

Power Platform: Rapid and Innovative Approaches to Data Collection and Visualization

PROJECT TITLE

Power Platform: Rapid and Innovative Approaches to Data Collection and Visualization

STUDY TIMELINE

Began March 2020

VTRANS CONTACTS

Alex Geller, ADM Performance
Chris Hulbert, ADM Performance

Problem Statement

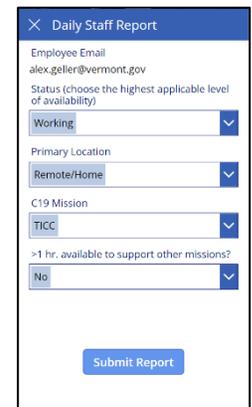
In response to the pandemic, the Governor closed State Office buildings to the public and implemented a “telework where possible” mandate to all of State Government in March of 2020. Many Agency employees were unable to perform their job functions remotely without enhanced technology: Cell phones, hot spots, laptops, printers / scanners, etc. Many others were not able to perform their job function remotely at all. This provided a unique opportunity for AOT to take on several key missions in support of our State Agency and Federal partners.

The Agency initially developed an excel workbook to gain an understanding of what unique skills our employees have. For example, who has EMS or former medical service? Who has exceptional customer service skills? Who is an expert in specific types of software? Does the employee have a state issued cell phone and laptop? This information was used to solicit resources as requests from other agencies and departments funneled through the SEOC to AOT and enabled the TICC to promptly respond with a list of available personnel.

As it became clear the pandemic was not going to be over quickly, the TICC Data Analysis & Reporting team developed a staffing reporting process that evolved from an excel worksheet to a web-based application with numerous capabilities. These tools allow our managers and supervisors to assess employee status and determine impacts to mission essential functions.

Methodology

Data Collection: While early data collection efforts utilized Microsoft Excel, this approach was not an ideal solution due to data integrity, performance, and confidentiality issues, to name a few. As the pandemic became a long term reality, effort was channeled into leveraging a new, app-based platform called Microsoft PowerApps. The new PowerApp allows all supervisors to log daily status, location, and mission assignment on behalf of their staff, using a cellphone. If an employee needs to work somewhere other than their home, the app also provides a COVID symptom screening tool. This app was built by Performance Section and ADS staff collaboratively, and is available to all state agencies.



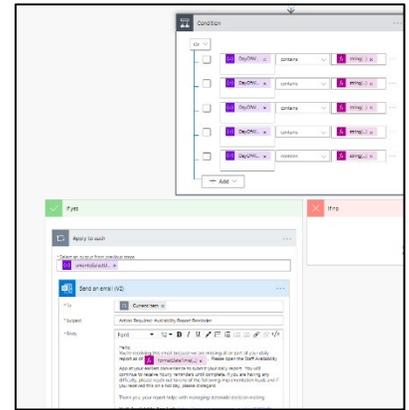
The screenshot shows a mobile application interface titled "Daily Staff Report". It contains several dropdown menus for data entry: "Employee Email" (alex.geller@vermont.gov), "Status (choose the highest applicable level of availability)" (Working), "Primary Location" (Remote/Home), "C19 Mission" (TICC), and ">1 hr. available to support other missions?" (No). A blue "Submit Report" button is at the bottom.

1 Staff Availability PowerApp

More information about the VTrans Research Program, including additional Fact Sheets, can be found at: <http://vtrans.vermont.gov/planning/research>

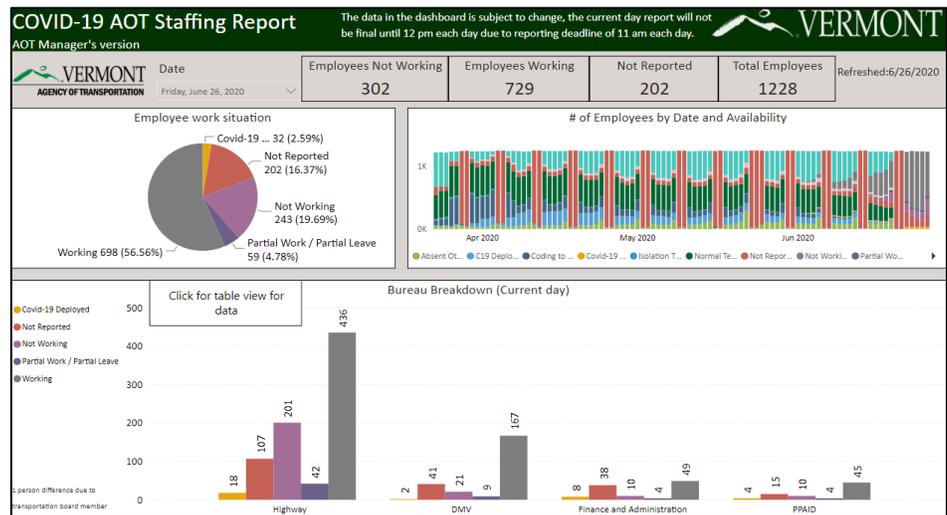
Data Validation: Daily reporting of staff status needs to be completed on a daily basis. At first, many supervisors missed the reporting deadline of 11AM and TICC members had to follow-up manually with reminders. As this was an unsustainable but needed

task, efforts were again channeled to leverage Microsoft tools. This time a Power Automate flow was created and automatically emails any supervisors with a gentle reminder to complete their reporting for the day, thereby allowing for more value-added activities for TICC staff.



2 Power Automate Reminder Email Flow

Data Presentation: Collecting all this data daily is only useful if it is leveraged to make decisions. However, with over 5,000 datapoints collected daily, processing and summarizing this data in pursuit of presenting information is no trivial task. Thankfully, Microsoft PowerBI in combination with Microsoft SharePoint are more than capable of shaping the data and presenting them in a format that requires little effort to maintain after it is built.



3 This dashboard shows the aggregated status of the AOT workforce from the early days of the Pandemic, through today.

Next Steps

The COVID-19 pandemic brought the need to adapt quickly to a changing environment. Many State of Vermont employees had their everyday work experience transformed in a matter of days. By using the Power Platform, an end-to-end solution was developed to better understand employees' work status, availability, and work location. Furthermore, it has facilitated contact tracing through tracking employee location, is utilized in tracking resources to support mission essential functions (MEFs) and has provided an overview of the greater trends in agency attendance throughout the course of the pandemic.

Potential Impacts and VTrans Benefits

Business problems often require complex solutions, and the Power Platform offers a sophisticated suite of tools that can solve complex business problems. It also happens to be accessible to anyone with the initiative to learn it. This experience has proven the value of this platform and because of the visibility and scale of the solution, has garnered attention as a potential platform to solve more business problems. We hope you can be part of the growing community of practitioners to build on this and other successes!