developed during the agency budget and strategic planning process prescribed under GPRA. This means that an IT initiative using the PRM will need to refer to these other existing processes to identify the Mission and Business Results the IT initiative is contributing to. This requires a strong partnership between the IT and business communities within an agency.

To ensure the outcomes that agencies identify are appropriately aligned to what agencies actually do, the Mission and Business Results Measurement Area is driven by the Business Reference Model (BRM). More specifically, the PRM’s Measurement Categories are the same as the BRM’s Business Areas and Lines of Business. The Generic Measurement Indicators of the PRM are the same as the Sub-functions of the BRM. These areas of the BRM seek to identify the purpose of the government activity. By extension the Mission and Business Results Measurement Area of the PRM seeks to identify the extent to which those purposes are being achieved.

Few if any IT initiatives can directly achieve Mission and Business Results. Many factors outside the control of not only an IT initiative, but federal programs determine whether true outcomes are achieved. However, understanding the desired Mission and Business Results as early as possible in the IT lifecycle is critical to ensure that IT initiatives are developed and managed in a performance and business-driven context.

The Mission and Business Results Measurement Area is comprised of the following Measurement Categories:

- The Lines of Business in Services for Citizens;
- The Lines of Business in Support Delivery of Services; and
- The Lines of Business in Management of Government Resources.

OMB Circular A-11 for FY 2005 requires agencies to identify the primary BRM alignment in the Unique Project ID for all proposed IT initiatives. This link between the BRM and the PRM provides the starting point to determine not only the purpose that the IT initiative supports, but how progress towards achieving that purpose can be measured. Building from this primary alignment to

the BRM, agencies will identify a corresponding Operationalized Measurement Indicator through the PRM for each major IT initiative that is DME in FY 2005.

Some of the Measurement Categories and Generic Measurement Indicators in the Mission and Business Results Measurement Area include:

Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Environmental Management	Environmental Monitoring and Forecasting	TBD by agencies
Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Education	Higher Education	TBD by agencies
Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
General Government	Taxation Management	TBD by agencies
Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Planning and Resource Allocation	Enterprise Architecture	TBD by agencies
Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Human Resources Management	Staff Recruitment and Employment	TBD by agencies

Appendix A of this release document provides the entire list of Measurement Categories and Generic Measurement Indicators for the Mission and Business Results Measurement Area.

## Customer Results Measurement Area

The Customer Results Measurement Area of the PRM is intended to capture how well an agency or specific process within an agency is serving its customers—and ultimately citizens. This is a critical aspect of successful E-Government. However, the diverse nature of federal programs means that there are many customers spanning the citizen, business, other government, and internal categories. Further, the nature of these relationships varies immensely. Some customers receive direct government services, such as veterans receiving health care from the Veterans Health Administration. Other “customers” are those subject to regulatory activities, such as large businesses conforming to safety regulations administered by the Occupational Safety and Health Administration. This is why the PRM allows agencies to operationalize the Measurement Indicator that appropriately reflects their desired relationship with their customers. Importantly, the citizen is generally considered to be the ultimate “customer” of government activities regardless of the nature of the customer relationship.

The Customer Results Measurement Indicator captured in this Measurement Area will be associated with the most external customer of the process or activity the IT initiative supports (e.g. citizens, businesses, or other governments). Not all Customer Results are meaningful or even distinct for every IT initiative. For example, for IT initiatives that support processes with federal employees as their customers, “customer” satisfaction and “IT user” satisfaction may in fact be the same. Whatever the specific circumstances, the purpose of the Customer Results Measurement Area is to identify the customer relationship and articulate how it can be measured over time.

Despite difficulties, including the Paperwork Reduction Act limitation on burdening customers with surveys, the notion of customer results is important to consider and capture. Customer surveys are not the only way to measure Customer Results. As with Mission and Business Results, few IT initiatives will directly or solely achieve Customer Results. Nevertheless it is still important to use customer needs as a guiding principle when developing and managing IT initiatives.

The Customer Results Measurement Area is comprised of the following Measurement Categories:

- Customer Benefit - Customer satisfaction levels and tangible impacts to customers as a result of the products or services provided;
- Service Coverage - The extent to which the desired customer population is being served and customers are using products and services;
- Timeliness & Responsiveness - Time to respond to customer inquiries and requests and time to deliver products or services;
- Service Quality - Quality from the customer’s perspective and accuracy of responses to customer inquiries; and
- Service Accessibility - Availability of products and services to customers and the extent of self-service options and automation.

Some of the Measurement Categories and Generic Measurement Indicators in the Customer Results Measurement Area include:

Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Customer Benefit	Customer Satisfaction	TBD by agencies
Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Service Quality	Accuracy of Service or Product Delivered	TBD by agencies
Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Service Coverage	New Customers & Market Penetration	TBD by agencies
Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Timeliness & Responsiveness	Delivery Time	TBD by agencies

Appendix B of this release document provides the entire list of Measurement Categories and Generic Measurement Indicators for the Customer Results Measurement Area.

## Processes and Activities Measurement Area

The Processes and Activities Measurement Area is intended to capture the outputs that are the direct result of the process that an IT initiative supports. These outputs are much more under the control of federal programs and generally contribute to or influence outcomes that are Mission and Business Results and Customer Results. This Measurement Area also captures key aspects of processes or activities that need to be monitored and/or improved.

Nearly all IT initiatives are designed to support or improve a single or set of processes or activities. This is generally where an IT initiative’s contribution to improved performance can be most accurately measured. Nevertheless there are still many factors beyond the IT initiative’s control that will determine the level of process performance. These factors include staff that manage or execute the process, statutory requirements, or inputs to the process such as benefits applications or information from other processes.

The desired outputs for a process or activity should strongly influence (1) whether technology is needed to improve or support the process and (2) if so, what technology is needed to help the processes or activities achieve the desired outputs.

As with Mission and Business Results, use of the Processes and Activities Measurement Area should use the BRM as the starting point. The BRM includes a Mode of Delivery Business Area that is designed to identify at a very high level the process that is being used to achieve an intended purpose. The Measurement Indicator(s) agencies choose should be an extension of the Mode of Delivery the IT initiative aligns with. For example, if an IT initiative aligns with the Federal Financial Assistance Mode of Delivery in the BRM, the PRM can be used to determine the Quality of how that financial assistance is delivered.

The Processes and Activity Measurement Area is comprised of the following Measurement Categories:

- Financial - Achieving financial measures, direct and indirect total and per unit costs of producing products and services, and costs saved or avoided;
- Productivity & Efficiency – The amount of work accomplished per relevant units of time and resources applied;
- Cycle Time & Timeliness - The time required to produce products or services;
- Quality - Error rates and complaints related to products or services;
- Security & Privacy - The extent to which security is improved and privacy addressed; and
- Management & Innovation - Management policies and procedures, compliance with applicable requirements, capabilities in risk mitigation, knowledge management, and continuous improvement.

Some of the Measurement Categories and Generic Measurement Indicators in the Processes and Activities Measurement Area include:

Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Cycle Time & Timeliness	Cycle Time	TBD by agencies
Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Financial	Savings & Cost Avoidance	TBD by agencies

Appendix B of this release document provides the entire list of Measurement Categories and Generic Measurement Indicators for the Processes and Activities Measurement Area.

## Technology Measurement Area

The Technology Measurement Area is designed to capture key elements of performance that directly relate to the IT initiative. An IT initiative generally can include applications, infrastructure, or services provided in support of a process or program. While these IT-specific aspects of performance (e.g. percent system availability) are important, they alone do not truly assess the value of an IT initiative to overall performance. This is why the Technology Measurement Area is far more relevant when used with other Measurement Areas to get a full and accurate picture of overall performance.

As with all other Measurement Areas, the Technology Measurement Categories and Generic Measurement Indicators are not an exhaustive list. Agencies may and should have many more Technology measures they use as part of their IT Capital Planning and Investment Control (ITCPI) and Systems Development Lifecycle processes. However, this Measurement Area includes aspects of IT performance that (1) may be insightful to decision-makers and (2) best articulate the extent to which an IT initiative is contributing to improved process performance and by extension improved mission and customer results.

The Technology Measurement Area is comprised of the following Measurement Categories:

- **Financial** - Technology-related costs and costs avoided through reducing or eliminating IT redundancies;
- **Quality** - The extent to which technology satisfies functionality or capability requirements or best practices, and complies with standards;
- **Efficiency** - System or application performance in terms of response time, interoperability, user accessibility, and improvement in technical capabilities or characteristics;
- **Information & Data** - Data or information sharing, standardization, reliability and quality, and storage capacity;
- **Reliability & Availability** - System or application capacity, availability to users, and system or application failures; and
- **Effectiveness** - Extent to which users are satisfied with the relevant application or system, whether it meets user requirements, and its impact on the performance of the process(es) it enables and the customer or mission results to which it contributes.

Some of the Measurement Categories and Generic Measurement Indicators in the Processes and Activities Measurement Area include:

Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Reliability & Availability	Reliability	TBD by agencies
Measurement Category	Generic Measurement Indicator	Operationalized Measurement Indicator
Effectiveness	User Satisfaction	TBD by agencies

Appendix B of this release document provides the entire list of Measurement Categories and Measurement Indicators for the Technology Measurement Area.

