IT Key Metrics Data 2016: Key Infrastructure Measures: End-User Computing Analysis: Current Year

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This research contains high-level End-User Computing cost efficiency and support staff productivity ratios. Information provided was collected throughout 2015 from a global audience. Key cost and support distributions as well as metrics based on the environment scale are also included.

Key Findings

- The 2015 average Annual End-User Computing Cost per Personal Computing Device is $1,015.

- The 2015 average number of Personal Computing Devices Supported per End-User Computing FTE is 257.

- Complexity and demand elements should always be considered within the context of a performance evaluation as they are the most fundamental drivers of a cost profile.

- Large organizations do have an advantage when it comes to economies of scale. However, as organizations grow in size, they tend to become more complex coupled with an elevated level of demand requirements.

Recommendations

- Use this research as a source of comparative data by unit supported and cost category to assist IT and enterprise leaders with fact-based decisions related to investments, planning, ongoing operational assumptions and identification of quantitative best practices.

- In addition to environment scale, these metrics should be considered in tandem with service level requirements, the quality/satisfaction levels achieved as well as within the context of IT complexity & the state of the IT-business environment (past, present & future).

- Use of this information should be considered the beginning of an ongoing measurement program. Organizations should consider investing in customized, refined, prescriptive or in-depth benchmarking engagements on a recurring basis to support the budget cycle, or whenever making significant, fact-based IT or business decisions. The information published in

this research can be used during the time periods in-between these comprehensive assessments to inform business and IT planning assumptions.

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Overview

Clients improve business performance by benchmarking their spending and best practices against Gartner's IT performance repository, the largest in the industry, drawing on 5,000 prescriptive IT benchmarks a year. Gartner Benchmark Analytics' End-User Computing Assessments examine IT efficiency and effectiveness with respect to the provisioning of the full life cycle management of all desktop, laptop, tablet, thin client, handheld and peripheral assets including acquisition, deployment, maintenance, change management and disposal. These assessments focus on the cost efficiency of the operation in terms of either overall cost per user or cost per device within the context of unique operating environments.

This research provides an overview of the Gartner Benchmark Analytics' consensus model and high-level averages from our global cost benchmark observations. The averages only represent a subset of the metrics and prescriptive analysis capability available through Gartner Benchmark Analytics.

The metrics explored include average cost efficiency and support productivity metrics in terms of personal computing devices supported, from organizations that are managing end-user computing operations internally (i.e., <50% outsourced). These database averages do not account for individual variations of service quality, complexity or demand which may be justified by specific business needs.

IT Key Metrics Data Research Background

The Gartner IT Key Metrics Data (ITKMD) series of reports was established in 1995 to support strategic IT investment decisions, and today the annual publication delivers more than 2,000

metrics, across 96 documents and covers 21 different industries. Allowing you to rapidly identify high-level IT spending, staffing, technology and performance trends.

In an ongoing effort to study, analyze, evolve and improve enterprise performance, Gartner drives a number of initiatives to continuously capture IT data and information from the greater Gartner client and non-client community to support the growth of the database, the industry insight and the published IT metrics series. We invite you to participate in and contribute to the study to represent your vertical industry and region. The Gartner client community provides an exemplary window into the global IT community, and, therefore, your participation is essential to this publication series.

To contribute to Gartner ITKMD research, start a survey and represent your industry and region. Surveys are available at: gartner.com/surveys.

IT Key Metrics Data Key Infrastructure Measures Overview

This research contains relevant database averages and ranges from a subset of metrics and prescriptive engagements available through Gartner Benchmark Analytics consulting-based capabilities. While database averages are indicative of enterprise IT spending levels, actual spending will vary around these averages when considering the variations of unique competitive landscapes, niche vertical industry subsectors, business scale, and IT complexity and demand, which may be justified by specific enterprise needs. These factors typically drive the context of an IT cost or performance evaluation and often dictate long-term support requirements. Ultimately, business value IT spending and staffing data should be used as a high-level directional indicator and in the creation of planning assumptions — not viewed as a prescriptive benchmark in which significant budget decisions are made.

For detailed information and metrics specific to each of the ITKMD Key Infrastructure Measures documents, see Table 1 or review "IT Key Metrics Data 2016: Index of Published Documents and Metrics" for a comprehensive list of all available IT Key Metrics Data 2016 research.

Table 1. ITKMD 2016 Key Infrastructure Measures: Document Index

Document Title	Current Year RN#	Multiyear RN#
Windows Server Analysis	G00291381	G00291382
Unix Server Analysis	G00291383	G00291384
Linux x86 Server Analysis	G00291385	G00291386
Mainframe Analysis	G00291387	G00291388
Storage Analysis	G00291389	G00291390
End-User Computing Analysis	G00291392	G00291393
IT Service Desk Analysis	G00291394	G00291395
Data Network Analysis	G00291396	G00291397
Local-Area Data Network Analysis	G00291398	G00291399
Wide-Area Data Network Analysis	G00291400	G00291401
Voice Network Analysis	G00291402	G00291403
Voice Premise Technology Analysis	G00291404	G00291405
Wide-Area Voice Network Analysis	G00291406	G00291407

Source: Gartner IT Key Metrics Data (December 2015)

Using This Research

This research was commissioned to help IT and enterprise leaders compare the cost efficiency and support staff productivity level of their IT infrastructure and operations environments with that of other organizations supporting similar IT operations. As with any published data, many potential interpretations and analyses exist. The dataset represents a mix of organizations of different sizes and vertical industry segmentations.

The industry-specific spending profiles published here represent key metrics data collected directly from CIOs, CTOs, IT leaders and practitioners with respect to their organization's IT investment levels and future IT budgets. Most IT organizations follow an annual IT budgeting process and adjust their budgets based on changing economic and business conditions. In many organizations, IT spending levels are reviewed and revised on a quarterly or even monthly basis. Therefore, published IT spending benchmarks represent a "snapshot in time," and do not necessarily indicate what enterprises will or have ultimately spent on IT in the coming year or in the past.

