

IT Spending:

Comparative Forecasts and Trends
in Technology Spending

January 2003



This report is the property of eMarketer, Inc. and is protected under both the United States Copyright Act and by contract. Section 106 of the Copyright Act gives copyright owners the exclusive rights of reproduction, adaptation, publication, performance and display of protected works.

Accordingly, any use, copying, distribution, modification, or republishing of this report beyond that expressly permitted by your license agreement is prohibited. Violations of the Copyright Act can be both civilly and criminally prosecuted and eMarketer will take all steps necessary to protect its rights under both the Copyright Act and your contract.

If you are outside of the United States: copyrighted United States works, including the attached report, are protected under international treaties. Additionally, by contract, you have agreed to be bound by United States law.

	Methodology	7
	The eMarketer Difference	8
	The Benefits of eMarketer’s Aggregation Approach	9
	“Benchmarking” and Projections	9
I	Worldwide IT Spending	11
	A. Worldwide IT Spending Forecasts	12
	B. Worldwide IT Spending Growth Rates	18
	C. Worldwide IT Spending by Category	23
	Telecommunications Spending	23
	IT Hardware Spending	30
	Software Spending	35
	IT Services Spending	40
	E-Business/Internet Technology Spending	44
II	North America	49
	A. North American IT Spending Forecasts	50
	B. IT Spending Growth in North America	52
III	Europe	55
	A. Europe IT Spending Forecasts	56
	B. IT Spending Growth Rates for Europe	59

IV	Asia-Pacific	63
	A. Asia-Pacific IT Spending Forecasts	64
	B. IT Spending Growth Rates in the Asia-Pacific Region	67
V	Latin America	69
	A. Latin America IT Spending Forecasts	70
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	A. IT Spending Plans	90
	IT Spending in 2002	90
	IT Spending in 2003	97
	B. IT Spending Priorities	102
	Telecommunications and Networking Equipment	105
	Index of Charts	121



Steve Butler
Senior Analyst, eMarketer
sbutler@emarketer.com

eMarketer, inc.
821 Broadway
New York, NY 10003
T: 212.677.6300
F: 212.777.1172

January 2003

Welcome to eMarketer

Dear Reader:

Welcome to the second edition of the *IT Spending Report*, eMarketer's annual coverage of the major trends and spending projections for information technology goods and services throughout the world.

The *IT Spending Report* provides readers with top-level data and comparative estimates about leading technology markets, with data covering regional, national and industry-specific IT spending, as well as IT spending by business size.

Unique to eMarketer's analysis, this report also includes an extensive survey section that provides insight into the current thinking among technology users, as well as data on the latest trends in technology spending.

If you have any questions or comments concerning eMarketer or any of the material in this report, please call, fax or e-mail us.

Sincerely,

Steve Butler
Senior Analyst

Written by Steve Butler

Also contributing to this report:

Yael Marmon, *researcher*
Tracy Tang, *researcher*
Allison Smith, *senior editor*
David Berkowitz, *senior editor*
Kwanza Johnson, *chart entry*
Dana Hill, *production artist*

Reuse of information in this document, without prior authorization, is prohibited. If you would like to license this report for your organization, please contact David Iankelevich at diankelevich@emarketer.com, or 212.763.6037.

	Methodology	7
	The eMarketer Difference	8
	The Benefits of eMarketer’s Aggregation Approach	9
	“Benchmarking” and Projections	9
I	Worldwide IT Spending	11
II	North America	49
III	Europe	55
IV	Asia-Pacific	63
V	Latin America	69
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	Index of Charts	121

Methodology

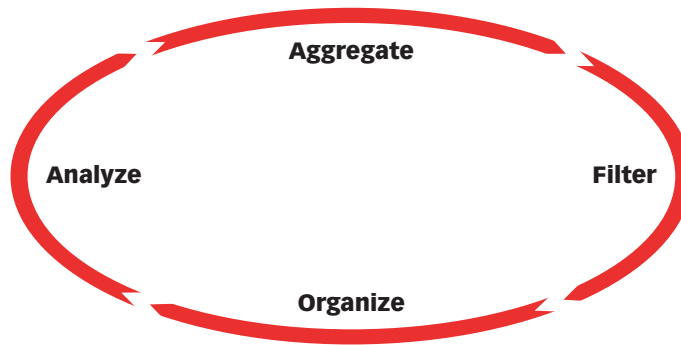
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

eMarketer’s approach to market research is founded on a philosophy of aggregating data from as many different sources as possible. Why? Because there is no such thing as a perfect research study and no single research source can have all the answers. Moreover, a careful evaluation and weighting of multiple sources will inevitably yield a more accurate picture than any single source could possibly provide.

The eMarketer Difference

eMarketer does not conduct primary research. Neither a research firm nor a consultancy, eMarketer has no testing technique to defend, no research bias and no client contracts to protect.

eMarketer prepares each market report using a four-step process of aggregating, filtering, organizing and analyzing data from leading research sources worldwide.



©2001 eMarketer, Inc.

www.eMarketer.com

Using the internet and accessing a library of electronically-filed research reports and studies, the eMarketer research team first aggregates publicly available e-business data from hundreds of global research and consultancy firms. This comparative source information is then filtered and organized into tables, charts and graphs. Finally, eMarketer analysts provide concise and insightful analysis of the facts and figures along with their own estimates and projections. As a result, each set of findings reflects the collected wisdom of numerous research firms and industry analysts.

“I think eMarketer reports are extremely useful and set the highest standards for high quality, objective compilation of often wildly disparate sources of data. I rely on eMarketer’s research reports as a solid and trusted source.”

— *Professor Donna L. Hoffman, Co-Director, eLab, Vanderbilt University*

Methodology[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

The Benefits of eMarketer's Aggregation Approach

Objective: information is more objective than that provided by any single research source

Comprehensive: gathered from the world's leading research firms, consultancies and news organizations

Authoritative: quoted in leading news publications, academic studies and government reports

All in one place: easy to locate, evaluate and compare

Readily accessible: so you can make quick, better-informed business decisions

Above the hype: accurate projections that business people can use with confidence

Time saving: there's no faster way to find internet and e-business stats, online or off

Money saving: more information, for less, than any other source in the world

"Benchmarking" and Projections

Until recently, anyone trying to determine which researcher was most accurate in predicting the future of any particular aspect of the internet did not have a definitive source with which to do this. For instance, over 10 firms predicted e-commerce revenues for the fourth quarter 1998 online holiday shopping season, and yet no single source could be identified after the fact as having the "correct" number. In the Spring of 1999, however, the US Commerce Department finally began measuring e-commerce B2C activity so business people and others could have a benchmark with which they could compare and evaluate projections.

eMarketer has adapted its methodology to recognize that certain government and other respected, impartial sources are beginning to provide reliable numbers that can be consistently tracked over time. Most of these established sources, however, only measure past results; typically, they do not make predictions.

Methodology

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Today, eMarketer formulates its Essential E-Business Numbers by first identifying the most established, reputable source for a given sector being measured and then adopting that organization's figures as *benchmarks* for the historical/current period. For instance, eMarketer's US internet user figures will be based on a combination of the most recent data from the US Census Bureau and the International Telecommunication Union. Using this data as the benchmark for 2000 and 2001, eMarketer will make projections for subsequent years based on the following factors:

- a comparative analysis of user growth rates compiled from other research firms
- additional benchmark data from internet rating firms, e.g., Nielsen//NetRatings, comScore Media Metrix, which use panels to measure internet user activity on a weekly and monthly basis
- an analysis of broader economic, cultural and technological trends in the US

Similarly, US e-commerce revenues are being "benchmarked" using historical data from the US Department of Commerce, and broadband household and penetration rate forecasts are being built off baseline data from the Organization for Economic Cooperation and Development (OECD).

Through this benchmarking process, eMarketer will be holding itself – and our projections – accountable.

“When I need the latest trends and stats on e-business, I turn to eMarketer. eMarketer cuts through the hype and turns an overabundance of data into concise information that is sound and dependable.”

— Mark Selleck, Business Unit Executive, DISU e-business Solutions, IBM

	Methodology	7
I	Worldwide IT Spending	11
	A. Worldwide IT Spending Forecasts	12
	B. Worldwide IT Spending Growth Rates	18
	C. Worldwide IT Spending by Category	23
II	North America	49
III	Europe	55
IV	Asia-Pacific	63
V	Latin America	69
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	Index of Charts	121

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

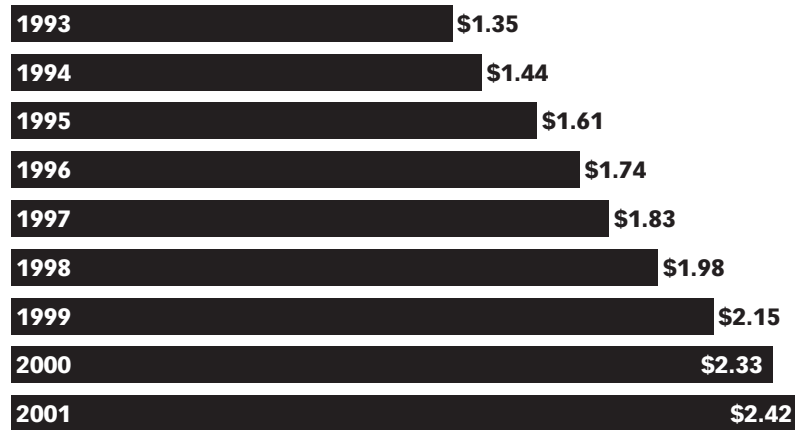
[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

A. Worldwide IT Spending Forecasts

According to estimates from the World Information Technology and Services Alliance (WITSA), worldwide information and communication technology (ICT) spending has nearly doubled between 1993 and 2001, increasing by a compound annual growth rate of 7.6%, to reach \$2.42 trillion in sales during 2001.

Worldwide Information and Communications Technology (ICT) Spending, 1993-2001 (in trillions)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045229 ©2002 eMarketer, Inc.

www.eMarketer.com

In partnership with the International Data Corporation (IDC), WITSA has developed its own country-specific estimates of ICT spending through a combination of technology vendor surveys, surveys of end-users and professional organizations, government data and financial records of public companies.

WITSA includes computer hardware, software, IT services and office equipment in its definition of ICT, along with telecommunications hardware and software. Salaries paid to IT personnel are also part of WITSA's total ICT spending estimates.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

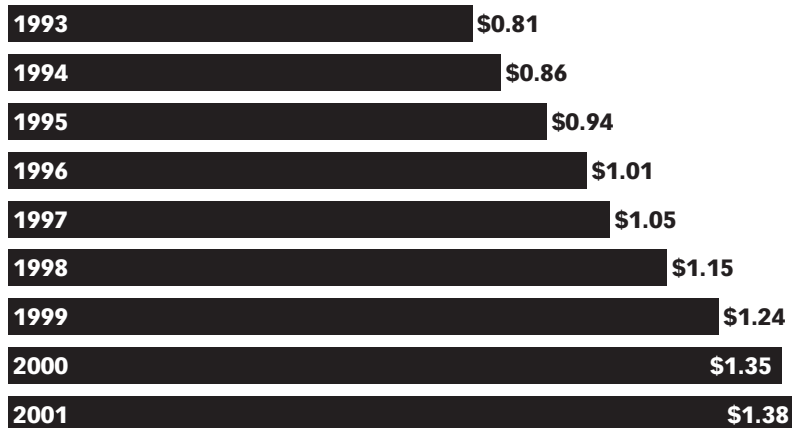
[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Breaking out telecommunications spending, which accounted for just under 43% of worldwide ICT spending in 2001, WITSA estimates that worldwide IT spending has increased from \$810 billion in 1993 to \$1.38 trillion in 2001.

Worldwide IT Spending, 1993-2001 (in trillions)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045298 ©2002 eMarketer, Inc.

www.eMarketer.com

By comparison, as a result of continued economic uncertainty, IDC has twice revised its independent worldwide IT spending forecast in July and November of 2002. According to its latest revision, IDC estimates that global spending on IT will come in at \$875 billion for 2002 and increase by 5.8% to reach \$925 billion in 2003.

Worldwide IT Spending, 2002 & 2003 (in billions)



Source: International Data Corporation (IDC), November 2002

045579 ©2002 eMarketer, Inc.

www.eMarketer.com

A third comparative estimate from Gartner Dataquest includes telecommunications spending as part of its forecast for global IT spending, which Gartner expects will grow by 3.4% to reach \$2.3 trillion by the end of 2002.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

For 2003, Gartner forecasts IT spending growth of 7.0%, with a recovery expected to begin after the second quarter of the year.

Worldwide IT Spending, 2001-2003 (in billions)

2001	\$2,226.7
2002	\$2,302.1
2003	\$2,463.1

*Note: *includes hardware, software, IT services and telecom spending*
Source: Gartner Dataquest, September 2002

044146 ©2002 eMarketer, Inc.

www.eMarketer.com

Broken down by market segment, Gartner finds that telecommunications accounts for 58.4% of worldwide IT spending in 2002, followed by IT services at 24.2% of technology spending. Hardware and software are expected to make up 14.0% and 3.3% of global IT spending, respectively.

In 2003, telecommunications spending is expected to retain its share of global IT spending at 58% of IT sales, while at the same time leading global IT spending growth by increasing 7.5% over 2002 spending.

Worldwide IT Spending, by Segment, 2001-2003 (in billions)

	2001	2002	2003
Hardware	\$327.4	\$323.3	\$338.8
Software	\$74.2	\$76.9	\$81.8
IT services	\$542.3	\$557.5	\$597.1
Telecom	\$1,282.9	\$1,344.6	\$1,445.4
Total	\$2,226.7	\$2,302.1	\$2,463.1

Source: Gartner Dataquest, September 2002

044147 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

And finally, a fourth comparative estimate by the Aberdeen Group projects worldwide IT spending of \$1.23 trillion for 2002 and \$1.29 trillion for 2003. Between 2001 and 2005, the Aberdeen Group estimates that worldwide IT spending will increase by a compound annual growth rate of 4.3%.

Worldwide IT Spending, by Region, 2000-2005 (in billions)

	2000	2001	2002	2003	2004	2005
Africa/Middle East	\$30.9	\$32.0	\$34.1	\$35.9	\$37.8	\$39.8
Asia-Pacific	\$250.6	\$251.8	\$258.1	\$274.5	\$292.4	\$310.9
Europe	\$375.6	\$377.4	\$384.6	\$393.1	\$402.0	\$410.5
Latin America	\$65.6	\$65.7	\$68.4	\$72.9	\$78.2	\$83.5
North America	\$477.4	\$475.7	\$494.6	\$522.3	\$550.2	\$578.2

Worldwide total \$1,200.1 \$1,202.6 \$1,239.8 \$1,298.7 \$1,360.6, \$1,422.9

Source: Aberdeen Group, August 2002

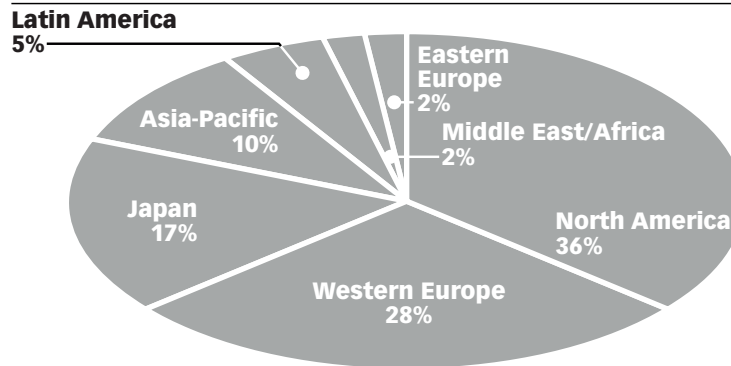
043133 ©2002 eMarketer, Inc.

www.eMarketer.com

According to IDC, North America accounted for 36% of worldwide IT spending in 2001, followed by Western Europe, which was the second largest regional market.

WITSA has noted, however, that North America has lost 1% of its global market share between 1999 and 2001, as the Asia-Pacific region and Eastern Europe have increased their spending on information technology.

Worldwide IT Spending, by Region, 2001 (as a % of total IT spending)



Source: International Data Corporation (IDC), February 2002

045580 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

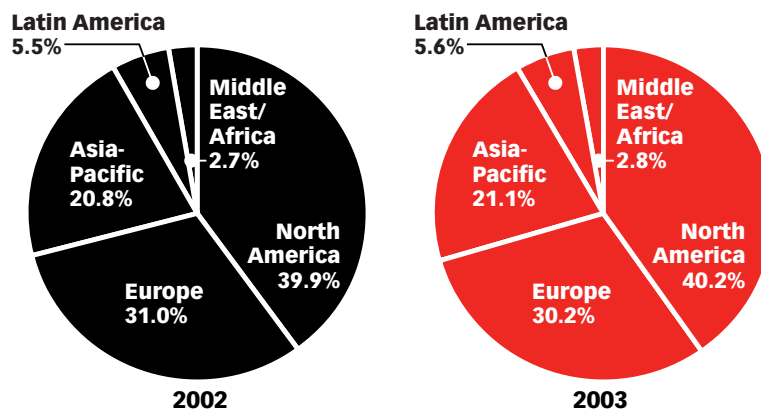
[Index of Charts](#)

Comparative figures from the Aberdeen Group give North America a slightly higher share of global IT spending, at about 40% of the worldwide market in 2002 and 2003.

On the other hand, the Aberdeen Group assigns a lower portion of worldwide IT spending to the Asia-Pacific region, compared with IDC's estimate for 27% of global IT spending for Japan and the Asia-Pacific region combined.

In 2003, the Aberdeen Group predicts that Canada and the United States will slightly increase their share of the global technology market, entirely at the expense of Europe, which is expected to see slower economic growth.

Worldwide IT Spending, by Region, 2002 & 2003 (as a % of total IT spending)



Source: Aberdeen Group, April 2002

045686 ©2002 eMarketer, Inc.

www.eMarketer.com

Among the leading national markets for information technology, the United States made up 39.7% of the world market, according to WITSA's calculations.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Japan, Germany, the United Kingdom and France rounded out the top five markets in the world, with the top ten countries accounting for 83% of the estimated \$1.38 trillion in IT spending worldwide.

Worldwide Information Technology Spending, by Country, 2001 (in billions and as a % of spending worldwide)

US	\$546.68 (39.7%)
Japan	\$188.01 (13.7%)
Germany	\$98.26 (7.1%)
UK	\$91.36 (6.6%)
France	\$81.22 (5.9%)
Canada	\$39.63 (2.9%)
Italy	\$32.45 (2.4%)
Netherlands	\$23.99 (1.7%)
China (PRC)	\$22.59 (1.6%)
Australia	\$19.29 (1.4%)

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045299 ©2002 eMarketer, Inc.

www.eMarketer.com

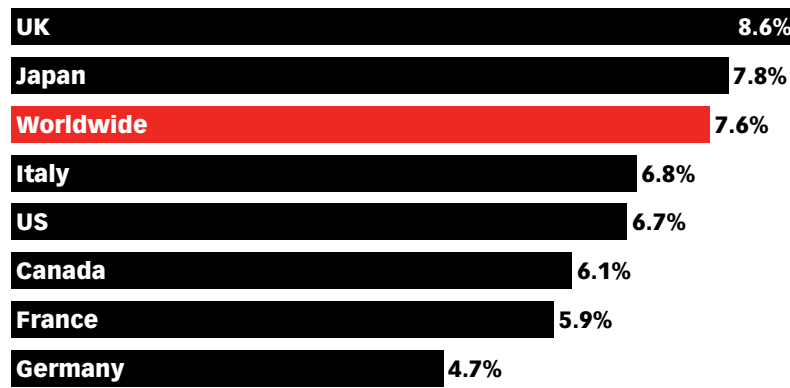
[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

B. Worldwide IT Spending Growth Rates

The World Information Technology Services Alliance (WITSA) estimates that US ICT spending increased by a compound annual growth rate of 6.7% between 1993 and 2001, compared with worldwide growth of 7.6% during the same period.

Among the G-7 countries, growth in ICT spending ranged from 4.7% in Germany to 8.6% in the United Kingdom between 1993 and 2001, with Japan posting healthy growth of 7.8%.

Growth in Information and Communication Technology Spending among the G-7 Countries, 1993-2001 (ranked by CAGR)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045582 ©2002 eMarketer, Inc.

www.eMarketer.com

Among the fastest growing world regions, WITSA estimates that ICT spending increased by a compound annual growth rate of more than 14% in Eastern Europe between 1993 and 2001, outpacing growth in both Asia and Latin America, which came in at approximately 12% and 11%, respectively.

ICT spending in Eastern Europe has accelerated during the past two years in particular, with the Czech Republic, Poland and Hungary showing the largest jumps in technology spending.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

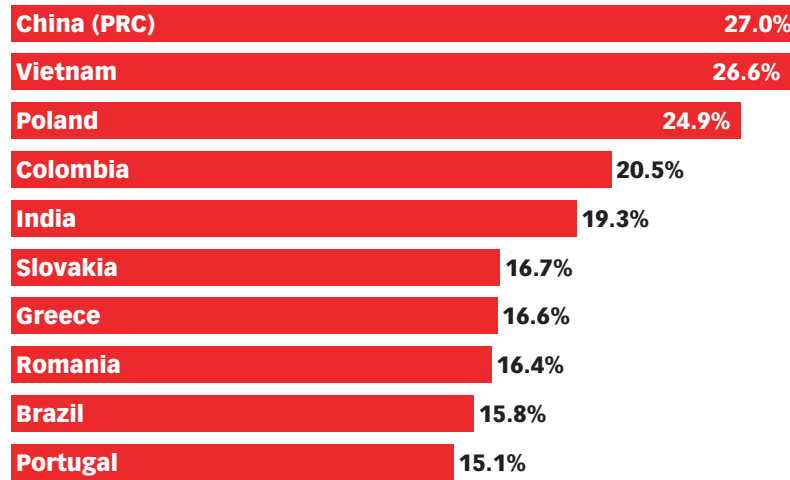
[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Among the fastest growing national markets around the world, China continues to be the leader, posting a compound annual growth rate of 27.0% in ICT spending between 1993 and 2001. Other countries showing strong growth include Vietnam, Poland, Colombia and India, although countries such as Vietnam and Slovakia are seeing ICT spending increases off of a lower base.

Fastest Growing Worldwide Information and Communications (ICT) Technology Markets, 1993-2001 (ranked by CAGR)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045583 ©2002 eMarketer, Inc.

www.eMarketer.com

In its forecasts for IT spending growth in 2002 and 2003, the European Information Technology Observatory (EITO) estimates that worldwide IT spending will have increased by a historically low 3.2% in 2002, while in 2003 the EITO estimates that global ICT spending will grow by a healthier 6.2%.

Estimated Growth in Worldwide Information and Communications Technology (ICT) Spending, 2002 & 2003



Source: European Information Technology Observatory (EITO), October 2002

045323 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

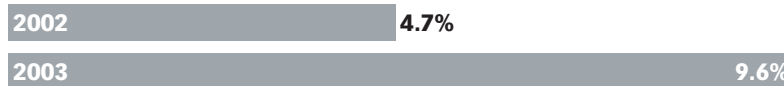
[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

Largely due to the changing economic climate, IT spending estimates for future growth have necessarily faced several revisions during the course of 2002, especially as an anticipated recovery in technology spending did not materialize during the second half of the year.

IDC, for example, has revised its 2002 IT spending forecast twice, after initially predicting worldwide IT spending growth of 4.7%. In July, IDC reduced its forecast to growth of 3.1% for 2002, and in November of 2002, the research firm said that it expected global IT spending to contract by 2.3% for the year.

Worldwide IT Spending Growth, 2002 & 2003



Source: International Data Corporation (IDC), May 2002

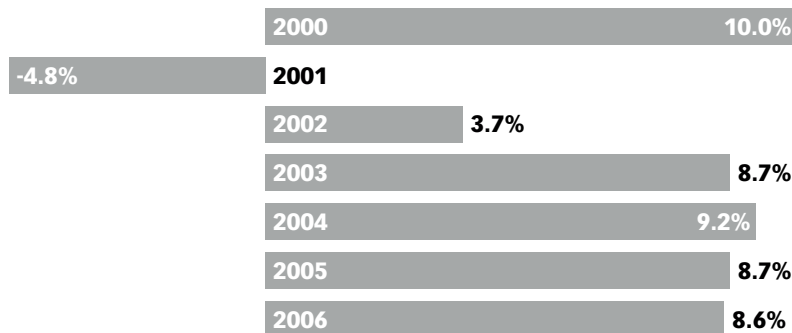
039471 ©2002 eMarketer, Inc.

www.eMarketer.com

Specifically, IDC's May forecast had initially anticipated stronger IT spending growth in Western Europe and in the Asia-Pacific region at rates of 6.2% and 4.7%, respectively. However, as these economies weakened during the first half of the year, many businesses began to cut back their IT budgets.

In July, IDC cited slow IT hardware sales, in addition to weaker than expected regional demand as the reasons for its reduced forecast. However, IDC still believed that spending on software and IT services would improve during the second half of the year, with a recovery in IT spending gaining strength in the fourth quarter.

Worldwide IT Spending Growth, 2000-2006



Source: International Data Corporation (IDC), July 2002

045334 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

In November of 2002, IDC once again reduced its IT spending forecast, estimating that worldwide IT spending would contract by 2.3% for the year. A 10.6% decline in the worldwide storage market, along with a 9.3% reduction in sales of PCs, servers and workstations were the main reasons for the drop in overall IT spending, as well as a 7.6% decline in network equipment due to poor sales in the telecommunications industry.

Looking ahead to 2003, IDC's latest forecast projects worldwide IT spending will grow by 5.8%, down from its July forecast of 8.7% growth. IDC has also warned that in the event of a prolonged war with Iraq or a significant decline in the stock market, global IT spending growth could be as low as 2% in 2003.