## Human Capital Measurement Area

A review of legislative requirements and best practices shows that capturing the human capital aspects of performance is imperative. It is for this reason that the PRM Version 1.0 includes a “placeholder” for Human Capital. However, because the Human Capital Measurement Area will not be used for FY 2005, the PRM at this point does not include specific Measurement Categories. One of the key next steps the FEA-PMO will take as it begins to improve the PRM Version 1.0 will be to fully engage organizations such as the Office of Personnel Management and the newly formed Chief Human Capital Officers Council. The FEA-PMO will work collaboratively with these organizations and others to identify the key human capital requirements and a set of practical and usable Measurement Indicators in the Human Capital Measurement Area.

## Other Fixed Assets Measurement Area

As with Human Capital, a review of legislative requirements and best practices shows that capturing the performance of other fixed assets (e.g. vehicle fleets, facilities, other equipment) is also critical. This is why PRM Version 1.0 also includes a “placeholder” for other fixed assets. However, because the Other Fixed Assets Measurement Area will not be used for FY 2005, the PRM at this point will not include specific Measurement Categories. The FEA-PMO will seek to engage officials knowledgeable about the management of other fixed assets as it begins to improve PRM Version 1.0.

## Measurement Areas Build “Line of Sight” to Results

As noted above, the PRM’s true value comes not from each Measurement Area, but when multiple Measurement Areas are used in concert to understand the full value and contribution of an IT initiative. Specifically, effective use of the PRM requires identification of a critical few Operationalized Measurement Indicators in each of the relevant Measurement Areas to draw the “line of sight” from the IT initiative to the processes and activities it supports—and by extension the customer results and mission and business results it enables. Though the PRM includes many indicators, its value is not in the sheer number of indicators it includes. Rather, its value is realized when used to identify a critical few indicators that can provide information for decision-making.

*“Volume II: How to Use the PRM”* provides detailed guidance on how to select and operationalize Measurement Indicators.

# 3.

## Who Can Benefit from Using the PRM?

The logo for the Federal Enterprise Architecture Performance Model (FEAPMO) is displayed in white capital letters on a blue rectangular background.

### 3. WHO CAN BENEFIT FROM USING THE PRM

This section discusses who can use the PRM and provides a summary of how the PRM will be used during the FY 2005 budget formulation process. More detail on how the PRM will be used is provided in "*Volume II: How to Use the PRM.*"

#### WHO CAN USE THE PRM?

The transformation required to implement the PMA—and E-Government in particular—requires the PRM to be either directly used or understood by OMB, Chief Information Officers (CIO), Chief Technology Officers (CTO), Chief Financial Officers (CFO), and most importantly Program and IT Project Managers. Each of these entities has a critical role in (1) using the PRM to identify indicators or (2) using progress towards PRM indicators to make more informed and data-driven IT management and funding decisions.

#### Office of Management and Budget

Using the PRM to inform budget decisions can help OMB through providing:

- More detailed information about how proposed IT initiatives may contribute to outcomes. This additional information can help budget examiners decide whether to fund proposed IT initiatives or whether to recommend changes to proposed IT initiatives, including recommendations to collaborate with other agencies; and
- Standardized structure to assess the performance of IT initiatives that support programs with common or similar missions. This can include an assessment of how proposed IT initiatives will improve programs being assessed by PART that align with the same BRM Line of Business and Sub-function.

## Chief Information Officers and Chief Technology Officers

Using the PRM to inform IT Capital Planning and Investment Control activities can help CIO and CTO staffs with:

- More clarity about what IT initiatives to select based on how they may be/are contributing to results and key mission requirements;
- Additional and more detailed performance information to use in the Control and Evaluate phases of the IT CPIC process; and
- Standardized structure to help identify collaboration opportunities within and outside the agency. Similar IT initiatives seeking to improve the performance of similar processes or serve similar customers could be coordinated to achieve the desired levels of performance at a reduced cost to either or both agencies.

## Chief Financial Officers and Budget Officials

Using the PRM consistent with other ongoing financial activities and the budget process can help CFO and budget staff with:

- Additional performance information to use in GPRA and budget planning and reporting activities;
- Better articulation through GPRA of how IT budgetary resources contribute to program outcomes; and
- Standardized IT performance information to identify potential cost savings and performance improvements.

## Program and IT Project Managers

Using the PRM to help manage programs and IT projects can provide those responsible for them with:

- Stronger justification of proposed initiatives and articulation of how they could potentially contribute to outcomes;
- Additional information to manage IT initiatives and demonstrate their contribution to outcomes;
- A framework to coordinate when needed with other federal agencies on IT investments; and
- Standardized information to identify other programs or IT projects with similar missions for “best practice” consultation or other collaboration.

Importantly, the information provided by using the PRM can also be invaluable to the Congress and members of the public seeking a clearer picture of performance.

More detailed information about exactly how these groups can use the PRM is provided in Volume II of PRM Version 1.0. As with all FEA reference models, the FEA-PMO will continue to en-

gage these users to further advance the models consistent with the needs of each user group identified above.

## WHEN WILL THE PRM BE USED?

---

During the FY 2005 budget formulation process, agencies aligned their major IT initiatives that are classified as new DME with the PRM. This alignment was collected and monitored by OMB through the Exhibit 300. OMB is initially applying the PRM in this manner because:

- PRM Version 1.0 is a starting point that needs to be further refined. The FEA-PMO plans to use the results of this limited use of the PRM for the FY 2005 budget formulation process to develop lessons learned that inform the development of PRM Version 2.0;
- PRM Version 1.0 is being released well into many agencies' internal pre-Selection processes to submit their proposed FY 2005 budget to OMB in September. This use of the PRM should focus on how the proposed IT investment will close existing performance gaps and help meet performance goals and objectives; and
- The PRM requires a cultural shift and collaboration within agencies by numerous staff representing CFO, budget, program planning, and CIO perspectives.

The PRM has key intersections points with existing management processes, such as agencies' IT CPIC processes. Volume II of PRM Version 1.0 suggests how these relationships can be leveraged and supported by the PRM. The PRM and the process to use it will continue to be refined and implemented consistent with the federal budget process. The Business Reference Model 2.0 release document provides additional detail on the FEA and key milestones in the federal budget process.<sup>4</sup>

---

<sup>4</sup> "The Business Reference Model Version 2.0," Federal Enterprise Architecture Program Management Office, U.S. Office of Management and Budget. June 2003.

# 4

## How Was the PRM Developed and How Does it Fit With the Rest of the FEA?

FEAPMO

## 4. HOW WAS THE PRM DEVELOPED AND HOW DOES IT FIT WITH THE REST OF THE FEA?

This section provides an overview of how the PRM was developed and its key integration points with the other reference models that comprise the FEA reference model framework.

### HOW WAS THE PRM DEVELOPED?

The PRM was developed using a collaborative and iterative process. The process was designed to leverage existing approaches and best practices for performance, while at the same time creating a practical framework that would achieve the purposes required. Key steps the FEAPMO took to develop the PRM included:

1. Defined the purposes of the PRM.
2. Defined the PRM Measurement Areas by considering legislative requirements and best practice approaches to performance measurement. Figure 2 on the following page shows how each Measurement Area was identified.

**FIGURE 2: LEGISLATIVE AND BEST PRACTICE DRIVERS OF PRM MEASUREMENT AREAS**

	E-Gov Act and Clinger-Cohen Act	GPRA	Balanced Scorecard	Baldrige Quality Criteria	Six Sigma
Mission and Business Results		GPRA states "... plans shall contain general goals and objectives, including outcome-related goals and objectives ..."		Includes a Business Results focus	
Customer Results	E-Gov Act states "areas of performance measurement to be considered include customer service, agency productivity ..."		Includes a Customer perspective	Includes a Customer and Market Focus	
Processes and Activities		GPRA states "... plan shall contain a description of how the goals and objectives are to be achieved, including a description of the operational processes, skills and technology, and the human, capital, information, and other resources required ..."	Includes a Business Process perspective	Includes a Process Management focus	Focuses on improving business processes through quality and error reduction
Human Capital				Includes a Human Resource focus	
Technology	Clinger-Cohen Act states "performance measurements measure how well the information technology supports programs ..."				
Other Fixed Assets					

3. Within each of these Measurement Areas, the FEA-PMO identified Measurement Categories by further assessing legislative requirements, best practices, and what agencies are currently measuring in their GPRA Strategic and Performance Plans, Exhibit 300s, and PART assessments. A universe of general measures were identified that would be useful if reported to OMB. These served as the starting point for the individual Generic Measurement Indicators in each Measurement Category. Appendix C of this release document provides a comprehensive list of the sources used to inform the PRM.

4. Conducted informational briefings and proofs of concept to test the draft PRM structure. These proofs of concept included testing the PRM with the 24 Presidential E-Government Initiatives, the six priority Lines of Business identified in the President's FY 2004 Budget, and briefings and working sessions within OMB and with components of the Immigration and Nationalization Service and the Patent and Trademark Office.

