Montgomery County Government
Enterprise Architecture
Performance Architecture

Department of Technology Services
Montgomery County Government, MD

VERSION	DATE	DESCRIPTION	AUTHOR
1.0	16 March, 2011	Initial version	Mike Tarquinio, Montgomery County Government
1.1	2 January, 2013	Fix links	Mike Tarquinio Montgomery County Government

Table of Contents

1.0 Introduction

Montgomery County takes advantage of mature and emerging technologies in areas of data, voice and radio networking, datacenter operations and monitoring, hardware and software systems deployment, and application development. This document, prepared by the Department of Technology Services (DTS), is part of Montgomery County's Enterprise Architecture. Specifically, this document covers the Performance Architecture.

The Performance Architecture Document reflects key information around how the County collects and acts upon metrics around its Enterprise Architecture. It is prepared in concert with the rest of the Enterprise Architecture and the DTS Strategic Plan and is designed to support the initiatives outlined in the plan.

The County has three essential organizational resources: people, process and technology.   People are the County's greatest resource; Process binds them together into a coherent workforce; and Technology is the tool.

1.1 Purpose

The purpose of this document is to document key information about how the County collects and acts upon Metrics around its Enterprise Architecture.

1.2 Document Format

The Montgomery County Enterprise Architecture consists of five separate sub-architectures: Business, Technical, Data, Application, and Performance. Each one of the sub-architectures is a standalone document but all five are subcomponents of the entire Enterprise Architecture.

This document addresses the Performance Architecture. It covers:

- CountyStat
- DTS Project Management office (PMO) metrics
- Desktop Computer Modernization (DCM) metrics
- Enterprise Architecture Domain Metrics

The County has assembled information detailing its technologies and its direction.   To avoid releasing potentially sensitive information, the County follows a strict release process that involves review at multiple levels (See Section 10-617(g) of the Maryland Public Information Act).

The owner of all five sub-architecture documents and the rollup document is Mike Tarquinio (michael.tarquinio@montgomerycountymd.gov), the Department of Technology Service Enterprise Architect. The Department is located at the Department of Technology Services, 101 Monroe Street, 13th Floor, Rockville, Maryland 20850.

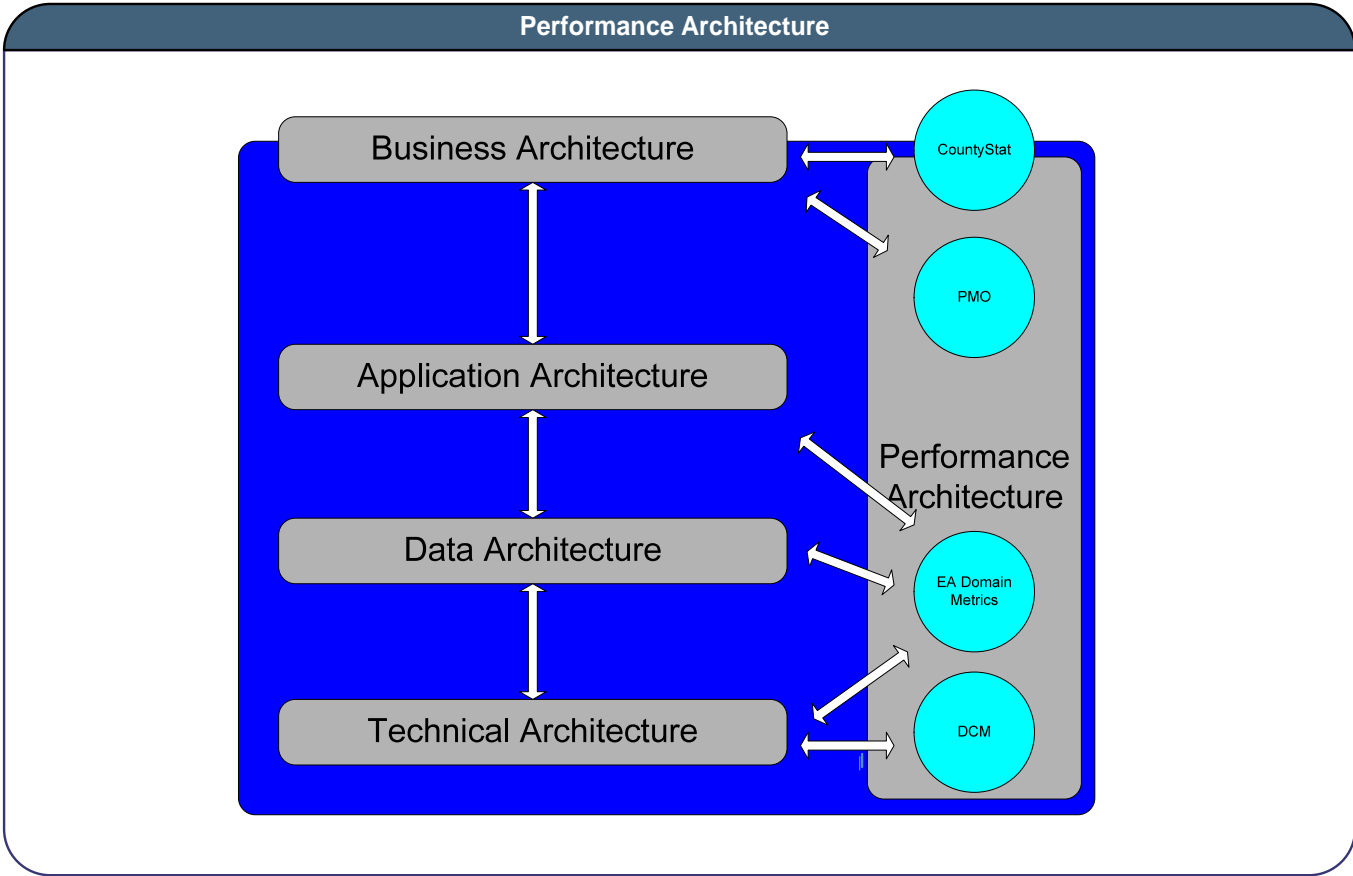## 1.3 Performance Architecture Document Change Management