On a more optimistic note, among the countries that it expects to see continued IT spending growth, IDC lists China, India, Korea, Russia, the Philippines, South Africa and Poland as some of the best IT markets in 2003. Specifically, IDC predicts that China and India will see IT spending growth of about 20% in 2003, up from growth of approximately 10% in 2002.

According to the comparative estimates that eMarketer has gathered, worldwide IT spending is projected to increase by a range of between 4.0% and 7.0% in 2003, with Gartner Dataquest producing the most favorable outlook.

Comparative Estimates: Worldwide IT Spending Growth, 2003

Gartner Dataquest, September 2002

7.0%

European Information Technology Observatory (EITO), October 2002

6.2%

International Data Corporation (IDC), November 2002

5.8%

Aberdeen Group, December 2002

4.0%

Source: various, as noted, 2002

045581 ©2002 eMarketer, Inc.

www.eMarketer.com

Citing continued uncertainty about the global economy, Gartner nonetheless believes that IT spending will pick up after the second quarter of 2003, should economic growth return and business profits improve, as anticipated. Gartner also expects most companies to first increase their spending on less strategic technology items, such as PCs and low-end servers, prior to initiating more ambitious technology projects later in the year.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

As part of IDC's July 2002 IT spending forecast, software and IT services were listed as the two leading areas for technology spending growth in 2003, followed by data communications equipment.

Worldwide IT Spending Growth, by Technology, 2002 & 2003

	2002	2003
PCs	-8.9%	3.2%
Servers	-0.3%	5.7%
Software	8.2%	10.5%
Services	8.8%	10.4%
Data communications equipment	-0.4%	9.8%
Total IT	3.7%	8.7%

Source: International Data Corporation (IDC), July 2002

042347 ©2002 eMarketer, Inc.

www.eMarketer.com

By comparison, Gartner Dataquest has projected that telecommunications spending will see the largest growth in 2003, as fixed and mobile telecom services companies increase their spending by 8.8%.

Gartner also believes that outsourced IT services will see strong growth in 2003, as businesses continue to reduce costs by looking for ways to more efficiently manage their IT operations.

Worldwide IT Spending Growth, by Category, 2001-2003

	2001	2002	2003
Hardware	-13.1%	-1.3%	4.8%
Software	-5.7%	3.6%	6.5%
IT services	4.1%	2.8%	7.1%
Telecom	1.9%	4.8%	7.5%
Total	-0.4%	3.4%	7.0%

Source: Gartner Dataquest, September 2002

044148 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

C. Worldwide IT Spending by Category

Telecommunications Spending

According to the World Information Technology and Services Alliance (WITSA), global telecommunications spending increased by a compound annual growth rate of 8.5% between 1993 and 2001, to reach \$1.03 trillion.

Worldwide Telecommunications Spending, 1993-2001 (in billions)

1993	\$538.75
1994	\$581.26
1995	\$666.43
1996	\$728.50
1997	\$776.62
1998	\$831.36
1999	\$911.84
2000	\$975.92
2001	\$1,037.88

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045297 ©2002 eMarketer, Inc.

www.eMarketer.com

By comparison, the Telecommunications Industry Association (TIA) estimates that worldwide telecommunications spending was more than \$1.8 trillion in 2001, after increasing by 11.5% over spending during the year before, while a third comparative estimate from Gartner Dataquest found that global telecommunications spending was \$1.28 trillion in 2001.

Despite the tough business climate facing telecommunications service providers and equipment vendors during the past two years, Gartner continues to project growth of 4.8% in 2002 and 7.5% in 2003, with worldwide telecommunications spending forecast to reach \$1.44 trillion by the end of 2003. Spending in the fixed and mobile services markets is expected to lead the way this year with growth of 8.8%, according to Gartner Dataquest.

Worldwide Telecommunications Spending, 2001-2003 (in billions)

2001	\$1,282.9
2002	\$1,344.6
2003	\$1,445.4

Source: Gartner Dataquest, September 2002

045591 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Taking a longer view, Pyramid Research predicts that global telecommunications spending will increase by a compound annual growth rate of 6% between 2002 and 2007 to reach \$1.3 trillion within the next five years.

Worldwide Telecommunications Spending, 2002 & 2007 (in trillions)

2002	\$1.0
2007	\$1.3

Note: CAGR=6%
Source: Pyramid Research, November 2002

045571 ©2002 eMarketer, Inc. www.eMarketer.com

Broken down by world region, the TIA estimates that the United States will account for 31.3% of global telecommunications spending in 2004, down from its 34.5% share in 2000. Similarly, the mature telecommunications market in Western Europe is also forecast to decline in relative size, from a 19.9% share of global telecom spending in 2000 to a 16.2% share in 2004.

On the other hand, substantial growth is expected for the Asia-Pacific region, where telecommunications spending is projected to increase from its 19.5% share of the world market in 2000 to a 23.4% share by 2004.

Worldwide Telecommunications Spending, by Region, 2000 & 2004 (in billions)

	2000	2004
US	\$609.2	\$954.0
Western Europe	\$351.7	\$496.0
Asia-Pacific	\$345.4	\$717.0
Eastern Europe	\$102.5	\$167.1
Latin America	\$79.0	\$157.1
Canada and Mexico	\$51.1	\$77.6
Total (not US)	\$1,155.0	\$2,099.0
Worldwide total	\$1,764.2	\$3,052.7

Source: Telecommunications Industry Association, 2001

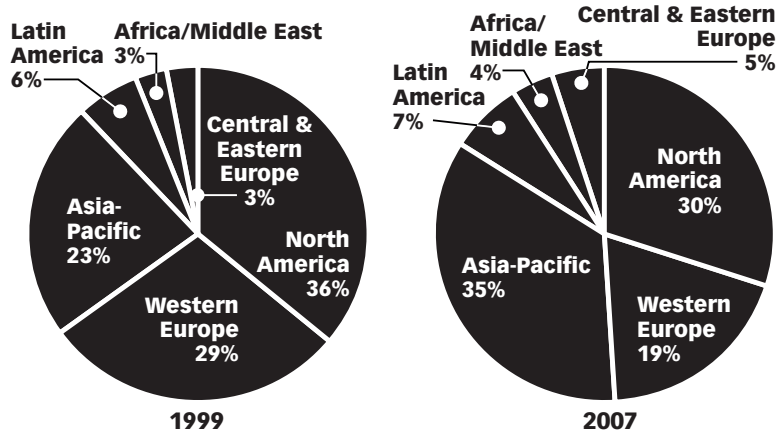
033566 ©2001 eMarketer, Inc. www.eMarketer.com

These findings are supported by more recent forecast data from Pyramid Research, which expects telecom spending in North America and Western Europe to decline as a share of global spending over the next four years, while the Asia-Pacific region is expected to account for the largest portion of worldwide telecommunications spending by 2007, at 35% of the global market.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

Indeed, Pyramid Research has underscored its findings that most of the growth in telecommunications spending over the next several years will be in emerging markets such as China, India and Russia.

Breakdown of Worldwide Telecommunications Revenues, by Region, 1999 & 2007



Source: Pyramid Research, November 2002

045129 ©2002 eMarketer, Inc.

www.eMarketer.com

Pyramid Research has further noted that while global telecommunications revenue will increase by a rate of 6% in 2003, the number of users connecting to telecom services will increase by 9%. The leading growth areas include broadband use, which is expected to increase by a rate of 25% per year, and mobile use, which is forecast to increase by 11% per year over the next five years.

Among the largest telecommunications markets, WITSA found that the United States and Japan were by far the biggest spenders, accounting for 25.6% and 21.8% of worldwide telecom spending in 2001, respectively.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Taken together, the top ten countries made up 75.3% of the global telecommunications market that year, while South Korea was eleventh on the list, spending \$16.1 billion on telecom in 2001 and accounting for 1.8% of global spending.

Worldwide Telecommunications Spending, by Country, 2001 (in billions and as a % of spending worldwide)

US	\$265.95 (25.6%)
Japan	\$225.76 (21.8%)
Germany	\$56.39 (5.4%)
UK	\$46.37 (4.5%)
China (PRC)	\$44.02 (4.2%)
France	\$39.35 (3.8%)
Italy	\$32.10 (3.1%)
Brazil	\$31.70 (3.1%)
Canada	\$21.27 (2.0%)
Australia	\$18.38 (1.8%)

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045300 ©2002 eMarketer, Inc.

www.eMarketer.com

As for the fastest growing markets for telecommunications technology and related services, WITSA found that Poland, Vietnam and Colombia posted significant compound annual growth rates of more than 27% between the years 1993 and 2001.

Other markets of note include China, India and Brazil, each of which spent between \$12 billion and \$44 billion on telecommunications equipment and services in 2001.

Although it was not among the ten fastest-growing markets, telecommunications spending in Russia grew at a rate of 6.5% in 2001, with total spending coming in at more than \$4.6 billion.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

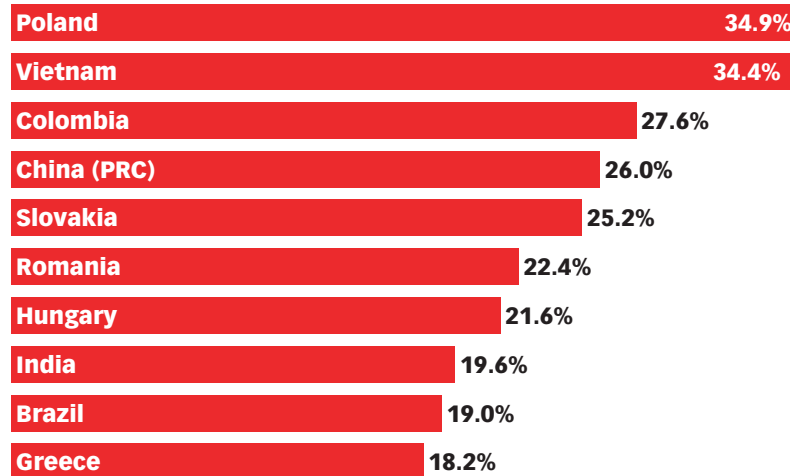
[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

By comparison, it is worthwhile to note that other fast-growing markets such as Vietnam, Slovakia and Romania saw significant growth over a lower base of initial spending, with Romania spending just \$539 million on telecommunications technology in 2001. Vietnam spent \$1.7 billion on telecommunications that year, while Slovakia spent just under \$1.07 billion.

Fastest Growing Telecommunications Markets Worldwide, by Country, 1993-2001 (ranked by CAGR)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045584 ©2002 eMarketer, Inc.

www.eMarketer.com

In April of 2002, the TIA reported that US spending on telecommunications equipment and services increased by a rate of 7.2% in 2001 and was expected to grow by a further 7.6% in 2002.

Breaking down the \$663 billion that was spent in 2001, the TIA estimates that spending on telecom equipment and software declined by 2.8% that year, falling to \$167 billion, while voice and data transport services spending increased by 6.5% to reach \$303 billion. As a component of this latter category, wireless services were the fastest growing area of the US telecom market, growing by 23.2% in 2001.

US Telecommunications Equipment and Services Spending, 2001 & 2002 (in billions)



Source: Telecommunications Industry Association (TIA), April 2002

045594 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

The TIA has gone on to predict that US spending on telecom network equipment and facilities would fall by 10.8% in 2002, and then stabilize in 2003, prior to returning to double-digit growth in 2004 and 2005. Between the years 2001 and 2005, spending on network equipment is forecast to increase by a compound annual growth rate of 3%, reaching \$46 billion by 2005.

Similarly, after declining in 2002, the TIA forecasts US spending on wireless infrastructure to rebound in 2003, with growth in capital expenditures expected to exceed 20% next year. The TIA also estimates that enterprise spending on support services for voice and data communications will increase by a compound annual growth rate of 15.5% between 2001 and 2005, to reach \$289 billion.

In Western Europe, the TIA estimates that telecommunications infrastructure and enterprise equipment spending fell by 11.5% in 2001, with public network equipment spending falling by a substantial 19.2%.

As of April 2002, the TIA was predicting that enterprise equipment spending would stabilize in 2002 after falling 9.0% in 2001, and go on to increase by a compound annual growth rate of 5.4% between 2001 and 2005.

By comparison, a more recent forecast from the European Information Technology Observatory (EITO) predicts that telecommunications spending in Western Europe will grow by 4.4% in 2003, up from growth of just 2% in 2002.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

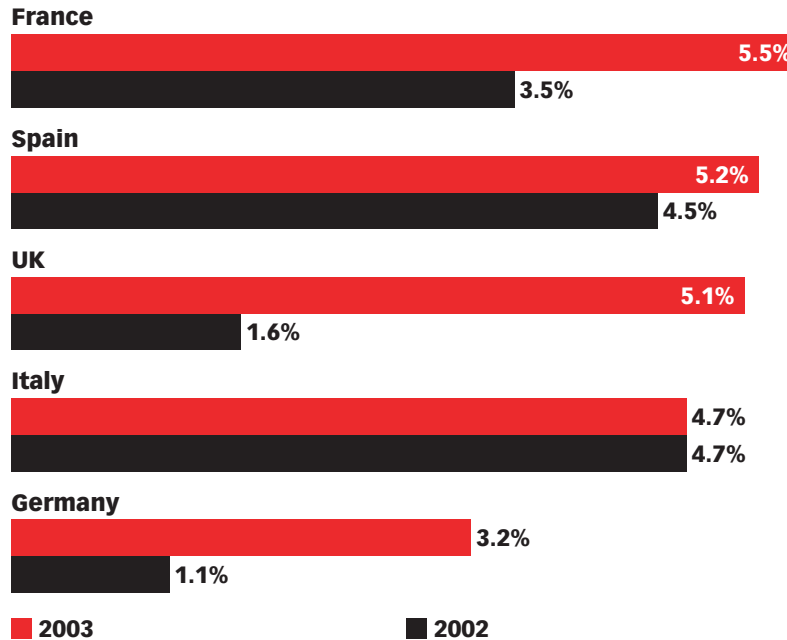
[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

Leading markets include France, Spain and the United Kingdom, which are expected to post growth of more than 5% in 2003.

Estimated Growth in Communications Technology Spending in Western Europe, by Country, 2002 & 2003



Source: *European Information Technology Observatory (EITO)*, October 2002

045327 ©2002 eMarketer, Inc.

www.eMarketer.com

As for Eastern Europe, the TIA predicts that enterprise telecommunications spending will increase by a compound annual growth rate of 10.4% between 2001 and 2005, while public network equipment spending will experience a compound annual growth rate of 9.2% over the same period.

Enterprise and Public Network Telecommunications Equipment Spending in Eastern Europe, 2005 (in billions)



Source: *Telecommunications Industry Association (TIA)*, April 2002

045595 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

The Asia-Pacific region will be the fastest growing market by far, according to the TIA, as public network equipment spending will increase by a compound annual growth rate of 17.0% between 2001 and 2005. By comparison, the TIA expects enterprise equipment spending in the Asia-Pacific region to increase by a compound annual growth rate of 11.5% through 2005, to reach \$122 billion.

Enterprise and Public Network Telecommunications Equipment Spending in the Asia-Pacific Region, 2005 (in billions)



Source: Telecommunications Industry Association (TIA), April 2002

045596 ©2002 eMarketer, Inc.

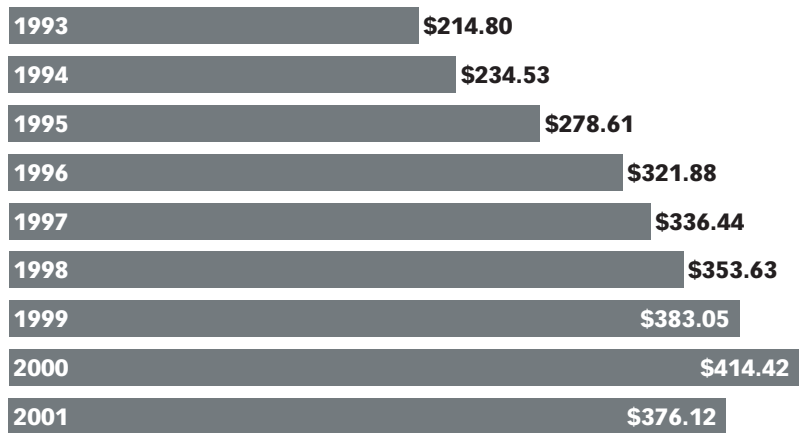
www.eMarketer.com

IT Hardware Spending

The World Information Technology and Services Alliance (WITSA) estimates that global IT hardware spending increased by a compound annual growth rate of just 1.6% between 1993 and 2001.

Despite nearly doubling between 1993 and 2000, IT hardware spending fell by 9.2% in 2001 to \$376.1 billion, according to WITSA, after peaking at \$414.42 billion in 2000.

Worldwide IT Hardware Spending, 1993-2001 (in billions)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045301 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

A comparative estimate from IDC puts global IT hardware spending at \$359.4 billion in 2001, with the Boston-based research firm projecting a further decline of 4.4%, to sales of \$343.4 billion in 2002.

According to IDC's November estimate, the storage market led the broader IT hardware market down, with sales declining by 10.6%. The worldwide systems market was also expected to post a substantial decline by the end of the year, with sales of PCs, servers and workstations forecast to fall by 9.6% in 2002.

Looking ahead, IDC predicts that worldwide IT hardware sales will increase by a narrow 1.9% in 2003, but go on to increase by a compound annual growth rate of 3.9% between 2001 and 2006, to reach \$436.0 billion within the next four years.

By comparison, the Aberdeen group predicts that IT hardware sales will increase by between 2.0% and 2.5% in 2003.

Worldwide IT Hardware Spending, 2001 & 2002 (in billions)

2001	\$359.4
2002	\$343.4

Source: International Data Corporation (IDC), June 2002; PricewaterhouseCoopers (PWC), November 2002

045332 ©2002 eMarketer, Inc.

www.eMarketer.com

Gartner Dataquest's forecast for 2002 IT hardware sales is even lower than IDC's, with Gartner predicting that sales will bottom-out at \$323.3 billion by the end of the year, before rebounding by 4.8% to reach \$338.8 billion in 2003.

Although Gartner believes that PC sales will post modest growth in 2003, printer and copier sales are expected to remain difficult in 2003 due to high saturation rates in those markets. Gartner also believes that tough price competition in the server market will continue to act as a drag on IT hardware revenues.

Worldwide IT Hardware Spending, 2001-2003 (in billions)

2001	\$327.4
2002	\$323.3
2003	\$338.8

Source: Gartner Dataquest, September 2002

045592 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

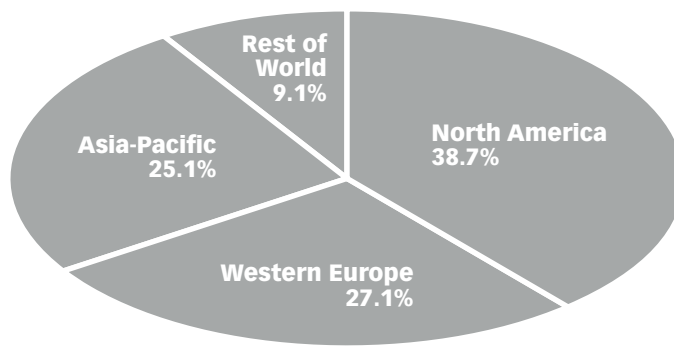
[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

Broken down by world region, PricewaterhouseCoopers and IDC estimate that North America accounts for the largest portion of global IT hardware spending, at 38.7% of sales in 2002, followed by Western Europe and the Asia-Pacific region, which make up 27.1% and 25.1% of worldwide sales, respectively.

Comparative data from Computer Economics gives the United States a much larger share of IT hardware spending, at 43.5% of the global market in 2002, with Europe accounting for 25.2% of worldwide spending, and the Asia-Pacific region holding a 22.1% share.

Worldwide IT Hardware Spending, by Region, 2002 (as a % of total spending)



Source: International Data Corporation (IDC), June 2002; PricewaterhouseCoopers (PwC), November 2002

045331 ©2002 eMarketer, Inc.

www.eMarketer.com

In their analysis of the IT hardware market in 2002, PricewaterhouseCoopers and IDC have found that sales in North America have been hardest-hit, dropping by an estimated 8.7% in 2002. Western Europe and the Asia-Pacific region have held up slightly better, although hardware sales in those regions have declined during 2002 as well.

Change in Worldwide IT Hardware Spending, by Region, 2002 (as a % decrease vs. prior year)



Source: International Data Corporation (IDC), June 2002; PricewaterhouseCoopers (PwC), November 2002

045329 ©2002 eMarketer, Inc.

www.eMarketer.com

Among the leading national markets for IT hardware spending, the United States was by far the largest in 2001, accounting for more than 36% of the global market, compared with a combined 18.5% share of global IT hardware sales held by Germany, the United Kingdom, France and Italy.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

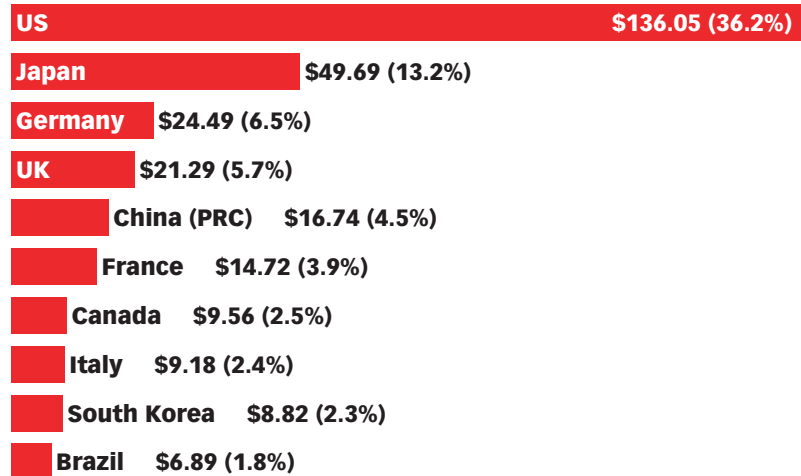
[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

According to WITSA's calculations, the top ten countries accounted for 79% of worldwide IT hardware spending in 2001.

Worldwide IT Hardware Spending, by Country, 2001 (in billions and as a % of spending worldwide)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045306 ©2002 eMarketer, Inc.

www.eMarketer.com

Among the fastest growing markets for IT hardware are China, India and Greece, with China posting a stunning 29.2% compound annual growth rate between 1993 and 2001. IT hardware spending continues to see strong growth in Brazil as well, which has become one of the ten largest markets in the world with sales of \$6.8 billion in 2001.

Other markets of note include Portugal, Ireland and Poland, each of which spent more than \$1 billion on IT hardware in 2001. Spending on IT hardware in Russia has been less consistent during the past several years, as IT hardware sales actually declined by 2.2% between 1993 and 2001, although they did start to climb again in 1999. IT hardware sales in Russia grew by 9.2% in 2001, with sales totaling \$2.3 billion, according to WITSA.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

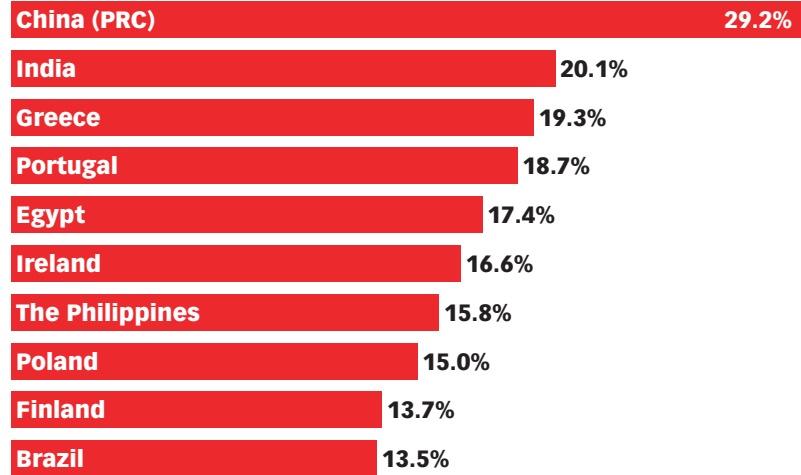
[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

It is worthwhile to note that smaller markets such as the Philippines and Egypt are experiencing high growth rates off of a small base of IT hardware sales, compared with other countries.

Fastest Growing IT Hardware Markets Worldwide, by Country, 1993-2001 (ranked by CAGR)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

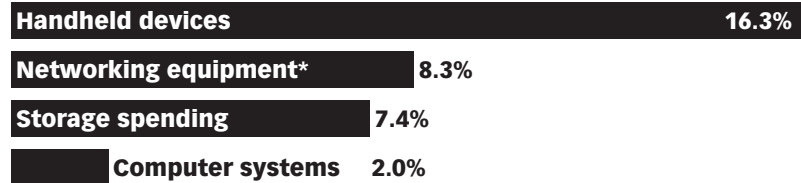
045586 ©2002 eMarketer, Inc.

www.eMarketer.com

Among the IT hardware markets that are forecast to see the strongest growth over the next several years, PricewaterhouseCoopers and IDC estimate that handheld devices will see the highest growth through 2006, as businesses finally begin to move forward with wireless initiatives.

Enterprise networking equipment and storage spending are also expected to see solid growth during the next four years, as business data needs continue to climb.

CAGR for Worldwide IT Hardware Spending, by Technology, 2001-2006



Note: *excludes equipment purchased by telecom carriers
Source: International Data Corporation (IDC), June 2002; PricewaterhouseCoopers (PwC), November 2002

045330 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

Software Spending

According to the World Information Technology and Services Alliance (WITSA), worldwide IT software spending increased by a compound annual growth rate of 13.4% between 1993 and 2001, to reach \$196.2 billion.

WITSA includes packaged software, systems software and application tools within its definition of IT software.