5. Refined the draft PRM and supporting process based on lessons learned from the proofs of concept.

6. Obtained review and comment on the draft PRM from subject matter experts within OMB.

7. Released a PRM Working Draft for federal agency comment on April 28, 2003. To coincide with the release of the PRM Working Draft an agency overview session was held, which nearly 80 agency officials attended. The FEA-PMO also held an agency overview session for smaller agencies. When the comment period closed, 21 separate federal agencies provided comments using a standardized PRM Comment Form. The FEA-PMO analyzed the comment forms and identified 326 separate comments that agencies made on the PRM. These comments were very instructive for the FEA-PMO as it refined the draft PRM.
8. Refined the draft PRM based on comments on the PRM Working Draft. Within the time constraints and available resources, the FEA-PMO substantially addressed the comments provided. A number of insightful comments will be reconsidered as the FEA-PMO develops PRM Version 2.0
9. Finalized integration of the PRM into OMB Circular A-11 guidance.
10. Provided a draft of the PRM Version 1.0 for final comment to the key councils, including the CFO Council and CIO Council.
11. Incorporated comments from the Councils and published two PRM Version 1.0 release documents that agencies can use to improve performance and meet the PRM-related requirements of the FY 2005 OMB Circular A-11.

During this process the FEA-PMO staff met with more than 200 government officials within OMB and at federal agencies to discuss the PRM. This PRM Version 1.0 release document is the first in a series of iterative refinements and improvements to the PRM. The FEA-PMO will work with agencies, key councils, and other stakeholders on PRM Version 2.0 which agencies will use as they develop their FY 2006 budgets.

## WHAT IS THE FEDERAL ENTERPRISE ARCHITECTURE?

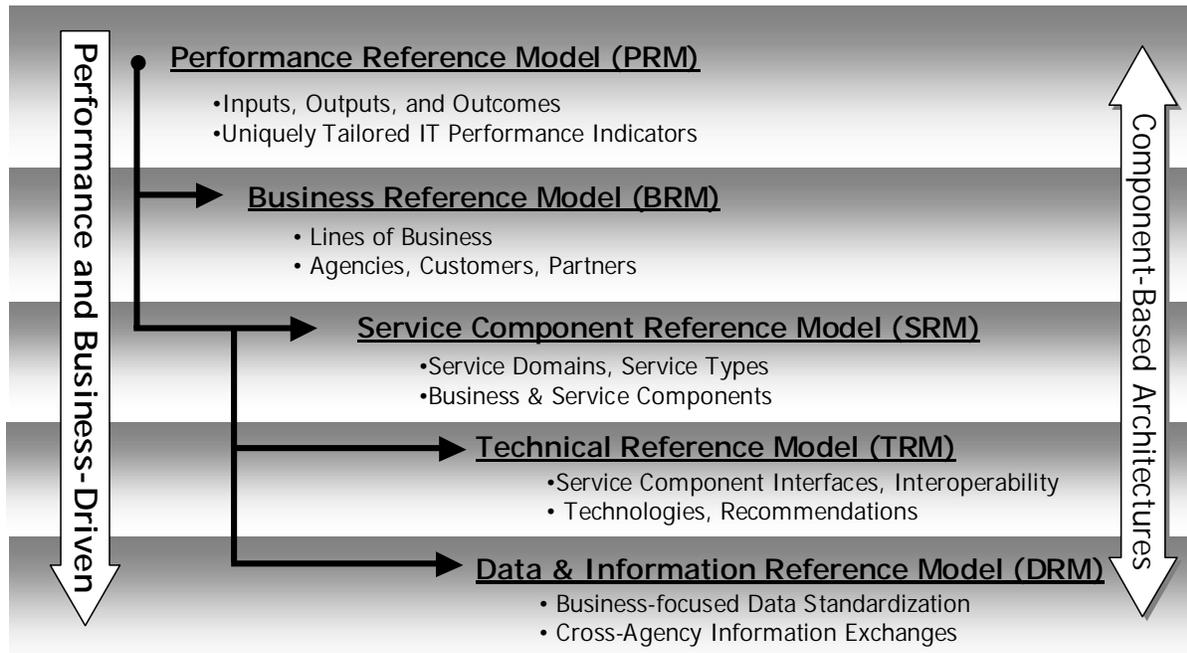
---

To facilitate the federal government's transformation towards being more citizen-centered and results-oriented, the FEA-PMO is developing the FEA. The FEA is being constructed through five interrelated "reference models" designed to identify collaboration opportunities both within and across traditional organizational boundaries. On July 24, 2002, the FEA-PMO released BRM Version 1.0, which describes the federal government's Lines of Business and its services to the citizen – independent of the agencies, bureaus, and offices that perform them.<sup>5</sup> The FEA Reference Model Framework is shown in Figure 3 on the following page.

---

<sup>5</sup> "The Business Reference Model Version 1.0," Federal Enterprise Architecture Program Management Office. July 24, 2002.

**FIGURE 3: THE FEA REFERENCE MODEL FRAMEWORK**



### Business Reference Model

The BRM now in version 2.0, is a function-driven framework that describes the Lines of Business and Sub-Functions performed by the federal government independent of the agencies that perform them.<sup>6</sup> The model provides a common understanding of the federal government’s business for agencies, oversight bodies, IT decision makers, and other stakeholders; and facilitates the identification of cross-agency opportunities and redundancies.

Of all the FEA reference models, the PRM is most closely tied to the BRM. The BRM provides a functional description of what Lines of Business and Sub-functions agencies currently conduct. Over time, the PRM can be applied to BRM Sub-functions to assess how well agencies conduct them. The BRM provides the content for the Mission and Business Results Measurement Area and the starting point to determine which Processes and Activities agencies should measure through the PRM. How the PRM is “operationalized” will vary depending on whether the Line of Business or Sub-function is in the Services for Citizens Measurement Area (e.g. Border Security) or Management of Government Resources (e.g. Goods Acquisition).

### Service Component Reference Model

SRM now in version 1.0, is a business-driven, functional framework that classifies Service Components with respect to how they support business and/or performance objectives.<sup>7</sup> The SRM is

<sup>6</sup> “The Business Reference Model Version 2.0,” Federal Enterprise Architecture Program Management Office, U.S. Office of Management and Budget, June 2003.

<sup>7</sup> “The Service Component Reference Model Version 1.0,” Federal Enterprise Architecture Program Management Office, U.S. Office of Management and Budget. June 2003.

structured across horizontal service areas that, independent of the business functions, can provide a leverage-able foundation for re-use of applications, application capabilities, components, and business services.

The SRM can be used to identify collaboration opportunities around services and applications. If capitalized on, these opportunities will lead to performance improvements as measured through the PRM, such as reduced costs, reduced time to implement services and applications, and ultimately improvements in processes and activities and results.

## Technical Reference Model

The TRM, now in version 1.0, is a framework to describe how technology supports the delivery, exchange, and construction of service components.<sup>8</sup> The TRM outlines the technology elements that collectively support the adoption and implementation of component-based architectures, as well as the identification of proven products and toolsets that are embraced by government-wide initiatives such as FirstGov, Pay.gov, and the 24 Presidential Priority E-Government Initiatives.

Technology decisions will need to be made in the specific context of the performance improvements they will contribute to as articulated through the PRM.

## Data and Information Reference Model

The DRM, still being developed, will address at an aggregate level the data and information that support program and business line operations. The DRM will help describe the interactions and information exchanges that occur between the federal government and its customers, stakeholders, and business partners. The DRM will help organize the government's information along general content areas specific to BRM Sub-functions and decompose those content areas into greater levels of detail, ultimately to data elements that are common to many business processes.

Data required to conduct business should be chosen in the specific context of the performance improvements having that data can help the business achieve. Prudent data management is also a key strategy to improving performance through the PRM.

---

<sup>8</sup> "The Technical Reference Model Version 1.0," Federal Enterprise Architecture Program Management Office, U.S. Office of Management and Budget. June 2003.

## Federal Enterprise Architecture Management System

The FEA-PMO will make available for selected agency officials and OMB the Federal Enterprise Architecture Management System (FEAMS). FEAMS is a web-based tool that will display how all major IT initiatives in the federal government can be characterized through each FEA reference model. FEAMS will be directly populated through the budget submissions that agencies send to OMB each September. More specifically, the information agencies provide in their Exhibit 300s when answering FEA-related questions will be used to populate FEAMS. Once this occurs, selected federal staff at each agency and within OMB will be able to scan the entire federal IT portfolio to identify collaboration opportunities.

# 5.

## What Happens Next with the PRM?

FEAPMO

### 5. WHAT HAPPENS NEXT WITH THE PRM?

This section provides a summary of the PRM release document and information on how the FEA-PMO will continue to evolve the PRM.

#### THE PRM IS A RESOURCE TO IMPROVE PERFORMANCE

In summary, the PRM is a flexible tool designed to help agencies improve IT performance. The extent of its implementation will vary and its usefulness will depend in part upon other existing frameworks agencies use and the degree of improvement needed. Nevertheless, the PRM is a framework to help drive federal-wide progress consistent with the model's three main purposes:

- Enhanced performance information;
- Clear line of sight to results; and
- Improved performance through collaboration across organizational boundaries.

PRM Version 1.0 is a starting point. But in the spirit of continuous improvement the FEA-PMO will actively seek comment and input to create PRM Version 2.0. Lessons learned through applying the PRM to new DME IT initiatives in the FY 2005 budget formulation cycle will be used to drive how the PRM evolves from its current form to version 2.0.

