

How Cisco IT Manages IT Service Costs

New model for allocating costs helps IT managers identify savings opportunities and measure investment value.

EXECUTIVE SUMMARY	
CHALLENGE	<ul style="list-style-type: none"> Function-focused financial data didn't reflect Cisco IT's new services focus No way to identify costs or investment value of each IT service No centralized source of IT cost data
SOLUTION	<ul style="list-style-type: none"> Develop a model for collecting cost data from multiple sources and allocating it to individual IT services Create a central data repository as a single source of truth for IT costs Use commercial tools for the service costing engine, reporting, and analytics Make cost data available for in-depth analysis by IT and finance stakeholders
RESULTS	<ul style="list-style-type: none"> Easier to identify opportunities for cost savings Better-informed decisions about IT investments Motivates adoption of ITaaS and sense of service ownership
LESSONS LEARNED	<ul style="list-style-type: none"> Executive sponsorship is critical Start with the data you have Define how much detail is enough Expect to make judgment calls Requests for data access will grow
NEXT STEPS	<ul style="list-style-type: none"> Continue to refine the data definitions and the service costing model

Challenge

The move by Cisco to an IT as a Services Organization (ITaaS) model required a fundamental change in how we operate, measure the value of our activity, and make decisions about technology investments. The ITaaS model means Cisco IT now runs like a business, delivering cost-effective services to meet the needs of the company's business operations. It also means we hold ourselves accountable for the costs and investments associated with those services.

But what does it really cost to deliver an IT service? What value does a particular IT service deliver to Cisco as a business? Like most enterprises, we have traditionally managed costs through functional budgets that don't cleanly align to our service hierarchy. Additionally, that financial cost data was stored in islands of application repositories and data warehouses. As a result, it was very difficult to obtain information for individual IT services or programs instead of general IT functions.

It became clear that we needed a different way to collect, analyze, and distribute financial data to determine the true cost of each service and the value it delivers for Cisco's operations and IT investments.

"Although we impose monthly budget charges for some IT services, we didn't want just another way to implement department chargebacks," says Robert Virden, program manager, Cisco IT. "We wanted to be able to determine the cost of providing a service and reflect the costs for consuming a service, regardless of whether those costs are being recovered or not. The intent is to allow the service owner to focus on the structure and composition of the service costs

and whether they can be reduced or even eliminated. To do this, we needed a way to capture, process, and analyze the right information to understand all costs for a service so we can make the right decisions for optimizing those expenditures."

Specifically, we wanted to:

- Provide a total cost of ownership (TCO) view for each IT service
- Provide greater visibility into the cost components of IT services to help identify opportunities for cost savings
- Generate meaningful financial data to improve planning and management for the entire IT services portfolio
- Present transparent data about IT service costs and financial investments to enhance decision-making
- Quantify the value of IT services in financial terms

The need for a new cost distribution model was also driven by the desire to understand whether our IT investments were paying off. “You need to articulate the costs in a way that you can really know where it is best to invest new funds, staff, and infrastructure resources,” says Paul Dench, IT architect, Cisco.

Solution

We began developing a service costing solution soon after Cisco IT started the transition to a services organization. This solution has four major components:

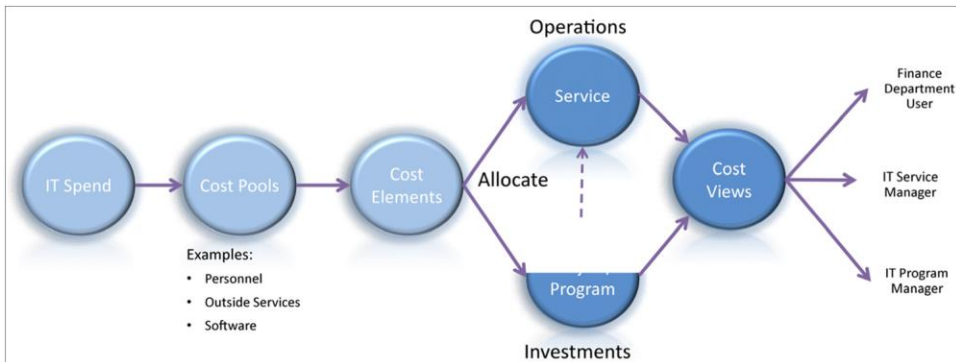
- A service costing model that defines how costs are identified, categorized, and allocated to individual IT services
- The processes for collecting, storing, allocating, and reporting the cost data from multiple sources into a central repository
- A commercial service costing tool that maintains the central, cloud-based repository of cost data and provides standard reports showing how costs are allocated to individual IT services and development programs
- Additional commercial tools that support custom analytics and provide reference information for the model about our IT architecture, programs, and projects

Together, these components supply the detailed cost data and transparency necessary for two important service management activities within Cisco IT: optimizing costs and reviewing investments.

