2014 PISA IT Survey Results

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Prepared for: Pharmaceutical Information System Association

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2014 Survey Demographics

Member Participation

- Survey participation was 11 out of 21 PISA members

AstraZeneca	Biogen	BMS	Eli Lilly	Genentech	GSK
J&J	Merck	Novartis	Pfizer	Purdue	

- The scope of the survey covered the Pharmaceutical business only; diagnostics, and consumer/over the counter businesses were **excluded.**
- All of participants did not responded to all of the survey questions, due either to corporate restrictions, definitional differences or an inability to provide the data within the time constraints.
- Most participants responded with both global and US only data, but several responded on an either/or basis.

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Executive Summary

Findings – Year-to-Year Changes

- There were some large shifts from the 2013 data in this year's survey, some of which can be attributed to the change in participants or their responses
  - Changes in company FTEs per IT FTE
    - US only decreased to 14, resulting mostly from some high ratio companies not participating.
  - Outsourcing spend as a percentage of overall operating expense rose considerably
    - Several participants reported no outsourcing numbers and the average is driven by a few highly outsourced organizations.
  - When broken down by revenue size, there' were some sizable shifts in the metrics.
    - Global View:
      - IT spending per company employee is up 30% to $33K in smaller companies
      - Revenue per employee is up 30% in smaller companies, but down 35% in midsized companies
      - IT expense as a percent of revenue is up (from 3.8% to 4.9%) in midsized companies along with IT capital investment as a percent of revenue.
      - Large companies saw a drop in IT operating expense as a percent of company operating expense from 7.8% to 6.7%

Findings – Year-to-Year Changes (continued)

- US Only View:
  - IT spending per company employee is up 50% to $36K in smaller companies, but down 8% in medium sized companies. The Gartner average is also down 8% in midsized companies.
  - IT spend as a percent of revenue is down over 50% in all of the size categories for US Only.
    - This extreme change is driven by the change in participants for 2014.
  - IT operating expense as a percent of company operating expense is up 50% in midsize companies, but down 25% in the large company group.
    - These large swings are also likely the result of the change in participants for 2014.

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Overall Findings

- IT spending per overall employee remains nearly 50% higher in the US than on a global basis, in both capital and ongoing operations.
  - PISA spending per overall employee (globally and US only) continues to be considerably higher than the Gartner average – the US only data set is double the average – although US only revenue per employee is nearly double the Gartner average. Revenue per employee on a global basis is on par with the Gartner average.
  - PISA IT spending per employee is similar to financial service companies who also have high regulatory requirements.
  - PISA overall spending distributions (hardware, software, personnel and outsourcing) diverge from the Gartner average in outsourcing where the levels are considerably higher (42% globally and 57% US vs. 27% for the Gartner average). There are differences in the distribution to IT functional areas; PISA places much more resources into applications development (up over 30% from 2013) and support than average and less in end-user and data center areas.
- Capital spending for the current year is again expected to rise in both the global and US views despite anticipated flat or declining revenue and operating expense. The Gartner database indicates expected increases in both revenue and operating expense.
- Despite fluctuations in the size demographic breakdowns, both global and US IT spending as a percent of revenue remain relatively flat – only 1/10 of a percent rise.
- In the US, total IT spending (capital and operating) increased to 7.6% of overall operating expense – still nearly double the Gartner average of 3.9%.

Overall Findings

- The mix of contractors to in-house IT staffing has changed for 2014
  - Contractor use rose to 34% in the global view, but decreased to 25% in the US.
- Research and Development and Marketing and Sales dominate the work effort both globally and in the US, albeit with small decreases in the US. Manufacturing and Operations has a larger share of the work effort in the global view than in the US.
- Applications age shows some changes. US applications older than five years increased to nearly half the portfolio (47%), matching the global view. However, the percentage of global applications less than three years old moved up to 30%.
- Software as a Service (SaaS) continues to grow in the US view (now up to 17%), but still makes up a small percentage of applications hosting model.
- In social media, the use of Yammer and blogs continue as the predominant networks but Twitter has replaced Wikis as next in line. Knowledge sharing and networking are now matched as the primary objectives with content sharing decreasing.
- No participants responded that e-Pedigree and Product Serialization were on hold in 2014 compared with 15% and 8% respectively in 2013.
- PISA investment priorities vary from the Gartner rankings.
  - Collaboration, digitalization and industry specific applications are much higher priorities for PISA while networking, ERP, and security rank lower.

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Summary Metrics and percentage change from 2013

2014 Metric	Global	US Only	Gartner Avg.
Company FTE per IT FTE (including contractors)	25 **	14 **	31
Company FTE per In-house IT FTE	32 **	23 **	43
IT Expense Spending per Company FTE	$23,103 ***dn 2%***	$34,103 ***flat***	$17,428 ***up 7%***
Revenue per Company FTE	$644,776 ***up 7%***	$1,138.648 ***up 10%***	$656.525 ***up 2%***
IT Expense (capital & operating) % of Revenue	3.7% ***up 7%***	3.3% ***up 10%***	3.9% ***up 2%***
IT Capital Investment % of Revenue	.5% ***up 25%***	.6% ***dn 2%***	.9% ***up 29%***
$ Spend Outsourced (including Transmission) as % of IT OpEx	42.3% **	51.6% **	26.8% ***dn 37%***
$ Spend Outsourced – Managed Services only	23.9%	17.8%	N/A
IT OpEx as % of Company OpEx	5.9% ***flat***	6.6% ***up 12%***	2.8% ***up 3%***
Highest Ranked Investment Priority	BI/Analytics		BI/Analytics
Highest Ranked IT Activity	Increasing Enterprise Growth		N/A

**** year-year changes were highly impacted by the change in survey participants and not reported here**

Gartner 2014 averages are derived from 726 enterprises across all industries with revenue above $2 billion per year

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Summary Metrics – Global Grouped by Revenue (PISA/*Gartner*)

2014 Metric	< $16B	$16B - $30B	>$31B
Company FTE per IT FTE (including contractors)	20/*27*	39/*24*	20/*29*
Company FTE per In-house IT FTE	28/*35*	44/*38*	27/*43*
IT Expense Spending per Company FTE	$33,007/*$17,073*	$21,315/*$18,784*	$19,046/*$14,947*
Revenue per Company FTE	$950,766/*$636,539*	$437,033/*$688,965*	$595,653/*$687,081*
IT Expense (capital & operating) % of Revenue	3.8%/*3.0%*	4.9%/*3.2%*	3.1%/*2.6%*
IT Capital Investment % of Revenue	.7%/*.8%*	.6%/*.7%*	.5%/*.9%*
$ Spend Outsourced (including Transmission) as % of IT OpEx	38%/*26%*	34%/*28%*	9.6%/*33%*
IT OpEx as % of Company OpEx	4.9%/*2.6%*	5.5%/*2.2%*	6.7%/*2.4%*
Highest Ranked IT Activity (PISA)	Increasing Enterprise Growth	None ranked highest by more than 1	None ranked highest by more than 1

Gartner 2014 averages are derived from global enterprises across all industries with revenue above $2 billion per year

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Summary Metrics – US Only Grouped by Revenue (PISA/*Gartner*)

2014 Metric	< $8B	$8B - $13B	>$13B
Company FTE per IT FTE (including contractors)	12/*27*	14/*29*	16/*40*
Company FTE per In-house IT FTE	21/*36*	28/*50*	21/*64*
IT Expense Spending per Company FTE	$36,774/*$16,019*	$46,344/*$15,551*	$25,239/*$14,589*
Revenue per Company FTE	$1,374,179/*$691,418*	$1,250,466/*$740,319*	$907,083/*$562,983*
IT Expense (capital & operating) % of Revenue	2.7%/*3.1%*	3.7%/*2.4%*	3.3%/*2.9%*
IT Capital Investment % of Revenue	.3%/*.7%*	.4%/*.8%*	.8%/*.8%*
$ Spend Outsourced (including Transmission) as % of IT OpEx	51%/*22%*	77%/*20%*	20%/*27%*
IT OpEx as % of Company OpEx	5.5%/*2.8%*	9.6%/*2.6%*	5.3%/*2.9%*
Highest Ranked IT Activity (PISA)	Improving IT Applications and Infrastructure	Reducing Enterprise Costs	Increasing Enterprise Growth

Gartner 2014 averages are derived from US enterprises across all industries with revenue above $2 billion per year