Worldwide IT Software Spending, 1993-2001 (in billions)

1993	\$71.55
1994	\$81.07
1995	\$95.70
1996	\$104.66
1997	\$114.77
1998	\$135.41
1999	\$153.55
2000	\$181.34
2001	\$196.24

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045303 ©2002 eMarketer, Inc.

www.eMarketer.com

By comparison, Gartner Dataquest estimates that worldwide software spending will grow from \$74.2 billion in 2001 to reach \$76.9 billion in 2002. Gartner believes that infrastructure software will lead software industry growth over the short term, while packaged applications will recover more slowly, only after businesses decide to invest more heavily in new technology initiatives.

Worldwide Software Spending, 2001-2003 (in billions)

2001	\$74.2
2002	\$76.9
2003	\$81.8

Source: Gartner Dataquest, November 2002

044867 ©2002 eMarketer, Inc.

www.eMarketer.com

Similar to Gartner's forecast, the Meta Group estimates that worldwide software spending will come in at \$75 billion by the end of 2002, while a third comparative estimate from Computer Economics puts worldwide software spending at \$145.6 billion in 2002.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

Looking out over the longer-term, IDC predicts that worldwide spending on software applications will reach \$131 billion by 2006.

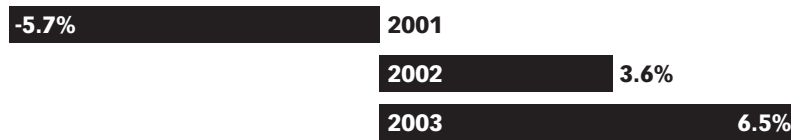
After an estimated decline in software spending of 5.7% in 2001, Gartner predicts that worldwide software sales will increase by 3.6% by the end of 2002. By contrast, the Meta Group estimates that global software sales will decline by 6% in 2002, while IDC estimates that software sales will increase by a modest 1.5%.

“When budgets loosen in the second half of 2003 or the first half of 2004, the backlog of demand could cause a temporary growth surge that then settles down to normal growth rates.”

– Roger Fulton, Gartner Dataquest Software Industry group

Looking ahead to 2003, Gartner expects that software sales will return to a healthier growth rate of 6.5%, led by sales of infrastructure software.

Estimated Growth in Worldwide Software Sales, 2001-2003



Source: Gartner Dataquest, September 2002

045467 ©2002 eMarketer, Inc.

www.eMarketer.com

And similar to Gartner, IDC believes that packaged applications will lag other segments of the global software market, with relatively slower growth of 4.0% in 2003.

By comparison, application development tools are expected to increase by a compound annual growth rate of 11.5% through 2006, as IDC believes that many companies have put off internal development projects long enough. Furthermore, IDC notes that new applications that make use of web services and XML-enabled tools have given companies further reason to invest in development projects.

Estimated Growth in Worldwide Packaged Software Sales, 2002 & 2003



Source: International Data Corporation (IDC), October 2002

045461 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Taking a closer look at the enterprise applications market, AMR Research estimates that this segment will increase by a compound annual growth rate of 13% between 2002 and 2006, to reach \$70.6 billion in four years' time. As a whole, AMR Research estimates that the worldwide enterprise application market grew by 7% in 2001, and will grow by another 6% in 2002.

Enterprise resource planning (ERP) software spending is forecast to increase from \$21 billion in 2002 to \$31 billion by 2006, while supply chain management (SCM) software sales are expected to grow from \$6.4 billion in 2002 to \$13.6 billion in 2006.

Among those applications expected to see the greatest near-term growth are product lifecycle management (PLM) and supply chain management (SCM), which are forecast to grow by 31% and 13% respectively during 2002.

Worldwide Enterprise Applications Market Revenues, by Category, 2006 (in billions)

Enterprise Resource Planning (ERP)

 **\$31.0**

Customer Relationship Management (CRM)

 **\$26.0**

Supply Chain Management (SCM)

 **\$13.6**

Total

 **\$70.6**

Source: AMR Research, May 2002

045464 ©2002 eMarketer, Inc.

www.eMarketer.com

When software sales are broken down by world region, IDC estimates that North America accounts for the largest share of the global software market, at 52.2% of total spending in 2001. Western Europe is next with a 32.1% market share, while Japan accounted for 7.0% of total spending.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

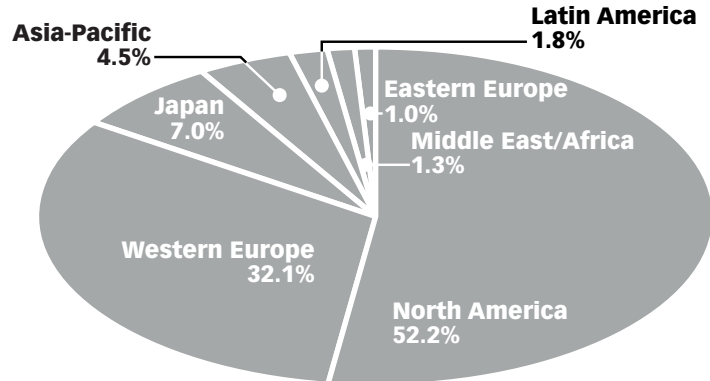
[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

By comparison, Computer Economics estimates that the Asia-Pacific region (including Japan) accounts for 22.2% of global software spending in 2002, compared with a 20.0% share for all of Europe and a 48.2% share of global software sales for the United States.

Software Spending Worldwide, by Region, 2001 (as a % of total spending)



Source: International Data Corporation (IDC), February 2002

045590 ©2002 eMarketer, Inc.

www.eMarketer.com

Among the leading national markets for IT software, WITSA has found that the United States was by far the world leader in 2001, accounting for nearly 50% of all sales worldwide.

Taken together, the top ten countries accounted for more than 85% of worldwide software spending in 2001, while Germany, the United Kingdom, France and Italy accounted for 22.3% of worldwide sales combined.

Worldwide Software Spending, by Country, 2001 (in billions and as a % of spending worldwide)

US	\$96.56 (49.2%)
Germany	\$14.70 (7.5%)
UK	\$13.80 (7.0%)
Japan	\$13.73 (7.0%)
France	\$10.52 (5.4%)
Canada	\$5.96 (3.0%)
Italy	\$4.65 (2.4%)
Netherlands	\$4.44 (2.3%)
Australia	\$2.73 (1.4%)
Switzerland	\$2.56 (1.3%)

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045304 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

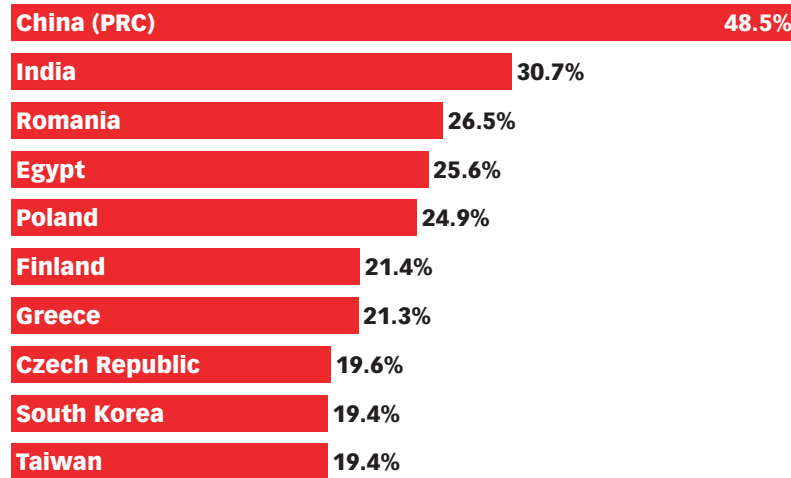
[Index of Charts](#)

Although they were not counted among the ten largest markets, China spent a notable \$1.49 billion on software in 2001, up from \$1.05 billion in 2000, while Brazil spent an even higher \$1.86 billion on software in 2001.

As for the fastest growing markets around the world, China and India increased their software spending the most between 1993 and 2001, posting compound annual growth rates of 48.5% and 30.7%, respectively, according to WITSA's estimates.

Other strong markets of note include Poland, Finland, South Korea and Taiwan, each of which spent more than \$500 million on software in 2001. By contrast, smaller markets such as Romania and Egypt have increased their spending to lower levels of \$46 million and \$124 million, respectively.

Fastest Growing Software Markets Worldwide, by Country, 1993-2001 (ranked by CAGR)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045587 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

IT Services Spending

Worldwide IT services spending increased by a compound annual growth rate of 10.2% between 1993 and 2001 to reach \$425 billion, according to the World Information Technology and Services Alliance (WITSA).

Worldwide IT Services Spending, 1993-2001 (in billions)

1993	\$196.33
1994	\$209.66
1995	\$235.70
1996	\$247.64
1997	\$265.71
1998	\$308.81
1999	\$347.03
2000	\$391.56
2001	\$425.66

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045302 ©2002 eMarketer, Inc.

www.eMarketer.com

By comparison, Gartner Dataquest's most recent forecast estimates that worldwide IT services spending will have increased from \$541.9 billion in 2001 to reach \$556.8 billion by the end of 2002.

As of November 2002, Gartner has slightly lowered its 2003 IT services spending forecast to \$591.4 billion, down from its September estimate of \$597.1 billion. Gartner had originally forecast IT services growth of 7.1% in 2003, but in light of continued technology spending reductions, decided to cut its projected growth rate for 2003 to 6.2%.

More specifically, Gartner has cited a sharp slowdown in consulting, development and integration business among IT consultants as the main drag on the IT services market. On the other hand, IT outsourcing has fared relatively better during the economic downturn, as several companies have chosen to reduce costs by turning to outsourced IT services contracts.

Worldwide IT Services Spending, 2001-2003 (in billions)

2001	\$541.9
2002	\$556.8
2003	\$591.4

Source: Gartner Dataquest, September 2002

045593 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Similarly, as of October 2002, IDC lowered its forecast for worldwide IT services spending for the current year, from a previous growth rate of 10.6% to a revised growth rate of 6.7%. IDC noted the decrease in IT spending during the first half of 2002 and continued spending reductions during the latter half of the year as the primary reasons for its forecast revision.

“...The anticipated pickup in demand by the middle of 2002 is now not expected until the last quarter of 2002, and a full recovery is not expected until the spring of 2003.”

– Ned May, IDC Worldwide Services Research

Taking a longer-term view, IDC predicts that worldwide IT services spending will increase by a compound annual growth rate of 10.6% between 2001 and 2006, to reach \$572 billion in four years' time.

In breaking down its worldwide IT services forecast by region, Gartner estimates that North America will account for 49.3% of global spending in 2003. Western Europe is expected to take a 26.5% share of the global market, while the Asia-Pacific region is forecast to hold a 5.6% share.

Worldwide IT Services Market Revenues, by Region, 2001-2003 (in billions)

	2001	2002	2003
Asia-Pacific	\$27.60	\$30.07	\$33.44
Eastern Europe	\$6.98	\$7.36	\$7.82
Japan	\$64.81	\$64.78	\$70.31
Latin America	\$19.71	\$20.18	\$21.22
Middle East and Africa	\$9.09	\$9.47	\$10.03
North America	\$267.04	\$274.81	\$291.53
Western Europe	\$146.71	\$150.18	\$157.06
Worldwide total	\$541.93	\$556.83	\$591.40

Note: numbers may not add to total due to rounding

Source: Gartner Dataquest, November 2002

045197 ©2002 eMarketer, Inc.

www.eMarketer.com

Among the top ten national markets for IT services, WITSA estimates that the United States accounted for 46.8% of the worldwide IT services market in 2001, followed by Japan at 12.3%.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Taken together, the top ten countries were responsible for 87.2% of worldwide IT services spending in 2001, while the United Kingdom, Germany, France and Italy accounted for a combined 21.1% of global sales.

Worldwide IT Services Spending, by Country, 2001 (in billions and as a % of spending worldwide)

US	\$199.20 (46.8%)
Japan	\$52.32 (12.3%)
UK	\$27.35 (6.4%)
Germany	\$27.02 (6.3%)
France	\$24.87 (5.8%)
Canada	\$12.39 (2.9%)
Italy	\$11.08 (2.6%)
Netherlands	\$6.20 (1.5%)
Sweden	\$5.49 (1.3%)
Australia	\$5.49 (1.3%)

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045305 ©2002 eMarketer, Inc.

www.eMarketer.com

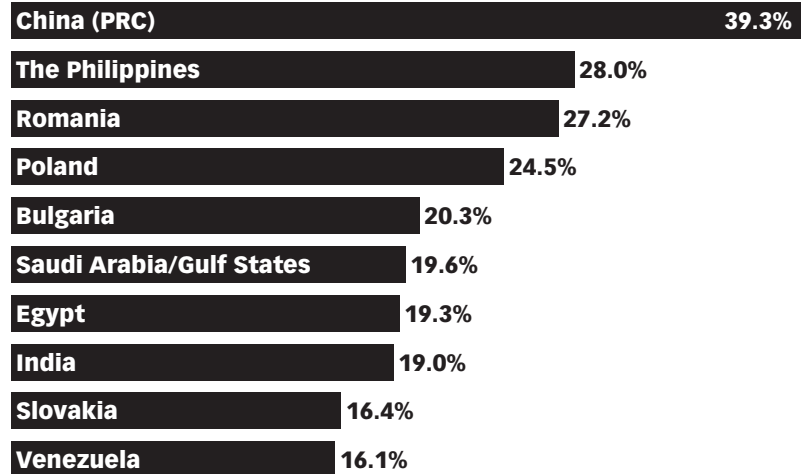
As for the fastest growing national markets between 1993 and 2001, China, India, Saudi Arabia and Poland are among the largest markets showing strong growth. IT services spending totaled \$1.77 billion in India during 2001, compared with \$1.48 billion in China and \$877 million in Poland.

Other countries of note include the United Kingdom, which saw IT services revenues increase by a compound annual growth rate of 14.8% between 1993 and 2001, and the United States, where IT services increased by a comparable 11.7%.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

It is worthwhile to note that small national markets such as Romania, Bulgaria, Slovakia and the Philippines have increased their IT services spending over a much smaller base, with the Philippines being the largest of these four markets at \$347 million in 2001.

Fastest Growing IT Services Markets Worldwide, by Country, 1993-2001 (ranked by CAGR)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045588 ©2002 eMarketer, Inc. www.eMarketer.com

As part of its May 2002 IT services market forecast, Gartner Dataquest has broken out IT services spending by segment, showing that development and integration services continue to be the largest component within this market, followed next by management services.

By 2005, Gartner expects development and integration services to make up 28.7% of IT services spending worldwide, with management services accounting for another 20.2% of the global market.

Worldwide IT Services Revenues, by Segment, 2001, 2002 & 2005 (in billions)

	2001	2002	2005
Development and integration	\$157.62	\$159.12	\$199.49
Management services	\$100.35	\$106.95	\$140.64
Hardware maintenance and support	\$97.30	\$97.58	\$105.21
Business process and transaction management	\$89.70	\$94.88	\$129.10
Consulting	\$47.52	\$47.06	\$57.10
Software maintenance and support	\$32.25	\$34.06	\$42.16
Education and training	\$17.54	\$17.82	\$22.51
Total	\$542.28	\$557.47	\$696.20

Source: Gartner Dataquest, May 2002

039843 ©2002 eMarketer, Inc. www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

E-Business/Internet Technology Spending

Although it is not traditionally broken out as a segment of IT spending, there is continued interest in the portion of technology spending that is dedicated to e-business or internet-related initiatives. Many companies have begun to dedicate significant portions of their IT budgets to such projects, and a handful of researchers have continued to measure the contribution that e-business initiatives are making to overall IT spending growth.

However, e-business spending forecasts do vary considerably, due in part to the fact that it is almost impossible for technology vendors to break out their product sales by intended customer use. Furthermore, some technologies may have multiple uses that make it difficult to define them as internet-specific, while for many end-users, e-business spending is considered to be a part of their regular technology spending.

Based upon its estimates for e-business spending as a portion of worldwide IT spending, data from the World Information Technology and Services Alliance (WITSA) indicates that global e-business spending has grown from \$149.0 billion in 1999 to approximately \$234.1 billion in 2002.

Worldwide E-Business Technology Spending, 1999-2001 (in billions)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045688 ©2002 eMarketer, Inc.

www.eMarketer.com

As a percentage of technology spending, WITSA estimates that worldwide e-business spending has increased from an average 12% of IT spending in 1999, to 17% of IT spending in 2001.

Worldwide E-Business Technology Spending, 1999-2001 (as a % of IT spending)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045307 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

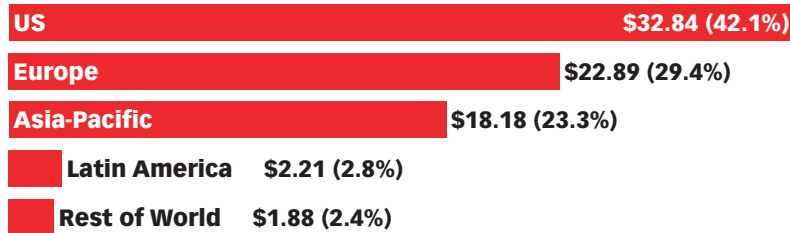
[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

By comparison, a more conservative estimate by Computer Economics puts global e-business spending at \$78.0 billion in 2002, accounting for 6.1% of its estimated \$1.27 trillion in total IT spending worldwide.

Broken down by world region, Computer Economics finds that the United States accounts for a substantial 42.1% share of global e-business spending, followed by Europe and the Asia-Pacific region, at 29.4% and 23.3% of worldwide e-business spending, respectively.

Worldwide E-Business Technology Spending, by Region, 2002 (in billions and as a % of total spending)



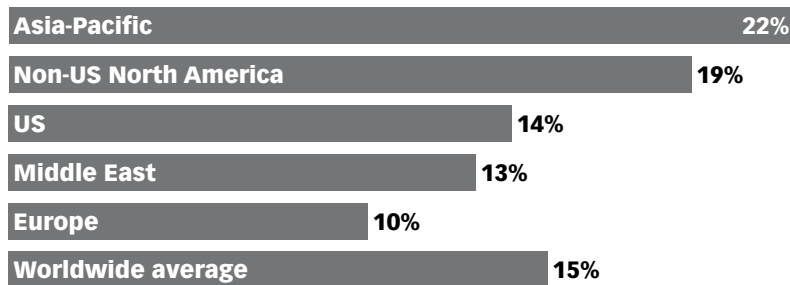
Source: Computer Economics, May 2002

045687 ©2002 eMarketer, Inc.

www.eMarketer.com

Comparative data from the Meta Group shows that the United States and North America account for a similarly high 33% share of the narrower e-commerce technology market, while the Asia-Pacific region is also investing heavily in e-commerce, accounting for 22% of global spending.

Worldwide Spending on E-Commerce Technology, by Region, 2002 (as a % of company revenues)



Source: META Group, 2002

045319 ©2002 eMarketer, Inc.

www.eMarketer.com

These findings are supported by country-specific data from WITSA, which found that China, Israel and Mexico were making the heaviest investments in e-business technologies in 2001, compared with other national markets.

Outside of the top ten, there are nine more countries spending at least 18% of their IT budgets on e-business, including the Czech Republic, Hungary, Poland, Brazil and Japan.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

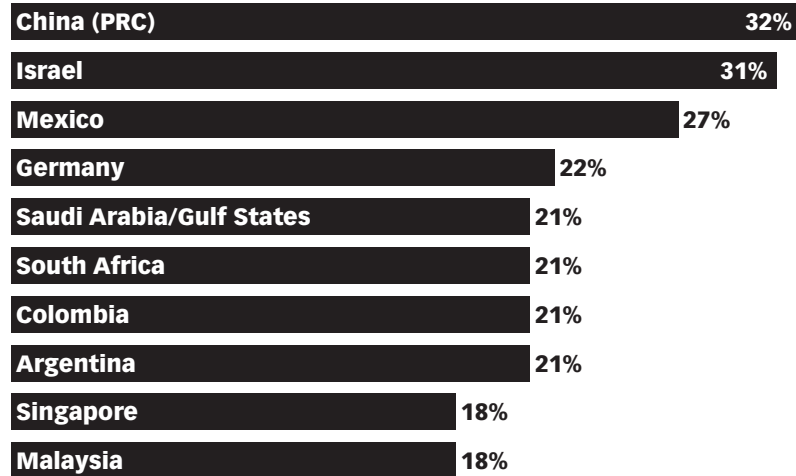
[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

According to WITSA, the United States is spending 17% of its IT dollars on e-business initiatives, compared with 16% for Canada, 14% for the UK, and 11% for France.

Leading E-Business Technology Markets Worldwide, by Country, 2001 (ranked by e-business spending as a % of IT spending)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045689 ©2002 eMarketer, Inc.

www.eMarketer.com

This compares with a mid-2002 survey conducted by A.T. Kearney and Line56 Research, which found that North American companies were spending an average 18.0% of their IT budgets on e-business initiatives in 2002.

Looking ahead to 2003, respondents to this survey expected that their e-business budgets would jump by a substantial 48.8%, to account for 26.8% of company IT budgets.

North American Companies' Average E-Business Spending, 2002 & 2003 (as a % of IT budgets)



Source: A. T. Kearney/Line56 Research, August 2002

043104 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business
IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

A more recent study conducted by *CIO Magazine* and Deutsche Bank found in their November 2002 survey of IT professionals that in North America, businesses expected to direct an average 13.4% of their IT budgets toward e-business in 2003, up from 11.8% in 2002.

Percent of Global Companies' IT Budgets Spent on E-Business, 2002 & 2003



Note: n=301

Source: CIO Magazine and Deutsche Bank, December 2002

045480 ©2002 eMarketer, Inc.

www.eMarketer.com

	Methodology	7
I	Worldwide IT Spending	11
II	North America	49
	A. North American IT Spending Forecasts	50
	B. IT Spending Growth in North America	52
III	Europe	55
IV	Asia-Pacific	63
V	Latin America	69
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	Index of Charts	121

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)**
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

A. North American IT Spending Forecasts

According to the Aberdeen Group, IT spending in North America is forecast to increase from \$494.6 billion in 2002 to \$522.3 billion in 2003.

IT Spending in North America, 2000-2005 (in billions)

2000	\$477.4
2001	\$475.7
2002	\$494.6
2003	\$522.3
2004	\$550.2
2005	\$578.2

Source: Aberdeen Group, August 2002

043139 ©2002 eMarketer, Inc.

www.eMarketer.com

Looking at IT spending in the United States alone, Computer Economics forecast in May of 2002 that US technology spending would total \$572.8 billion by the end of the year, while a comparative estimate from IDC predicts that US IT spending will reach \$436 billion in 2002.

A third estimate from Forrester Research puts US IT spending at \$388 billion in 2002, according to Forrester's "most likely" IT spending scenario, with US technology spending forecast to climb to \$410 billion by the end of 2003.

US IT Spending, by Recovery Scenario, 2000-2004 (in billions)

	2000	2001	2002	2003	2004
Best case	\$543	\$421	\$401	\$442	\$519
Most likely	\$543	\$421	\$388	\$410	\$454
Worst case	\$543	\$421	\$373	\$377	\$389

Source: Forrester Research, October 2002

044636 ©2002 eMarketer, Inc.

www.eMarketer.com

As for IT spending in Canada, IDC's latest forecast revision in November 2002 predicts that IT spending will actually fall by 1.6% in 2002, to CAD \$35.2 billion, down from CAD \$35.8 billion in 2001.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)**
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

Looking ahead to 2003, IDC believes that IT spending in Canada will return to growth, increasing by more than 3% to reach CAD \$36 billion.

IT Spending in Canada, 2001 & 2002 (in billions CAD)

2001	\$35.8
2002	\$35.2

Source: International Data Corporation (IDC), November 2002

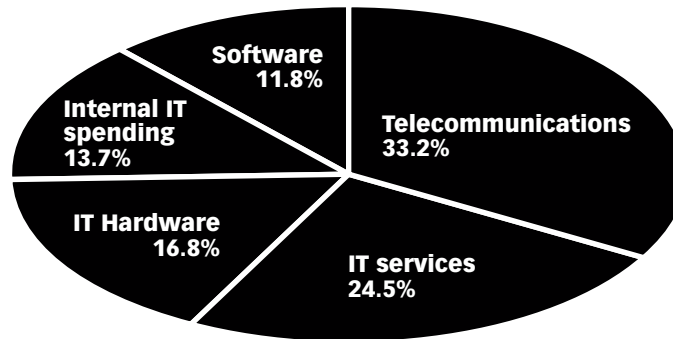
045475 ©2002 eMarketer, Inc.

www.eMarketer.com

In its breakdown of IT spending by technology segment, IDC has found that telecommunications spending accounts for about one-third of all IT spending in North America.

This compares with much higher proportions in the less mature markets of Latin America and the Asia-Pacific region, where telecom spending takes up between 60% and 67% of all IT dollars.

IT Spending in North America, by Technology Segment, 2001 (as a % of total spending)



Source: International Data Corporation (IDC), February 2002

045691 ©2002 eMarketer, Inc.

www.eMarketer.com

With the exception of the Middle East, North America dedicates the greatest portion of its IT spending toward software, at 11.8% of overall spending. Western Europe, on the other hand, directs approximately 9.4% of IT spending toward software, while Asia spends less than 4.0% of its IT dollars on software.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

B. IT Spending Growth in North America

After compiling several comparative estimates for US IT spending growth, eMarketer has found that most forecasts from the latter half of 2002 project that IT spending in the United States will grow by between 4% and 6% in 2003.

Comparative Estimates: US IT Spending Growth, 2003

Yankee Group, January 2002

11.5%

Forrester Research*, October 2002

5.6%

European Information Technology Observatory (EITO), October 2002

5.0%

International Data Corporation (IDC), November 2002

4.4%

Aberdeen Group, December 2002

3.6%

Giga Information Group, September 2002

2.0-4.0%

*Note: *"most likely" scenario
Source: various, as noted, 2002*

045442 ©2002 eMarketer, Inc.

www.eMarketer.com

The Yankee Group's forecast from January of 2002 is the outlier at 11.5%, although eMarketer expects that its new forecast will be in line with those of most other research firms when the Yankee Group makes its revisions in early 2003.

