



WHITEPAPER

# **MANAGE BUDGET AND SPEND IN A MULTI-CLOUD ENVIRONMENT**

**THE CLOUD IS VAST, YOUR BUDGET IS LIMITED –  
WHAT IS YOUR PLAN?**

## Introduction

Organizations around the world are adopting cloud-based solutions at a rapid pace. In fact Gartner predicts that the global public cloud services market will grow 18% in 2017 and through 2020 cloud adoption strategies will dictate greater than 50% of IT outsourcing deals.<sup>1</sup> While the cloud provides proven technical benefits, are organizations fully realizing the business requirements of the cloud?

Cloud, by its very nature, makes it easy to procure and spin-up resources quickly in real time, providing organizations increased agility, opportunity for innovation, and an edge over the competition. However, as with anything that is on-demand and without high, up-front investment, there can be too much of a good thing – and that leads to other organizational issues.

Let's take a step back to when server virtualization was introduced; virtualization improved hardware efficiency through server consolidation and reduced the time to bring a server online from days or weeks to as little time as hours or minutes. Organizations realized the initial benefits of server virtualization via improved business agility, but over time, due to virtual machine sprawl,

the overall efficiencies disappeared. It's the simple economic theory of diminishing returns – too much of a good thing, is not always a good thing.

Fast forward to today and you are starting to see the same with cloud adoption, too much of a good thing is leading to other organizational issues. (See Figure 1, Diminishing Returns on Cloud) In the early stage of cloud adoption, organizations tend to pay more attention as the business case needs to be proved out to the C-suite. Early stage, the Return On Investment (ROI) is quite impressive, the C-suite is pleased and cloud adoption is made main stream across the organization. As business units and Lines of Business within an organization adopt the cloud, ROI reaches an inflection point of diminishing returns.

At this point, organizations have a multi-cloud strategy and are trying to get visibility and insight into what cloud providers are being used, who is using them and what is the budget and spend of those resources? Having this level of visibility and insight will potentially bring back the returns realized in the early stage of adoption.

