

Cloud FinOps A Story Beyond Cost Optimization

White Paper

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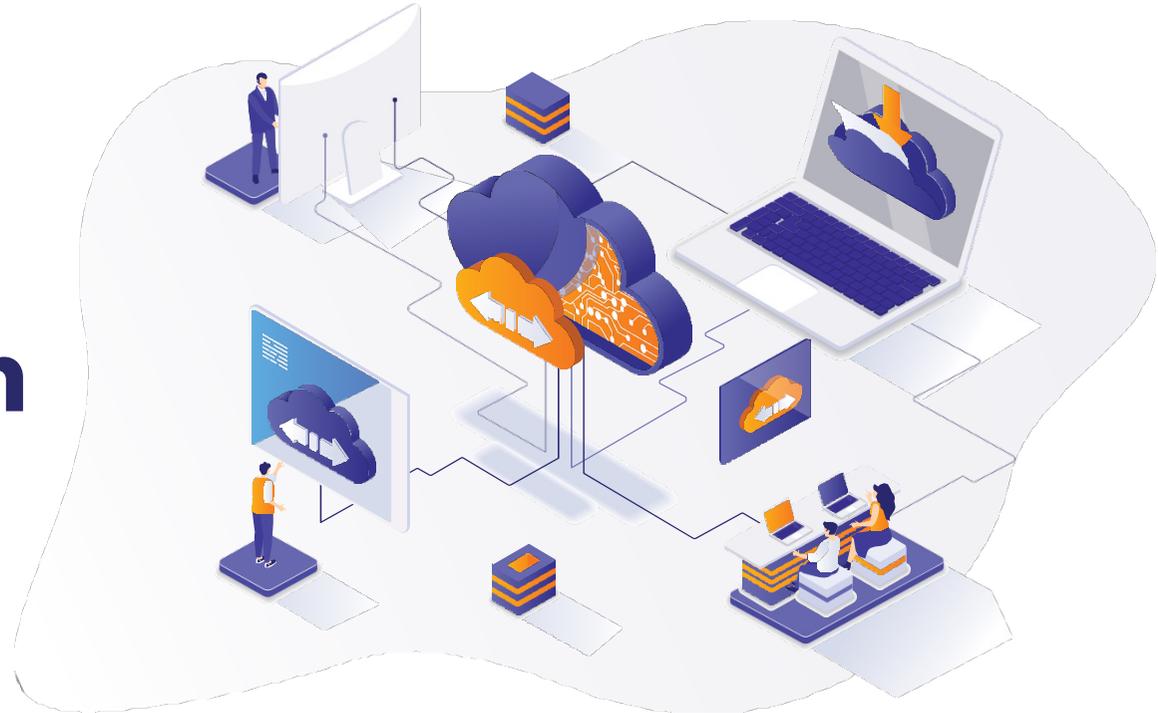


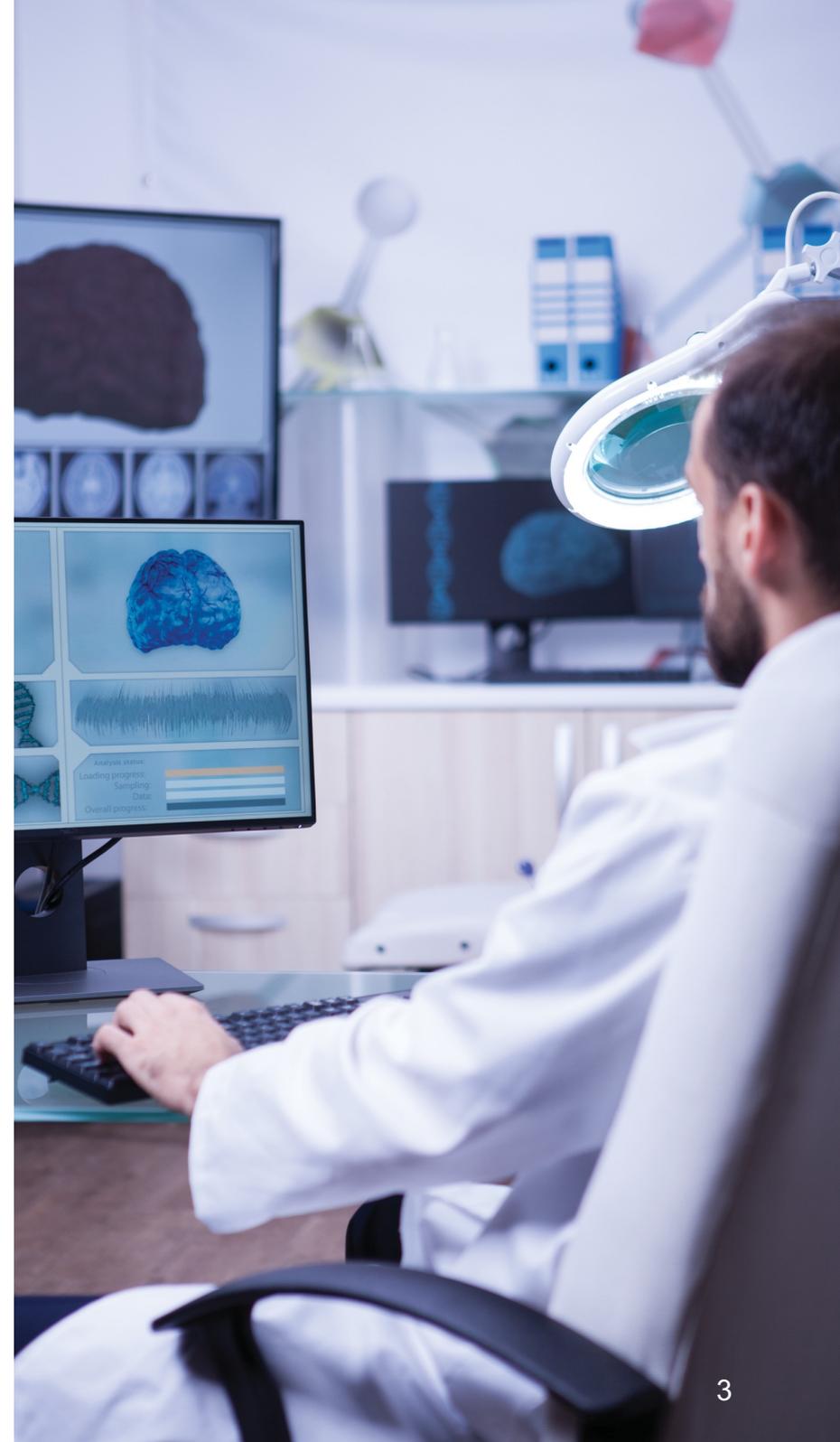
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Introduction

In today's rapidly evolving digital landscape, healthcare organizations have started prioritizing digital transformation and modernization leading to higher cloud adoption. Leveraging cloud technologies, they can scale easily, have the flexibility of providing different services via various channels, reduce operational costs, seamlessly collaborate, and securely exchange information. Now, they can ensure security and compliance, access innovative technologies, and provide reliable disaster recovery and business continuity solutions.

The global healthcare cloud computing market will grow at a CAGR of 17.8% from 2022 to 2027 and will reach \$89.4 billion by 2027 (a report by MarketsandMarkets). However, the benefits of cloud computing also come with new challenges, particularly in managing cloud costs. In a recent survey by Flexera, most of the respondents said that cloud cost management is still one of the top initiatives in their organization. The survey also highlighted that organizations **waste an average of 30% of their cloud spend** due to a lack of visibility into their usage and spending. The complexities of multi-cloud environments, diverse pricing models, and decentralized ownership further compound the challenge of optimizing cloud spending.



As cloud usage continues to grow, these challenges will only become more significant!