Although the published figures represent what Gartner calls a "stalking horse" (that is, a position resulting from analysis of data that represents trends and results), each organization should assess its own situation carefully, and should not arbitrarily change to conform to published results (which do not necessarily represent best practices). For example, without the context of business service level/quality requirements and satisfaction levels, the metric of cost per unit supported does not, by itself, provide valid comparative information that should be used to allocate IT or business resources. Moreover, IT spending statistics alone do not measure IT effectiveness and are not a gauge of successful IT organizations. They simply provide an indicative view of average costs in general without regard to complexity or demand.

While the technology-specific cost metrics published here provide a high-level overview of cost efficiency and productivity levels. Many organizations feel the need to further evaluate their organization as compared to their niche competitive landscape when benchmarking. Many firms decide that a formal benchmarking exercise — one that is highly customized and prescriptive for the individual firm — is a natural follow-on to using the results presented in this research and in Gartner IT Key Metrics Data publications. In such exercises, companies can be more assured that they are getting an "apples to apples" benchmark with a more refined peer group, and that the benchmark takes into consideration variations in complexity (which includes the elements of industry, enterprise size, platforms, applications and other key variables).

Gartner recommends that organizations consider an investment in such customized or in-depth benchmarking engagements to support the budget cycle, significant IT or enterprise changes, or whenever making significant IT-cost-based decisions. The information published in this research can be used during the time periods in-between prescriptive or consulting-led benchmark engagements.

To explore Gartner's consulting-based prescriptive benchmark analytics capabilities and case studies, see the Appendix.

Gartner IT Key Metrics Data Series

Depending on your subscription level for Gartner services, some clients have access to the Gartner ITKMD publication series from gartner.com, select "Explore," "Metrics & Tools," and "IT Key Metrics Data."

ITKMD is part of the Gartner Benchmark Analytics range of solutions and offers a macro level look at Gartner's global database of comprehensive cost and performance measures. ITKMD provides you with immediate access to authoritative data on IT staffing and investment levels, as well as key technology cost and performance metrics. These metrics enable improved budget and investment decisions with regard to the changing environments of business and IT.

The ITKMD annual publication series contains more than 2,000 IT metrics published by way of 96 Gartner Benchmark Analytics research notes. In addition to the key IT financial metrics in this research, a variety of IT staffing and productivity metrics are available in the areas listed below. Some reports show vertical industry tendencies, while others tend to be cross-industry perspectives. Many of the metrics show averages by revenue scale or size of IT infrastructure

environment supported (e.g., number of server operating system instances, number of installed MIPS, number of personal computing devices).

These key metrics reports are broadly defined by five key areas of the IT portfolio:

- **Key Industry Measures.** Enterprise-level total IT spending and staffing metrics across 21 vertical industries, including current-year and multiyear averages. Metrics based on enterprise size in terms of annual revenues are often provided.

- **Key Infrastructure Measures.** IT functional area-specific unit cost, productivity and performance measures for the IT infrastructure environments, including current-year and multiyear averages for the Windows server, Unix server, Linux x86 server, mainframe, storage, end-user computing, IT service desk, data and voice network environments. Metrics by workload size are often provided.

- **Key Applications Measures.** Application development and application support spending and staffing metrics, project measures, life cycle phases, productivity and quality measures (current year and multiyear).

- **Key IT Security Measures.** Enterprise-level total spending and staffing measures by industry and region.

- **Key Outsourcing Measures.** Enterprise-level total spending and staffing measures by industry and region.

For a complete outline of all related published research in the series, see "IT Key Metrics Data 2016: Index of Published Documents and Metrics."

IT Key Metrics Data Source

Information for ITKMD is continuously collected worldwide via direct fact-finding in our many benchmarking and consulting engagements, through surveys of the Gartner community and at Gartner events, in addition to surveys of non-Gartner-based communities. Financial information, such as revenue and operating income, is also collected from secondary research sources, such as annual reports and public databases.

End-User Computing Analysis Framework

The scope of the End-User Computing environment analysis includes costs/FTEs with regards to the full life cycle management of desktop, laptop, tablet, thin client, handheld and peripheral assets including acquisition, deployment, maintenance, change management as well as disposal.

Annual End-User Computing Costs

- End-User Computing cost includes the annual operational expense, lease, depreciation, maintenance, installation and taxes, as appropriate, for all of hardware, software, disaster recovery, occupancy, as defined below in Non-personnel Costs, in addition to annual personnel costs as defined below in Personnel Costs/FTEs.

Figure 1 below outlines the Gartner Benchmark Analytics chart of accounts or consensus cost model for the end-user computing environment. This is the chart of accounts which was leveraged for the IT Key Metrics Data, end-user computing analysis.

Figure 1. Gartner Benchmark Analytics: End-User Computing Consensus Model

Hardware	▪ Desktops, Laptops, Tablets, Thin Clients and Handhelds ▪ VDI Servers and Storage ▪ Local and Shared Printers
Software	▪ PC Operating Systems ▪ Personal Productivity ▪ Personal Databases ▪ Messaging and Groupware ▪ Mobile Device Management ▪ Security
Disaster Recovery	▪ Hardware ▪ Software ▪ DR "Hot Site" ▪ DR Connectivity
Occupancy	▪ Office Space
Personnel	▪ Technical Support (operations and technical services) ▪ Planning and Process Management ▪ Administration (includes management)

Source: Gartner Benchmark Analytics (December 2015)

Non-personnel Costs

Non-personnel costs include in-house related costs as well as fees for third party and outsource contracts.

Hardware is defined as:

▪ 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, messaging devices and tablets. Transmission costs for these devices are excluded.

