TITLE: ENTERPRISE IT PROJECT PORTFOLIO MANAGEMENT

CATEGORY: ENTERPRISE IT MANAGEMENT INITIATIVES

STATE: COMMONWEALTH OF KENTUCKY

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1. EXECUTIVE SUMMARY

Proactive. Transparent. Collaborative. In 2017, IT projects within the Commonwealth often failed to align with those three concepts. Minimal transparency existed across organizational boundaries for both IT project spend and IT project performance. Project management rigor varied across organizations and in many cases, was reactive instead of proactive. Projects involving multiple organizations often lacked collaboration from the conceptual and planning phases through to execution.

As a result, the Commonwealth routinely funding the same IT projects multiple times because of failed attempts. Further, there was no enterprise transparency into the frequency of fiscal impact of the repeated, failed IT projects.

In April 2018, legislation was passed and signed by the Governor to establish the Office of Project Management to perform oversight over large and complex IT projects across the Executive Branch. By December 2019, via the establishment of enterprise IT project portfolio management, Commonwealth IT projects embody the spirit of "Proactive. Transparent. Collaborative." As a result, the Commonwealth is enjoying the following benefits:

- Transparency of IT project spend in excess of $1B (~3x improvement in transparency)

- Transparency of IT project performance across organizational boundaries, including the approximately 20% of projects that are in a yellow or red overall health status each month. This information allows the CIO, for the first time, to allocate resources and drive corrective action for these troubled projects.

- Improvements in project management maturity scores across the enterprise from a composite of 2.32 to 2.90 (3.0 is the target) in just 10 months.

- Trending metrics for project management maturity allowing for targeted coaching and training with the objective of proactive project management.

- Enterprise-level awareness of project risks and issues allowing identification of common root causes impacting multiple projects, even across organizational boundaries.

- Monthly collaboration between Cabinets and the Commonwealth Office of Technology on Cabinet IT project portfolios.

- IT project data benefiting enterprise functions such as enterprise system change management and the Chief Privacy Officer.

These benefits have been realized with a bare bones staff and a relatively small investment in tools. OPM has spent less than $1M on tools and staffing for this project. A less than 0.1% investment compared to the $1B+ IT project portfolio that previously lacked transparency.

Given that approximately 20% of the portfolio is in a yellow or red health status in a given month, that's represents about $200M of projects at risk each month that are now receiving the cross-boundary leadership support needed to either become successful or, in some cases, to be cancelled before spending additional resources on a doomed effort. On average, 5% of the portfolio is returning to green overall health status from a yellow or red status in a given month. That represents a return to the Commonwealth of approximately $50M in projects that may otherwise have failed.

2. PROJECT NARRATIVE

2.1. Concept

Through 2017, the Commonwealth did not have an accurate accounting of IT projects performed by state agencies. While a subset of projects with line item funding from legislature was maintained (typically between $100M to $300M funded in a given biennium), there was no insight into the projects funded by other sources such as grants or self-funded by the agency. Further, there was no consistency to the level of rigor required for managing IT projects, whether funded by legislature or otherwise.

As a result, unknown millions were spent each year on projects that failed to deliver on their objectives without transparency at the enterprise level. Anecdotally (because the Commonwealth lacked the systems and processes for hard data on IT projects), the Commonwealth repeatedly funded multiple $10M+ projects 3 or 4 times each because the same projects failed multiple times each. For example, the Commonwealth funded projects to consolidate state tax systems multiple times. Most recently, the Commonwealth funded $95M for this same concept after multiple prior attempts costing tens of millions of dollars failed to achieve the desired outcome.

The Commonwealth Office of Technology, the Governor and legislature recognized the lack of transparency into IT project spend and sought better visibility into how hundreds of millions of dollars were being spent.

2.2. Significance

In 2018, legislature passed House Bill 244, establishing the Office of Project Management (OPM) and charged it with oversight of large and complex IT projects across the Executive Branch. OPM's initial project was to establish portfolio management in order to:

- Establish an inventory of IT projects conducted across the Executive Branch to:
  - Provide visibility into IT project spend across Cabinets
  - Provide visibility into IT project performance across Cabinets
- Establish project management standards across the Executive Branch applicable to all IT projects within the portfolio
- Evaluate the level of project management maturity for each Cabinet

Once established, OPM implemented the following standards, processes and tools to both provide transparency into all IT projects and to improve the level of project management performed across the Executive Branch.

