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Quantifying the Value of Cloud

Cloud's true value in government is mission enablement

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When you think about technology firsts, the US Census Bureau probably doesn't leap to your mind. But the agency used the very [first punch-card computer](#) to tabulate data from the 1880 Census. Where manual tabulation would have taken years, this new machine accomplished the task in less than 6 hours. The time and financial benefits of this machine's speed was clear – it allowed the US Census Bureau to complete the next census in 1890 "ahead of schedule and far under budget",[1] yet, the real advantage of the new technology to the agency was that it provided better analysis and greater insights into a growing nation.

Today, governments face similar opportunities with modern technology such as cloud: the promise of both speed and cost savings to support essential business activities to enable their missions. Nevertheless, there are often non-monetary benefits these solutions can provide that make an impact on an agency's mission performance. For those governments considering how or where to expand cloud use, measuring those non-monetary benefits can be difficult. After all, how do you directly quantify the impact of improved satisfaction among citizens, consolidated data within your agency, or more effective public services? These questions may be hard to answer but understanding how cloud can better enable an agency's mission is central to making the right decisions on when to use cloud within an organization.

Cloud enables governments to save money and better fulfill their missions.

Past surveys of government leaders reveal that cost savings topped the list of reasons driving cloud adoption. According to the US Government Accountability Office, 13 agencies reported $291 million in savings or cost avoidances since 2014 due to cloud.[2] Yet, solely relying on this driver to create a business case for cloud adoption can be problematic because there is almost always an investment required to migrate to the cloud, and cost savings may take time to achieve.

Therefore, when evaluating the use or expansion of cloud, governments should consider additional factors, such as its ability to address changing business needs, that can enhance an agency's performance to better meet its mission. To manage an anticipated increase in traffic and car accidents, the city of Las Vegas employed a cloud-based AI platform to gather data from connected cars, road cameras, road conditions, weather patterns, and mapping apps. With a better understanding of traffic conditions and preventive actions, the city saw a 17 percent reduction in crashes along the highway.[3]

Most recently, the COVID-19 has forced governments to become even more responsive, agile, and flexible and many of them have turned to cloud to meet those demands, while simultaneously addressing unprecedented demand for their services. Cloud delivered on its promise and allowed agencies to scale service delivery, enable a government workforce to telework, and build resiliency in overall government operations.

Due to cloud, federal, state and local agencies were able to achieve new mission objectives that arose during the pandemic with unprecedented and unimaginable speed. For example, Maryland was able to stand-up an online grant application within eight hours.[4] 90 percent of California's state government staff was able to transition to telework rapidly due to cloud.[5] In the Federal government, the Department of Veterans Affairs used cloud to provide more than 100,000 telehealth consultations between March and May, a 10-fold increase.[6]

How should governments quantify cloud's value?

Cloud's ability to improve mission performance makes it a powerful tool, but those benefits can make it difficult for government executives to quantify cloud's return on investment. While many private organizations see cloud's value in its ability to saving money, obtain new clients, or introduce new products, it's clear that governments measure cloud's value differently.

Start by asking the right questions

First and foremost, government leaders can define what matters most to their agency (e.g., What is our mission? Who do we serve? What services do we provide?) and how the agency will measure if it successfully achieved its goals and ambitions. Second, government officials should focus on clarifying and communicating to their stakeholders how technology enablers (such as cloud) will support the agency in achieving its goals and ambitions (e.g., How can cloud save costs for our agency? How can cloud allow us to quickly bring our services to more citizens? How can cloud allow us to benefit from industry best practices without needing to develop it ourselves?). Thinking through those questions in detail includes laying out all the organization's stakeholders and activities to help identify opportunities (e.g., cost savings, mission improvement, risk avoidance) where cloud can deliver maximum value.

Calculate monetary and nonmonetary value of cloud

With a clear understanding of the drivers of value – both monetary and mission-related - an organization can begin to estimate the benefits of cloud. To do this calculation, an organization should compare its current state technology environment to the future state cloud environment across three dimensions:

Mission Value

The mission benefits of cloud are derived from the improved speed, accuracy, and security of many tasks, however, quantifying these benefits can be difficult. One way to infer their value is to estimate how much it would cost to reach the same levels of performance by means other than the cloud. For example, if an organization can reduce the time it takes to provision a server from one month to six hours, what is the value of the additional time each developer now is now able to spend on mission-enhancing activities? Many government agencies are operating with reduced workforces who are supporting increasing workloads, so saving time on repeatable tasks and re-prioritizing those hours to high-value tasks could represent the most significant value of cloud adoption to a government organization.

Stability and Reliability

As regulations and citizens' needs shift, cloud offers the ability to quickly respond to recurring and unforeseen changes. Government organizations should consider how cloud can help the agency respond to the expected shifts (e.g., changes in policy and new regulations) and unexpected (e.g., global pandemic) shifts that can impact the way they conduct business to support their missions.

Value Preservation

Data losses or cyber attacks all have their own cost. Even beyond the direct costs of repairs, the damage to reputation can prove to be more costly. When managed with the expertise and attention required, cloud has the ability to increase data security and improve disaster recovery. Calculating the costs of risk avoidance can show the additional value of cloud for an organization.

2020 has demonstrated to governments and citizens alike the role technology has in determining an agency's success in addressing and responding to unforeseen challenges and issues. Making the right decision on where to invest in these technologies is dependent upon a clear understanding of the value they bring to an organization. As the past year has shown us, cloud enables government agencies to deliver on their missions today and be better prepared for the uncertainties of tomorrow.

Endnotes

1. "Tabulation and Processing". History. U.S. Census Bureau. 22 June 2009. Archived from the original on 19 July 2009.

2. https://fcw.com/articles/2019/05/06/gao-cloud-savings-gunter.aspx#:~:text=According%20to%20GAO%2C%2013%20 agencies,more%2 cost%2Deffective%20IT%20management.

3. https://www.govtech.com/Las-Vegas-to-Pilot-WayCares-Accident-Prediction-Artificial-Intelligence-Software.html

4. https://www.govtech.com/computing/Maryland-Stands-Up-Online-Grants-Application-in-Just-8-Hours.html

5. https://www.govtech.com/computing/2020-Puts-Cloud-Computing-in-Government-to-the-Test.html

6. https://www.nextgov.com/cio-briefing/2020/09/how-cloud-helping-governments-pandemic-response/168738/

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