▪ IT Management Hardware: This encompasses hardware (client devices and servers) that primarily support an IT process and not a business or user process. This also includes supporting a hosted virtual desktop (HVD) installation.

Software is defined as:

- User Client Software: Personal productivity and database software including new word processors, spreadsheets, presentation packages, personal databases and other personal productivity software executing on client systems. Also include upgrades.

- Messaging and Groupware: This includes new and upgraded email, groupware and collaboration software. Specify the client component of the costs only.

- 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, security software (antivirus, personal firewall, encryption, etc.) as well as mobile device management which offers software distribution, policy management, inventory management, security management and services management for smartphones and media tablets. This also includes supporting a hosted virtual desktop (HVD) installation.

Disaster Recovery is defined as:

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

Occupancy is defined as:

- 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 Costs/FTEs

Personnel costs/FTEs include in-house and contract personnel (salaries and benefits) costs/full-time equivalents supporting the following IT functions:

Operations/Maintenance

- Incident Resolution/Prevention: This category includes FTEs and costs directly involved in resolving or preventing incidents related to the end-user computing environment. Typical activities include repairing malfunctioning functioning client hardware and software. Preventative activities such as applying patches are included as well.

- Service Request Fulfillment: Include staff/costs related to fulfilling service requests around client equipment. These include but are not limited to software deployment (electronic or manual), installation of new computers and moves/adds/changes/deinstalls/removals of existing computers.

Engineering/Technical Services

- Desktop Engineering: Includes staff/costs related to the technical design, and modification of the desktop environment, inclusive of hosted virtual desktop (HVD) enablement. Typical activities include but are not limited to client software application packaging, scripting, testing, debugging, and implementation of change and production support.

- **Security Management:** The process of planning and managing a defined level of security for information and IT services in relation to the End-User Computing environment, including all aspects associated with procedures for and reaction to security incidents.

Planning and Process Management

- This includes systems research and planning, process development and management, disaster recovery, and project management.

Services Administration

- This includes product management, budget, chargeback and service level reporting, training (IT and end-user training), asset management (procurement, asset and configuration tracking) as well as account management (both business unit relationship and contract and service provider management).

Management and Administration:

- IT Administration provides direct administrative and clerical support to all organizations related to the technology environment.

- Management: This area includes time spent by management personnel on supervisory, departmental administration, or strategy related tasks.

End-User Computing Analysis Data Demographics

To offer some insight into the characteristics of the end-user computing analysis data as well as to observe the effect of economies of scale, we will provide a high-level view of select metrics based on 3 environment scales defined by total personal computing devices supported.

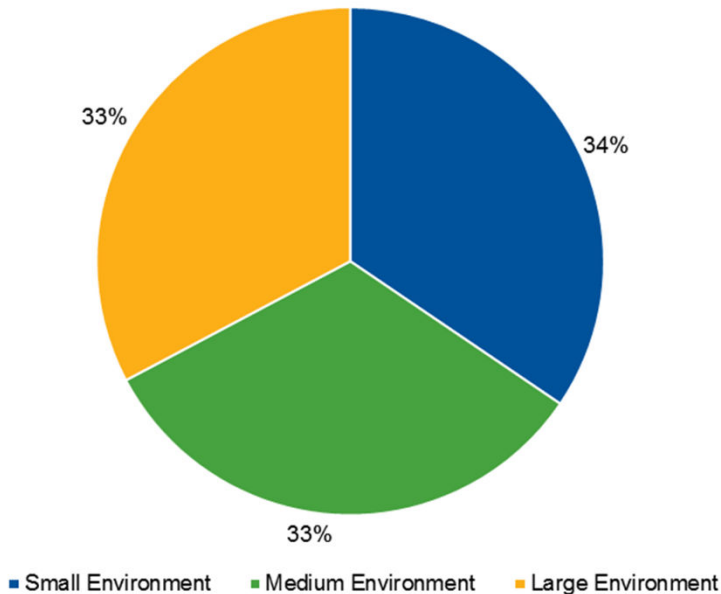Total Personal Computing Devices (PCD) supported is defined as:

- The total number of Desktops, Laptops, Tablets and Thin Clients supported by IT.

  - Desktop: Non-mobile computers used by employees in either the traditional office setting or in another fixed location such as satellite office suites and employee homes.

  - Laptop: Fully functioning laptop and notebook computers.

  - Tablet: Include devices based on a touchscreen display, typically multitouch, that facilitates content entry via an on-screen keyboard. Media tablets feature connectivity via Wi-Fi or via third generation (3G)/fourth generation (4G) cellular networks.

  - Thin client: Include small terminals designed to connect a user to a server-hosted virtual desktop, PC blade workstation or set of applications hosted in a server based computing environment.

The chart below (Figure 2) outlines the distribution of the end-user computing analysis data between the "small," "medium" and "large" environments as defined below.

- **Small Environment = Less Than 6,000 personal computing devices supported**

- **Medium Environment = 6,000 To 20,000 personal computing devices supported**

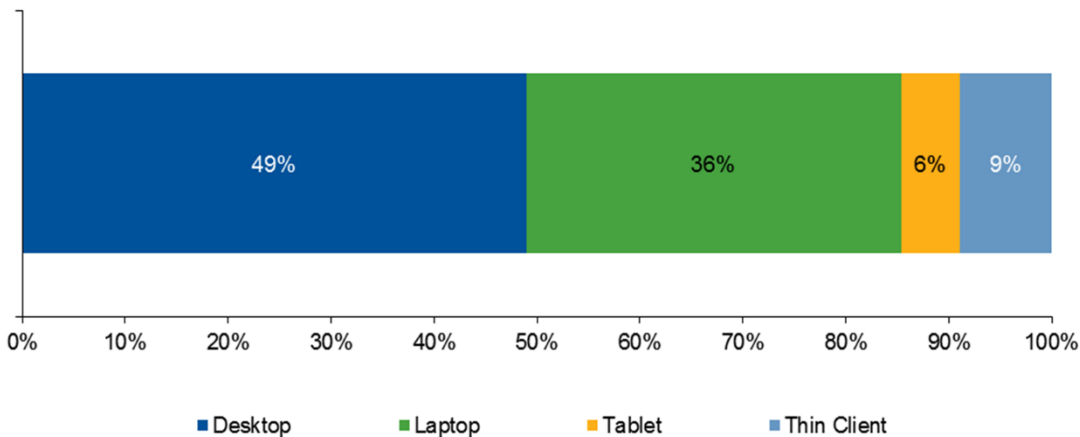- **Large Environment = More Than 20,000 personal computing devices supported**

