Gartner ITBudget: Enterprise Comparison Tool

This ITBudget report was created for Jamie Guevara on 14-Mar-17.
Assessment name: 2017 Sample ITBudget Report

Healthcare Providers vertical industry comparison

To be successful with digital business transformation and optimization, CIOs and IT leaders must communicate the financial story of IT using mature budgeting practices enabled by actionable financial transparency. The ITBudget tool provides a vehicle to compare IT budget levels to the industry as well as translate IT costs into business services.

ITBudget Structured Approach

This report contains total IT investment, cost and staffing comparisons against published Gartner Benchmark Analytics industry standard IT metrics.

References to the Gartner IT Key Metrics Data refer specifically to the Gartner Benchmark Analytics Research Note #G00316604, IT Key Metrics Data 2017: Key Industry Measures: Healthcare Providers Analysis: Current Year and Research Note #G00316610, IT Key Metrics Data 2017: Key Industry Measures: Insurance Analysis: Current Year.

Example Organization Key Metric Data Input

Survey respondent data inputs used in this comparison report are not validated by Gartner and are based on the following user submitted data. IT key metric data inputs or comparison groups can be updated using the "Copy" button on the Gartner ITBudget “My Assessments” page.
http://www.gartner.com/explore/tools/it-budget

Input Currency: USD	2016	2017	2018
Revenue	1,200,000,000	1,400,000,000	
Operating Expense	900,000,000	1,100,000,000	
Employees		4,700	5,000
IT Budget	**2017 IT Budget**	**2018 IT Budget**	**2017 - 2018 % Change**
IT Spending/Budget*	30,000,000	32,000,000	6.7%
IT Annual Cost/Budget**	27,000,000	30,000,000	11.1%
IT Budget* by Funding Source			
Formal IT Budget	70%	75%	14.3%
Business Unit IT	25%	23%	-1.9%
Shadow IT	5%	2%	-57.3%
IT Budget* by Asset/Resource			
Hardware	15%	17%	20.9%
Software	21%	18%	-8.6%
Personnel/Occupancy	40%	38%	1.3%
Outsourcing/Third-Party IT Services	24%	27%	20.0%
IT Budget* by Investment Class			
Run the Business	70%	73%	11.2%
Grow the Business	20%	18%	-4.0%
Transform the Business	10%	9%	-4.0%
IT Budget* by IT Function			
Infrastructure and Operations	50%	47%	0.3%
Applications	47%	48%	8.9%
IT Mgt, Finance, Admin	3%	5%	77.8%
IT Staff	**2017 IT Budget**	**2018 IT Budget**	**2017 - 2018 % Change**
IT Full-time Equivalents (FTE)	305	307	0.7%
IT Staff by Source			
Insourced IT FTE	88%	85%	-2.8%
Contract IT FTE	12%	15%	25.8%
IT Staff by IT Function			
Infrastructure and Operations	50%	51%	1.3%
Applications	38%	37%	0.0%
IT Mgt, Finance, Admin	12%	12%	0.0%

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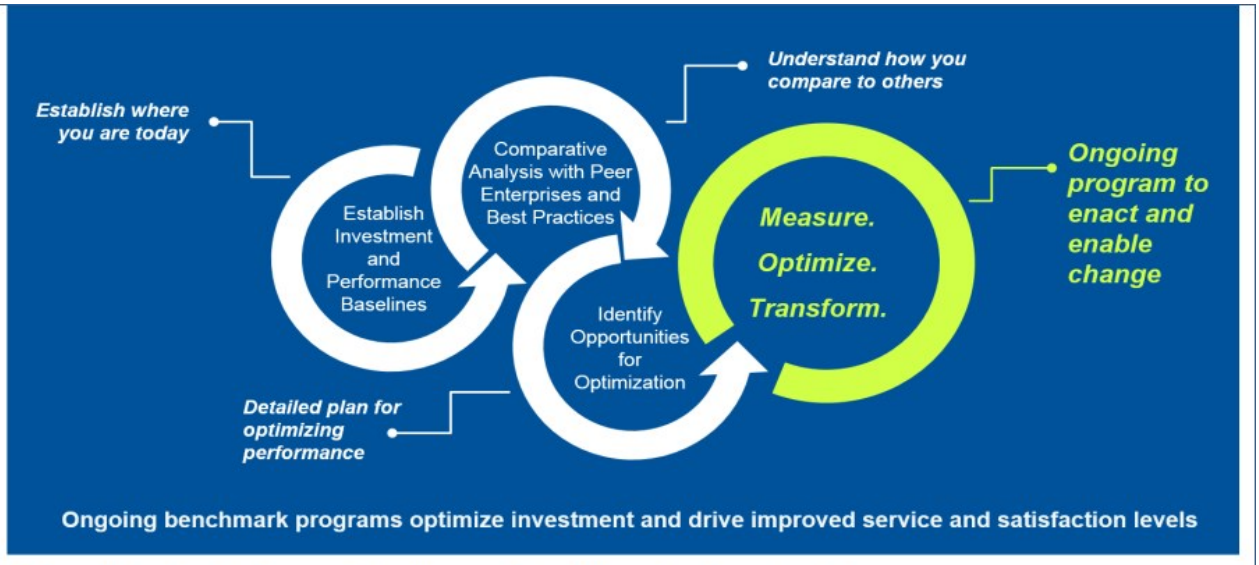
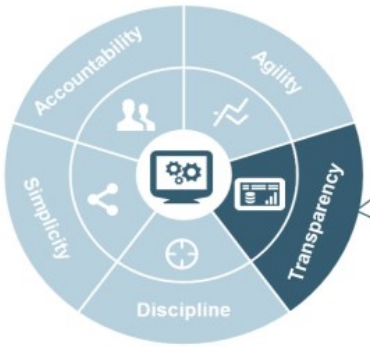


Ongoing benchmark programs optimize investment and drive improved service and satisfaction levels

Mature IT cost and value optimization practices follow five key principles

Five Key Principles



Cost and Value Transparency

- **Develop multiple views of the IT budget and resource allocations**
- **Provide the foundation for better IT service supply and demand decisions**
- **Allow IT spending and functional resource costs to be quantitatively articulated and bundled and more easily connected to business processes, outcomes, and goals**

Overall goal: align spending with business services through incremental steps

Step 1

IT Asset View

Personnel:
- Salaries/Benefits
- Staff Augmentation
- Travel and Entertainment

Hardware:
- Purchases/Lease/Rental
- Maintenance

Software:
- Purchases/Lease/Rental
- Maintenance

External IT Services:
- Consulting
- Outsourcing

Telecommunications:
- Data Communications
- Voice Communications

Supplies Facilities

Total IT Budget

Step 2

IT Functional Resource View

Window, Unix and Linux Server	OS Instance
Mainframe	MIPS
Storage	Terabytes
Voice and Data Network	Port, Device or User
End-User Computing	End-User Device
IT Service Desk	Agent Supported Contact
Application Development and Support	Allocated
IT Management, Finance and Administration	Allocated

Step 3

Business Services View

Business Transformation

Automated Sales/Customer Service

Automated Product Development

Automated Billing

Automated Procurement

Automated Operations/Manufacturing

Automated Human Capital Management

Automated Financial Reporting

IT Provisioning/Workplace Services
- For example;

Workspace Services	Desktop Support
	Phone services
	Email

Description of Comparison Group(s)

Your organization has been compared to a primary and secondary comparison group. You have selected your primary comparison group as organizations within the Healthcare Providers vertical industry as defined below. As an additional point of reference, you have selected the Insurance Average as a secondary comparison group.

Healthcare Providers vertical industry overview

Industry Average Size:

Revenue:	$2.53	Billion USD
Employees:	15.3	Thousand Employees

Healthcare Providers vertical industry definition

Organizations from which their primary revenue stream is derived from one or more of the following:

Healthcare Facilities, Assisted Living Facilities and Services, Nursing Homes, Retirement Communities, Hospitals and Healthcare Centers, Veterinary Services and Animal Hospitals, Healthcare Services, Dental Services, Home Healthcare Services, Midwifery and Child Birth Preparation Services, Nursing Services, Specialist Services, Chiropractic Services, Optometry Services, Healthcare Referral Services. Medical Laboratory Services, Mental Care Facilities, Rehabilitation Services, Occupational Therapy Services, Physical Therapy Services, Speech and Language Therapy Services, Medical Practice Organizations, Physician Practice Management Companies, Primary Care Practitioner Services, Ambulance Services.

IT Budget Comparison Summary

The purpose of this tool is to support your organization's annual IT budget process. It provides a structured and consistent vehicle to easily compare your organization's IT budget and staff levels against Gartner IT Key Metrics Data published industry averages.

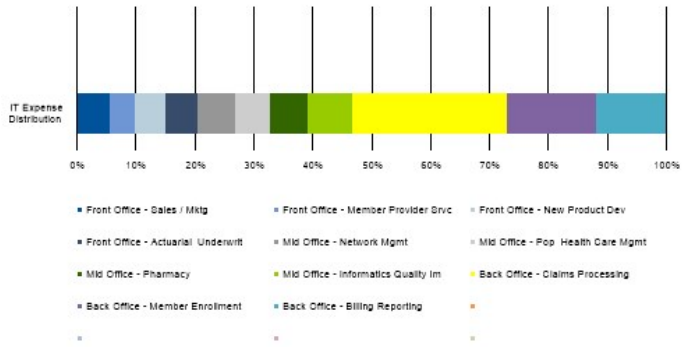
	Example Organization		Healthcare Providers	Insurance
IT Investment Metrics	2017 IT Budget	2018 IT Budget	Industry Averages	Averages
IT Spending as a % of Revenue	2.5%	2.3%	4.3%	3.2%
IT Spending as a % of Operating Expenses	3.3%	2.9%	4.5%	3.5%
IT Spending per Employee (USD)	$6,383	$6,400	$6,820	$29,424
IT Spending, by Funding Source				
Formal IT Budget	70%	75%	78%	82%
Business Unit IT	25%	23%	15%	13%
Shadow IT	5%	2%	7%	5%
IT Spending, by Accounting Category				
IT Capital	30%	31%	25%	25%
IT Operational	70%	69%	75%	75%
IT Spending, by Asset Class				
Hardware	15%	17%	18%	11%
Software	21%	18%	26%	22%
Personnel/Occupancy	40%	38%	40%	40%
Outsourcing/Third-Party IT Services	24%	27%	16%	27%
IT Spending, by Strategic Category				
Run the Business IT Spending	70%	73%	74%	66%
Grow the Business IT Spending	20%	18%	16%	22%
Transform the Business IT Spending	10%	9%	10%	12%
IT Spending, by IT Functional Area				
Data Center	25%	25%	20%	24%
End-User Computing	9%	8%	10%	7%
IT Service Desk	6%	5%	5%	4%
Network	10%	9%	13%	9%
Application Development	35%	33%	9%	27%
Application Support	12%	15%	32%	20%
IT Management, Finance & Administration	3%	5%	11%	9%
IT Staffing				
IT FTEs as % of Total Employees	6.5%	6.5%	3.0%	12.7%
IT Staffing, by Source				
Insourced FTEs	88%	85%	89%	77%
Contract FTEs	12%	15%	11%	23%
IT Staffing, by IT Functional Area				
Data Center	14%	14%	11%	13%
End-User Computing	12%	12%	11%	5%
IT Service Desk	10%	10%	10%	6%
Network	15%	15%	7%	4%
Application Development	20%	20%	13%	37%
Application Support	17%	17%	35%	24%
IT Management, Finance & Administration	12%	12%	13%	11%

Source: Gartner IT Key Metrics Data 2017

IT Service Portfolio 2018 Plan

Many ingredients are involved in finding or delivering the business value of IT; however, Gartner research shows that three best practices can demonstrate the value of IT services (see "Three Key Steps Are Needed to Show the Value of IT Services," RN# G00267245).