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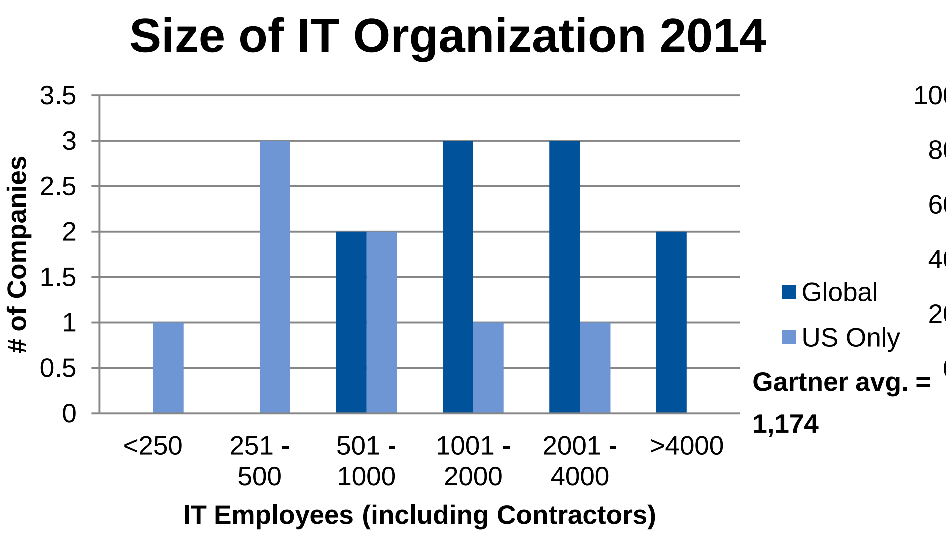
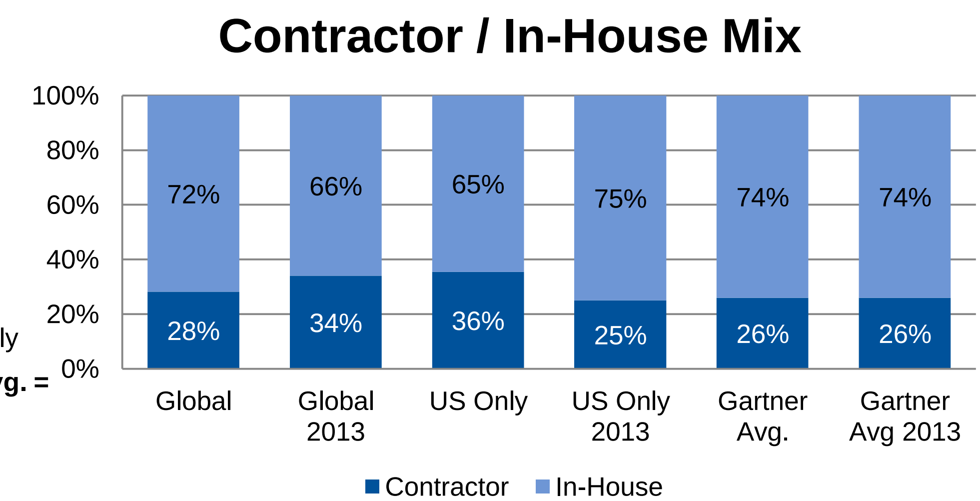
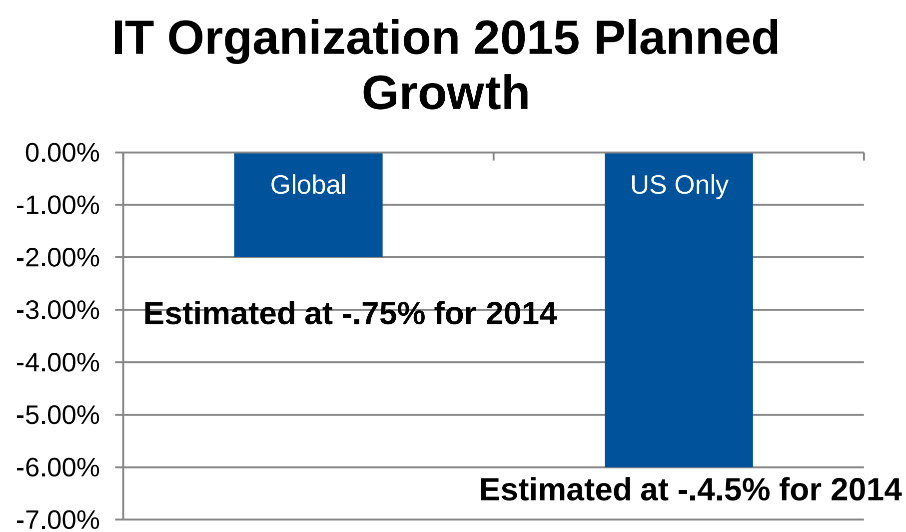
Detailed Category Review

IT Organization – Size and Growth







Note: Gartner does not currently track this metric

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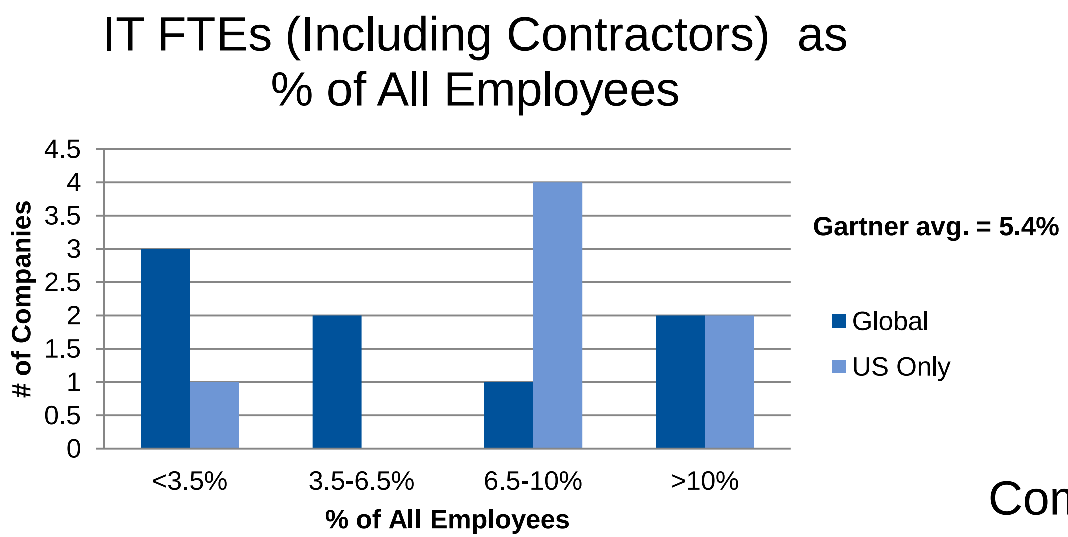
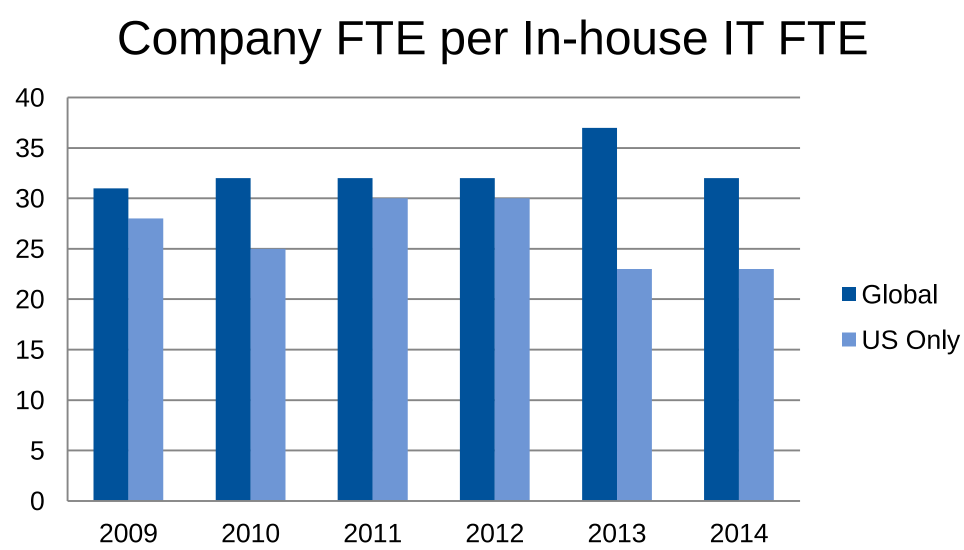
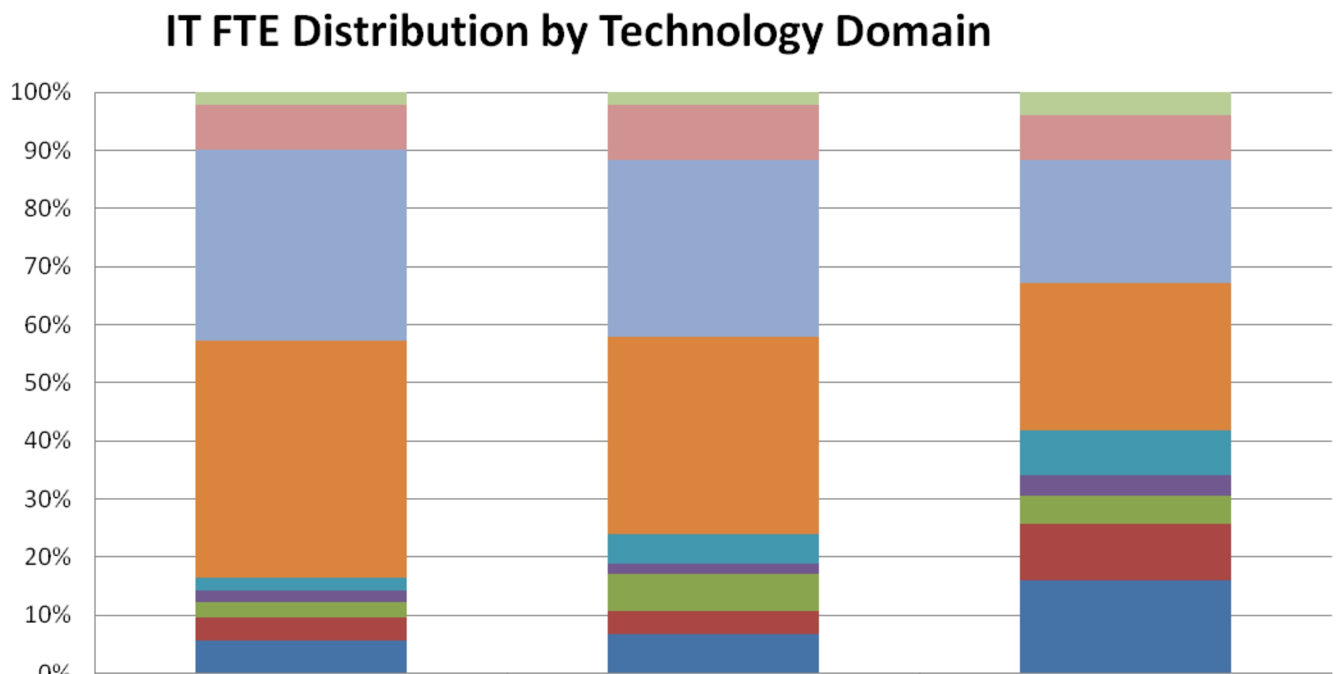
IT Organization: Company vs. IT