- **September 2018:** Published the Project Management Framework establishing a base level of project management concepts and standards for all IT projects within the Executive Branch (https://technology.ky.gov/oet/Pages/PMFramework.aspx)

- **December 2018:** Established monthly reporting process for all IT projects across the Executive Branch. As part of this process, OPM meets with each agency IT lead and their project managers to review that agency's IT project portfolio. OPM then reviews the enterprise portfolio with the CIO. To support this process, Microsoft Project Online went live as the enterprise project and portfolio management tool. OPM trained approximately 100 project managers across the Executive Branch on both project management concepts and standards in addition to providing training on the new tool, Project Online. Project reporting required fields can be found at https://technology.ky.gov/oet/Pages/epmo.aspx.

- **February 2019:** Revised the Capital IT project scoring process from a paper-based process to an online process using Decision Lens. Members of the cross-agency

scoring team provided high praise for how streamlined the new process was compared to prior years.

- **March 2019:** Implemented the Project Management Maturity Scorecard to quantify the level of project management performed at each Cabinet.

- **June 2019:** Provided access to enterprise project data to the Chief Privacy Officer to allow that office to identify systems in need of a new Privacy Impact Analysis.

- **July 2019:** Established a quarterly forum for agencies to share what they do on a particular project management related topic so that agencies can learn from each other. The initial topic was on IT project prioritization processes at each agency.

- **August 2019:** Established the Project Management Community portal as a tool for project managers to collaborate with each other across organizational boundaries. In addition to providing a central repository of project management best practices, tools and templates, the portal features a discussion forum and a calendar of upcoming learning opportunities targeted to Project Managers.

- **September 2019:** Implemented a process for IT pilots and proof of concepts (POCs) to ensure all agencies are aware of the pilots and POCs performed by other agencies in order to enable collaboration and drive agencies towards enterprise solutions instead of siloed solutions.

- **October 2019:** Utilizing data from project schedules in Project Online, created a report for the Enterprise System Change Management team to identify planned system changes they may not already be aware of via the change management ticketing system.

- **November 2019:** Created reporting to analyze project risks and issues at the enterprise level providing visibility for the CIO into issues impacting multiple projects across organizational boundaries.

- **December 2019:** Streamlined the IT Capital Project reporting process to legislature by automating the generation of that reporting from Project Online.

2.3.   Impact

The Commonwealth has, for the first time, transparency into spend on IT projects across the Executive Branch. The following charts the growth in that understanding. It should be understood that IT spend on projects did not increase significantly over this period, but the Commonwealth's understanding of just how much is being spent on IT projects improved immensely. By mid-2019, the size of the IT Project Portfolio was understood to be ~120 open projects in any given month with a total budget of over $1B for those open projects. This represents about a 3x increase in the size and value of IT projects the Commonwealth could identify.
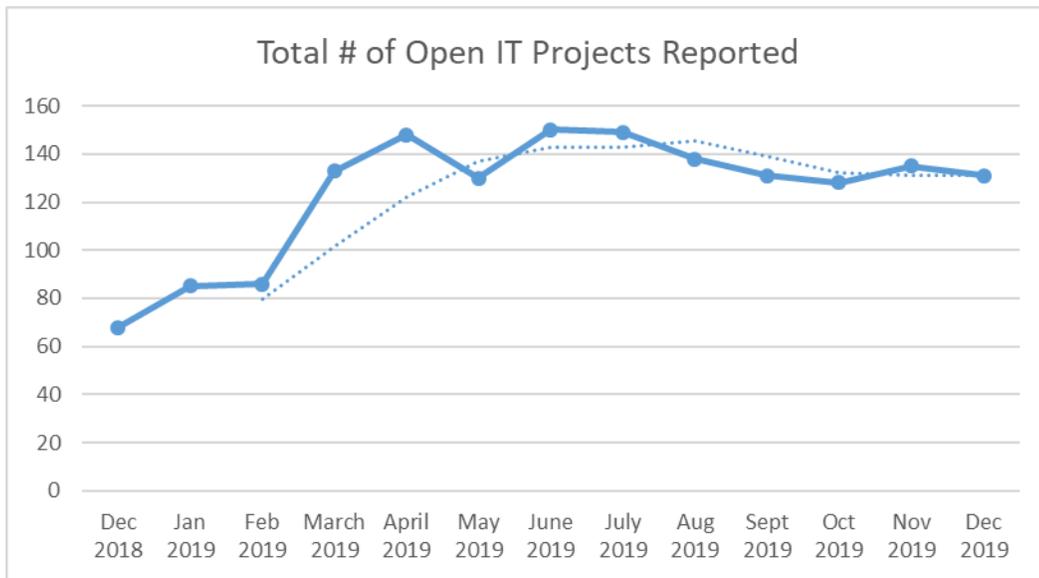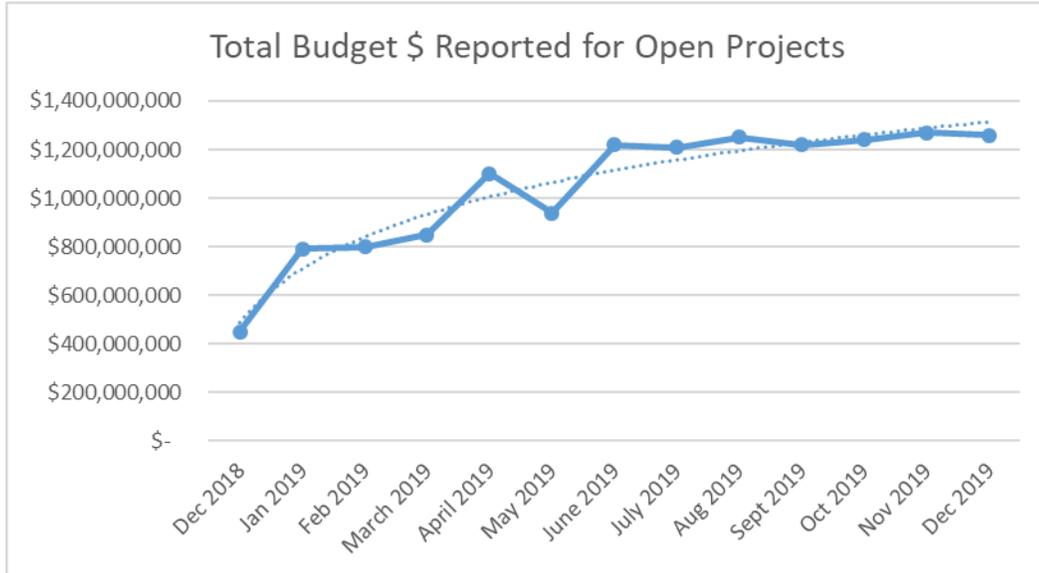
As the size of the IT project portfolio became better understood, data from the monthly reporting was analyzed to quantify the level of project management maturity at each Cabinet. Once a baseline was established, OPM utilized coaching and targeting trainings to improve the rigor of project management in specific domains at each Cabinet. The image below quantifies the improvements to project management maturity across the enterprise. It should be understood that the scorecard utilizes a 5-point capability maturity model scale where 3 is the target for most organizations and 4s or 5s are only appropriate for agencies with the largest, most complex projects. As the history of this data expands, OPM will