- Define IT services in the language of the business.
- Create value statements that tie the services to business outcomes.
- Identify metrics to measure the business impact.



2018 IT Service Portfolio Budget

	IT Expense Distribution	IT Expense Distribution USD
Total	**100%**	**32,000,000**
Front Office - Sales / Mktg	6%	1,846,400
Front Office - Member Provider Srvc	4%	1,305,600
Front Office - New Product Dev	5%	1,712,000
Front Office - Actuarial Underwrit	5%	1,715,200
Mid Office - Network Mgmt	6%	2,028,800
Mid Office - Pop Health Care Mgmt	6%	1,923,200
Mid Office - Pharmacy	6%	2,057,600
Mid Office - Informatics Quality Im	7%	2,377,600
Back Office - Claims Processing	26%	8,432,000
Back Office - Member Enrollment	15%	4,832,000
Back Office - Billing Reporting	12%	3,769,600

IT Key Metrics Data Comparison Detail

Total IT Spending/Budget Definition

For the purpose of this research, Gartner has defined "total IT spending" as the following:

"The best estimate of total spending at the end of the 12-month budget period for IT to support the enterprise. IT spending/budget can come from anywhere in the enterprise that incurs IT costs, and it is not limited to the IT organization. It includes estimates by enterprises on decentralized IT spending and or "shadow IT." It is calculated on an annualized 'cash flow view' basis, and, therefore, contains capital spending and operational expenses, but not depreciation or amortization."

What the IT Spending/Budget Includes, From a Resource or Cost Perspective

• Hardware, software, personnel (including contractors, travel, benefits and training), outsourcing (external IT services like consulting, system integration, data and voice transmission, software as a service, infrastructure as a service, platform as a service), disaster recovery and occupancy costs associated with supporting IT within the enterprise. Costs also include all taxes (except value-added tax where it is recovered or refunded to the organization).
• Note: Occupancy costs, include fully burdened costs for the facilities being used by the IT staff supporting the enterprise. Some examples include office space, furniture, electricity, maintenance, property taxes, security and office supplies. Occupancy costs for space dedicated to IT functions, such as the data center, including power/heat management and raised floor, are also included.

What the IT Spending/Budget Includes, From an IT Functional Area or Activity Perspective

• The data center (for example, mainframes, servers, storage and facilities), end-user computing devices (for example, desktops, laptops, tablets, thin clients and smartphones), voice and data networks (including, but not limited to, voice and data transmissions, fixed and mobile telephony, and internet access services), IT service desk, and applications (for example, development and support).
• IT support functions, such as the office of the CIO; supervisory management; finance and administrative costs, such as purchasing; asset management; process management; and marketing of IT services.
• Dedicated data processing equipment used in operations, production and engineering environments — examples are computer-aided design/computer-aided manufacturing (CAD/CAM) and standard computing equipment used in devices for factory automation, and tablet PCs used by healthcare professionals.

What the IT Spending/Budget Does Not Include

• Costs for technology or services that are resold. Examples include salaries for developers involved in building commercially packaged software, or IT-skilled employees who provide services for the organizations' external clients.
• Operational technology that is:
• Equipment-built or purchased for non-data-processing purposes, but which has computerized components. Examples include robotic manufacturing machines, automated teller machines, specialized point-of-sale devices, scanners, blood pressure monitors and sensors on a supervisory control and data acquisition (SCADA) system.
• Appliance-like or proprietary data processing equipment that has a single (typically industry vertical) purpose and cannot be used for other general purposes. A typical example is a computer that can only control the flow of electricity through the power grid. Since it cannot be repurposed, it is not included in our model. Note that other systems that gather data from this type of computer and can be used for other purposes would not be considered operational technology and, therefore, would be in scope of our model.
• Depreciation or amortization expenses, which could lead to double counting from an accounting perspective.
• Internal "cross charges" and corporate allocations related to large, significant and/or unusual one-time expenses, such as reductions in workforce, redundancy, relocations, retirement, human resources and chairperson's salary.
• Business data subscriptions and services (such as Bloomberg), even if they are managed by the IT organization.
• Business process outsourcing services (BPO) where organizations outsource entire business functions such as payroll or benefits management. This includes cases where the BPO vendor provides access to software, and also guarantees that the outcomes of their services will meet business requirements, such as tax and withholding regulations. Note: where a vendor provides Software as a Service and only guarantees that the software will perform as specified, then this is in scope of the IT spending/budget. Traditional outsourcing of IT functions, for example servers and email, are also still within the scope of IT spending/budget.

IT Spending as a Percent of Revenue

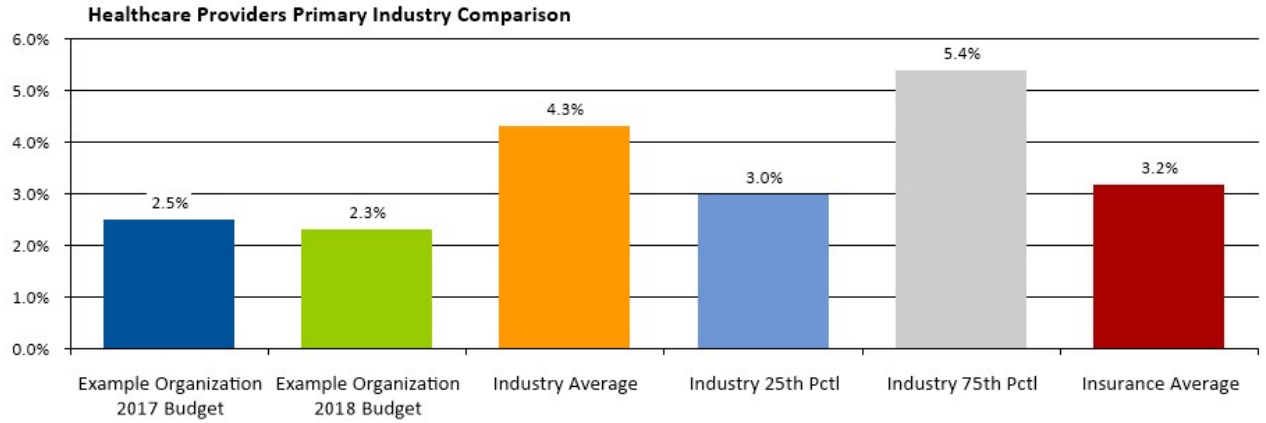
IT spending as a percent of revenue is the most recognized measure of total IT investment relative to top-line business results.

The value of this measure is that it assists in identifying the competitiveness of investment levels relative to the most fundamental measure of business performance: revenue. While this has been viewed as a must-have and readily available metric for many enterprises, common misuses include:

- Looking at a single year rather than multiyear trends
- Basing decisions on the assumption that this figure will not change in the future, sometimes dramatically
- Failing to understand and address changes in the numerator and the denominator of the calculation
- Considering just the average rather than the range of values or the upper and lower quartiles

IT spending as a percent of revenue alone does not highlight why spending levels are at, above or below average (which are often misinterpreted as "good" or "bad"), nor does it reflect IT's contribution to business performance. Thus, IT spending as a percent of revenue needs to be considered in tandem with other IT intensity measures, as well as the context of business objectives, the rate of change and the overall circumstances affecting the numerator, as well as the denominator, of the calculation.

IT Spending as a Percent of Revenue



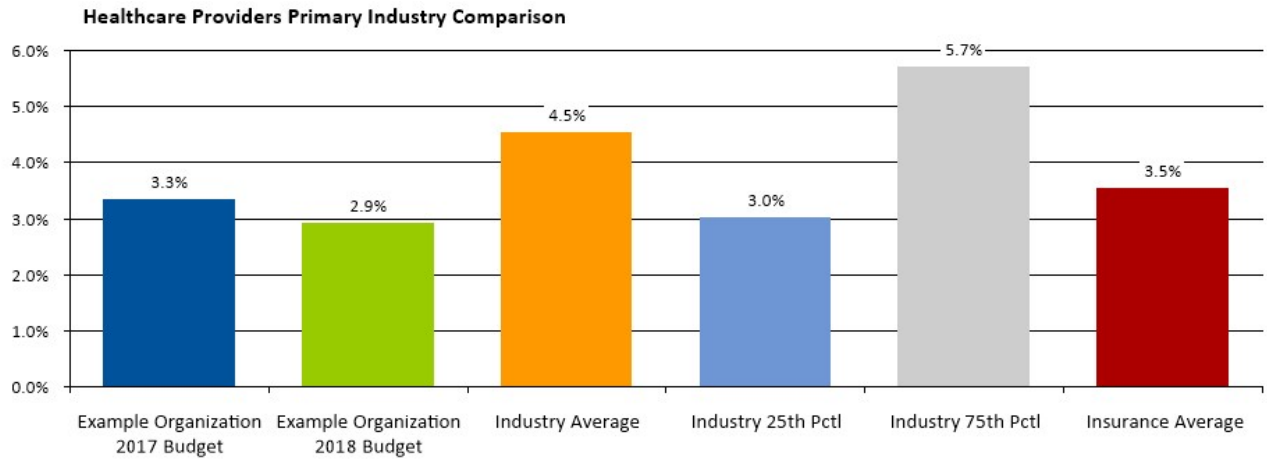
Source: Gartner IT Key Metrics Data 2017

IT Spending as a Percent of Operating Expense

IT spending as a percent of operating expense is another view of IT investment levels in terms of the role IT plays in overall business spending patterns.