The Montgomery County Government Enterprise Architecture Performance Architecture document is part of the County's documented Enterprise Architecture and is published by the DTS Enterprise Architect. The Enterprise Architect is responsible for working with DTS Content Experts and department representatives (through TOMG) to document the Performance Architecture. The document adheres to stringent change management controls and follows a defined change management process.

Change requests can be initiated via DTS content experts, Technical Operational Management Group (TOMG) members, or the DTS Enterprise Architect. Contact the DTS Enterprise Architect Mike Tarquinio (michael.tarquinio@montgomerycountymd.gov) for further details.

1.4 References

1. Montgomery County Office of Management and Budget – Administrative Procedure 6-1, June 14, 2004; *Use of the County-Provided Internet, Intranet, and Electronic Mail Services*;

2. Montgomery County Office of Management and Budget – Administrative Procedure 6-6, May 4, 2005; *Information Technology Policies and Procedures*;

3. Montgomery County Office of Management and Budget – Administrative Procedure 6-7, May 4, 2005; *Information Resources Security*;

4. Montgomery County Department of Technology Services, September 2004; *Computer Security Guideline*;

5. Montgomery County Department of Technology Services, 2009; *Enterprise Technology Strategic Plan 2009 – 2012;*

6. Montgomery County Government, May 31, 2007; *Montgomery County Code*;

7. Montgomery County Department of Technology Services, July 19, 2007; *Enterprise Architecture Configuration Management Plan*

8. Montgomery County Department of Technology Services, April 14, 2008; *Montgomery County Government Public Safety Information Technology Architecture*

9. Montgomery County Government; *About County Government*; http://www.montgomerycountymd.gov/resident/about.html ; page accessed 1/2/2013

10. Montgomery County Government; *The Charter and County Code*; http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/Content/countyatty/charter.asp ; page accessed 3/14/2011

11. Montgomery County Government; *Montgomery County Organization Chart*; http://www.montgomerycountymd.gov/government/orgchart.html ; page accessed 1/2/2013

2.0 Performance Architecture Overview

Performance Architecture

Business Architecture

Application Architecture

Data Architecture

Technical Architecture

CountyStat

PMO

Performance Architecture

EA Domain Metrics

DCM

2.1 CountyStat

The main business process for tracking and improving operational efficiency is through the County's CountyStat program (http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/content/exec/stat/index.asp). The program supports the County Executive and the Chief Administrative Officer through the use of real-time data to analyze past, present, and future performance strategies.

The mission statement for the County is documented on the County Web Site at (http://www.montgomerycountymd.gov/Content/government/mission_statement.pdf). To support the mission the County has created the CountyStat program whose mission statement is documented at http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/content/exec/stat/about.asp.

