Market Definitions and Methodology: IT Services

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Initiatives: Technology Market Essentials

This document details methodologies, segmentation, definitions and research metrics used for Gartner's regularly published IT services regional and country-level market share and forecast statistics reports.

Additional Perspectives

- Update: Label Changes in IT Services Forecast
  (21 November 2021)
- Update: Gartner to Expand Its Managed Security Services Segmentation
  (15 November 2021)

What You Need to Know

This research is intended to be used in conjunction with the following Gartner research:

- Market Share: IT Services (which is updated annually)
- Forecast: IT Services (which is updated quarterly)
- Market Share Analysis: IT Services
- Forecast Analysis: IT Services

The methodology used to develop this data, as well as definitions of the terms used in these market statistics documents, are all described here.

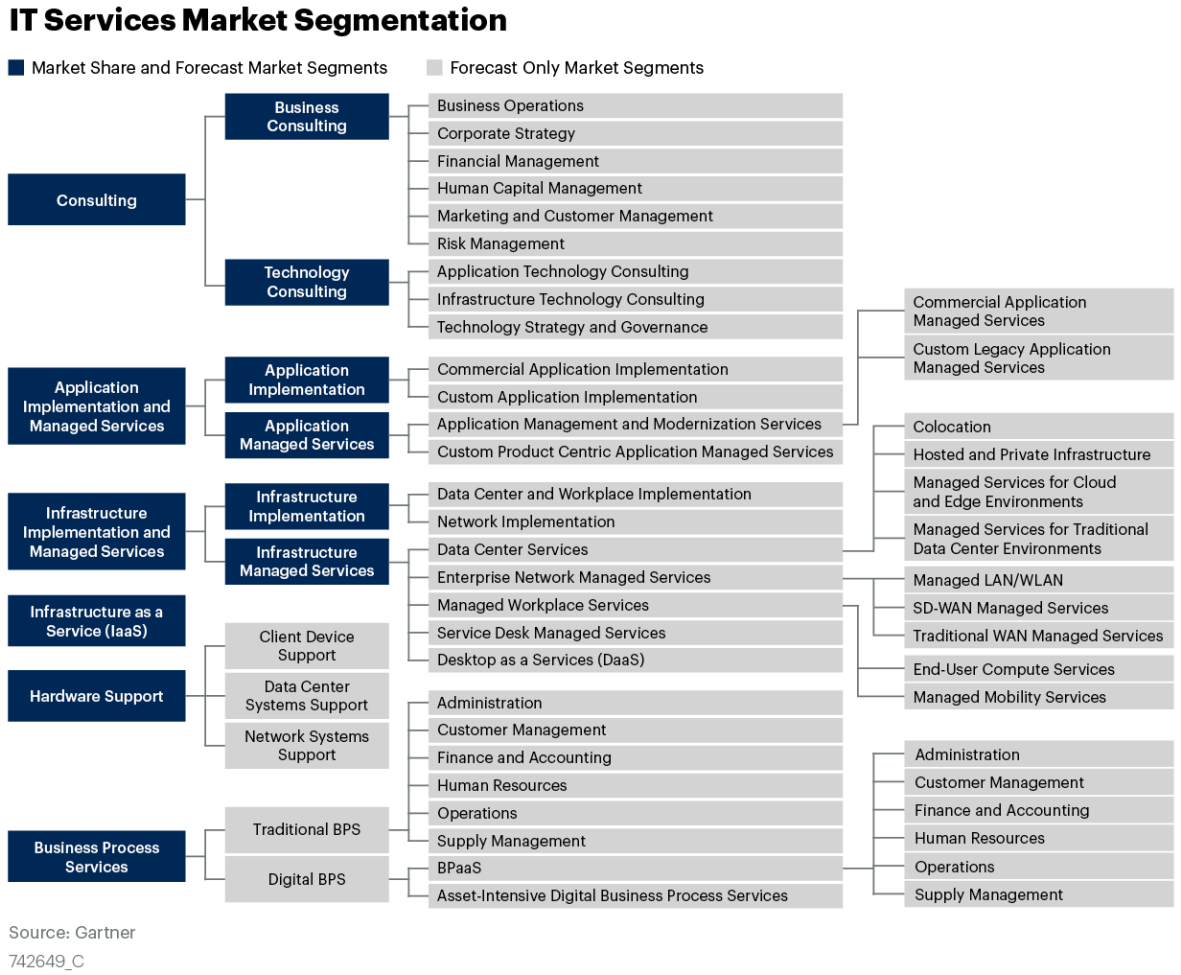
Any modifications to our Market Share and Forecast segmentation and/or definitions are published as Update notes for the relevant Market Definitions and Methodology documents in the fourth quarter. Typically, these modifications are then applied in quarterly and annual Market Share publications, publishing in the second quarter, and subsequent forecast publications.

Introduction

The IT services market taxonomy can be found in the High-Level Definitions and Segmentation section.

Gartner regularly revisits, evaluates and updates its IT services market definitions and segmentation (see Figure 1) in order to align with the changing market trends and complement the way our clients understand and consume our data. This may result in definition and methodological changes, as well as how we track and segment the markets, resulting in changes to our market share for segment representation. It may also result in changes in market sizing methodology, thereby impacting the market size numbers.

Figure 1: IT Services Market Segmentation



Notable Changes

Effective 9 April 2021, Gartner made the following changes to its annual IT services market share segmentation:

- Consulting (Segment 3) is broken down into business consulting (Segment 4) and technology consulting (Segment 4).
- Implementation and managed services and cloud infrastructure services were removed from both Segment 3 and Segment 4 and replaced with:
  - Application implementation and managed services added at the Segment 3 level.
  - Application implementation added at the Segment 4 level.
  - Infrastructure implementation and managed services added at the Segment 3 level.
  - Infrastructure implementation will be added at the Segment 4 level.
- Infrastructure as a service (IaaS) will be removed from Segment 4 under managed services and cloud infrastructure services and be its own Segment 3.
- Hardware support will be removed from Segment 4 under managed services and cloud infrastructure services and be its own Segment 3.
- Business process outsourcing will be renamed to business process services.

Effective with the 2Q21 IT services Forecast publication, Gartner will make the following changes to its quarterly IT services forecast segmentation:

- Implementation and managed services and cloud infrastructure services will be replaced with two new segments at Segment 3:
  - Application implementation and managed services, which will include:
    - Application implementation (previously called “application services” in Segment 5 within implementation)
    - Application managed services, which will include the following changes:
      - New segment to be added called “application management and modernization services” at Segment 5
      - New segment to be added called “custom legacy application managed services” at Segment 6
      - Commercial application managed services at Segment 6
      - New segment called “custom product-centric application managed services” at Segment 5
- Infrastructure implementation and managed services, which will include:
  - Infrastructure implementation (previously named infrastructure services in Segment 5 within implementation)
  - Segment renamed “data center and workplace implementation” (previously infrastructure services) at Segment 5
  - Network implementation at Segment 5
  - Infrastructure managed services at Segment 4

The following segments will be moved from Segment 4 to Segment 3:

- Infrastructure as a service (IaaS)
- Hardware support

Business process outsourcing will be renamed business process services:

- Previously reported Segment 6 within BPO will be retired from the publication.

- Traditional BPO will be renamed traditional BPS.
- Digital BPS will be added at Segment 4:
  - Asset-intensive digital BPS will be a new segment under the new digital BPS.
  - BPaaS will move from Segment 4 to Segment 5 under the new digital BPS.

As a result of these changes, restatements of historical market sizes (2019) will be made to the following deliverables:

- Forecast: IT Services, Worldwide (to be published in late June 2021)
- Gartner Market Databook (to be published in late June 2021)
- Forecast: Enterprise IT Spending by Vertical Industry Market, Worldwide and other vertical-specific Forecast reports (to be published in late June 2021)
- Market Share: IT Services, Worldwide (to be updated in April 2022)

Methodology

Market Share and Market Sizing Methodology

Each year, Gartner publishes market share statistics based on updated, comprehensive revenue models for the leading IT services providers by service segment, geographical area and vertical market. We concentrate on monitoring the largest providers that exert the most influence on the market.

Sources of data used for market share estimates include (but are not limited to):

- Information published by providers tracked
- Published company financial reports
- Provider responses to Gartner requests for information
- Input from Gartner analysts, IT services buyers and IT services market competitors
- Reports from financial analysts
- Information and data from content aggregators
- Government data or trade association data

- Relevant economic data
- Articles in the general and trade press
- Existing proprietary provider models

Gartner believes that our market share estimates are the most accurate and meaningful available. Careful attention must be paid to the definitions and assumptions, which are revised on an annual basis. Different companies, government agencies and trade associations may use slightly different definitions of IT services categories and regional groupings, or they may include different companies in their summaries. These differences should be kept in mind when making comparisons between data and numbers provided by Gartner and those provided by other research organizations.