Like most industry analysts, the Yankee Group initially expected that a recovery in IT spending would occur during the second half of 2002, as several CIO surveys and other IT spending indicators seemed to predict. However, as economic uncertainty persisted through the summer of 2002, many businesses made further cuts to their IT budgets, thereby pushing out hopes for a technology spending recovery into 2003.

US IT Spending Growth, 2001-2003

-1.1% 2001

3.3% 2002

11.5% 2003

Source: Yankee Group, January 2002

036578 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

Not unlike the Yankee Group, IDC initially expected that IT spending would recover during the second half of 2002, thereby setting up IT spending growth of 8.8% in 2003, according to its May 2002 forecast.

US IT Spending Growth, 2001-2003



Source: International Data Corporation (IDC), May 2002

039472 ©2002 eMarketer, Inc.

www.eMarketer.com

But six months later, in November, IDC revised its IT spending forecasts downward, estimating that US IT spending would increase by just 4.4% in 2003, while growth in Canada would come in at just 3.0%.

IT Spending Growth in Canada, 2002 & 2003 (as a % increase/decrease vs. prior year)



Source: International Data Corporation (IDC), November 2002

045474 ©2002 eMarketer, Inc.

www.eMarketer.com

In August of 2002, Goldman Sachs predicted that US IT spending would grow by 3% to 5% in 2003, with most of the increase occurring during the latter half of the year. Similarly, in September the Giga Information Group estimated that US IT spending will increase by between 2% and 4% in 2003, largely depending upon how well corporate profitability is able to rebound during the closing months of 2002 and into 2003.

A fifth comparative estimate from the European Information Technology Observatory (EITO) came out in October of 2002, projecting that US information and communication technology spending would increase by a rate of 5.0% in 2003, a slight improvement over the 3.2% growth rate from 2002.

Estimated Growth in US Information and Communications Technology Spending, 2002 & 2003



Source: European Information Technology Observatory (EITO), October 2002

045324 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)**
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

In October of 2002, Forrester Research issued its revised IT spending forecast, with downward revisions from its February 2002 projections for 3.9% growth in 2002 and 10.4% growth in 2003.

US Technology Spending, 2000-2004 (in billions)

	2000	2001	2002*	2003*	2004*
Spending	\$543	\$421	\$389	\$410	\$454
Annual growth	+20.0%	-22.4%	-7.9%	+5.6%	+10.7%
Trend line	\$482	\$517	\$551	\$586	\$620

*Note: *forecast*
Source: Forrester Research, October 2002

044638 ©2002 eMarketer, Inc.

www.eMarketer.com

Citing survey data from its bi-annual Business Technographics Benchmark Study, Forrester found that IT executives had become more risk-averse during the course of the year, and had shifted much of their IT priorities to infrastructure or internal development projects.

Nonetheless, Forrester said that it believed that IT budget cuts had hit bottom by mid-2002, and that IT spending in North America would begin to grow again during the latter half of the year, thereby setting the stage for stronger growth in 2003.

A final comparative estimate from *BusinessWeek's* chief economist predicted in December of 2002 that IT spending in the United States would grow at a rate of between 5% and 10% in 2003, amid a low-growth and highly competitive economic environment. As a result of this business climate, *BusinessWeek* predicts that the focus of technology implementations will be to replace jobs and improve productivity.

	Methodology	7
I	Worldwide IT Spending	11
II	North America	49
III	Europe	55
	A. Europe IT Spending Forecasts	56
	B. IT Spending Growth Rates for Europe	59
IV	Asia-Pacific	63
V	Latin America	69
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	Index of Charts	121

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

A. Europe IT Spending Forecasts

According to the Aberdeen Group's technology spending estimates for Europe, IT spending will reach \$394.6 billion by the end of 2002, and will grow to \$393.1 billion in 2003.

IT Spending in Europe, 2000-2005 (in billions)

2000	\$375.6
2001	\$377.4
2002	\$384.6
2003	\$393.1
2004	\$402.0
2005	\$410.5

Source: Aberdeen Group, August 2002

043138 ©2002 eMarketer, Inc.

www.eMarketer.com

By comparison, Computer Economics estimates that IT spending in Europe will total \$325.6 billion by the end of 2002, while Gartner Dataquest estimates that Western European IT spending alone will reach \$584.4 billion by the end of 2002 and grow to \$615.8 billion in 2003.

Among the leading national markets in Western Europe, Germany, the United Kingdom and France are the three largest, with Italy and the Netherlands rounding out the top five countries in 2001, according to the World Information Technology and Services Alliance (WITSA).

Other countries of note include Austria and Norway, each of which spent \$8.9 billion and \$7.6 billion on information technology in 2001, respectively.

Leading IT Markets in Western Europe, 2001 (in billions)

Germany	\$98.26
UK	\$91.35
France	\$81.22
Italy	\$32.45
Netherlands	\$23.99
Sweden	\$17.49
Switzerland	\$17.03
Spain	\$15.18
Belgium	\$11.95
Denmark	\$10.26

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045695 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

With their highly educated and computer literate populations, the emerging markets of Eastern Europe have in recent years begun to significantly increase their spending on information technology, with Russia and Poland coming out on top as the two largest national markets.

Among the smallest markets in the world, IT spending in Slovenia, Romania and Bulgaria totaled \$490 million, \$416 million and \$269 million, respectively, by the end of 2001.

Leading IT Markets in Eastern Europe, 2001 (in billions)

Russia	\$5.26
Poland	\$4.03
Czech Republic	\$2.72
Hungary	\$1.96
Slovakia	\$0.68

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

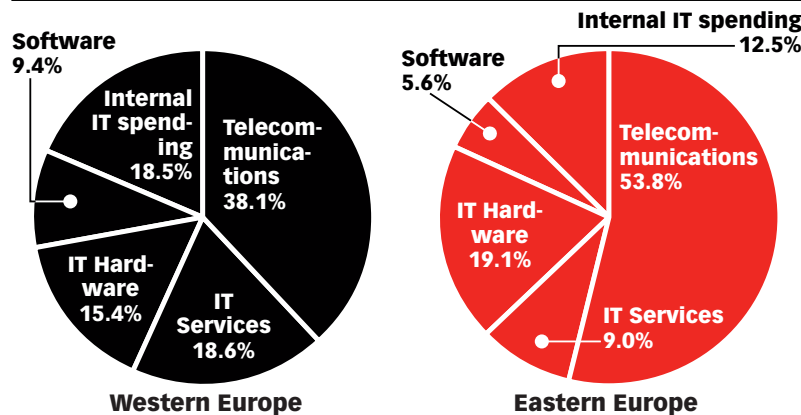
045696 ©2002 eMarketer, Inc.

www.eMarketer.com

When comparisons are made between how countries in Western Europe allocate their IT spending versus their counterparts in Eastern Europe, it is apparent that the less mature markets of Eastern Europe are still investing heavily in basic infrastructure such as telecommunications equipment and IT hardware.

Compared with the United States, however, Western European countries were spending much more on internal IT expenses such as labor and other operational costs, and slightly less on software and IT services.

IT Spending in Western and Eastern Europe, by Technology Segment, 2001 (as a % of total spending)



Source: International Data Corporation (IDC), February 2002

045692 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)**
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

According to Gartner Dataquest’s estimates, Western European IT spending on telecommunications equipment will increase by 5.8%, from \$330.9 billion in 2002 to \$350.2 billion in 2003.

IT services spending in Western Europe will see the highest growth in 2003, however, as it is forecast to increase by 7.1% to \$158.5 billion by the end of the year.

IT Spending in Western Europe, by Technology Segment, 2000-2003 (in billions)

	2000	2001	2002	2003
Hardware	\$92.84	\$85.12	\$81.99	\$82.01
Software	\$23.65	\$23.07	\$23.61	\$25.11
IT services	\$136.67	\$144.62	\$148.01	\$158.48
Telecom	\$319.49	\$321.94	\$330.91	\$350.22
Total IT	\$572.64	\$574.74	\$584.52	\$615.82

Source: Gartner Dataquest, October 2002

044540 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

B. IT Spending Growth Rates for Europe

According to Gartner Dataquest's October 2002 IT spending forecast for Western Europe, IT spending is set to see growth of 5.4% in 2003, up from 1.7% growth in 2002.

By comparison, in July 2002, IDC estimated that IT spending in Western Europe would grow by 6.3%, after experiencing growth of 4.4% in 2002.

IT Spending Growth in Western Europe, 2001-2003



Source: International Data Corporation (IDC), July 2002

042918 ©2002 eMarketer, Inc.

www.eMarketer.com

Sweden was forecast by IDC to lead Western European IT spending growth, with an 8% increase in 2002. Finland, France, Italy and the Netherlands were expected to follow closely, with growth rates of 6%.

“...A return to healthy IT investment will be hindered until business profitability ameliorates and the restrictions on corporate IT budgets are subsequently relaxed.”

– Vicky Hawksworth, IDC European IT Markets Center

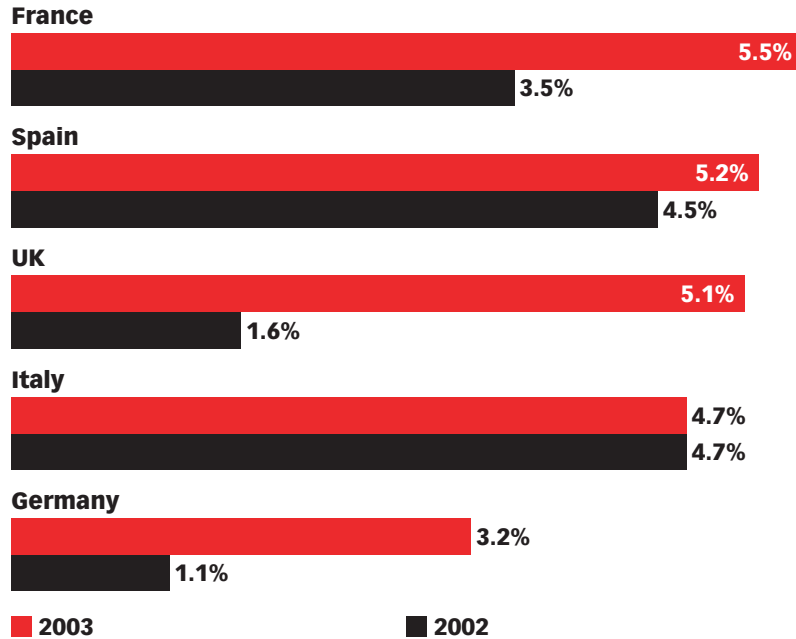
However, as a result of sluggish economic growth in Europe during the second half of 2002, IDC has in November of 2002 lowered its IT spending forecast for Western Europe, which it now estimates will grow by 5.4% in 2003.

Similarly, the Giga Information Group expects IT spending in Europe to see moderate IT spending growth of between 2% and 4% in 2003, up from an increase of just 1% in 2002.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)**
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

A fourth comparative estimate from the European Information Technology Observatory (EITO) released in October of 2002, estimates that IT and telecommunications spending will grow by just 3.2% in 2003, after experiencing growth of 1.1% in 2002.

Estimated Growth in Communications Technology Spending in Western Europe, by Country, 2002 & 2003



Source: European Information Technology Observatory (EITO), October 2002

045327 ©2002 eMarketer, Inc.

www.eMarketer.com

However, when telecommunications technology is excluded, the EITO predicts that IT spending in Western Europe will actually remain stagnant in 2002, increasing by only 0.1%, and will see slight growth of just 1.9% in 2003.

Among the bright spots in the Western European technology market, AMR Research predicts that spending on e-business applications will increase by a compound annual growth rate of 24% between 2001 and 2005. Computer Economics estimates that spending on e-business applications and infrastructure will reach \$22.9 billion in Europe by the end of 2002.

In a September 2002 survey of IT professionals in Western Europe, Gartner Dataquest found that respondents in the Benelux countries were rather optimistic about their IT spending in 2003, with 19.2% of IT respondents indicating that they expected their companies' IT budgets to increase by more than 10%.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)**
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

IT managers in Italy were the most positive however, with 46% of respondents saying that they plan to increase their IT spending by at least 3% in 2003. Respondents in the United Kingdom and Ireland were similarly optimistic, with 37.7% expecting to see a notable increase in their IT spending.

IT Spending Intentions of CIOs in Selected Countries in Western Europe, 2003 (as a % of respondents)

	Benelux	Scan- dinavia	France	Germany	UK & Ireland	Italy	Others
Increase by more than 10%	19.2%	5.1%	4.4%	4.5%	8.2%	16.0%	5.0%
Increase by 3%-10%	5.8%	17.9%	20.0%	13.6%	29.5%	30.0%	40.0%
No change (-3% to +3%)	55.8%	53.8%	64.4%	54.5%	39.3%	38.0%	30.0%
Decrease by 3%-10%	5.8%	10.3%	6.7%	15.9%	14.8%	14.0%	20.0%
Decrease more than 10%	13.5%	12.8%	4.4%	11.4%	8.2%	2.0%	5.0%

Source: Gartner Dataquest, October 2002

044541 ©2002 eMarketer, Inc.

www.eMarketer.com

In total, 78.4% of Western European IT managers said that they expected that their IT budgets would stay flat or increase, while 21.4% believe that their IT budgets will decrease in 2003.

	Methodology	7
I	Worldwide IT Spending	11
II	North America	49
III	Europe	55
IV	Asia-Pacific	63
	A. Asia-Pacific IT Spending Forecasts	64
	B. IT Spending Growth Rates in the Asia-Pacific Region	67
V	Latin America	69
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	Index of Charts	121

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

A. Asia-Pacific IT Spending Forecasts

According to the Aberdeen Group's August 2002 IT spending forecast, IT spending in the Asia-Pacific region is expected to reach \$258.1 billion in 2002, and grow to \$274.5 billion by the end of 2003.

IT Spending in the Asia-Pacific Region, 2000-2005 (in billions)

2000	\$250.6
2001	\$251.8
2002	\$258.1
2003	\$274.5
2004	\$292.4
2005	\$310.9

Source: Aberdeen Group, August 2002

043135 ©2002 eMarketer, Inc.

www.eMarketer.com

By comparison, Computer Economics estimates that IT spending in the Asia-Pacific region, including Japan, will reach \$267.8 billion by the end of 2002. E-business spending is expected to make up 6.8% of that total, or \$18.2 billion in 2002.

Accounting for 13.7% of global IT spending in 2001, Japan is by far the largest market for information technology in the Asia-Pacific region, and second only to the United States throughout the world.

And despite posting a compound annual growth rate of 29.1% between 1993 and 2001, IT spending in China was barely more than one-tenth the amount that was spent in Japan in 2001.

Nonetheless, technology spending in the developing markets of Asia is continuing at a rapid pace, as governments and businesses view their IT investments as key to their competitive futures. After Japan and China, Australia, South Korea and India round out the top five IT markets in the Asia-Pacific region, according to figures from the World Information Technology and Services Alliance (WITSA).

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)**
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

Other countries of note include Thailand, the Philippines and Indonesia, each of which spent \$1.94 billion, \$1.47 billion and \$1.22 billion respectively, on IT in 2001.

Leading IT Markets in the Asia-Pacific Region, 2001 (in billions)



Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

045697 ©2002 eMarketer, Inc.

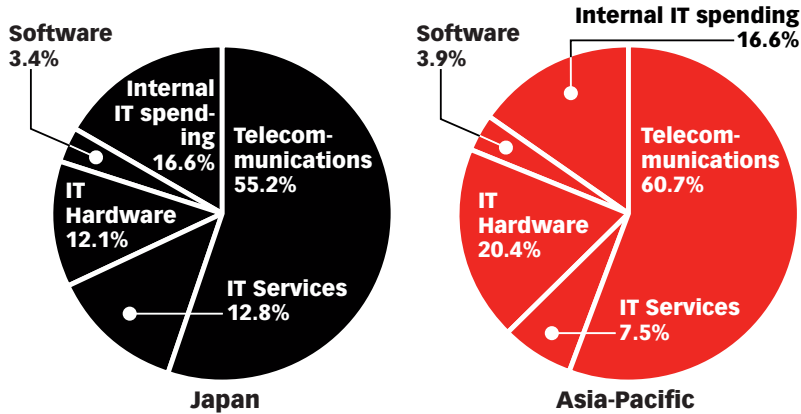
www.eMarketer.com

In a comparison similar to that of the IT spending divide between Eastern and Western Europe, the developing countries of the Asia-Pacific region are investing a great deal more in technology infrastructure, when compared with the relatively mature market of Japan.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)**
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

In particular, spending on telecommunications and IT hardware takes a much greater portion of most Asia-Pacific countries' IT dollars than it does in Japan.

IT Spending in Japan and the Asia-Pacific Region, by Technology Segment, 2001 (as a % of total spending)



Source: International Data Corporation (IDC), February 2002

045693 ©2002 eMarketer, Inc.

www.eMarketer.com

It is worthwhile to note, however, that Japan spends much more on telecommunications than North America, where telecom spending accounts for 33.2% of all IT spending.

North American companies also spend a great deal more on software and IT services, at 11.8% and 24.5% of their technology spending, respectively.

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

B. IT Spending Growth Rates in the Asia-Pacific Region

According to IDC's July 2002 forecast, IT spending in the Asia-Pacific region is forecast to grow by a significant 16.4% in 2003, after posting healthy growth of 8.0% in 2002.

Citing the fact that countries in the Asia-Pacific region did not suffer as deep an economic downturn as countries in North America and Europe, IDC has noted that IT spending in the Asia-Pacific region has experienced less of a decline in 2002, when compared with other parts of the world.

Looking ahead to 2003 and beyond, IDC believes that China, India, the Philippines and South Korea will be among the fastest growing technology markets worldwide.

Among the leading segments that are expected to show strong growth in the Asia-Pacific region, IDC expects both software and data communications equipment to increase by 22.4% in 2003, followed by IT services spending, which is expected to grow by 19.6%.

IDC predicts that IT services in the Asia-Pacific region will increase by a compound annual growth rate of 20.5% between 2001 and 2006.

IT Spending Growth in the Asia-Pacific Region, by Technology Segment, 2002 & 2003

	2002	2003
PCs	0.0%	13.2%
Servers	2.0%	11.4%
Software	18.0%	22.4%
Services	15.5%	19.6%
Data communications equipment	15.7%	22.4%
Total IT	8.0%	16.4%

Source: International Data Corporation (IDC), July 2002

042348 ©2002 eMarketer, Inc.

www.eMarketer.com

As for Japan, the European Information Technology Observatory (EITO) predicts that information and communications technology will grow by 5.0% in 2003, up from a growth rate of 4.4% in 2002.

By comparison, the EITO forecasts ICT spending growth of 5.0% and 3.2% in 2003 for the United States and Europe, respectively.

Estimated Growth in Information and Communications Technology Spending in Japan, 2002 & 2003

2002	4.4%
2003	5.0%

Source: European Information Technology Observatory (EITO), October 2002

045325 ©2002 eMarketer, Inc.

www.eMarketer.com

	Methodology	7
I	Worldwide IT Spending	11
II	North America	49
III	Europe	55
IV	Asia-Pacific	63
V	Latin America	69
	A. Latin America IT Spending Forecasts	70
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	Index of Charts	121

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)**
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

A. Latin America IT Spending Forecasts

According to the Aberdeen Group, IT spending in Latin America will increase from \$68.4 billion in 2002 to \$72.9 billion by the end of 2003.

IT Spending in Latin America, 2000-2005 (in billions)

2000	\$65.6
2001	\$65.7
2002	\$68.4
2003	\$72.9
2004	\$78.2
2005	\$83.5

Source: Aberdeen Group, August 2002

043137 ©2002 eMarketer, Inc.

www.eMarketer.com

By comparison, Computer Economics estimates that IT spending in Latin America will total \$46.7 billion by the end of 2002. E-business applications and infrastructure are forecast to reach \$2.2 billion, or 4.7% of that total.

Brazil is by far the largest IT market in the region, spending as much as the next five countries combined in 2001, according to data from the World Information Technology Alliance (WITSA).

Brazil is also the fastest growing technology market in Latin America, posting a compound annual growth rate of 11.6% between 1993 and 2001, compared with growth of 10.5% for Venezuela and 8.9% for Argentina.

Leading IT Markets in Latin America, 2001 (in billions)

Brazil	\$18.33
Mexico	\$8.41
Argentina	\$4.01
Colombia	\$2.19
Venezuela	\$2.07
Chile	\$1.70

Source: World Information Technology and Services Alliance (WITSA), International Data Corporation (IDC), February 2002

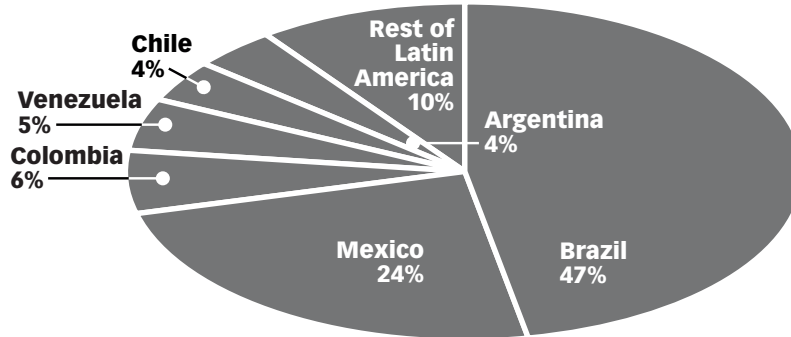
045698 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)**
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

According to IDC's independent estimate for 2002, Brazil accounts for a 47% share of IT spending in Latin America, while Mexico has a 24% share.

IT Spending in Latin America, by Country, 2002



Source: International Data Corporation (IDC), September 2002

044050 ©2002 eMarketer, Inc.

www.eMarketer.com

Looking ahead to 2005, the Aberdeen Group predicts that Brazil's IT spending will increase to \$27.6 billion, while the technology market in Mexico will grow to \$22.3 billion.

As for Argentina, the Aberdeen Group believes that 2002 will mark the bottom of both its economic contraction, and its decline in IT spending. In 2003, technology spending in Argentina is expected to see modest growth, with a recovery gaining strength in 2004.

IT Spending in Latin America, by Country, 2001-2005 (in billions)

	2001	2002	2003	2004	2005
Brazil	\$22.2	\$23.1	\$24.6	\$26.1	\$27.6
Mexico	\$16.9	\$17.3	\$18.9	\$20.6	\$22.3
Argentina	\$6.7	\$6.5	\$6.6	\$7.1	\$7.6
Venezuela	\$3.1	\$3.1	\$3.3	\$3.4	\$3.5

Source: Aberdeen Group, April 2002

045819 ©2002 eMarketer, Inc.

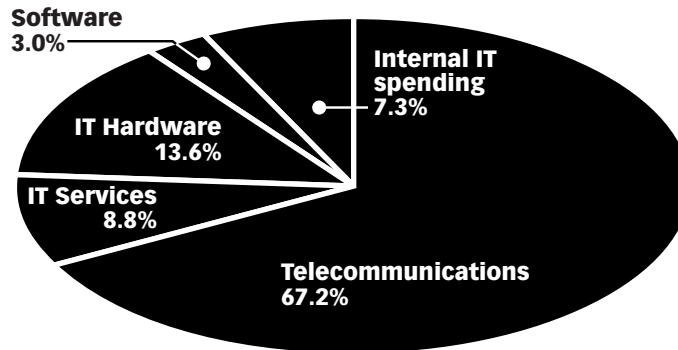
www.eMarketer.com

When IT spending is broken down by technology segment, telecommunications takes up more than two-thirds of technology dollars that are spent in the region.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)**
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

This is in line with other developing parts of the world, where a greater emphasis is placed upon investments in basic technology infrastructure, as compared to more mature markets in the United States, Europe and Japan.

IT Spending in Latin America, by Technology Segment, 2001 (as a % of total spending)



Source: International Data Corporation (IDC), February 2002

045694 ©2002 eMarketer, Inc.

www.eMarketer.com

Similar to IT spending in Latin America, 60.7% of technology spending in the Asia-Pacific region is channeled toward telecommunications, while 20.4% of spending is invested in IT hardware.

Looking to 2003, IDC has predicted in November 2002 that IT spending in Latin America will grow by a rate of 8.7%, and go on to have double-digit growth through 2006.

By comparison, the Aberdeen Group forecasts that regional IT spending will increase by a compound annual growth rate of 6.2% between 2001 and 2005, with Mexico leading regional growth at a 7.2% rate through 2005.

Software and IT services are the two technology segments expected to see the greatest growth between 2001 and 2005, increasing by compound annual growth rates of 9.2% and 11.2%, respectively. Hardware spending in Latin America is forecast to increase by a compound annual rate of 6.2% during that same period.