The CountyStat program works with all of the departments to align their work to the County Mission. Each department defines performance plans (http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/content/exec/stat/performance.asp) that are designed to support their mission. The CountyStat program then meets with each department on a regular basis in an open forum to discuss their performance results and measures (http://www2.montgomerycountymd.gov/countystat/). The measures allow the department and CAO to identify problems early and to institute corrective action plans. The plans are then regularly tracked.

The strategic direction for the County is embodied in these performance plans and operational focus on the strategy is maintained through the metrics and regular public meetings.

2.2 PMO Metrics

Project Management Dashboard

The PMO Dashboard establishes a quantitative status reporting mechanism to provide clarity and consistency in assessing and reporting project status and overall health. It is important to establish a set of key performance indicators for projects so that critical information is reported to key project stakeholders in a consistent and timely manner. The dashboard provides decision makers quick access to projects in trouble or heading for trouble so that corrective actions can be identified as efficiently as possible.

Figure 1 - Project Management Dashboard
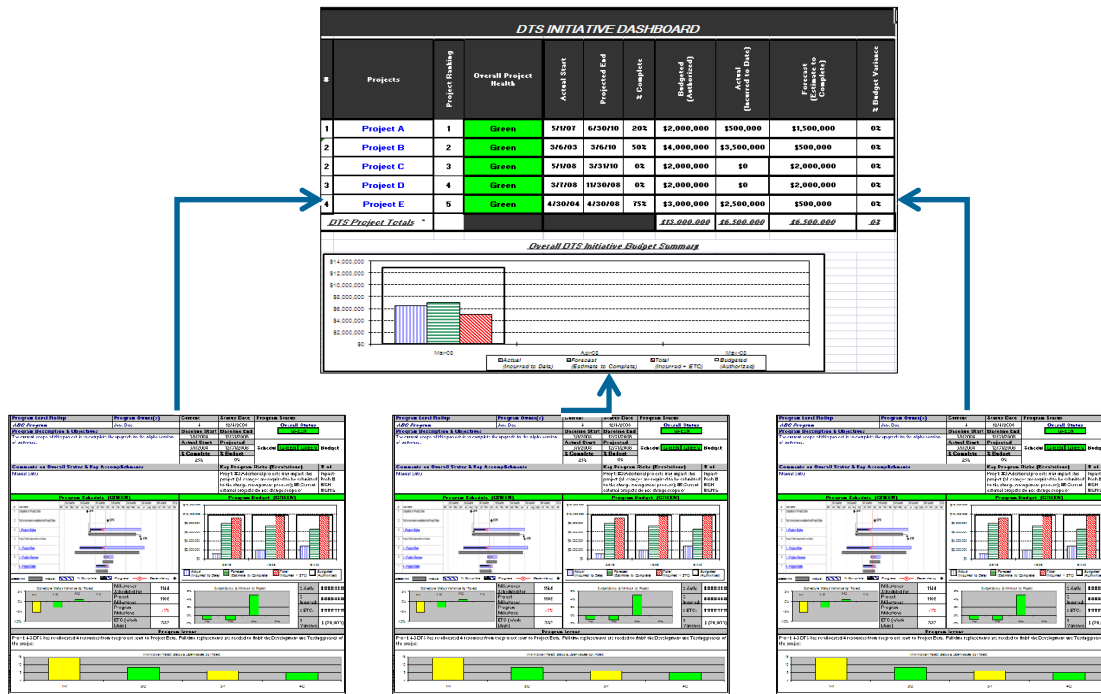
The Project Management Office has established health thresholds for five key reporting areas:
- Schedule
    - Is this project on schedule?
    - Are the subtasks of this project on schedule?
- Budget
    - Is this project on budget?
    - Is the spending plan on track?
- Risk
    - Is the project operating in a high level of risk?
    - Are there any risks which require escalation?

- Issues
    - Is the total number of issues (and severity) a cause for concern?
    - Are there any issues which require escalation?
- Scope
    - Are the pending scope changes impacting this project?

Project health in each area is represented by a "Red, Yellow, Green" health indicator in accordance with actual project performance against established thresholds. An overall project health indicator is also calculated based on project performance metrics.

In addition to providing a "current snapshot" of project performance, the PMO Dashboard reports on a running 3-month accumulation of project performance metrics in order to determine the direction a project is heading in a specific reporting area (improving or regressing). Trending information is important for decision makers to consider in evaluating whether a project's current plan will result in improved performance.

All information on the PMO Dashboard is derived from the tools that the project managers use in the day-to-day execution of their projects.