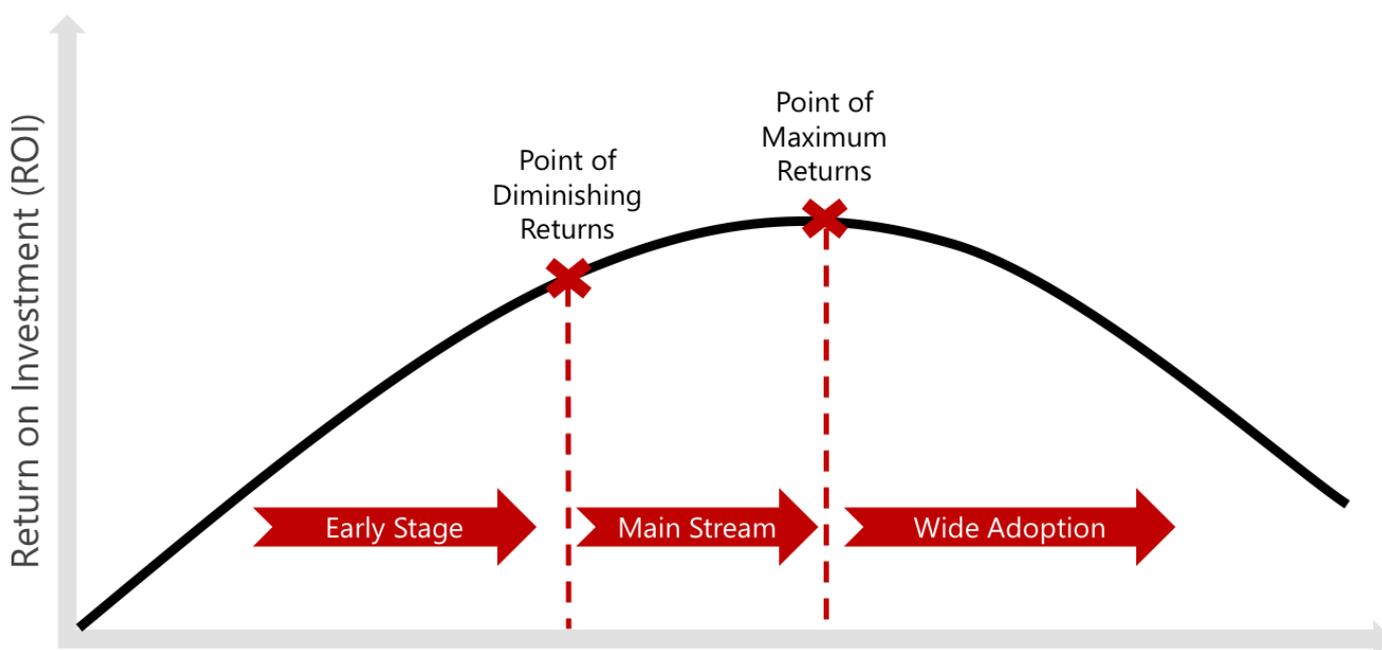


Figure 1 – Diminishing Returns on Cloud



Figure 2 – Technical Benefits vs. Business Requirements

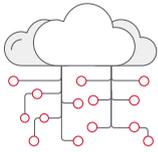
This white paper looks at how setting in place an effective cloud budget and spend management methodology involving people, processes and technology can help your organization realize the full business requirements of the cloud. Proactively developing the strategy, establishing the plan, and defining the requirements is the first step. Once in the cloud, establishing the process to govern what cloud resources are being used, who is using them, budget and spend will bring you closer to realizing the full business requirements of the cloud.

**Technical Benefits vs. Business Requirements**

The cloud as we know it today is still technically in its infancy, but traction is growing as cloud service providers are increasing the breadth of options and offerings. Cloud has many technical benefits and organizations are racing to take advantage of these benefits which range from being more flexible, agile and innovative. The key benefit most organizations focus on is the fact that cloud services are on-demand or pay-as-you-go, significantly changing the landscape of your budget and forecast.

**Recent statistics and industry reports show:**

- Organizations use an average of 13 different cloud service providers to meet their business needs.<sup>2</sup> The cloud services are used across multiple business units.
- Public cloud bills are, on average, 2-3X higher than what is budgeted.<sup>3</sup> Many organizations do not track spend against budget and do not take a proactive approach to see how they are tracking against budget.
- 75% of cloud acquisition will be unapproved and untracked in 2017.<sup>4</sup> The great thing about the cloud is it's typically ready to go whenever you are. The drawback of course being that anyone with a corporate credit card can order the services or application they need with little thought to the impact on the overall IT budget.
- 72% of organizations do not have information to predict future use.<sup>5</sup> Visibility and insight into what cloud resources are being used and who is using them is a big miss across organizations.



**13**

# of cloud service providers used by organizations in 2017



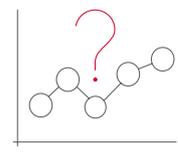
**2-3X**

higher public cloud bills than expectations



**75%**

of cloud acquisition will be unapproved and untracked in 2017



**72%**

of organizations do not have information to predict future use

Figure 3 – Governance and Visibility of Cloud Resources is Challenging

These statistics clearly highlight the fact that business requirements are not being met. (See Figure 3) Business requirements and questions around governance, cost control, what is being used and who is using it, are not always answered. While organizations are rushing to take advantage of the technical benefits of the cloud, the business requirements are not always being met.

To successfully meet the business requirements, organizations need to have a methodology to effectively govern and manage the budget and spend of the cloud resources across the business.

## Govern and Manage Cloud Budget and Spend

The methodology involves people, process and technology and each should be given equal importance. For example, you could have a solution that is giving you insights on your cloud budget and spend, but if there is no process or people to take action, the insights provided by the solution are almost useless. See something, say something and take action should be the overall goal of the methodology.