Figure 2. End-User Computing Analysis Data Distribution: by Environment Scale

33%   34%

33%

■ Small Environment   ■ Medium Environment   ■ Large Environment

Source: Gartner IT Key Metrics Data (December 2015)

In addition to the total personal computing devices supported, it is important to understand the hardware mix between desktop, laptop, tablet and thin clients. Figure 3 below outlines the distribution of the sample between the PCD hardware categories.

Figure 3. Personal Computing Device Distribution: Desktop Versus Laptop Versus Tablet Versus Thin Client

49%   36%   6%   9%

0%   10%   20%   30%   40%   50%   60%   70%   80%   90%   100%

■ Desktop   ■ Laptop   ■ Tablet   ■ Thin Client

Source: Gartner IT Key Metrics Data (December 2015)

End-User Computing Cost as a Percent of Total IT Cost

End-user computing cost as a percent of total IT cost (Figure 4) is helpful in understanding the relative level of IT costs to support the environment from a total IT portfolio perspective.

Total IT Cost is defined as the fully burdened annual cost/expense for all IT non-personnel, personnel, and third party costs to support the enterprise. This includes the annual operating expense, lease, depreciation, maintenance, installation and taxes, as appropriate, for all non-personnel categories, in addition to personnel costs and third party IT investments. Total IT cost can come from anywhere in the enterprise that incurs IT costs, and it is not limited to the IT organization and includes estimates by enterprises on decentralized IT costs and or "shadow" IT.

IT cost (annual expense) 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), 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.

IT cost (annual expense) includes, from an IT domain or activity perspective:

- The data center (for example, mainframes, servers and storage), 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 maintenance).

- 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.

IT cost (annual expense) 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.

- 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 scope.

This should be considered within the context of the overall technology & sourcing strategy. I.e., as the technology environment plays a lesser or greater role in mission-critical business processes, it will play a smaller or larger role as a percentage of the total IT cost portfolio. As you leverage contract versus insourced labor, or enter into outsourcing arrangements for various third party services, your cost structure changes and therefore can impact your total allocation as a percentage of the total available IT budget. It is not uncommon to reduce costs in one technology tower only to have the follow on effect of passing those costs off to another technology tower. By monitoring investments across all technology towers, these cost transfers within IT can be more visible.

Figure 4. End-User Computing Cost as a Percent of IT Cost
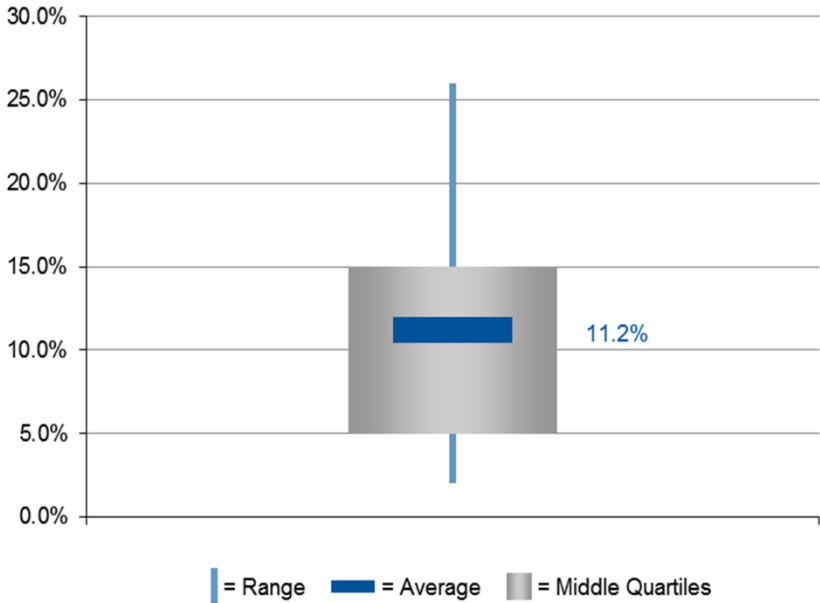
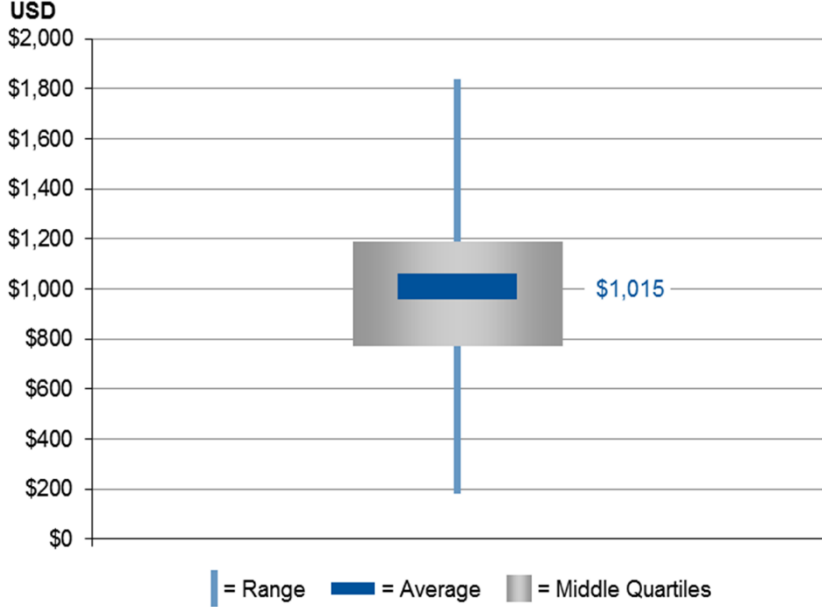Source: Gartner IT Key Metrics Data (December 2015)

Annual End-User Computing Cost per Personal Computing Device

Annual End-User Computing cost per personal computing device (Figure 5 and Table 2) is often used to evaluate the relative cost efficiency level of the overall end-user computing environment.