	Methodology	7
I	Worldwide IT Spending	11
II	North America	49
III	Europe	55
IV	Asia-Pacific	63
V	Latin America	69
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	Index of Charts	121

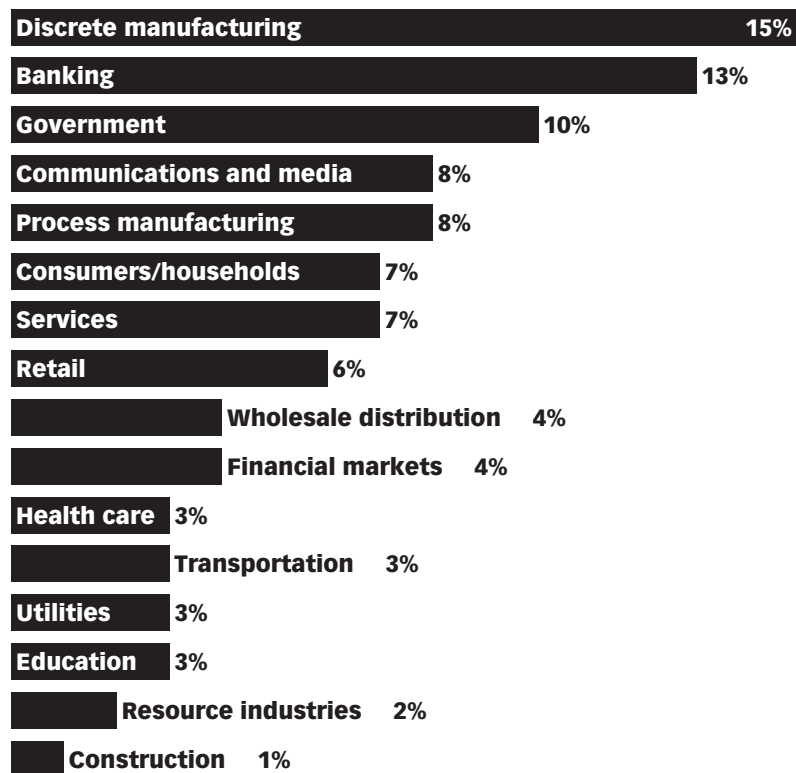
- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)**
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

Coverage of IT spending by industry reveals that definitional differences for industry categories can have a significant impact on the ranking of IT spending estimates.

Data on US industries is much more robust and readily available than that for other world markets, and it should be noted that in many global IT spending forecasts, US spending will necessarily have the heaviest weighting.

IDC breaks out worldwide IT spending by industry, finding that discrete manufacturing, banking and government are the three largest vertical technology markets in 2002.

Worldwide IT Spending, by Industry, 2002 (as a % of total IT spending)



Source: International Data Corporation (IDC), October 2002

045333 ©2002 eMarketer, Inc.

www.eMarketer.com

IDC estimates that spending by consumers accounts for approximately 7% of technology spending worldwide.

According to forecast data from the Giga Information Group, the largest vertical market for IT spending in the United States has been the combined group of local, state and federal government, which is expected to spend \$113 billion on technology in 2002.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

The professional services industry, followed by the retail and distribution industry and the nonblank financial services industry are the next largest segments of the economy for IT vendors.

US IT Spending, by Industry, 1999-2002 (in billions)

	1999	2000	2001	2002
Banking	\$42	\$46	\$49	\$51
Nonbank finance	\$54	\$62	\$58	\$58
Chemicals	\$6	\$7	\$11	\$11
Construction and engineering	\$22	\$19	\$19	\$20
Consumer goods	\$13	\$10	\$11	\$12
Electronics	\$13	\$18	\$15	\$15
Energy	\$10	\$10	\$9	\$10
Food and beverage processing	\$9	\$12	\$14	\$15
Health care	\$41	\$46	\$50	\$54
Hospitality and travel services	\$4	\$5	\$6	\$6
Information technology	\$26	\$32	\$25	\$28
Insurance	\$16	\$24	\$21	\$22
Manufacturing	\$25	\$29	\$31	\$33
Media	\$25	\$28	\$30	\$26
Metals and natural resources	\$15	\$16	\$14	\$15
Pharmaceuticals and medical	\$8	\$11	\$11	\$11
Professional services	\$71	\$80	\$85	\$91
Retail and distribution	\$66	\$84	\$63	\$65
Telecommunications	\$26	\$78	\$51	\$50
Transportation	\$21	\$30	\$26	\$23
Utilities	\$10	\$13	\$12	\$13
Real estate	\$9	\$10	\$11	\$12
Educational services	\$4	\$5	\$5	\$6
All other private services	\$12	\$16	\$15	\$16
Government	\$88	\$98	\$105	\$113
Agriculture	\$3	\$4	\$4	\$4
Total US IT spending	\$639	\$793	\$751	\$780

Source: Giga Information Group, December 2001

045311 ©2002 eMarketer, Inc.

www.eMarketer.com

It is worthwhile to note the significant decline in the US telecommunications industry's technology spending, from a high of \$78 billion in 2000 to just \$50 billion in 2001.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

Despite this reduced spending, however, companies in the telecommunications industry still spend the highest proportion of their revenues on information technology, at an estimated 10.1% of gross sales in 2002. Other information intensive industries include the banking and nonbank financial sectors, as well as government.

US IT Spending, by Industry, 1999-2002 (as a % of company revenues)

	1999	2000	2001	2002
Banking	8.0%	8.2%	8.4%	8.4%
Nonbank finance	10.0%	9.8%	8.8%	8.6%
Chemicals	2.5%	2.8%	4.3%	4.3%
Construction and engineering	2.7%	2.2%	2.1%	2.1%
Consumer goods	3.5%	2.4%	2.7%	2.7%
Electronics	3.0%	3.6%	2.8%	2.8%
Energy	3.0%	2.0%	1.7%	1.9%
Food and beverage processing	1.5%	1.8%	2.1%	2.1%
Health care	4.4%	4.6%	4.8%	5.0%
Hospitality and travel services	2.0%	2.3%	2.7%	2.7%
Information technology	4.0%	4.5%	3.5%	3.7%
Insurance	3.5%	5.0%	4.0%	4.0%
Manufacturing	2.5%	3.0%	3.1%	3.2%
Metals and natural resources	1.7%	1.7%	1.5%	1.5%
Pharmaceuticals and medical	3.4%	4.4%	4.1%	4.1%
Professional services	6.5%	6.6%	6.8%	7.0%
Retail and distribution	2.6%	3.1%	2.2%	2.2%
Telecommunications	6.0%	16.8%	10.6%	10.1%
Transportation	3.4%	4.5%	3.9%	3.5%
Utilities	2.5%	3.0%	2.5%	2.5%
Real estate	0.5%	0.6%	0.6%	0.6%
Educational services	3.0%	3.2%	3.3%	3.3%
All other private services	1.0%	1.1%	1.0%	1.1%
Government	6.0%	6.4%	6.5%	6.6%
Agriculture	1.0%	1.1%	1.0%	1.0%
Average US IT spending	3.9%	4.4%	4.0%	4.0%

Source: Giga Information Group, December 2001

045313 ©2002 eMarketer, Inc.

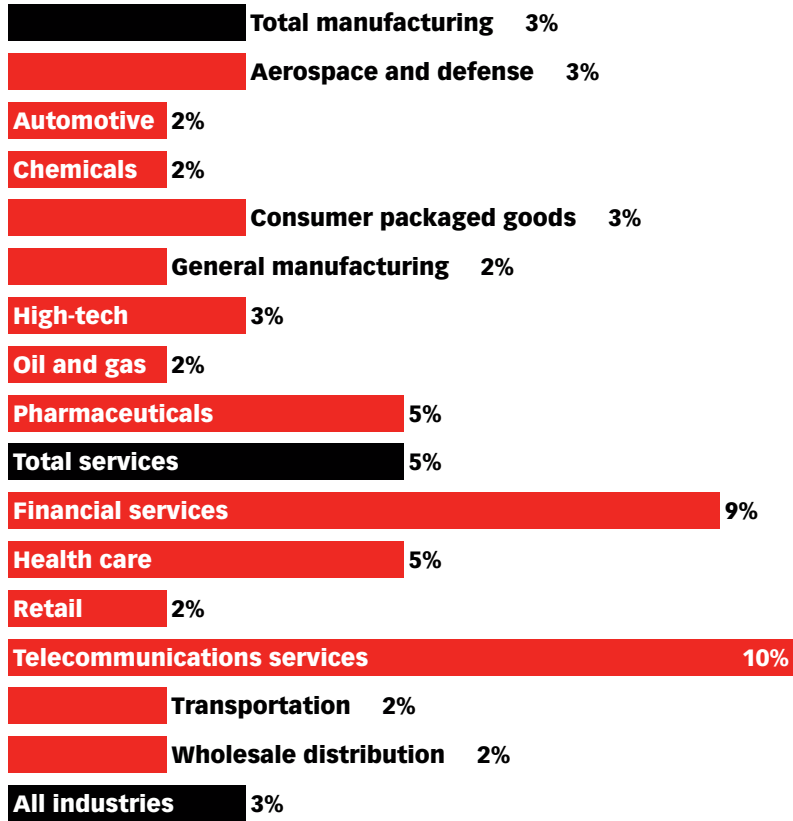
www.eMarketer.com

Comparative US industry data from AMR Research puts the telecommunications industry on top, with 10% of company revenues being spent on technology, while the financial services industry has also continued to invest heavily in information technology in 2002, despite the tough year that several companies have had.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)**
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

On average, AMR Research estimates that companies in the services industry are spending 5% of their revenues on information technology this year, while manufacturing firms will spend 3% of their revenues on IT.

US IT Spending, by Industry, 2002 (as a % of company revenues)



Note: n=500
Source: AMR Research, July 2002

045314 ©2002 eMarketer, Inc.

www.eMarketer.com

A third set of comparative data from the Meta Group confirms that the financial services and telecommunications industries invest heavily in information technology, although the survey data that the Meta Group has gathered puts these levels at 6.64% and 6.40% of industry revenues respectively, in 2002.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business](#)

[IT Spending](#)

[IT Budgeting and
Spending Surveys](#)

[Index of Charts](#)

Looking ahead to 2003, the Meta Group predicts that the telecommunications industry will once again find itself second to the financial services industry, spending 6.49% of industry revenues on IT.

US IT Spending, by Industry, 2001-2003 (as a % of company revenues)

	2001	2002	2003
Banking	5.16%	5.37%	6.26%
Chemicals	2.66%	2.68%	2.72%
Construction & engineering	1.46%	1.43%	1.64%
Consumer products	3.94%	3.64%	3.76%
Electronics	2.80%	2.95%	3.07%
Energy	2.72%	2.20%	2.20%
Financial services	6.56%	6.64%	6.79%
Food & beverage	2.36%	2.13%	2.05%
Health Care	4.37%	4.42%	4.11%
Hospitality & travel	1.62%	1.55%	1.47%
Information Technology	3.59%	5.13%	5.45%
Insurance	4.78%	3.49%	3.49%
Manufacturing	3.76%	3.60%	3.55%
Media	3.85%	4.13%	3.68%
Metals/ natural resources	1.93%	2.01%	2.03%
Pharmaceuticals	4.02%	3.91%	3.91%
Professional services	5.13%	5.12%	5.37%
Retail	1.69%	1.63%	1.59%
Telecommunications	5.80%	6.40%	6.49%
Transportation	4.25%	4.17%	4.27%
Utilities	2.83%	2.43%	2.47%

Source: Meta Group, October 2002

044545 ©2002 eMarketer, Inc.

www.eMarketer.com

It is important to note, however, that an increase in IT spending as a percent of industry revenues does not necessarily indicate an increase in the absolute dollar value of IT spending as well.

“IT spending is currently standing still as most organizations have hit the wall on cost reduction.”

– Dr. Howard Rubin, Meta Group

Indeed, as some companies have seen their revenues decline in 2002, the Meta Group notes that many businesses must still preserve basic IT spending levels regardless of revenues, simply to maintain current systems or complete mission-critical projects. The telecommunications industry is one such vertical, where further spending cuts by service providers may be harmful to their operations.

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

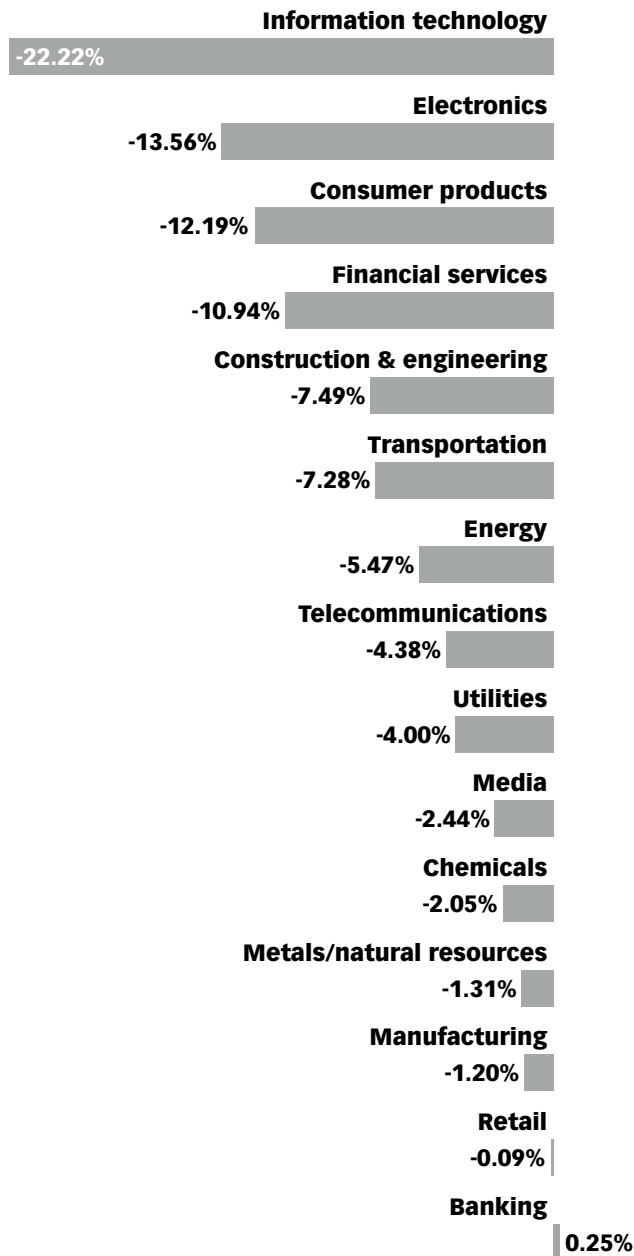
[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

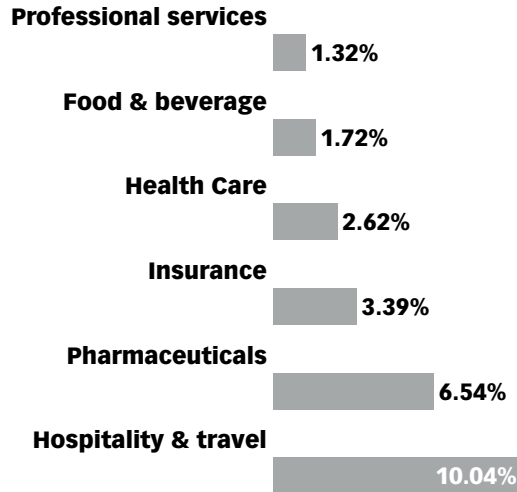
In its ranking of how industries have fared in 2002, the Meta Group has found that the high tech industry and the electronics industry were forced to reduce their technology spending the most. It was estimated that financial services firms cut their IT spending by an average 10.94% in 2002, while telecommunications firms reduced their spending by nearly 4.4%.

Change in US IT Spending, by Industry, 2001-2002



continued on page 80

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)**
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)



Source: Meta Group, October 2002

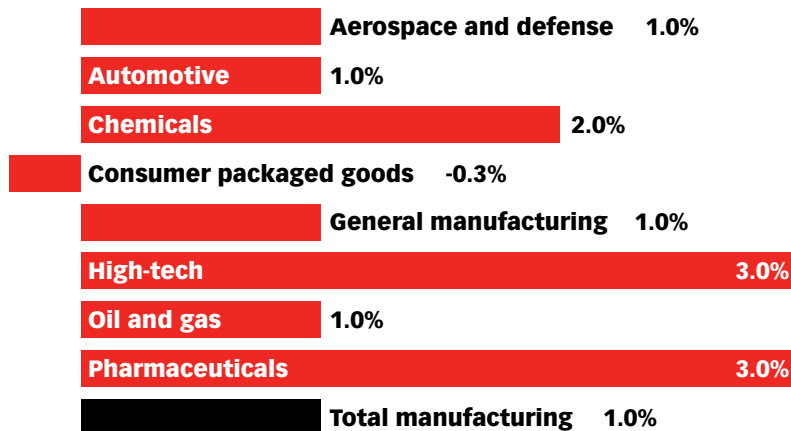
044546 ©2002 eMarketer, Inc.

www.eMarketer.com

In July of 2002, AMR Research surveyed several firms in the US manufacturing and services sectors, finding that on average, manufacturers expected their IT spending to increase by a narrow 1% in 2003, while service industries firms anticipated that their IT budgets would increase by 2% next year.

Technology manufacturers and pharmaceutical companies were the most optimistic, expecting their IT spending to increase by 3.0% next year, while consumer packaged goods manufacturers surprisingly planned to reduce their IT spending by 0.3% in 2003.

Average Anticipated Change in US IT Spending, by Industry, 2003



Source: AMR Research, July 2002

045317 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

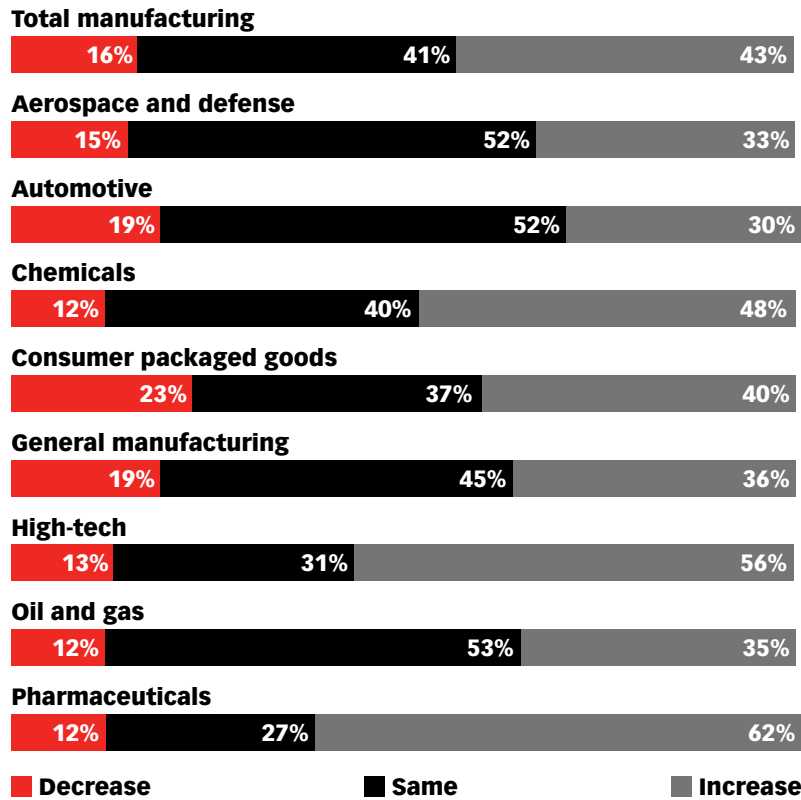
[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

Taking a closer look at respondents' answers, AMR Research found that several more firms in the pharmaceuticals and high tech industries planned to increase IT spending in 2003, when compared with other manufacturing verticals. Just 30% of automotive companies planned to increase their IT spending next year, while a similarly narrow 33% share of aerospace and defense firms expected to spend more on IT.

The consumer packaged goods industry had the highest percentage of respondents that planned to decrease their IT spending in 2003, followed closely by the automotive and general manufacturing industries.

Anticipated Change in IT Spending by US Manufacturers, by Industry, 2003



Source: AMR Research, July 2002

045315 ©2002 eMarketer, Inc.

www.eMarketer.com

[Methodology](#)

[Worldwide IT Spending](#)

[North America](#)

[Europe](#)

[Asia-Pacific](#)

[Latin America](#)

[IT Spending by Industry](#)

[Small Business IT Spending](#)

[IT Budgeting and Spending Surveys](#)

[Index of Charts](#)

In Western Europe, Gartner Dataquest found that 38.7% of financial services firms, followed by 36.1% of government, education and healthcare organizations, planned to increase their IT spending by at least 3% in 2003. A significant number of utilities and manufacturers planned to increase their IT spending by more than 10% as well.

IT Spending Intentions for Selected Industries in Western Europe, 2003 (as a % of respondents)

	Com- mun- ications	Govern- ment, Edu- cation & Health	Utili- ties	Finan- cial Ser- vices	Manufac- turing	Retail & Whole- sale	Others
Increase by more than 10%	7.0%	10.6%	12.2%	12.2%	12.2%	9.3%	8.3%
Increase by 3%-10%	16.3%	25.5%	14.6%	26.5%	14.9%	20.9%	25.0%
No change (-3% to +3%)	53.5%	44.7%	46.3%	42.9%	52.7%	55.8%	58.3%
Decrease by 3%-10%	14.0%	12.8%	19.5%	10.2%	8.1%	7.0%	8.3%
Decrease more than 10%	9.3%	6.4%	7.3%	8.2%	12.2%	7.0%	-

Source: Gartner Dataquest, October 2002

044542 ©2002 eMarketer, Inc.

www.eMarketer.com

As for those industries that had the highest proportion of firms planning to decrease their IT spending by at least 3% next year, 26.8% of utilities said they expected budget cuts, followed by 23.3% of communications firms.

	Methodology	7
I	Worldwide IT Spending	11
II	North America	49
III	Europe	55
IV	Asia-Pacific	63
V	Latin America	69
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	Index of Charts	121

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)**
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

As one of the leading research firms covering the small and medium business technology market, AMI-Partners estimates that small business IT and telecommunications spending will increase by 11% in 2002, to reach \$620 billion worldwide. Spending on telecommunications equipment and services accounts for \$280 billion of the total, while the remaining \$340 billion is forecast to be spent on information technology.

According to AMI-Partners, small and medium-sized companies in the United States are spending \$136 billion on information technology in 2002, with small companies accounting for 65.4% of that total. AMI-Partners defines small businesses as companies with 1 to 99 employees, while medium-sized businesses have between 100 and 499 employees.

Between 2002 and 2007, small businesses in the United States are expected to increase their IT spending by a compound annual growth rate of 12.3%, compared with a compound annual growth rate of 8.4% for medium-sized companies.

Total IT Spending by US Small and Medium-Sized Businesses, 2002-2007 (in billions and CAGR)

	2002	2007	CAGR
Small businesses	\$89	\$158	12.3%
Medium-sized businesses	\$48	\$72	8.4%
Total	\$136	\$230	11.0%

Source: AMI-Partners, September 2002

044165 ©2002 eMarketer, Inc.

www.eMarketer.com

A comparative estimate from Computer Economics puts US small business IT spending at \$110.7 billion in 2002, with small businesses defined as having between 10 and 100 employees. Small office/home office companies with 1 to 9 employees are forecast to spend an additional \$65.8 billion on technology in 2002.

US Small Business IT Spending, by Category, 2002 (in billions and as a % of total spending)

Hardware	\$47.32 (42.7%)
Staff	\$33.02 (29.8%)
Software	\$15.41 (13.9%)
Outside services	\$9.51 (8.6%)
Consumer supplies	\$3.30 (3.0%)
Facilities overhead	\$2.20 (2.0%)

Note: Small business defined as having 10-100 employees

Source: Computer Economics, May 2002

045699 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)**
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

According to Computer Economics' calculations, IT hardware accounts for almost half of small office/home office's technology spending, while staffing is the second-largest expense for both small businesses and small office/home office organizations.

US Small Office/Home Office IT Spending, by Category, 2002 (in billions and as a % of total spending)

Hardware	\$31.42 (47.7%)
Staff	\$13.54 (20.5%)
Software	\$10.94 (16.6%)
Outside	\$6.47 (9.8%)
Consumable supplies	\$2.18 (3.3%)
Facilities overhead	\$1.27 (1.9%)

*Note: Small office/home office defined as having 1-9 employees
Source: Computer Economics, May 2002*

045700 ©2002 eMarketer, Inc.

www.eMarketer.com

In its breakdown of global small business IT and telecommunications spending for 2002, AMI-Partners estimates that local and long distance telephony is the single largest expense for small businesses, followed closely by wireless telephony.

Beyond these service-related costs, the New York-based research firm estimates that the small business market for computer hardware will reach \$68.0 billion in 2002, while software spending will add up to \$54.0 billion by year's end.

Worldwide Small Business IT and Telecommunications Spending, by Category, 2002 (in billions)

Services and support	\$31.7
Networking and storage	\$48.2
Software	\$54.0
Printers and peripherals	\$59.3
Computer hardware	\$68.0
Internet	\$78.8
Wireless telephony	\$92.0
Local and long distance telephony	\$188.0

*Note: Small business defined as 1-99 employees
Source: AMI-Partners, October 2002*

045403 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)**
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

As for small businesses' estimated \$78.8 billion in internet-related spending, website hosting and maintenance is the single largest segment of this market, at \$29.0 billion. Small business spending on internet access is estimated at \$31.4 billion, when dial-up, high speed and wireless access are combined.

Small Business Internet Spending Worldwide, by Category, 2002 (in billions)

Wireless internet access	\$5.6
Dial-up internet access	\$8.8
High speed internet access	\$17.0
Website development	\$18.4
Website hosting and maintenance	\$29.0

*Note: Small business defined as 1-99 employees
Source: AMI-Partners, October 2002*

045460 ©2002 eMarketer, Inc.

www.eMarketer.com

In comparison to AMI-Partners' \$78.8 billion estimate for all internet-related spending by small businesses worldwide, Computer Economics forecasts that US small businesses will spend \$9.6 billion on e-business technology in 2002.

Small firms with 1 to 9 employees are expected to account for \$3.0 billion of this total, while companies with between 10 and 100 employees are forecast to spend an additional \$6.6 billion.

As for small business spending priorities for 2003, CRN Research released results of a survey in November 2002, finding that small companies in the United States ranked desktop PCs as their number one spending priority, followed closely by storage.

Leading Hardware/Software Spending Priorities among US Small Businesses, 2002 (ranked on a scale of 1 to 5*)

Desktops	3.42
Storage	3.32
Network hardware	3.25
PC servers	3.24
Network software	3.20

*Note: *1=low priority, 5=top priority
Source: CRN, October 2002*

045401 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)**
- [IT Budgeting and Spending Surveys](#)
- [Index of Charts](#)

Compared with the study's earlier survey that had been conducted in July, CRN Research found that small businesses had raised the importance of internet-related technology spending initiatives over the course of 2002.