While revenue may be subject to external-market-based volatilities, business operational expense typically remains much more consistent and predictable year over year; thus, it better reflects the overall business investment strategy. Typically, organizations with a greater level of IT investment relative to operating expense view IT as a strategic enabler, and this can improve business performance and productivity levels.

IT Spending as a Percent of Operating Expense



Source: Gartner IT Key Metrics Data 2017

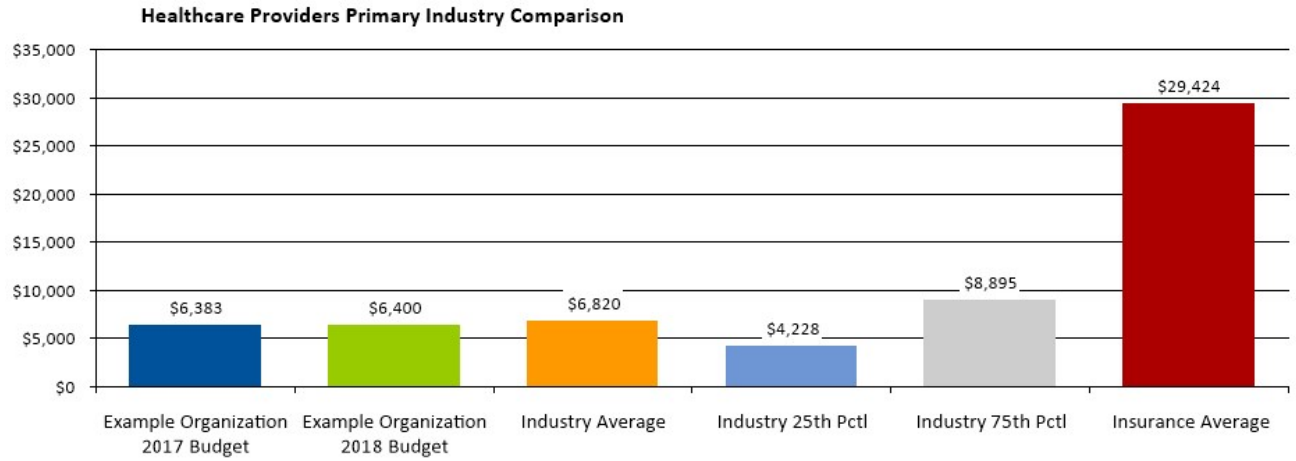
IT Spending per Employee

IT spending per employee is often used to determine the amount of IT support the average organization's workforce receives.

This measure helps to establish a link between IT investment and automation levels within the context of the workforce that supports revenue. Variations in this measure can represent niche-industry-specific delivery processes for service or product delivery, and, thus, should be viewed in conjunction with revenue and operating income per employee. Organizational staffing strategies and the use of contract employees can also impact this measure.

An increase in IT spending per employee is often viewed as a negative trend. However, this may not always be the case, as a decrease in employees (or a lack of increase of additional employees when business improves) can result in a higher value, simply because there are a smaller number of employees that are divided into the same or increasing IT spending size. Therefore, the overall trend may have been impacted by continuing lower levels of general employment and the fact that, in many cases, organizations have returned to profitability, but have been reluctant to increase hiring. For information-intensive enterprises, an increase in their figure for IT spending per employee may indicate a productivity improvement, due to automation or digitization.

IT Spending per Employee (USD)



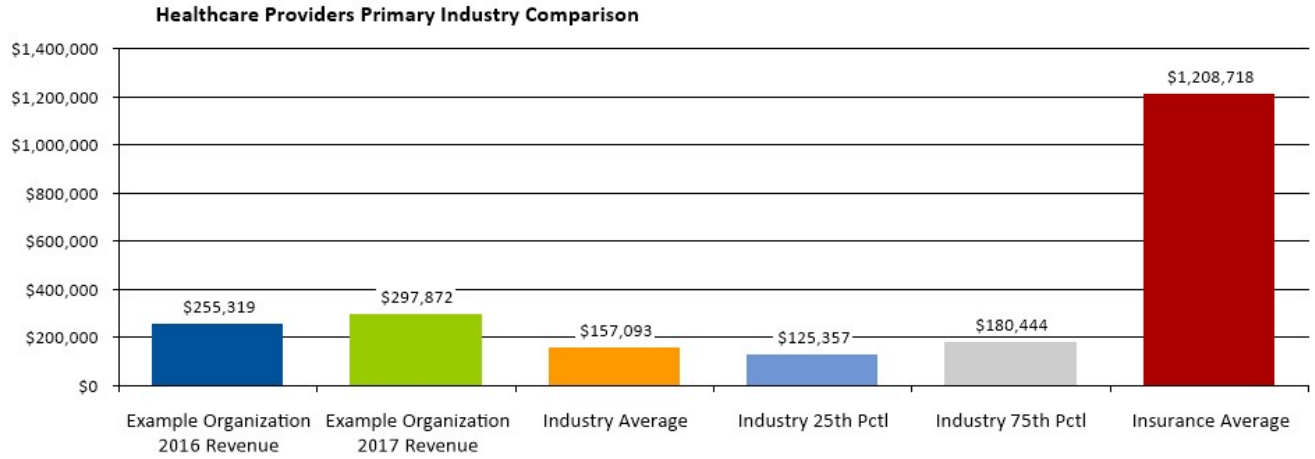
Source: Gartner IT Key Metrics Data 2017

Business Productivity

Revenue per Employee

Revenue per employee can help determine employee productivity in terms of revenue generation intensity. This measure is typically influenced by organizational business model and staffing strategy. Those enterprises that are highly labor intensive operations tend to generate a lesser amount of revenue per individual as compared to those enterprises who are highly automated. Effective and efficient uses of IT enable business processes to be streamlined, thus increase the level of employee productivity in terms of business results. While revenue may represent top line business results, it does not represent an organization's ability to generate income. This measure should be considered within the context of the enterprise operating model which drives operating income and profit margin as well as within the context of the total workforce strategy.

Revenue per Employee (USD)



Source: Gartner IT Key Metrics Data 2017

IT Budget Distributions: Uncover the Facts

Up to this point, the figures have shown spending trends overall without distinguishing between the strategic, financial or operational categories that compose them. Through these categories, you can draw conclusions about critical investment areas, key investment themes and competitive spending levels.

Centralized versus Decentralized IT Spending: Formal IT Budget, Business Unit IT and Shadow IT

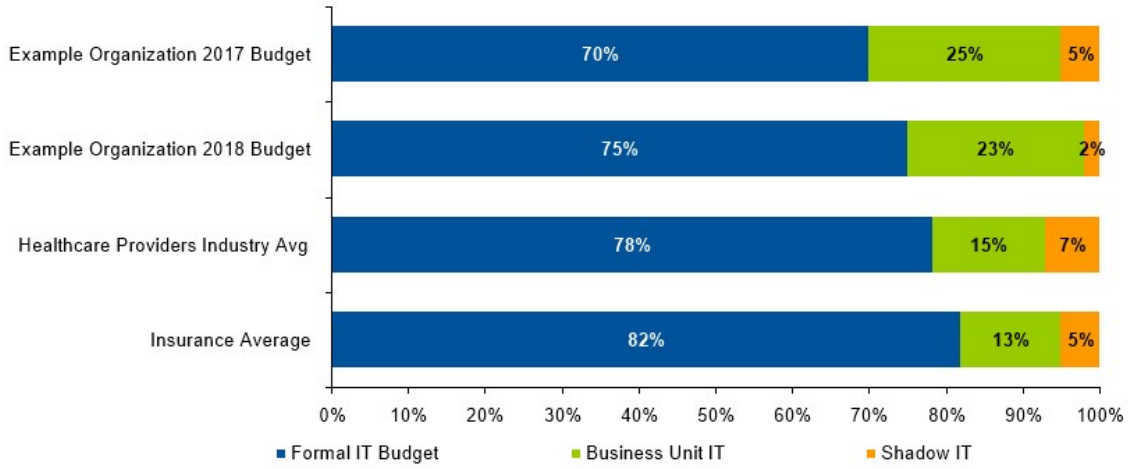
IT spending can come from a number of different sources within an enterprise or organization, and is not restricted to the formal IT Budget. Additional spending can occur within business unit budgets and be what is known as "shadow IT." The sources of IT spending are defined as follows:

• Formal IT Budget: IT spending that the IT department is accountable for. The IT department is answerable for the provision of these IT assets and services.
• Business Unit IT: IT spending where profit centers or overhead departments are accountable. For this category the IT department is consulted as a subject matter expert, and there is two-way communication..
• Shadow IT: IT spending anywhere in the enterprise for which the IT department is not accountable. For this category the IT department is aware of spending, but may not have detailed information about it. Amounts here may need to be estimated..

For the purposes of this metric the IT department is defined as the formal organization headed by the CIO/senior IT leader of the entity being analyzed. It also includes any IT organization reporting into them.

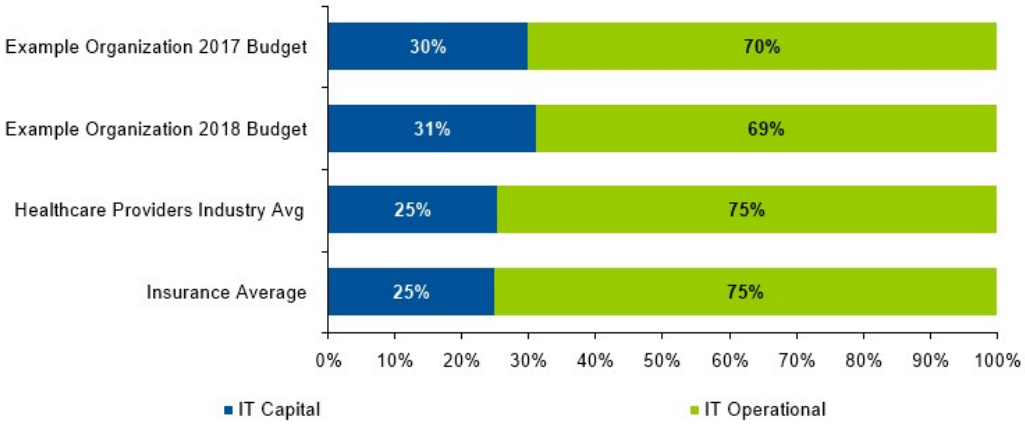
Understanding how much IT spending occurs outside the formal IT budget allows organizations to gauge the true extent of their IT spending, and ensure for example that IT budget cost cutting exercises do not simply result in IT spending occurring elsewhere in the business. Getting the right mix of the formal IT budget, business unit IT and shadow IT can depend upon many factors, and needs to be appropriate for the circumstances of the individual organization. Shadow IT can occur because the business wants to move faster than the formal IT departments processes allow, and can lead to a lack of central governance and control. However not all shadow IT should necessarily be view as "bad."