Note: Gartner does not currently track this metric

IT Organization: FTE Distribution



	Global	US Only	Gartner Avg.
Finance & Admin	2%	2%	4%
Corporate IT Mgmt	8%	10%	8%
Applications Support	33%	30%	21%
Applications Developmen	41% Up from 36%	34% Up from 23%	25%
Data Network	2%	5%	8%
Voice Network	2%	2%	3%
IT Service Desk	3%	6%	5%
End-User Computing	4%	4%	10%
Data Center	6% Down from 8%	7% Down from 9%	16%

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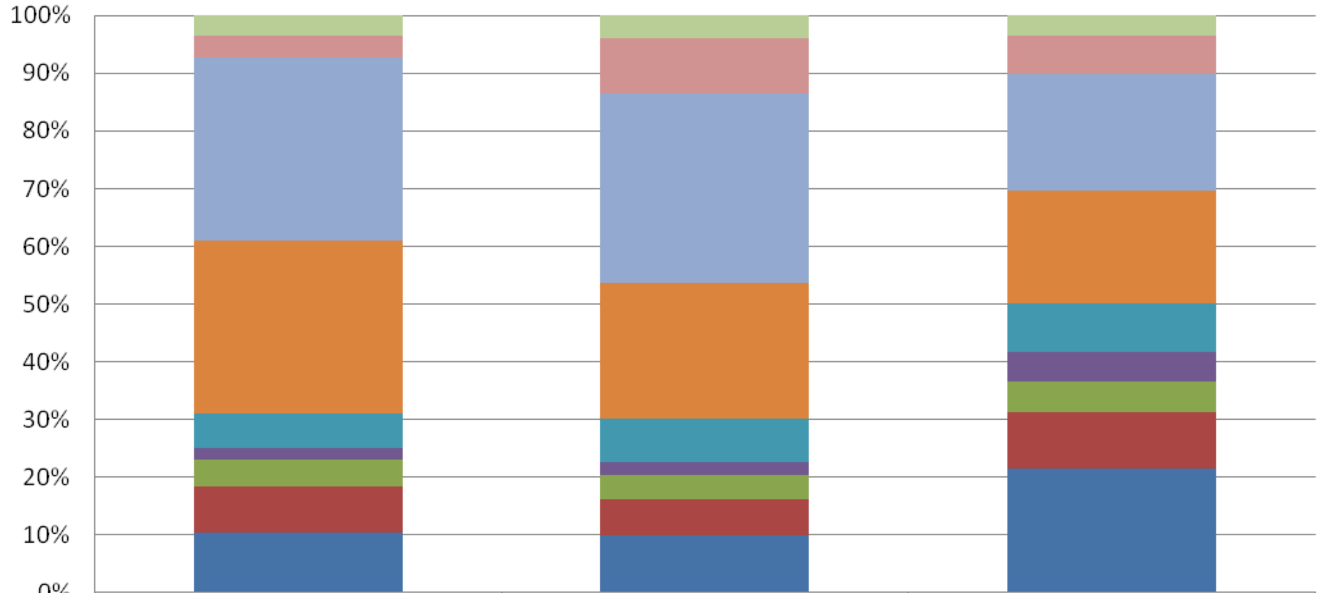
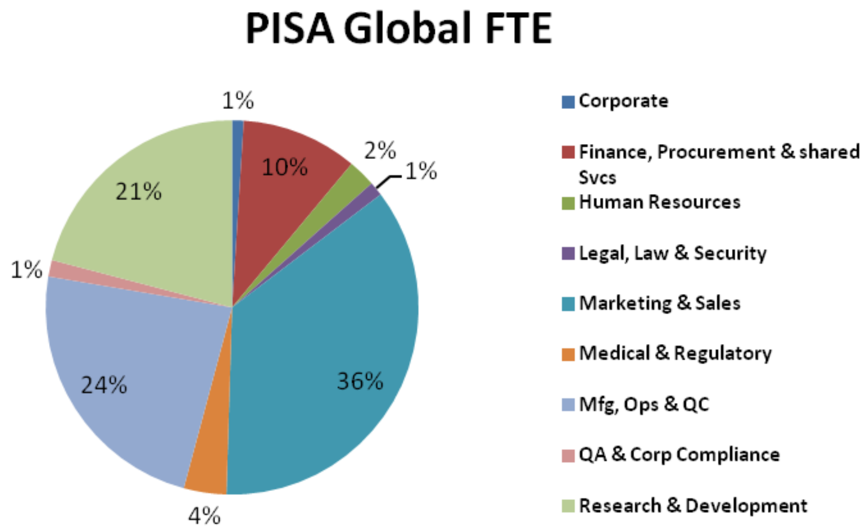
IT Spend: Budget Distributions

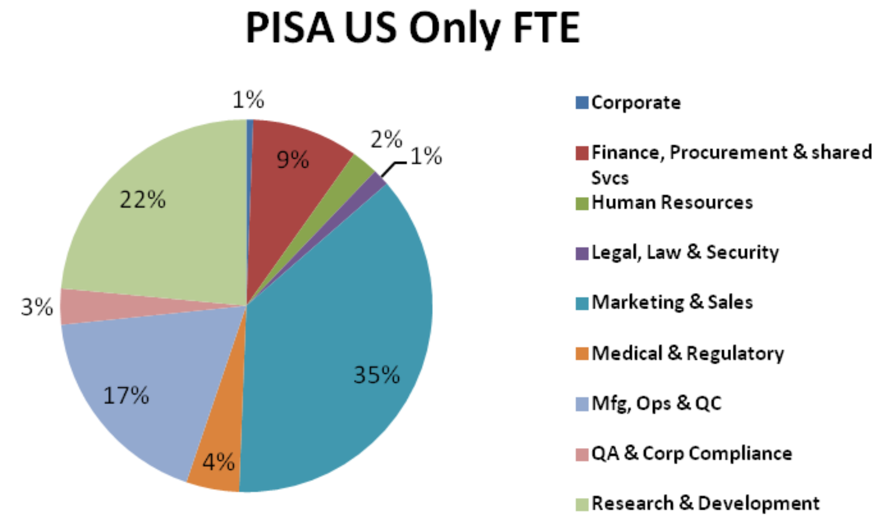
IT Budget Distribution by Technology Domain



	Global	US Only	Gartner Avg.
Finance & Admin	4%	4%	4%
Corporate IT Mgmt	4%	10% Up from 7%	6%
Applications Support	32% Down from 36%	33%	20%
Applications Development	30% Up from 22%	24% Up from 21%	19% Down from 24%
Data Network	6%	8%	8%
Voice Network	2%	2%	5%
IT Service Desk	5%	4%	5%
End-User Computing	8%	6%	10%
Data Center	11%	10%	21% Up from 16%