How Revenue Is Calculated for Each Vendor

IT services revenue for each provider is based on our calendar year estimate. When a provider's fiscal year is different from the calendar year, we use the two relevant fiscal years to build a calendar year estimate.

Whenever new information becomes available, we make changes to both years in our market share research. As a result, we sometimes change a vendor's revenue compared to what we reported the previous year. Our focus is on developing the most accurate growth rates possible for this two-year period because growth rates are often more verifiable and comparable than absolute values.

Gartner's proprietary, collaborative, real-time market share system enables analysts in all countries to efficiently share evidence and evaluate provider performance in multidimensional data models, while working in a systematic process designed to foster continuous improvement in data quality. This process also allows provider revenue and end-user spending to be reconciled for consistency. Information from a demand-side perspective ensures that we have neither overestimated nor underestimated the available budgets from end users. Supply-side data grounds our end-user spending in the reality of the types and quantity of services that have been delivered by service companies.

We estimate the IT services revenue of each individual vendor included in the market share deliverable by country, segment and vertical market. This provides us with a base of "named vendor" revenue by country, segment and vertical.

How Market Share and Market Size Are Determined

Market share is calculated by dividing our estimate of each vendor's IT services revenue by the market size. Statistics on individual vendors are based on revenue. Total market size is an estimate of end-user spending.

IT services market sizing is developed by following these steps:

- Establishing provider revenue data for the vendors that are tracked. We track IT services providers based on our assessment of their global market impact, and for regional or country-specific providers, based on their impact in the region/country.
- Adding estimated revenue for remaining providers not tracked.
- Deducting an estimate for subcontracting.

The net result of the final two calculations appears in summary form as "Other IT Services Vendors" in our market share data. The total when adding "Other IT Services Vendors" to the revenue for each "named vendor" tracked is our market size estimate for end-user spending. This total estimate published in the market share data files, for the two most recent years of end-user spending, is the market size from which we start each forecast.

The estimates for "Other IT Services Vendors" are developed separately for each country tracked. Estimates are created by leveraging data from our current forecast by company size, and by Gartner's established, extensive statistics on current and past IT services spending, end-user survey data, economic and demographic statistics, as well as local analyst expertise. Since the IT services market is highly fragmented and contains a large number of small companies, it will never be possible to precisely determine the size of "Other IT Services Vendors." Therefore, historical market sizing changes as our view on this factor evolves.

The two-year end-user spending estimates from Gartner's market share repository form the historical starting point for IT services forecasts. As a result, absolute values of first-year market history will alter slightly to preserve the known growth rates. We use this methodology because the absolute size of the IT services market is difficult to definitively assess — given the many small players and the changing scope of activities recognized as IT services. In contrast, growth rates represent some of the most verifiable data that we develop, because most large vendors publicly report several years of financial information. Growth rates are also a universally comparable metric across all sectors. For these reasons, the first-year growth rate — rather than absolute value — is the metric preserved in our data model.

Vendor Revenue Profile

Gartner creates and maintains a high-level company model called a "Vendor Revenue Profile" (VRP) for each of the vendors named in its IT services Market Share report. Gartner VRPs represent Gartner's interpretation of a vendor's revenue mapped to Gartner's technology segmentation. The VRP provides a calendar-year view of a vendor's revenue across IT market segments. When analyzing the financial data of a vendor that does not end its fiscal year on 31 December, Gartner "calendarizes" that vendor's financial earnings by adjusting the vendor's fiscal year to align with the calendar year. If a vendor's fiscal quarter breaks across a calendar quarter, Gartner splits the quarters into months and recalculates estimates for calendar quarters and years accordingly. We assume equal distribution of revenue across the three months.

Technology segments featured in a VRP do not overlap, and they are reconciled with the consolidated view of the vendor's public financial statements when available. These models are created and maintained for all vendors, large or small, public or private.

The vendor revenue estimates developed for the Gartner VRP provide an important input into our Market Share research. For more information on VRPs, see Understanding the Gartner Vendor Revenue Profile.

Forecasting Methodology

Forecasting provides a structured and logically rigorous setting in which to clarify expectations about the future, and helps to reduce business risk by aiding executives in planning strategy and tactics based on likely events and trends. Our objective is to provide clients with forecasts that are useful, credible and as accurate as possible.

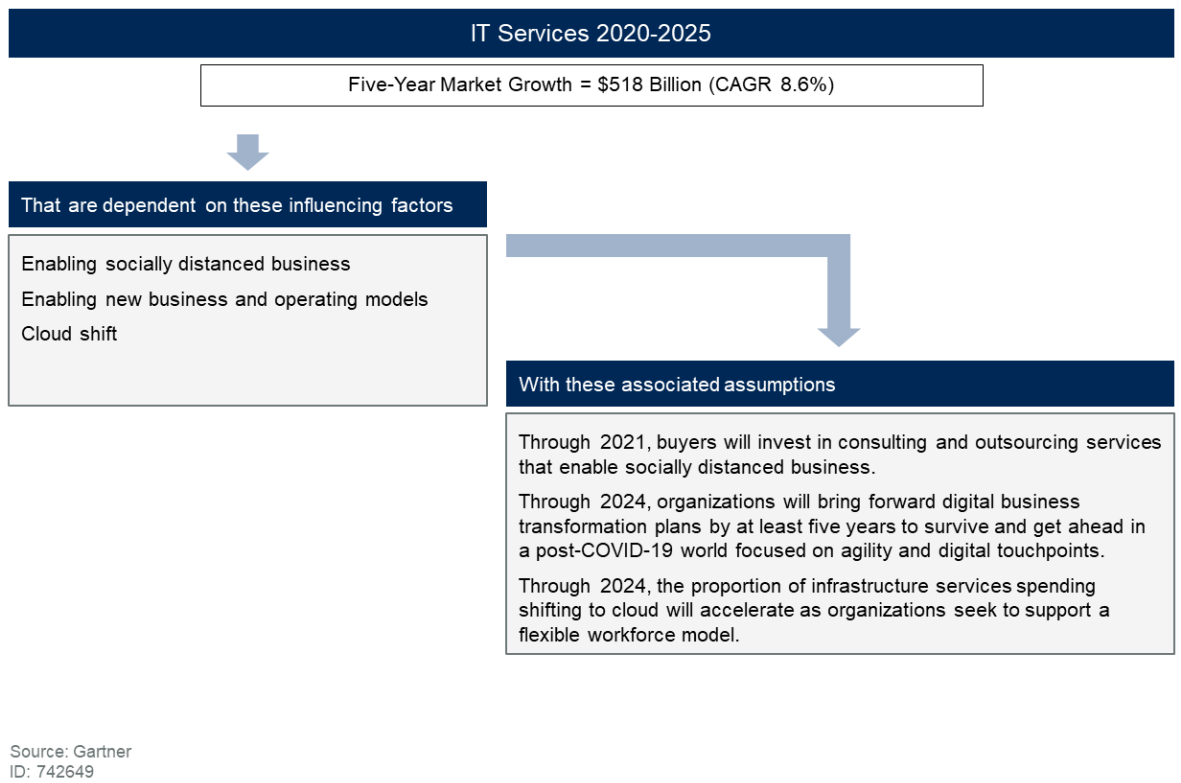
Fundamental to the way Gartner conducts our research is an underlying philosophy that the best data and analysis derive from a well-balanced methodology. This methodology includes the following:

- Balance between primary and secondary survey data
- Balance between supply-side and demand-side analysis
- Balance between focused, industry-specific research and coordinated "big picture" analysis aided by integration of data from more than 25 separate high-technology industries covered by Gartner
- Balance between the perspectives of experienced industry professionals and rigorous, disciplined techniques of seasoned market researchers

Forecast Methodology Overview

Gartner's forecast methodology is based on a market model, which incorporates all the factors important in describing the structure and dynamics of a market. A market model depicts how we represent a market for forecast purposes; it is presented as a diagram in the Forecast Analysis reports and is designed to convey the methodology employed in creating the forecast. The market model diagram shows the logical dependencies (influencing factors) that the forecast is based on and the associated forecast assumptions (see Figure 2 for an example).

Figure 2: IT Services Market Model Example



Source: Gartner
ID: 742649

Influencing factors are inputs, which, when applied to forecast components, shape the forecast output. That is, influencing factors have an identifiable and measurable effect on the forecast. Influencing factors are features of the market that affect the forecast when they change. These influencing factors are defined by the market dynamics specific to a particular market. Changes in an influencing factor will affect other influencing factors, via a logical connection, and ultimately cause a change in the components of the forecast and, therefore, the forecast itself.