Centralized versus Decentralized IT Spending: Distribution of IT Spending between Formal IT Budget, Business Unit IT and Shadow IT



Source: Gartner IT Key Metrics Data 2017

IT Operational vs. Capital Spending



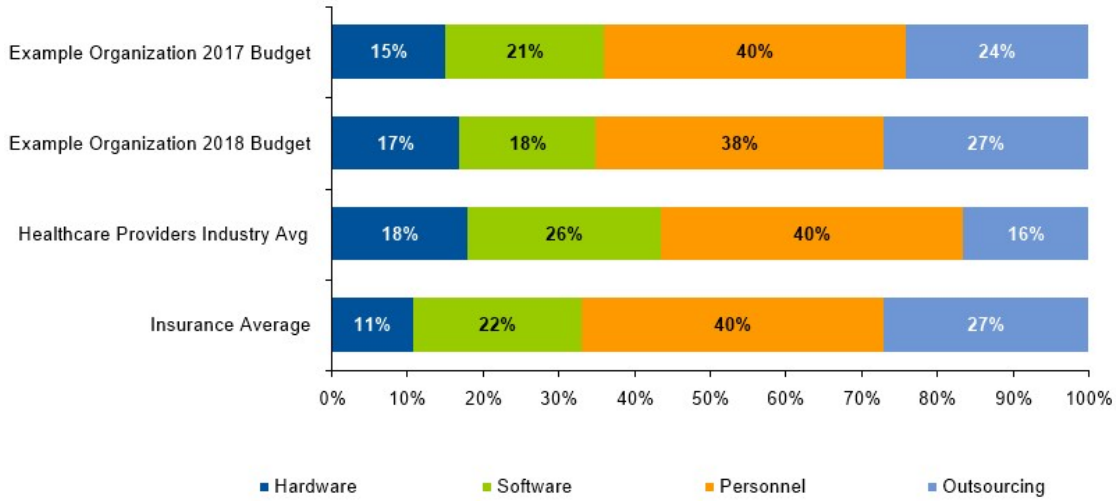
Source: Gartner IT Key Metrics Data 2017

IT Spending Distribution: Hardware, Software, Personnel, Outsourcing

The distribution of spending between hardware, software, personnel and outsourcing costs can show the dynamics of IT investments. For the purpose of this research, personnel includes occupancy/facilities costs and outsourcing includes public cloud services as well as third-party network transmission expenses.

This measure can be helpful in adding context to the IT investment strategy from a sourcing perspective, in terms of accounting-based resources that may be insourced (e.g., IT hardware, software, personnel and occupancy/facilities costs) vs. services delivered by a third-party (e.g., outsourced services, "X" as a Service (XaaS) and data/voice transmission costs). As an organization increases or decreases the level of third-party/outsourced services, it may find an inverse effect in its associated personnel, hardware and/or software expenditures, depending on the scope of third-party services retained and on business requirements. The cyclical nature of capital investments in IT hardware and software may also play a significant role in an organization's IT spending outlay during a given year.

IT Spending Distribution: Hardware, Software, Personnel, Outsourcing



Source: Gartner IT Key Metrics Data 2017

Strategic IT Spending Categories: IT Spending to Run the business, IT Spending to Grow the business and IT Spending to Transform the business

The distribution of IT spending to "run the business," "grow the business" and "transform the business" provides a view of the IT investment profile or "portfolio" to support business performance. In some industries, it is not uncommon to see a high "run" focus — typically because organizations in the industry are not planning strong changes in business model growth or high organic growth — which often translates into a more "cost center" role for IT in the industry or niche sector.

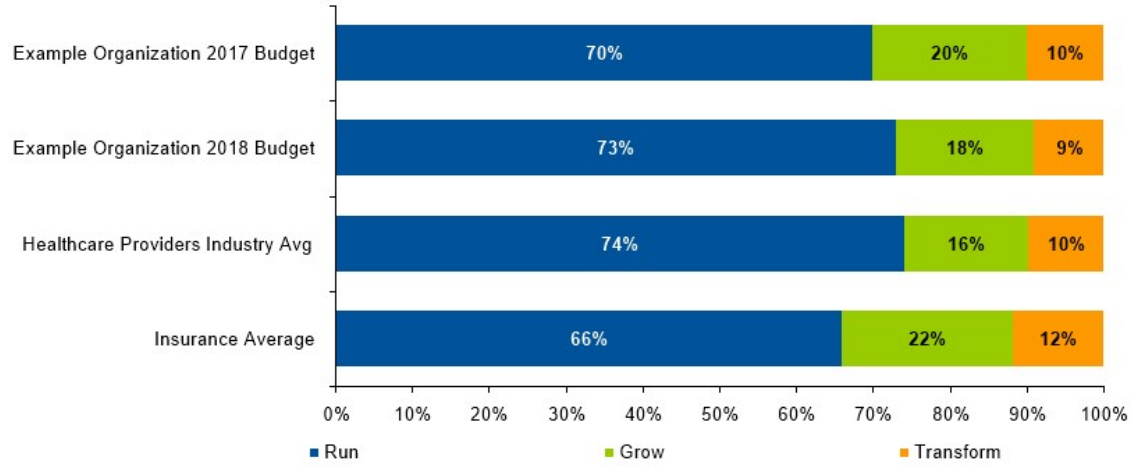
Classifying IT spending into categories that show impact on business outcomes or success can aid alignment and quantify underinvestment in IT. Gartner uses the following portfolio spending categories and defines them as follows:

• Run the business: This is an indicator of how much of the IT resource is consumed and focused on the continuing operation of the business. It includes all nondiscretionary expenses as part of the run-the-business cost. Some businesses call this "business as usual," "keep the lights on" IT spending, or sustain investments. Run expenses do not directly increase revenue, or achieve by themselves new or enhanced goals of the enterprise.
• Grow the business: This is an indicator of how much of the IT resource is consumed and focused on developing and enhancing IT systems in support of business growth (typically organic growth). Discretionary investments are more likely to be included in the grow-the-business or transform-the-business cost.
• Transform the business: This is an indicator of how much of the IT resource is consumed and focused on implementing technology systems that enable the enterprise to enact new business models. This is very much a "venture" category and would be represented by activities such as an insurer introducing usage-based insurance products such as telematics or a supermarket combining real time analytic monitoring with in-store task management to provide automated alerts to store staff to perform preemptive tasks.

Gaps in business alignment can be found by examining IT spending as it relates to the day-to-day operations of a business (run), the organic growth of the business or productivity improvement (grow) and its support with new revenue creation from major business transformation, new products, services or business models (transform).

A common misconception with this measure is that an IT initiative that may transform the IT organization, such as data center modernization or virtualization, should be classified as a "transform the business" investment. While these IT initiatives do transform the IT organization, they should primarily be classified as "run the business" investments because they support pre-existing IT services. IT transformation often leads to new business process improvements that enable the business to grow or build new revenue streams; therefore, these costs would need to be evaluated and distributed based on IT service and business performance. The run, grow and transform the business framework should always be viewed in business terms with respect to how IT will enable the business to grow or transform revenue, operating income and/or profit margins.

Strategic IT Spending Portfolio: IT Spending to Run, Grow and Transform the Business IT Spending



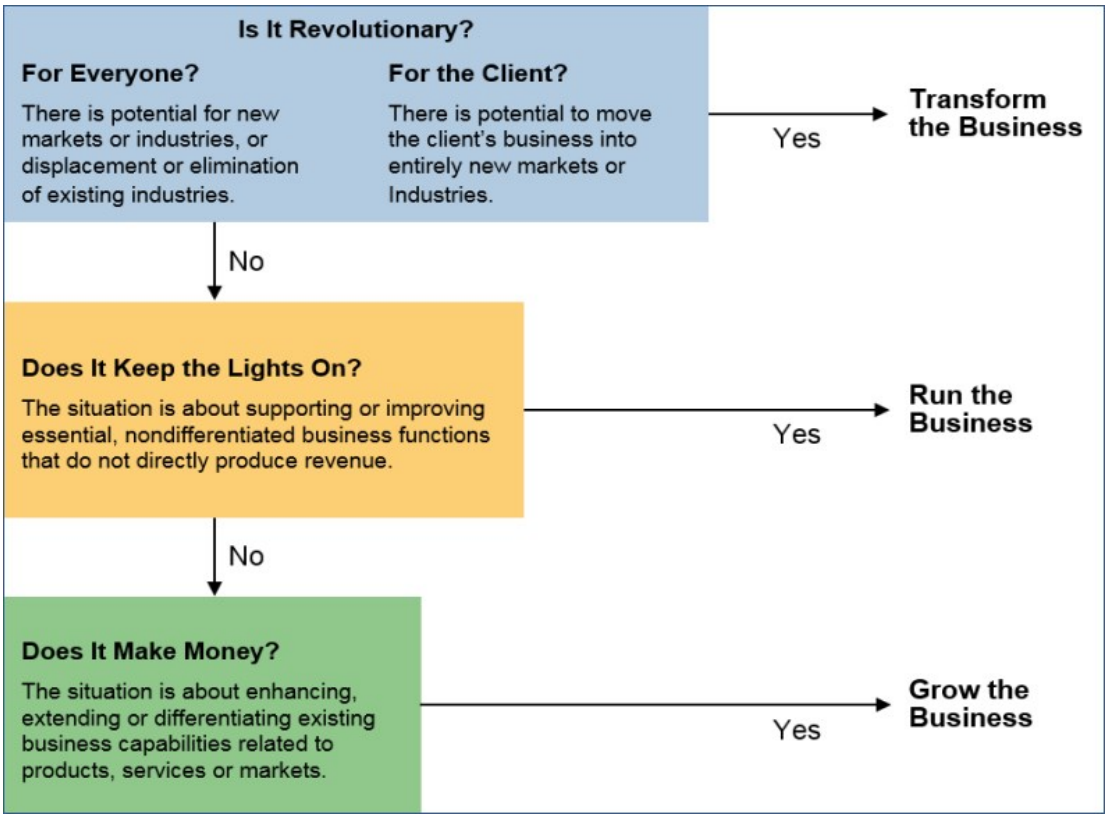
Source: Gartner IT Key Metrics Data 2017

Determining the Business Context for Value

As organizations leverage the run, grow and transform the business concepts at a macro level, Gartner has found it helpful to define various IT investments (and portions of investments) with the same basic framework to illustrate the projected impact at the individual IT initiative and project levels.

