G-Cloud

Hitachi Digital Services

Cloud Cost Management
Assessment (FinOps)

Hitachi Digital Services vision and mission

Hitachi has been a trusted supplier to the UK government for over half a century in Transport, Energy, Technology and Research among the numerous sectors where we have consistently delivered social value and value for money.

Hitachi Digital Services offers a diverse array of innovative technology solutions tailored to meet the specific needs and desired outcomes of governmental agencies. Specialising in advanced IOT, ERP, Machine Learning, data analytics, and cloud services, we stand out for our unwavering commitment to security, reliability, and innovation. With a track record of delivering robust and scalable solutions, Hitachi empowers government entities to streamline operations, increase efficiency, enhance data security, and optimize performance, thereby enabling them to better serve the UK public. By leveraging state-of-the-art innovative technology and a deep understanding of governmental challenges, Hitachi emerges as the premier choice for governmental agencies seeking to bolster their digital foundation and achieve their mission-critical objectives. Our cross-sector view and technology expertise makes us ideally placed to advise government on data-driven, end-to-end digital transformations that delivers value for money.

Hitachi Digital Services G-Cloud offerings

Partnership Offerings	Consulting/ Advisory Cloud Services	HARC/ Cloud Services	Healthcare Services
AWS Cloud Maturity Assessment	Business Analysis & Product Management	Cloud Cost Management – Assessment (FinOps)	Digital Care & Operations (DCO)
Azure Cloud Maturity Assessment	Data Strategy	Cloud Migration/ Modernisation Assessment strategy (Planning & Journey)	Lifestyle Management
GCP Cloud Maturity Assessment	Digital Transformation Strategy & Roadmap	Cloud Maturity Assessment	Secure Data Environment
Databricks Enablement Services	Cloud Organization Strategy & Design	Cloud Migration and Modernisation	Digital Healthcare Advisory and Technology Services
Oracle ERP	Organization Change Management	Cloud Operate Services	Lightbeam by Hitachi DS
SAP Cloud Support	Innovation Incubation Accelerators	Cloud Services	Luminai by Hitachi DS
Pentaho	Managed Service – Advisory	Harc Operations	Luminance by Hitachi DS
	Managed Service – Rail	Performance Testing and Engineering Services	
Sustainability Cloud Services	Cloud Managed Services	Quality Assurance and Engineering Services	**AI Cloud Offerings**
Application and Software (IT decarbonisation)	Oracle Cloud Support	Resilience and Chaos Testing and Engineering Services	AI Business Accelerator Incubate & Launch
Energy efficiency for buildings	Maturity Assessment	Security Testing and Engineering Services	AI Business Accelerator Innovate
ESG Supplier assessment and engagement	Observability Assessment	Security Services	AI Business Accelerator Optimise & Solidify
GHG Emissions Dashboard	Reliability & Resiliency Assessment	SWAT Services	AI Business Accelerator Foundation Platform
Energy Strategy	Security Posture Assessment	FinOps – Managed Cloud Cost Implementation	AI Business Accelerator Starter Platform
ESG Strategy	Advisory/Consulting – Service Management (Cloud Managed Service)	IOT – Internet of Things	GenAI Strategy Assessment
		Smart Spaces and Video Intelligence (SSVI)	

Context

In the realm of public sector governance, where financial stewardship is paramount, the effective cost management becomes a critical component for government organizations striving to optimize their cloud spending.

Hitachi Digital Services' Hitachi Application Reliability Center (HARC) offers cutting-edge FinOps service designed to revolutionize the way businesses manage their cloud spending. With the exponential growth of cloud adoption, organizations are faced with the challenge of controlling costs while maximizing the benefits of cloud technologies. HARC offers finest FinOps talent, best in class tools & framework, training & delivery centers to address this challenge head-on.

The FinOps Assessment service is meticulously designed to assess and enhance a public sector entity's financial management practice in the cloud, ensuring cost-effectiveness and alignment with public service objectives.