Gartner analysts consider a full range of influencing factors that can have an impact — positive or negative — on a forecast, including the following:

- Accuracy of the prior forecast
- General macroeconomic conditions and key indicators
- Total available market
- Intensity of competition
- Rate of innovation among competitors and suppliers
- Potential changes in current business models
- Changes in production and delivery models
- Buyer expectations, behaviors and demographics
- Access to capital
- Currency and interest rate fluctuations
- Influence of regulatory and standards bodies
- Geopolitical factors (including trade issues, political stability and tariff/nontariff barriers)

Forecast Process

The IT services forecast is systematically developed by a global team of analysts that forms assumptions about future changes in influencing factors, using a proprietary collaborative, real-time forecast system based on a multidimensional data model.

Assumptions are tested against different points of view. The peer review of assumptions strengthens the resulting forecast, because the results are validated not only within the context of individual market segments, but also for the total market. This process assimilates vast amounts of disparate and aggregate data to support forecast decisions that are scrutinized and vetted by many seasoned analysts. An integral part of this process involves comparing initial forecasts to related forecasts that either flow into or flow from them. For IT services, this means carefully examining and taking into account related software, hardware and equipment forecasts. It also means the ranks of those involved in the forecast process extend beyond Gartner's global staff of IT services analysts.

Our methodology provides an iterative approach to an updated forecast in which successive initial forecasts are reviewed, critiqued and revised by all those involved in the forecast process. Gartner believes that a sound forecasting process incorporates art and science into a logical and coherent series of steps that, if conducted in a rigorous and organized fashion, will:

- Ensure forecasting effectiveness, reliability and accuracy
- Prove to be a valuable tool for developing sound market strategies

This does not imply that a conservative approach is called for; where we fail to forecast a completely new market, we have failed to inform the client of an opportunity. Gartner uses tools and processes that maximize our ability to share processes and time frames, so that a unified, coherent picture of the IT market is built.

Forecast Assumptions

Forecasts consist of two elements — forecast data and supporting assumptions and analysis. Forecast statistics are published quarterly, identified by vintage. For example, the Excel workbook in Forecast: IT Services, Worldwide, 2018-2024, 1Q21 Update would represent Gartner's IT services forecast published in the first quarter of 2021.

Annual analysis and key highlights are also published as a Forecast Analysis research. For example, the document Forecast Analysis: Application Services, Worldwide provides an explanation of the forecast assumptions in the current IT services forecast as they relate to application services.

Metrics

This section describes the research metrics that Gartner uses for reporting revenue, end-user spending, market size and market share:

- **Compound annual growth rate (CAGR)** — The annualized rate of spending growth between two given years, assuming growth takes place at an exponentially compounded rate. The CAGR is calculated as shown here.

$$CAGR = \left[\frac{Ending\ Value}{Beginning\ Value}\right]^{\left[\frac{1}{No.\ of\ Years}\right]} - 1$$

- CAGR Year X to Year Z = [(Value in Year Z / Value in Year X) ^ (1 / N) – 1]

For example, the CAGR for 2020 through 2025 is calculated as follows:

- CAGR 2020 through 2025 = [(Value in 2025 / Value in 2020) ^ (1 / 5) – 1]

- **End user** — The final purchaser of a service. IT services market sizing and forecasts are expressed in millions of U.S. dollars (or other currency) of end-user spending.
- **Revenue** — Sales generated by a vendor, measured in currency of millions.

Forecast Currencies

When using forecast statistics, Gartner recommends viewing growth rates in either constant currency or in the currency in which the country or region was forecast. This is important, given that large fluctuations in exchange rates can cause significant differences in growth rates. When comparing growth rates in different regions, it is also recommended that the client compare each in its forecast currency so that exchange rates do not affect the growth rate. The tab “Currency Choice” in the forecast data file allows for the conversion of end-user spending in multiple currencies.

Exchange Rates

Gartner exchange rates are updated quarterly and used for all Market Share, Forecast and Forecast Analysis documents published in the corresponding cycle. Gartner maintains a database of past and future exchange rates, at the quarterly and annual levels. Historical exchange rates are deduced from appropriate averages of monthly exchange rates reported by the U.S. Federal Reserve (the Fed) and the Pacific Exchange Rate Service. Future rates are applied from exchange rates reported quarterly by our data partner IHS Markit, reviewed by Gartner expertise.

For Market Share reports, historical quarterly and annual exchange rates are applied. For Forecast and Forecast Analysis reports, annual exchange rates combining historical and future periods are applied. Gartner's Market Share and Forecast publications always include the exchange rates associated with the published data.

Current-Dollar and Constant-Dollar Reporting

Gartner publishes Forecast and Market Share reports that ultimately serve two purposes: gauge the growth opportunity available to vendors/providers and assess market growth. We recognize that the two goals generally cannot be accomplished in one single measure. This is because the revenue growth opportunity available to vendors/providers depends not only on the underlying rate of market growth, but also on the exchange rate at which they can translate monies earned back into their native currency. Thus, significant differences can emerge between vendor/provider revenue growth opportunity and underlying market growth when exchange rates move. Even more to the point, vendor revenue growth opportunity can vary dramatically relative to underlying market growth when exchange rates are volatile. This can cause significant confusion about how fast markets are growing as opposed to how vendors can monetize that growth in dollars, euros or yen as exchange rates change.

To illuminate this point, Gartner reports its forecast and market share data in two ways: in "current" dollars and in "constant" dollars.

- Current-dollar figures indicate the end-user spending in U.S. dollars that vendors/providers could expect to earn, given the prevailing exchange rates.
- Constant-dollar figures, also marked in constant currency, reflect the equivalent U.S. dollar value of market spending translated by fixed time (base year) exchange rates.

Constant-Currency Calculation

Gartner develops market shares and forecasts for individual countries in the relevant local currency; that is, U.S. data is developed in U.S. dollars, eurozone data in euros, and so on. Data developed in currencies other than the U.S. dollar is subsequently converted to current U.S. dollars using actual historical and/or forecast future exchange rates.

Constant currency is a commonly used economic construct that is calculated by translating other currencies into dollars using a set of fixed exchange rates versus the U.S. dollars from a given period. This period is called the "base period," and it is always indicated whenever constant-dollar data is reported — for example, "constant currency (2020 base)."

Precisely because values in constant currency are calculated using exchange rates of a fixed time, they are not affected by exchange rate fluctuations when data originally formulated in other currencies is translated into them. By the same token, growth rates based on constant dollars will reflect only changes in natively valued market shares and forecasts.

(Note: In some contexts, constant currency will imply the figures have been discounted for inflation; this is not the case here. Gartner reports data in both U.S. dollars and constant currency, which implicitly includes inflation, and neither figure has been adjusted for it.)

How to Use Constant Currency

There is a critical difference between the provider revenue growth opportunity and the underlying market growth — specifically, the former depends on the latter and the rate at which that growth can be converted into a particular currency.

For example:

- Assume yen-valued Japanese IT spending grows 5% in a given year. At the same time, assume the yen depreciates 4% against the dollar that same year. Japanese market growth is 5%, but the dollar revenue growth opportunity will only be 1%. Why? This is because when the yen depreciates 4% against the dollar in a given year, any amount of yen will convert into 4% fewer dollars that year than the year before. This means the 5% growth in yen-valued Japanese IT spending translates into a 1% increase in dollar growth opportunity for the year.

- Assume the following year, yen-valued Japanese IT spending again grows 5%, but in this year, the yen appreciates 4% against the dollar, meaning a given amount of yen will convert into 4% more dollars than the year before. This time, the dollar revenue growth opportunity is 9%, equal to 5% yen-valued market growth plus the 4% yen gain against the dollar. So, even though yen-valued Japanese market growth was the same in both years, the dollar growth opportunity went from 1% to 9% solely because of exchange rate movements in the yen against the dollar.

- Analyzing growth rates in constant currency enables easy comparison of country growth in local currency, because for each country, growth in local currency will be the same as growth in constant currency.

Both sets of values are relevant to understanding the Japanese market performance over the two years; it just depends on what you're trying to analyze — underlying market growth or dollar growth opportunity.

High-Level Definitions and Segmentation

Definitions apply hierarchically and should be interpreted in relation to the IT services market taxonomy table (see Table 1). For example:

- The definition for IT services applies to all IT services segments.
- The definition for consulting applies to all Segment 5 business consulting segments.
- The definition for Segment 5 business consulting applies to all Level 6 segments under business consulting. So, for this example, the full definition for business strategy includes the definition for IT services, consulting, business consulting and business strategy.