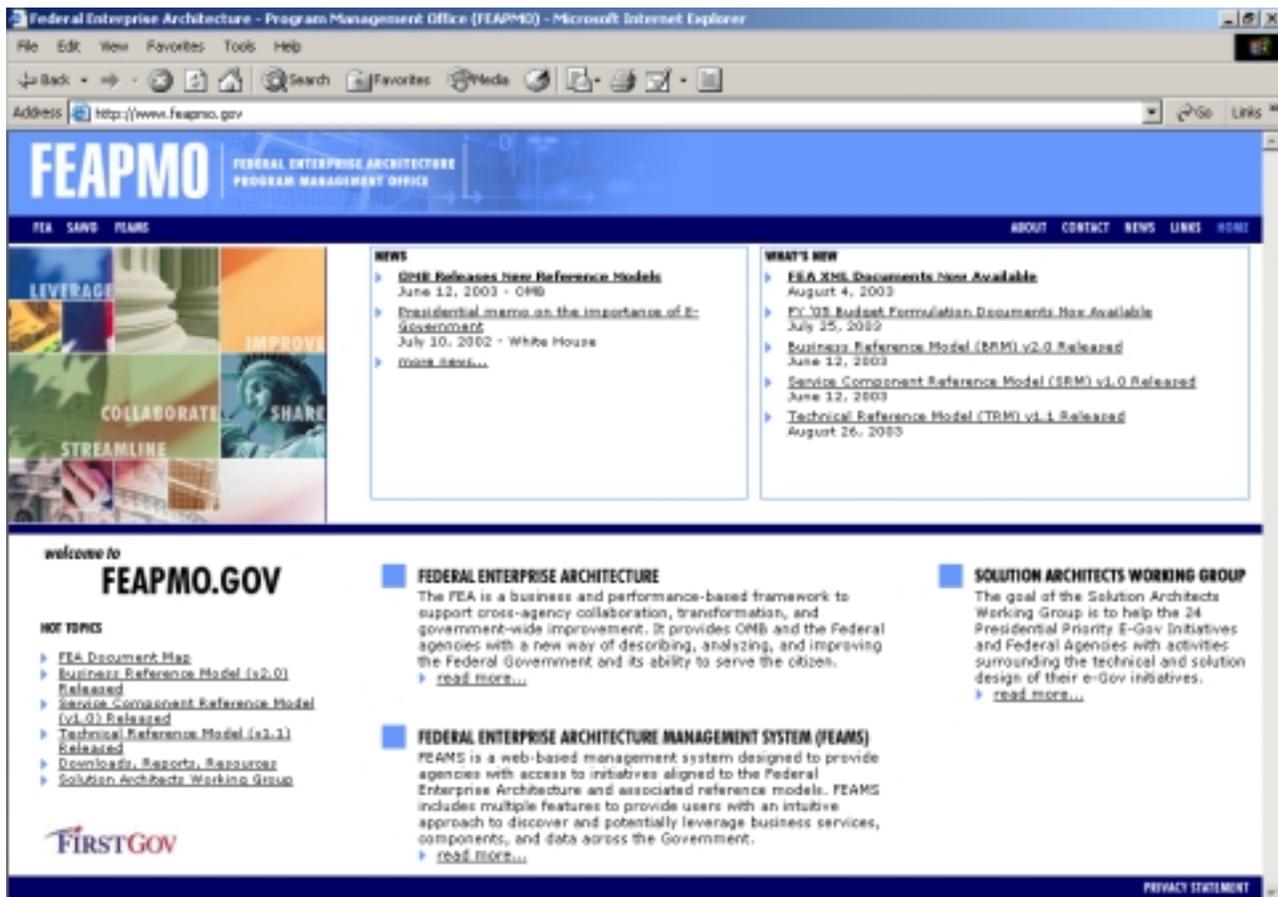
The FEA-PMO will also seek to further engage the financial management and human capital communities to improve the PRM.

## THE FEA-PMO WILL CONTINUE TO COMMUNICATE WITH AGENCIES

For the PRM and other FEA Reference Models to truly help agencies and OMB, information about the models must be widely and readily available. Acknowledging this, the FEA-PMO has instituted a number of ways through which agencies can learn about the FEA and other related activities. These include:

- The FEA-PMO website, which is [www.feapmo.gov](http://www.feapmo.gov). At the site agencies can access important FEA-related information including downloading Extensible Markup Language (XML) versions of the latest reference models. A screenshot of this web site is shown in Figure 4 below:

**FIGURE 4: THE FEA-PMO WEB SITE, WWW.FEAPMO.GOV**



- Reference model release documents, such as this one for the PRM;
- The Federal Enterprise Architecture Management System (FEAMS);
- Public forums and conferences; and
- Regularly scheduled council and agency meetings.

## PROVIDING COMMENTS ON THE PRM AND OTHER FEA REFERENCE MODELS

---

The FEA-PMO will accept comments on the PRM Version 1.0 and other FEA reference models at any time. The FEA-PMO will seek to address all comments submitted.

Comments may be provided by e-mail, telephone, mail, fax, or in-person discussions with FEA-PMO staff. Those wishing to comment on the PRM are encouraged to visit [www.feapmo.gov](http://www.feapmo.gov) for additional information about the FEA reference model framework.

- Comments can be e-mailed to [support@feapmo.gov](mailto:support@feapmo.gov). The e-mail should include a contact name, e-mail address, and phone number.
- Comments can be provided by telephone to FEA-PMO staff by calling (202) 395-0379. If no one is available to take your call, leave a detailed message and your phone call will be returned.
- Comments can be mailed to the E-Gov Program Management Office located in the New Executive Office Building.
- Comments can be faxed to (202) 395-0342. The fax should include a contact name, phone number, and return fax number.

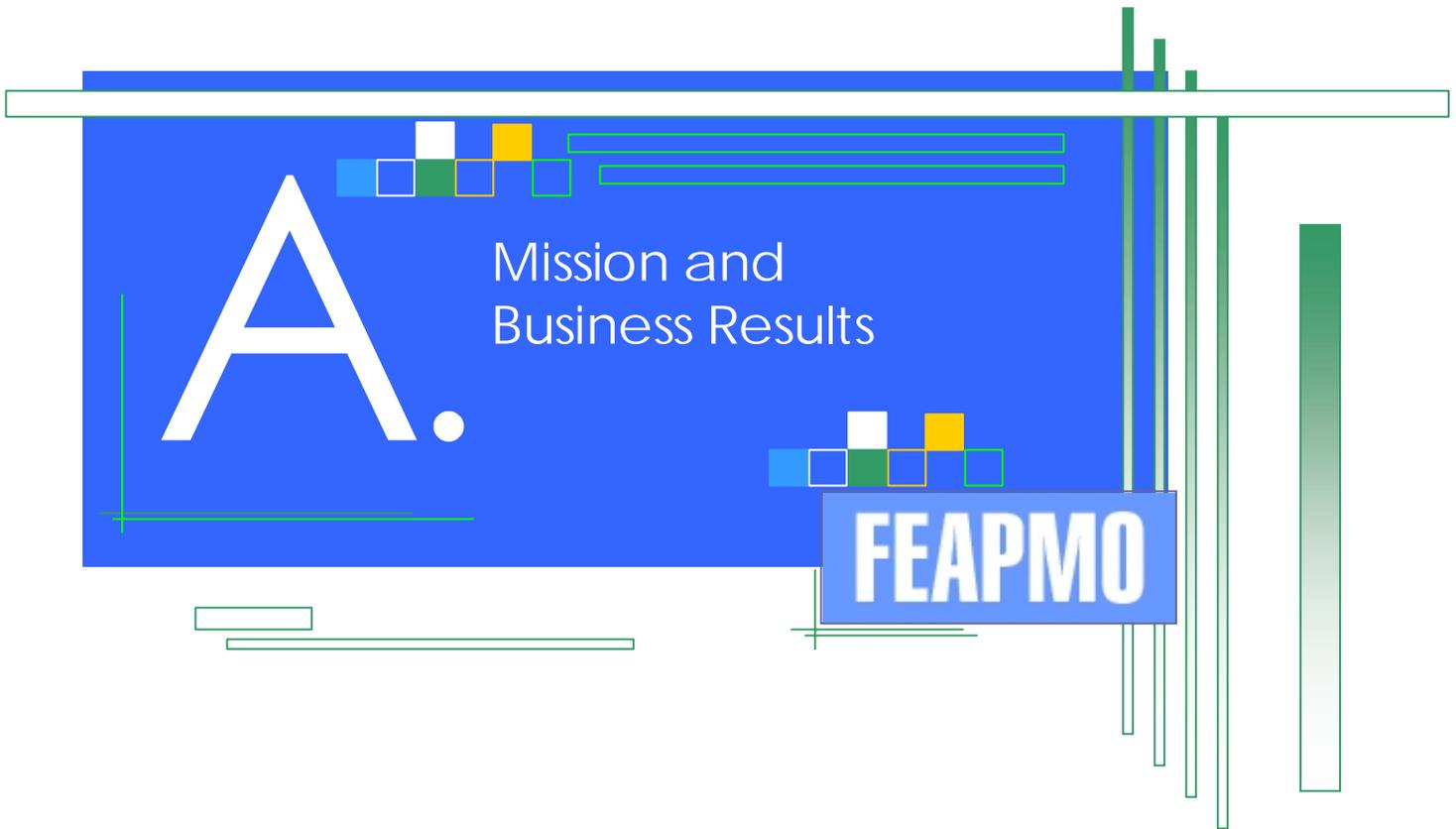
## NEXT STEPS FOR THE PRM

---

Key next steps for the PRM include:

- Agencies use PRM Version 1.0 to improve performance as required in OMB Circular A-11 when submitting FY 2005 Exhibit 300s for DME IT initiatives. The PRM should be used in the context of what performance gaps and goals the proposed IT investment will impact. Use of the PRM should also be in the context of agency EA efforts and PART assessments where applicable.
- OMB will assess agency Exhibit 300 submissions for DME IT initiatives to determine (1) the extent of alignment with the PRM (2) lessons learned and examples to incorporate into PRM Version 2.0 and (3) potential collaboration and performance improvement opportunities.
- The FEA-PMO will continue to accept comments on PRM Version 1.0 and formally seek further agency feedback and examples as it develops PRM Version 2.0 for use in the FY 2006 budget formulation process.
- Seek to further integrate the PRM with the PART, GPRA, and key CFO initiatives, including the OMB "Super Circular" on financial management and reporting.
- Seek to further refine the placeholder "Human Capital" and "Other Fixed Asset" Measurement Areas by working with key councils and decision-makers, including OPM and the newly appointed Chief Human Capital Officers.

As with the evolution from the draft PRM to PRM Version 1.0, the FEA-PMO will use standardized criteria grounded in the main purposes of the PRM to guide how the PRM is improved from Version 1.0 to Version 2.0.



## APPENDIX A: MISSION AND BUSINESS RESULTS MEASUREMENT CATEGORIES AND GENERIC MEASUREMENT INDICATORS

This Appendix provides the Generic Measurement Indicators for the three Measurement Categories of the Mission and Business Results Measurement Area of the PRM. These categories are Services for Citizens, Support Delivery of Services, and Management of Government Resources. This Measurement Area aligns with Business Areas described in the Business Reference Model Version 2.0. For the purpose of completing Exhibit 300, each new DME IT initiatives must identify or develop at least one Operationalized Measurement Indicator in the Mission and Business Results Measurement Area. The Operationalized Measurement Indicators agencies create should be determined by referencing the outcome indicators identified through GPRA Strategic Plans, budget submissions, and PART assessments.

**Note the placeholder for “Operationalized” Measurement Indicators. Agencies’ use of the PRM from this point forward will create the actual inventory of Operationalized Measurement Indicators.**

## MISSION AND BUSINESS RESULTS (SERVICES FOR CITIZENS)

This Measurement Category captures the extent to which results related to services that the federal government provides both to and on behalf of the American citizen are achieved.

Measurement Category <sup>9</sup>	Generic Measurement Indicator Grouping <sup>10</sup>	"Operationalized" Measurement Indicators <sup>11</sup>
<b>COMMUNITY AND SOCIAL SERVICES-</b> Community and Social Services includes all activities aimed at creating, expanding, or improving community and social development, social relationships, and social services in the United States. This includes all activities aimed at locality-specific or nationwide social development and general social services. This Line of Business includes general community development and social services programs, as well as earned and unearned benefit programs that promote these objectives.	<ul style="list-style-type: none"> <li>• Homeownership Promotion</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Community and Regional Development</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Social Services</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Postal Services</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>DEFENSE AND NATIONAL SECURITY -</b> Protect and advance U.S. national interests and, if deterrence fails, decisively defeat threats to those interests	<ul style="list-style-type: none"> <li>• Strategic National and Theatre Defense</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Operational Defense</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Tactical Defense</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

<sup>9</sup> These are the Lines of Business from the Business Reference Model Version 2.0. Lines of Business in the Mode of Delivery Area are addressed in the Processes and Activities Measurement Area of the PRM.

<sup>10</sup> These are the Sub-Functions from the Business Reference Model Version 2.0.

<sup>11</sup> As agencies use the PRM for their specific IT initiatives they will create the inventory of operationalized indicators.

Measurement Category <sup>9</sup>	Generic Measurement Indicator Grouping <sup>10</sup>	"Operationalized" Measurement Indicators <sup>11</sup>
<p><b>DISASTER MANAGEMENT</b>- Disaster Management involves the activities required to prepare for, mitigate, respond to, and repair the effects of all disasters whether natural or man-made.</p>	<ul style="list-style-type: none"> <li>Disaster Monitoring and Prediction</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Disaster Preparedness and Planning</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Disaster Repair and Restore</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Emergency Response</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<p><b>ECONOMIC DEVELOPMENT</b>- Economic Development includes the activities required to promote commercial/industrial development and to regulate the American financial industry to protect investors. It also includes the management and control of the domestic economy and the money supply, and the protection of intellectual property and innovation.</p>	<ul style="list-style-type: none"> <li>Business and Industry Development</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Industry Sector Income Stabilization</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Intellectual Property Protection</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Financial Sector Oversight</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<p><b>EDUCATION</b> – Education refers to those activities that impart knowledge or understanding of a particular subject to the public. Education can take place at a formal school, college, university or other training program. This Line of Business includes all government programs that promote the education of the public, including both earned and unearned benefit programs.</p>	<ul style="list-style-type: none"> <li>Elementary, Secondary, and Vocational Education</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Higher Education</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Cultural and Historic Preservation</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

Measurement Category <sup>9</sup>	Generic Measurement Indicator Grouping <sup>10</sup>	"Operationalized" Measurement Indicators <sup>11</sup>
	<ul style="list-style-type: none"> <li>• Cultural and Historic Exhibition</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>ENERGY</b> - Energy refers to all actions performed by the government to ensure the procurement and management of energy resources, including the production, sale and distribution of energy, as well as the management of spent fuel resources. Energy management includes all types of mass-produced energy (e.g., hydroelectric, nuclear, wind, solar, or fossil fuels). Also included in this Line of Business is the oversight of private industry.</p>	<ul style="list-style-type: none"> <li>• Energy Supply</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Energy Conservation and Preparedness</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Energy Resource Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Energy Production</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>ENVIRONMENTAL MANAGEMENT</b> - Environmental Management includes all functions required to monitor the environment and weather, determine proper environmental standards and ensure their compliance, and address environmental hazards and contamination.</p>	<ul style="list-style-type: none"> <li>• Environmental Monitoring and Forecasting</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Environmental Remediation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Pollution Prevention and Control</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>LAW ENFORCEMENT</b> - Law Enforcement involves activities to protect people, places, and things from criminal activity resulting from non-compliance with U.S. laws. This includes patrols, undercover operations, response to emergency calls, as well as arrests, raids, and seizures of property.</p>	<ul style="list-style-type: none"> <li>• Criminal Apprehension</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Criminal Investigation and Surveillance</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Citizen Protection</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Crime Prevention</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Leadership Protection</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

Measurement Category <sup>9</sup>	Generic Measurement Indicator Grouping <sup>10</sup>	"Operationalized" Measurement Indicators <sup>11</sup>
	• Property Protection	•
	• Substance Control	
<b>LITIGATION AND JUDICIAL ACTIVITIES-</b> Litigation and Judicial Activities refers to those activities relating to the administration of justice.	• Judicial Hearings	•
	• Legal Defense	•
	• Legal Investigation	•
	• Legal Prosecution and Litigation	•
	• Resolution Facilitation	•
<b>CORRECTIONAL ACTIVITIES-</b> Correctional Activities involves all Federal activities that ensure the effective incarceration and rehabilitation of convicted criminals.	• Criminal Incarceration	•
	• Criminal Rehabilitation	•
<b>HEALTH</b> - 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.	• Illness Prevention	•
	• Immunization Management	•
	• Public Health Monitoring	•
	• Health Care Services	•
	• Consumer Health and Safety	•

Measurement Category <sup>9</sup>	Generic Measurement Indicator Grouping <sup>10</sup>	"Operationalized" Measurement Indicators <sup>11</sup>
<p><b>HOMELAND SECURITY</b>- Homeland Security involves protecting the nation against terrorist attacks. This includes analyzing threats and intelligence, guarding borders and airports, protecting critical infrastructure, and coordinating the response emergencies. The Homeland Security Line of Business is defined by the President’s Strategy on Homeland Security. Note: Some of the Critical Mission Areas from the President’s strategy have already been identified in other Lines of Business in the BRM.</p>	<ul style="list-style-type: none"> <li>• Border and Transportation Security</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Key Asset and Critical Infrastructure Protection</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Catastrophic Defense</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>INCOME SECURITY</b> – Income Security includes activities designed to ensure that members of the public are provided with the necessary means – both financial and otherwise – to sustain an adequate level of existence. This includes all benefit programs, both earned and un-earned, that promote these goals for members of the public.</p>	<ul style="list-style-type: none"> <li>• General Retirement and Disability</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Unemployment Compensation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Housing Assistance</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Food and Nutrition Assistance</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Survivor Compensation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>INTELLIGENCE OPERATIONS</b>- TBD</p>	<ul style="list-style-type: none"> <li>• TBD</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>INTERNATIONAL AFFAIRS AND COMMERCE</b>- International Affairs and Commerce involves the non-military activities that promote U.S. policies and interests beyond our national borders, including the negotiation of conflict resolution, treaties, and agreements. In addition, this function includes: foreign economic development and social/political development; diplomatic relations with other Nations; humanitarian, technical and other developmental assistance to key Nations; and global trade.</p>	<ul style="list-style-type: none"> <li>• Foreign Affairs</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• International Development and Humanitarian Aid</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Global Trade</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>NATURAL RESOURCES</b> - Natural Resources includes all activities involved in conservation planning, land management, and national park/monument tourism that affect the nation's natural</p>	<ul style="list-style-type: none"> <li>• Water Resource Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

