IBM + Apptio eBook

The CIO's Handbook for IT Cost Optimization

Four ways to trim costs and fund innovation

IBM

Cost savings in plain sight, yet out of reach

You're probably already running a cost optimization initiative—does it ever really end?
You know there are opportunities to save, but your team struggles to identify them and gain buy-in to make the necessary changes. Attempts at optimization, such as infrastructure consolidation, application rationalization, cloud adoption, vendor consolidation or offshoring, often overpromise and underdeliver because they lack hard data and rely too much on instinct.

In this book, we walk you through the four ways to optimize your IT costs and offer up prescriptive questions to make your analysis crisp and your conclusions actionable.

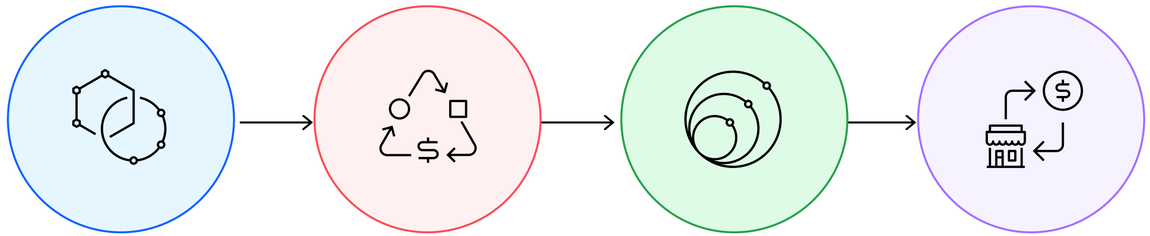
"Liberty Mutual has made big bets in digital transformation, migrating workloads to the cloud and executing on our $100 million cost optimization challenge. Changing our allocation model to be 100% consumption-based, understanding TCO and unit economics and, more importantly, influencing cost with the business is more critical than ever before."

Ronan Hughes
Principal architect for core banking and group manufacturing,
Bank of Ireland

Cost optimization opportunities

In our experience, there are 4 ways to optimize technology costs. Some cost optimization opportunities yield quick wins because they are immediately obvious and easy to action. Other opportunities require greater effort to find and action. The four ways are generally ordered from easiest to hardest—getting your IT financial management (ITFM) principles in order is a lower lift than applying market forces to influence demand. Start with the low-hanging fruit and progress through stages that require involvement from more and broader stakeholders.

As you progress through these four vectors of cost optimization, it's useful to focus your efforts on each layer in the IT value chain: cost pools—i.e., the type of technology asset or service purchased; IT resource towers—i.e., the technology functions supported by IT spend; and applications and services—i.e., the products or output delivered by IT and consumed by business units. Tailor your conversations to the specific stakeholders involved in each of these layers to avoid overwhelming your audience and losing momentum.



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01
Scrutinize to tie up loose ends. Accurately apply ITFM principles.

Quick wins to tie up loose ends include:

- Accelerating depreciation and amortization (D&A) schedules for underused assets
- Retiring assets reaching end of life
- Replacing ITFM manual data entry with automation
- Analyzing variance for an indicator of over- or underprovisioned IT

For IT cost optimization purposes, financial loopholes are defined as inaccurate applications of ITFM principles.
Common examples of financial loopholes include:

- Misaligned D&A schedules
- Spend wrongly recorded as an asset rather than an expense
- Account miscategorization
- Excessive budget padding that locks up funds that could be used elsewhere

There are multiple causes for these financial loopholes, including asset values that are either higher or lower than the standard depreciated value, alignment of assets to the wrong depreciation cycle and inconsistent use of capitalization accounts. In other cases, cost center owners undertake optimization efforts without explaining their rationale to IT Finance, and often lack the understanding of finance principles that would help them better steward their budgets.

Questions that will help you uncover loose ends:

Cost Pools
- Are there assets that need to be written off?
- Is excess padding locking out innovation?
- Is variance real or driven by miscategorization?
- Do we track discretionary expenses?

Applications and Services
- Do we know the depreciation tail for this service?
- Are decommissioned applications still being amortized?
- Are “change” investments being capitalized correctly?

IT Resource Towers
- Are D&A balances falling on the correct—planned—infrastructure elements?
- Are we still paying for lease or maintenance of retired assets?
- Is equipment that is not needed decommissioned?
- Does monthly budget underspend indicate rising tech debt or surplus capacity?
- Does monthly budget overspend indicate poor financial controls or unforeseen market disruptions?

1%

Micron tracking to within 1% of CapEx annual budget

80%

First Citizens Bank reduced budget padding by 80%

$100M

Exelon reduced annual operations and maintenance (O&M) costs by $100M

02
Economize to eliminate waste. Use what you need—and no more.

Quick wins to eliminate waste include:

- Retiring overprovisioned virtual machines, legacy infrastructure, excess storage and software licenses
- Rightsizing infrastructure choices by business need (e.g., reserve tier 0 storage for production environments)
- Reevaluating excessive disaster and recovery footprint
- Reassigning unused or inaccurately provisioned SaaS licenses

For IT cost optimization purposes, waste is defined as having more of something than is needed.
A common cause of waste comes from a disconnect between spend and use. Finance data reflects the actual spend in your organization—a “source of truth,” if you will—but it needs to be assigned to the various IT functions, technology stacks, applications and business units that consume them. Use hybrid cloud cost optimization to narrow the gap between resourcing requirements and actual spend. By continuously analyzing resource utilization across IT infrastructure, software can identify inefficiencies and generate actions to optimize resource allocation. This proactive approach helps teams accurately, and automatically, provision their environments, reducing unnecessary expenses associated with idle or underutilized resources.