IT services refer to the application of business and technical expertise to enable enterprises to create, access, manage and optimize information technology and IT-intensive business processes provided by an external IT services vendor. IT services do not include stand-alone hardware product development.

The IT services market is evaluated in three dimensions:

- **Geographic area** — Segmentation based on buyer's location.
- **Vertical** — Segmentation based on buyer's industry.

- **Market segment** — In segmenting the IT services market, we consider both the type of skills that are employed to deliver the service and the capabilities specified in the purchase agreement. This market segmentation can also be aligned with the type of engagement provided by external service providers (ESPs):
  - Design
  - Build
  - Run
  - Cloud access
  - Support

The market segments identified as service type “cloud access” are also components of the quarterly public cloud forecast.

Note: In addition to the IT services forecast segments, the public cloud forecast publication includes forecast data for other cloud market segments, including the public cloud services also reported as components of the software market, such as:

- Software as a service (SaaS)
- Platform as a service (PaaS)
- Cloud management
- Security services

IT Services

IT services include consulting, implementation, managed services and cloud infrastructure services, as well as business process outsourcing. These services are defined in the following sections.

Consulting

Consulting services are project-based advisory services that leverage the expertise of skilled business and technology specialists to help clients affect strategic change and achieve sustainable operational improvements.

Business Consulting

Business consulting services included in Gartner's IT services forecast are limited to advisory services that preface, enable or influence the adoption of IT. These services may include business process transformation, business process redesign or reengineering, business performance improvement, corporate compliance, risk management, governance, and sourcing advisory. Gartner segments the business consulting market into corporate strategy, business operations, financial management, risk management, human capital management, and marketing and customer management. Digital business consulting services (DBCS) represent a growing subset of the business consulting market. DBCS is an overlay of the formal taxonomy that Gartner applies on top of the same data to call out an important trend — namely, the increasing portion of business consulting dedicated to helping clients achieve their digital business ambitions. DBCS defines opportunities for digital transformation and optimization, which include the use of emerging technologies to create operational change in an organization.

Business consulting services are discrete projects that may be individually contracted or sourced as part of a larger technology implementation initiative or as preludes to managed service or outsourcing engagements. Regardless of how the services are sold and delivered, the business consulting services considered in Gartner's IT services forecast directly affect IT. This distinguishes them from other types of consulting services that are not directly related to IT or digital business such as pure strategy. Business consulting segments are as follows.

Corporate Strategy

Corporate strategy includes strategic advisory services that analyze risks and opportunities for clients, working with them to develop a detailed strategic roadmap. They focus on cross-functional client issues, including innovation, digital, regulatory, sustainability, growth, transformation, postmerger and postacquisition integration, and pricing strategies that precede configuration of ERP or other software.

Business Operations

Business operations include transformation advisory services that improve quality and efficiency for business operations in an organization. This includes process reengineering and improvement derived from business strategy. Business operations consulting services are consumed by clients across both product and service industries.

Financial Management

Financial management includes strategic cost restructuring and optimization as a result of consulting services, which include financial assessments and visioning, operational finance, sourcing advisory, financial transformation, and process improvement.

Risk Management

Risk management seeks to maximize client security and stability by delivering project-based strategic and transformative advisory services. These services include risk strategy, risk reporting, risk monitoring, security, compliance, forensics, fraud, cybercrime, data breach response, risk analytics, risk operations, event response and business continuity, with advisory services provided as part of risk assurance.

Human Capital Management

Human capital management focuses on improving employee-focused processes, metrics and collaboration, building an optimal working environment for delivering value. It is composed of advisory services related to HR strategy, planning and transformation, organizational design, workforce planning and performance, training, operations, service delivery model evaluation, organizational change management, organizational culture, leadership, talent management, and employee communication programs.

Marketing and Customer Management

Marketing and customer management seeks to uncover opportunities for generating customer satisfaction and improved value through consulting projects focused on customer strategy, customer journey insight and experience, sales process improvement, and marketing transformation including digital marketing and customer-related analytics management.

Technology Consulting

Technology consulting services are advisory services that help clients assess and develop technology strategies for optimal alignment with their business or process strategies. These services support customers' business and technology initiatives by providing strategic, architectural, operational and implementation planning. Strategic planning includes advisory services that help clients:

- Align their technology strategies to business needs (including sourcing advisory, merger and acquisition [M&A] integration strategy, planning and roadmaps)
- Assess their technology needs (including designing best-in-class IT organizations, processes and capabilities)
- Formulate system implementation plans

Architectural planning includes advisory services that combine strategic plans and knowledge of emerging technologies to create the logical design of the system and the supporting infrastructure to meet customer requirements. Operational assessment and benchmarking include services that assess the process efficiency and capacity of a client's technology environment. Implementation planning includes services aimed at advising customers on the development, rollout and testing of new solution deployments. Technology consulting segments are as follows.

Application Technology Consulting

Application consulting services focus on strategic, architectural, operational and implementation planning for custom-developed or packaged application software, including SaaS and hybrid SaaS/on-premises strategies and roadmaps, as well as helping with evaluation and selection of the right package application.

Infrastructure Technology Consulting

Infrastructure consulting services focus on strategy, architecture, design and selection of the computing hardware, operating systems, facility and personnel, as well as network and communications equipment used to provide technical capabilities for the enterprise. These services can include readiness assessments, security, disaster recovery, workload optimization, architectural design and technology selection consulting, including cloud-based strategies and roadmaps, along with evaluation and selection of cloud providers and managed service providers.

Technology Strategy and Governance

Technology strategy and governance consulting services focus on planning for the overall development and management of technology for the organization. Sample services include designing IT organizations, processes and capabilities for optimal scalability, performance, control, service management and cost management, along with sourcing and captive center strategies. It also includes evaluating foundational enterprise technology structure, as well as the optimal use of emerging technologies such as cloud, analytics, intelligent automation and other digital technologies.

Application Implementation and Managed Services

Application Implementation

Application implementation services provide project-based services for configuration, development, deployment or integration for custom-developed package applications and/or commercially available applications, including SaaS, to increase the performance of business or personal resources. These services frequently serve to integrate or link internal or external business processes and may include converting applications to run on different architectures. Services may also include helping clients with hardware or software procurement, configuration, tuning, staging, training, installation, system integration and testing. They may also include detailed design and implementation services that link application functionality (custom software, packaged software or cloud services) and/or data with each other or with the established or planned IT infrastructure. Specific activities might include project planning, project management, detailed design and implementation of software functionalities, application programming interfaces, web services or middleware systems.

Commercial Application Implementation

Commercial application implementation services assist enterprises in implementing software developed by independent software vendors or SaaS providers. These services can range from simple installation to complex configuration, customization, enhancements, reports and interfaces development, integration, data loading and rollouts. Typical applications include business intelligence (BI), CRM, ERP, supply chain management (SCM), security and applications supporting industry-specific business processes. In addition, implementation of commercial analytics or cognitive applications and associated reports and artificial intelligence (AI)-based solutions are included in this category.

Custom Application Implementation

Custom application services develop application software specifically for an organization to satisfy its unique business needs. These can include business requirements gathering and coding the application from scratch or building it on a PaaS or assembling from existing web services or other reusable pieces of code. Custom application services also include integration of the developed application with other systems, within the enterprise or with external partners. In addition, any custom-developed analytics application and associated reports and AI-based solutions are included in this category. Software product engineering services, where a service provider is contracted to develop or build software that will become part of their clients' products or services, are included in Gartner's definition of custom application services.

Application Managed Services

Application managed services (AMS) are multiyear contracts to develop, maintain, enhance, modernize, optimize and manage one or more of a customer's business applications. The services provide live production applications, such as:

- Customizations and integrations of commercial off-the-shelf (COTS) software applications
- Legacy custom-developed software applications
- Custom digital cloud-native applications developed using agile, DevOps or product-centric methodologies

The applications supported may be hosted on-premises, at an outsourced data center, in the cloud, developed on PaaS and/or supplied as SaaS.

In AMS contracts, a service provider takes responsibility for one or more of the following:

1. **Application operations:** Operational care and management of middleware software layers (above the OS but below the business application code). Includes monitoring middleware performance; changing configuration parameters; maintaining hard-coded data or tables embedded within the applications; monitoring, updating and maintaining system interfaces; and deploying application updates, such as upgrades, patches and new releases. (Excludes reading or changing application code.)