- Annual End-user computing cost includes costs associated to the operation, lease, maintenance, and depreciation of hardware, software, occupancy, and personnel to support the environment as defined in the End-User Computing Framework.

This should be considered within the context of business requirements, environment architecture and scale (i.e., client density, users, devices, sites, print environment, number of operating systems deployed). This should also be considered alongside productivity levels and service levels delivered.

Figure 5. Annual End-User Computing Cost per Personal Computing Device

Source: Gartner IT Key Metrics Data (December 2015)

Table 2. Annual End-User Computing Cost per Personal Computing Device: by Environment Scale

Environment Size Personal Computing Devices	Small <6,000 Personal Computing Devices	Medium 6,000 — 20,000 Personal Computing Devices	Large >20,000 Personal Computing Devices
Average	$1,032	$1,064	$947

Source: Gartner IT Key Metrics Data (December 2015)

End-User Computing Cost Distribution

The distribution of end-user computing costs (Figure 6) provides an understanding of how costs are dispersed within the end-user computing environment. This distribution helps to outline non-personnel versus personnel related cost allocations as defined in the End-User Computing Framework.

Figure 6. Distribution of End-User Computing Costs
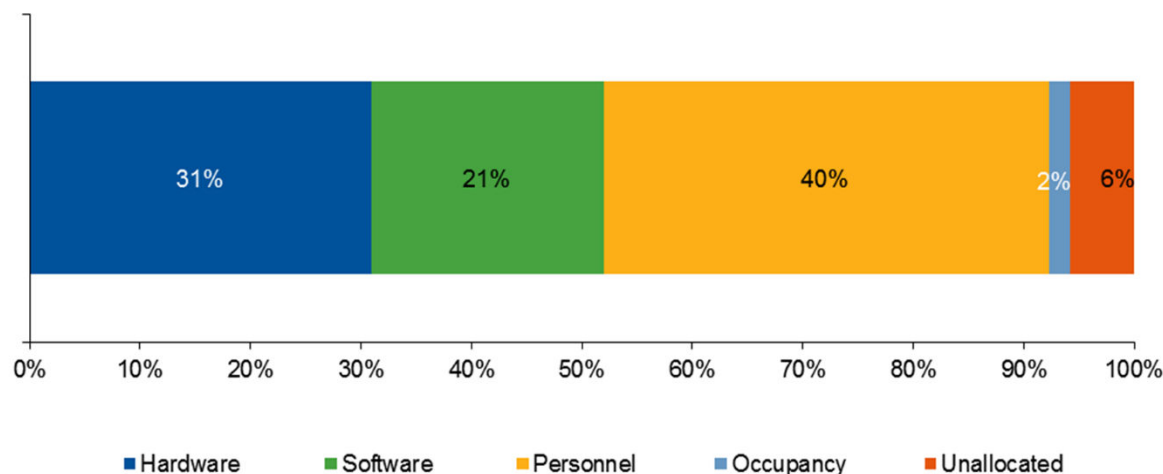
Note: Disaster Recovery is included with the Unallocated category and accounts for less than 0.5% of total costs.

Source: Gartner IT Key Metrics Data (December 2015)

End-User Computing FTEs as a Percent of Total IT FTEs

End-User Computing FTEs as percent of total IT FTEs (Figure 7) is a measure of IT support intensity from a human capital perspective.

End-User Computing support personnel includes in-house and contract full-time equivalents supporting the following IT functions: operations/maintenance, engineering technical services, planning and process management, services administration, management and administration as defined in the End-User Computing Framework.

IT Full-Time Equivalent (FTE) is defined as:

- 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 includes both insourced FTEs and contract FTEs. This excludes staff of a third-party vendor, who are not operationally managed by in-house staff, but managed by service-level agreements.

Understanding the relative level of IT support dedicated to an IT environment can also assist in identifying whether staff size is appropriate. This should be considered within the context of the overall sourcing strategy and future state objectives. Variables to consider in tandem with this metric include: IT staffing distribution: contract versus insourced FTEs, the percentage of the environment outsourced (supported by a third party), as well as the evolving business requirements.

Figure 7. End-User Computing FTEs as a Percent of Total IT FTEs
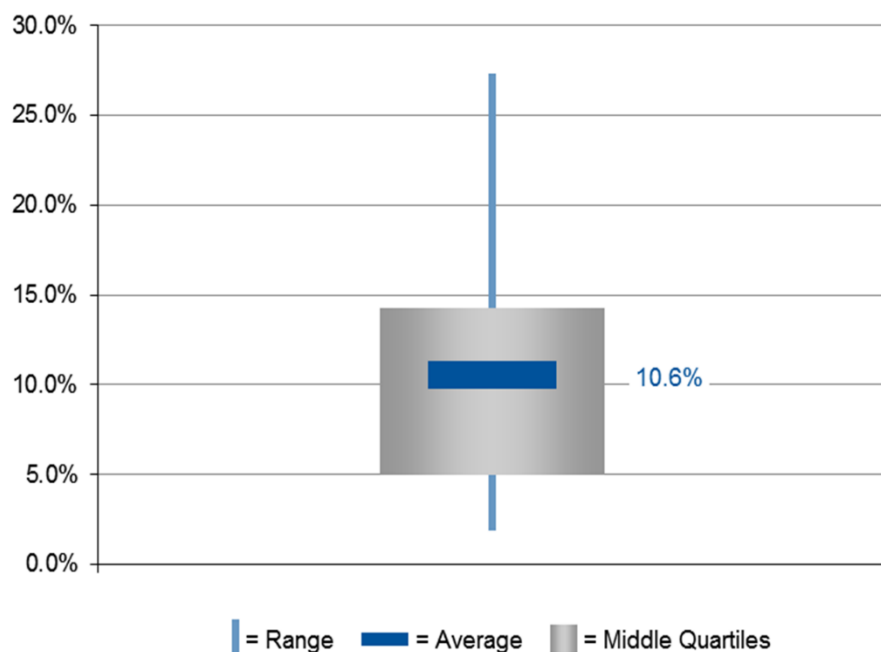
Source: Gartner IT Key Metrics Data (December 2015)