quantify the impacts of improved project management maturity scores against project outcomes.

Overall PM Maturity Trend for the Enterprise
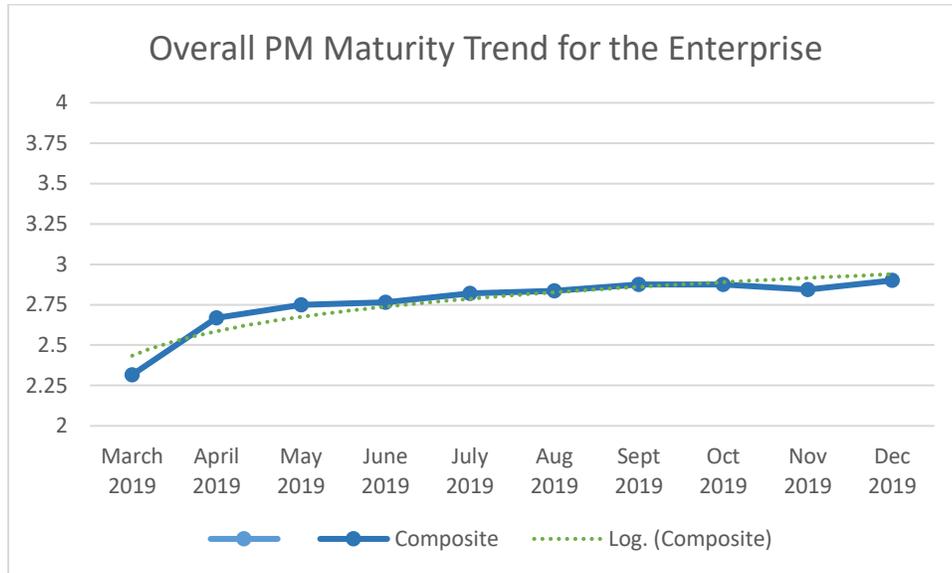
The project management areas of risk and issue management has been OPM's primary focus for coaching and training. The impact to project management maturity scores in these two areas is clearly visible in the following image.