To address these challenges, healthcare organizations are turning to FinOps (Financial Operations), or cloud financial management. It is a discipline that provides a framework for managing cloud costs and optimizing cloud spending while aligning cloud spending with broader business objectives. FinOps is a **cultural shift** where each department or team takes on the financial accountability and ownership of the variable cloud spend, enabling them to make informed trade-offs between quality, speed, and cost in their cloud architecture and investment decisions.

This whitepaper aims to provide healthcare organizations with a comprehensive understanding of FinOps and how the framework can be leveraged to go beyond cost optimization. We will explore the principles, strategies, and best practices of FinOps, along with practical guidance on how to get started and drive FinOps adoption within your organization. By adopting FinOps, healthcare organizations can gain better control over cloud costs, improve financial performance, foster transparency and accountability, and ultimately accelerate their digital transformation journey.

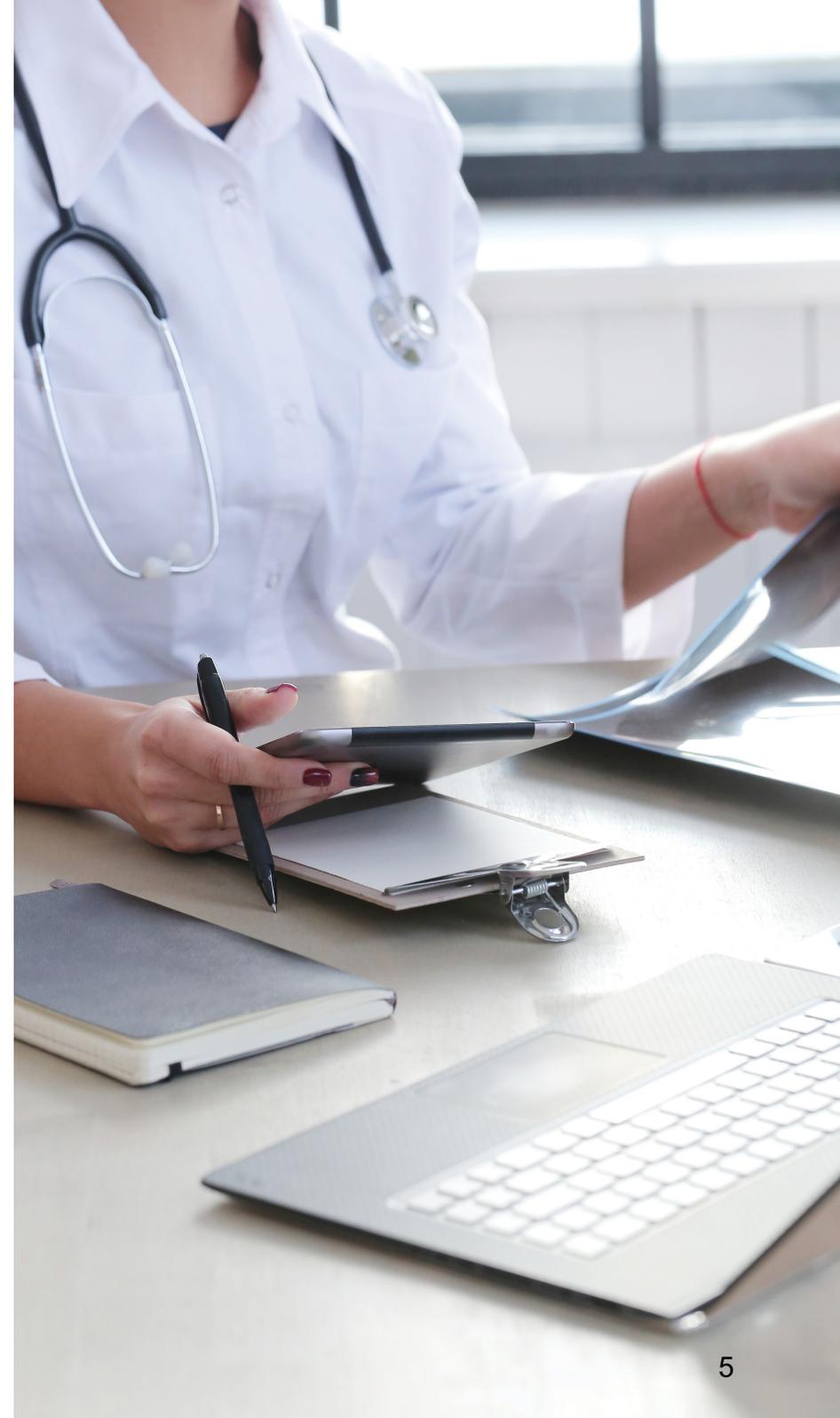


Understanding FinOps

FinOps, short for Financial Operations, is a discipline that combines financial management practices with cloud operations to optimize cloud spending and maximize the value of cloud investments. It introduces a framework for managing cloud costs while aligning them with broader business objectives. At its core, FinOps aims to foster a culture of financial accountability, transparency, and collaboration among teams responsible for cloud usage and spending.

Key Principles of FinOps

FinOps is guided by a set of key principles that serve as the foundation for effective cloud financial management. Understanding these principles is crucial for healthcare organizations looking to implement FinOps practices. Let's explore the core principles of FinOps





1. Accountability and Ownership

- FinOps emphasizes decentralized financial accountability, where each team or department takes ownership of the cloud resources they consume. This principle ensures that teams are aware of the financial implications of their decisions, promoting responsible cloud resource usage.
- To promote accountability, ensure that everyone involved in cloud operations, from developers to finance teams, shares responsibility for managing cloud costs. This involves creating a culture of cost awareness and setting up cross-functional teams to work together



2. Empower consumption

- FinOps places a strong emphasis on transparency and visibility into cloud usage and costs. By providing teams with real-time visibility into their cloud spending and consumption patterns, organizations can promote cost consciousness and enable data-driven decision-making
- To ensure visibility, encourage cloud users to make informed decisions about their usage and spending by providing them with tools and information about their costs. This involves implementing chargebacks, showbacks, and other tools to provide transparency and accountability.



3. Optimize costs

- FinOps is not a one-time activity but rather an ongoing process of continuous optimization. It involves regularly assessing cloud usage, identifying cost optimization opportunities, and implementing strategies to achieve optimal cost-efficiency without compromising performance.
- To foster optimization, continuously identify and eliminate waste in cloud usage by regularly reviewing costs and usage patterns, and optimizing resources accordingly. This involves implementing automated cost optimization tools and processes, such as automated resource scheduling and rightsizing.



4. Plan and forecast

- FinOps relies on data analytics and insights to drive informed decision-making. By leveraging cloud cost management tools, organizations can gain actionable insights, identify trends, and make data-driven decisions to optimize cloud spending.
- Develop a clear plan for cloud spending based on usage and business needs, and regularly review and adjust that plan based on changing requirements. This involves creating a budgeting and forecasting process that incorporates the organization's overall strategic objectives.



5. Choose the right resource

- Choose the most cost-effective cloud resources that meet business needs, taking into account factors such as usage patterns, workload requirements, and vendor pricing models.
- This involves developing a deep understanding of cloud pricing and vendor offerings, as well as engaging with vendors to negotiate favorable terms.



6. Drive continuous improvement

- Continuously measure and optimize cloud operations to improve performance and reduce costs. This involves implementing a continuous improvement process that includes regular reviews of cloud operations, benchmarking against industry best practices, and identifying areas for improvement.

Showbacks and Chargebacks: Fostering Accountability and Carbon Consciousness

In addition to the core principles of FinOps, two important practices play a vital role in creating awareness and accountability for cloud resource usage: showbacks and chargebacks. These practices involve showcasing the cost of cloud resources to different hospital departments, enabling them to understand the financial implications of their consumption.

Showbacks

- Showbacks provide visibility into cloud costs and usage metrics for different departments or teams within the organization. It allows departments to see how their activities contribute to overall cloud spending. By presenting showbacks, organizations create a culture of transparency and encourage departments to optimize their resource usage
- **For example**, the IT department can generate showback reports that illustrate the cost of infrastructure, storage, and networking services utilized by each department. These reports can be shared regularly, fostering accountability and enabling departments to identify areas where cost optimizations can be made.