Salaries and Benefits Cost per End-User Computing FTE

Salaries and benefits cost per FTE (Figure 8) provides a range of the average annual salaries and benefits for an End-User Computing FTE. This cost will vary depending on geographic location, experience, and expertise of the staff as well as depending on if they are a contractor or insourced FTE.

Annual personnel costs are defined as:

- For in-house staff, this cost should include salary (including overtime pay), benefits and "other" employee costs such as travel and training. The "benefit load" should include costs for bonuses, paid holidays, vacation, medical/dental coverage, life and accident insurance, retirement plans, stock plans, disability, social security, unemployment compensation, dependent care, tuition reimbursement and employee assistance programs (for example, physical exams, exercise programs and similar costs).

- In all cost categories, include all applicable taxes (that is, federal, state, local and VAT). Exclude VAT only when it is recovered or refunded to the organization.

- Do not include internal "cross charges" and corporate allocations related to expenses such as reductions in workforce, redundancy, relocations, retirement, human resources and chairperson's salary etc.

- For contractors and consultants, include all compensation that was paid directly to the individual or agency.

This measure is best used within the context of the skill requirements for the various roles with in the technology environment depending on the environment structure and level of complexity. What percentage of the environment FTEs are management versus operations versus engineering? What services/roles are outsourced to a third party? How do personnel costs look as compared to software or hardware costs? How does the use of contractors impact your average cost? Best in class organizations understand these contextual aspects as a backdrop for leveraging these high-level averages.

Figure 8. Salaries and Benefits Cost per End-User Computing FTE
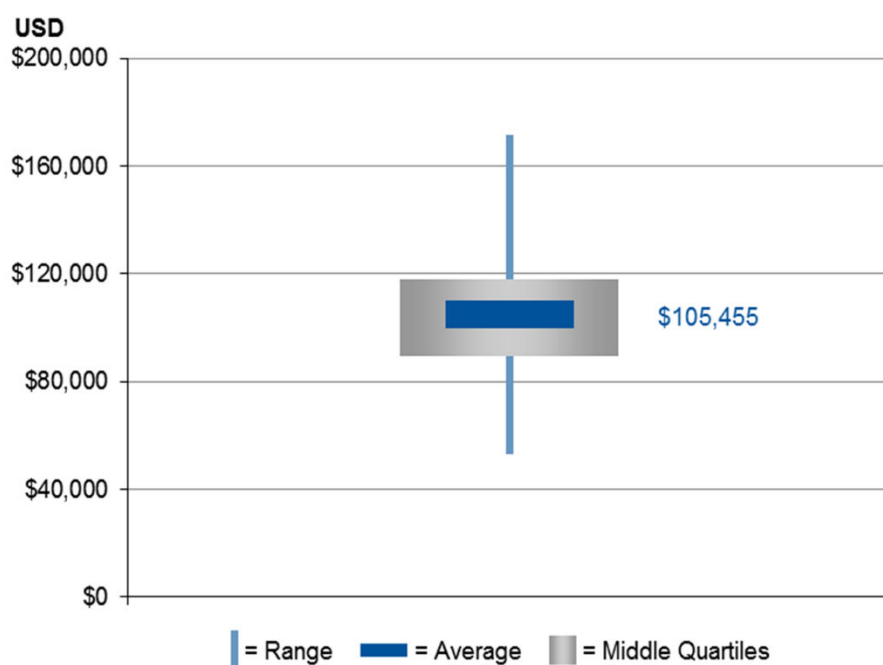
Source: Gartner IT Key Metrics Data (December 2015)

End-User Computing FTE Distribution: Insourced Versus Contractor

The distribution of end-user computing support between insourced and contract FTEs (Figure 9) can help provide a view of the end-user computing support staffing strategy.

Insourced IT FTE is defined as:

- Full-time equivalents who are employed by the IT organization (excluding contractors and consultants). This includes all full time and part time FTEs.

Contract IT FTE is defined as:

- Contract full-time equivalents are supplemental to your staff and "operationally" managed by in-house staff. This includes all full time, part time, and temporary contract FTEs.

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 more costly and limit process standardization if the associated knowledge, IP and processes are not well documented and captured within the enterprise.

