



Division of Technology Services

State of Utah Division of Technology Services

Enterprise Technology Management

Restored Trust, Real-Time Savings: Utah's FinOps Blueprint for 100% Cloud Cost Accountability

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EXECUTIVE SUMMARY

As an Internal Service Fund (ISF), the State of Utah Division of Technology Services (DTS) manages executive branch public cloud expenses upfront, utilizing an allocation and charge-back model for state agencies. Failures in previous bill-back processes compromised Utah's ability to precisely allocate costs, causing a lack of confidence in cloud financial reporting across the state. By implementing IBM Cloudability and integrating core FinOps principles, DTS transformed a manual, error-prone billing process into a proactive, automated system. This overhaul eliminated hundreds of thousands of dollars in previously unallocated monthly costs, definitively established a single source of truth for cloud financial oversight, and restored trust among state agencies and stakeholders. For this project, the team relied on FinOps principles, a collaborative practice that brings technology, finance, and business teams together to manage and optimize computing bills, ensuring they get the most value out of every dollar spent.

IDEA

Problem or Opportunity Addressed

Managing costs in the public sector is inherently complex, and public cloud billing methods left agency business personnel frustrated and confused. Agency leadership could not confidently link specific cloud bill line items to the vital public-facing applications they supported. This confusion was compounded by legacy tools that struggled to use cost dimensions effectively across an infrastructure spanning more than 500 public cloud accounts and 300 state agency cost centers.

To address the issue, Utah implemented IBM Cloudability and integrated core FinOps principles to transform a manual, error-prone billing process into a proactive, automated system. The state can more accurately allocate costs by utilizing cost dimensions, by attributing costs to more easily understandable, human-readable formats.

The result of this effort was staggering: approximately 23% of the state's total cloud spend was categorized as unallocated. The inability to effectively allocate shared indirect costs (such as enterprise support) resulted in an additional 20% being unallocated on monthly bills. Reconciling these large gaps manually was nearly impossible.

Operational Scale at a Glance:

Metric	Quantity	The Governance Challenge
Cloud Accounts	Over 500	Demanded precise attribution for agencies and divisions.



Cost Centers	Over 300	Required granular financial tracking across all government agencies.
Raw Billing Lines	50,000 - 100,000 / month	Represented a massive data volume requiring complex, manual processing.

Why it matters

Accurate cost allocation is one of the foundations of public accountability. When reports failed to reflect reality, they provided zero value for public financial oversight or agency budget reviews. Because business logic could not be easily updated in the old system, DTS Finance Analysts and Cloud Platform Engineers were forced into the manual, time-consuming task of editing up to 65,000 line items every single month. This administrative burden eroded trust and prevented us from making smart, responsible decisions about how we spent taxpayer money on cloud resources.

By implementing a better solution, we provided verifiable, concrete cost attribution of public cloud expenditure for its agency customers. This cleared up previous frustrations where agency leadership could not confidently link specific cloud bill line items to the public-facing applications they supported. With clear visibility into their consumption, agencies no longer have to wonder what they are paying for in the cloud. This transparency reduces uncertainty, enables true strategic planning, and enhances trust in the state's public cloud financial reporting.

What makes it different

Historically, governments have relied on older commercial off-the-shelf software that still required separate, internal tools for manual data cleaning. We took a different approach by integrating all essential cloud billing logic directly into Cloudability's advanced FinOps modeling tools. We engineered an automated, daily process that imports current agency data, intelligently verifies tagged resources, and automatically assigns default cost centers to resources that cloud platforms inherently cannot tag.

What makes it universal

The hurdles we overcame are not unique to Utah; they are universal pain points for any state government navigating public multi-cloud environments. This project provides a blueprint for addressing common public sector challenges by integrating advanced FinOps modeling and automated processing:

- **Stakeholder Requirements:** The challenge is balancing varied budgetary requirements across agencies with distinct funding sources. We solved this by replacing technical item



descriptions with business-friendly "usage family dimensions," providing a clear, understandable view of cloud consumption.

- **Regulatory Compliance:** The challenge is adhering to strict state and federal audit requirements. We solved this by automating rule applications to establish a definitive single source of truth, providing concrete and verifiable attribution of public cloud expenditure.
- **System Integration:** The challenge is bridging the gap between dynamic cloud data and legacy on-premises financial systems. We solved this by fully automating the generation of public cloud billing files so they integrate seamlessly with the state's legacy billing application.
- **Inter-Agency Billing:** The challenge is ensuring fairness, transparency, and auditability for chargebacks utilizing taxpayer funds. We solved this by developing custom tracking methods that divide shared expenses fairly based on actual resource utilization or instance counts

IMPLEMENTATION

Roadmap & Strategy

This project fundamentally supports our overarching enterprise strategy of establishing and maintaining highly transparent rates. By integrating cost center transformation and replacing complex technical descriptions with business-friendly usage family dimensions, this initiative provides a clear, understandable view of cloud consumption.

To manage this massive cross-functional effort, we utilized the Scaled Agile Framework (SAFe) methodology. This agile approach allowed for tight collaboration among key groups. Operating within this iterative framework, the intent to migrate was communicated to agency bill consumers early on, ensuring that input from customers was actively sought and implemented. Finance Analysts and Cloud Platform Engineers led the technical overhaul, while the SAFe structure ensured that key decision points were rapidly brought to senior leadership for approval.

