



CUSTOMER SPOTLIGHT

Preparing for future missions to the Moon & Mars with dynamic workforce scenario planning

SUMMARY:

Leveraging a combination of Posit Team and Amazon Web Services (AWS), NASA's People Analytics Team provides the insight necessary for strategic workforce planning and dynamic scenario planning to assess the impact of internal and external factors on the capacity and capability of the organization's human capital.



ABOUT:

National Aeronautics and Space Administration (NASA) is an independent agency of the U.S. federal government responsible for the civil space program, aeronautics research, and space research.

INDUSTRY:

Public Sector

SIZE:

18,000 Civil Servants

TECHNOLOGY USED:

Posit Team (Posit Workbench, Posit Connect, Posit Package Manager), Dash, Shiny, Quarto, Vetiver, Shiny Assistant

DATA CLOUD PARTNER INTEGRATION:

AWS, Amazon Bedrock



The Challenge:

Improving the speed of iteration & response for complex questions

NASA's people analytics team sought to improve the speed of iteration and response due to frequent, immediate requests from Congress and high-level stakeholders.

- **MOVING FROM STATIC DASHBOARDS TO PREDICTIVE MODELING:**
NASA's People Analytics Team needed to move beyond descriptive BI tools like Tableau to address complex, predictive questions. While existing tools could track current headcount, the team required interactive applications to simulate the workforce impact of mission delays or new budget proposals.
- **TRANSITIONING FROM ISOLATED LAPTOPS TO SHARED INSIGHTS:**
Although analysts could build sophisticated models in R and Python, these simulations were often confined to individual laptops. To better manage risk, NASA needed a way for workforce planners to interact with the data directly, moving away from manual presentations to a more agile, self-service approach.



The Solution:

Agile Workforce Intelligence at Mission Scale

NASA adopted Posit Team to give their people analytics team the speed and flexibility to meet high-priority requests. This infrastructure supports strategic planning for 18,000 civil servants by replacing manual workflows with interactive, self-service tools.

- **DEMAND SCENARIO FORECASTING:**
With a Dash app deployed to Posit Connect, their team has enabled real-time “what-if” exploration of workforce needs, allowing planners to model the impact of mission delays, new budget proposals, and staffing changes across the organization.
- **LONG-RANGE WORKFORCE PLANNING:**
Planners can now model future scenarios and identify the skill sets required for upcoming projects up to 10 years out, shifting from static slide decks to a dynamic, evidence-based approach to workforce strategy.

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