MaineHealth

CUSTOMER SPOTLIGHT

Reproducible and sharable analysis workflows

SUMMARY:

By implementing Posit Workbench, MHIR created a managed, central environment that simplifies software management and enhances security. This infrastructure allows researchers to spend their time on data analysis rather than troubleshooting installations. With features for project sharing and dependency management, teams can now collaborate on identical infrastructure, which ensures their code is reproducible and peer reviews are more efficient.

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ABOUT:

MaineHealth Institute for Research (MHIR) currently spans the spectrum of biomedical research, with basic research programs in cardiovascular biology and stem cell biology, a growing clinical and translational research program, health services and patient-centered outcomes research, and psychiatric research.

INDUSTRY:

Biomedical

TECHNOLOGY USED:

Posit Workbench

The Challenge:

Technical Friction in Open-Source Research

Restrictive desktop environments and inconsistent software configurations prevented analysts from easily collaborating on or reproducing one another's analyses.

- **INSTALLATION BARRIERS:** Security constraints on desktop computers restricted analysts from freely installing or updating open-source R packages, making it difficult to use R effectively within the organisation's secure environment.
- **REPRODUCIBILITY GAPS:** Differences in R and package versions across individual machines meant analysts frequently encountered errors when attempting to share and run each other's code, undermining peer review and slowing research.

The Solution:

A Centralized, Managed Research Environment

MHIR adopted Posit Workbench to create a unified R environment shared across the entire analyst team.

- **SECURE, STANDARDIZED ACCESS:**
  A managed, centralized platform replaced individual desktop installations, reducing variability in system dependencies and giving analysts immediate access to a pre-configured, security-approved R environment with no installation or maintenance burden on the individual.
- **REPRODUCIBLE COLLABORATION:**
  Posit Workbench's project sharing feature allowed analysts to read and run each other's code on identical infrastructure, directly supporting peer review and computational reproducibility, with renv providing project-level dependency isolation for individual analyses.

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