Challenges

Public sector organizations encounter challenges specific to their operational context, including accurately tracking and allocating cloud costs, optimizing resource utilization, and fostering a culture of cost-awareness among teams. Addressing these challenges is imperative for maximizing the value derived from cloud investments while ensuring fiscal responsibility.

Here are the common challenges organisations face moving from traditional fixed cost capex weighted spend to variable cost opex weighted Spend.

1. Visibility & Governance:

- Challenge: Engineers empowered to spend company money with code create a lack of oversight and control over cloud spending, making it challenging to maintain visibility into resource provisioning and usage.
- Challenge: Limited visibility for finance teams until after the fact inhibits their ability to fulfill their fiduciary duty to the company, as they cannot proactively monitor and manage spending in real-time.
- Challenge: Establishing consistent governance policies and controls becomes difficult when engineers have autonomy over spending, leading to potential compliance risks and budget overruns.
- Challenge: Lack of communication exacerbates governance challenges, as finance and engineering teams may operate in silos, resulting in inconsistencies in policy enforcement and accountability.

2. Optimization & Reporting/Analytics:

- Challenge: Dynamic spending patterns, coupled with agile experimentation and waste, make it challenging to identify and prioritize optimization opportunities effectively.
- Challenge: Finance's limited visibility into spending until after the fact hinders optimization efforts, as they cannot proactively implement cost-saving measures or enforce optimization strategies.
- Challenge: Inadequate reporting and analytics capabilities hinder the ability to generate actionable insights from complex and dynamic spending data, further complicating optimization efforts.
- Challenge: Lack of communication between finance and engineering teams results in incomplete or inaccurate reporting, impeding informed decision-making and hindering cost management efforts.

3. **Resource Management & Culture/Collaboration:**
   - Challenge: Resource sprawl and underutilization due to agile experimentation and lack of centralized control pose significant resource management challenges.
   - Challenge: Without clear governance and optimization strategies in place, it becomes challenging to manage resource lifecycle effectively, leading to wasted resources and increased costs.
   - Challenge: Lack of communication between finance and engineering teams, combined with the dynamic nature of spending, hampers efforts to foster a culture of cost awareness and collaboration.
   - Challenge: Overcoming cultural barriers and resistance to change is essential to promoting collaboration and alignment around FinOps goals and initiatives, particularly in organizations where communication is lacking.
4. **Pricing Models:**
   - Challenge: Engineers empowered to spend may not fully understand the cost implications of different pricing models, leading to suboptimal decision-making and potential overspending.
   - Challenge: Limited visibility and communication hinder the ability to evaluate and compare pricing models effectively, making it difficult to select the most cost-effective options for cloud resources.
   - Addressing these challenges requires a comprehensive approach that combines technological solutions, process improvements, and cultural changes to foster collaboration, enhance visibility, and optimize cloud spending effectively.

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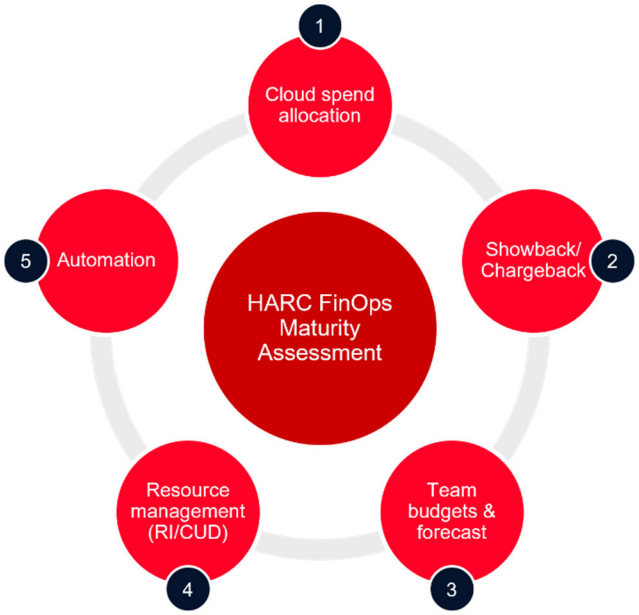
Solution

The approach to conducting the FinOps Assessment is collaborative and tailored, ensuring alignment with the public sector entity's specific cloud environment and fiscal goals. We adopt an iterative approach and continuous improvement strategy to deliver the business values.