IT Organization – Applications Development & Support Work Distribution





2013 Percentages where > 10% Change

Finance	14%
Marketing	33%
Mfg. Ops	21%

2013 Percentages where > 10% Change

Finance	13%
Marketing	28%
R&D	26%

Note: Gartner does not currently track these metrics

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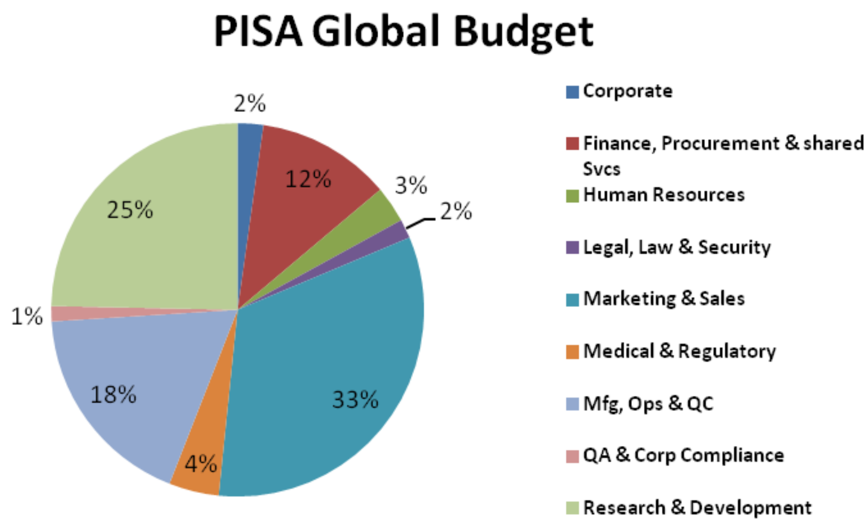
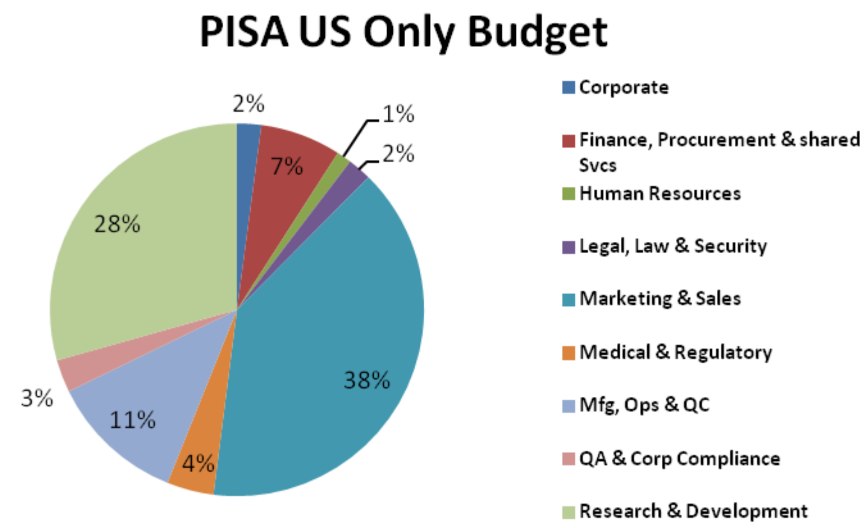
IT Organization – Applications Development & Support Budget Distribution





2013 Percentages where > 10% Change

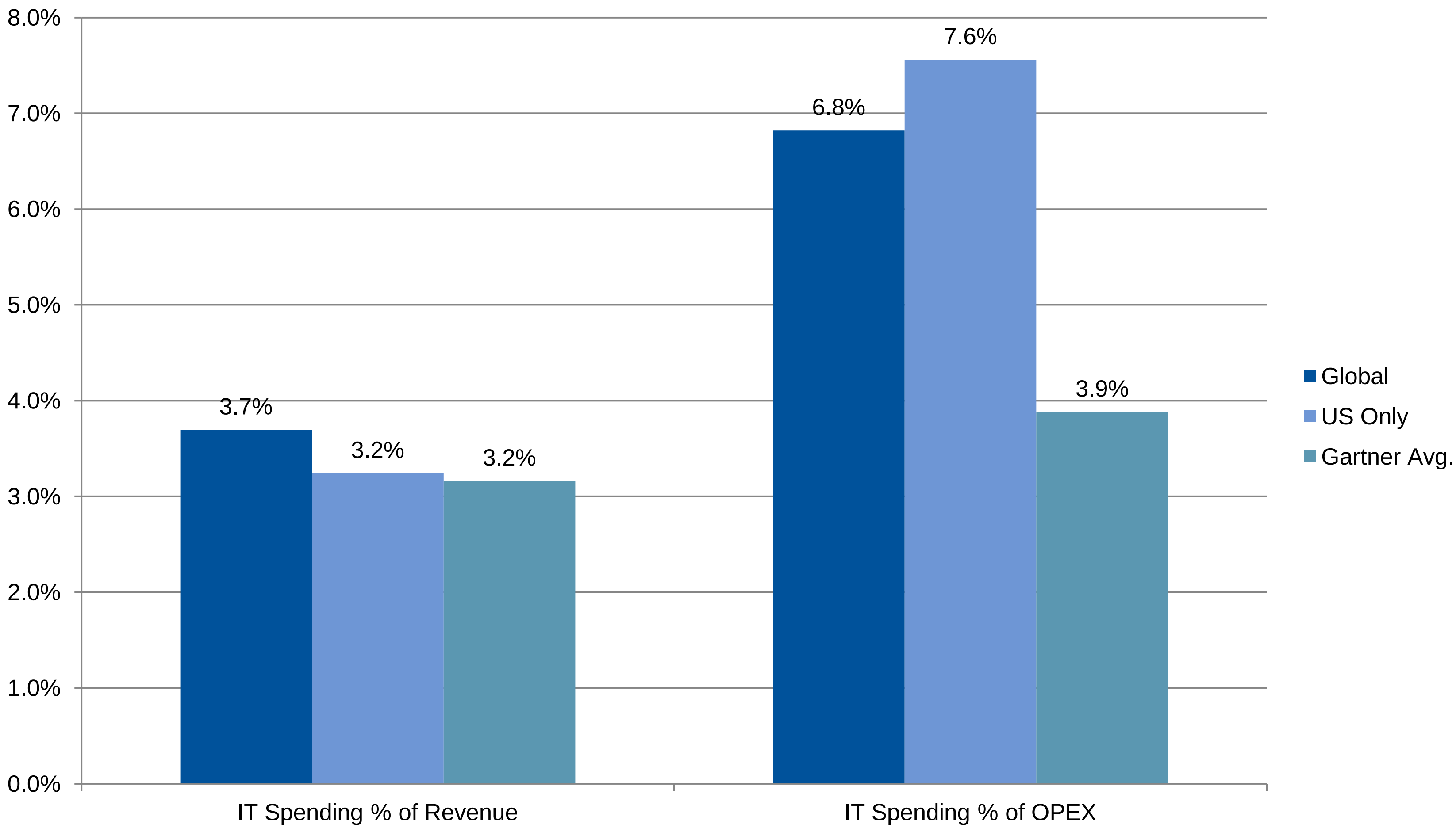
Corporate	1%
Finance	15%
Med./Reg.	3%

2013 Percentages where > 10% Change

Finance	13%
HR	3%
Legal/Law	3%
R&D	23%

Note: Gartner does not currently track these metrics

IT Spend: Capital and Operating as % of Overall Revenue and Operating Expense



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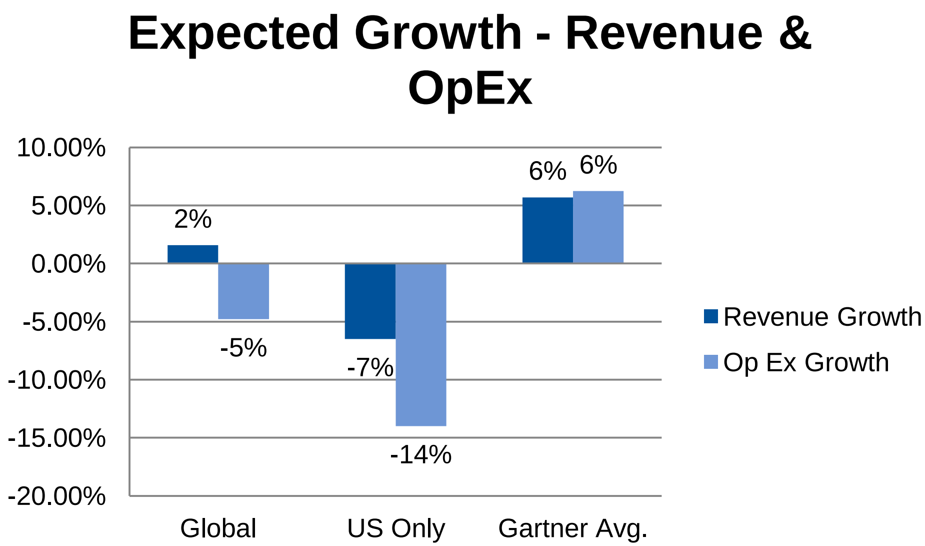
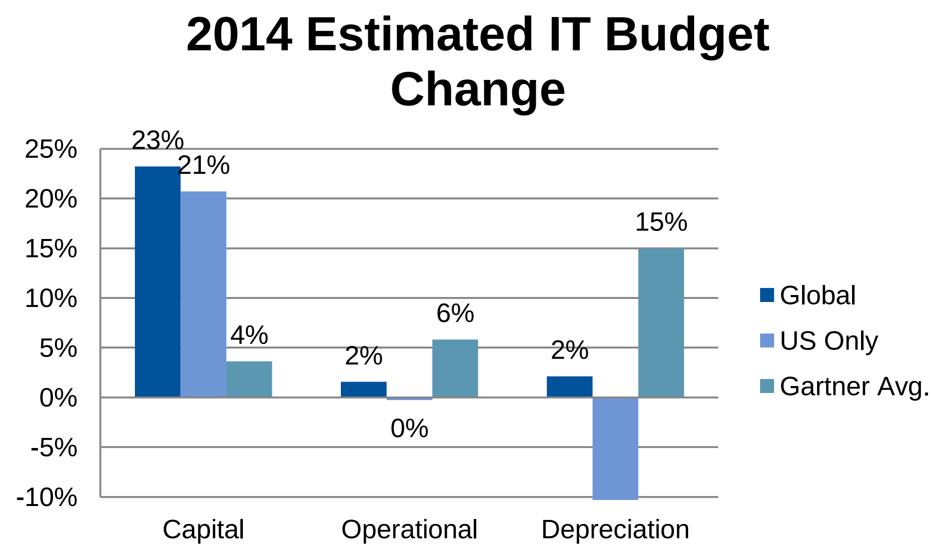
IT Spend: Trend - Capital and Operating as % of Revenue