Common examples of waste include:

Compute	High-powered servers provisioned for anticipated load that never materialized
Virtual machines (VMs)	Orphaned VMs that never get deprovisioned after usage ends
Storage	High-grade storage used when mid- or low-grade would suffice
Software licenses	Costly app licenses never redeployed after employees change roles
Data center capacity	Long-term leases renewed despite plans to migrate to cloud

Questions that will help you eliminate waste:

Cost Pools
- Are labor costs per role consistent?
- Are threshold rates for labor enforced—e.g., benefits, overtime pay?
- Are variable costs increasing?
- Have vendor costs been reviewed for necessity?

IT Resource Towers
- Do we review / report consumption of IT resources?
- Are Dev environments cheaper than Prod?
- Is aging infrastructure leading to rising support costs?
- Is asset utilization improving?
- Are end-user compute platforms yielding fewer devices / lower costs?

Applications and Services
- Does the service catalog include unused services?
- Is consumption reported to the app owner?
- Are gold-level services limited to corner cases?
- Has service demand changed since BYOD?
- Have ticket volumes / complexity fallen over time?
- Are legacy apps becoming brittle, causing rising support costs?

$800K

Caesars Entertainment uncovered $800K in software contracts

40%

Hewlett Packard identified 40% of unused storage capacity representing $33M in capital

$5M

Cargill's better matching of server demand and capacity saved $5M

03
Rationalize to avoid duplication. Remove redundant business capabilities.

Quick wins to eliminate waste include:

- Rationalizing multiple apps by showing business units (BUs) TCO of duplicate capabilities
- Retiring legacy infrastructure
- Consolidating multiple contracts with a single vendor for the same services or solutions

For IT cost optimization purposes, duplication is defined as having two or more of something that does the same job—without any justifiable reason for having duplication.
Common reasons for duplication include systems inherited through mergers and acquisitions, decentralized IT purchasing and retention of incumbent tools and platforms when new ones are purchased. Many applications (GoToMeeting, WebEx) have a singular business capability. You can avoid duplication by pairing one application to one business capability.

Common examples of waste include:

Application	Division- or region-specific ERP systems
Productivity & collaboration systems	Multiple chat platforms used by various departments
IT operations & monitoring tools	Overlapping tools covering various technology generations
Vendor contracts or rates	Costly app licenses never redeployed after employees change roles

Questions that will help you avoid duplication:

IT Resource Towers

- Are we building ourselves a capability that's available commercially in commoditized form?
- Have toolset and processes been consolidated?
- Can we consolidate services, builds, products and images?
- Can we virtualize existing infrastructure platforms?
- Can we outsource commodity elements?
- Have negotiations standardized this?

Applications and Services

- Are there standard application platforms?
- Can we consolidate toward these standard platforms?
- Is the level of technical debt increasing?
- What applications / services cost the most to maintain?
- Are costs tracking business volumes?
- Have strategic vendors been identified?
- Is the number of vendors declining?

2,000

Unilever rationalized service catalog from 4,000 to 2,000 services

80%

Marshfield Clinic Health System reduced application and services unit costs by 80%

70

UPMC Life Changing Medicine identified over 70 applications to retire in the first run

04
Commercialize to curb demand.

Apply market forces to influence consumption.

Quick wins to curb demand:

- Limit size of VMs available through self-service
- Enable cloud adoption and cloud cost management with a bill of IT
- Shape demand with showback by tying costs to consumption
- Shape demand with chargeback by transferring IT budgets to the business based on consumption

For IT cost optimization purposes, demand is defined as the business's consumption of IT services.
Common examples of unrestrained demand include:

- App teams still applying old on-premises architectures to new cloud-hosted apps
- Provisioning of larger-than-necessary infrastructure with no awareness of cost impact
- VMs not powered off or deleted when no longer needed
- All employees in a department receiving high-powered laptops and specialty software regardless of role retaining legacy custom-built applications when viable commercial alternatives exist

Often, the reason that IT's spend or budget increases is because demand for or consumption of IT services increases. IT struggles to prove and communicate this correlation without robust ITFM software.

Questions that will help you curb demand:

Applications and Services
- Is the proportion of costs for unique applications increasing?
- Do generic services have market equivalents?
- Are prices of IT services set routinely?
- Are we offering services that duplicate compelling market equivalents?
- Have our unique / value-adding services been identified?

IT Resource Towers
- Have common purchases been standardized?
- Are IT resource costs allocated to the apps, services and business units that consume them?

Business Units
- Is the business funding their IT consumption?
- Are business volumes tracked and reported?

Following these four steps is not a one-and-done activity—you need to make fast, credible, data-driven optimization decisions on an ongoing basis. Doing this in manual spreadsheets is unsustainable, which is why you need purpose-built, automated IT cost analytics to continuously optimize.

35%

Nomura reduced physical servers by 35% by showing BUs' physical vs virtual costs

40%

Maritz shared accountability by tying IT costs to BU consumption—achieved cost reduction of 40%

$60

Christus Health discovered $60 growth in app spend due to rising resource demand

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