- **Collaboration with Business, Finance, Procurement, and Technology Teams:**
  Engaging in collaborative sessions with business, finance, procurement, and technology teams to understand public service priorities and align financial strategies.
- **Analysis of Cloud Cost Management Practices:**
  In-depth analysis of existing cloud cost management practices to identify strengths and areas for improvement within the regulatory framework of the public sector.
- **Implementation of Best Practices for FinOps:**
  Implementing best practices for FinOps based on industry standards and the unique requirements of public sector organizations.
- **Tailored Methodology:**
  Crafting an assessment methodology tailored to seamlessly align with the distinct cloud environment and fiscal goals of the public sector entity.

HARC FinOps maturity assessment approach is represented below.



- Understand Fully Loaded Costs
- Visibility into IT spend.
- Granular cost allocation
- Team-level budgets & tracking
- Performance Benchmarking
- Trending & variance analysis
- Internal team benchmarking
- Industry peer-level benchmarking.

HARC Solutions and accelerators

1. HARC Cost management methodology
2. Automated tools & framework
3. Integrate with most market tools
4. Automated analytics

	Levers	Low performers	Medium performers	High performers
1	**Visibility and allocation of cloud spend**	Reliant on vendor invoices and manual reconciliation	>1 day for partial visibility with limited retention of granular historical data	<1 hour or near-real-time visibility of all spend with all current and historical data retained
2	**Showback or chargeback**	Inability to provide teams an accurate accounting of cloud spend	Cloud spend is allocated to teams based on estimated usage of resources	Teams understand their portion of cloud spend based on actual consumption
3	**Team budgets**	Teams have no budgets	Teams have budgets	Teams budget and track spend against budgets
4	**RI and CUD management**	0-20% of cloud services purchased via reservations	40-50% of cloud services purchased via reservations	>80% of cloud services purchased via reservations
5	**Find and remove underutilized services**	Every few months	Weekly	Automated and policy driven

Monitor the current maturity level holistically in order to identify and take corrective actions to target elevated levels

Crawl

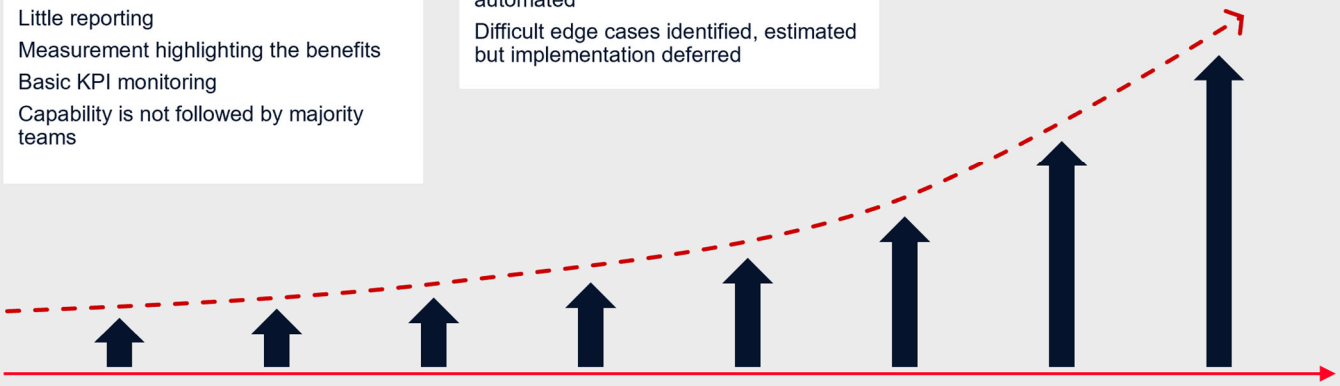
Little reporting
Measurement highlighting the benefits
Basic KPI monitoring
Capability is not followed by majority teams