IT Spending % of Revenue					
	2010	2011	2012	2013	2014
Global	3.1%	2.8%	3.3%	3.6%	3.7%
US Only	3.9%	3.0%	3.6%	3.4%	3.3%
Gartner Avg.	3.4%	3.2%	3.3%	3.0%	3.2%

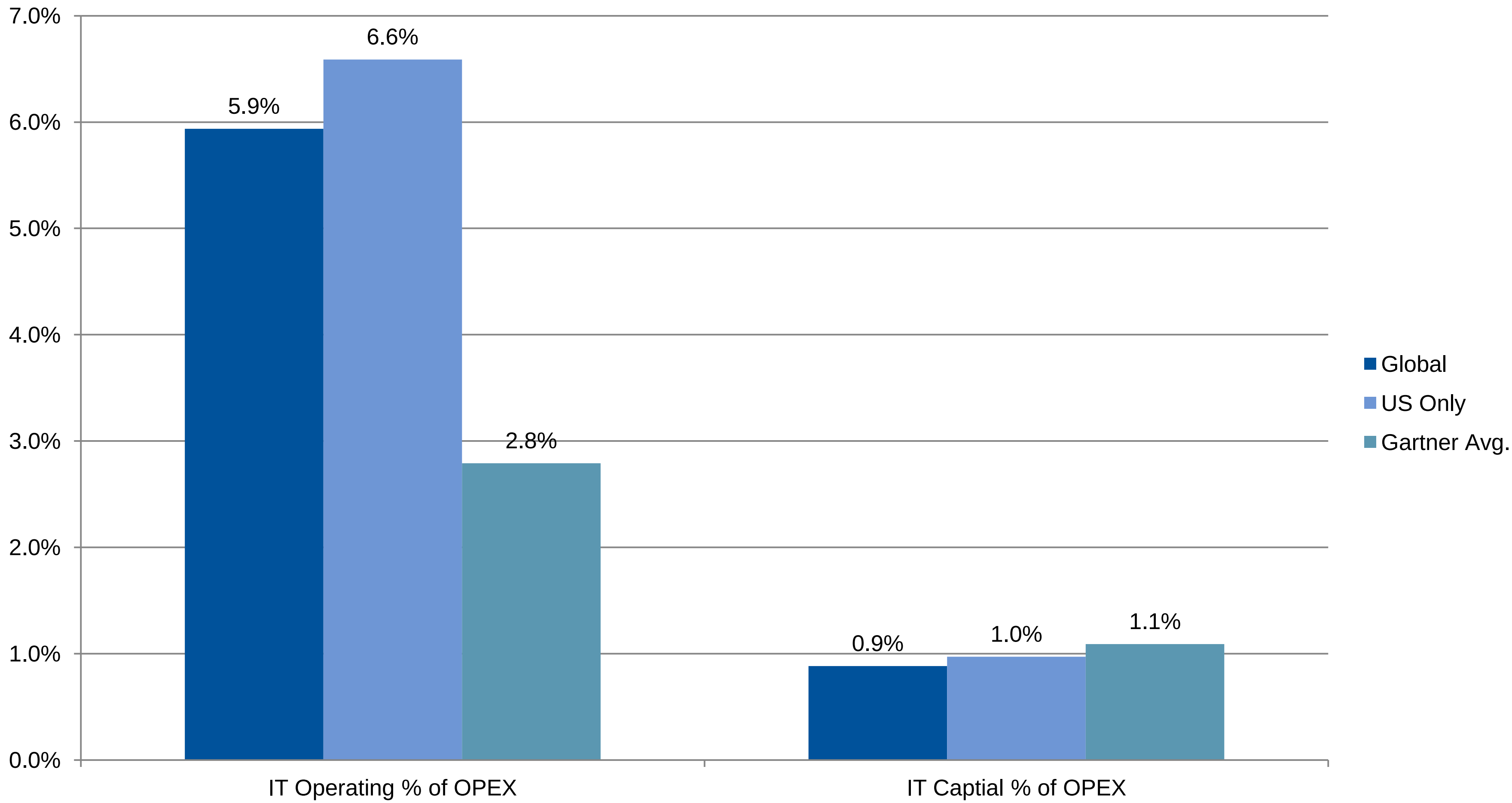
Gartner Averages are derived from 726 enterprises with revenue above $2 billion per year