Measurement Category <sup>9</sup>	Generic Measurement Indicator Grouping <sup>10</sup>	"Operationalized" Measurement Indicators <sup>11</sup>
and recreational resources, both private and federal. Note: Energy-related natural resources are covered in the Energy Management line of business.	<ul style="list-style-type: none"> <li>• Conservation, Marine and Land Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Recreational Resource Management and Tourism</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Agricultural Innovation and Services</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>TRANSPORTATION</b> - Transportation involves all federally supported activities related to the safe passage, conveyance, or transportation of goods and/or people.	<ul style="list-style-type: none"> <li>• Air transportation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Ground Transportation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Water Transportation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Space Operations</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>WORKFORCE MANAGEMENT</b> – Workforce Management includes those activities that promote the welfare of the Nation’s workforce by improving their working conditions, advancing opportunities for profitable employment, and strengthening free collective bargaining.	<ul style="list-style-type: none"> <li>• Training and Employment</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Labor Rights Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Worker Safety</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>GENERAL SCIENCE AND INNOVATION</b> - General Science and Innovation includes all Federal activities to meet the national need to advance knowledge in this area. This includes general research and technology programs, space exploration activities, and other research and technology programs that have diverse goals and cannot be readily classified into another Line of Business or Sub-function.	<ul style="list-style-type: none"> <li>• Scientific and Technological Research and Innovation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Space Exploration and Innovation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

## MISSION AND BUSINESS RESULTS (SUPPORT DELIVERY OF SERVICES)

This Measurement Category captures the extent to which intermediate outcomes related to support services are achieved.

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>12</sup>
<b>CONTROLS AND OVERSIGHT</b> - Controls and Oversight ensures that the operations and programs of the Federal Government and its external business partners comply with applicable laws and regulations and prevent waste, fraud, and abuse.	• Corrective Action	•
	• Program Evaluation	•
	• Program Monitoring	•
<b>INTERNAL RISK MANAGEMENT AND MITIGATION</b> - Internal Risk Management and Mitigation involves all activities relating to the processes of analyzing exposure to risk and determining appropriate countermeasures.	• Contingency Planning	•
	• Continuity Of Operations	•
	• Service Recovery	•
<b>LEGISLATIVE RELATIONS</b> - Legislative Relations involves activities aimed at the development, tracking, and amendment of public laws through the legislative branch of the Federal Government.	• Legislation Tracking	•
	• Legislation Testimony	•
	• Proposal Development	•
	• Congressional Liaison Operations	•
<b>REGULATORY DEVELOPMENT</b> - Regulatory Development involves activities associated developing regulations, policies, and guidance to implement laws.	• Policy and Guidance Development	•

<sup>12</sup> As agencies use the PRM for their specific IT initiatives they will create the inventory of operationalized indicators.

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>12</sup>
	<ul style="list-style-type: none"> <li>Public Comment Tracking</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Regulatory Creation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Rule Publication</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>PLANNING AND RESOURCE ALLOCATION</b> - Planning and Resource Allocation involves the activities of determining strategic direction, identifying and establishing programs and processes, and allocating resources (capital and labor) among those programs and processes.</p>	<ul style="list-style-type: none"> <li>Budget Formulation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Capital Planning</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Enterprise Architecture</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Budget Execution</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Workforce Planning</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Management Improvement</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>PUBLIC AFFAIRS</b> - Public Affairs involves the exchange of information and communication between the Federal Government, citizens and stakeholders in direct support of citizen services, public policy, and/or national interest.</p>	<ul style="list-style-type: none"> <li>Customer Services</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Official Information Dissemination</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Product Outreach</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>Public Relations</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>REVENUE COLLECTION</b> - Revenue Collection includes the collection of Government income from</p>	<ul style="list-style-type: none"> <li>Debt Collection</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>12</sup>
<p>all sources. Note: Tax collection is accounted for in the Taxation Management Sub-Function in the General Government Line of Business.</p>	<ul style="list-style-type: none"> <li>• User Fee Collection</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>GENERAL GOVERNMENT</b> - General Government involves the general overhead costs of the Federal Government, including legislative and executive activities; provision of central fiscal, personnel, and property activities; and the provision of services that cannot reasonably be classified in any other Line of Business. As a normal rule, all activities reasonably or closely associated with other Lines of Business or Sub-Functions shall be included in those Lines of Business or Sub-Functions rather than listed as a part of general government. This Line of Business is reserved for central government management operations; agency-specific management activities would not be included here.</p>	<ul style="list-style-type: none"> <li>• Federal Asset Sales</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Central Fiscal Operations</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Legislative Functions</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Executive Functions</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Central Property Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Central Personnel Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Taxation Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Central Records and Statistics Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	

## MISSION AND BUSINESS RESULTS (MANAGEMENT OF GOVERNMENT RESOURCES)

This Measurement Category captures the extent to which intermediate outcomes related to back office support that enables government to operate efficiently are achieved.

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>13</sup>
<b>ADMINISTRATIVE MANAGEMENT</b> - Administrative Management involves the day-to-day management and maintenance of the internal infrastructure.	<ul style="list-style-type: none"> <li>Facilities, Fleet, And Equipment Management</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Help Desk Services</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Security Management</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Travel</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Workplace Policy Development And Management</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>FINANCIAL MANAGEMENT</b> - The use of financial information to measure, operate and predict the effectiveness and efficiency of an entity's activities in relation to its objectives. The ability to obtain and use such information is usually characterized by having in place policies, standards, and a system of controls that reliably capture and report activity in a consistent manner.	<ul style="list-style-type: none"> <li>Accounting</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Budget and Finance</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Payments</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Collections and Receivables</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Asset and Liability Management</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

<sup>13</sup> As agencies use the PRM for their specific IT initiatives they will create the inventory of operationalized indicators.

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>13</sup>
	<ul style="list-style-type: none"> <li>• Reporting and Information</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>HUMAN RESOURCE MANAGEMENT</b> - Human Resource Management involves all activities associated with the recruitment and management of personnel.</p>	<ul style="list-style-type: none"> <li>• Benefits Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Personnel Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Payroll Management and Expense Reimbursement</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Resource Training And Development</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Security Clearance Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Staff Recruitment And Employment</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>INFORMATION AND TECHNOLOGY MANAGEMENT</b> - Information and Technology Management involves the coordination of information technology resources and systems required to support or provide a citizen service.</p>	<ul style="list-style-type: none"> <li>• Lifecycle/Change Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• System Development</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• System Maintenance</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• IT Infrastructure Maintenance</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• IT Security</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Record Retention</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Information Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>13</sup>
<b>SUPPLY CHAIN MANAGEMENT</b> - Supply Chain Management involves the purchasing, tracking, and overall management of goods and services.	<ul style="list-style-type: none"> <li>• Goods Acquisition</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Inventory Control</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Logistics Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Services Acquisition</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>



# B.

Customer Results,  
Processes and  
Activities, and  
Technology

FEAPMO

## APPENDIX B: CUSTOMER RESULTS, PROCESSES AND ACTIVITIES, AND TECHNOLOGY MEASUREMENT CATEGORIES AND GENERIC MEASUREMENT INDICATORS

This Appendix provides the Measurement Categories and Generic Measurement Indicators for the Customer Results, Processes and Activities, and Technology Measurement Areas of the PRM. For the purposes of completing Exhibit 300, each new DME IT Initiative must identify or develop at least one Operationalized Measurement Indicator in each of these three Measurement Areas.

**Agencies' use of the PRM from this point forward will create the actual inventory of "Operationalized" Measurement Indicators.**

## CUSTOMER RESULTS

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>14</sup>
Customer Benefit	• Customer Satisfaction	•
	• Customer Retention	•
	▪ Customer Complaints	•
	▪ Customer Impact or Burden	•
	▪ Customer Training	•
Service Coverage	▪ New Customers & Market Penetration	•
	▪ Frequency & Depth	•
	▪ Service Efficiency	•
Timeliness & Responsiveness	• Response Time	▪
	• Delivery Time	•
Service Quality	▪ Accuracy of Service or Product Delivered	•
Service Accessibility	▪ Access	•
	▪ Availability	•

<sup>14</sup> As agencies use the PRM for their specific IT initiatives they will create the inventory of operationalized indicators.