Walk

Capability is understood and followed by most teams within organization
Most of the reporting is in place and automated
Difficult edge cases identified, estimated but implementation deferred

Run

Capability is understood and followed by all teams within organization
Difficult edge cases are being addressed
Higher goals/KPIs set on the measurement of success
Automation is standardized



Inform	Optimise	Operate
Understand Cost drivers/Spend, allocate spend and benchmark efficiencies • Visibility into IT spend and Map spending data to the business • Create Show back and Chargeback • Understand and allocate team spend and shared cost • Understand and Set tag strategy and compliance • Internal & External benchmarking • Create Scorecards • Continuous implementation • Define budgets & forecasts • Integrate show back/chargeback into internal systems • Analyse trending and variance	**Measure potential optimisations and set goals based on Business strategy** • Identify anomalies and clean-up of unused resources • Find and report on underutilized services • Account level cost optimizations • Recommendations for leveraging Cloud Native Services • Architecture recommendations to optimize costs • Auto scheduling resources for lower environments (non-prod) • Budget and TCO reports • Compare prices and workload placements	**Measure potential optimisations and set goals based on Business strategy** • Deliver spend data to stakeholders • Make cultural changes to align with business goals • Actively optimize Novartis cloud spend • Finance moves at the speed of IT • Continuously improve cost efficiency & innovation • Automate resource optimization • Integrate recommendations into workflows • Defined governance & controls for cloud usage • Establish policy-driven tag clean-up and storage lifecycle policies i.e. **Tag-Or-terminate, Tag-On-Deploy, automatic storage tiering, etc.**

CRAWL WALK RUN FLY

Benefits

Conducting a FinOps Assessment holds significant benefits for public sector entities, empowering them with improved financial visibility, informed decision-making, and a proactive approach to cost management in line with public service goals.

- **Improved Cost Visibility:**
  Enhancing visibility into cloud costs through meticulous evaluation and analysis tailored for the public sector.
- **Optimized Cloud Spending:**
  Making informed decisions to optimize cloud spending without compromising public service performance.
- **Proactive Cost Management Culture:**
  Establishing a proactive culture that actively manages and controls cloud-related expenses in alignment with public sector fiscal responsibility.

Features

The assessment process is a targeted exploration, focusing on key features that contribute to effective FinOps practices in the public sector cloud environment:

- **Cost Allocation Methodologies Evaluation:**
  Assessing the methodologies used for allocating costs to different public sector projects and departments.
- **Analysis of Spending Patterns:**
  In-depth analysis of spending patterns to identify areas for optimization and improvement in the public sector context.
- **Implementation of Cost Optimization Strategies:**
  Strategically implementing cost optimization strategies tailored to the unique needs of public sector organizations.
- **Utilization of Cloud Cost Management Tools:**
  Assessment of the effectiveness of implemented cloud cost management tools, considering public sector requirements.
- **Establishment of Budgeting Practices:**
  Evaluating the effectiveness of budgeting practices for cloud-related expenditures within the regulatory framework of the public sector.
- **Integration of Cost Monitoring into DevOps Pipeline:**
  Examining the integration of cost monitoring seamlessly into the DevOps pipeline for continuous optimization, aligning with public sector objectives.
- **Real-time Cost Visibility:**
  Gain complete visibility into your cloud spending across multiple providers and regions through intuitive dashboards and reports.
- **Cost Optimization Recommendations:**
  Leverage advanced algorithms and machine learning to identify cost-saving opportunities and optimize resource utilization.
- **Budget Management:**
  Set and track budgets for individual projects, departments, or teams, with automated alerts and notifications to prevent budget overruns.
- **Resource Allocation Insights:**
  Understand resource usage patterns and trends to make informed decisions about resource allocation and capacity planning.
- **Customizable Reporting:**
  Generate detailed reports tailored to your organization's needs, with customizable filters, dimensions, and metrics.
- **Integration with Leading Cloud Platforms:**
  Seamlessly integrate with popular cloud providers such as AWS, Azure, and Google Cloud Platform for unified cost management.
- **Security and Compliance:**
  Ensure compliance with industry regulations and internal policies through robust security measures and audit trails.