IT Spend: Expected Changes





IT Spend: IT Operating Expense and Capital as % of Company Operating Expense



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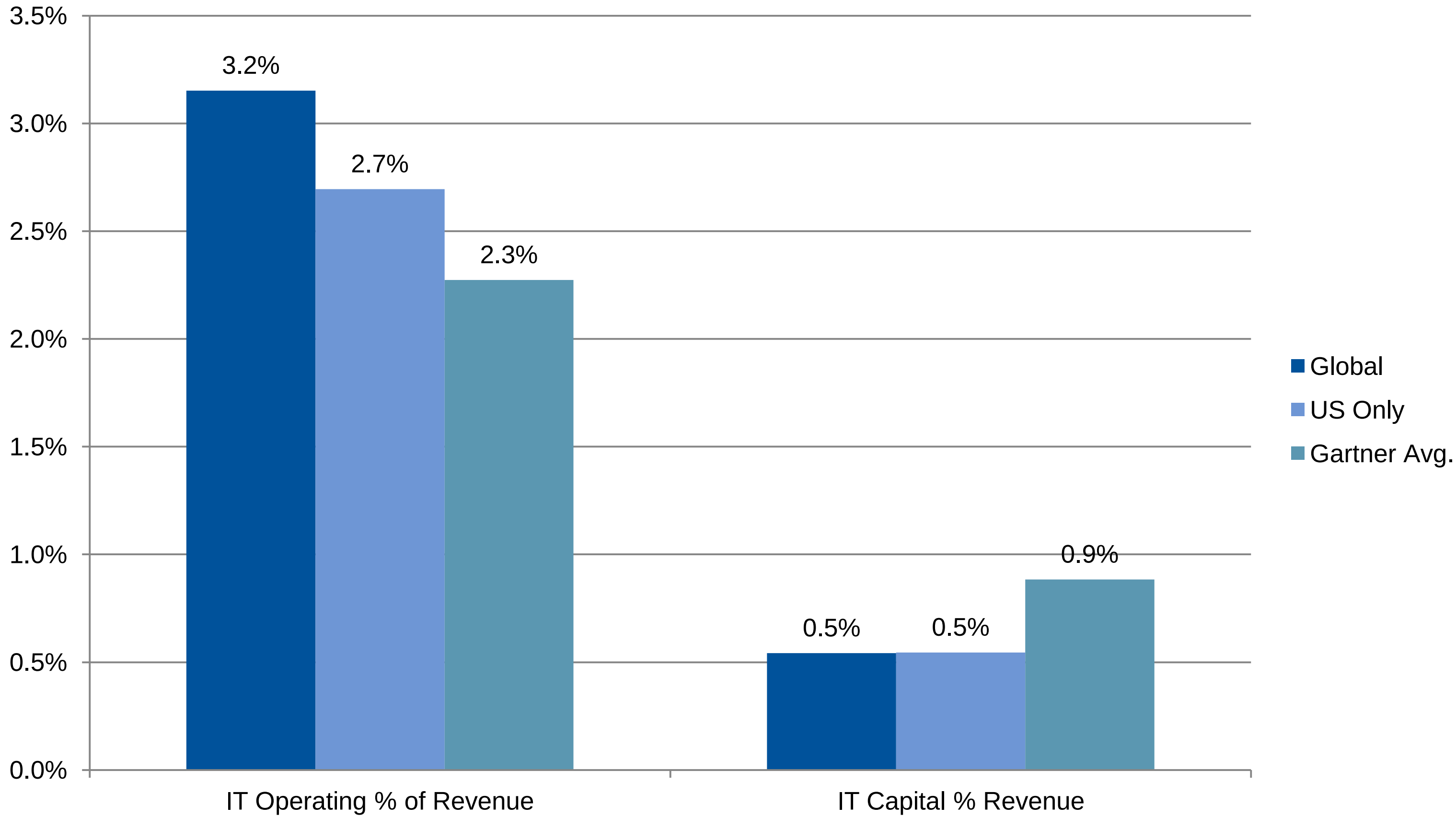
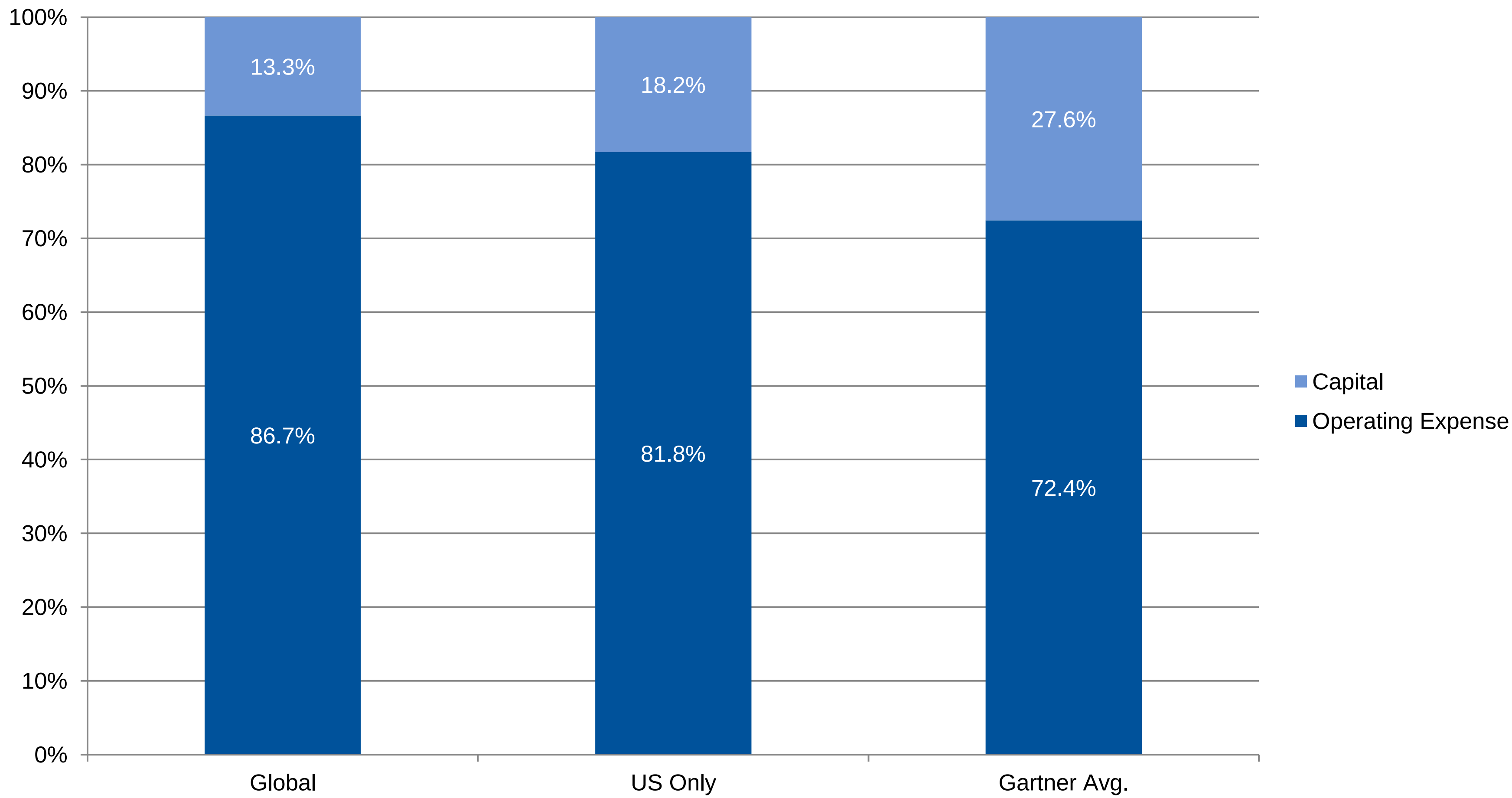
IT Spend: IT Operating Expense and Capital as % of Revenue



IT Spend: Capital vs. Operating Expense



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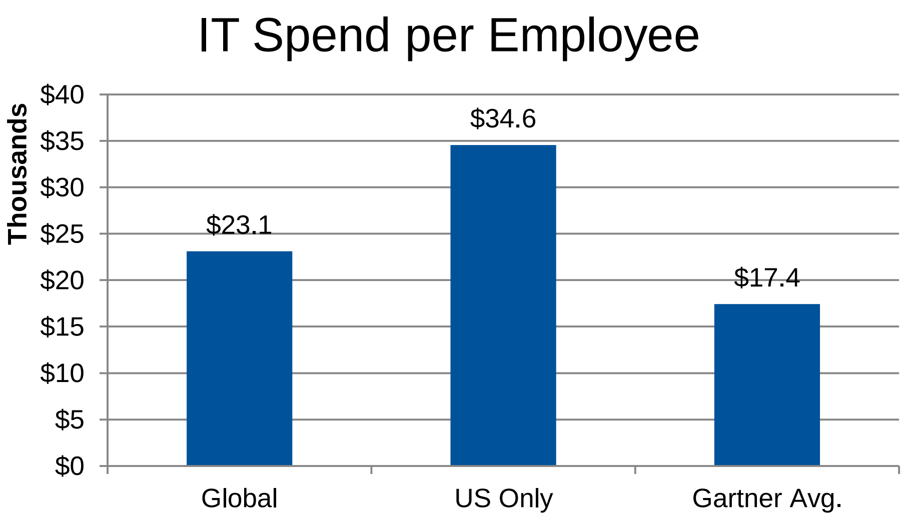
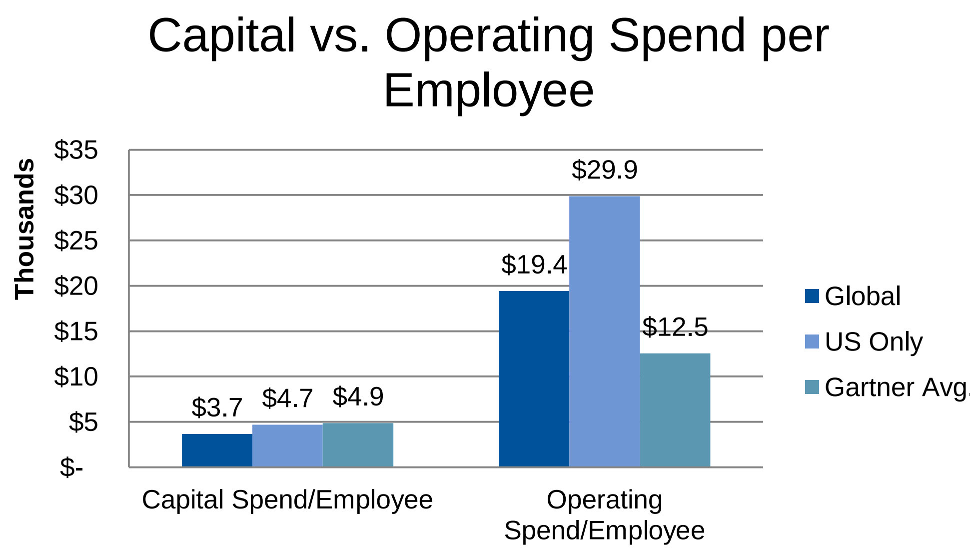
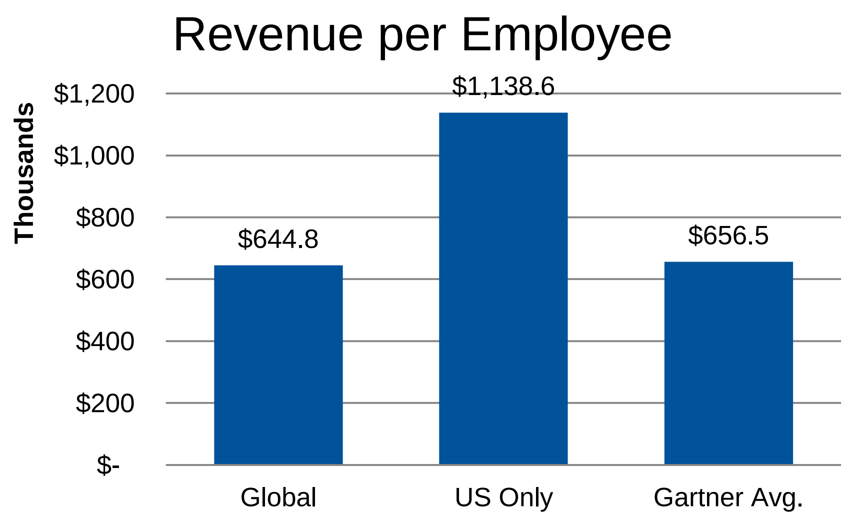
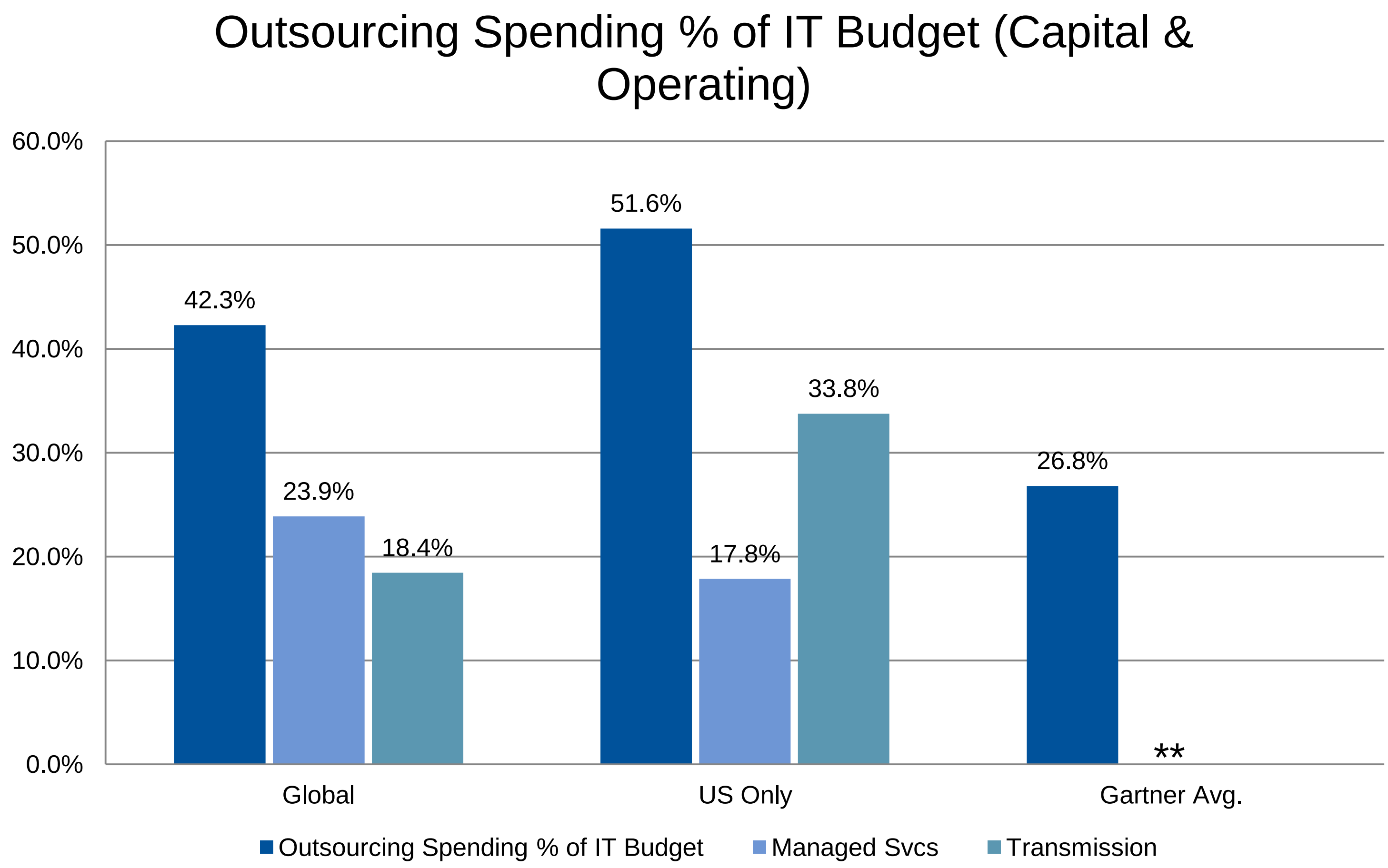
IT Spend: Per Company Employee