Trend of Average PM Maturity Scores by Category
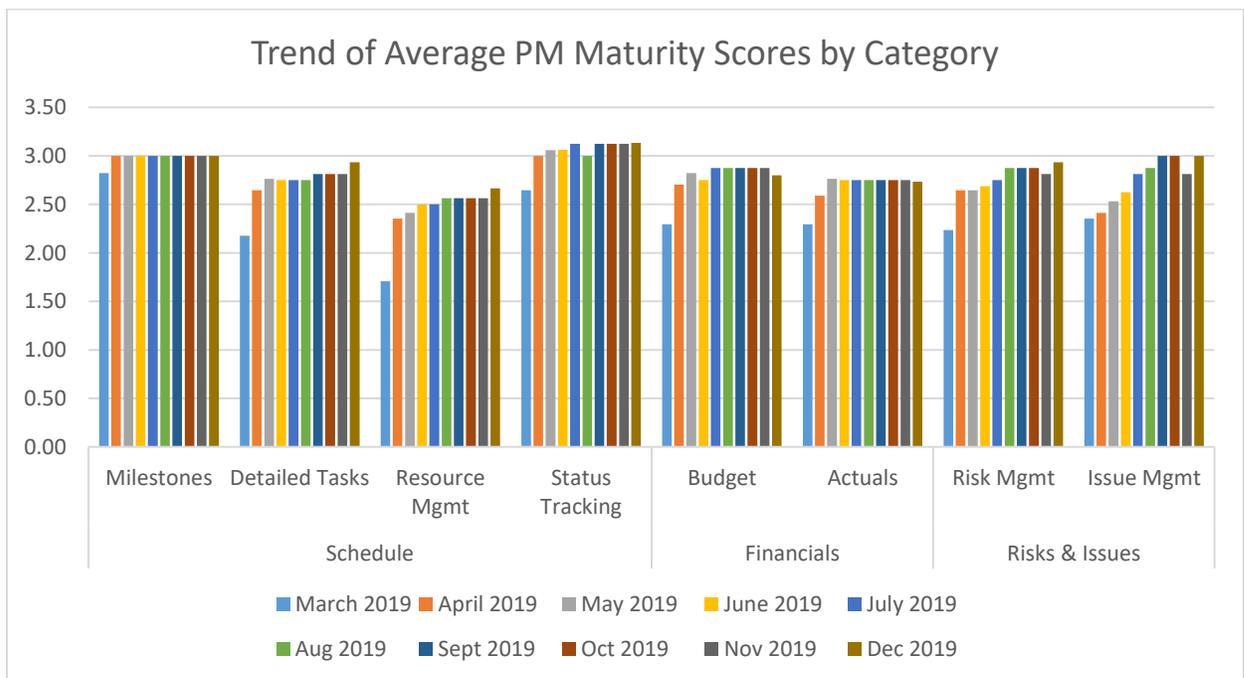
The CIO now has a dashboard of summary information about the enterprise IT project portfolio along with the ability to drill down into project-level dashboards. The following image depicts the type of information available in the CIO's dashboard. Individual reports are listed below the summary metrics and grouped in categories highlighting projects that changed their overall health status from the prior month and projects that have maintained their current health status and may be stuck in a negative status.

CIO IT Project Report

Reset | Open in Power BI

| 117 # of Projects | 10 # Started this year | $1.03bn Total Budget | $515.85M Actual to date total | $426.43M Total Labor Budget | 98.25M Actual to date Labor | # of Projects |

Number of Projects by Overall Health

Red 14
Yellow 30
Green 73

Projects Cost by Sponsoring Cabinet

Gen Gov — $454.46M
CHFS — $267.45M
FIN — $196.79M
KYTC — $51.98M
JUS — $36.58M
EWFD — $10.44M
PPC — $7.14M
PERS — $2.62M
EEC — $2.17M
Labor — $0.98M
TAH — $0.11M

31 High Impact- Active Issues by Sponsoring Cabinet

PERS 1
Labor 1
EWFD 2
EEC 2
CHFS 13
FIN 12

Clicking on one of the above charts, filters the report for that organization's sposoring project(s). It does not include partnering projects.

Programs

ProgramName	Overall Health	OverallHealthSummary	Agency	Program Budget

***Note: Image above is test data from the test environment

The establishment of the IT Project Portfolio processes, standards and tools is generating data each month that will allow the Commonwealth to not only have visibility into IT project spend across the enterprise, but will also allow for the following as the amount of historical data becomes sufficient for analysis:

- Return on investment of projects
- Project success/failure rates
- Quantified impacts on project outcomes by improving project management maturity
- Early identification of projects in trouble based upon KPIs

As a result of implementing enterprise IT project portfolio management, the Commonwealth now is not only aware that the true size of the IT project portfolio is over $1B, 3x previously understood volumes, but has visibility into details about the 20% of projects that are in a yellow or red overall health status each month. Through this awareness, the Commonwealth is returning about 25% of these projects (5% of the overall portfolio) back to a green overall health status each month. A return to the Commonwealth of approximately $50M worth of projects that may otherwise have failed.