The following six step methodology provides a framework for governing and managing cloud budget and spend. (See Figure 4)

### 6-STEP METHODOLOGY

## HOW TO GOVERN, MANAGE AND OPTIMIZE CLOUD BUDGET AND SPEND?



- 1 Establish a Strategy to Move to the Cloud
- 2 Define Requirements and Procure Resources
- 3 Discover, Structure and Govern Cloud Resources
- 4 Define Business Units (BUs) and Map Resources to BUs
- 5 Establish Budgets by Business Units
- 6 Analyze and Optimize Budget and Spend

Figure 4 – Methodology for Managing and Optimizing Cloud Budget and Spend

## Step 1: Establish a Strategy to Move to the Cloud

An organization's first step in considering a shift to the cloud is to develop the overall strategy. The strategy should provide insights so key stakeholders can assess the value of extending current datacenter configurations into the public cloud and transform the way IT services are delivered. As such, the strategy should address the following areas:

### Strategy and Plan

- A clear view of how the varied benefits of the Cloud environments align with your business and workload-specific pains to give the workload owners a view of the benefits they will gain from migrating to the Cloud.
- A high-level technical design for your future Cloud datacenter. This provides all IT stakeholders with a current and future-state architecture that can guide further strategy and developments.
- A recommended strategy for securely connecting your existing network to public cloud services. This provides IT stakeholders with concrete advice on how to make necessary changes to existing firewalls, proxy's and routers, and to implement site-to-site VPNs, ExpressRoutes and other networking options to public cloud vendors.
- A recommended hosting strategy for each of the applications in scope to give the operations stakeholders a view of the implication and advantages of supporting the future datacenter.

### Security

- A recommended Identity Access Management (IAM) strategy that ties into your existing security infrastructure. This provides your organization with insights and specific advice about utilizing

technologies such as Active Directory Federation Services (ADFS), Security Assertion Markup Language (SAML)2.0, Multi-Factor Authentication, encryption and single-sign-on, and provides details on relevant Identity & Access Management (IAM) solutions.

- Cloud provider's security practices, this enables security stakeholders to understand the implications and advantages of moving workloads to the cloud.
- An automation framework for driving down costs, freeing up human resources and driving down the operational burden on technology departments.

### Cost Control

- A Total Cost of Ownership (TCO) comparison for running the workloads in the current and future datacenter, split by workload, which enables financial stakeholders to have a holistic view of the cost implications and advantages of the Cloud.
- A framework for aligning the costs of your workloads with internal cost centers providing financial stakeholders with a more direct view of the value of specific workloads.

The strategy should also provide a view of what software is currently being licensed on-premises. A detailed view into software Entitlement, Inventory and Consumption (EIC) should be considered, highlighting what software is actively consumed and utilized, as well as license mobility of moving the workloads to the cloud.

Since workloads are moving to the cloud, it is important that any software that is not being utilized on-premises is not shifted to the cloud. This will ensure that your cloud environment is optimized from day one and



Figure 5 – Consumption Based Shift to Cloud

all under-utilized software is decommissioned so you save on software licensing costs. This is very similar to moving to a new house where waste is identified and removed before packing the boxes for the new house. (See Figure 5)

## Step 2: Define Requirements and Procure Resources

As part of Step 1, you have developed your cloud strategy and identified workloads to be shifted to the cloud. Step 2 should address the cloud resource



requirements needed to shift to the cloud. As there are many options from different cloud service providers (and the average organization uses over a dozen cloud providers), you need to put in place a process and leverage technology that will provide the best options available from different cloud providers taking into account your requirements. The technology aspect should help your organization describe the resource requirements (See Figure 6) such as compute, network, storage, Operating System (OS), and region, to name a few, and it will provide the best options from both a capability and cost perspective. Another item to consider during this stage is the license mobility;