Chargebacks

- Chargebacks take the concept of showbacks a step further by assigning costs directly to the respective departments or business units. Chargebacks involve allocating cloud costs based on actual resource consumption, enabling departments to have a clear understanding of the financial impact of their cloud usage.
- For instance, the finance team can generate chargeback reports that detail the allocated costs for cloud services, computing instances, and storage used by different departments. This helps departments understand their financial responsibility and encourages them to make conscious decisions about resource utilization.

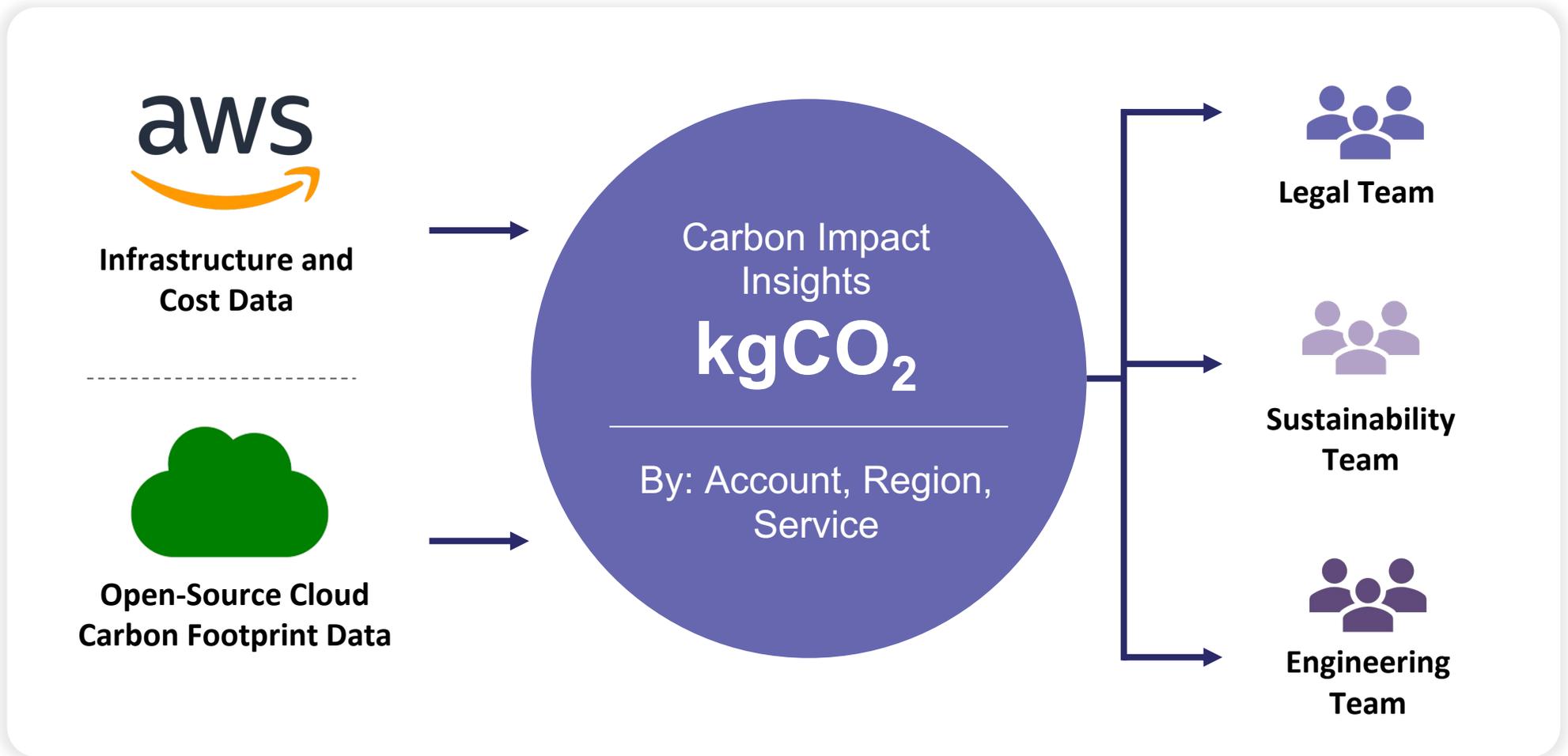


Image 1 – Showback and chargeback can create awareness about the environmental impact of the cloud usage.

By implementing showbacks and chargebacks, healthcare organizations promote financial transparency, accountability, and cost consciousness among their departments. Additionally, it serves as a catalyst for promoting carbon consciousness within the organization. Cloud computing has a significant carbon footprint, and by showcasing the costs associated with cloud resources, organizations can create awareness about the environmental impact of their cloud usage.

Cloud service providers are increasingly investing in renewable energy sources and implementing sustainable practices to reduce their carbon emissions. By linking cloud costs to carbon emissions, healthcare organizations can raise awareness among departments about the environmental implications of their cloud usage. This enables them to make informed decisions that not only optimize costs but also contribute to reducing their carbon footprint.

For example, organizations can include carbon emissions data in the showback or chargeback reports, indicating the equivalent carbon emissions associated with the consumed cloud resources. This visual representation can help departments understand the environmental impact of their activities and encourage them to adopt more sustainable practices.

By incorporating showbacks, chargebacks, and carbon consciousness into the FinOps approach, healthcare organizations can foster a culture of responsibility, accountability, and environmental stewardship. This empowers departments to make informed decisions, optimize cloud resource usage, and contribute to both financial and environmental sustainability.

In the following sections of this whitepaper, we will delve deeper into the benefits of FinOps for healthcare organizations and provide practical guidance on how to get started with implementing FinOps practices.



Benefits of FinOps for Healthcare Organizations

Implementing a FinOps approach in healthcare organizations offers a wide range of benefits that positively impact both the financial and operational aspects of cloud management. Let's explore some of the key benefits in detail:

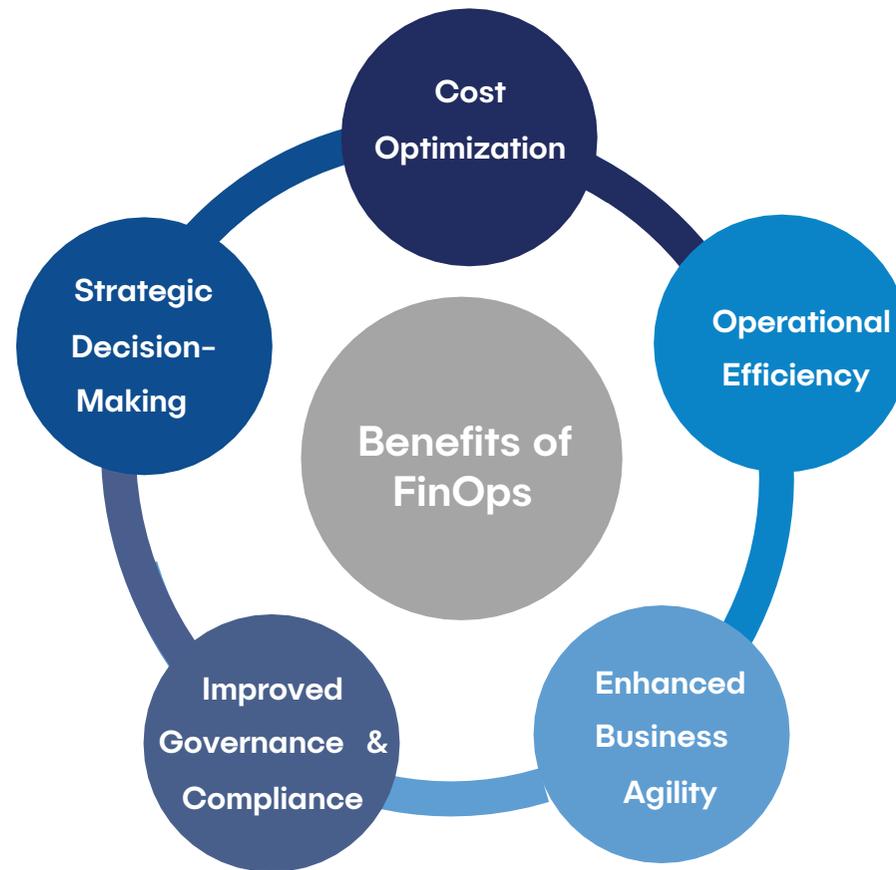


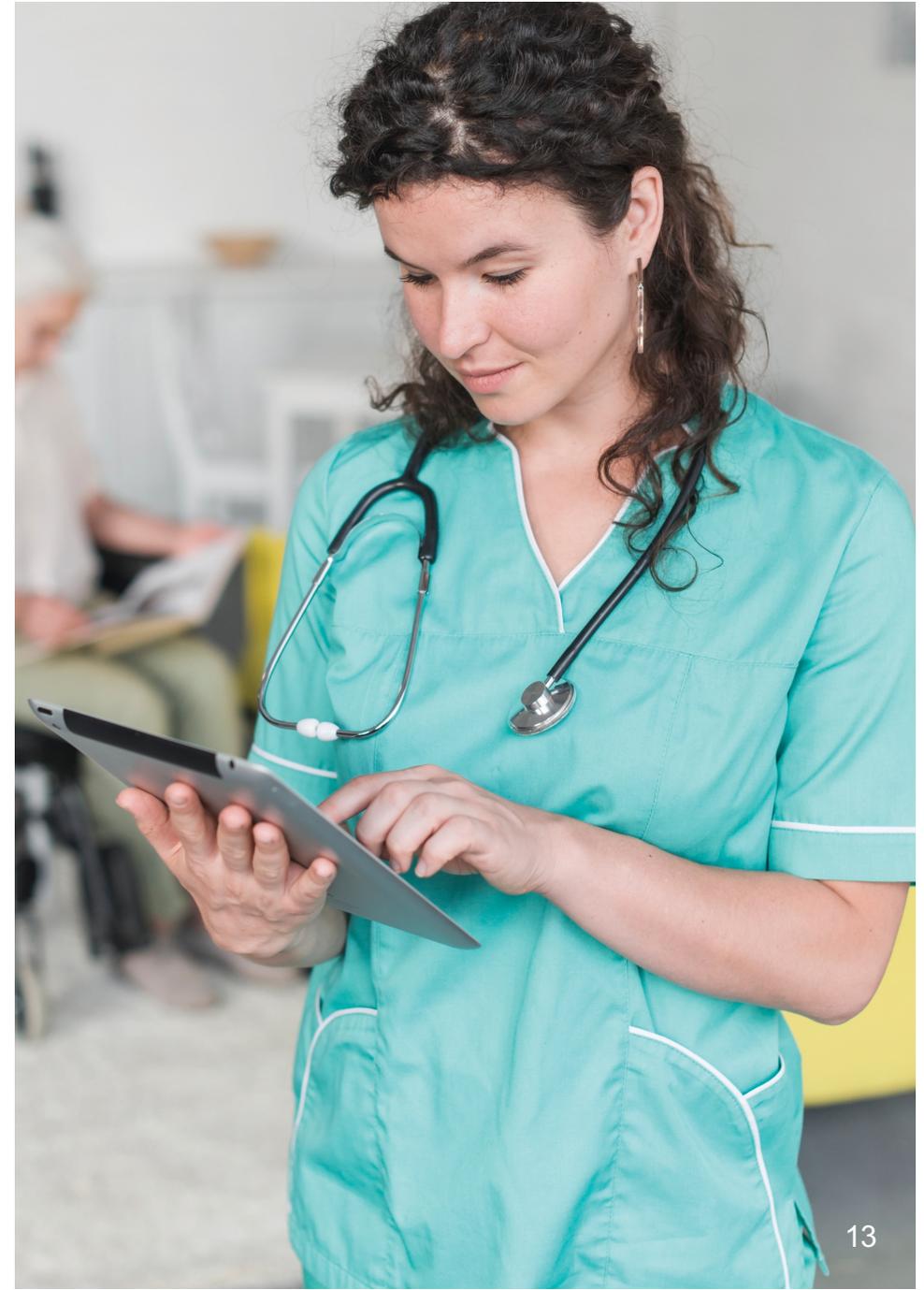
Image 2 – Benefits of FinOps for Healthcare Organizations

Cost Optimization

One of the primary objectives of FinOps is to optimize cloud costs by bringing financial accountability and visibility into cloud resource usage. By implementing FinOps practices, healthcare organizations can gain insights into their cloud spending patterns, identify areas of waste and inefficiency, and take proactive measures to optimize costs.

Through cost allocation and tagging strategies, organizations can accurately attribute cloud costs to specific departments, projects, or applications. This granular visibility allows stakeholders to understand their individual contributions to overall cloud spending and make informed decisions regarding resource usage.

FinOps teams can leverage advanced analytics and cost optimization tools to identify idle resources, right-size instances, and leverage reserved instances or spot instances where appropriate. By eliminating waste and optimizing resource allocation, healthcare organizations can achieve substantial cost savings while maintaining the desired level of service.



Operational Efficiency



FinOps promotes operational efficiency by streamlining cloud operations and improving resource utilization. With a clear understanding of their cloud environment, organizations can identify opportunities to improve workflows, automate processes, and enhance overall efficiency.

By implementing FinOps practices, healthcare organizations can identify bottlenecks, optimize data transfer and storage, and automate routine tasks. This enables teams to focus on higher-value activities and accelerates the pace of innovation within the organization.

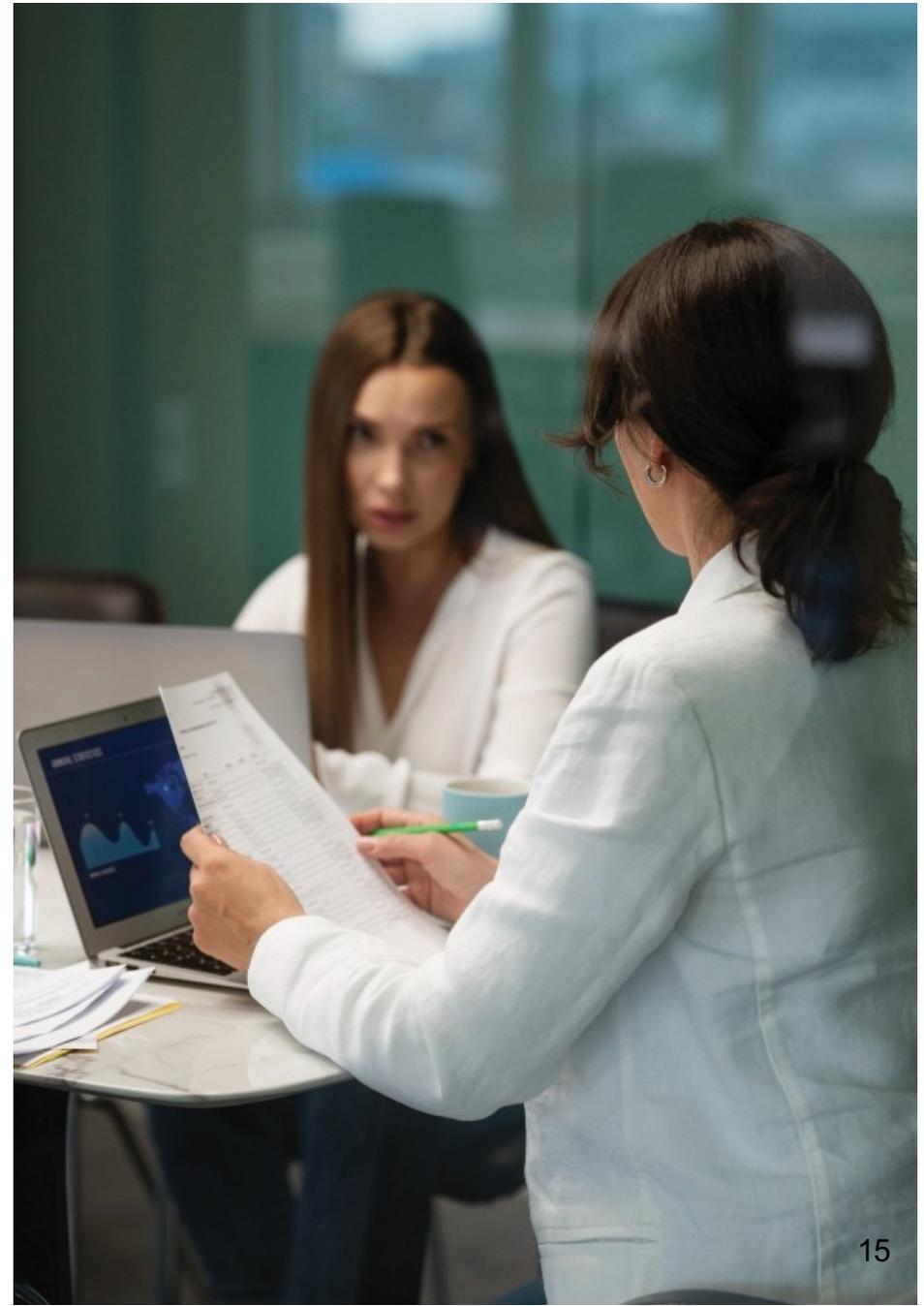
Furthermore, FinOps facilitates collaboration between IT, finance, and operations teams, fostering a culture of shared responsibility and accountability. Cross-functional collaboration enables teams to align their objectives and drive collective efforts towards optimizing cloud usage and achieving operational excellence.