With a basic understanding of the framework, as outlined here, organizations can apply the decision tree to select the category that best describes business value for their IT initiatives.

Strategic IT Spending : Decision Tree



Source: Gartner 2017

The Link to Strategy

The run, grow and transform the business framework is a starting point for the overall process of measuring, forecasting and communicating IT value. Gartner believes that the initial language and metrics used for business value are critical success factors in the organization's ability to make good IT investment decisions. For organizations that are looking for best practice, consider linking individual IT services to individual business process performances in a causal chain.
For more information on run, grow and transform the business, see "Run, Grow and Transform the Business IT Spending: Approaches to Categorization and Interpretation."

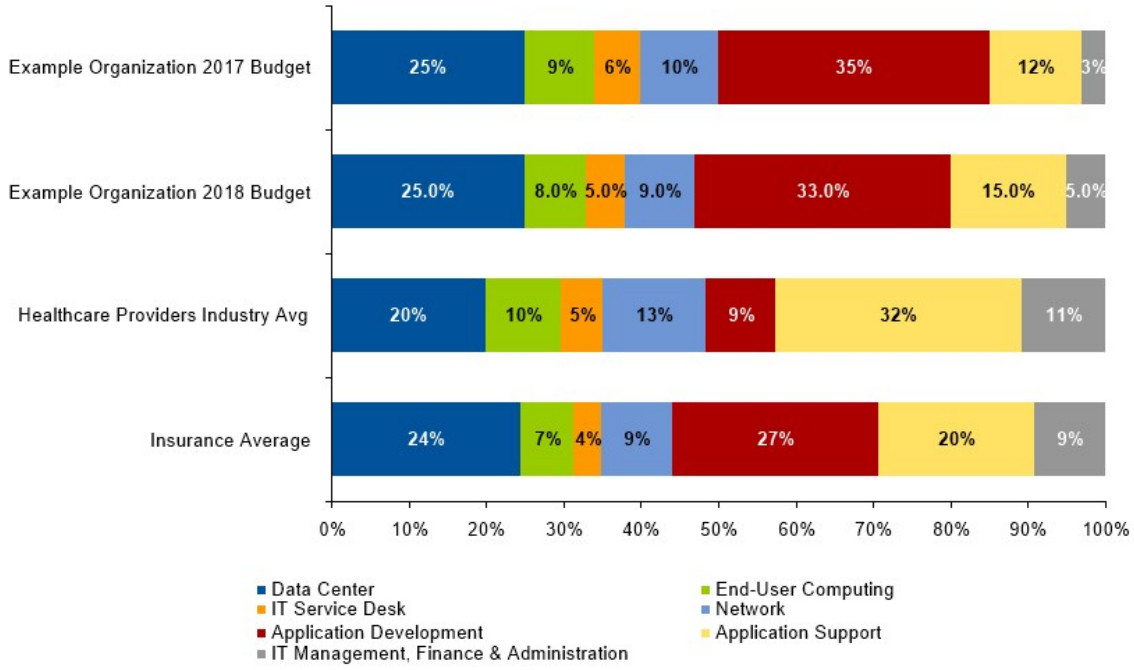
Distribution of IT Spending, by IT Functional Area

The distribution of IT spending by IT functional area provides a view of key IT budget consumption in the context of investment into the overall IT portfolio to support those IT functional areas:

Note: Gartner is asking that the Functional Area Distribution of IT Spending be calculated based as “Cash Out” (IT Operating Expenses plus IT Capital) rather than “Accounting” (IT Operating Expenses plus IT Depreciation).
• The comparison data here is based on previously collected information and will remain as “Accounting”. Gartner believes in the long run these two methods should produce a similar result. Once Gartner has an appropriate amount of responses, the comparisons will be based on “cash out”

The distribution of IT expenses into these categories helps to define the relative level of IT resources required to support the technology environment portfolio. This is often leveraged in tandem with IT resource planning exercises, wherein annual spending and staff resource allocations can be viewed in terms of investment in IT infrastructure (data center, end-user computing, IT service desk, network) vs. applications (application development and application support) vs. IT overhead (IT management, IT finance and IT administration). While this measure is helpful in identifying relative volumes of IT resource consumption by IT functional area, as compared to industry, it does not aid in identifying whether resources are being leveraged in a cost-effective or productive manner.

Distribution of IT Spending, by IT Functional Area



To better understand IT functional cost-efficiency levels, Gartner recommends identifying which IT functional area is has the largest variance from the industry mean, then evaluate the individual IT functional annual costs compared with the workload supported, within the context of your service levels, complexity, demand and scale based on the model and metrics outlined in Gartner's various "IT Key Metrics Data: Key Infrastructure Measures" research outlined in the "IT Functional Area Framework" section of the Appendix.

Source: Gartner IT Key Metrics Data 2017

IT Portfolio Trends: Staffing

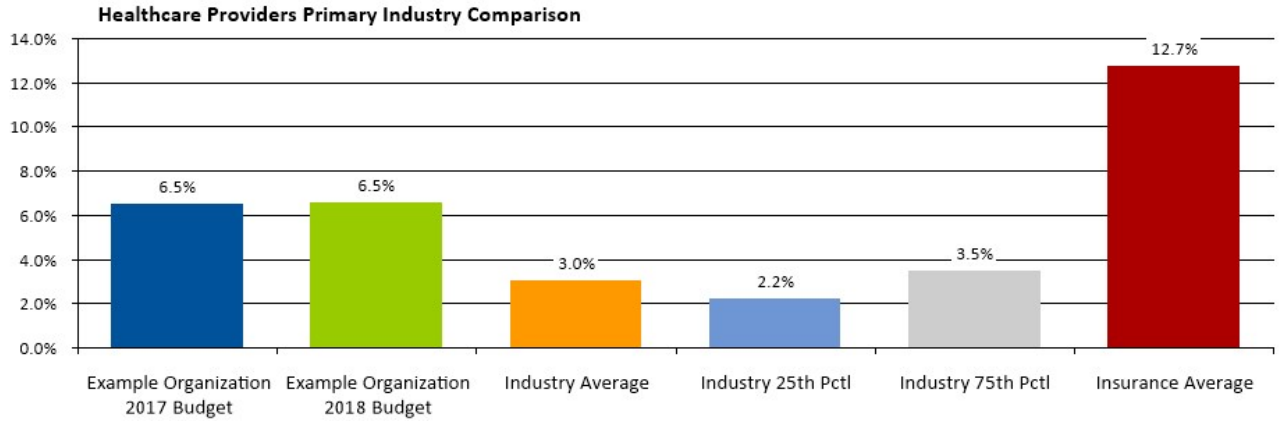
As we have seen in preceding figures, internal staff typically represents more than one-third of the overall IT investment, which demonstrates the considerable human component of the IT portfolio. As such, it is critical for organizations to understand whether they are staffed adequately, whether their human resources are effective and whether they are sufficiently trained and motivated to meet changing business needs. The following metrics provide a broad view of IT staffing levels as compared to the industry.

IT Full-Time Equivalents (FTEs) as a Percent of Employees

IT FTEs as a percent of employees is a key measure of IT support investment from a human capital perspective.

Understanding the relative level of IT staff dedicated to supporting the business can also assist in identifying whether the staff size is appropriate. This should be considered within the context of the overall enterprise sourcing strategy and future-state objectives. Variables to consider in tandem with this metric include IT staffing distribution, contract vs. insourced FTEs, and IT outsourcing as a percent of IT spending, as well as the enterprise sourcing strategy (i.e., does the total employee count accurately represent the organization's workforce that is supported by IT? Do you have the ability to track the total number of internal users supported by IT?

IT FTEs as a Percent of Employees



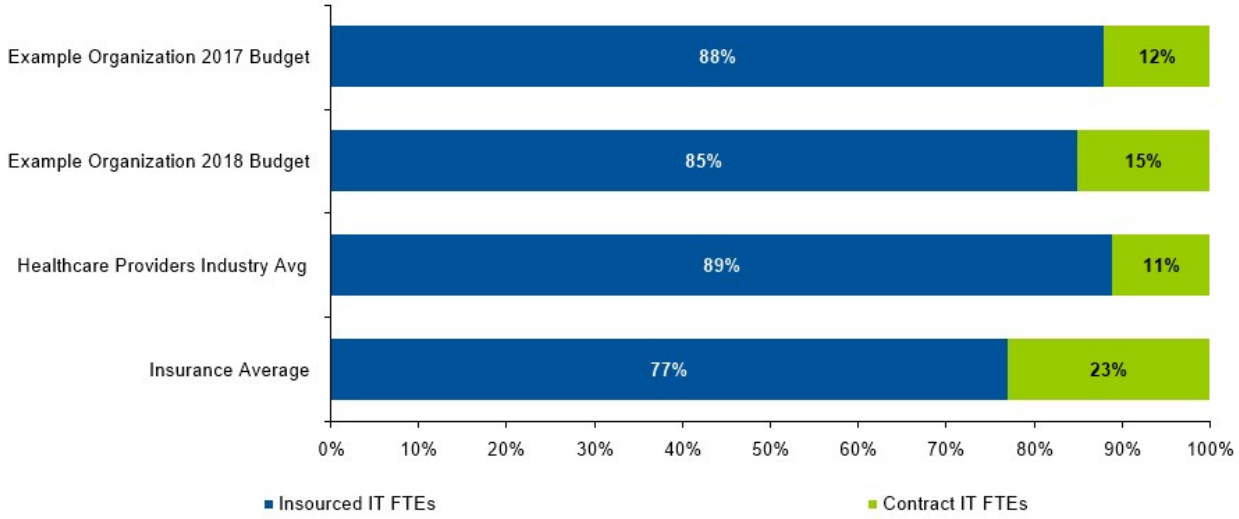
Source: Gartner IT Key Metrics Data 2017

Distribution of IT FTEs: Insourced vs. Contractor

The distribution of IT FTEs insourced vs. contractor can help provide a view of the IT staffing strategy.