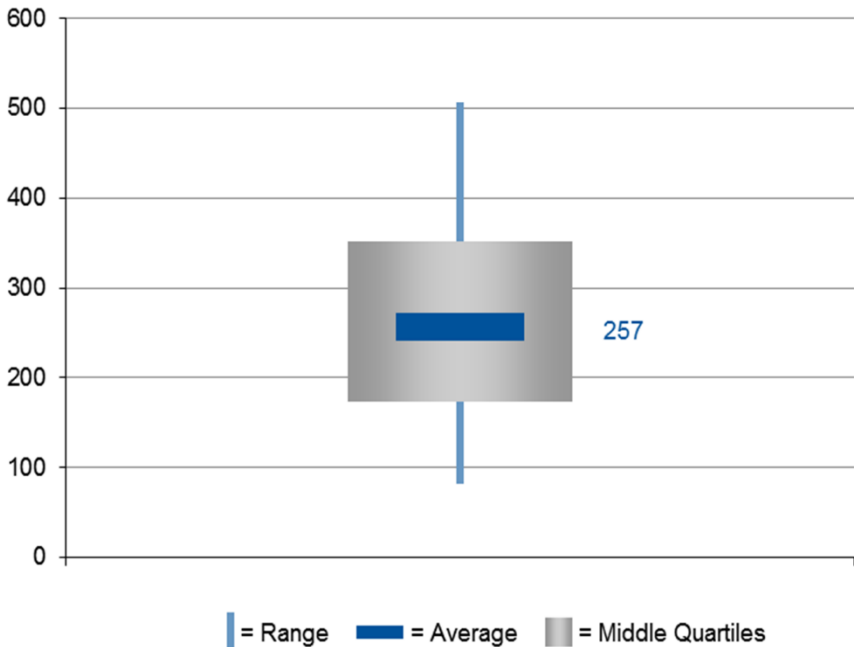Figure 9. Distribution of End-User Computing FTEs: Insourced Versus Contractor
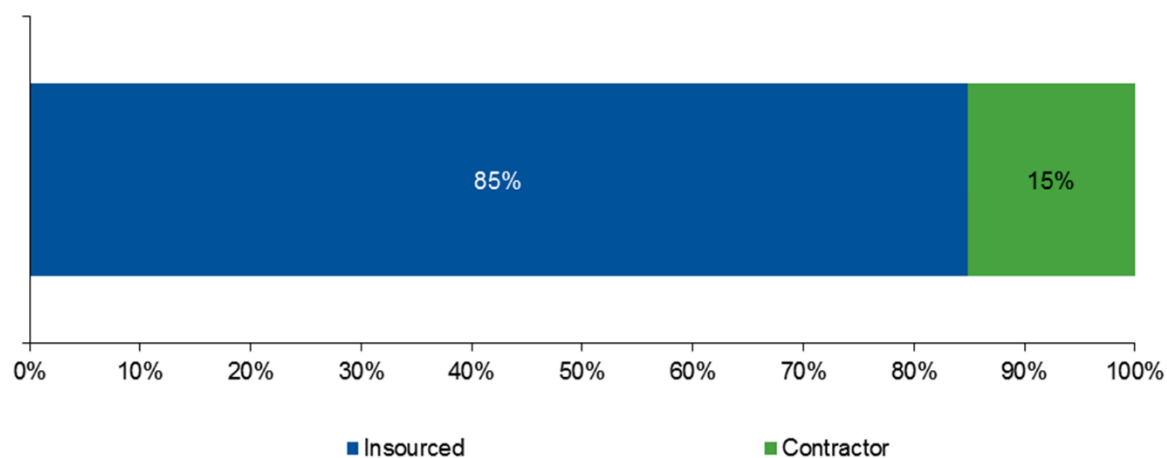
Source: Gartner IT Key Metrics Data (December 2015)

Personal Computing Devices per End-User Computing FTE

Personal computing devices per end-user computing FTE (Figure 10 and Table 3) provides a look at dedicated FTE productivity levels.

Understanding the productivity level of your IT staff in terms of units supported can be very helpful in establishing efficient and effective workflow as well as in terms of ensuring your support staff is the "right size." If your support staff is supporting more than the middle 50 percent of the published sample, is this level of productivity sustainable? How will you adapt to required future growth or complexity? How many sites and end-users are supported per FTE? Do the different sites have different productivity levels? How does this compare to the service levels, the cost structure, the skill level of the support staff or the level of environment complexity?

Figure 10. Personal Computing Devices per End-User Computing FTE

Source: Gartner IT Key Metrics Data (December 2015)

Table 3. Personal Computing Devices per End-User Computing FTE: by Environment Scale

Environment Size Personal Computing Devices	Small <6,000 Personal Computing Devices	Medium 6,000— 20,000 Personal Computing Devices	Large >20,000 Personal Computing Devices
Average	266	248	255

Source: Gartner IT Key Metrics Data (December 2015)

Conclusions

The metrics and benchmarks we have identified here provide a high-level view of current trends in technology cost efficiency and staff productivity levels. These can be used to assist in planning exercises with IT management as well as in setting targets in key technology areas. They provide generic context as well as an industry standard framework to monitor and evaluate cost structure and sourcing strategy.

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 cost levels to help identify differences that could merit further analysis. By understanding the complexity and demand factors driving your environments cost structure; you will be more able to articulate why your organization is higher or lower than these

metrics in terms of service quality, workload quantity and the associated cost to meet business requirements.

IT Key Metrics Data is a Gartner Benchmark Analytics solution that delivers indicative IT metrics in a published format as directional insight for IT organizations. This solution represents a subset of the metrics and prescriptive benchmark analysis capability that is available through Gartner Benchmark Analytics. For ongoing and or more targeted analyses, Gartner Benchmark Analytics provide clients with in-depth, personalized benchmarking and customized analysis to help identify technology performance strengths and prioritize areas and opportunities for optimization.

Appendix: Exploring Gartner's Prescriptive Benchmark Analytics Capabilities

The world's leading organizations use Gartner Benchmark Analytics to support the execution of Missions-Critical Priorities. Gartner's consulting-based benchmark analytics capabilities deliver unbiased comparisons of IT performance relative to unique client-specific peer organizations and those considered best in class. Benchmarks can help you assess your IT organization's performance to ensure delivery of cost-effective and efficient IT services, identify opportunities for improving performance and effectively communicate value to the business.