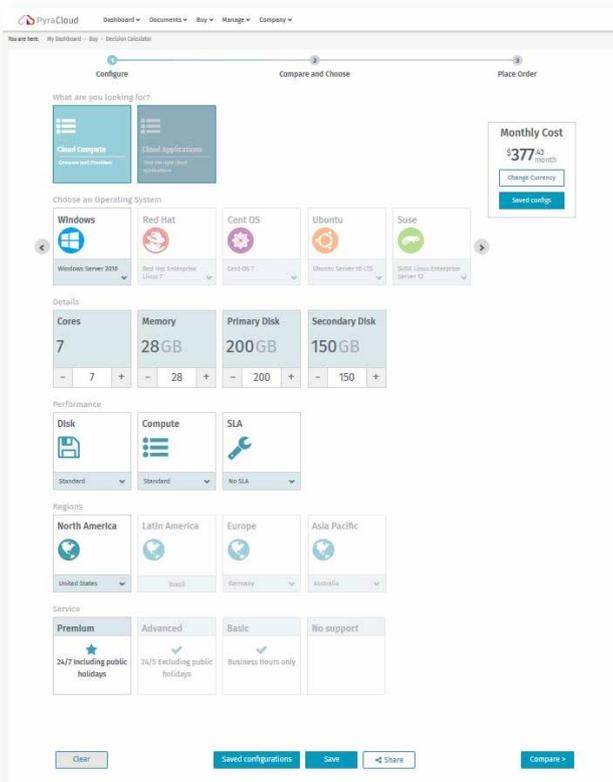
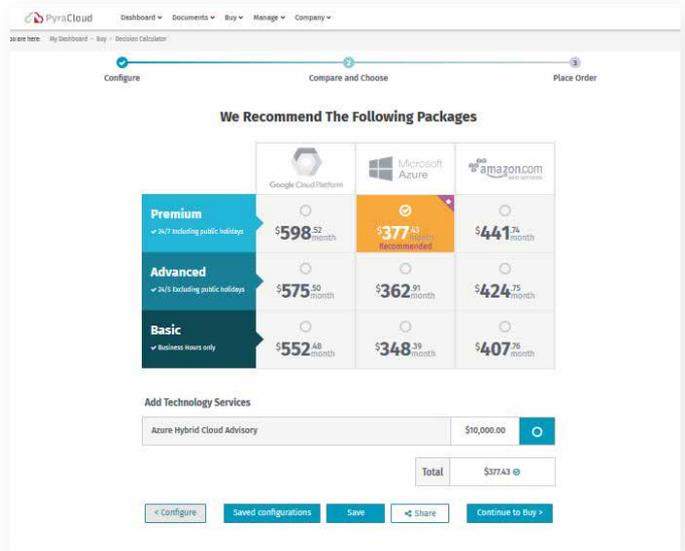