IT contract labor or contractor usage can be an effective approach to maintaining flexibility and agility when business conditions are changing. However, keeping contractors for extended periods can be costly and limit process standardization.

Distribution of IT FTEs: Insourced vs. Contractor



Source: Gartner IT Key Metrics Data 2017

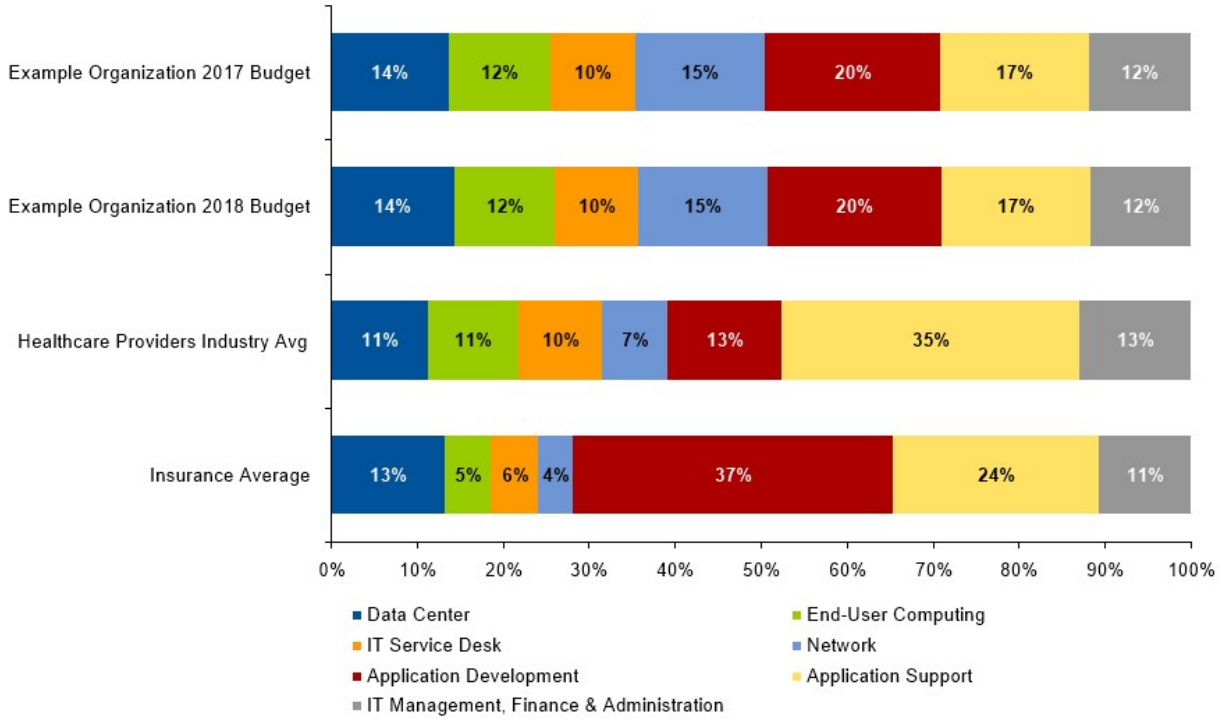
Distribution of IT Staff, by IT Functional Area

The distribution of IT staff by IT functional area provides a view of key IT resource consumption in the context of the overall IT portfolio.

By viewing human resources (IT FTEs) within the context of the total portfolio, organizations are able to identify which environment is the most labor-intensive as a percent of the IT labor pool. Typically, application activities (development and support) demand the most resources from a cost as well as a staffing perspective. The degree to which an organization outsources should be considered alongside such staffing metrics.

To better understand IT functional area staff productivity levels, Gartner recommends evaluating individual IT functional staffing levels compared with the workload supported, within the context of service levels, complexity, demand and scale. For more information on productivity measures by IT functional area, see Gartner's various "IT Key Metrics Data: Key Infrastructure Measures" research (which is cited throughout this report).

Distribution of IT Staff, by IT Functional Area

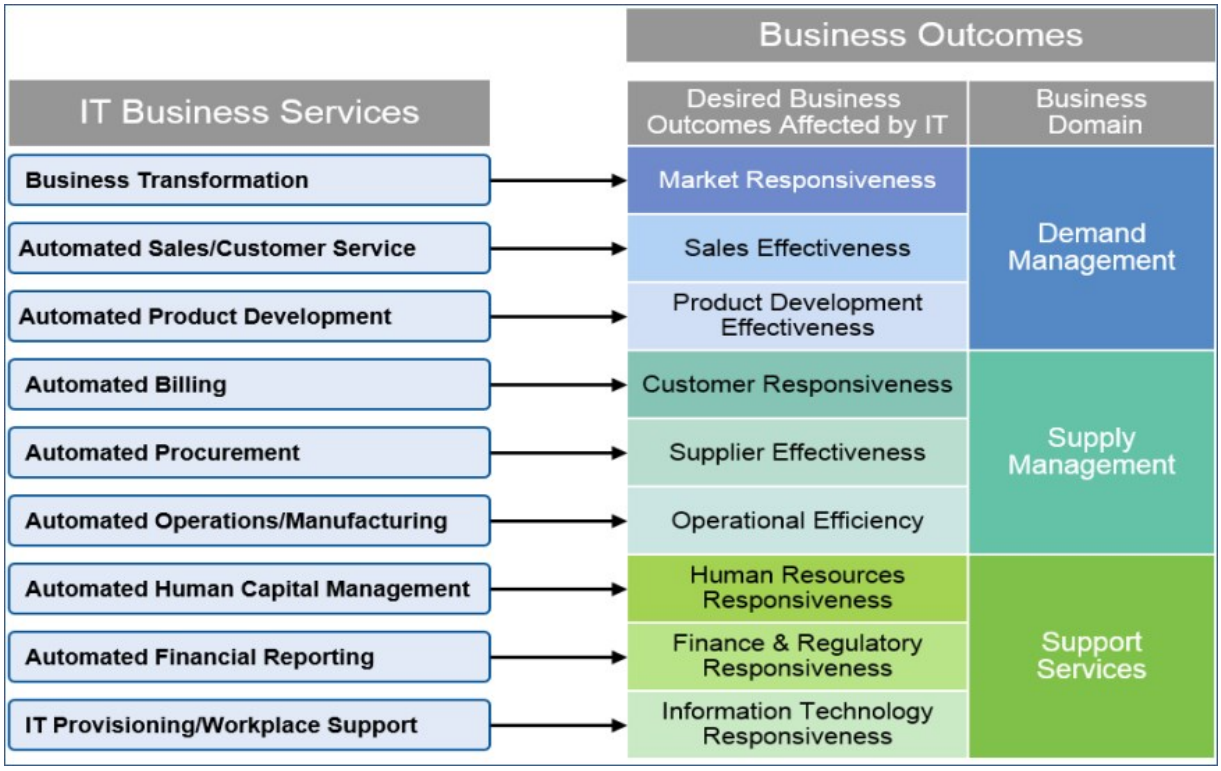


Source: Gartner IT Key Metrics Data 2017

Next Steps:

Shift the Focus to Business Optimization

Creation of the service portfolio is not the final endgame. After IT has created the service portfolio, it is important to demonstrate the value each service can bring to the business by creating a link to business metrics. In this diagram, we can see how each IT service contributes to improvement of a business outcome. CIOs and IT leaders should always keep this link in mind and talk in business outcomes rather than focusing only on IT costs and IT service levels. Cost management is important in that it helps to demonstrate the credibility of cost management; by itself, however, it does very little to demonstrate business value. CIOs that can master running IT as a business stand a greater chance of being able to access greater budgets across the business. Once IT can become known in the business as having the ability to help contribute toward factors such as improving customer retention or operational efficiency, CIOs will be invited to contribute at a greater level toward helping shape business strategy. For more information, see "How to Shift the Focus From IT Cost Cutting to Business Optimization" and "Three Key Steps Are Needed to Show the Value of IT Services."



Conclusions

A successful IT performance measurement program communicates metrics that are important to a target audience. This remains true when communicating IT investments to the business. The metrics and benchmarks that Gartner has identified here provide a high-level view of current trends in IT by industry. They also reveal trends in business alignment, staffing, technology and outsourcing. They can be used to assist in communicating alignment with the business and in evaluating targets in key technology areas. They provide context for key business decisions and internal performance measures.

It is important to understand that the published averages are not targets, and decisions of "good" or "bad" performance should not be based on these metrics. They are indicative reference points from which to view current performance and investment levels to help you identify differences that could merit further analysis. Articulating why your organization is higher or lower than these metrics is the first step in better business alignment and the communication of IT's impact on business performance.

For more detailed metrics focused on IT infrastructure cost and performance, consult Gartner's various "IT Key Metrics Data: Key Infrastructure Measures" research, which can help provide more insight into IT-centric cost efficiency and productivity metrics.

For more detailed metrics focused on IT application spending, staffing and project measures, consult Gartner's "IT Key Metrics Data: Key Applications Measures" research, which can help provide more insight into total application development vs. support metrics.

Related Gartner IT Key Metrics Data Research

IT metrics research included in this report is part of a set of Gartner Benchmark Analytics research pieces.
Depending upon your subscription level for Gartner services, some clients have access to the Gartner IT Key Metrics Data publication series via the link at gartner.com, select "Explore," "Metrics & Tools," and under “IT Key Metrics Data,” select "Learn More."

For detailed list of published IT Key Metrics Data published, review "IT Key Metrics Data 2016: Index of Published Documents and Metrics"; Gartner RN # G00291331, for a comprehensive list of all available IT Key Metrics Data research.

- IT Key Metrics Data 2017: Executive Summary
- IT Key Metrics Data 2017: Resources to Review Your ITBudget Comparison Report
- IT Key Metrics Data 2017: Index of Published Documents and Metrics
- IT Key Metrics Data 2017: Definition of Industries
- IT Key Metrics Data 2017: Demographics

Recommended Reading

Access to these documents is dependent upon your level of Gartner subscription.