Case Study

Qualifications

ISO 9001
ISO 27001
Cyber Essentials Certified
DSPT Certified
AWS Premier Tier Services
AWS Managed Service Provider
AWS Public Sector Partner
AWS Solution Provider Program
AWS – APN Immersion Days
Select Databricks Partner
Microsoft Solutions Partner: Infrastructure
Microsoft Solutions Partner: Data and AI
Microsoft Solutions Partner: Digital & App Innovation
AWS Oracle Competency Partner
Google Cloud Premier Partner
AWS Premier Consulting Partner
Oracle Global Cloud Premier Elite partner
IoT approved Oracle Partner

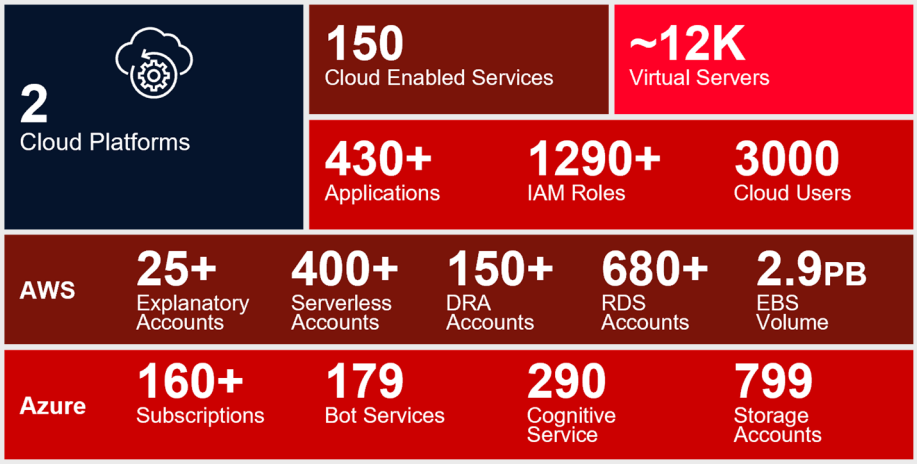
Large Multinational Pharmaceutical Company

Summary

Hitachi Application Reliability Center (HARC) established FinOps practice delivering,

- Visibility into cloud spending for effective cost management and optimisation.
- Centralised Oversight: Dedicated FinOps team providing centralised oversight and expertise, driving targeted cost optimisation initiatives.
- Continuous Improvement: guiding organisational cultural shift to cost aware design, development & operations, as an ongoing process that requires continuous monitoring, analysis, accountability, and refinement of strategies to maximise savings and efficiency through multi-level showback & chargebacks.

High Complex multi-cloud environment



What was done?

To get visibility over consumption costs Hitachi Vantara leveraged an industry standard FinOps framework.

1. Established centralized FinOps team
2. Purchasing reservations and doubling the number of machines that run on a reservation plan.
3. Resource cleanup and data transfer, consolidating and upgrading tables and machines, and so reducing storage and operation costs.

Accomplishments

With optimizations implemented, the client's **cloud bill decreased by 20%**, even **though workload grew by 30%** during the project due to increased website traffic and feature development.