Enhanced Business Agility

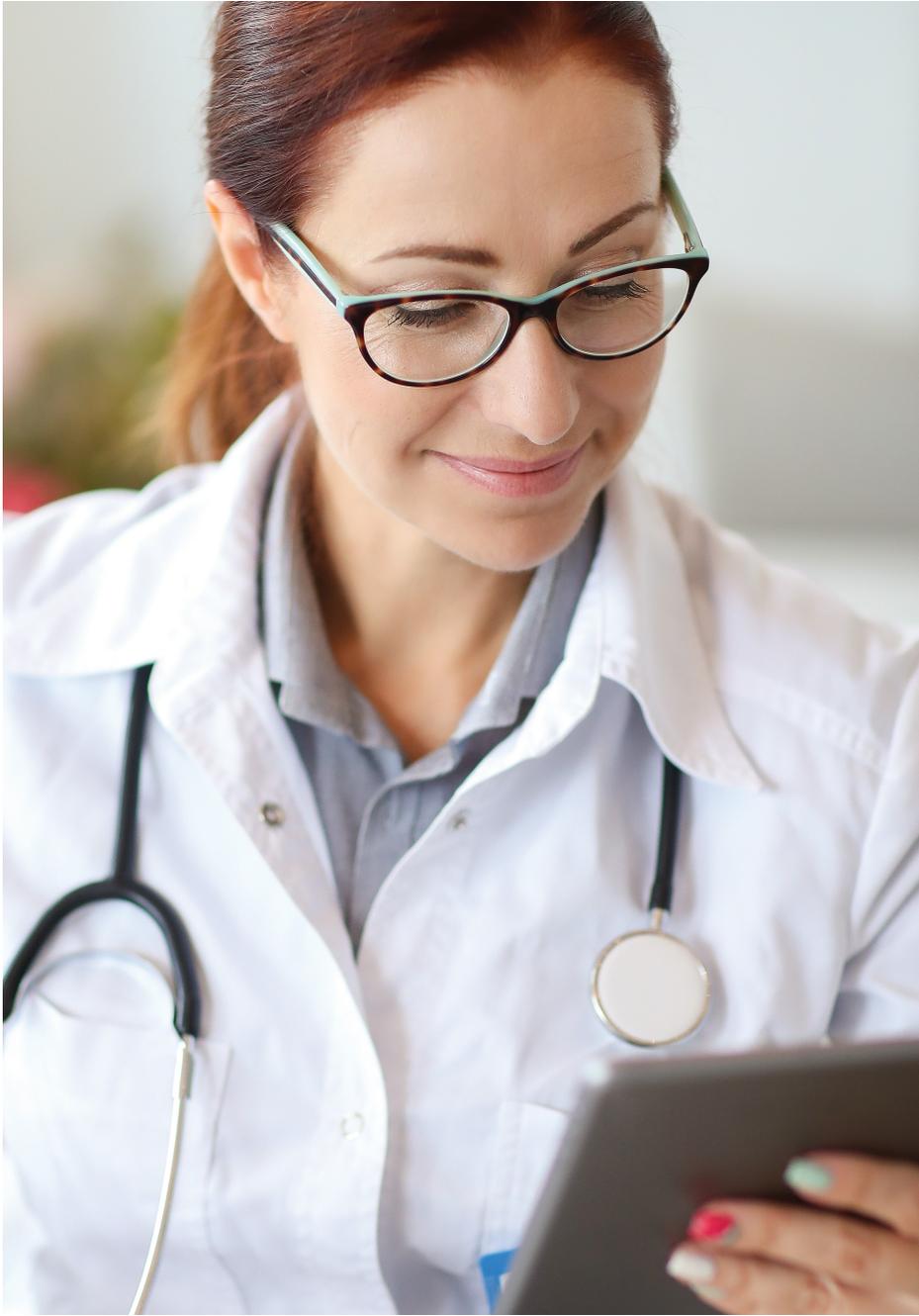
In today's rapidly evolving healthcare landscape, organizations must be agile and responsive to changing market dynamics. FinOps empowers healthcare organizations to scale their cloud resources up or down based on demand, enabling them to respond quickly to evolving business needs.

With FinOps practices in place, organizations can leverage cloud-native services and features to experiment, innovate, and launch new products or services more rapidly. The ability to provision resources on-demand and leverage cloud automation capabilities allows healthcare organizations to seize market opportunities and stay ahead of the competition.

FinOps also provides organizations with the flexibility to explore multi-cloud or hybrid cloud strategies. By optimizing costs and resource utilization across different cloud providers, healthcare organizations can avoid vendor lock-in and take advantage of the unique capabilities offered by each provider.



Improved Governance and Compliance



Cloud governance and compliance are critical considerations for healthcare organizations. FinOps helps establish robust governance frameworks, ensuring that cloud usage aligns with industry regulations, organizational policies, and security requirements.

By implementing FinOps practices, organizations can monitor cloud resource usage, enforce access controls, and track compliance with relevant industry standards. With accurate cost allocation and chargeback mechanisms, healthcare organizations can ensure that departments are accountable for their cloud spending and adhere to budgetary guidelines.