Not surprisingly, US small businesses ranked security as their leading internet-related spending priority in 2002, followed by application and database development.

Leading Internet-Related Spending Priorities among US Small Businesses, 2002 (ranked on a scale of 1 to 5*)

Security	3.61
Application/database development	3.17
Intranet development	3.14
Wireless	3.03
Supply chain management	3.02

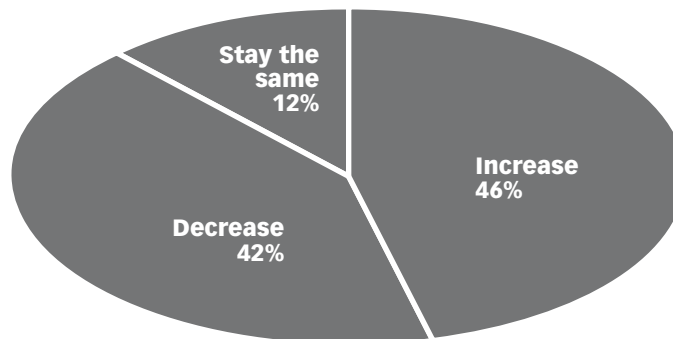
*Note: *1=low priority, 5=top priority
Source: CRN, October 2002*

045399 ©2002 eMarketer, Inc.

www.eMarketer.com

Looking ahead to their 2003 IT budgets, 46% of small businesses planned to increase their IT spending over spending levels from 2002, while an equally substantial 42% of respondents to the CRN Research study said that they planned to decrease their IT spending next year.

Anticipated Change in IT Spending among US Small Businesses, 2003 (as a % of respondents)



Source: CRN, October 2002

045402 ©2002 eMarketer, Inc.

www.eMarketer.com

	Methodology	7
I	Worldwide IT Spending	11
II	North America	49
III	Europe	55
IV	Asia-Pacific	63
V	Latin America	69
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
	VIII IT Budgeting and Spending Surveys	89
	A. IT Spending Plans	90
	B. IT Spending Priorities	102
	Index of Charts	121

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business
IT Spending](#)[**IT Budgeting and
Spending Surveys**](#)[Index of Charts](#)

After comparing aggregated IT spending surveys from late 2001 and late 2002, eMarketer has found that many CIOs' outlook has not significantly changed year over year.

Indeed, a similar optimism exists among approximately one-third of IT professionals at the end of 2002, as it did at the end of 2001, that a recovery in IT spending would occur by the middle of the coming year.

However, with economic uncertainty persisting through the third quarter of 2002, IT spending did not pick up as initially expected in 2002, requiring industry analysts to reduce their IT spending forecasts during the latter half of the year.

As a result, IT executives' spending plans should be viewed as tentative at best, since most organizations have shown a willingness to significantly scale back their IT budgets during tough economic times.

On the other hand, with a more positive economic outlook for 2003, compared with that for 2002, there may in fact be some reason for IT spending to surprise on the upside, especially if technology investment starts to gain momentum in the latter half of the year.

A. IT Spending Plans

IT Spending in 2002

Despite the hopeful outlook for an IT spending recovery in 2002, the past year has proven to be a disappointing one for technology vendors and IT service providers alike.

Although it was widely anticipated that IT spending would be slow during the first half of the year, CIO surveys taken in late 2001 indicated that many companies expected an economic recovery to take hold by mid-2002, which would in turn spark a rebound in their own technology spending by the second half of the year.

Instead, corporate scandals, fears of a double-dip recession and economic weakness abroad led to continued uncertainty, causing several businesses to push back IT initiatives into the fourth quarter of 2002, and then on into the new year.

As a result, industry analysts have revised downward 2002 IT spending forecasts, and a whole new crop of IT spending surveys has recently been published, as observers try to gain fresh insight into the timing of a rebound in technology spending.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

At the mid-point of 2002, investment bank Goldman Sachs found that 49% of the Fortune 1000 IT executives that it spoke with planned to under-spend their IT budgets through the remainder of the year, with another 43% of respondents saying that their IT spending was still in line with their initial budget forecast.

IT Executives' Use of IT Budget, 2002

Significantly underspending IT budget



Slightly underspending IT budget



Spending in line with IT budget



Over-spending IT budget



Don't know



Source: Goldman Sachs, July 2002

042700 ©2002 eMarketer, Inc.

www.eMarketer.com

Similarly, Morgan Stanley found in its September survey of 225 corporate CIOs that 39% of the companies it spoke with had revised downward their IT spending plans during 2002. A further 26% of CIOs said that they had not yet made any changes to their budgets, although they were monitoring the economic situation closely.

By October, 43% of the CIOs surveyed by Morgan Stanley said that they had revised their IT budgets downward since the beginning of 2002.

When compared with IT spending in 2001, Forrester Research found in August that 37% of the North American companies it surveyed were actually spending more on information technology in 2002 than they had the year before, while 31% of respondents indicated that they were spending the same as they had in 2001.

Change in North American Companies' IT Spending, 2002 (as a % of respondents)



Note: n=1,001 IT decision makers

Source: Forrester Research, October 2002

045498 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

As for their IT spending plans through the end of 2002, Forrester found that 63% of the businesses it surveyed expected their IT budgets to remain the same during the second half of the year, with 19% of respondents planning to increase their budgets over 2001 spending levels.

Compared with other surveys, Forrester’s study used a larger sample group of more than 1,000 firms, which included medium-sized enterprises. Because these companies have had a more positive outlook on IT spending than many of their larger counterparts, it is not surprising that this survey is more optimistic than others that focus upon Fortune 1000 firms.

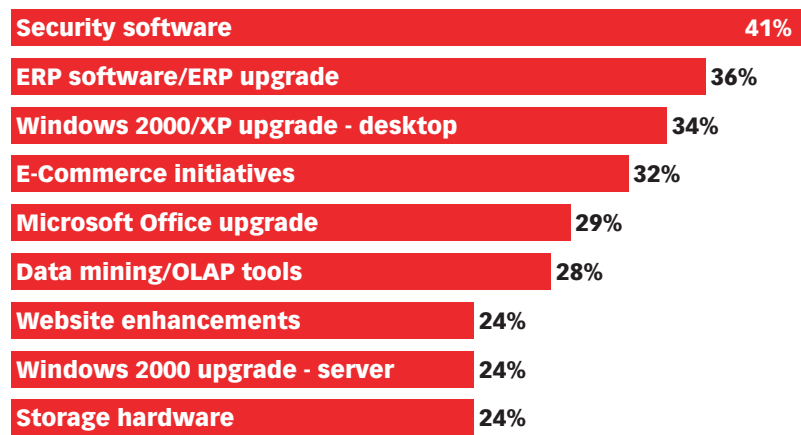
In a more recent study, AMR Research found in its October survey of 100 IT professionals that respondents expected to spend an average 92% of their 2002 IT budgets by the end of the year. As of the third quarter of 2002, IT executives said they had spent 77% of their budgets.

Separately, the Gartner Group found that 90% of the IT executives it surveyed in October 2002 had spent more than half of their companies’ IT budgets during the first three-quarters of the year. On average, respondents said that they had spent 71% of their budgets through the first nine months of 2002.

In *CIO Magazine*’s October survey, 51% of respondents said that they did not expect to experience an end-of-year surge in IT spending, in order to use up their IT budgets. A further 17.8% of IT professionals said that they had in fact been incentivized not to spend, while just 18.5% of respondents said they planned to spend more before the year was out.

As for CIOs’ IT spending priorities for the second half of 2002, Morgan Stanley found that application integration, security software and enterprise resource planning (ERP) software upgrades were among several companies’ top projects, which is consistent with many firms’ interest in first preparing themselves internally for future external e-business initiatives.

Top 10 IT Priorities among US CIOs, July 2002 (as a % of respondents)

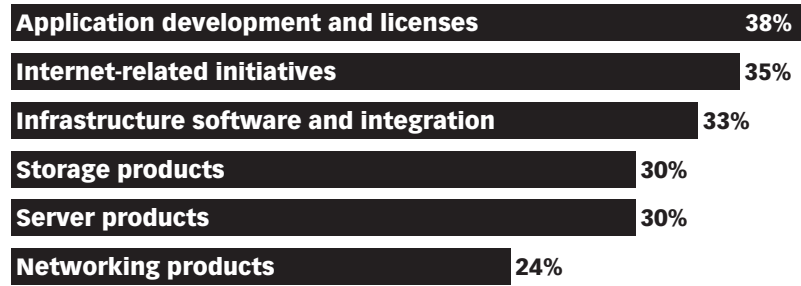


Note: n=225, multiple responses allowed
Source: Morgan Stanley, August 2002

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Forrester Research found a slightly different set of IT spending priorities among respondents to its survey, many of which were focusing upon application development projects and internet-related initiatives. Nonetheless, infrastructure software and integration was a priority for about one-third of firms.

Leading Areas Where North American Companies Plan to Increase IT Spending , Second Half 2002 (as a % of respondents)



Note: n=1,001 IT decision makers
Source: Forrester Research, October 2002

045499 ©2002 eMarketer, Inc. www.eMarketer.com

When it comes to measuring the IT budgets of leading technology users, *InformationWeek* magazine found that these companies were spending an average \$319.6 million on IT in 2002, down considerably from the \$483.9 million that survey respondents said they spent in 2001. IT spending as a percent of company revenues among the *InformationWeek* 500 had fallen as well, from a high of 4.31% in 2000 to 3.39% by 2002.

IT Spending by the InformationWeek 500, 2000-2002 (in millions and as a % of total revenues)

	2000	2001	2002
Average IT dollars spent	\$442.2	\$483.9	\$319.6
Average IT budget as a % of total revenues	4.31%	3.88%	3.39%

Source: *InformationWeek*, September 2002

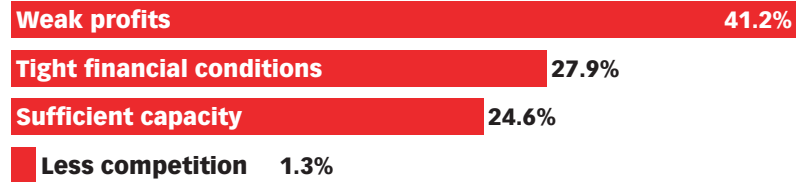
044186 ©2002 eMarketer, Inc. www.eMarketer.com

Looking at the leading factors that have caused businesses to cut back on their technology spending in 2002, weak corporate profits was the primary reason cited by 41% of respondents to Deutsche Bank and *CIO Magazine's* monthly poll of IT executives.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Just as many technology vendors have been hearing all year, respondents also listed tight financial conditions and sufficient capacity as key reasons for their reduced IT spending in 2002.

Leading Negative Factors Hindering Global Companies' IT Spending, November 2002 (as a % of respondents)



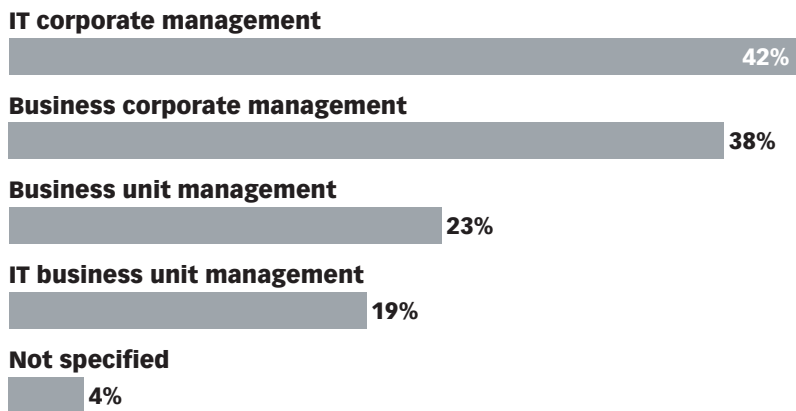
Note: n=301
Source: CIO Magazine and Deutsche Bank, December 2002

045482 ©2002 eMarketer, Inc. www.eMarketer.com

For many businesses in both the United States and Europe, IT executives are still the key decision makers who are ultimately responsible for measuring the success of their companies' IT investments.

But as survey data from past years has also shown, other c-level executives have taken a more active role in monitoring the success of IT investments, especially as technology has increasingly become a critical part of many companies' broader competitive strategy.

Management Position Responsible for Measuring the Success of US and European Companies' IT Investments, 2002 (as a % of respondents)



Note: n=458 IT executives in the US and Europe (Germany, Italy, Spain, France, UK, Netherlands)
Source: Getronics, IDG Research, CIO Magazine, October 2002

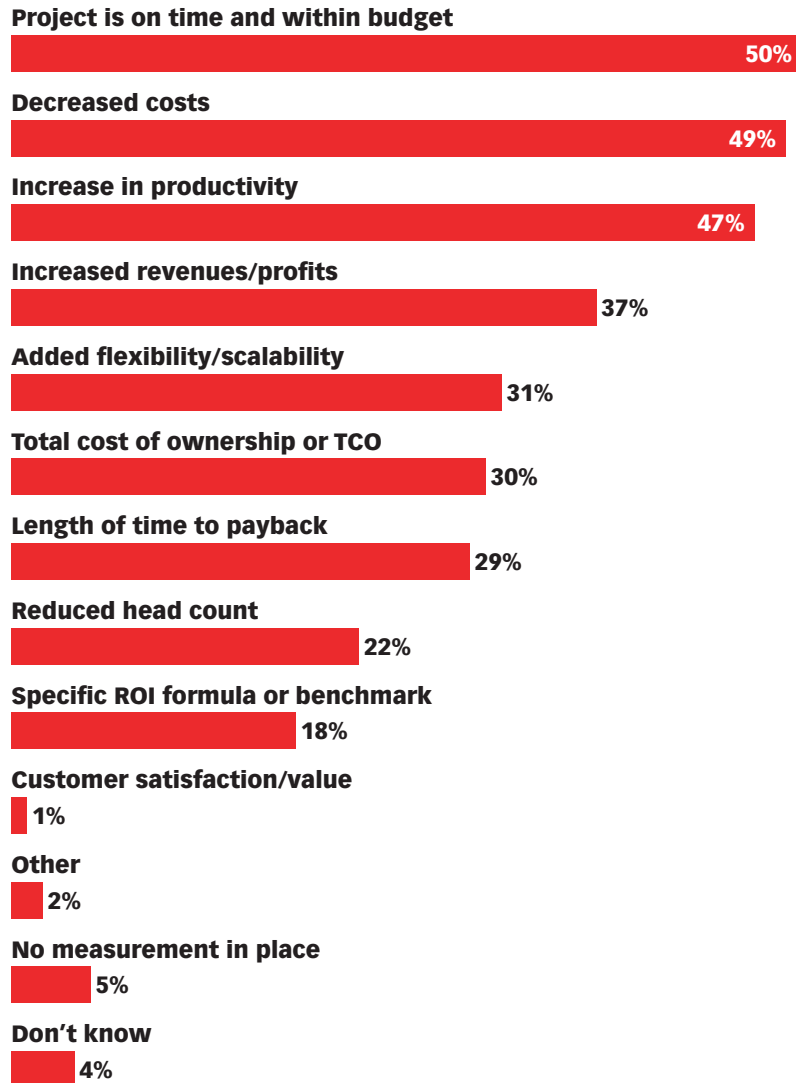
044159 ©2002 eMarketer, Inc. www.eMarketer.com

Among the key criteria used by corporate managers to gauge the success of IT initiatives, there is now a growing mix of considerations, besides basic budgeting metrics.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

According to IT executives polled by Getronics and IDG Research, other areas of concern include the ability of a technology project to decrease costs or increase productivity, as well as its success at increasing revenues.

Criteria Used to Measure the Success of US and European Companies' IT Investments, 2002 (as a % of respondents)



Note: n=458 IT executives in the US and Europe (Germany, Italy, Spain, France, UK, Netherlands)
Source: Getronics, IDG Research, CIO Magazine, October 2002

“There is a clear shift in importance from return on investment to revenue generation.”

– AMR Research, July 2002

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Indeed, these findings are supported by AMR Research, which found in its mid-2002 survey of IT professionals that many companies have furthermore shifted their perspectives on technology spending, away from a focus upon obtaining a rapid return on investment, to a greater emphasis upon using technology to help drive revenues.

Initiatives that meet such interests include sales force automation or marketing automation projects, as well as analytical tools that permit companies to gain better insight into their customers' needs, so that they may more effectively sell to established clients or reach out to new ones.

When it comes to e-business budgeting, Forrester Research has found that large companies in North America planned to spend an average \$29 million on e-business initiatives in 2002, down considerably from average budgets of \$41 million in 2001.

Forrester found that 26% of respondents to its survey expected to spend money on e-business applications in 2002, compared with 58% of respondents in 2001.

Average E-Business Budgets of North American Companies, 2001 & 2002 (in millions)



Note: n=900
Source: Forrester Research, April 2002

045471 ©2002 eMarketer, Inc. www.eMarketer.com

As a percent of overall company revenues, e-business budgets were expected to fall from 3.5% of total spending to 3.0%.

North American Companies' E-Business Spending, 2001 & 2002 (as a % of company revenues)



Note: n=900
Source: Forrester Research, April 2002

045470 ©2002 eMarketer, Inc. www.eMarketer.com

By comparison, as mentioned in the first chapter of this report, A.T. Kearney and Line56 Research found that North American companies had set aside an average 11.8% of their IT budgets for e-business initiatives in 2002, with the intention of increasing this allotment to 13.4% of their IT spending in 2003.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

IT Spending in 2003

When asked to characterize their outlook for IT spending in 2003, 44% of the CIOs surveyed by Morgan Stanley said that they viewed the coming year as “a year of cost containment.” A further 21% of respondents to the investment bank’s November survey said that 2003 would be “a year of stabilization after two years of belt-tightening,” while 19% characterized the new year as a time for new project investment.

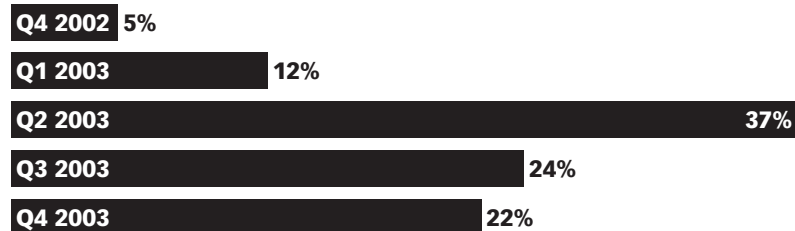
The remaining 16% of respondents said they expected that 2003 would be “a year of IT cost reduction.”

“We believe that overall tech spending should lag the pace of a general economic recovery due to cautious buying behavior and the lingering effects of overbuying in the past.”

– Charles Phillips, Morgan Stanley

Because economic growth and a subsequent improvement in corporate profitability will necessarily precede any improvement in technology spending, it is worthwhile to note that 37% of the CIOs surveyed by Morgan Stanley do not expect an economic recovery to occur until the second quarter of 2003, while a further 46% of CIOs believe that a recovery will not arrive until the second half of 2003.

US CIOs' Expectations for the Timing of an Economic Recovery, September 2002 (as a % of respondents)

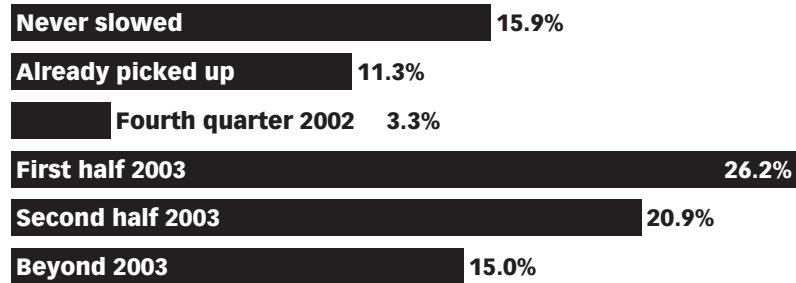


Note: n=225
Source: Morgan Stanley, October 2002

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Not surprisingly, a relatively high 35.9% of respondents to Deutsche Bank and *CIO Magazine*'s November CIO survey said that they did not believe that a recovery in their own IT spending would occur until after the first half of 2003.

IT Executives' Anticipated Timing for a Recovery in Their Own IT Spending, November 2002 (as a % of respondents)



Note: n=301
Source: CIO Magazine and Deutsche Bank, December 2002

045481 ©2002 eMarketer, Inc. www.eMarketer.com

Bringing CIOs' economic outlook and spending plans together, Gartner Dataquest believes that global IT spending will follow normal seasonal patterns through the first half of 2003, with spending on non-strategic technology initiatives showing the earliest signs of a revival.

It is Gartner's belief that spending on more expensive or ambitious IT projects will not occur until the economic recovery is well underway, and corporate profitability has shown signs of solid improvement – something that will probably not occur until the latter half of 2003.

This outlook was more recently supported by Goldman Sachs, which announced in December of 2002 that the majority of the 100 US CIOs it surveyed did not expect to increase their IT spending until the second half of 2003 at the earliest.

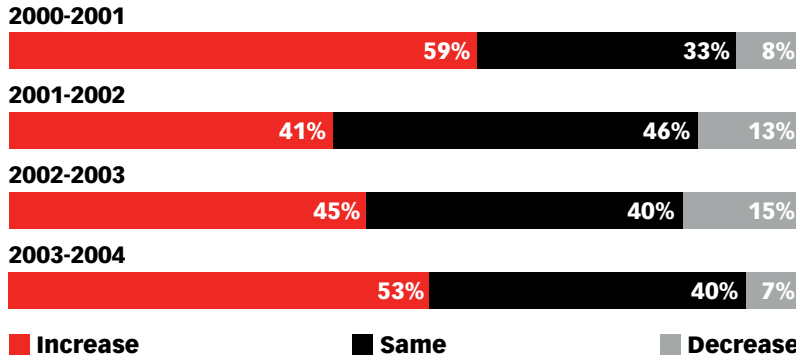
Based upon such a scenario, Goldman Sachs believes that IT budgets will increase by an average 2% to 3% in 2003, prior to returning to average long term IT spending growth levels of between 6% and 7%.

Comparing IT executives' technology spending outlook on a year-over-year basis, AMR Research found in its mid-2002 survey that 45% of the 500 US companies it spoke with planned to increase their IT budgets in 2003, up slightly from the 41% of organizations that had planned to increase their IT spending heading in to 2002.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

On the downside, 15% of respondents to the AMR Research study said that they planned to decrease their companies' IT budgets in 2003, which was slightly higher than the 13% of companies that had planned to do so prior to 2002.

US Companies' Anticipated Change in Their IT Budgets, 2000-2004



Source: AMR Research, July 2002

045316 ©2002 eMarketer, Inc.

www.eMarketer.com

Similar results were uncovered by Getronics and IDG Research, which found that 42% of US-based IT executives plan to increase their technology spending in 2003, while 12% expect to see a reduction in their spending.

By comparison, 48% of IT executives in the Netherlands and Spain have plans to increase their IT spending in the coming year, while companies in Spain and Italy were slightly more optimistic about their IT spending plans, when compared with their American counterparts.

IT Spending Intentions of IT Executives in the US and Europe, 2003 (as a % of respondents)

	Increase	Decrease	Remain the same
France	28%	14%	58%
Germany	36%	26%	38%
Italy	43%	15%	42%
Netherlands	48%	12%	40%
Spain	48%	11%	42%
US	42%	12%	45%
UK	45%	9%	45%

Note: n=458 IT executives in the US & Europe

Source: Getronics, IDG Research, CIO Magazine, October 2002

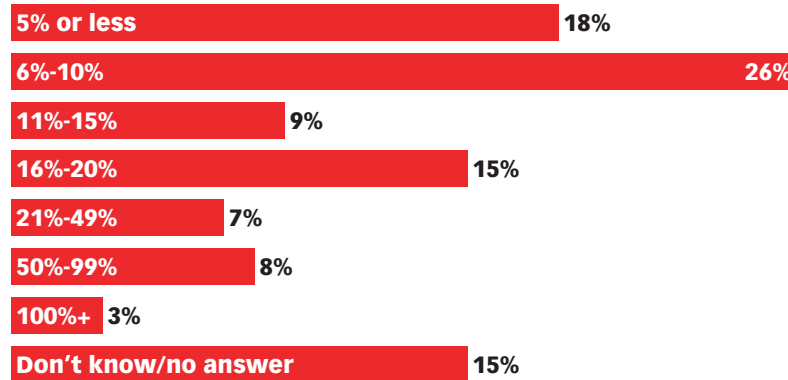
044031 ©2002 eMarketer, Inc.

www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Among those organizations that expected to increase their technology spending in 2003, Getronics and IDG Research found that just over one-quarter planned to increase their budgets by between 6% and 10%, while 42% said that they would increase their IT budgets by 11% or more.

Anticipated Growth in IT Spending by US and European Companies, 2003 (as a % of respondents predicting an increase)



Note: n=458 IT executives in the US and Europe (Germany, Italy, Spain, France, UK, Netherlands)
Source: Getronics, IDG Research, CIO Magazine, October 2002

044133 ©2002 eMarketer, Inc. www.eMarketer.com

By comparison, RoperNOP Technology found that IT professionals in the United States expect their spending to increase by an average 7.7% in 2003. Survey respondents in the United Kingdom and Germany were similarly optimistic, expecting their organizations' IT spending to rise by an average 6.6% and 5.4%, respectively.

IT Professionals' Average Anticipated Increase in IT Spending, by Country, 2003



Note: N = 1400
Source: RoperNOP Technology, August 2002

045472 ©2002 eMarketer, Inc. www.eMarketer.com

In a much less sanguine outlook for the coming year, AMR Research has found that respondents to its survey plan to leave their IT budgets largely unchanged in 2003, with an average increase of 0.2% set for the year.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Similarly, Gartner found in a survey of 846 attendees at its October Gartner Symposium conference that IT users expect their technology spending to remain flat in 2003, with an average increase of 0.03% forecast for 2003.