- Best Practices to Drive Cost and Value Optimization in IT Management
- How to Shift the Focus From IT Cost Cutting to Business Optimization
- How CIOs Influence Decisions When Every Budget Is an IT Budget
- Leadership Development Module 3, Chapter 5: Budgeting Fundamentals of IT Management
- Leadership Development Module 3, Chapter 7: Cost Transparency, Allocation and Recovery
- Avoid Dangerous Cost-Cutting Traps, and Embrace Gartner's Cost Optimization Approach
- The Gartner Top 10 Recommended IT Cost Optimization Ideas 2016
- Five Principles Underpin IT Cost Optimization Success
- Ten Ideas for Business Cost Optimization in the Age of Digital Business
- Enhancing and Communicating Performance and Measurement of Business Value of IT Primer for 2017

Appendix - The power of Benchmark Analytics throughout Gartner

In addition to Benchmark Analytics research, Gartner's consulting based Benchmark Analytics capabilities delivers client specific prescriptive benchmarks against discrete industry peers from within your competitive landscape.

Gartner Consulting's contemporary and prescriptive benchmark analytics solutions are unparalleled in the IT marketplace. By bringing together industry leading, independent research and advisory capabilities with client focused consulting services and the world’s largest IT benchmarking database we address our clients most important challenges and produce tangible results.

More information on Gartner Benchmark Analytics can be obtained by contacting your Account Executive, Or
benchmarkinginfo@gartner.com

Gartner ITBudget: Enterprise Comparison Tool

Research

Industry's largest database

111,700 documents across 1,230 technology and business topics with insights from Gartner Benchmark Analytics data

Consulting

Results on initiatives

Custom engagements fuelled by 5,500 benchmarks a year

100+ independent, objective Benchmark associates worldwide

Advisory Services

Unique client perspective

1,000 analysts conduct 215,000 one-to-one client interactions a year

Events

Networking with peers

50,000 professionals a year attend 70 worldwide events with the opportunity to interact with Benchmark Analysts & Consultants

Gartner ITBudget: Enterprise Comparison Tool

The world's leading organizations use Gartner Benchmark Analytics to support the execution of their Mission-Critical Priorities

Gartner helps IT & business leaders make fact-based decisions through market-leading data and actionable insight delivered by specialist practitioners

Gartner Benchmark Analytics — Build your decisions on the facts and insight you can trust

Gartner Benchmark Analytics helps your organization address key questions, target opportunities and provides insight into strategic challenges

Internal Operations

Identify your current state and where your best opportunities are for future improvement

- Can you independently prove that you are delivering value for money?
- Does your IT spending drive value and performance?
- Can you sustain your baseline costs and where to improve?

Market Perspective

Understand if you have competitive service contracts

- Are you able to make valid comparisons to similar contracts?
- Do you have market insights required to support contract renegotiations?
- Can you measure the performance and price of your service provider?

Gartner's comparative measurement solutions align with your mission-critical priorities

Internal Operations

IT & Business Leader Budget Baseline	Cost control is a must-have for any enterprise. Leadership is increasingly focused on value-creation via employee productivity, customer retention and competitive advantage.
New CIO Baseline	New CIOs need a baseline to work from to understand what they have inherited, where they should focus their efforts first and how they can measure the impact of their strategy.
Applications Cost, Staffing & Productivity	Comparatively assessing the productivity and cost-efficiency of applications enables you to demonstrate the value of IT spending and to prioritize future application spending.
Infrastructure Cost & Staffing Efficiency	Understanding and comparing performance and support of IT network, storage and infrastructure allows you to present IT value to the business and cost optimization opportunities.
Security Risk, Maturity & Spend	Allows you to measure and compare your security budgets and execution effectiveness to determine the investments and initiatives required to achieve an acceptable and achievable level of risk tolerance.
Customer Satisfaction	Measuring IT's efficiency and effectiveness by evaluating end-user satisfaction with IT services informs the prioritization of efforts and limited resources to improve future satisfaction levels.

Market Perspective

Market Price Baseline	Understanding the competitive market price ranges for services provides valuable insight into operational efficiencies and cost reduction considerations enabling IT to demonstrate value to the business.
Contract Price Competitiveness	Demonstrating the price competiveness of a providers' contract against comparable peers allows you to achieve the best value and efficiencies from an outsourced investment.
Service Catalog Rates	In defining and reviewing service catalogues it is key to understand if charge back unit prices are aligned to the market and/or other internal providers in order to make informed decisions around cost efficiencies.
Market Cloud Baseline	The complexity of most cloud pricing models means it is crucial to understand the market maturity of these solutions and if each offering is commercially competitive.
Business Effectiveness	IT's effectiveness in supporting the execution of the business's mission-critical priorities helps to identify opportunities to better align the IT organization with the enterprise to optimize value and results.

Appendix - Glossary of Terms

Revenue

Revenue is defined as follows:

• "The enterprise revenue associated with the business units supported by the IT organization (banks should use total interest income plus noninterest income minus provision for loan losses, while insurance companies should use gross written premiums and other income)."

Business Operational Expense

Business operational expense is defined as follows:

• "The total expense associated with the business units supported by the IT organization. This includes items such as selling, general and administrative expenses, cost of goods sold (or cost of revenue), research and development, depreciation, and depletion and amortization expenses. For insurance, this includes underwriting expenses and loss and loss-adjustment expenses; for banking organizations, it includes interest expenses and noninterest expenses; for government and nonprofit organizations, it is represented by the enterprise operating budget."

Employees

Organization employee count is defined as:

• "The count of employees (i.e., head count, excluding enterprise contractors and consultants), regardless of whether these employees are frequent users of the technology supported by the IT organization. This includes full-time and part-time employees, or as reported in the public record."

IT Full-time Equivalents (IT FTEs)

IT FTE is defined as follows:

• "An IT FTE represents the logical staff to support functions performed by the physical staff, measured in calendar time. This includes all staffing levels within the organization, from managers and project leaders to daily operations personnel. This also includes insourced FTEs and contract FTEs. However, this excludes the staff of a third-party vendor (for example, IT outsourcing), which is not operationally managed by the in-house staff, but rather is managed by the vendor."

Insourced IT FTE is defined as:

• "FTEs who are employed by the IT organization (excluding contractors and consultants). These include all full-time and part-time employees supporting the IT environment, as defined by IT spending/budget."

Contract IT FTE is defined as:

• "Contract FTEs (contractors) who are supplemental to your staff and are "operationally" managed by the in-house staff. These include all full-time, part-time and temporary contractors supporting the IT environment, as defined by IT spending/budget."

IT Operational vs. Capital Spending

IT operational expense is defined as:

• "The total day-to-day operations and maintenance expenses for this fiscal year that have not been capitalized. These do not include any amortization and depreciation expenses."

IT capital spending is defined as:

• "The total capitalized IT spending for the fiscal year (i.e., the full value of capitalized assets acquired in the fiscal year). This includes investments in new application development and IT infrastructure."

IT Spending Distribution: Hardware, Software, Personnel, Outsourcing

The definitions of each category are as follows:

• Hardware Expenses: These include all hardware expenses described in the IT spending/budget definition.

• Software Expenses: These include all software expenses described in the IT spending/budget definition.

• Personnel/Occupancy Expenses: These include:

  • Salary and Benefits Expenses: "These should include salary (including overtime pay), benefits and "other" employee costs, such as travel and training for all IT FTEs. The "benefit load" should include costs for bonuses, paid holidays, vacations, medical/dental coverage, life and accident insurance, retirement plans, stock plans, disability, Social Security, unemployment compensation, dependent care, tuition reimbursements and employee assistance programs (for example, physical exams, exercise programs and similar costs)."

  • Occupancy/Facilities Expenses: "These include fully burdened costs for the facilities being used by the staff that supports the enterprise. Some examples include office space, furniture, electricity, maintenance, property taxes, security and office supplies. Occupancy costs for space dedicated to IT functions, such as the data center (including power/heat management and raised floor/slab using overhead cable trays, etc.), are also included."

• Outsourcing Expenses: "These include the fees for third-party or outsourcing contracts in which "outsourcing" is defined as "any situation in which the full operational responsibility for IT services is completely handed over to an external service provider (for example, print, maintenance, procurement, system management, equipment)." This includes outsourced third-party data and voice transmission services/expenses, as well as public cloud based IT services, such as SaaS, PaaS, and IaaS."

IT Functional Area Framework

The following sections provide guidance on how to count costs and FTE numbers, as defined by the scope of the IT functional area framework/chart of accounts.

Data Center

Note: Data center (enterprise computing, storage and facilities) includes Windows, Unix and Linux servers, mainframe, storage and any other platform running in the data center.

Hardware

• Processing devices: Include all hardware in server platform configurations, including internal disk storage, controllers, external disk arrays, tape libraries, optical jukeboxes, processors, memory, cards as well as other offline media supplies.

Software

• Annual costs for host and virtual OS licenses, virtualization and partitioning software, utilities, databases, middleware, content/document management search engines, messaging, communications (TCP/IP, FTP and host-based) and server security software.

Connectivity

• Intra-data-center connectivity: This typically includes routers, switches, load balancers, controllers and appliances. Data center communication networks are dedicated networks that are segregated or isolated from the general-purpose LANs or WANs. General-purpose or shared network costs are excluded from the data center and should be allocated to the data network.

• Inter-data-center connectivity: This typically includes the transmission cost and hardware cost for the fiber, used and unused (dark fiber), and the switches and controllers. Data center remote communication networks are dedicated networks that are segregated or isolated from the general-purpose LAN or WAN. General-purpose or shared network costs are excluded from the data center and should be allocated to the data network.

Disaster Recovery

• Includes disaster recovery contracts (compute and communications) for hot sites (shell facilities), dedicated hardware, software and connectivity.

Facilities / Occupancy

• Costs for power/heat management, furniture, access systems, office space, raised floor and / or slab using overhead cable trays etc.

Personnel

• Operations/maintenance, engineering technical services, planning and process management, service administration, management and administration, and facilities management.

End-User Computing

Hardware

• User client and peripheral hardware: desktop, laptop, thin-client and tablet PCs, personal and shared printers, multi-functional printers (MFPs or MFDs), handheld devices such as smartphones, and messaging devices.

• Transmission costs for these devices are excluded and should be allocated to the data network.

• IT management hardware: This encompasses hardware that primarily supports an IT process, not a business or user process. Examples are test and training devices, servers hosting network and system management (NSM) or asset management software, and devices used by the IT staff supporting the end-user computing environment. This also includes supporting a hosted virtual desktop (HVD) installation.

Software

• User client software.