2. **Incident resolution (Level 2/Level 3):** Resolve incidents concerning an application at Level 2 (L2) and/or Level 3 (L3). Includes problem identification, root cause analysis and defect correction. Excludes Level 1 (L1) service desk support but includes assisting users and answering user questions about the applications when L1 support requests.

3. **Value-added enhancements:** Execute minor functional enhancements to application code — typically restricted by contractual agreement to changes that can be made utilizing a limited amount of effort. Approximately 40 to 80 hours are common upper limits.

4. **Modernization and consolidation/rationalization:** Includes application portfolio analysis and subsequent consolidation of instances or systems, and rationalization of applications that are duplicative or not in use. Also includes reengineering of applications to be cloud-native and for hosting on the cloud, as well as migrating the applications to the hosted cloud infrastructure.

AMS does not include implementation or software development services sold as discrete projects or staff augmentation services. AMS may be delivered from the client site, off-site or as a mixture. AMS contracts may include the transfer of client employees, IT assets and facilities to the service provider.

Application Management and Modernization Services

Application management and modernization services (AMMS) entail turning over management and/or development responsibility for a live production application to a service provider for performance-based outcomes. They are often measured through SLAs and enforced through financial incentives.

AMMS may include consolidation, rationalization and modernization (including migration of the applications to a private or public cloud) if these activities are part of the multiyear contract.

Commercial Application Managed Services

Commercial application managed services provide services within a multiyear contract for developing, managing, enhancing, modernizing, optimizing and maintaining software developed by COTS software vendors, such as Guidewire, Infor, Microsoft, Oracle, Pegasystems, Salesforce, SAP and Workday. Typical applications include BI, CRM, ERP, SCM and industry-specific applications, such as claims processing in insurance or trade promotion management in retail.

Custom Legacy Application Managed Services

Custom legacy application managed services provide services to develop, manage, enhance, modernize, optimize and maintain software uniquely developed for an organization to satisfy its individual business needs. Custom legacy AMS may often involve a long-term application modernization strategy but can also be focused purely on maintaining a legacy system.

Custom Product-Centric Application Managed Services

Custom product-centric application managed services are a long-term contract to supply a multidisciplinary team that builds, deploys and supports software using agile and DevOps approaches. “Long-term contract” means one that is not ended by completing a project phase, but which is ongoing, is typically multiyear and ends only when the contract ends. A “multidisciplinary” team could include business analysts, architects, user experience (UX)/customer experience (CX) designers, Scrum Masters, developers, testers and site reliability engineers. A continuous product-centric delivery team is responsible for gathering requirements for the backlog, developing software, testing and deploying it, and resolving L2/L3 support requests for incident resolution, defect correction or software enhancements. These teams could work on any software component, whether it forms part of the customer’s products and services, or is an application within the customer’s IT systems. The services are not restricted to the software product engineering market.

Infrastructure Implementation and Managed Services

Infrastructure Implementation

Infrastructure implementation services provide project-based services for the development, deployment or integration of computing hardware (e.g., servers and storage devices) and network equipment (e.g., WAN, LAN or corporate customer premises equipment) to build, run and manage the performance of enterprise IT resources. Increasingly, infrastructure services are procured by clients to assist them in migrating to the public and private cloud. Services may include helping clients with hardware or software procurement, configuration, tuning, staging, training, installation, and operability testing, as well as detailed design and implementation services that link with the established or planned IT infrastructure. Specific activities might include technology assessments, project planning, project management, hardware integration, detailed design and implementation of programming interfaces and/or middleware systems, and platform modernization, such as rehosting, migration to a converged infrastructure system or migration to cloud-based environments.

Data Center and Workplace Implementation

Data center and workplace implementation services provide development, deployment or integration of computing hardware, such as servers and storage devices, to build, run and manage the performance of enterprise IT resources. Increasingly, infrastructure services are procured by clients to assist them in migrating to the public and private cloud. Services may include helping clients with hardware or software procurement, configuration, tuning, staging, training, installation and operability testing, as well as detailed design and implementation services that link with the established or planned IT infrastructure. Specific activities might include technology assessments, project planning, project management, hardware integration, detailed design and implementation of programming interfaces and/or middleware systems, and platform modernization, such as rehosting, migration to a converged infrastructure system or migration to cloud-based environments.

Network Implementation

Network services provide development, deployment or integration of WAN, LAN or corporate customer premises equipment (CPE). Services include configuration, tuning, staging, training, installation and operability testing, as well as detailed design and implementation services that link with the established or planned IT infrastructure. Specific activities include project planning, project management, hardware integration and implementation.

Infrastructure Managed Services

Infrastructure managed services (IMS) are a multiyear or annuity contract/relationship, providing services, processes and methodologies for maintaining, enhancing and managing compute, storage, desktop, service desk and network. These services can include any combination of hardware, software, facilities and personnel to build, run and manage the performance of enterprise IT technology. IMS includes traditional deployment methods and models, as well as managed services, cloud infrastructure and platform services.

Data Center Services

Data center services provide a combination of hardware, software, personnel and facilities managed for central repositories (either physical or virtual), which maintain back-end IT systems and data stores organized around a particular body of knowledge or pertaining to a particular business. Data center services provide customized managed services, typically in conjunction with transition and transformation services. Services may be provided at the client site or off-site, and can include facilities, personnel, hardware and software. IT assets may be owned by either the client or the managed service provider. Services may be facilitated by information management software and system management tools, which may be provided and used by the managed service provider or the client. The infrastructure managed may include physical hardware, virtualized infrastructure, or resources in cloud services or from a third party. Contracts are service-level-based, and may include the transfer of client employees, IT assets and facilities to the managed service provider.

Managed Services for Cloud and Edge Environments

Managed services for cloud and edge environments provide management across multiple infrastructures used by the organization both on-premises and in the cloud (hosted and private infrastructure, public cloud, and edge). These services include the management of traditional data center environments in conjunction with public cloud and hosted and private infrastructure. All services are delivered seamlessly to the client organization, with the provider maintaining the relationship with both cloud and noncloud providers and ensuring end-to-end visibility and management of the entire environment.

Managed Services for Traditional Data Center Environments

Managed services for traditional data center environments are composed of legacy data center services, meaning they are entirely limited to noncloud legacy technologies. This segment is an estimate intended to provide Gartner clients with insight into the declining demand for such services (for example, mainframe, legacy server and legacy workload).

Hosted and Private Infrastructure

Hosted and private infrastructure services include compute, storage and network resources within a provider-controlled data center facility and a preprovisioned operating system. The infrastructure resources may be dedicated or shared, and may be physical or virtual. This segment is defined by service outcomes, technical options and interfaces, and it is purchased under a discrete resource-based agreement.

Colocation

Colocation services provide standardized, secured partition shared facility space, power, HVAC and network connectivity, including internet access for enterprise data centers. Services in this segment are sold as distinct colocation agreements; billing is usage-based, typically on a per-rack, per-square foot or per-kilowatt basis.

Enterprise Network Managed Services

Enterprise network managed services contracts cover runtime management of WAN, LAN or other corporate network customer premises equipment in a wired or wireless network, and/or core network infrastructure and/or other enterprise telecommunications assets. The services are governed typically by SLAs and charged on a monthly recurring basis. Premises assets can be physical appliances or software instances that are either enterprise-owned or rented/leased as part of the service.

Managed LAN/WLAN

A local-area network (LAN) is a small network connecting computers and servers that span across a small geographic area like an office, school, campus or a group of close buildings. In managed LANs and wireless LANs (WLANs), the provider operationally manages the on-site LAN and Wi-Fi equipment. IT services forecast reports do not include spend on equipment such as switches, access points and WLAN controllers.

SD-WAN Managed Services

Gartner includes a separate category for runtime service management of enterprise wide-area networks (WANs) using software-defined (SD-WAN) gear. Providers of managed SD-WAN services manage the technology and WAN transport; however, they do not need to supply the SD-WAN product or the WAN transport as part of the service. Enterprises may procure and consume the components of their managed SD-WAN solutions collectively from a single provider or individually from a separate vendor for each of the elements of the solution. In the IT services forecast reports, the managed SD-WAN service category includes providers' operations management of the SD-WAN overlay. Gartner does not include WAN transport or equipment spend under this category.