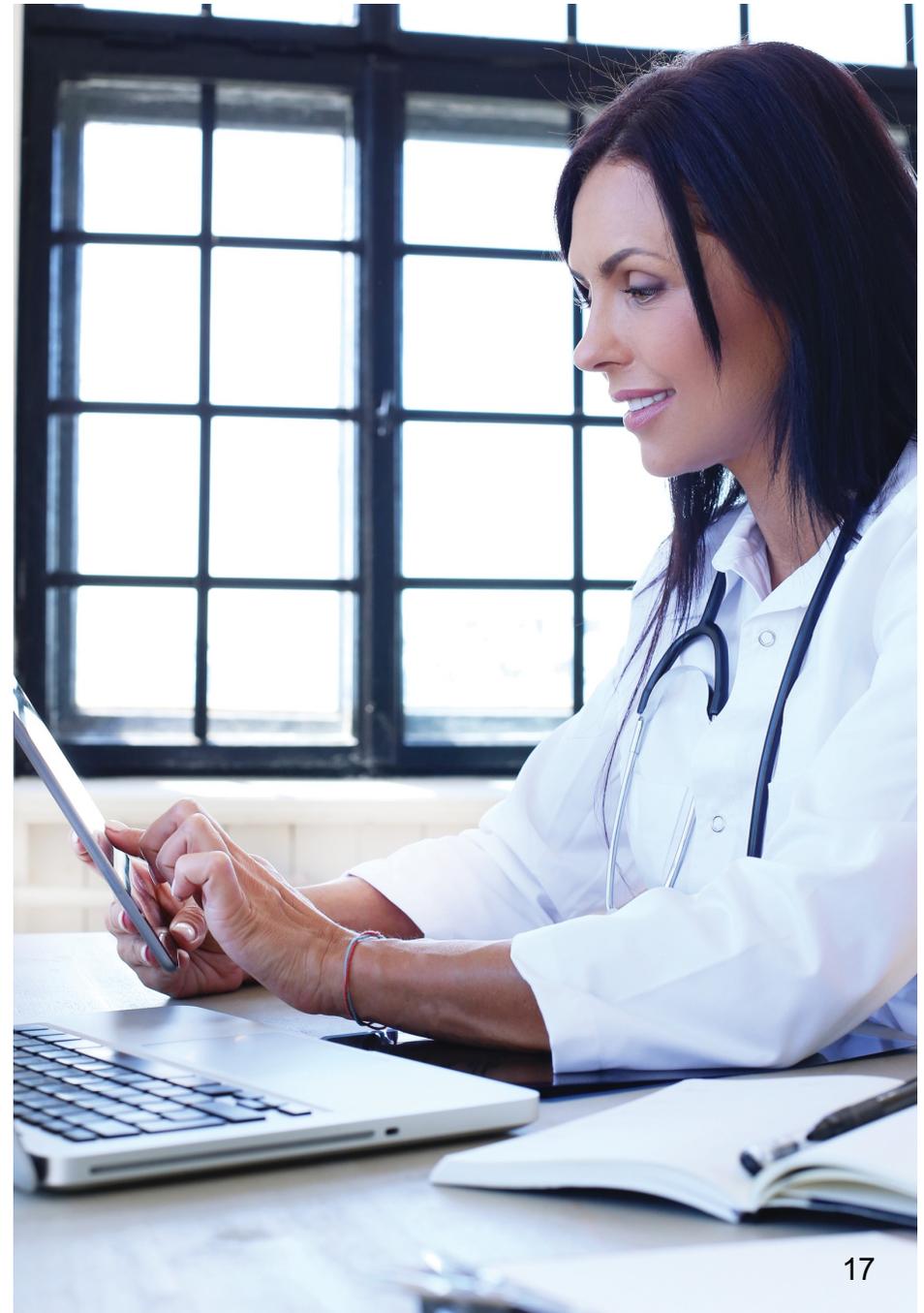
FinOps also enables organizations to implement cost allocation tags that align with their financial and operational structures. This facilitates accurate reporting and auditing, making it easier to demonstrate compliance with regulatory frameworks.

Strategic Decision Making

FinOps provides healthcare organizations with the necessary insights and data to make strategic decisions regarding cloud investments and resource allocation. With comprehensive visibility into cloud spending patterns, organizations can align their cloud strategy with broader business objectives and drive informed decision-making.

By leveraging FinOps practices, healthcare organizations can analyze cost and usage data to identify trends, patterns, and opportunities for optimization. This information enables stakeholders to make data-driven decisions about resource provisioning, capacity planning, and cost management.

FinOps also empowers organizations to assess the return on investment (ROI) of their cloud initiatives. By tracking the cost and performance metrics associated with specific projects or applications, healthcare organizations can evaluate the effectiveness of their cloud investments and optimize their spending accordingly.



Environmental Sustainability



In addition to financial considerations, healthcare organizations are increasingly concerned about their environmental footprint. FinOps can play a significant role in promoting sustainable cloud usage by creating awareness of the carbon impact associated with cloud resources.

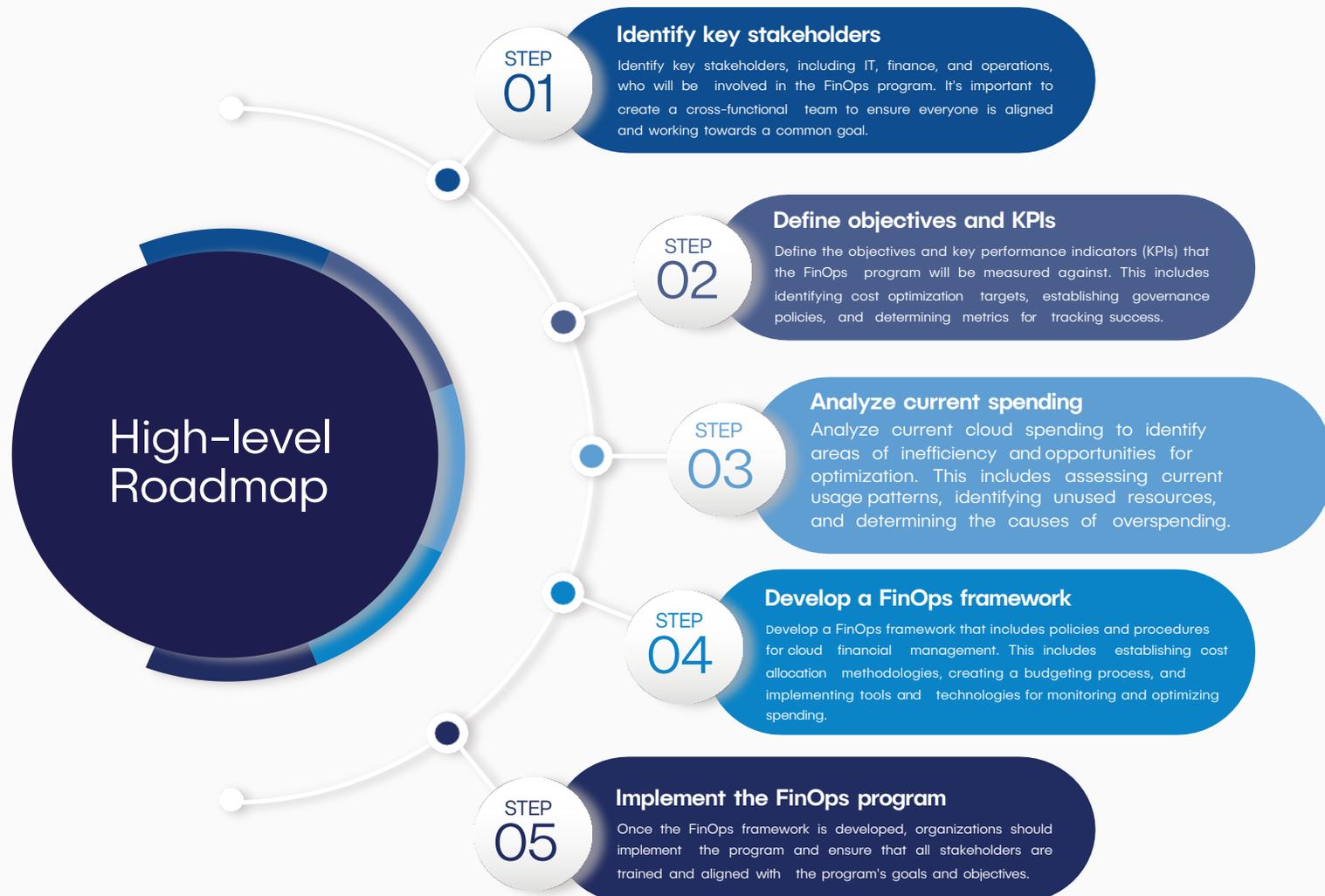
Through effective tagging and reporting mechanisms, FinOps teams can provide visibility into the carbon footprint of different departments or projects. This information raises awareness among stakeholders, encouraging them to make conscious decisions about resource utilization and adopt sustainable practices.