Figure 6 – Define Requirements and Procure Resources

Specify Resources and Service Types

Recommended Cloud Resources



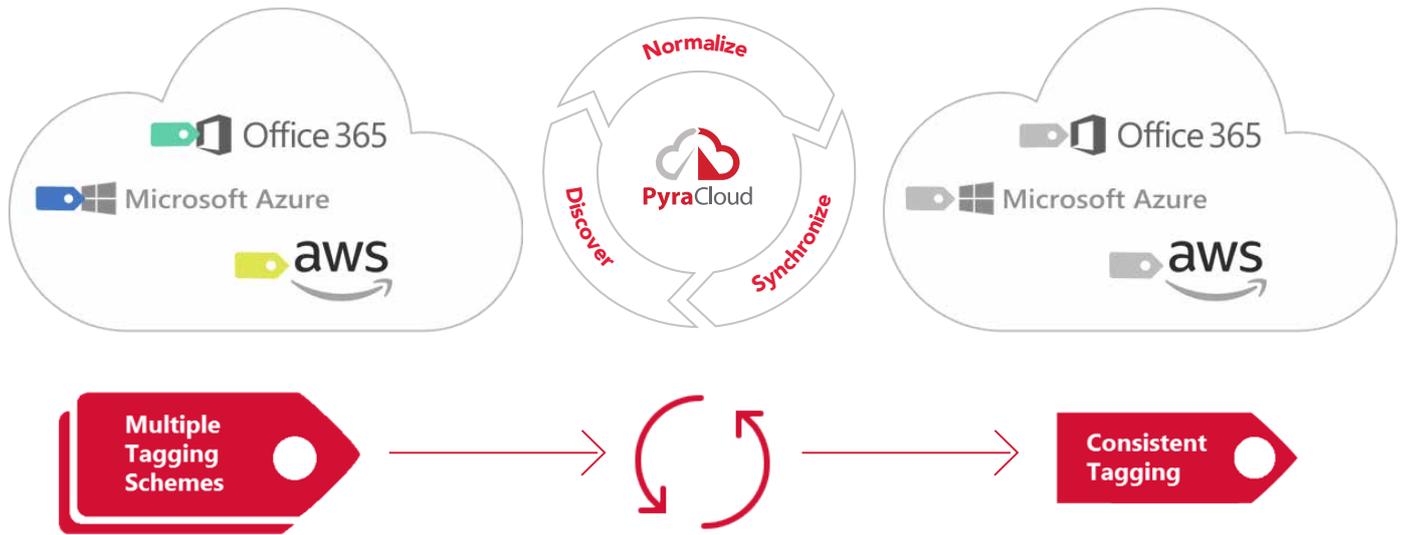


Figure 7 – Consistent Tagging Across Cloud Providers

many cloud service providers will offer benefits when purchasing bundles as IaaS, PaaS and SaaS together. If your software license restricts the shift to the cloud, consider the bundled offerings as they could provide significant cost savings.

As part of this effort, once the optimal cloud resources are identified, save them as organizational favorites as other people in the organization can use the favorites to procure effectively.

### Step 3: Discover, Structure and Govern Cloud Resources

Since cloud is so dynamic, it is important that automation technology be utilized to discover and govern all cloud service providers and resources being used. Consistently tagging resources (See Figure 7) across cloud providers will help you better govern resources across providers. While cloud providers, such as AWS and Azure, provide tag management within the cloud service, they do not provide the ability to tag across different cloud platforms. The technology that should be used is an abstraction layer above the native AWS and Azure tag and resource capabilities. This allows you to group resources across cloud services

to effectively budget and track spend against those resources.

Additionally, once the cloud resources are discovered, the technology should help your organization normalize the naming structure so that resources across cloud providers are governed and tracked consistently.

### Step 4: Define Business Units and Map Resources to Business Units

In order to effectively govern cloud resources and manage cloud costs across an organization, it is imperative that the organizational structure, including business unit hierarchy and cost centers, are defined. Proactively defining the organizational structure allows customers to govern, budget, track and report on cloud resources and costs by business unit. A process should be implemented such that key stakeholders are identified from each of the business units – including Lines of Business (LoB), CIO and CFO teams. These stakeholders will help your organization manage the budget and spend of the respective cloud resources utilized. Once the stakeholders are identified, define the business units and map the cloud resources to the business units. This will help your organization have

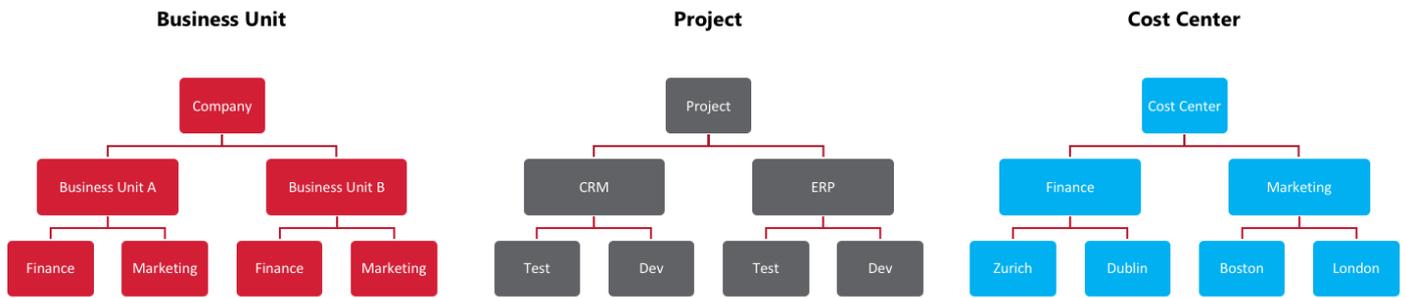


Figure 8 – Establish Cost Structure and Accountability

total visibility into what cloud resources are being consumed by the various business units. (See Figure 8)

budgets upfront and tracking costs against the budgets is proactive and it will help organizations get ahead of overspending on cloud resources.