Traditional WAN Managed Services

Traditional WAN managed services refer to the runtime service management of enterprise WANs used to connect business locations (including headquarters, branches, small offices and data centers), and their servers and systems spanning large geographical distances (metropolitan, regional, national or international). Traditional managed WAN services in the IT services forecast reports include (but do not break out) management of traditional edge equipment as well as network connections (by contrast with SD-WAN edge devices) for:

- **Multiprotocol Label Switching (MPLS) services** — Private, Layer 3 Internet Protocol (IP) networking service, based on label-switched paths, delivered over last-mile access types, including time division multiplexing (TDM), fiber and copper-based Ethernet access, broadband/DSL and wireless cellular access.
- **Internet services** — Either dedicated internet accesses or contended internet services used for VPN connections to the WAN and/or local internet breakouts from enterprise locations.
- **Ethernet WAN services** — Virtual private LAN service (VPLS), Ethernet Line (E-Line), Ethernet LAN (ELAN) and Ethernet virtual private line (EVPL) managed by the service providers. Often these services are delivered over the MPLS network.

Gartner does not include spend on WAN transport or equipment under this category.

Managed Workplace Services

Managed workplace services provide day-to-day management responsibility for operating and managing client devices that generally include desktop and mobility. These IT services include any combination of, or all, the product procurement, technical support and professional services as they specifically relate to the ongoing operation and management, including personnel resources, tools, assets and other associated requirements.

End-User Compute Services

End-user compute services are traditionally a labor-intensive service requiring broad geographic coverage to deliver field support services related to a combination of hardware, software end-user devices, desktop hosting servers, and the network infrastructure, processes and organization to support these devices. Additionally, desktop virtualization and bring-your-own-device programs are redefining the types and level of services provided to end users, which often changes the scope of responsibility contracted to an outsourcing provider.

Managed Mobility Services

Managed mobility services (MMSs) encompass the vendor-provided IT and business process services required to plan, procure, provision, activate, manage and support mobile devices, mobile network services, related mobile management systems and mobile applications. Broadly, mobile service management includes sourcing and logistics management, managed UEM (mobile only), security management, financial management (expense management), and program management (including professional services).

- **Sourcing and logistics management:** This comprises the systems and services used to purchase, provision and activate network services, applications and devices, in addition to what is delivered through an expense management or UEM platform. Forward and reverse logistics (of devices out to users and then back from users) support includes staging and kitting, depot repair, advanced replacement, recycling, and device cascading.

- **Managed UEM (mobile only):** UEM suites comprise five core technical capabilities to support enterprises with the management of mobile devices. Those are mobile device management, mobile application management, mobile identity, mobile content management and containment (separating corporate and personal data). In the context of MMS, this capability is delivered through a third-party platform, such as release management and support of UEM servers.

- **Security management:** This includes the systems and services — beyond those available through UEM platforms — to secure access and consumption of corporate resources and content through authentication, encryption, containerization, and cloud-based enterprise file synchronization and sharing (EFSS). Security management also covers content and domain filtering and anti-malware functionality. For example, this includes mobile threat defense solutions and professional services capabilities related to mobile security management.

- **Financial management:** This is the expense management capability, which includes sourcing management, ordering and provisioning management, inventory management, invoice and contract management, usage management, and dispute management and reporting. In this MMS context, the capability is either to have a proprietary platform or to resell somebody else's.

- **Program management (including professional services):** This is the capability to manage the other capabilities cohesively and effectively, including governance across the included set of third-party providers (such as UEM providers, device OEMs and logistics companies), account management, support and SLAs. This service category also includes associated service desk and help desk capabilities to address users' technical requests for corporate-liable devices (for example, Level 2 and Level 3 help desk), as well as to support BYOD users. This also includes professional services capabilities related to MMS, other than those specific to individual capabilities and the ability to act as an agent on behalf of a customer to conduct services on behalf of the user.

Service Desk Managed Services

Service desk managed services provide centralized information and support management services to handle a company's internal or external queries and operational problems about IT-related processes, policies, systems and use. These managed services include multilevel support, problem categorization and logging, problem tracking and escalation, and problem resolution, as well as problem management.

Service desk managed services are typically a multiyear contract in which a service provider takes accountability for one or all contacts in the client's service desk operations. Service desk outsourcing services provide help desk personnel, hardware, software and delivery facilities and, increasingly, the operations and automation tools required to perform the function. Clients pay for services on a volume basis related to either call volume or number of end users or devices being supported.

Typically, as the face of IT to the end user in an organization, service desk services are cross-functional in nature and span multiple IT operations towers, including infrastructure (data centers, networks and end-user devices) and applications. Individual service desk queues can be assigned to a tower-level outsourcing decision. However, we categorize service desk outsourcing within infrastructure managed services because it is most often considered part of the infrastructure budget, is contracted as an infrastructure decision, and will frequently be contractually bundled with managed workplace services.

Desktop as a Service

Desktop as a service (DaaS) is a service offering that provides users with an on-demand, virtualized desktop experience delivered from a remotely hosted location. It includes provisioning, patching and maintenance of the management plane and resources to host workloads.

Business Process Services

Business process services is the delegation of one or more IT-enabled business processes to an external provider that, in turn, owns, administers and manages the processes and agreed-upon outcomes based on predefined performance metrics. BPS providers offer buyers improved business process efficiency and effectiveness. Outsourced processes include knowledge-based processes as well as transactional ones, along with the support and administration of front-office, middle-office and back-office activities. Almost any business process or discrete part thereof can be awarded to a BPS provider, with the boundaries regularly being widened to include more sophisticated processes. Entire processes or discrete subprocesses can be outsourced to form end-to-end, comprehensive service arrangements.

BPS contracts range from contracting for labor only, to labor plus process enhancement technologies and services (PETS), to BPS plus IT outsourcing (ITO) on a single contract, to digital business process services, including BPaaS and asset-intensive digital business process services.

BPaaS is the delivery of business process services where the underlying construct is multitenancy often achieved by leveraging cloud services. BPaaS services are often automated, and the required labor pool is shared (so it is not overtly dedicated to a specific client). BPaaS pricing models are consumption-based or subscription-based commercial terms that may be gain-sharing- or outcome-based. In most cases, the inherent risk and responsibility associated with the administration of the outsourced processes — and agreed-upon outcomes — belong to the service provider. However, this is not always the case; these risks and responsibilities are outlined in the contract's statement of work.

Traditional BPS and BPaaS is further segmented into:

- Administration
- Customer management
- Finance and accounting
- Human resources
- Operations
- Supply chain management

Administration

Cloud Payment Processing (BPaaS Only)

Cloud payment services are business process services provided online at a retail level. They are standardized and do not require special equipment or contracts with merchant acquirers. While cloud payment services traditionally have been the domain only of internet-based payment processing providers, major financial institutions are beginning to offer such payment services.

Payment Processing (Traditional BPO Only)

These services encompass the processing of paper checks, electronic data interchange (EDI), business and corporate credit cards, letters or lines of credit, automated clearinghouse (ACH) transactions, electronic invoices and payments, and insurance payments (such as excess value, credit, flexible parcel or collect-on-delivery service). The services include the administration of the transfer of payments between all parties involved and the reporting related to that administration.

Document Management (Traditional BPO Only)

These services include the provision of internal and external printed and electronic communications, including content creation, incoming document processing (for example, imaging and storage), multimedia presentation and archiving.

Customer Management

Customer Selection

Customer selection BPO services include market segmentation and data analysis (including the collection, management, augmentation, analysis, and application of customer data to support marketing and sales efforts), campaign design and communication planning (including media campaign creation, integration, deployment, tracking and measurement). Other customer selection services include testing, brand planning, account/territory planning and product introduction.

Customer Acquisition

Customer acquisition BPO services include telesales, telemarketing, web sales, web marketing, mobile sales, mobile marketing, social marketing (including crowdsourcing platforms), lead management/opportunity management and field sales automation. Other customer acquisition BPO services include direct mail campaign management, channel management, proposal generation, solution design, negotiation and deal closing.

Customer Extension

Customer extension BPO services include:

- Customer upsell/cross-sell, which includes using information about products and services purchased by a customer to influence the purchase of associated products and services across all channels (voice, web chat, email, web self-service, mobile apps, social CRM [including crowdsourcing platforms] and BPaaS)
- Customer data analytics to support customer service and support processes, and other sales, marketing and customer care processes

Other customer extension includes needs reassessment, campaign management and other customer extension functions that are not included in the previous categories.

Customer Retention

Customer retention BPO services include customer service processes for inquiry handling/problem resolution, field service automation and customer self-service functions. Inquiry handling and problem resolution include managing customer concerns through outbound or inbound communications, by telephone, internet, mobile device or face-to-face. Field service automation includes managing personnel resource allocation, communication of problem tickets, diagnostics, spares inventory and preventive maintenance in the field service and repair organization. Other customer retention includes order management, repair and returns handling, and attrition management.

Finance and Accounting

Accounts Payable

Accounts payable BPO services include traditional accounts payable processing, as well as travel and expense processing and electronic payments (such as credit card or ACH transactions).