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>14</sup>
	<ul style="list-style-type: none"> <li>▪ Automation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Integration</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

## PROCESSES AND ACTIVITIES

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>15</sup>
Financial	• Financial Management	•
	• Costs	•
	• Planning	•
	• Savings & Cost Avoidance	•
Productivity & Efficiency	• Productivity	•
	• Efficiency	•
Cycle Time & Timeliness	• Cycle Time	•
	• Timeliness	•
Quality	• Errors	•
	• Complaints	•
Security & Privacy	• Security <sup>16</sup>	•
	• Privacy	•

<sup>15</sup> As agencies use the PRM for their specific IT initiatives they will create the inventory of operationalized indicators.

<sup>16</sup> See relevant guidance, for example NIST's draft "Federal Information Processing Standard 199, Standards for Security Categorization of Federal Information and Information Systems."

Measurement Category	Generic Measurement Indicator Grouping	"Operationalized" Measurement Indicators <sup>15</sup>
Management & Innovation	<ul style="list-style-type: none"> <li>• Participation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Policies</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Compliance</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Risk</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Knowledge Management</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Innovation &amp; Improvement</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

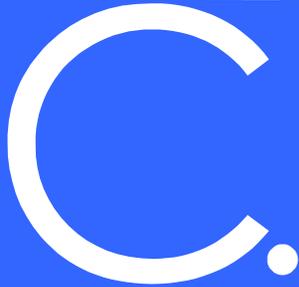
## TECHNOLOGY

Measurement Category	Generic Measurement Indicator Grouping <sup>17</sup>	"Operationalized" Measurement Indicators <sup>18</sup>
Financial	• Overall Costs	•
	• Licensing Costs	•
	• Support Costs	•
	• Operations & Maintenance Costs	•
	• Training & User Costs	•
Quality	• Functionality	•
	• IT Composition	•
	• Compliance & Deviations	•
Efficiency	• Response Time	•
	• Interoperability	•
	• Accessibility	•
	• Load levels	•

<sup>17</sup> Certain Measurement Indicators related to IT management, specifically cost and schedule, are addressed in other areas of the Exhibit 300 and consequently not included in the PRM. Specific Technology indicators for IT security are also addressed in other areas of the Exhibit 300 and not included in the PRM.

<sup>18</sup> As agencies use the PRM for their specific IT initiatives they will create the inventory of operationalized indicators.

Measurement Category	Generic Measurement Indicator Grouping <sup>17</sup>	"Operationalized" Measurement Indicators <sup>18</sup>
	<ul style="list-style-type: none"> <li>• Improvement</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
Information & Data	<ul style="list-style-type: none"> <li>• External Data Sharing</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Data Standardization or Tagging</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Internal Data Sharing</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Data Reliability &amp; Quality</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Data Storage</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	Reliability & Availability	<ul style="list-style-type: none"> <li>• Availability</li> </ul>
<ul style="list-style-type: none"> <li>• Reliability</li> </ul>		<ul style="list-style-type: none"> <li>•</li> </ul>
Effectiveness	<ul style="list-style-type: none"> <li>• User Satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• User Requirements</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• IT Contribution to Process, Customer, or Mission</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>



## Key Terms and List of Sources

FEAPMO

## APPENDIX C: KEY TERMS AND LIST OF SOURCES

This Appendix provides a list of key terms and acronyms related to the PRM and lists some of the primary sources used to develop the PRM.

### KEY TERMS AND ACRONYMS

BRM – Business Reference Model, one of the five models in the Federal Enterprise Architecture reference model framework.

CFO – Chief Financial Officer, generally responsible for agency-wide budget and performance measurement activities.

CIO – Chief Information Officer, generally responsible for agency-wide IT and information management activities.

CTO – Chief Technology Officer, generally responsible for agency-wide IT management activities.

DME – Development, Modernization, or Enhancement, an IT initiative funding category depicting IT efforts other than maintenance or “steady state.”

DRM – Data Reference Model, one of the five models in the Federal Enterprise Architecture reference model framework.

EA – Enterprise Architecture, the discipline of creating a blueprint of an agency’s business, data, applications, and technology.

FEA – Federal Enterprise Architecture, the collection of five inter-related reference models designed to spur cross-agency analysis and collaboration.

FEAMS – Federal Enterprise Architecture Management System, a read-only web-based system that will allow selected federal staff to view how major IT initiatives align with the FEA reference models.

FEA-PMO – Federal Enterprise Architecture Program Management Office, office within the U.S. Office of Management and Budget that is developing the FEA reference model framework.

GPRA – Government Performance and Results Act, requires agencies to produce Strategic Plans, Performance Plans, and Performance Reports.

IT CPIC – IT Capital Planning and Investment Control, set of federal and agency processes designed to Select, Control, and Evaluate IT investments.

IT Project Manager – The individual responsible for managing an IT investment activity.

Line of Business Owner – An agency that has been designated by the President’s Management Council to lead federal-wide collaboration around a Line of Business or Sub-function in the Business Reference Model.

Line of Sight – The indirect or direct cause and effect relationship from a specific IT investment to the processes it supports, and by extension the customers it serves and the mission-related outcomes it contributes to.

Managing Partner – The federal agency that has the lead on one of the 24 Presidential E-Gov Initiatives.

Measurement Area – The highest-level organizing framework of the FEA Performance Reference Model.

Measurement Category – Groupings of Generic Measurement Indicators within each FEA Performance Reference Model Measurement Area.

Measurement Indicator – Generic measurements organized within a FEA Performance Reference Model Measurement Category. These are the starting points for agencies to create the Operationalized Measurement Indicators for their specific environment.

Operationalized Measurement Indicator – The indicator that an agency creates that is uniquely tailored to the agency’s specific environment.

PART – Program Assessment Rating Tool, a set of program evaluation questions used to analyze federal programs that is part of the President’s Budget and Performance Integration initiative.

PRM – Performance Reference Model, one of the five models in the Federal Enterprise Architecture reference model framework.

Program Manager – A business official that is responsible for making decisions and managing a federal program or process.

SRM – Service Component Reference Model, one of the five models in the Federal Enterprise Architecture reference model framework.

TRM – Technical Reference Model, one of the five models in the Federal Enterprise Architecture reference model framework.

PMA – President’s Management Agenda, the list of federal-wide initiatives the President has identified as critical to improving government. These are Budget and Performance Integration, Competitive Sourcing, Expanding E-Government, Improved Financial Management, and Strategic Management of Human Capital.

## LIST OF SOURCES

---

These are some of the primary sources the FEA-PMO used to develop version 1.0 of the Performance Reference Model. Agencies may find this list useful as they seek additional guidance and perspective on the discipline of performance measurement.

1. American Customer Satisfaction Index, a partnership of the University of Michigan Business School, American Society for Quality, and CFI Group, “ACSI: Federal Government Scores,” December 16, 2002.
2. American Management Systems and Mercer, John, “Performance Budgeting for Federal Agencies: A Framework,” March 2002.
3. Anexys, LLC; Indiana University-Bloomington—Institute for Development Studies; META Group, Inc, “Primer on Measuring ROI in E-Government,” 2001.
4. Artley, Will and Suzanne Stroh, “The Performance-Based Management Handbook: Establishing an Integrated Performance Measurement System,” Training Resources and Data Exchange, Performance-Based Management Special Interest Group, U.S. Department of Energy, Oak Ridge Associated Universities, September 2001
5. Ashton, Chris, “Transforming Strategic Performance Through the Balanced Scorecard: How to Drive Effective Strategy Alignment and Execution,” Business Intelligence, 2001
6. Booz Allen Hamilton, “Unbundling the Value Chain: The Internet’s Impact on Supply Relationships,” 2001.
7. Booz Allen Hamilton, “Internal Revenue Service Strategic Measures Framework,” June 2000
8. Booz Allen Hamilton, “Performance Management Case Study: Balanced Scorecard Development for a Healthcare Company,” August 1997
9. Brown, Mark Graham, “Keeping Score,” Quality Resources, 1996
10. Brown, Maury Maureen, “The Benefits and Costs of Information Technology Innovations,” Public Performance & Management Review, June 2001.
11. Center for Strategic Management Inc. for the National Institutes of Health, “A Guide to Developing Effective Information Technology Performance Measures,” November 1999

12. Chief Financial Officer's Council, "Integrating Performance Measurement Into the Budget Process," 1997
13. Chief Information Officer's Council, "Value Measuring Methodology," October 2002.
14. Christopher, William, and Carl Thor, "Handbook for Productivity Measurement and Improvement," 1993
15. Chief Financial Officers Act of 1990
16. Clinger-Cohen Act of 1996
17. Congressional Budget Office, "Using Performance Measures in the Federal Budget Process," July 1993
18. Department of Defense Financial Management Modernization Program, "DOD Financial Management Enterprise Architecture," 2002.
19. Department of Defense, U.S. Army, "Practical Software and Systems Measurement," October 2000.
20. E-Government Act of 2002
21. Federal Acquisition Streamlining Act of 1994
22. Federal Financial Management Improvement Act of 1996
23. Frost, Bob, "Measuring Performance," Fairway Press, 1998
24. General Services Administration, "Performance Based Management: Eight Steps to Develop and Use Information Technology Performance Measures Effectively," 1996
25. General Services Administration, "GSA FY 2002 Performance Plan," 2000
26. Government Performance and Results Act of 1993
27. Government Paperwork Elimination Act of 1998
28. Harbour, Jerry L., "The Basics of Performance Measurement," Quality Resources, 1997
29. Harvard Business Review, "On Measuring Corporate Performance," Harvard Business School Press, 1998
30. Kaplan, Robert S. and Norton, David P., "Having Trouble with Your Strategy? Then Map It," Harvard Business Review, September-October 2000.
31. Kaplan, Robert S. and Norton, David P., "Putting the Balanced Scorecard to Work," Harvard Business Review, September – October 1993
32. Kaplan, Robert S. and Norton, David P., "The Balanced Scorecard – Measures that Drive Performance," Harvard Business Review, Vol. 70, No. 2 (January – February 1992)
33. Kirkpatrick, Sharon, "The Program Logic Model: what, why, and how?," December 2001