FinOps also facilitates the identification of energy-efficient cloud services, optimized workload configurations, and strategies for minimizing overall resource consumption. By optimizing cloud usage with a focus on sustainability, healthcare organizations can contribute to environmental stewardship while achieving their financial and operational goals.

The benefits of FinOps extend beyond financial optimization, empowering organizations to operate efficiently, innovate rapidly, and deliver value to patients and stakeholders. In the following sections of this whitepaper, we will delve into the practical aspects of implementing FinOps in healthcare organizations. We will explore the key steps to get started with FinOps, discuss best practices for cloud cost optimization, and provide insights into leveraging technology and tools for effective FinOps implementation.

Getting Started with FinOps in Healthcare Organizations

As organizations beginning to understand the importance of FinOps as enabler, getting broad executive support from both technical and financial leadership is the key to driving the cultural change. Here is a high-level roadmap that organizations can follow to kick-start their FinOps Journey.



Implementing FinOps in a healthcare organization requires careful planning, collaboration, and a phased approach. In this section, we will outline the key steps to get started with FinOps, including establishing a governance framework, defining cost allocation strategies, implementing tagging and reporting mechanisms, and fostering cross-functional collaboration.

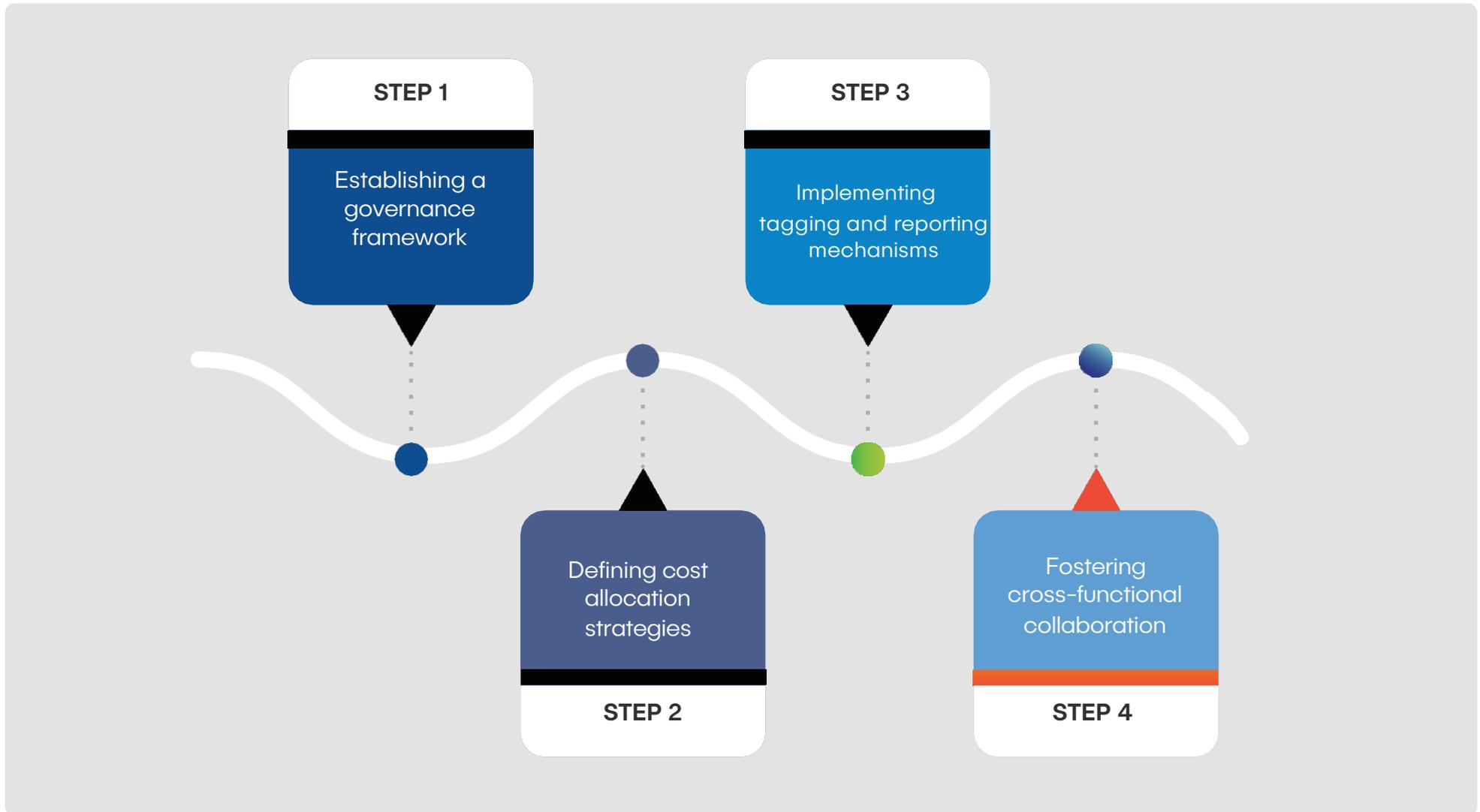


Image 3 – Key steps to get started with FinOps

Establishing a Governance Framework

Before embarking on a FinOps journey, it is essential to establish a governance framework that outlines the roles, responsibilities, and processes related to cloud financial management. This framework provides a solid foundation for effective cost control, transparency, and accountability.

The governance framework should include:

Roles and Responsibilities:

Clearly define the roles and responsibilities of the FinOps team, cloud architects, finance department, and other stakeholders involved in cloud financial management. This ensures that everyone understands their responsibilities and accountabilities in managing cloud costs

Policies and Procedures:

Develop policies and procedures related to cost allocation, budgeting, purchasing, and resource provisioning. These policies should align with industry best practices and reflect the organization's specific needs and goals.

Approval Processes:

Establish clear approval processes for cloud resource provisioning and spending. This helps prevent unauthorized spending and ensures that cloud resources are provisioned based on business needs.

Compliance and Security:

Define guidelines for ensuring compliance and security in cloud usage. This includes data protection, access controls, and adherence to regulatory requirements.

By establishing a governance framework, healthcare organizations can create a structured approach to FinOps implementation and ensure that cloud financial management aligns with organizational policies and objectives.

Defining Cost Allocation Strategies

Accurate cost allocation is a crucial aspect of FinOps, as it enables organizations to understand the cost implications of different departments, projects, or applications. Defining cost allocation strategies involves categorizing cloud resources, establishing cost allocation tags, and assigning costs to specific entities.

To define cost allocation strategies:

Categorize Cloud Resources

- Identify and categorize different types of cloud resources, such as virtual machines, storage, databases, and networking.
- This categorization allows for better visibility and analysis of costs associated with each resource type.

Establish Cost Allocation Tags

- Implement a standardized tagging strategy to assign specific cost allocation tags to cloud resources.
- These tags could include department, project, application, or any other relevant categorization that aligns with the organization's structure and reporting needs.

Automate Tagging

- Leverage automation tools and scripts to automatically apply cost allocation tags to cloud resources.
- This reduces manual effort and ensures consistent and accurate tagging.

Allocate Costs

- Implement a cost allocation methodology that assigns costs to the appropriate departments, projects, or applications based on the assigned tags.
- This enables accurate showbacks and chargebacks, providing transparency and accountability to stakeholders.

By defining cost allocation strategies, healthcare organizations can gain granular insights into cloud costs and effectively attribute expenses to the entities responsible for generating them.

Implementing Tagging and Reporting Mechanisms

Tagging and reporting mechanisms are essential components of FinOps implementation, as they provide visibility into cloud costs, usage patterns, and optimization opportunities. Implementing robust tagging and reporting mechanisms involves leveraging cloud provider tools, third-party solutions, and custom scripts to gather and analyze cost and usage data.