Accounts Receivable

Accounts receivable BPO services include traditional accounts receivable processing as well as billing, general ledger and reconciliation of “suspense” account balances.

Other Finance and Accounting

Other finance and accounting BPO services include administration of tax management, treasury and cash management, yield analysis, preparation of asset schedules, and risk analytics.

Human Resources

Payroll and Benefits

These BPO services include payroll processing (including time and attendance tracking and tax compliance services). These services also include health and welfare benefits enrollment and ongoing administration, defined benefits and defined contribution program administration, Consolidated Omnibus Budget Reconciliation Act (COBRA) 1985 administration (in the U.S.), and other services related to payroll and benefits administration.

Talent Management

These BPO services include those related to recruitment, learning and development, preemployment services (for example, background checking), workforce administration (including relocation and expatriation administration), workforce planning, compensation management, performance appraisal and competency assessment, as well as career development and planning.

Operations

Cloud E-Commerce Enablement (Cloud Only)

E-commerce BPO services enable online retailing. Delivered as a cloud business process service, it is a fully managed service where providers deliver and manage a standardized platform for delivery of the services, and the resulting business outcomes.

Service Industries

Service industry BPO services are targeted to the operational processes that are specific to service industries. In Gartner's vertical taxonomy, these industries are transportation, utilities, healthcare, communications, financial, government, education, retail, wholesale, services (for example, professional services), agriculture, mining and construction industries.

Product Industries

Product industry BPO services are targeted to the operational processes that are specific to discrete and process manufacturing industries.

Supply Management

Logistics

These BPO services include information-centric supply chain planning, product distribution, and domestic and international transportation. This does not include the physical movement of goods throughout the cycle.

Procurement

These BPO services include the information-centric buying processes related to direct and indirect procurement.

Warehousing

These BPO services include the information-centric storing processes that cover warehouse and inventory management.

Asset-Intensive Digital Business Process Services

These are ongoing managed services that run, monitor and optimize core business processes, whether functional or industry-specific, via highly automated and digitalized solutions that are contracted through subscription models and are based on business transactions or outcomes. The digitalization creates a transaction processing platform that includes services, assets, analytics and intellectual property (IP) that is specific to business processes and use cases.

Infrastructure as a Service

Infrastructure as a service (IaaS) is a standardized, highly automated offering in which computing resources owned by a service provider, complemented by storage and networking capabilities, are offered to customers on-demand. Resources are scalable and elastic in near real time and metered by use. Self-service interfaces, including an API and a graphical user interface (GUI), are exposed directly to customers. Resources at the discretion of the service provider may be single tenant or multitenant and are hosted by the service provider.

Hardware Support

Hardware support contracts may cover the following at different response times, depending on level of contract:

- Hardware replacement
- On-site field engineering
- Technical support
- Proactive monitoring

Hardware support services are predominantly sold as annuity support contracts, most commonly as one-year or three-year contracts. There is also noncontract support spending, typically billed as time and materials (T&M).

Hardware support contracts are typically sold in the following ways:

- **Resale (OEM support) —** The most commonly purchased support is OEM-branded, OEM-delivered support. These SKU-based hardware support packages are purchased from different sources, including the OEM itself or from partners, including communications service providers (CSPs), system integrators (SIs), managed service providers (MSPs) or value-added resellers (VARs).

- **Collaborative (co-delivery support)** — Some OEMs have programs to authorize channel partners (including CSPs, SIs and VARs) to provide their own brand of support, which is backed by the OEM. This is commonly called "co-delivery" or "collaborative" support. In these programs, the channel partner typically is taking Level 1 and Level 2 calls and managing the relationship with the customer, but is able to escalate to the OEM for Level 3/backline support when needed. Typically, collaborative support partners are financially motivated to do more on their own, meaning they receive a higher discount on the price they pay the OEM for support if the number of escalations to the OEM is minimized.
- **Multivendor support (MVS)** (hybrid of resale/collaborative/third-party maintenance [TPM]) — This is when a service provider combines elements of other support types. Globally, MVS contracts are typically offered by global OEMs, CSPs and SIs.
- **Third-party maintenance** — Third-party maintenance is support services provided independently from the OEMs, often referred to as "TPM," "OEM-independent maintenance," "unauthorized maintenance" or "alternative maintenance."

Gartner segments hardware support as follows.

Client Device Support

This segment includes support for end-user devices.

Data Center Systems Support

This segment includes support for enterprise servers and storage systems.

Network Systems Support

This segment includes support for enterprise networking and communications equipment.

Geographic Definitions

IT services data is published at Gartner's 11-region and 50-country/market level of aggregation, illustrated in Table 1.

Table 1: Geographic Taxonomy, IT Services Market Statistics

(Enlarged table in Appendix)

Region	Country (or Province or Market)
North America	Canada
	United States
Latin America	Argentina
	Brazil
	Chile
	Colombia
	Mexico
	Rest of Latin America
Western Europe	Austria
	Belgium
	Denmark
	Finland
	France
	Germany
	Greece
	Ireland
	Italy
	Netherlands
	Norway
	Portugal
	Spain
	Sweden
	Switzerland
	United Kingdom
	Rest of Western Europe
Eastern Europe	Czech Republic
	Hungary
	Poland
	Rest of Eastern Europe
Eurasia	Russia
	Rest of Eurasia
Middle East and North Africa	Israel
	Saudi Arabia
	Turkey
	Rest of Middle East and North Africa
Sub-Saharan Africa	South Africa
	Rest of Sub-Saharan Africa
Mature Asia/Pacific	Australia
	New Zealand
	Singapore
	South Korea
Greater China	China
	Hong Kong
	Taiwan
Emerging Asia/Pacific	India
	Indonesia
	Malaysia
	Thailand
	Rest of Emerging Asia/Pacific
Japan	Japan
Note: Gartner defines the Greater China region to include China, Hong Kong and Taiwan.	

Source: Gartner (June 2021)

Many countries are not tracked individually and instead are combined in subregional designations. These designations include the following countries and markets:

- **Rest of Latin America:** Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Cayman Islands, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, French Guiana, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Virgin Islands (St. John, St. Croix and St. Thomas), and Venezuela

- **Rest of Western Europe:** Andorra, Cyprus, Iceland, Liechtenstein, Luxembourg and Malta

- **Rest of Eastern Europe:** Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Kosovo, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Romania, Serbia, Slovakia, and Slovenia

- **Rest of Middle East and North Africa:** Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, the Palestinian Authority, Qatar, Sudan, Syria, Tunisia, United Arab Emirates and Yemen

- **Rest of Sub-Saharan Africa:** Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Niger, Nigeria, Réunion, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, Swaziland, Tanzania, Togo, Uganda, Zambia, and Zimbabwe

- **Rest of Eurasia:** Afghanistan, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan

- **Rest of Emerging Asia/Pacific:** American Samoa, Bangladesh, Bhutan, Brunei, Cambodia, Democratic People's Republic of Korea, East Timor, Fiji, Guam, Kiribati, Laos, Maldives, Micronesia, Myanmar, Nepal, Pakistan, Papua New Guinea, the Philippines, Samoa, Solomon Islands, Sri Lanka, Tonga, Tuvalu, Vanuatu and Vietnam

Vertical Market Definitions

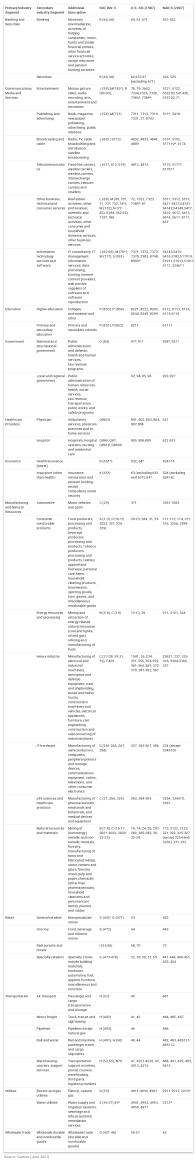
Gartner defines vertical segments as shown in Table 2. The International Standard Industrial Classification code (ISIC) and the Standard Industrial Classification (SIC) code is in wide use within the U.S., the North American Industry Classification System (NAICS).

The Worldwide Vertical Market Definitions Map indicates how Gartner defines markets by industry. IT services market share data is available by primary industry segment only. The IT services forecast by vertical market is reported in the quarterly forecast for all enterprise IT spending in Forecast: Enterprise IT Spending by Vertical Industry Market, Worldwide.