Monitoring and optimizing service costs. A core service management activity is to eliminate unnecessary expenses without impacting service delivery. For this activity, the service costing tool enables us to identify in detail the direct and indirect expenses that contribute to the costs of each IT service.

The service costing tool provides a single source of truth for the actual cost of each IT service and program. These costs are determined by distributing the data from the IT department level down through the individual services to each underlying element. The service costing tool allocates expenses to individual IT services in a standardized way, providing a consistent view of the service’s TCO (Figure 1).

Figure 1. Flow of Cost Data Through the Service Costing Model



This cost model helps a service manager see areas for optimizing service costs and plan for greater operational efficiencies as the service continues to develop. Meaningful financial data on individual services also helps IT leaders better manage costs for the complete service portfolio.

Decision-making about IT investments. The service costing data helps quantify the impact of current investments in IT services and the potential impact of new investments in existing or new services. The data is used by IT executives in review sessions and planning activities to compare actual investment spending and results against planned levels.

“Service owners understand that they are now running essentially a small business within IT and are accountable for its costs and the value it delivers to Cisco as a company.”
— Robert Virden, program manager, Cisco IT

Defining the Service Costing Model

The ultimate goal of our service costing model is to determine the TCO for each IT service, encompassing all of the people and things involved in developing and operating that service. However, determining TCO requires more thought than simply adding up a selected set of direct and indirect costs. The service costing model must be carefully designed in order to correctly define and allocate service costs. The Cisco IT service costing team used the steps below to create an appropriate model.

- Step 1. Specify service definitions.** This step defines the set of services that IT provides to the company. It also associates each service with any IT applications the service provides.
- Step 2. Define the service architecture.** This step defines the service taxonomy and hierarchy. It specifies how services are grouped and categorized, along with the relationships between services and other assets such as applications, infrastructure, and resources.
- Step 3. Identify supporting information.** Additional, nonfinancial information can help in choosing how to best allocate financial costs to individual services. For example, this information might include what projects employees are working on or typical consumption levels for specific infrastructure resources. The additional data may be unstructured and drawn from a broad range of sources. It needs to be centralized and standardized so it can be used in a consistent way by the service costing tool.

Step 4. Create the service costing model. With a clear understanding of what cost data is available and the associations among services, applications, and infrastructure resources, the next step is to define the model for how specific costs are distributed to specific services. Our service costing model uses three definitions to produce cost data that can be allocated to individual services:

1. IT spend: The total amount of money spent by the department.
2. Cost pools: A defined set of financial spend categories (e.g., personnel, facilities, depreciation) that are a way to group and classify IT expenditures. When analyzing service costs, the total can be examined by cost pool to show the breakdown of the cost structure.
3. Cost elements: A set of individual expenses that are aligned according to a specific cost pool and organizational grouping, e.g., the architecture team headcount. A cost element is the base for financial allocation to the services and programs.

Defining Roles in the Service Costing Processes

Table 1 shows the Cisco departments, teams, and managers who currently define, contribute, allocate, or use IT service costing data.

Table 1. Team Roles in the Cisco IT Service Costing Processes

Department, Team, or Manager	Involvement in Service Costing Data
IT Service Costing Team	Develop and coordinate the quarterly costing process and manage its governance
IT Finance and Business Operations Teams	Define the cost pools, elements, and allocations to the individual services and programs
IT Service Portfolio and Program Managers	Update program information in the program and project management system; review costs allocated to programs
IT Service Managers	Define mappings of applications to services, review costs allocated to their assigned services
Application and Infrastructure Teams	Define and maintain mappings of infrastructure to services; provide supporting data for core infrastructure resource costs that are allocated to services

Cisco IT development programs are launched to develop new services or new capabilities for existing services. Program costs are also associated to the services that are spending the budget.

Deploying Data Reporting and Analytics Tools

After creating the service costing model and establishing the associated processes, we were ready to select appropriate tools for collecting, distributing, reporting, and analyzing that data.

We use a cloud-based Technology Business Management (TBM) tool as the central repository for cost data and as the service costing engine. The TBM product receives cost data from a mix of sources, then transforms it for use in our standard service cost reports. Because the central repository stores sensitive and proprietary Cisco® data, the Cisco Information Security (InfoSec) team evaluated the provider's security measures before we began to use the TBM cloud service.

We also use several commercial products for collecting, reporting, and running analytics on the service costing data. Some of these products are cloud-based while others are deployed internally on Cisco Unified Computing System™ (Cisco UCS®) servers. These tools allow service managers and other authorized users to run their own queries and reports for in-depth analysis of the cost data.

Changing the IT Management Culture

The transition to measuring financial results according to IT service costs, along with functional budgets, meant deep shifts in the way we measure success, evaluate expenses, and define management responsibilities.

Our service managers and many of our IT operations teams needed to learn how to shift their thinking from function-based budgets to the new definition of IT services. “Costs help the idea of cross-functional services become more real to the IT management, which had been accustomed to thinking in terms of function-specific responsibilities,” says Virden.

Results

Because the service costing model provides a single source of truth for IT cost data, we are able to realize several significant, ongoing benefits.

Easier to identify opportunities for cost savings. “All IT organizations are always being asked to optimize, but you need to know the cost basis first,” says Radhika Chagarlamudi, director, Cisco IT. “The service costing model gives service managers the data to baseline the true expenses and identify where to look for potential savings.” For example, cost data at the individual element level helps service owners recognize and release infrastructure resources, retire applications, or eliminate licenses that are no longer needed.

Just as importantly, “The Cisco IT service costing model gives us the data to advocate with credibility when we need to balance cost optimization with other factors, such as the service’s ability to support growth,” says Chagarlamudi.

Better-informed decisions about IT investments. Department leaders can now monitor whether funds allocated to investments in new or existing services are being spent as planned. Capturing the actual investment expenditures and the operational baseline costs is the first step toward justifying investments and producing ROI measurements.

Motivation for acceptance of service ownership. The availability of cost information helped to drive adoption of the broader ITaaS model within Cisco IT. That sense of service ownership continues because the cost data is used in quarterly, executive-level reviews of IT operations and investment results.

“Knowing that you will be accountable for service costs helps service owners understand the mindset change that is necessary from previous budgeting methods and data,” says Virden. “It helps service owners understand that they are now running essentially a small business within IT and are accountable for its costs and the value it delivers to Cisco as a company.”

Lessons Learned

Based on our experience, we can offer several insights to other IT departments that want to develop a model for service-based cost allocation and tracking.

Executive sponsorship is critical. Adopting a service costing model involves a large change management effort because it’s a whole new perspective for IT managers. It is essential to have support for this model from the IT department executives, as well as authority for the service costing team to mandate use of the new processes, cost reports, and service measurements.

Start with what you have. Given the scope of our operations, it was clear that tracking costs on spreadsheets would not be an adequate or sustainable solution. In the beginning we didn't have any automated way of collecting and calculating the service cost data. Additionally, we were working in parallel with the IT teams as they defined and developed their services, so we faced a lot of uncertainty about what to measure.

We decided that at the start we would tolerate a lower level of detail in the cost data that we were able to produce. Over time, we have increased the amount of detailed cost data collected and aligned it more tightly with individual services.

Define how much detail is enough. A key question to ask when developing a service costing model: What is the right level of granularity so you can make decisions without getting flooded by too much information? The answer will be a big factor in selecting the tools for data collection, reporting, and analytics as well as determining the deployment design, capacity, and resources for a central data repository.

Expect to make judgment calls for some cost data. "If you don't have a way to connect costs to real things inside your infrastructure, then your options for optimizing a service are limited," says Virden. "Yet there are always some cases where you'll be able to get the level of cost data granularity that you need and other cases where you will need to work with higher level, abstracted data in order to get any information at all." In those cases, the model will need to apply defined rules or assumptions to allocate the abstracted data down to the individual service level.

Plan to serve more requests for data access. Any cost information you offer will be used by more people and teams than you might anticipate. Plan to create additional reports such as new financial views, planning baselines, optimization targets, and investment tracking.

Next Steps

The service costing team will continue to refine the model as needed to make the data more useful to IT service owners and executives.

For More Information

Cisco IT case study: [How Cisco IT Transformed into a Services Organization](#).

[Cisco Unified Computing System](#).

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