And in December 2002, Merrill Lynch found in a survey of 75 American and 25 European CIOs that on average, respondents expected their IT spending to increase by 1.3% in 2003, down from an earlier survey in which respondents had said that they anticipated their IT spending would increase by 3% in the coming year. As of December, American CIOs said that they expected to increase their technology spending by an average 2%, while the Europeans anticipated that their budgets would remain flat.

Perhaps most interestingly, in a year-over-year comparison of IT executives' spending plans for 2001 and 2002, Deutsche Bank and *CIO Magazine* found that respondents to their survey held a similarly positive outlook for IT spending in November of 2001, as they did more recently in November of 2002.

Unfortunately, IT spending did not rise by as much as IT executives had hoped it would, when they were looking ahead to 2002.

IT Executives' Average IT Spending Increase Planned for the Next 12 Months, 2001 & 2002 (as a % of respondents)

November 2001	5.3%
November 2002	5.1%

Note: n=301
Source: CIO Magazine and Deutsche Bank, December 2002

[Methodology](#)[Worldwide IT Spending](#)[North America](#)[Europe](#)[Asia-Pacific](#)[Latin America](#)[IT Spending by Industry](#)[Small Business](#)[IT Spending](#)[IT Budgeting and
Spending Surveys](#)[Index of Charts](#)

B. IT Spending Priorities

In light of the cautious atmosphere surrounding most companies' IT spending plans for 2003, it should come as little surprise that businesses are continuing to give preference to technology initiatives that meet the key goals of reducing costs or delivering a short-term return on investment.

And although more ambitious IT projects are not on most companies' near-term agendas, the aggregated survey data does indicate that there is a growing need to upgrade IT infrastructure, from internal networks to storage systems and mission-critical software systems.

Furthermore, eMarketer has found that security systems and application integration are the two most common technology initiatives that have made their way to the top of IT spending priority lists for both 2002 and 2003.

“Technology will be used to replace jobs in a low-growth, heavy-competition environment.”

– Michael Mandel, chief economist, *Business Week*

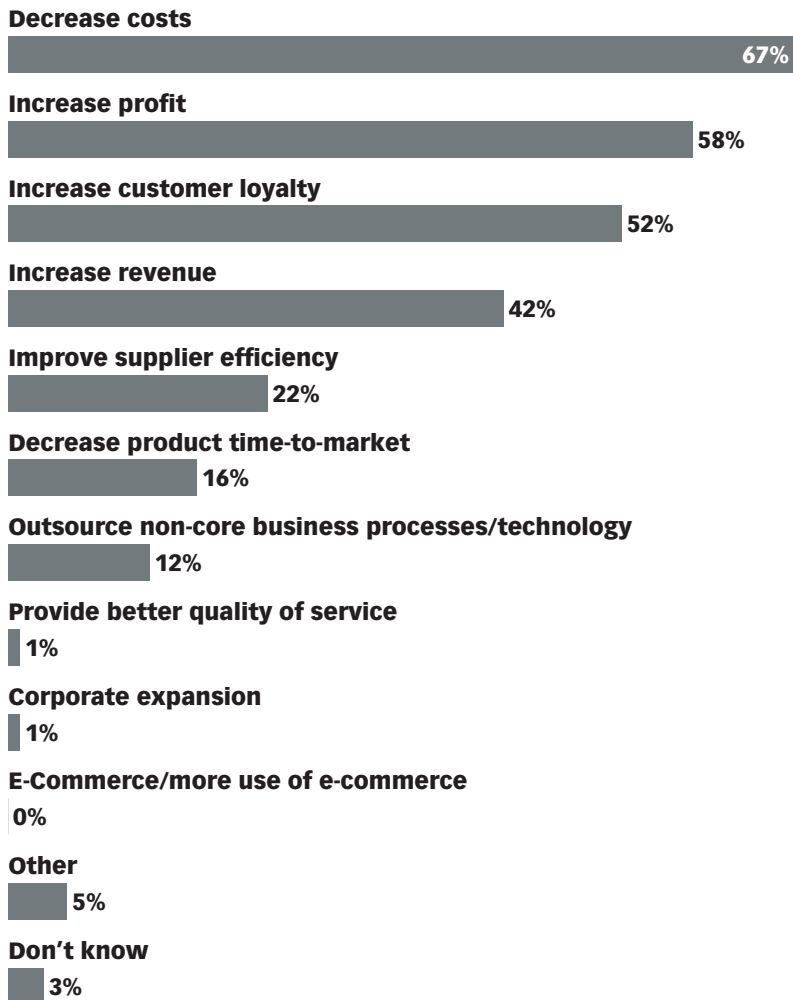
Indeed, as might be expected in a low-growth economic environment, businesses have chosen to focus on using technology to reduce costs, ahead of increasing revenues.

This was confirmed by a June 2002 survey of US and European IT professionals, in which more than two-thirds of respondents said that their leading technology priority for the next 18 months would be to decrease costs – well ahead of the 42% of respondents who plan to use technology to improve revenues.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Interestingly, supply chain and e-commerce initiatives were rather low on this list, indicating that most companies are continuing to focus upon internal technology projects that in many ways are more manageable and better able to deliver an immediate return on investment.

Leading IT Priorities for US and European Companies over the Next 18 Months, June 2002-December 2003 (as a % of respondents)



Note: n=458 IT executives in the US and Europe (Germany, Italy, Spain, France, UK, Netherlands); respondents were asked to choose their three top priorities
 Source: Getronics, IDG Research, CIO Magazine, October 2002

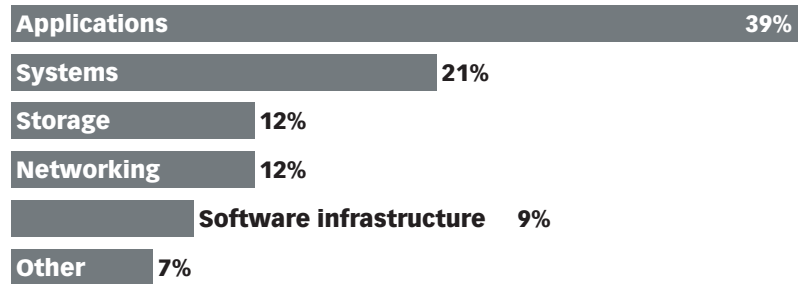
- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

In October 2002, Gartner Dataquest and the Soundview Technology Group published results from their survey of 846 North American IT professionals, which found that 39% of respondents listed applications initiatives as their leading IT spending priority for 2003. Within this broad category, customer relationship management (CRM), enterprise resource planning (ERP) and web portals were at the top of the list.

A further 21% of respondents to the Gartner/Soundview study listed systems projects as a leading priority for 2003, with a migration to Windows XP as their first goal, followed by purchases of additional servers and personal computers.

Data centers were the leading initiative planned by those respondents listing storage as their number one priority in 2003, while network infrastructure upgrades and wireless initiatives were the leading goals for those who named networking as their top IT spending priority for the coming year.

North American Companies' IT Spending Priorities, 2003 (as a % of respondents)



Note: n=846
Source: Gartner Inc. and Soundview Technology Group, October 2002
 045328 ©2002 eMarketer, Inc. www.eMarketer.com

It is worthwhile to note that 70% of the IT executives that participated in this survey said that they had a backlog of IT projects from 2002 that had been approved for implementation in 2003. At 42% of respondents, nearly half of the surveyed executives described their backlog as minimal, while 24% said that they had a moderate backlog of projects for the coming year.

On the other hand, 33% of the IT executives said they still had excess software licenses that they had not yet put to use.

Similar to the Gartner Dataquest study, Merrill Lynch found in its December survey of 75 American and 25 European CIOs that at the broadest level, storage and IT services were most companies' leading IT spending priorities for 2003.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Ranked by highest priority, the top six categories marked for spending growth in 2003 are as follows:

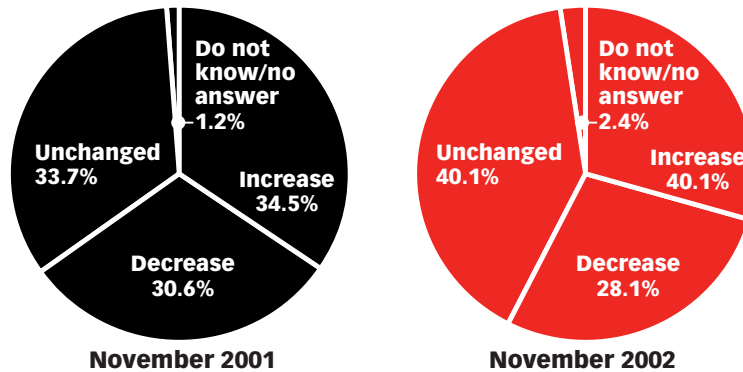
- Storage
- Services
- Servers
- Software
- PCs
- Networking

Telecommunications and Networking Equipment

According to survey data gathered by Deutsche Bank and *CIO Magazine*, just 29.4% of the 301 IT executives polled in November 2002 said that they planned to increase their spending on telecommunications equipment over the next 12 months.

This was down slightly from the 34.5% of IT professionals who said that they planned to increase their telecommunications spending as of late 2001, although there was a higher number of respondents in the November 2002 survey that said they intended to leave their telecom spending unchanged for much of 2003.

IT Executives' Planned Spending on Telecommunications Equipment over the Next 12 Months, 2001 & 2002 (as a % of respondents)



Note: n=301
 Source: *CIO Magazine and Deutsche Bank, December 2002*

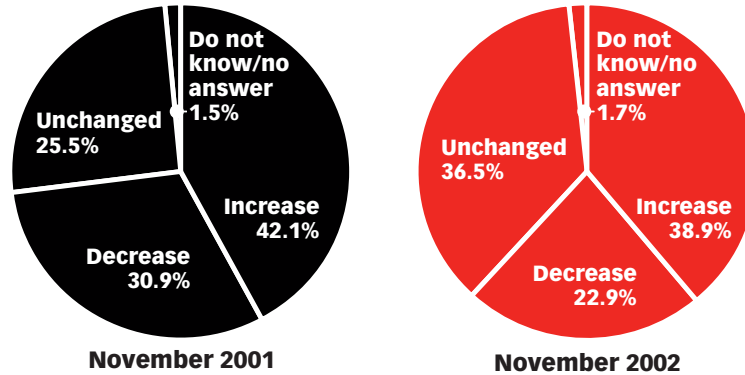
045494 ©2002 eMarketer, Inc. www.eMarketer.com

IT executives' planned spending on data networking equipment was slightly more optimistic than their outlook for telecom equipment, as 38.9% of IT executives indicated that they would spend more on their data networks in 2003.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Just 22.9% of respondents to the Deutsche Bank/*CIO Magazine* survey planned to decrease their data networking equipment spending, while 36.5% said that they would leave it unchanged in 2003.

IT Executives' Planned Spending on Data Networking Equipment over the Next 12 Months, 2001 & 2002 (as a % of respondents)



Note: n=301
Source: CIO Magazine and Deutsche Bank, December 2002

045492 ©2002 eMarketer, Inc.

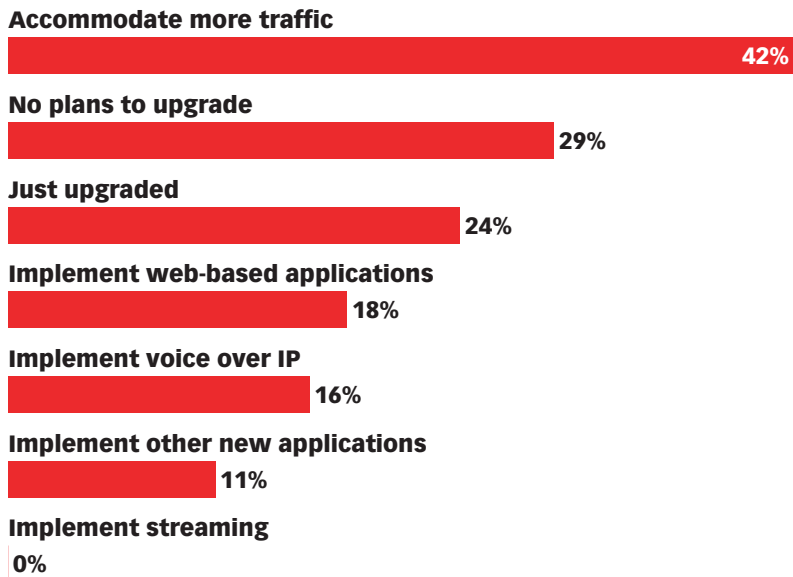
www.eMarketer.com

Comparative data from Morgan Stanley's September 2002 survey found that 48% of the CIOs it spoke with plan to leave their network equipment spending unchanged in 2003. A further 31% of respondents intend to increase their spending, while 20% expect to spend less.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Among the top reasons for upgrading their data networks in 2003, 42% of US CIOs said that they need to accommodate more data traffic, while another 18% indicated that they were planning to implement web-based applications. A further 16% of respondents said that they wanted to implement voice over IP technology.

US CIOs' Planned Network Upgrade Initiatives, 2002-2003 (as a % of respondents)

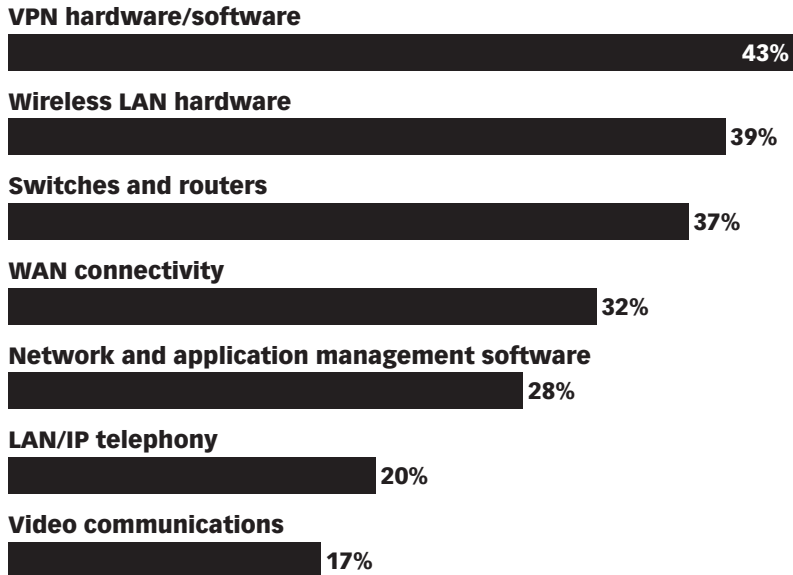


Note: n=225, multiple responses allowed
Source: Morgan Stanley, October 2002

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Taking a closer look at US CIOs' network spending plans for 2003, Morgan Stanley's November survey found that 43% of respondents had made virtual private network (VPN) initiatives their priority, followed by wireless LANs and then switches and routers.

Top Seven Networking Spending Priorities among US CIOs, November 2002 (as a % of respondents)



Note: n=225
Source: Morgan Stanley, December 2002

045798 ©2002 eMarketer, Inc. www.eMarketer.com

Another 64% of the CIOs surveyed said that they plan to spend more on general bandwidth upgrades for their companies' networks, while 53% of respondents expect to increase their spending on storage area networks in 2003.

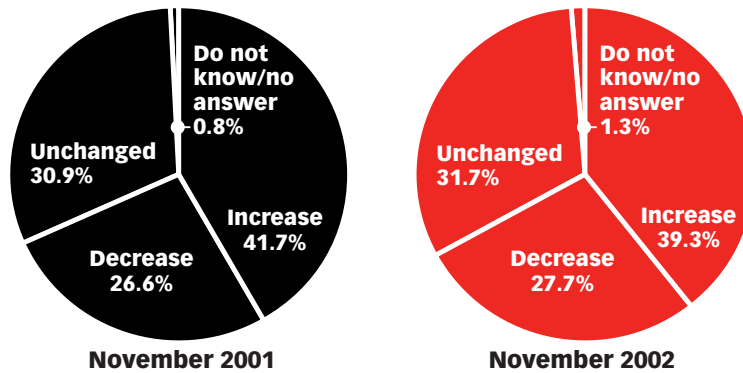
- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

IT Hardware

According to results from Deutsche Bank and *CIO Magazine*'s November 2002 survey of IT executives, 39.3% of respondents plan to increase their computer hardware spending in 2003, compared with 41.7% who planned to do so the year before.

Overall, little has changed with the outlook for the computer hardware market between late-2001 and 2002, as similar numbers of businesses plan to decrease their spending in 2003 or leave it unchanged.

IT Executives' Planned Spending on Computer Hardware over the Next 12 Months, 2001 & 2002 (as a % of respondents)



Note: n=301
Source: *CIO Magazine* and Deutsche Bank, December 2002

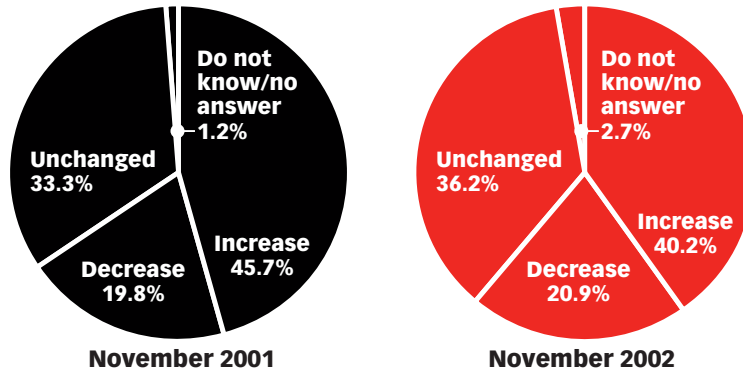
045483 ©2002 eMarketer, Inc. www.eMarketer.com

By contrast, the storage systems market appears to be less optimistic heading into 2003, according to the Deutsche Bank / *CIO Magazine* survey.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

While 45.7% of respondents planned to increase their storage systems spending in November 2001, just 40.2% said that they plan to do so in November 2002. Instead, 20.9% of IT executives intend to decrease their storage systems spending over the next 12 months, while 36.2% expect to leave their spending unchanged.

IT Executives' Planned Spending on Storage Systems over the Next 12 Months, 2001 & 2002 (as a % of respondents)



Note: n=301
Source: CIO Magazine and Deutsche Bank, December 2002

045493 ©2002 eMarketer, Inc.

www.eMarketer.com

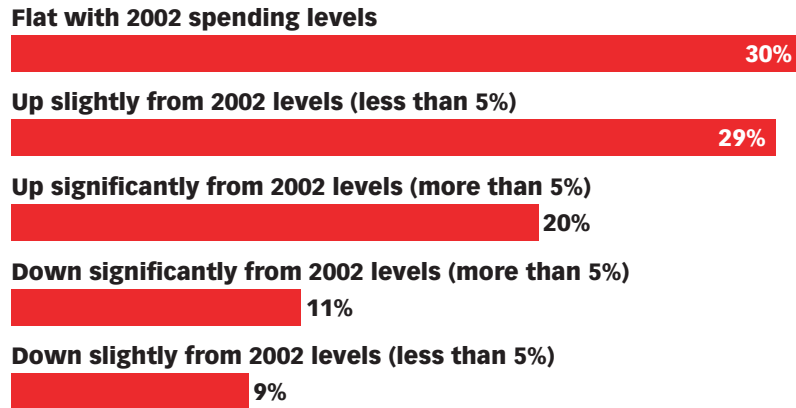
In its September survey of CIOs' outlook for the broader hardware equipment market, Morgan Stanley found that 49% of respondents plan to increase their spending in 2003, while another 30% expect to keep their hardware equipment spending flat with 2002 spending levels.

Just under one-third of US CIOs, at 32% of respondents, said that they plan to increase their spending on servers in 2003, while 29% said they would reduce their spending on servers when compared with 2002 levels.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

As for PCs, 38% said they would spend more in 2003, 37% indicated they would spend about the same, and 24% of the surveyed CIOs said that they intend to spend less on PCs than they had in 2002.

US CIOs' Planned Hardware Equipment Spending, 2003 (as a % of respondents)



Note: n=225
Source: Morgan Stanley, October 2002

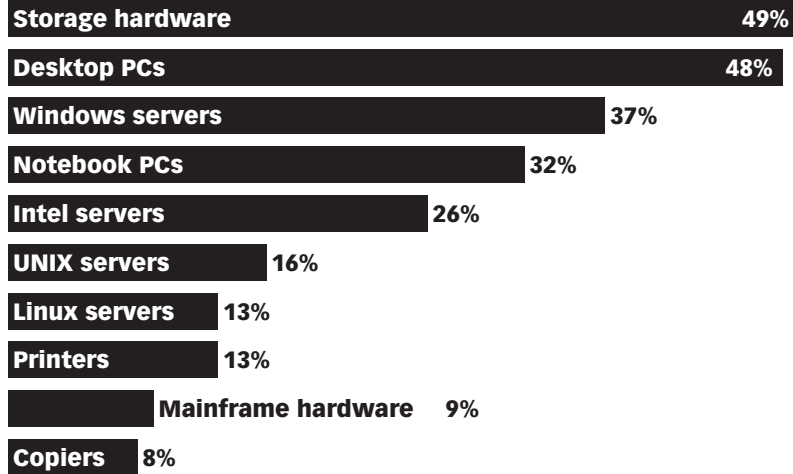
045578 ©2002 eMarketer, Inc. www.eMarketer.com

In a separate study that was published by the Aberdeen Group in September 2002, IT executives predicted they would increase their spending on servers by 2.5% in 2003. Respondents to the Aberdeen Group study also indicated that they would increase spending on PCs and notebook computers by 2.0% in the coming year.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

With their 2003 IT spending budgets nearer to completion in November of 2002, Morgan Stanley found that storage hardware, followed by desktop PCs and Windows servers would be the top three IT hardware spending priorities among US companies in the coming year.

Top 10 Hardware Spending Priorities among US CIOs, November 2002 (as a % of respondents)



Note: n=225
Source: Morgan Stanley, December 2002

045673 ©2002 eMarketer, Inc. www.eMarketer.com

Just over half of the 225 CIOs surveyed, at 52% of respondents, said that they plan to increase spending on Windows servers in 2003, while 51% indicated that they would raise their spending on storage hardware as well.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

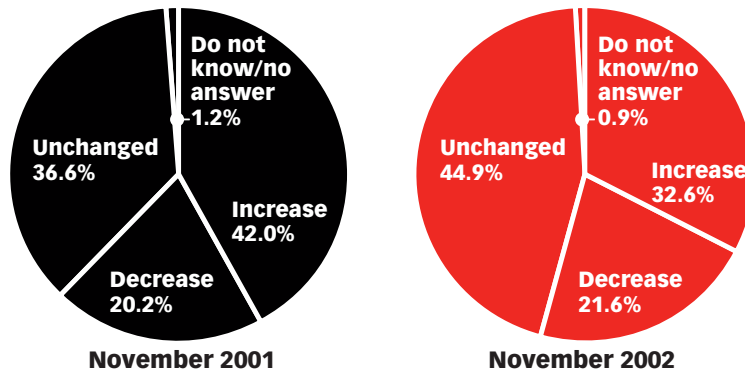
IT Software

Contrary to several other surveys predicting growth in software spending during 2003, just 32.6% of respondents to Deutsche Bank and *CIO Magazine*'s November 2002 survey said that they plan to increase their infrastructure software spending over the coming 12 months.

As mentioned previously, results were slightly better for e-business applications software, with 36.9% of respondents to the *CIO Magazine* survey planning to increase their spending on such applications in 2003.

Software spending intentions for both categories were down in November 2002, however, when compared with IT executives' plans to increase spending in November 2001.

IT Executives' Planned Spending on Infrastructure Software over the Next 12 Months, 2001 & 2002 (as a % of respondents)



Note: n=301
 Source: *CIO Magazine and Deutsche Bank, December 2002*

045495 ©2002 eMarketer, Inc. www.eMarketer.com

In September 2002, the Aberdeen Group published its survey of global IT executives' software buying plans, finding that sales force automation and analytical software are the two leading categories of enterprise software that companies plan to purchase in the coming months.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Outside of the top five software categories, more than one-third of the executives surveyed plan to purchase content management applications, imaging systems and enterprise resource planning (ERP) software.

Global IT Executives' Software Buying Plans, by Category, 2002 (as a % of respondents)

Sales force automation applications	48.0%
Query, reporting and analysis tools	45.2%
Help desk and field applications	44.9%
Finance, accounting systems	44.7%
Data mining applications	44.2%

Source: Aberdeen Group, September 2002

043865 ©2002 eMarketer, Inc.

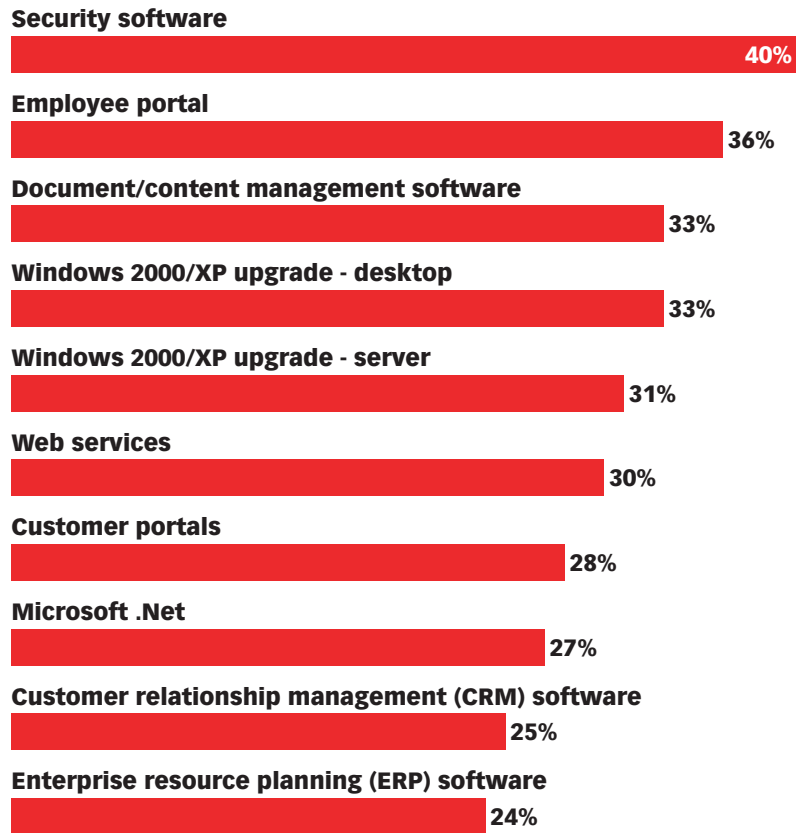
www.eMarketer.com

Morgan Stanley's November 2002 survey of American CIOs produced slightly different results, however, as security software and employee portals topped respondents' lists.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Content management applications were also high on Morgan Stanley's survey results, along with Windows 2000/XP upgrades for desktop PCs and servers.