34. Intergovernmental Advisory Board Federal of Government Information Processing Councils, "High Payoff in Electronic Government: Measuring the Return on E-Government Investments," March 31, 2003
35. Industry Advisory Council, Enterprise Architecture Special Interest Group Briefing, January, 2003
36. Morris, Matthew, "The State of Performance Measurement in the Capital Budget Development Process," The Public Manager, 1998
37. National Academy of Public Administration, Center for Improving Government Performance, "Designing Effective Performance Measures – Focus Paper," June 1999
38. National Academy of Public Administration, Center for Improving Government Performance, "Helpful Practices in Improving Government Performance," June 1998
39. National Electronic Commerce Coordinating Council, "E-Government Strategic Planning: A White Paper," December 2000
40. National Institute of Standards and Technology, Baldrige National Quality Program, "2002 Criteria for Performance Excellence," 2002
41. National Partnership for Reinventing Government, "Balancing Measures: Best Practices in Performance Management," 1999
42. National Institute for Standards and Technology, "Malcom Baldrige National Quality Award 2002 Award Recipient, Health Care Category, SSM Health Care," 2002
43. National Commission on the Public Service, "Urgent Business for America: Revitalizing the Federal Government for the 21<sup>st</sup> Century," January 2003
44. Office of Management and Budget "Performance Measurement Challenges and Strategies," 2003.
45. Office of Management and Budget, "Budget Procedures Memorandum 861: Completing the Program Assessment Rating Tool (PART) for the FY2005 Review Process," May 2003.
46. Office of Management and Budget, "E-Government Strategy: Implementing the President's Management Agenda for E-Government," April 2003.
47. Office of Management and Budget, "Budget of the United States Government, Fiscal Year 2004," February 2003.
48. Office of Management and Budget, Federal Enterprise Architecture Program Management Office, "The Business Reference Model Version 1.0," July 2002
49. Office of Management and Budget, "The President's Management Agenda: Fiscal Year 2002," 2002
50. Office of Management and Budget, "OMB Circular A-11," 2002
51. Office of Management and Budget, "OMB Circular A-130," 2001

52. Office of Management and Budget, "Instructions for the Program Assessment Rating Tools," April 18, 2002
53. Office of Management and Budget, "Spring Review Program Effectiveness Ratings: Guidance for Selecting Programs," 2002
54. Office of Management and Budget, "Memorandum M-02-06, Planning for the President's Fiscal Year 2004 Budget Request," April 24, 2002
55. Office of Management and Budget, "Managing for Results: Budget and Performance Integration: Program Performance Assessment," June 2002
56. Office of Management and Budget, "Major Issues for Consideration in Revising the Program Assessment Rating Tool (PART): Preliminary Recommendations by the Performance Evaluation Team (PET)"
57. Office of Management and Budget, Federal Enterprise Architecture Program Office, "The Business Reference Model Version 1.0: A Foundation for Government-wide Improvement," 2002
58. Office of Management and Budget, "Primer on Performance Measurement," 1995
59. Office of Strategic Planning and Budgeting, State of Arizona, "Managing for Results," January 1998
60. Performance Institute, "Creating a Performance-Based Electronic Government," October 2002
61. Porter, Michael E, "Competitive Advantage," 1985
62. Reilly, Gregory and Reilly, Raymond, "Using a Measure Network to Understand and Deliver Value," Journal of Cost Management, 1999
63. Social Security Administration, "Building a Methodology for Measuring the Value of E-Services," 2002
64. Social Security Administration, "Strategic Plan"
65. Social Security Administration, "Performance Plan Fiscal Year 2001 and Revised Final Fiscal Year 2000 Performance Plan"
66. State of Iowa, "The Iowa Citizen-Initiated Performance Assessment (CIPA) Project," 2002
67. Transportation Security Administration: Performance targets and Action Plan, 180 Day Report to Congress," May 19, 2002
68. University of Wisconsin-Extension Program Development & Evaluation, "Logic Model," 2002
69. U.S. Department of Agriculture, "FY 2003 Annual Performance Plan and Revised Plan for FY 2002," March 2002

70. U.S. Department of Agriculture, Animal and Plant Health Inspection Service, "Strategic Plan (2000 – 2005)
71. U.S. Department of Commerce, Bureau of Export Administration, "FY 2001 Annual Performance Report and FY 2003 Annual Performance Plan"
72. U.S. Department of Energy, "Guidelines for Performance Measurement," 1996
73. U.S. Department of Justice, "FY01 Performance Report/ FY 02 Revised Final Performance, FY03 Performance Plan," 2002
74. U.S. Department of Labor, "IT Performance Measurement Guidebook," 2002
75. U.S. Department of Labor, "IT Project Management," 2002
76. U.S. Department of Labor, "E-Government Strategic Plan: Transforming into a Digital Department," February 2003
77. U.S. Department of State, "Program Performance Report: Fiscal Year 2001"
78. U.S. Department of Transportation, "2003 Performance Plan and 2001 Performance Report," 2002
79. U.S. Department of Treasury, Financial Management Service, "Performance Measurement Guide," November 1993
80. U.S. Department of Treasury, "FY 2001 Performance Report"
81. U.S. Department of Treasury, U.S. Customs Service, "Strategic Plan, Fiscal Years 2000-2005"
82. U.S. Department of Treasury, U.S. Customs Service, "Performance Report for FY 2001"
83. U.S. General Accounting Office, "Program Evaluation: An Evaluation Culture and Collaborative Partnerships Help Build Agency Capacity," May 2003
84. U.S. General Accounting Office, "Performance Budgeting: Current Developments and Future Prospects," April 2003
85. U.S. General Accounting Office, "Major Management Challenges and Program Risks: A Governmentwide Perspective," January 2003
86. U.S. General Accounting Office, "Managing for Results: Efforts to Strengthen the Link Between Resources and Results at the Veteran's Health Administration," December 2002
87. U.S. General Accounting Office, "Electronic Government: Selection and Implementation of the Office of Management and Budget's 24 Initiatives," November 2002
88. U.S. General Accounting Office, "Program Evaluation: Strategies for Assessing How Information Dissemination Contributes to Agency Goals," September 2002
89. U.S. General Accounting Office, "Results-Oriented Cultures: Insights for U.S.
90. Agencies from Other Countries' Performance Management Initiatives," August 2002

91. U.S. General Accounting Office, "Performance Reporting: Few Agencies Reported on the Completeness and Reliability of Performance Data," April 2002
92. U.S. General Accounting Office, "Managing for Results: Agency Progress in Linking Performance Plans with Budgets and Financial Statements," January 2002
93. U.S. General Accounting Office, "Major Management Challenges and Program Risks: A Governmentwide Perspective," January 2001
94. U.S. General Accounting Office, "Program Evaluation: Studies Helped Agencies Measure or Explain Program Performance," September 2000
95. U.S. General Accounting Office, "Managing for Results: Emerging Benefits from Selected Agencies' Use of Performance Agreements," October 2000
96. U.S. General Accounting Office, "Management Reform: Elements of Successful Improvement Initiatives," October 1999
97. U.S. General Accounting Office, "Managing for Results: Measuring Program Results that are Under Limited Federal Control," December 1998
98. U.S. General Accounting Office, "Managing for Results: The Statutory Framework for Performance-Based Management and Accountability," January 1998
99. U.S. General Accounting Office, "Performance Measurement and Evaluation: Definitions and Relationships," 1998
100. U.S. General Accounting Office, "Executive Guide: Measuring Performance and Demonstrating Results of Information Technology Investments," March 1998
101. U.S. General Accounting Office, "Executive Guide: Effectively Implementing the Government Performance and Results Act," June 1996
102. U.S. House of Representatives, Subcommittee on Government Efficiency, Financial Management and Intergovernmental Relations and the Subcommittee on Legislative Budget Process of the Rules Committee, "Linking Program Funding to Performance Results," Hearing before the Committee on Government Reform, September 19, 2002
103. U.S. House of Representatives, Committee on Government Operations, "Government Performance and Results Act of 1993: Committee Report" (Report 103-106), May 25, 1993
104. U.S. Senate, Committee on Governmental Affairs, "Government at the Brink," June 2001
105. U.S. Senate, Committee on Governmental Affairs, "Government Performance and Results Act: Committee Report" (Report 102-49), September 29, 1992
106. U.S. Senate, Committee on Governmental Affairs, "Measuring Program Performance: Getting the Most Bang for the Buck," Hearing before the Committee on Governmental Affairs, May 23, 1991