### Step 5: Establish Budgets by Business Units

Budgets provide a way to plan for costs, establish forecasts, and track actual and planned spend. When using cloud resources, setting budgets upfront will help track how close usage and costs are to exceeding the cloud budget. Additionally, by setting cloud budgets, the organization that is consuming cloud resources is held accountable for spend and it can provide visibility into how it is tracking against the budget. Setting

With stakeholders and business units established in Step 4, establish a process to set and track budgets for each organization. (See Figure 9) By setting budgets, an organization can track down to the workload level establishing strong accountability for cloud spend. Budgets can be set by value and length of time. Once the budget is set, provide the stakeholders within the business unit a view of where the organization is against the budget and the remaining budget for the length of time.

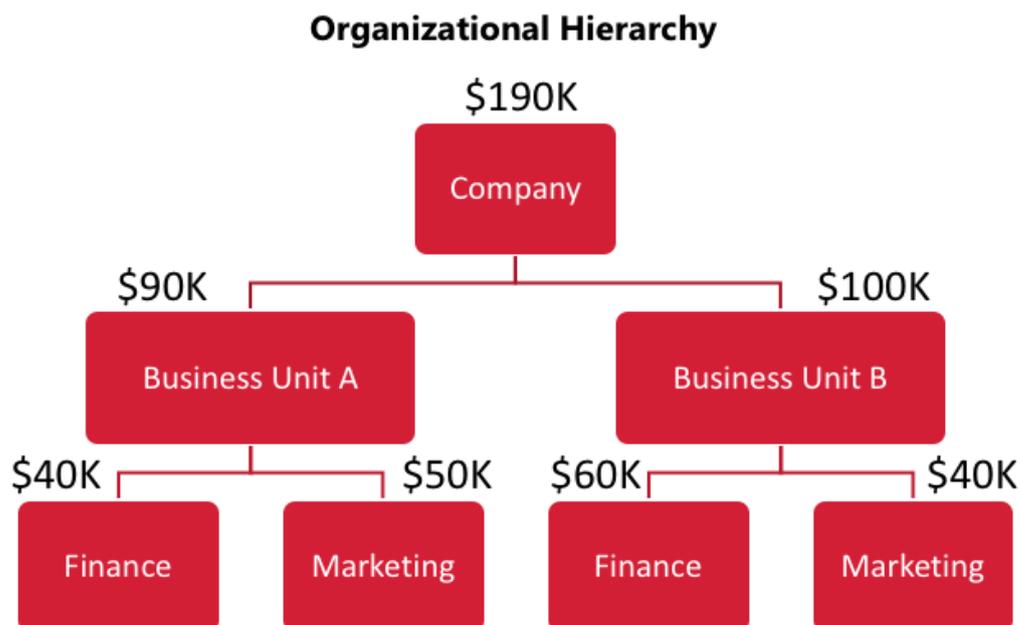


Figure 9 – Establish Budgets Based on Business Unit Hierarchy

## Step 6: Analyze and Optimize Budget and Spend

Track, analyze and alert key stakeholders of where they are against their budget and spend on a consistent and frequent basis. Establish a process that provides a view of spend and budget by business unit across multiple cloud subscriptions and providers. Enable the business unit stakeholders to drill down into the consumption from business unit, function, and resource. Additionally, provide them with the ability to design and view reports on-demand. (See Figure 10)

### Summary

Whether you are just starting on your cloud journey or have an established plan, the combination of the six steps listed above plus the latest cloud management enhancements from SoftwareONE's PyraCloud platform

can help ensure your organization has a complete cloud plan in place for both the current and future state. The potential of the cloud seems to be endless, but it is key to remember that all organizations need to align its cloud strategy with key business issues – not just technology for technology's sake. This will help your organization meet the business requirements, and maintain and focus efficiencies brought about by the cloud, rather than see them diffused.

### PyraCloud Platform

PyraCloud Platform is a single-point of access to your entire software estate. Whether on-premises or in the cloud, PyraCloud gives organizations a proactive and holistic visibility into the full software and cloud resources; continuously analyzing, providing insights and optimizing the entire portfolio.

