



LEVERAGING DIGITAL TRANSFORMATION for RESOURCING INVESTMENTS

May 8-9, 2024

Presented To: 2024 Acquisition Research Symposium

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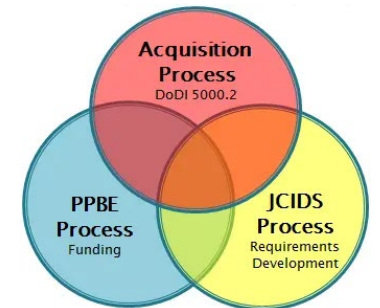
Research Question

- Program management and support rely on a complex set of relationships, are only made more difficult by budgeting and priority ambiguity
- Previous attempts to assist programs make the best resource decisions have largely fallen short
- How can Digital Transformation help provide innovative methods to address how resourcing investments are made?



Research Issue

- Programs are established as a result of the JCIDS process, managed by the Acquisition Process, and beholden to the PPBE process
- Programs and organizations must make investment decisions to improve system performance, reduce cost and provide overall satisfaction and value to their stakeholders
- Many attempts via initiatives and models have been tried over the last few decades with few, if any, persist over time
- Are we learning from these previous attempts at success?
- Are we, or can we, leverage the integrated and connected nature of digital transformation to address shortcomings in our approaches?





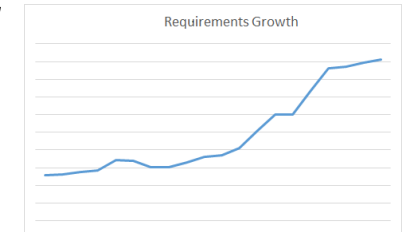
Methodology

- Mixed Methods approach to utilize thematic analysis and combine the strengths of both qualitative and quantitative methods
- Qualitative Analysis
 - Document Analysis and Observations
 - What analytical methods have been attempted, what was their approach and what was the result
 - How do we define the systems of interest and how do we measure success and define value”
- Quantitative analysis
 - Model and simulation to analyze effectiveness of some of our methods
 - Experiments and statistical analysis and sensitivity analysis on investments



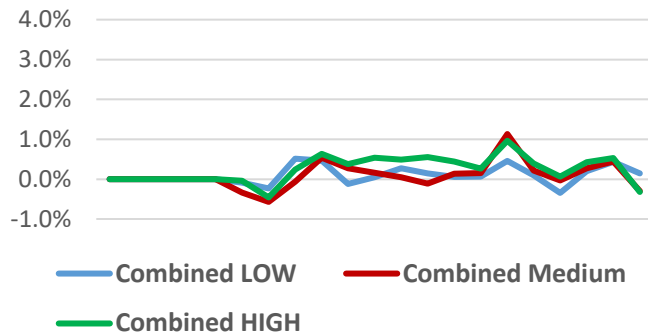
Observations

- Request for funding has increased over the years but with a lack of understanding of what is it providing in terms of value
- Various models and analytical approaches focused on narrow fields of regard, specifically the composite of “readiness” (i.e. availability) with less focus on the elements that integrate to that metric
- Many initiatives followed the same approach of identifying systems of interest and performing “what if” analysis to inform investment decisions, but the efforts remained largely without V&V or sufficient documentation to defend approach
- Agreement on high level metrics, but little understanding on the interplay between measures and investment decisions



Results

- Simulation results have shown little to no improvement in key measures where investments were proposed
- Some analytical models and simulations did not improve the fidelity of the availability of affordability estimate of previous, more simplistic methods, i.e. “back of the napkin
- A lack of understanding of the value stream, interaction effects and program needs have hindered progress and confused approaches



MC improvement of various investments on different platforms with one COTS software

Affordability calculations were very close to “back of the napkin”





Recommendations

- Digital Transformation offers an opportunity to establish a framework for decision making, with integrated processes and data
- A disciplined, deliberate and intentional approach on understanding ones business value stream is required to ensure transparency and digital formalisms to be realized
- Investment decisions must be part of any digital transformation framework to give credibility and credence between supporting and supported elements and ensure we optimize the precious resources we have on those efforts that drive capable, affordable, available, and safe systems