Top 10 Software Spending Priorities among US CIOs, November 2002 (as a % of respondents)



Note: n=225
 Source: Morgan Stanley, December 2002

045672 ©2002 eMarketer, Inc. www.eMarketer.com

Looking more closely at Windows XP upgrades, Morgan Stanley found that 29% of the companies it surveyed said they had already completed their upgrades as of November 2002. A further 17% plan to upgrade within the next 6 months, while 14% plan to do so within the next 12 months.

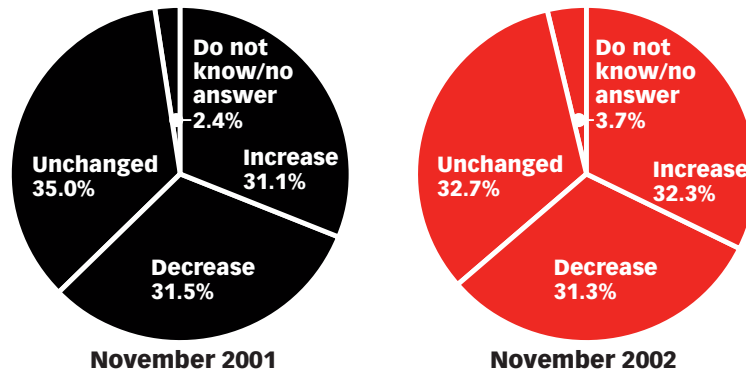
- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

IT Services

IT services spending plans by the IT executives surveyed by Deutsche Bank and *CIO Magazine* appear to be largely unchanged when compared year over year, between November 2001 and November 2002.

Heading in to 2003, about one-third of respondents plan to increase their IT services spending, while another 31% of IT executives intend to decrease their IT services spending.

IT Executives' Planned Spending on Outsourced IT Services over the Next 12 Months, 2001 & 2002 (as a % of respondents)

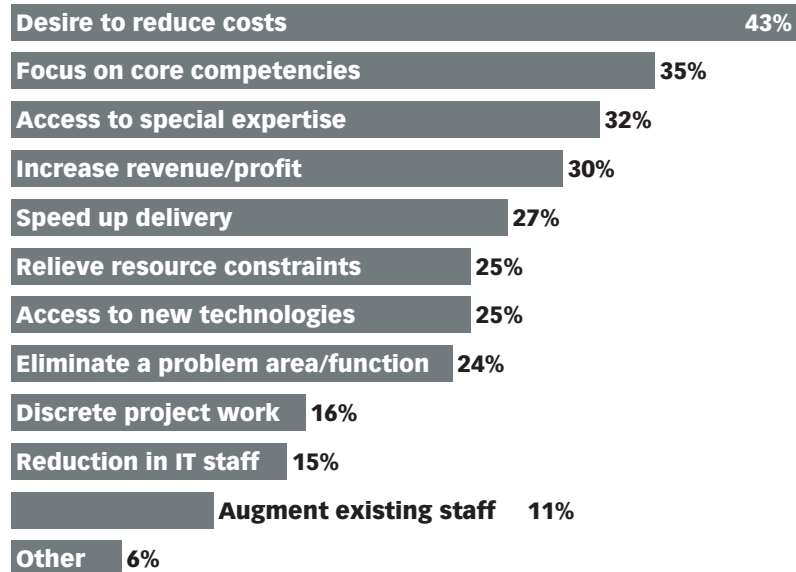


Note: n=301
 Source: *CIO Magazine and Deutsche Bank, December 2002*

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Among the key factors that are leading American and European companies to consider outsourcing at least part of their IT operations, the desire to reduce costs and focus upon core competencies are the two leading concerns.

Key Factors Driving US and European Companies' IT Outsourcing Decisions for the Next 18 Months, June 2002-December 2003 (as a % of respondents)

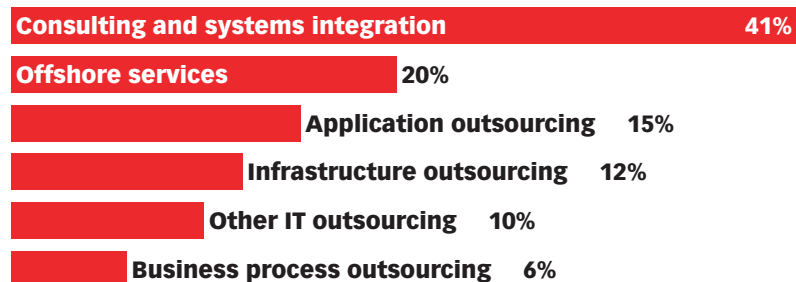


Note: n=458 IT executives in the US and Europe (Germany, Italy, Spain, France, UK, Netherlands)
Source: Getronics, IDG Research, CIO Magazine, October 2002

044160 ©2002 eMarketer, Inc. www.eMarketer.com

Among the leading IT services spending priorities for US CIOs surveyed by Morgan Stanley in November 2002, consulting and systems integration were at the top of most companies' lists heading into 2003.

Top Six IT Services Spending Priorities among US CIOs, November 2002 (as a % of respondents)



Note: n=225
Source: Morgan Stanley, December 2002

045799 ©2002 eMarketer, Inc. www.eMarketer.com

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Offshore services have slowly become more popular during the course of 2002, as several large corporations have begun to embrace the idea of turning to less expensive overseas IT services as a means of reducing costs during difficult economic times.

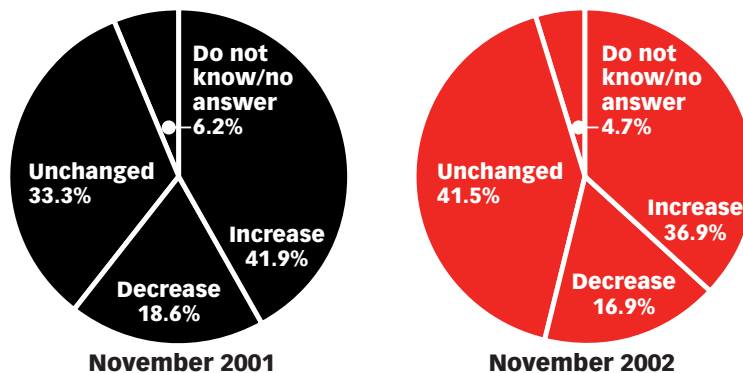
In a separate survey, the Aberdeen Group has confirmed that there is a growing interest in outsourcing IT services among US companies, with 30% of respondents to its survey indicating that they are considering the idea of using overseas service providers for some of their technology needs.

E-Business Spending Priorities

According to Deutsche Bank and *CIO Magazine's* November 2002 survey, 36.9% of IT executives plan to increase their spending on e-business applications in 2003, while 16.9% of respondents intend to reduce their spending over the next 12 months.

This compares to a slightly more optimistic outlook in late 2001, when nearly 42% of the executives indicated that they planned to increase their e-business applications spending in 2002.

IT Executives' Planned Spending on E-Business Applications over the Next 12 Months, 2001 & 2002 (as a % of respondents)



Note: n=301

Source: *CIO Magazine and Deutsche Bank, December 2002*

045496 ©2002 eMarketer, Inc.

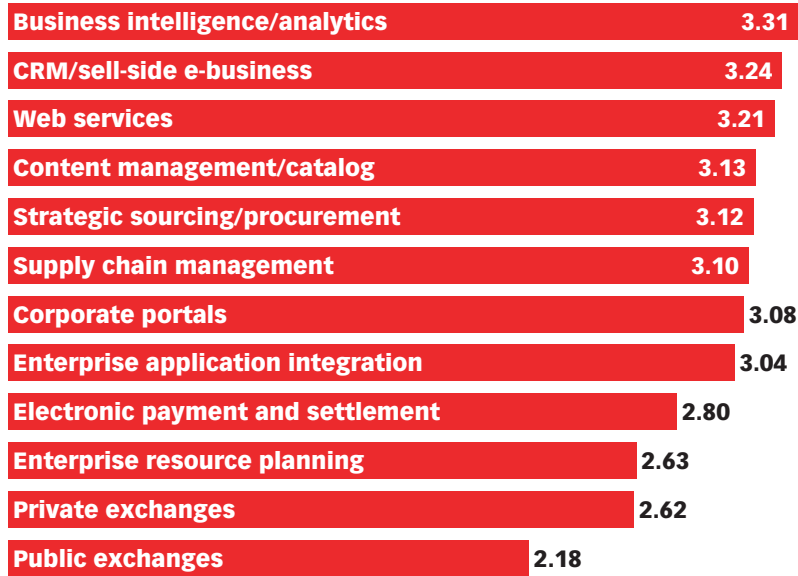
www.eMarketer.com

In August of 2002, A.T. Kearney and Line56 Research found that among the leading e-business projects that North American companies were planning for the following year, analytical applications, sell-side e-commerce initiatives and web services topped their list of priorities.

- [Methodology](#)
- [Worldwide IT Spending](#)
- [North America](#)
- [Europe](#)
- [Asia-Pacific](#)
- [Latin America](#)
- [IT Spending by Industry](#)
- [Small Business IT Spending](#)
- [IT Budgeting and Spending Surveys](#)**
- [Index of Charts](#)

Interestingly, both private and public business-to-business exchanges were at the bottom of their lists.

North American Companies' Most Important E-Business Projects for 2003 (based on a scale of 1-5*)



*Note: *where 1=least important and 5=most important*
Source: A. T. Kearney/Line56 Research, August 2002

043105 ©2002 eMarketer, Inc.

www.eMarketer.com

	Methodology	7
I	Worldwide IT Spending	11
II	North America	49
III	Europe	55
IV	Asia-Pacific	63
V	Latin America	69
VI	IT Spending by Industry	73
VII	Small Business IT Spending	83
VIII	IT Budgeting and Spending Surveys	89
	Index of Charts	121

Index of Charts

Methodology	7
The eMarketer Difference	8
The Benefits of eMarketer's Aggregation Approach	9
"Benchmarking" and Projections	9
I Worldwide IT Spending	11
Worldwide Information and Communications Technology (ICT) Spending	12
A. Worldwide IT Spending Forecasts	12
Worldwide IT Spending	13
Worldwide IT Spending	13
Worldwide IT Spending, by Segment	14
Worldwide IT Spending	14
Worldwide IT Spending, by Region	15
Worldwide IT Spending, by Region	15
Worldwide IT Spending, by Region	16
Worldwide Information Technology Spending, by Country	17
B. Worldwide IT Spending Growth Rates	18
Growth in Information and Communication Technology Spending among the G-7 Countries	18
Estimated Growth in Worldwide Information and Communications Technology (ICT) Spending	19
Fastest Growing Information and Communications (ICT) Technology Markets Worldwide, by Country	19
Worldwide IT Spending Growth	20
Worldwide IT Spending Growth	20
Comparative Estimates: Worldwide IT Spending Growth	21
Worldwide IT Spending Growth, by Category	22
Worldwide IT Spending Growth, by Technology	22
C. Worldwide IT Spending by Category	23
Worldwide Telecommunications Spending	23
Worldwide Telecommunications Spending	23
Worldwide Telecommunications Spending, by Region	24
Worldwide Telecommunications Spending	24
Breakdown of Worldwide Telecommunications Revenues, by Region	25
Worldwide Telecommunications Spending, by Country	26
US Telecommunications Equipment and Services Spending	27
Fastest Growing Telecommunications Markets Worldwide, by Country	27
Enterprise and Public Network Telecommunications Equipment Spending in Eastern Europe	29
Estimated Growth in Communications Technology Spending in Western Europe, by Country	29
Worldwide IT Hardware Spending	30
Enterprise and Public Network Telecommunications Equipment Spending in the Asia-Pacific Region	30

Index of Charts

Worldwide IT Hardware Spending	31
Worldwide IT Hardware Spending	31
Change in Worldwide IT Hardware Spending, by Region	32
Worldwide IT Hardware Spending, by Region	32
Worldwide IT Hardware Spending, by Country	33
CAGR for Worldwide IT Hardware Spending, by Technology	34
Fastest Growing IT Hardware Markets Worldwide, by Country	34
Worldwide Software Spending	35
Worldwide IT Software Spending	35
Estimated Growth in Worldwide Packaged Software Sales	36
Estimated Growth in Worldwide Software Sales	36
Worldwide Enterprise Applications Market Revenues, by Category	37
Worldwide Software Spending, by Country	38
Worldwide Software Spending, by Region	38
Fastest Growing Software Markets Worldwide, by Country	39
Worldwide IT Services Spending	40
Worldwide IT Services Spending	40
Worldwide IT Services Market Revenues, by Region	41
Worldwide IT Services Spending, by Country	42
Worldwide IT Services Revenues, by Segment	43
Fastest Growing IT Services Markets Worldwide, by Country	43
Worldwide E-Business Technology Spending	44
Worldwide E-Business Technology Spending	44
Worldwide Spending on E-Commerce Technology, by Region	45
Worldwide E-Business Technology Spending, by Region	45
North American Companies' Average E-Business Spending	46
Leading E-Business Technology Markets Worldwide, by Country	46
Percent of Global Companies' IT Budgets Spent on E-Business	47
II North America	49
A. North American IT Spending Forecasts	50
US IT Spending, by Recovery Scenario	50
IT Spending in North America	50
IT Spending in Canada	51
IT Spending in North America, by Technology Segment	51
B. IT Spending Growth in North America	52
US IT Spending Growth	52
Comparative Estimates: US IT Spending Growth	52
Estimated Growth in US Information and Communications Technology Spending	53
IT Spending Growth in Canada	53
US IT Spending Growth	53
US Technology Spending	54
III Europe	55

Index of Charts

A. Europe IT Spending Forecasts	56
Leading IT Markets in Western Europe	56
IT Spending in Europe	56
IT Spending in Western and Eastern Europe, by Technology Segment	57
Leading IT Markets in Eastern Europe	57
IT Spending in Western Europe, by Technology Segment	58
B. IT Spending Growth Rates for Europe	59
IT Spending Growth in Western Europe	59
Estimated Growth in Communications Technology Spending in Western Europe, by Country	60
IT Spending Intentions of CIOs in Selected Countries in Western Europe	61
IV Asia-Pacific	63
A. Asia-Pacific IT Spending Forecasts	64
IT Spending in the Asia-Pacific Region	64
Leading IT Markets in the Asia-Pacific Region	65
IT Spending in Japan and the Asia-Pacific Region, by Technology Segment	66
B. IT Spending Growth Rates in the Asia-Pacific Region	67
Estimated Growth in Information and Communications Technology Spending in Japan	67
IT Spending Growth in the Asia-Pacific Region, by Technology Segment	67
V Latin America	69
A. Latin America IT Spending Forecasts	70
Leading IT Markets in Latin America	70
IT Spending in Latin America	70
IT Spending in Latin America, by Country	71
IT Spending in Latin America, by Country	71
IT Spending in Latin America, by Technology Segment	72
VI IT Spending by Industry	73
Worldwide IT Spending, by Industry	74
US IT Spending, by Industry	75
US IT Spending, by Industry	76
US IT Spending, by Industry	77
US IT Spending, by Industry	78
Change in US IT Spending, by Industry	79
Average Anticipated Change in US IT Spending, by Industry	80
Change in US IT Spending, by Industry	80
Anticipated Change in IT Spending by US Manufacturers, by Industry	81
IT Spending Intentions for Selected Industries in Western Europe	82
VII Small Business IT Spending	83
US Small Business IT Spending, by Category	84
Total IT Spending by US Small and Medium-Sized Businesses	84

Index of Charts

Worldwide Small Business IT and Telecommunications Spending, by Category	85
US Small Office/Home Office IT Spending, by Category	85
Leading Hardware/Software Spending Priorities among US Small Businesses	86
Small Business Internet Spending Worldwide, by Category	86
Anticipated Change in IT Spending among US Small Businesses	87
Leading Internet-Related Spending Priorities among US Small Businesses	87
VIII IT Budgeting and Spending Surveys	89
A. IT Spending Plans	90
Change in North American Companies' IT Spending	91
IT Executives' Use of IT Budget	91
Top 10 IT Priorities among US CIOs	92
IT Spending by the InformationWeek 500	93
Leading Areas Where North American Companies Plan to Increase IT Spending	93
Management Position Responsible for Measuring the Success of US and European Companies' IT Investments	94
Leading Negative Factors Hindering Global Companies' IT Spending	94
Criteria Used to Measure the Success of US and European Companies' IT Investments	95
North American Companies' E-Business Spending	96
Average E-Business Budgets of North American Companies	96
US CIOs' Expectations for the Timing of an Economic Recovery	97
IT Executives' Anticipated Timing for a Recovery in Their Own IT Spending	98
IT Spending Intentions of IT Executives in the US and Europe	99
US Companies' Anticipated Change in Their IT Budgets	99
IT Professionals' Average Anticipated Increase in IT Spending, by Country	100
Anticipated Growth in IT Spending by US and European Companies	100
IT Executives' Average IT Spending Increase Planned for the Next 12 Months	101
B. IT Spending Priorities	102
Leading IT Priorities for US and European Companies over the Next 18 Months	103
North American Companies' IT Spending Priorities	104
IT Executives' Planned Spending on Telecommunications Equipment over the Next 12 Months	105
IT Executives' Planned Spending on Data Networking Equipment over the Next 12 Months	106
US CIOs' Planned Network Upgrade Initiatives	107
Top Seven Networking Spending Priorities among US CIOs	108
IT Executives' Planned Spending on Computer Hardware over the Next 12 Months	109

Index of Charts

IT Executives' Planned Spending on Storage Systems over the Next 12 Months	110
US CIOs' Planned Hardware Equipment Spending	111
Top 10 Hardware Spending Priorities among US CIOs	112
IT Executives' Planned Spending on Infrastructure Software over the Next 12 Months	113
Global IT Executives' Software Buying Plans, by Category	114
Top 10 Software Spending Priorities among US CIOs	115
IT Executives' Planned Spending on Outsourced IT Services over the Next 12 Months	116
Top Six IT Services Spending Priorities among US CIOs	117
Key Factors Driving US and European Companies' IT Outsourcing Decisions for the Next 18 Months	117
IT Executives' Planned Spending on E-Business Applications over the Next 12 Months	118
North American Companies' Most Important E-Business Projects for 2003	119
Index of Charts	121

Also Available from eMarketer

Asia-Pacific Online: Access, Demographics and Usage

- Population, economy & infrastructure
 - Internet users, demographics & usage patterns
 - Country profiles
-

Asia-Pacific E-Commerce: B2B & B2C

- Technology spending
 - E-commerce revenue forecasts
 - Online marketplace & exchanges
 - Online buyer demographics & top B2C categories
-

ASP Report

- Market size & growth
 - Industry leaders
 - Usage patterns
 - Customer satisfaction
-

Benefits of Broadband

- Trends in consumer adoption of broadband
 - Digital TV & iTV
 - Broadband infrastructure costs
 - Direct & indirect benefits of broadband
-

Brazil Online: Demographics, Usage Patterns and E-Commerce Trends

- Population, economy & infrastructure
 - Internet users, access preferences, demographics & usage patterns
 - E-commerce, e-finance & e-advertising
-

Broadband & Dial-Up Access

- Broadband households & access preferences
 - Cost of broadband technology
 - Country profiles
-

Broadband Report

- Users by access method (dial-up, fiber, DSL, cable, satellite, wireless) & user demographics
 - Residential & business usage
 - Access revenues
 - Region & country profiles
-

CPG Online: E-Business Activity & Trends

- E-Business strategy & spending
 - Online advertising by CPG companies
 - Website capabilities of CPG manufacturers
 - Consumer shopping patterns
-

CRM Report

- Market size & growth
 - Leading vendors
 - Budgeting & implementation
-

eAsia Report

- Technology infrastructure
 - Internet users, access preferences, demographics & usage patterns
 - Wireless internet & m-commerce
 - E-commerce, e-finance & e-advertising
 - Country profiles
-

eCanada Report

- Economy & infrastructure
- Internet users, demographics & usage patterns
- E-commerce, m-commerce & e-advertising

eGlobal: Demographics & Usage

- Access technologies & costs
- Internet users, demographics & usage patterns
- Wireless internet users

eHealth Report

- Consumer demographics & attitudes
- Internet usage among healthcare professionals
- Online health & beauty sales
- Business automation & B2B spending

eInvesting Report

- Online brokerages & mutual funds
- Online asset management
- Online investment advice
- Account aggregation

ePrivacy & Security Report

- Consumer attitudes & behavior toward online privacy
- Online fraud
- Credit card security
- Corporate security (hacking & denial-of-service attacks)
- Virus attacks & virus protection

eTravel Report

- Online travel bookings by segment & category
- Demographics of online travelers
- Online travel booking preferences & concerns
- Region profiles

eWireless Report

- Technology infrastructure, 2.5G & 3G networks & wireless protocols in use
- Wireless subscribers & penetration by region & by country
- Wireless internet users & usage patterns by region & by country
- M-commerce, m-finance & m-advertising

E-Commerce: B2B Report

- B2B e-commerce revenues by region & by country
- Internet penetration among businesses
- E-business trends & budgeting
- EDI networks, online marketplaces, auctions & exchanges
- Supply chain management

E-Commerce: B2C Report

- B2C e-commerce & total retail commerce revenues in the US
- Top consumer categories online
- Online shoppers, buying frequency & size of transactions
- Consumer attitudes and behaviors

E-Commerce Trade and B2B Exchanges

- B2B e-commerce trade & stage of e-business development by region
 - E-business budgeting & trends
 - Private & public exchanges
-

E-Mail Marketing: Strategies, Stats, Techniques & Tools

- Spending, costs & budgets
- E-mail marketing users & accounts
- Consumer & marketer attitudes toward e-mail marketing
- E-mail marketing techniques, strategies & privacy issues

Electronic Payments Report

- Market size & growth
- Leading vendors
- Biller adoption of electronic bill & invoice presentment & payment
- Consumer attitudes toward electronic billing

Essential E-Business Numbers for Marketers

- Internet users by region and by country
- Access preferences of internet users & households worldwide
- E-commerce revenues & online advertising spending in the US

Europe E-Commerce: B2B & B2C

- Technology spending
- E-commerce revenue forecasts
- Online marketplace & exchanges
- Online buyer demographics & top B2C categories

Europe Online: Access, Demographics and Usage

- Population, economy & infrastructure
- Internet users, demographics & usage patterns
- Access preferences
- Wireless internet users & short messaging

Interactive TV: Reality & Opportunity

- iTV market segments, revenues & user projections
- Interactive TV advertising, services & t-commerce
- Consumer attitudes toward iTV
- Region & country profiles

IT Spending Report

- IT spending by region & by category
- Market forecasts & growth rates
- IT budgeting by region

Japan Online: Demographics, Usage Patterns and E-Commerce Trends

- Population, economy & infrastructure
- Internet users, access preferences, demographics & usage patterns
- Wireless internet users, demographics & usage patterns
- E-commerce, e-finance & e-advertising

Latin America Online: Demographics, Infrastructure Usage Patterns and E-Commerce Trends

- Population, economy & infrastructure
- Internet users, access preferences, demographics & usage patterns
- E-commerce, e-finance & e-advertising
- Country profiles

Marketing and Selling Online to Kids and Teens

- Online usage & spending trends
 - Online shoppers, buying frequency & size of transactions
 - Legal & privacy considerations
-

North America E-Commerce: B2B & B2C

- E-commerce revenue forecasts
- Multi-channel B2C buying & selling
- Conversion rates & Top B2C categories
- Business use of the internet

North America Online: Access, Demographics and Usage

- Internet users, households & access devices
- User demographics & usage patterns by gender, age, income, education, ethnicity & region
- Usage trends among kids, teens, seniors, African-Americans & Latinos
- Wireless internet users, demographics & usage patterns

North American Wireless Report

- Technology infrastructure & leading carriers
- Wireless subscribers & usage trends
- Access devices (handsets, PDAs, pagers, telemetry & telematics)
- Lessons learned from Europe & Japan

Online Advertising: Statistics, Strategies, Projections & Trends

- Market size & growth
- Spending by ad formats
- Online advertising pricing
- Web advertisers & publishers

Online Investing: Brokers, Investors, Statistics, and Market Trends

- Market size & growth
- Costs & value of online investing
- Demographics of online investors
- Choosing channels & financial service firms

Online Marketing: Key Strategies, Statistics, Techniques and Trends

- Market size & growth
- Branding, viral & direct marketing & CRM
- E-mail marketing, affiliate programs & classifieds
- Search engine optimization

Online Selling & eCRM

- B2B & B2C website capabilities & website user preferences
- Website budgeting
- Online customer service & eCRM

PC Market Report

- PC spending by region
- Market forecasts & growth rates
- Leading vendors by market share
- Profiles of business & consumer markets

PDA Market Report

- PDA spending by region & by country
- Market forecasts & growth rates
- Leading vendors by market share
- Enterprise & consumer usage trends

Pharmaceutical Industry Online

- Selling to consumers & physicians online
 - Selling pharmaceutical products online
 - