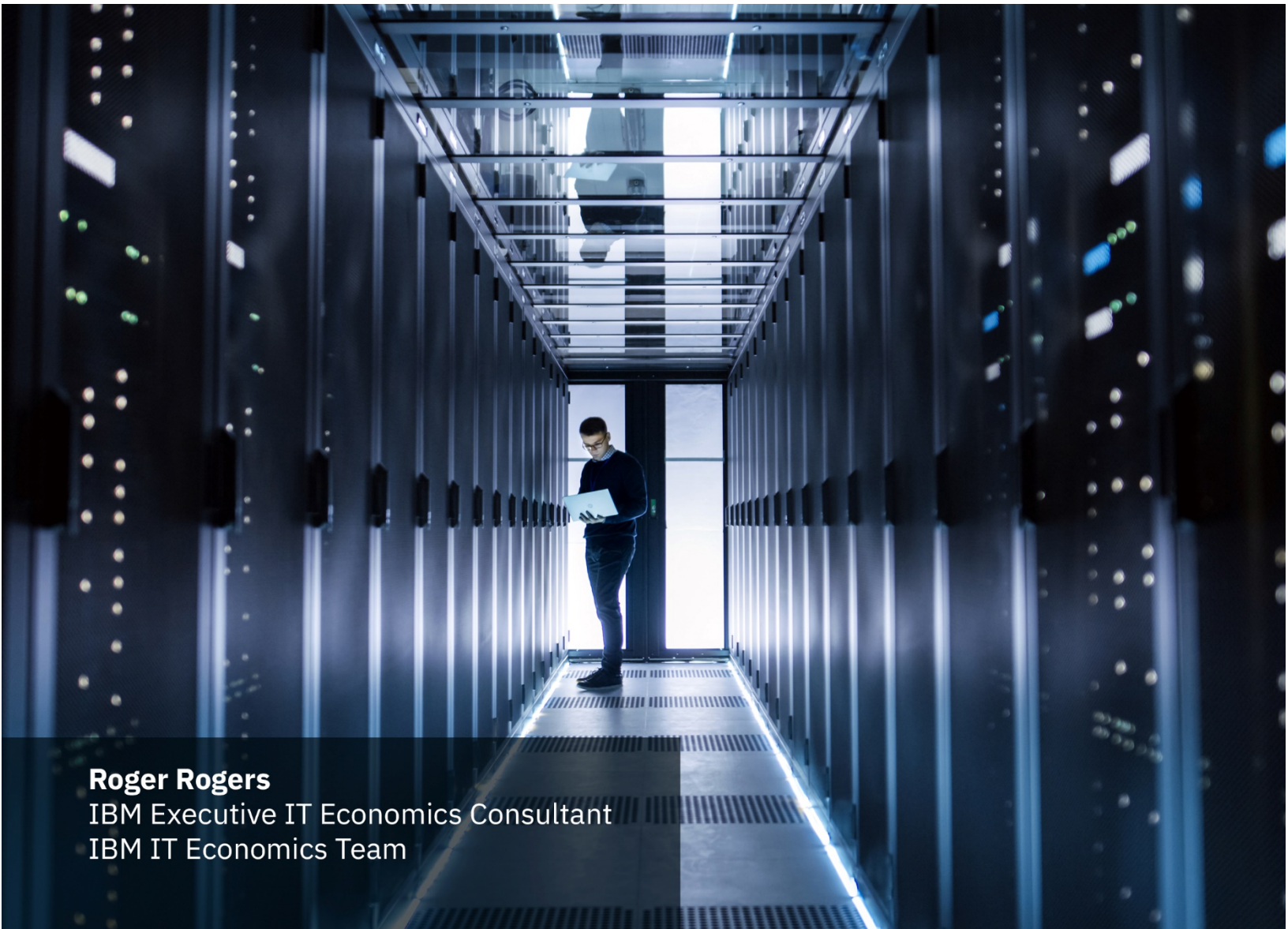


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The financial impact of indirect costs in mainframe and distributed IT environments



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What is hiding in your datacenter?

Accounting for IT costs can seem straightforward but lurking behind the obvious costs are hidden costs that often aren't properly quantified. Most teams consider IT costs to be servers, storage, software licenses and maintenance. However, a significant proportion of IT costs are committed to infrastructure support. These are often overlooked when considering the cost of new applications or the impact of changing application platforms. Separating costs into direct and indirect costs is a helpful approach for estimating the true impact on total IT costs for new applications and platform changes.

Direct costs and indirect costs

IT costs can be separated into two categories: direct costs and indirect costs.

Direct costs are the obvious costs and are easily identified and quantified:

- Servers and server maintenance
- Software licenses and maintenance
- Storage and maintenance

Indirect costs typically span multiple departments and are part of the supporting infrastructure of IT.

Indirect costs typically include:

- Networking (including network hardware, directory and address management, network software and operations)
- Operations and monitoring (problem management, incidence management)
- Security (hardware, software, and people)
- Physical infrastructure management (inventory, purchasing, life-cycle management, racking/stacking, uninterruptable power, generation, power, and cooling)
- Software license management (entitlements, renewals, auditing, reporting)

Client IT assessments by the IT Economics team show that indirect costs make up 40% to 50% of total costs in a typical IT organization. IBM IT Economics assessments also show that there are significant differences in these costs between platforms and computing methods.

Indirect costs differ between mainframe and distributed environments

It should seem obvious that mainframes and distributed computing platforms have different infrastructure support requirements. Mainframes use a centralized method of computing; most of the infrastructure elements for the platform are included already and are internally shared. Distributed computing, by its nature, relies on a shared infrastructure. Elements of a distributed application are deployed on separate servers and are connected through networks.