2.3 Desktop Computer Modernization (DCM) Dashboard

DCM developed a state-of-the-art business intelligence/dashboard reporting system that has produced significant operational benefits. The ability to capture and analyze IT service metrics is essential to providing quality support to the County's staff in the most cost effective manner possible. Recognizing the value that could be derived from having real-time access to real-time data, DCM launched a program to establish a "Dashboard" reporting system that would facilitate decision making and planning through timely and available operational, technical, and financial metrics in an easy to access, easy to use format. The information this system provides to the County's IT management team has produced cost savings, changed the manner in which problems are addressed, and become an integral part of the County's extensive quality management and continuous improvement programs.

The dashboards, along with the business intelligence system that feeds the dashboards, has produced unprecedented insight into the performance and status of the operations supporting the County's 10,000+ personal computers and laptops. The data visualization of the performance dashboards makes finding the key information easy and intuitive. The data can be easily navigated, can be programmatically controlled to highlight threshold exceptions, and is presented in ways that are designed to specifically reflect the business processes and metrics that are critical to running our programs. Exception situations and trends portending towards potential problems are easily identified before they become actual problems. The integrated ability to drill-down from overview graphs to multiple levels of detailed support data provides users with immediate access to the relevant information they need, and all of the information is displayed in easily-understandable formats.

The County's business intelligence/dashboard reporting system has established the viability and the benefits of making real-time data available to facilitate management and planning for any organization in which immediate access to metrics and financial data can enhance decision making.

2.4 Enterprise Architecture Domain Metrics

DTS has developed a data warehouse around its Enterprise Architecture program that tracks information around the enterprise IT shared services (e.g. email, database hosting, application hosting, collaboration, networking, phone) that are offered to county departments and agencies. The metrics generated from the data warehouse are used to improve budget and investment decision making as well as providing a picture of how enterprise IT services are being used within the county. The published metrics (http://www.montgomerycountymd.gov/dts/architecture/index.html) include tracking of departmental use and acceptance of the various Enterprise Domains as well as metrics on the individual domains. With Montgomery County's distributed IT governance, the metrics are used internally to assess cost effectiveness of each shared service and also serve to inform the public in general and vendors in particular on how IT resources are aligned within the county.

The Enterprise Architecture Data Warehouse and Metrics are designed to communicate how the organization has invested in its IT infrastructure. The county continues to make significant investments in IT and must communicate to many parties how future investments and decisions align or impact the architecture and infrastructure.

The following audiences are identified as having need of the metrics that are generated:

- General public
- County employees, including the following subsets of county employees:
    - Technical Operational Management Group (TOMG) members
    - Information Technology Policy Advisory Committee (IPAC) members
    - County departmental IT
    - County council administration
    - County executive staff
    - Department of Technology Services employees
- Vendors responding to RFPs and procurement solicitations
- Auditors

A dashboard was created that provides a unified picture of the various architecture domains (shared services) within the county Enterprise Architecture. With the dashboard an overall view of what departments are using which services and trends around each service is developed.   A sample from the dashboard is included below:

Number of Departments,Groups and Agencies using each Domain
Date run: 1/18/2011
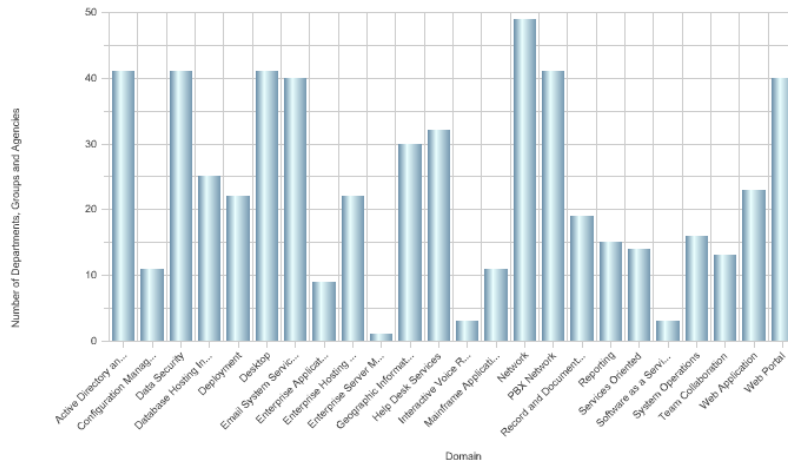
Domain Use by Departments, Groups, and Agencies
Date run: 1/18/2011