Table 2 also indicates our best effort with how Gartner definitions map to various industry codes, such as SIC, NAICS and ISIC. It should be noted that none of the industry codes map perfectly to each other or, by extension, to Gartner's industry taxonomy. As a result, when undertaking a data modeling effort that involves integrating data developed by different sources and methodologies, it is important to recognize that the result will be unique to the organization creating the model.

Table 2: Gartner Vertical Market Mapping to Industrial Codes

(Enlarged table in Appendix)



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Market Definitions and Methodology: IT Services - 2 December 2011

Market Definitions and Methodology: IT Services, 2010 - 23 September 2010

Dataquest Guide: IT Services Market Research Methodology and Definitions - 30 November 2009

Recommended by the Authors

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Market Share: IT Services, Worldwide 2020

Table 1: Geographic Taxonomy, IT Services Market Statistics

Region	Country (or Province or Market)
North America	Canada
	United States
Latin America	Argentina
	Brazil
	Chile
	Colombia
	Mexico
	Rest of Latin America
Western Europe	Austria
	Belgium
	Denmark
	Finland
	France
	Germany
	Greece

	Ireland
	Italy
	Netherlands
	Norway
	Portugal
	Spain
	Sweden
	Switzerland
	United Kingdom
	Rest of Western Europe
Eastern Europe	Czech Republic
	Hungary
	Poland
	Rest of Eastern Europe
Eurasia	Russia
	Rest of Eurasia
Middle East and North Africa	Israel
	Saudi Arabia

	Turkey
	Rest of Middle East and North Africa
Sub-Saharan Africa	South Africa
	Rest of Sub-Saharan Africa
Mature Asia/Pacific	Australia
	New Zealand
	Singapore
	South Korea
Greater China	China
	Hong Kong
	Taiwan
Emerging Asia/Pacific	India
	Indonesia
	Malaysia
	Thailand
	Rest of Emerging Asia/Pacific
Japan	Japan
Note: Gartner defines the Greater China region to include China, Hong Kong and Taiwan.	

Source: Gartner (June 2021)

Table 2: Gartner Vertical Market Mapping to Industrial Codes

Primary Industry Segment	Secondary Industry Segment	Additional Description	ISIC Rev. 4	U.S. SIC (1987)	NAICS (2007)
Banking and Securities	Banking	Monetary intermediation; activities of holding companies, trusts, funds and similar financial entities; other financial service activities, except insurance and pension funding activities	K (64, 66)	60, 61, 671	521-522
	Securities		K (64, 66)	62,637,67 (excluding 671)	523, 525
Communications, Media and Services	Entertainment	Motion picture, video, audio recording, arts, entertainment and recreation	J (59); M(742*); R (90-93);	78, 79, 3652, 7334,7335, 7336, 7384*, 7389*,	5121, 5122, 532230, 541430, 519120, 71
	Publishing and advertising	Book, magazine, newspaper publishing; advertising, public relations	J (58); M(731)	7311, 7312, 7319, 7331, 27, 8743	5111, 5418
	Broadcasting and cable	Radio, TV, cable	J (60) J (613)	4832, 4833, 4841, 4899	5151, 5152, 517110*,

		broadcasting and distribution, satellite broadcasting			5174
	Telecommunications	Fixed-line carriers, wireline carriers, wireless carriers, interexchange carriers, telecom carriers and resellers	J (611, 612, 619)	4812, 4813	5172, 5171*, 517911
	Other business, technical and consumer services	Real estate activities; other professional, scientific and technical activities; other consumer and household domestic services; other business services	L (68); M (69, 70*, 71, 72*, 732, 74*); M (732); N (77-82); S (94, 952,96), T (97, 98)	72, 7322, 7323, 7389*, 81	5311, 5312, 5313, 5411-5413,54141-54142,54149,5417, 5419, 5612, 5613, 5616, 5617, 8111, 812
	Information technology services and software	IT consultancy, IT management, information services, data processing, hosting, internet content providers, web portals; suppliers of software and software reproduction	J (62-63); M (70*); M (71*); S (951)	7371, 7372, 7373-7379, 7383, 8748, 8999*	54143,5415-5416,5182,517919, 51911,51913,51919, 5112, 334611

Education	Higher education	Colleges, professional and other	P (853), P (854)	8221, 8222, 8243, 8244, 8249, 8299	6112, 6113, 6114, 6115,6116
	Primary and secondary education	Primary and secondary schools	P (851), P(852)	8211	61111
Government	National and international government	Public administration and defense; health and human services; tax/revenue programs	O (84)	97*; 91*	928*; 921*
	Local and regional government	Public administration of human resources, health, social services, tax/revenue, transportation, public works, and safety programs		92, 94, 95, 96	922-927
Healthcare Providers	Physician	Ambulatory services, physician practices and at-home services	Q8620	801, 802, 803, 804, 807,808	621
	Hospital	Hospitals, hospital systems, nursing and residential care	Q869, Q87, Q8610, Q8690	805, 806,809	622 623
Insurance	Health insurance (payer)		K (651*)	632, 64*	524114
	Insurance (other than	Insurance, reinsurance	K (65*)	63 (excluding 632 and	524 (excluding 52414)

	health)	and pension funding, except compulsory social security		637), 64*	
Manufacturing and Natural Resources	Automotive	Motor vehicles and parts	C (29)	371	3361-3363
	Consumer nondurable products	Food producers, processing and products, beverage producers, processing and products, tobacco producers, processing and products, textiles, apparel and footwear, personal care items, household cleaning products, housewares, sporting goods, toys, games, and miscellaneous nondurable goods	A (1-3), C(10-15, 2023, 321-324, 329)	20-23, 284, 31, 39	111-112, 114, 311-316, 3256, 3399
	Energy resources and processing	Mining and extraction of energy-related natural resources (coal and lignite, oil and gas), refining and manufacturing of fuels	B (5-6), C (19)	12-13, 29	211, 2121, 324

	Heavy industry	Manufacturing of electrical and industrial machinery, aerospace and defense equipment, train and shipbuilding, buses and heavy trucks, construction machinery and vehicles, electrical appliances, furniture; civil engineering, construction and subcontracting of industrial plants	C (27-28, 30-31, 33), F429	1541, 16, 234, 351-356, 358-359, 361-364, 369, 372-379, 381-382, 387	23621, 237, 333, 335, 3364-3366, 337
	IT hardware	Manufacturing of semiconductors, computers, peripheral printers and storage devices, communications equipment, radios, televisions, and other consumer electronics	C (261-265, 267-268)	357, 365-367, 386	334 (except 334510)
	Life sciences and healthcare products	Manufacturing of pharmaceuticals, medicinals and botanicals, and medical devices and equipment	C (21, 266, 325)	283, 384-385	3254, 334510, 3391

	Natural resources and materials	Mining of (nonenergy) metallic and non-metallic minerals; forestry; manufacturing of basic and fabricated metals, stone, cement and glass, forestry, wood, pulp and paper, chemicals (other than pharmaceuticals, household cleansers and personal care items), plastics and rubber	B (7-8), C (16-17, 2021-2022, 2029, 22-25)	10, 14, 24, 26, 281-282, 285-289, 30, 32-34	113, 2122, 2123, 321-322, 325-327 (except 3254 and 3256), 331-332
Retail	General retailers	Nonspecialized stores	G (45)*, G (471)	53	452
	Grocery	Food, beverage and tobacco stores	G (472)	54	445
	Restaurants and hotels		I (55,56)	58, 70	72
	Specialty retailers	Specialty stores include building materials, hardware, automotive, fuel, apparel, furniture, miscellaneous and nonstore	G (473-479)	52, 55, 56, 57, 59	441-444, 446-451, 453, 454
Transportation	Air transport	Passenger and cargo	H (51)	45	481

		transportation and storage			
	Motor freight	Truck, transit and sightseeing	H (492)	41, 42	484, 485, 487
	Pipelines	Pipelines except natural gas	H (493),	46	486
	Rail and water	Rail and maritime passenger travel and cargo shipments	H (491), H (50)	40, 44	482, 483, 485111-485112
	Warehousing, couriers, support services	Transportation support activities, postal, couriers, warehousing, third-party logistics providers	H (52,53); N79	47, 4221-4226, 43, 4513, 4215	488, 491, 492, 493, 5615
Utilities	Electric and gas utilities	Electric, natural gas	D (35)	4911-4939, 4961	2211-2212, 2213*
	Water utilities	Water supply and irrigation systems; sewerage and refuse systems; remediation services	E (36-37) 49*	4941, 4952, 4953, 4959, 4971	2213*
Wholesale Trade	Wholesale durable and nondurable goods	Wholesale trade (durable and nondurable goods)	G (45*, 46)	50-51	42

Source: Gartner (June 2021)