Successful implementation was defined by moving from a reactive, manual billing state to a proactive, automated system. To eliminate reliance on manual intervention, success required rule management to be centralized and data processing to be fully automated within Cloudability. The project's ongoing assessment relies on drastic, quantifiable improvements in efficiency and data integrity.

Who was involved

This was a massive cross-functional effort. Key groups included DTS Enterprise Hosting, DTS Finance, DTS Billing, agency IT Directors, and DTS cloud and DevOps personnel. The intent to migrate to this system was communicated to agency bill consumers. Input from agencies was



sought and implemented. Finance Analysts and Cloud Platform Engineers led the technical overhaul. Key decision points were brought to senior leadership for approval. Proactive training was deployed to agency users on workload planning and rightsizing. By directly addressing the specific challenges of stakeholders who had previously doubted the reporting, we secured essential buy-in across the state.

How we did it

To prevent overwhelming business users, we replaced highly technical item descriptions with intuitive, broader usage family dimensions. This change simplified the billing information by creating high-level groupings (like compute or storage) instead of overwhelming users with specific, technical details. The goal of using a dimension is to provide a clear, business-friendly view of cloud consumption for charge-back and cost management.

The generation of public cloud billing files is now fully automated to integrate seamlessly with the state's legacy billing application.

IMPACT

What the project made better

By automating rule application for all incoming line items, stakeholders now have verifiable, concrete attribution of public cloud expenditure. Internal teams and agencies have clear visibility into their consumption, fundamentally reducing uncertainty and enabling true strategic planning.

How we know

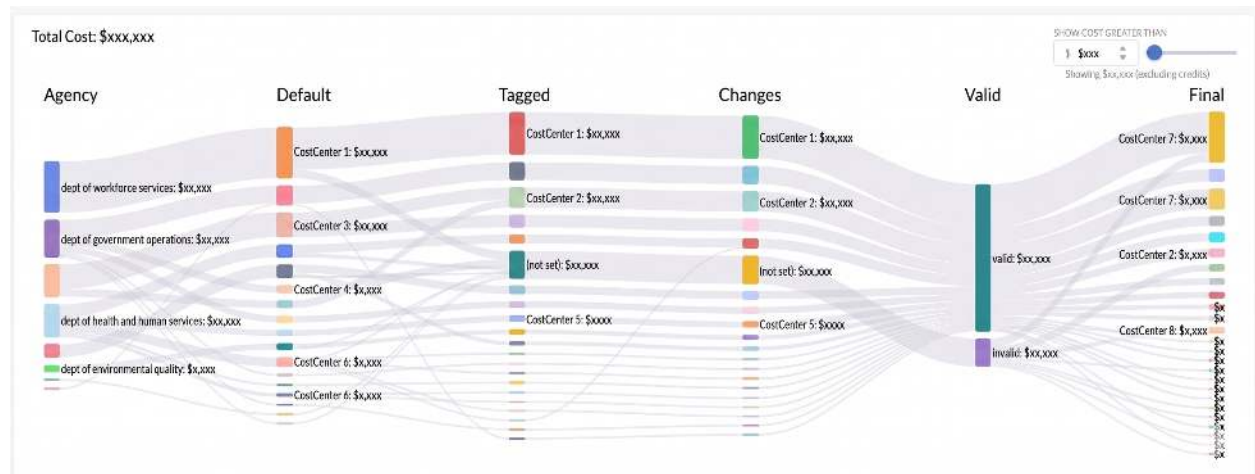
The shift from manual guesswork to automated precision yielded drastic, quantifiable improvements in efficiency and data integrity:

Key Performance Indicator	Pre-Implementation	Post-Implementation	Strategic Impact
Total Unallocated Spend	~43%	~0%	Hundreds of thousands of dollars accurately reallocated to correct budget units.
Raw Line Items	65,000	25,000	Massive reduction in data bloat, making reports instantly



Processed			digestible.
Sub-Dollar Line Items	53,000	14,000	Removed financial "noise," allowing leaders to focus on significant budget trends.
Sub-Cent Line Items	27,000	7,000	Drastically reduced processing overhead and systemic clutter.

Sample dashboard of billing code transformation



What now

With a foundation of accurate, fully allocated data, Utah is moving from reactive billing to proactive optimization. Utilizing Cloudability, we deploy a rightsizing engine that analyzes compute and database utilization to safely reduce unnecessary spending without impacting civic services. A commitment optimization engine forecasts future usage, securing the best Reserved Instance (RI) and Savings Plan (SP) rates across the state's entire multi-cloud environment.

Before implementing this platform, we struggled with a lack of clear, timely data, which prevented proactive decision-making. We often discovered the financial impact of our cloud spending months after the costs were incurred, only upon receiving the official bill.

Current Impact and Benefits:



- **Real-time Cost Correction:** This tool has closed the data gap, allowing us to view expenditures weeks before billing. This immediate visibility enables us to quickly identify and correct "runaway" costs and server setup errors, resulting in thousands of dollars in avoided spending.
- **Data-Driven Budgeting:** We are replacing guesswork with realistic, data-backed budgets. The tools ensure we remain within our financial means, even with day-to-day changes in cloud resource needs.

Future Outlook:

This software will foster a closer partnership between our finance and IT teams. It ensures that all technical decisions are made with a clear financial understanding, promoting efficient use of cloud resources and preventing unnecessary spending.

By empowering state agencies with transparent insights, Utah has fostered a permanent, cost-conscious culture that ensures the continuous, responsible optimization of taxpayer investments.