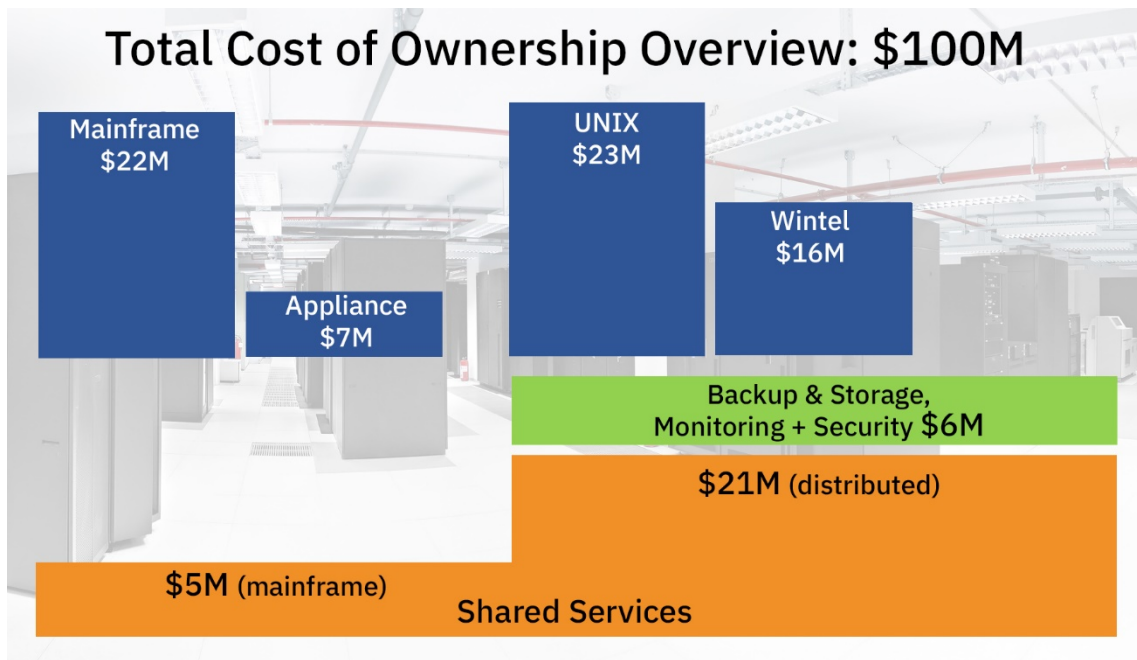
The lower indirect costs expected from the centralized mainframe model is affirmed in IT Economics assessments that find that 80-85% of mainframe costs are directly captured in the platform and are typically budgeted with the platform. This would imply a 1.17x or 1.2x multiplier on top of direct costs to get to true total cost that includes direct and indirect. In contrast, distributed platform costs are only 50-60% directly captured with the platforms and applications, and indirect costs are often not budgeted to the platforms or the applications. This would imply a 1.7x to 2x multiplier to get to true total cost that includes both direct and indirect. Instead of attributing these costs appropriately they are frequently missed when they are counted as overhead and charged back separately to business unit budgets.

What is hiding in your datacenter?

	Mainframe	Distributed (UNIX + WINTEL)
Mainframe Direct	\$22M	
Mainframe Appliance (Direct)	\$7M	
Mainframe Shared Service (indirect)	\$5M	
UNIX (Direct)		\$23M
WINTEL (Direct)		\$16M
Backup & Storage (Indirect)		\$6M
Distributed Shared Services (Indirect)		\$21M
Totals	\$34M	\$66M
Direct Costs	\$29M	\$39M
Indirect Costs	\$5M	\$27M
Direct Percentage	85.3%	59.1%
Indirect Percentage	14.7%	40.9%
Total Cost Multiplier	1.17	1.69

Example of an enterprise IT data center

Based on actual customer engagements, a typical breakout from an IT Economics assessment is illustrated in the diagram below (scaled to \$100M). Direct costs are in the blue rectangles and indirect costs are in the green and orange rectangles below them.



What is hiding in your datacenter?

Issues for IT Management

It is crucial to account for indirect costs when evaluating platform expenses and projecting costs for new applications. A bottoms-up approach will normally fail to account for indirect costs. A common oversight is to assume these costs are covered when planning for new applications or platform changes.

IT Economics assessments show that direct/indirect cost proportions are remarkably stable when looking at both small and large IT operations. In other words, indirect costs grow proportionally with direct costs. What is the takeaway for IT accounting? Indirect costs are not covered, and are likely to grow with new applications and may increase with re-platforming decisions.

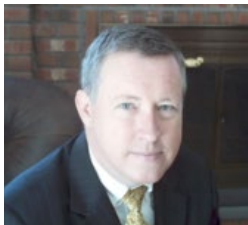
In addition, a failure to consider indirect costs will lead to misleading comparisons between mainframe platforms and distributed platforms. When comparing costs, be sure to apply indirect cost assessments.

Finally, be careful when budgeting and assessing chargebacks by platforms. “Spreading” indirect costs equally among platforms will create a false impression of total platform costs.

Interested in knowing more?

The IBM IT Economics team can help you understand IT costs by providing a no-charge assessment of your organization’s types of costs and cost allocations. For more information on IT cost analysis contact the [IBM IT Economics Team](#).

About the author



Roger Rogers is an IBM Executive IT Economics Consultant for the IBM IT Economics team and works with clients worldwide to optimize their IT operations. He has more than 35 years of experience in product development, management, and strategy. During his tenure at IBM Roger has received two IBM Outstanding Technical Achievement awards and has been recognized in IBM’s Top 500 IBM Employees list. He is also a frequent speaker at IBM conferences and customer briefings to share technical and financial insights on the latest IT solutions. For more information contact the IBM IT Economics team.

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