To implement tagging and reporting mechanisms effectively:

Utilize Cloud Provider Tools:

Leverage the tagging and reporting capabilities provided by your cloud providers, such as AWS, GCP, and Azure. These tools allow you to apply tags to resources, generate cost and usage reports, and visualize spending patterns.

Third-Party Solutions:

Explore third-party solutions and FinOps tools specifically designed for multi-cloud cost management. These tools offer advanced tagging features, customizable reporting dashboards, and cost optimization recommendations across multiple cloud providers.

Custom Scripts and Automation:

Develop custom scripts or use automation frameworks to enhance tagging and reporting processes. These scripts can automatically apply tags to resources based on predefined rules or extract and aggregate cost and usage data from different cloud provider APIs.

Visualization and Dashboards:

Create visual dashboards and reports that provide a holistic view of cloud costs, showbacks, and chargebacks. These visualizations help stakeholders understand their resource utilization, identify cost-saving opportunities, and make informed decisions based on data-driven insights.

By implementing robust tagging and reporting mechanisms, healthcare organizations can gain real-time visibility into their cloud costs and usage, enabling them to optimize resource allocation, identify cost-saving opportunities, and facilitate informed decision-making.

Fostering Cross-Functional Collaboration

Successful implementation of FinOps requires collaboration and alignment between various teams and departments within the healthcare organization. By fostering cross-functional collaboration, organizations can ensure that the cloud financial management becomes a shared responsibility and decisions are made with a holistic understanding of business objectives and cost implications.

To foster cross-functional collaboration:

Establish Communication Channels

Create channels for regular communication and collaboration between the FinOps team, cloud architects, finance department, and other stakeholders involved in cloud financial management. This can include regular meetings, shared documentation, and collaborative tools.

Educate and Train Teams

Provide training and educational resources to enhance the financial literacy of technical and non-technical teams. This helps teams understand the cost implications of their decisions and encourages responsible resource usage.

Promote Cost Awareness

Foster a culture of cost awareness by regularly sharing cost-related metrics, showbacks, and chargebacks with relevant departments. This promotes accountability and encourages departments to optimize their resource usage based on the associated costs.

Align Financial and Business Goals:

Encourage collaboration between the finance department and business leaders to align cloud spending with business objectives. This ensures that cloud investments support strategic initiatives and deliver value to the organization.

By fostering cross-functional collaboration, healthcare organizations can drive a FinOps culture that promotes transparency, accountability, and optimized cloud spending, leading to improved financial performance and resource utilization.

In the next section, we will explore the key metrics to measuring success of FinOps program within a healthcare IT organization.

Measuring the Success of FinOps in Healthcare Organizations

The success of FinOps can be measured under the following headings:



1. Cost optimization:

The primary objective of FinOps is to optimize cloud spending. Organizations can use the following KPIs to measure cost optimization:

- **Cost savings:** This measures the amount of cost savings achieved through optimization efforts compared to the previous period or the budgeted amount.
- **Cost efficiency:** This measures the level of efficiency in cloud spending compared to industry benchmarks or best practices.
- **Cost allocation accuracy:** This measures the accuracy of cost allocation across different departments, applications, and projects.

2. Governance and compliance

FinOps help ensure alignment of cloud spending with governance and compliance requirements. Businesses can use the following KPIs to measure governance and compliance:

- **Security and compliance score:** This measures the organization's compliance with security and regulatory requirements, such as SOC 2, ISO 27001, and HIPAA.
- **Policy compliance:** This measures the level of compliance with internal policies and procedures, such as cloud usage policies and access controls.





3. Business alignment:

FinOps should be aligned with the organization's business goals and objectives. Organizations can use the following KPIs to measure business alignment:

- **ROI:** This measures the return on investment in cloud services and infrastructure compared to the cost of investment.
- **Time to market:** This measures the speed of delivery of new products and services using cloud infrastructure and services.

4. Collaboration:

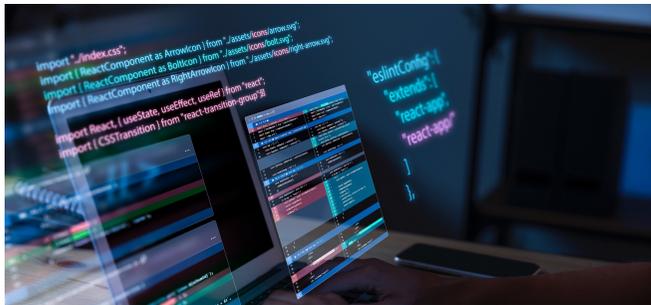
FinOps requires collaboration between IT, finance, and operations. Businesses can use the following KPIs to measure collaboration:

- **Communication effectiveness:** This measures the effectiveness of communication between IT, finance, and operations in managing cloud spending.
- **Joint accountability:** This measures the amount of joint accountability for cloud spending between IT, finance, and operations.



FinOps: Going Beyond Cost Optimization

Cost optimization is a significant part of FinOps, but it's not the only focus of an effective FinOps program. Here are some ways that organizations can use to use FinOps for driving broader business goals and go beyond cost optimization:



1. Align IT and business objectives:

By involving finance in cloud spending decisions, organizations can ensure that cloud spending alignment with broader business objectives. Finance involvement can help ensure directing cloud spending towards plans aligned with the organization's overall objectives and priorities.



2. Improve resource allocation:

In addition to optimizing costs, FinOps can help organizations allocate resources more effectively. FinOps can help ensure directing resources towards initiatives that deliver the most value to the organization by tracking usage patterns and identifying areas where resources are being underutilized.



3. Drive innovation:

FinOps can help organizations drive innovation by enabling teams to experiment with new cloud services and technologies in a cost-effective way. By providing businesses the visibility into cloud spending and usage patterns, FinOps can align innovation initiatives with the organization's overall goals and priorities.



4. Increase agility:

FinOps can help organizations increase agility by enabling teams to provision and deprovision cloud resources quickly and efficiently. By providing businesses the visibility into cloud usage and costs, FinOps can help ensure that teams have the resources they need when they need them, without incurring unnecessary costs.



5. Enhance security and compliance:

By involving finance in cloud spending decisions, organizations can ensure alignment of cloud spending with security and compliance requirements. FinOps can help ensure alignment of cloud usage with regulatory requirements and organizational policies as well as provisioning resources securely.

Conclusion

FinOps is a crucial part of the digital transformation of healthcare IT organizations. It is not limited to measuring the cloud spend, it promotes developing a proper framework to identify opportunities for optimizations and be able to drive innovation by allowing teams to experiment safely while also making them accountable. FinOps also improve a business's overall agility to respond to the changing market conditions while building secure software solutions.

To meet the customer expectations and provide a range of services and flexibility, the healthcare stakeholders are bound to adopt more cloud technologies in the future. Using cloud effectively and optimizing cost with the best practices is still in nascent stages for all industries, especially healthcare. While the cost optimization always comes as an afterthought after investing in cloud technologies, there is a need for constant optimization of cloud to meet and deliver business objectives – a requirement met by FinOps principles.

FinOps is a combination of best practices that can help organization develop a culture to use cloud the most effective way, trading-off between quality and cost as required by business objectives. It involves close collaboration between DevOps and Finance teams and requires them to equip themselves with the right tools. FinOps is a sustainable cloud cost optimization practice that every organization investing in cloud technologies need to follow instead of random and sporadic cloud optimization efforts and develop cloud cost optimization as a culture in the organization.

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Abstract

This whitepaper highlights the rising significance of FinOps, key FinOps principles, and how FinOps goes beyond cloud cost optimization. It will help organizations to kick start their FinOps journey.

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About CitiusTech

Our vision is to Inspire new possibilities for the health ecosystem with technology and human ingenuity. At CitiusTech, we constantly strive to solve the industry's greatest challenges with technology, creativity, and agility. Together with the world's leading Healthcare and Lifesciences organizations and our partners, we aim to accelerate the transition to a human-first, sustainable, and digital healthcare ecosystem.

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