burwood group, inc.

CLIENT SUCCESS STORY

Using Terraform and GCP to Speed Cloud Expansion in Higher Education

A large public university and medical center's IT department planned to expand their Google Cloud Platform (GCP) services to support campus activities and research at their affiliated hospital. The biggest challenge was answering the question: "Where to start?"

To create a workable system, such as establishing access and identity management and setting up secure work zones for research projects and classrooms, central IT needed to define a whole host of custom use cases to address. Additionally, how should they bill for services and make sure grant money and researcher credits were properly applied?

The university's IT team asked their Google Cloud management team for onboarding advice. Google recommended Burwood Group because they had worked successfully with more than 50 university clients and achieved outstanding results. Because Burwood was willing to customize their standard engagement process to address the project scope, the university invested in their services.

A SPEED TO VALUE APPROACH TO EXPANDING GCP

Over the course of two weeks, Burwood's team led three discovery workshops to both learn about their client's use cases and present the pros and cons of possible design approaches. After the workshops were complete, Burwood Technical Account Managers (TAMs) spent another week to summarize findings, draft design documentation, and propose optional project timelines and cost projections.

Some of the possible solutions included:

- Address campus and research GCP platform use cases in tandem

- Split campus and research GCP platform use cases into sequential projects

- Use GCP tooling only (lowest cost, longer project duration) for automation and network security

- Combine GCP tooling and Burwood's pre-defined Terraform templates (accelerated timeline) to create an advanced automation platform

The IT team chose both to split campus and research GCP platform use cases into sequential projects and to use Burwood's pre-defined Terraform templates for an accelerated timeline. The advantage of this route was twofold: Not only was saving time a great benefit, using Terraform and Burwood's pre-defined templates would allow them to extend their learning to other cloud platforms.

- Cloud
  - Governance
  - Identity
  - Billing
  - Infrastructure
- Networking
- Security
- Collaboration
- DevOps
- Managed Services

> "
> The TAM assigned to the research project really knew their stuff. They were able to explain how to take advantage of the Google Cloud Platform tools and avoid pitfalls when deploying Terraform scripts. Now as inbound requests come from my team, we provision what is needed almost immediately.
>
> BIOMEDICAL RESEARCHER AT THE HOSPITAL

Figure 1: Custom Engagement Plan Highlights

Phase 1: Discovery	Phase 2: Design	Phase 3: Build	Phase 4: Maintenance
Three workshops: • Operations and security • Cloud networking • Billing portal	• Refined workshop findings • Scoped work • Created project plan	University IT automated the build process by • using GCP tooling • deploying Burwood's pre-defined Terraform templates Burwood created the billing portal	• Reviewed build deliverables • Published final operational runbooks • Established recurring meetings to monitor progress

Practical Innovation.
Accelerated Results.

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A CUSTOM ENGAGEMENT PLAN WITH GCP TOOLING AND TERRAFORM

The first build phase lasted approximately one month. The Burwood TAM embedded themselves into the IT team to teach them how to use Terraform templates to automate services and set up network security and monitoring. The TAM kept things moving through a combination of video conferencing for paired coding and troubleshooting, hosting real-time Slack channel discussions to answer questions, and building runbooks for documenting common procedures as the build progressed.

The second build phase went quickly and was completed within a couple of weeks. When a Burwood TAM joined the project, the IT team appreciated the continuity of Burwood's approach. It made transitioning to the next set of tasks much easier for everyone. The TAM was able to focus on teaching the IT team how to use advanced GCP tooling and create additional runbooks, without having to spend too much time on project orientation tasks.

After the project formally closed, the university IT team took over day-to-day responsibilities for the campus and research GCP framework. The university's IT team continues to use Slack to check in with Burwood with the occasional question and hold monthly check-in meetings to discuss a broad range of topics, such as new university use cases, security and compliance trends, Google training opportunities, etc.

SMOOTH IMPLEMENTATION INCREASED SPEED-TO-VALUE

The university was impressed by Burwood Group's professionalism and open communication style. When compared to other vendor-lead cloud projects they had worked on, their GCP onboarding went very smoothly, and the engagement successfully exceeded all the university's expectations.

Improved Deployments, Cost Tracking and More

- Onboarding focused on upskilling university staff. As a result, new cloud services can be deployed rapidly without having to increase IT resources.
- Time needed to set up and tear down virtual classrooms and lab environments went from days to hours to minutes. As a result, when faculty make requests to open or close sessions or adjust the number of users, the IT department can help almost immediately.
- Security is robust. Projects and policies are well organized and access rights are maintained appropriately.
- Improved billing services reduce accounting costs when tracking expenses and dispersing payments. Built-in reporting also improves budget analysis and forecasting.

About Burwood Group

Burwood Group, Inc. is an IT consulting and integration firm. We help forward-thinking leaders design, use, and manage technology to transform their business and improve outcomes. Whether you are developing strategy, deploying technology, or creating an operational model, Burwood is a dedicated partner. Headquartered in Chicago since 1997, today Burwood comprises seven U.S. locations including 24x7 operations centers in San Diego, CA and Normal, IL. To learn more, visit burwood.com.

Our Primary Markets

Burwood serves clients across the U.S. with six offices and two 24x7 operations centers. Our primary markets include:

Illinois (HQ)
California
Colorado

Missouri
North Carolina
South Carolina

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