• Personal productivity and database: This includes new word processors, spreadsheets, presentation packages, personal databases and other personal productivity software executing on client systems. It also includes upgrades.

• Messaging and groupware: This includes new and upgraded email, groupware and collaboration software.

• IT Management Software: This includes IT software that is used exclusively for IT functions including network, systems, storage and asset management, training and computer-based training (CBT) software as well as security software (antivirus, personal firewall, encryption, etc.) as well as mobile device management which offers software distribution, policy management, inventory management, security management and service management for smartphones and media tablets... This also includes supporting a hosted virtual desktop (HVD) installation.

Disaster Recovery

• Annual costs of hardware, software, connectivity, occupancy and contracts specifically dedicated to disaster recovery for end-user computing.

Occupancy

• Occupancy costs should include fully burdened costs for the facilities being used by the staff supporting the end-user computing environment. Some examples include office space, furniture, electricity, maintenance, property taxes, security and office supplies.

Personnel

• Operations/maintenance, engineering technical services, planning and process management, service administration, management and administration.

IT Service Desk

Hardware

• PBX, ACD, interactive voice response, computer-telephony integration, IT service desk end-user computing devices, and IT service desk application servers.

Software

• This includes all software that is necessary to operate the service desk, such as expert knowledge tools, problem management tools, quality monitoring, self-service, workforce management software, workflow management software and service desk management portal software.

Transmission

• Includes inbound 800 service, dedicated trunking, local service, outbound long distance, internet access (for example, IT service desk portal) and networking between IT service desks.

Disaster Recovery

• Annual costs of hardware, software, connectivity, occupancy and contracts specifically dedicated to disaster recovery for IT service desk.

Occupancy

• Facilities/occupancy: Includes lease, depreciation, rent, capital costs, transaction costs, operating expenses, repairs and maintenance, utility charges, insurance, taxes, construction and reconstruction of work settings.

• Furniture: Includes costs for furniture and office equipment (other than IT assets such as PCs, servers and telecommunications equipment).

Personnel

• IT service desk agent operations/maintenance, engineering technical services, planning and process management, service administration, management and administration.

Network

Note: Network includes Voice (WAV & VPT) and Data (WAN, LAN and IAS) network as well as dedicated cellular (mobile) network costs.

• WAN: Connectivity and transmission of business-critical data between enterprise locations and business partners

• LAN: Accounts for the provisioning of communications and connectivity to critical business systems within enterprise sites and campuses (Note: Costs associated with permanent building cabling, horizontal and vertical, are excluded. Likewise, costs for any interbuilding cabling — copper and/or fiber — that would be found on a campus are also excluded.)

• IAS: Internet Access Services (IAS): Enterprise access to the global internet, for the use of its personnel and for the use of its external customers to access enterprise websites.

Hardware

• Wide-area voice network hardware: Switching and routing, as well as terminating hardware. Terminating hardware includes microwave, satellite, compression, multiplexer/channel bank, PBX network interface card and channel service unit/data service unit (CSU/DSU).

• Voice premise: Telephone system equipment (such as voice switch/server and peripherals, including modules and uninterruptible power supply [UPS]), premise system phones (voice only; smartphones such as BlackBerry, iPhone and Android-based devices are excluded and should be allocated to the end-user computing environment), voice mail hardware (for example, processors and storage) and message authentication control (MAC) materials.

• Security hardware: Dedicated data network firewall hardware/servers, intrusion/detection servers and devices, as well as encryption hardware.

• NOC hardware: This includes hardware that is located within a NOC to support a centrally managed network infrastructure/network. This includes test equipment and remote monitoring equipment, client devices (PCs on NOC desktops) and network management servers (NOCs).

• Switching, routing and wireless hardware, including switches and routers, multiplexers, satellite equipment, boundary (branch) routers, backbone routers and bridges, and wireless access points.

• Other dedicated data network hardware, including Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP) servers, optimization equipment such as internet load-balancing hardware, UPS, MAC hardware and MAC cable (closet to desktop).

Software

• Switch/voice server and peripherals (e.g., automatic call distribution [ACD], voice response unit [VRU]) and voice mail software costs.

• Security software: Dedicated data network firewall software, intrusion/detection software as well as encryption software.

• NOC software: All NSM software costs related to the NOC's support of the data network infrastructure/network.

Transmission

• Includes all outbound and inbound transmission costs. It also includes the annual cost for local central office lines (where applicable) as well as cellular (mobile) transmission costs.

• Annual data network transmission costs, such as carrier digital services including Frame Relay access, ports and PVCs (Permanent Virtual Circuits), ATM (Asynchronous Transfer Mode) access, ports and PVCs, MPLS (Multiprotocol Label Switching) access, ports, and CARs (Committed Access Rates) which also includes specific charges for Quality of Service (QoS) commitments, sometimes referred to as traffic shaping, T3/E3, dial backup service, Synchronous Optical Network (SONET), metropolitan Ethernet, and dark fiber, as well as annual cost for circuits connected to the internet service provider and cellular (mobile) data transmission costs.

Disaster Recovery

• Disaster recovery contracts (communications) for hot sites (shell facilities), dedicated hardware, software, and connectivity.

Occupancy (For Personnel Only)

• These costs should include fully burdened costs for the facilities being used by the staff supporting the network. Some examples include office space, furniture, electricity, maintenance, property taxes, security and office supplies.

Personnel

• Operations/maintenance, engineering technical services, planning and process management, service administration, management and administration.

Applications

Application Development

• New code for a new application and functional enhancements to the current code that take more than two person-weeks, or that typically add eight function points or more. A "functional enhancement" is defined as "a change made for a user that allows additional capabilities (from a business point of view) that were not there before. In some environments, major enhancements can actually be added in less than two person-weeks. If this is the case, and eight function points or more are added (about 800 lines of COBOL or 300 lines of a database language), then this is still categorized as development.

Application Support

• Bug fixes of any size or duration, maintenance of hard-coded data or tables (including field size changes) embedded within the programs (any size or duration), and functional enhancements to current code that take less than two person-weeks and typically add fewer than eight function points, or any project that produces no new business functionality for the user.

• A "functional enhancement" is defined as "a change made for a user that allows additional capabilities (from a business point of view) that were not there before." In some environments, major enhancements can actually can be added in less than two person-weeks. If this is the case, and more than eight function points or more are added (about 800 lines of COBOL or 300 lines of a database language), then this enhancement is recorded as a project, marked as an enhancement and categorized as development rather than support.

Hardware

• This includes only hardware (mainframes, servers, end-user computing devices) used by the application development or support staff members to do their jobs (that is, client devices as well as servers and a portion of the mainframe used for application development and testing). This excludes end-user or production hardware.

Software

• Development and support software required by the application development and support staff members to do their jobs. It may include the languages/compilers/databases, development/testing tools and IT management software tools, such as project estimators and project schedulers.

• Business functionality software: For application support, this includes the maintenance cost of off-the-shelf vendor packages, as well the annualized cost of the software.

Occupancy

• Fully burdened costs for the facilities used by the development or support staff and included in this analysis view. Some examples would include office space, furniture, electricity, maintenance, property taxes, security and office supplies.

Personnel

• Application development: This includes staff involved in developing new applications, enhancing existing applications, installing new packages and installing major functional enhancements to existing packages.

• Application support: This includes staff involved in supporting applications that exist within the current portfolio. It also includes personnel who are responsible for fixing programming problems uncovered when applications are running in production. It does not include any personnel who are responsible for running the production applications. If an upgrade for a packaged application primarily contains fixes for existing problems, then the efforts involved in installing such a maintenance upgrade are included in application support.

Corporate IT Management

Only include functions that are at a level within the IT organization that, after best effort, cannot be allocated to an IT functional area."

Office of the CIO/CTO

• This includes the "C-level" IT management, including the CIO and CTO functions. Also included here are the direct reports of the CIO, who spend the majority of their time providing enterprise-wide support other than the functions outlined below (that is, special projects).

IT Human Resources

• This includes resources dedicated to human resource issues surrounding the recruiting and retention of IT staff.

IT Marketing

• This includes resources dedicated to marketing the capabilities of the IT organization to the business units.

Technology Planning and Process Management

• This includes activities related to the planning for and management of current and future technology needs, and the establishment of policies and processes relating to technology. This also includes, but is not limited to, systems research, product management, technology evaluation and purchase decision making, the establishment of processes surrounding security and virus protection, and business continuity/recovery.

Disaster Recovery

• This includes resources dedicated to planning, testing and implementing contingency procedures across all IT functions. This also includes the staff dedicated to safeguarding the enterprise's ability to continue operations of vital business functions following physical damage or other catastrophes that impact business facilities. Responsibilities include:

• Maintaining disaster recovery documentation

• Negotiating contingency site arrangements and serving as liaison with the vendor

• Managing off-site data retention

Security

• This includes resources that oversee the development of standards and procedures for ensuring overall network and systems integrity.

IT Finance and Administration

Only include functions that are at a level within the IT organization that, after best effort, cannot be allocated to an IT functional area.

IT Administration

• This includes direct administrative and clerical support to enterprise-level IT. Positions include secretary, receptionist and administrative assistant.

Budget and Chargeback

• This area establishes the overall IT budget, monitors actual expenses versus the budget, arranges financing for purchases and performs financial reporting to other enterprise areas. Staff members also handle the operation of the chargeback system. Positions include financial analyst and chargeback administrator.

Asset Management

• Tracking: This area provides the administrative support for tracking systems and system components. It accounts for labor and contract costs for managing depreciation records and lease contracts, performing asset inventories (physical or automatic management), asset identification and tracking, asset database management, change recording and reconciliation. It also includes the creation and maintenance of an up-to-date record of installations, moves, adds, changes, removals and final disposal of all assets (for example, hardware, software and circuits). The record contains information for locating, assessing, auditing, troubleshooting, counting and assigning assets, or performing other technical and business functions without the need to repeatedly visit the asset location or reassemble data records. It also includes the determination of an asset's useful life, including planning for the installation, upgrade, and removal/disposal of the asset and executing the plan.

• Procurement: This area solicits bids, negotiates purchasing agreements, establishes purchase orders, validates vendors' bills, coordinates with accounts payable for payments and handles contract administration.

Quality Assurance

• This includes staff responsibility for monitoring, tracking and recommending solutions for improving the content and delivery of services provided by the customer service contact center.

Training

• This refers to the primary source for the delivery of training within the IT organization and for end users in the business units. This area may also prepare the training materials, evaluate employee skills and assist in the creation of custom training programs for the organization.