Gartner Consulting led benchmarks are individually configured, project-specific benchmarks that help support such IT challenges as growth planning, charging for IT services, budget validation, mergers and acquisitions, end-user satisfaction, application rationalization, or the support of outsourced service contract evaluation. Benchmarking offers a stake in the ground, to determine where an enterprise is today, and a future road map, which shows where opportunities lie.

Gartner Benchmarking can help you:

- Plan your IT budget with relevant facts and metrics to justify your IT spending and staffing costs.

- Identify opportunities for cost optimization and investment prioritization.

- Use data to improve dialogue and align with business units and the board.

- Select the right mix of insourcing and outsourcing at fair-market prices and service levels available today.

Gartner Benchmark Analytics Select Case Studies

IT Infrastructure and Operations Benchmarks

Infrastructure and operations benchmarks create a starting point in the process of helping IT organizations identify and assess all IT performance levels. Learn more at Gartner Consulting's Benchmarking: For Your IT Challenges — Infrastructure and Operations.

IT Infrastructure and Operations Benchmarking Case Studies

- Organization Assesses IT Performance to Ensure Effectiveness and Competitiveness

- Organization Benchmarks IT Costs to Ensure Ongoing Cost-Effectiveness and Consistency With Industry

- Organization Undergoes Cost-Optimization Assessment

- Organization Creates a Foundation for Continual Improvement

Enterprise Computing Benchmarking Case Study

- Organization Benchmarks Data Center Costs to Ensure Cost-Effectiveness

End-User Computing Benchmarking Case Study

- Organization Creates Foundational Components for Increased Transparency of Services to End Users

CIO and IT Executive Benchmarks

CIO and IT executive benchmarks evaluate performance from two perspectives: a cost and maturity assessment of critical IT competencies and IT business value. Learn more at Gartner Consulting: For Your IT Role.

CIO Benchmarking Case Studies

- CIO Wants to Move IT to a Process-Focused Delivery Model

- CIO Wants to Obtain a Better Understanding of IT Performance

- Organization Establishes a Baseline and Looks to the Future

- Organization Evaluates IT's Ability to Support the Dean's Vision

- CIO Balancing Increased Demand With Flat Resources

IT Budget Benchmarking Case Studies

- Organization Ensures Industry Competitiveness

- Organization Assesses Merger and Acquisition Activity Implications on IT Spend

Consortium Benchmarking Case Studies

- Organizations Share Best Practices

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Applications Benchmarks

Applications benchmarks are the starting point in the process to help IT organizations identify and assess application development and support performance levels. Learn more at Gartner Consulting's Benchmarking: For Your IT Challenges — Applications.

Application Development and Support Benchmarking Case Studies

- Organization Ensures Competitiveness and Quality
- Organization Maintains a Foundation for Continual Improvement
- Organization Manages Stakeholders and Identifies Performance Improvement
- Organization Creates a Foundation for Continual Improvement

SAP Benchmarking Case Study

- Agency Ensures Delivery of Cost-Effective SAP Services

Sourcing and Vendor Relationship Benchmarks

Sourcing and vendor relationship benchmarks provide an accurate answer to the question, "Is this a good market price for the services being provided?" Learn more at Gartner Consulting's Benchmarking: For Your IT Challenges — Sourcing and Vendor Relationships.

Market Assessment Benchmarking Case Studies

- Organization Implements Third-Party Benchmark Clause
- Organization Wants to Execute a Global Consolidation Strategy
- Organization Accelerates Business Growth

IT Service Catalog Benchmarking Case Study

- Organization Assesses IT Service Catalog Rates to Validate Current Competitiveness

Cloud as a Service Benchmarking Case Studies

- Organization Looks to Procure Cloud Email
- Organization Evaluates Backup as a Service
- Organization Requires Third-Party Assessment of Storage as a Service Offering
- Organization Desires Unified Communications as a Service Contract Evaluation

End-User Satisfaction Benchmarks

IT customer satisfaction benchmarks establish a baseline for customer satisfaction and create a road map that helps prioritize efforts to increase these levels. Learn more at Gartner Consulting's Benchmarking: For Your IT Challenges — IT Customer Satisfaction.

IT Customer Satisfaction Benchmarking Case Study

- Organization Undergoes an Assessment of End-User Satisfaction
- Agency Assesses End-User Satisfaction

IT Business Effectiveness Benchmarks

IT business effectiveness benchmarks establish a baseline for IT's effectiveness in meeting business needs and identify opportunities to better align the IT organization with the enterprise for maximum results. Learn more at Gartner Consulting's Benchmarking: For Your IT Challenges — IT Business Effectiveness.

Business Effectiveness Benchmarking Case Study

- Agency Undergoes an Assessment of Business Effectiveness

Information Security and Risk Management Assessments

Information protection is critical to your organization, and Gartner Consulting has the expertise, tools and knowledge of best practices to help you improve your overall IT security posture. Learn More

Security & Risk Management Case Studies

- Information Protection Strategy to Prevent Loss of Sensitive Data
- A Holistic Security Program Involving People, Process and Technology

More information on Gartner Benchmark Analytics can be obtained by contacting your account executive, or by email: benchmarkinginfo@gartner.com.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Best Practices to Drive Cost and Value Optimization in End-User Computing"

"Map Infrastructure and Operations Metrics to Business Value"

"Four Steps for Optimizing Automation Implementations in Data Centers, Clouds and I&O Environments"

"Six Ways to Drive Cost and Value Optimization for IT Operations"

"Best Practices to Drive Cost and Value Optimization for Infrastructure and Operations"

"Don't Settle for Average When Benchmarking IT"

"Seven Actions to Take When Short-Term Cuts Are Demanded From I&O Budgets (Again)"

"How to Quickly Estimate I&O Costs, 2015"

Evidence

- This research contains relevant database averages and ranges from a subset of metrics and prescriptive engagements available through Gartner Benchmark Analytics consulting-based capabilities.

- Employee, income and revenue data is based on the most recently completed fiscal year.

- Calculations were made using worldwide observations.

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