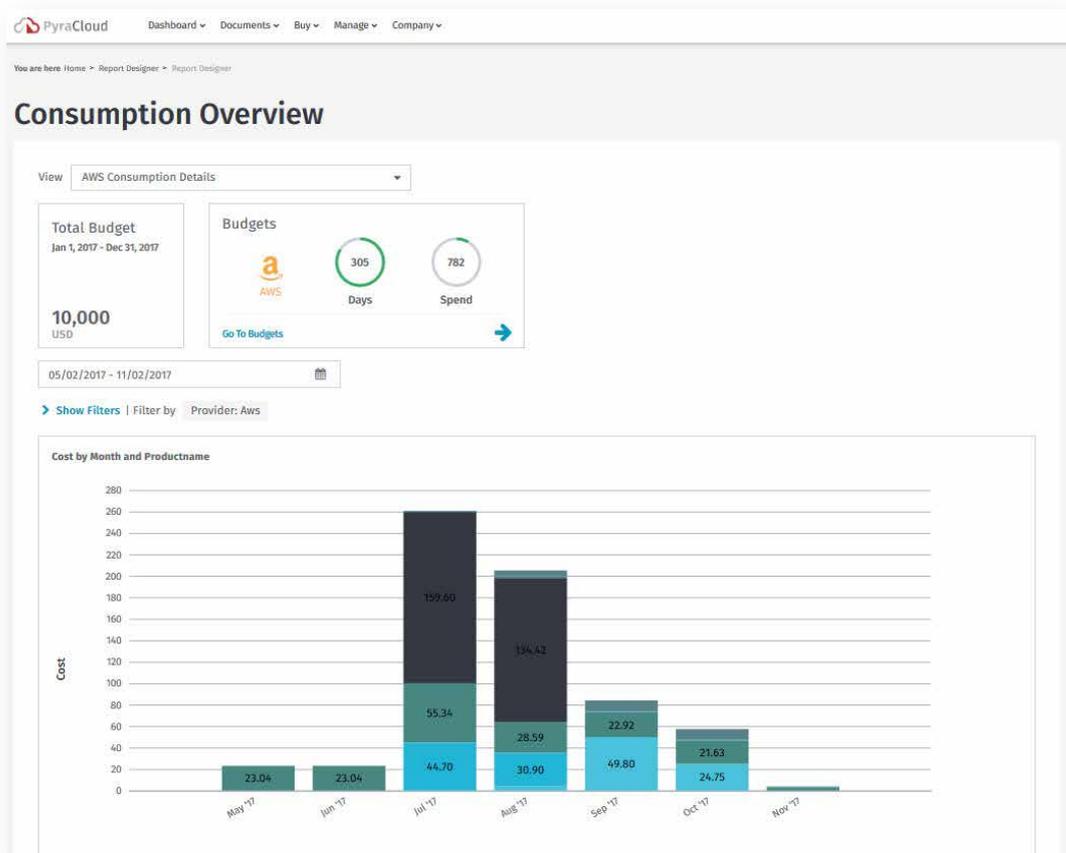


Figure 10 – Analyze and Optimize Budget and Spend

Cloud Management module is one of the modules within PyraCloud. New enhancements are available to help customers better govern and manage budget and spend across all their cloud resources. The Cloud Management Module is an abstraction layer that integrates with the APIs of the cloud service providers, normalizing and consolidating the budget and spend information to reduce and optimize spend across all cloud resources used by an organization.