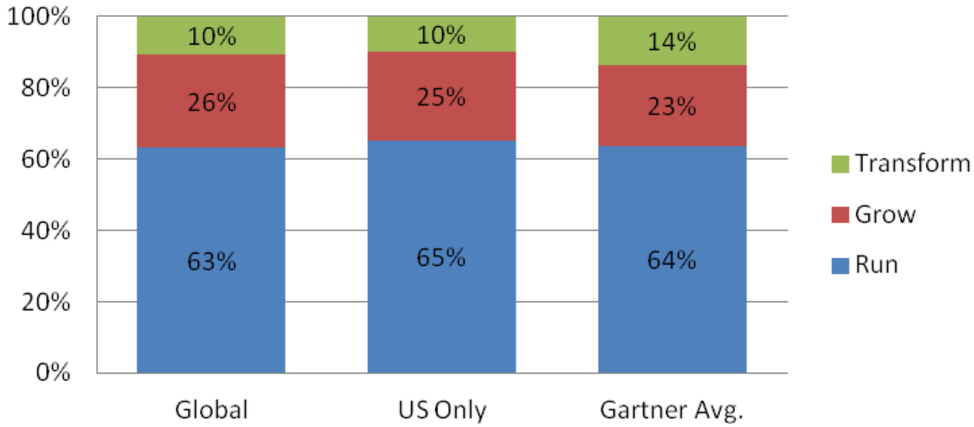
IT Spend: Outsourcing



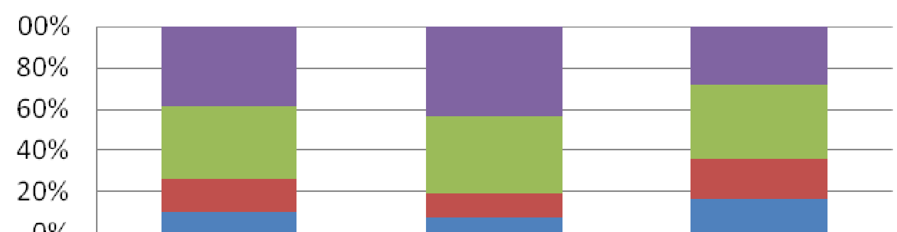
** Gartner does not separate Managed Services from Transmission in its database

IT Spend: Budget Distributions

IT Budget Distribution - Run, Grow, Transform



IT Budget Distribution by Cost Category



	Global	US Only	Gartner Avg.
Outsourcing	42%	52%	27%
Personnel	38%	45%	33%
SW	17%	14%	18%
HW	11%	9%	16%

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IT Metrics: Age of Applications and Hosting Model - Definitions

- The age of the applications in use was determined by the point in time the application was first developed or substantially re-engineered.
- The hosting models are defined as:
  - Internal: Company owned or outsourced data centers where the company has some or complete control over the environment itself and how it's managed.
  - Cloud: Company developed applications are run on vendor provided platforms that are charged based on a choice of standard configurations.
  - SaaS: A software subscription model where vendor provided software is hosted and delivered via the internet. Hardware and software maintenance costs are borne by the vendor.

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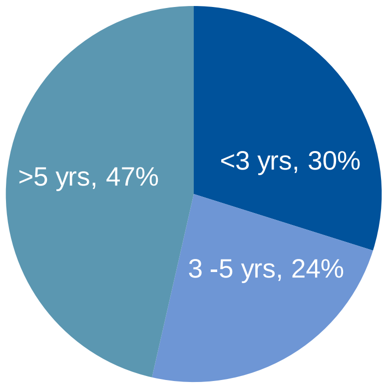
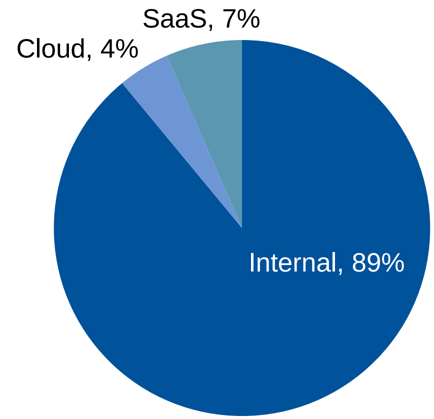
IT Metrics: Age of Applications and Hosting Model

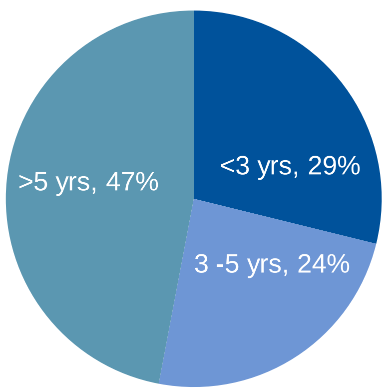
PISA Global Application Age



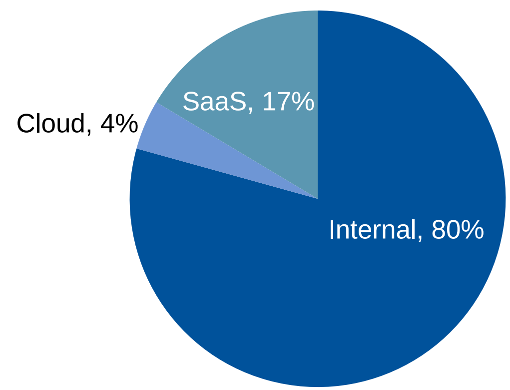
PISA Global Hosting Model



PISA US Only Application Age

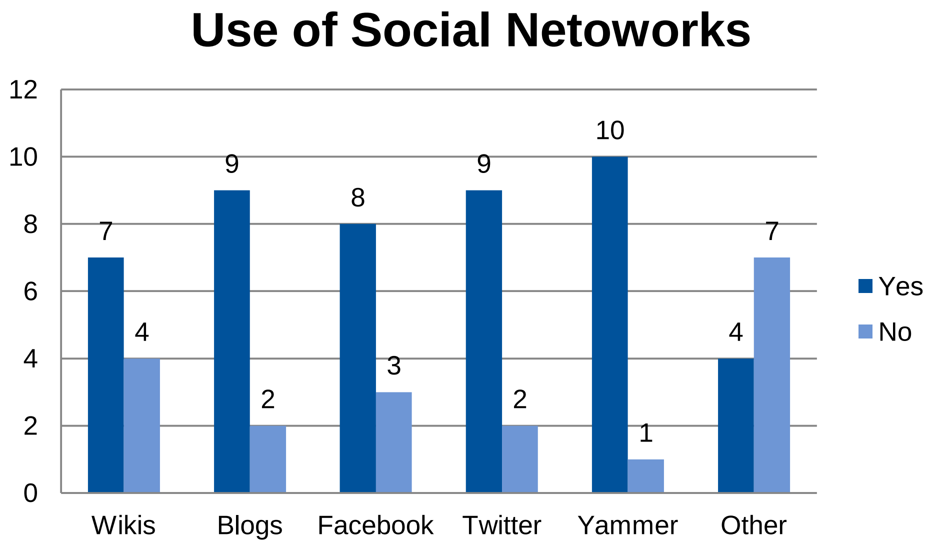


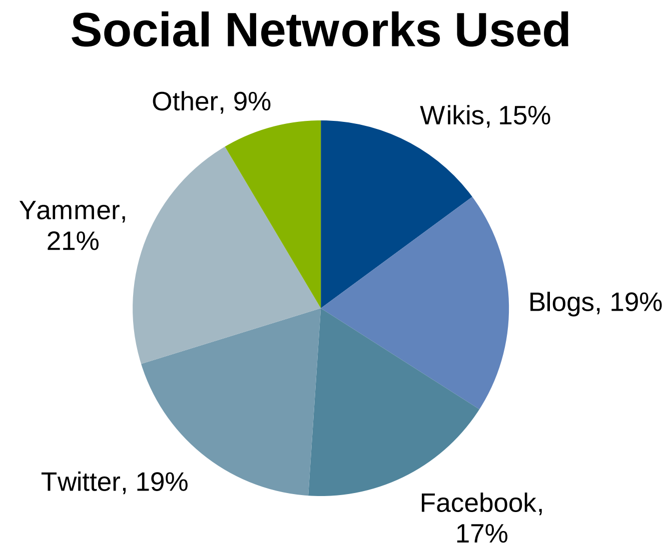
PISA US Only Hosting Model

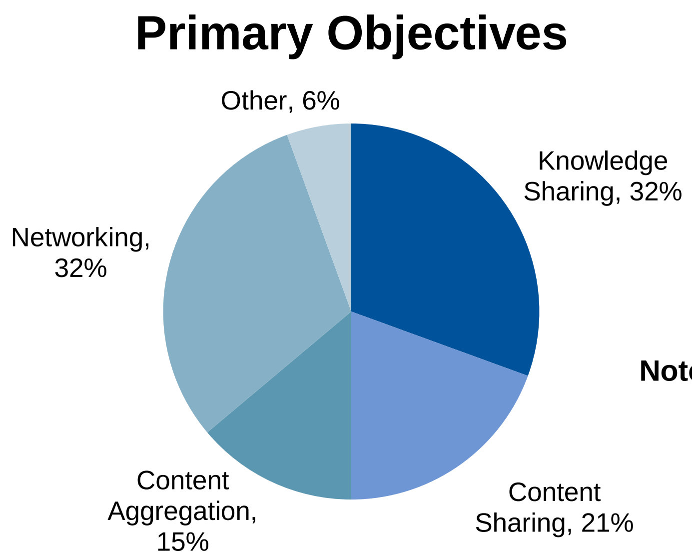


Note: Gartner does not currently track these metrics

IT Policies: Social Networks



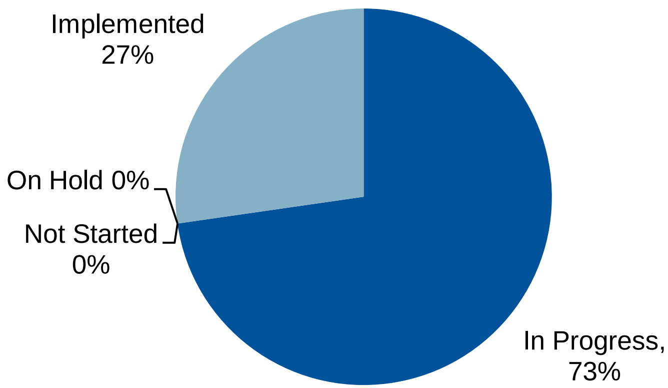




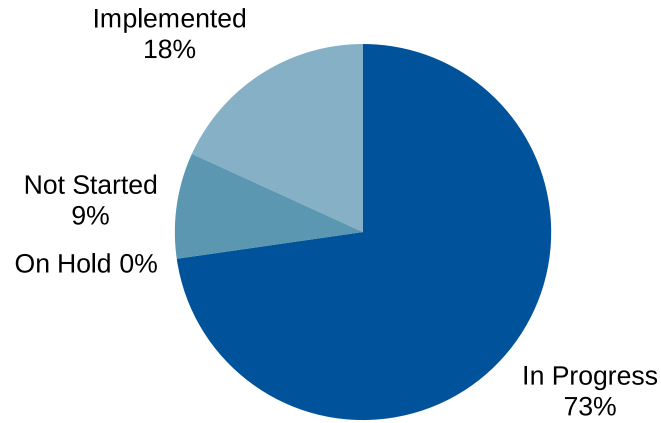
Note: Gartner does not currently track these metrics

IT Initiatives: Product Serialization & e-Pedigree

Product Serialization Status



e-Pedigree Status



Note: Gartner does not currently track these metrics

IT Initiatives: Business Strategies

Strategy	PISA 2014 Ranking	PISA 2013 Ranking
Increasing enterprise growth	1	1
Improving IT applications and infrastructure	2	4
Improving business process	3	6
Implementing analytics and big data	4	7
Delivering operational results	5	9
Attracting and retaining new customers	6	8
Improving efficiency	7	5
Attracting and retaining the workforce	8	3
Creating new products or services	9	10
Reducing enterprise costs	10	2

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IT Initiatives: Investment Priorities

Investment Priority	PISA Ranking	Gartner Ranking
BI / Analytics	1	1
Digitalization/Digital Marketing	2	7
Industry-specific Applications	3	9
Collaboration	4	12
Mobile	5	3
Cloud	6	5
Legacy Modernization	7	11
Infrastructure and Data Center	8	2
ERP	9	4
Customer Relationship Management	10	10
Networking, Voice and Data Communications	11	6
Security	12	8

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Demographics – Gartner $2B+ Companies Spending as Percent of Revenue and OPEX

Industry	IT Spend % Revenue	IT Spend % OPEX
Accident And Health Insurance And Medical	3.0%	3.1%
Chemicals And Allied Products	2.5%	3.3%
Civic, Social, And Fraternal Associations	6.8%	7.9%
Colleges, Universities, Professional Schools, And	3.6%	3.7%
Communications	5.0%	5.7%
Computer Programming, Data Processing, And	4.5%	5.8%
Construction	1.7%	2.0%
Consumer Goods	2.3%	2.8%
Drugs	3.0%	3.8%
Electric, Gas, And Sanitary Services	2.3%	2.8%
Electrical Industrial Apparatus	2.0%	2.3%
Electronic And Other Electrical Equipment And Components, Including Computer Equipment	2.5%	2.9%
Finance, Insurance, And Real Estate	2.1%	2.6%
Financial Services	5.3%	7.6%
Fire, Marine, And Casualty Insurance	3.2%	3.9%
Food And Kindred Products	1.5%	1.9%
Health Services	4.4%	4.6%
Hospitals	3.3%	3.4%
Insurance	1.4%	1.5%
Insurance Carriers, Not Elsewhere Classified	3.5%	3.4%
Life Insurance	2.1%	2.3%
Manufacturing	1.4%	1.8%
Mining	1.9%	2.4%
Oil & Gas	1.6%	2.3%
Retail Trade	1.7%	2.2%
Services	3.9%	4.8%
Transportation	2.7%	3.3%
Transportation Services	4.6%	4.6%