**New functionality introduced in the Cloud Management Module is as follows:**

- **Tag and Resource Manager (TRM)** – Step 3: Discover Structure and Manage All Cloud Resources
- **Custom Group Manager (CGM)** – Step 4: Define Business Units and Map Resources to Business Units

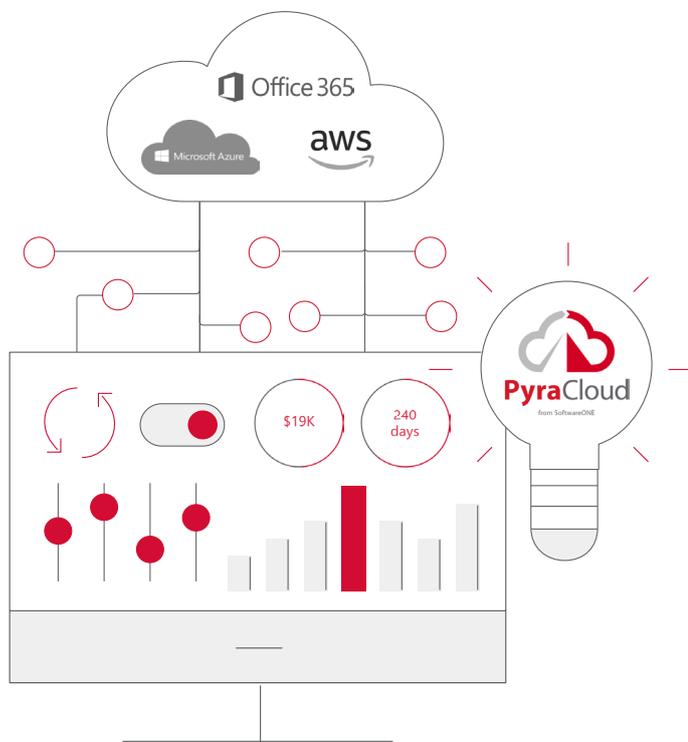


Figure 11 – Analytics and Insights with PyraCloud Platform

- **Cloud Budget Manager (CBM)** – Step 5: Establish Budgets by Business Units
- **Analytics Viewer** – Step 6: Analyze and Optimize Budget and Spend

**SoftwareONE Advantage**

Businesses embracing transformation need both efficiency and agility from their software and cloud solutions. The cost and governance of their software portfolio however can often be a challenge given the complexities of procurement, implementation and management. A new holistic approach that spans on-premises and cloud is required.

SoftwareONE, a global leader in software and cloud portfolio management, transforms the way customers govern, budget and optimize their global spend on software and cloud solutions. SoftwareONE brings a unique, well integrated combination of solutions, platform and transactional competency to help you navigate the complexity and achieve a balance between entitlements, inventory and consumption to avoid compliance risk and maximize the return on your software and cloud investments.

Our Software Portfolio Management (SPM) and Software Asset Management (SAM) services provide the methodology and framework to gain control over the underlying software and cloud investments. We help our customers to accelerate cloud adoption, right-size cloud and software consumption as well as spend, and minimize compliance risk. PyraCloud further extends our vision to deliver the world’s premier SPM platform. PyraCloud delivers the visibility, insight, automation and control customers require to maximize their software and investments.

The SoftwareONE solutions, platform and transactional competency are unique in helping you simplify and manage your global software and cloud investments,

ensuring you only spend on what you use and avoid compliance risk. Customers choose SoftwareONE because our solutions are global, fully integrated, span cloud and on-premises, and reduce complexity throughout the entire software supply chain.

Privately owned since 1985, with over 3,000 technology experts located across 80+ countries, SoftwareONE is one of the fastest growing technology solution providers in the world. We have migrated over 1 million users to cloud environments, and we conduct thousands of SAM projects every year. We support our customers through elite partnerships with Microsoft, AWS, Adobe, IBM, VMware, Oracle, Citrix, Symantec, McAfee, and many more.

1. Gartner, <https://gartner.com/newsroom/id/3616417>
2. IDC, Cloud Trends in 2017, [http://resources.idgenterprise.com/original/AST-0178756\\_Whitepaper-IDCcloudSpend2017.pdf](http://resources.idgenterprise.com/original/AST-0178756_Whitepaper-IDCcloudSpend2017.pdf)
3. Innovation Insight for Dynamic Optimization Technology for Infrastructure resources and Cloud, February 2017
4. <http://www.sosuccess.com/Blog/ArticleID/106/Gartner-says-SAM-is-now-a-C-level-imperative-It%E2%80%99s-about-time>
5. Hybrid IT Adoption and Trends - <https://www.sciencelogic.com/product/resources/cloud-adoption-trends>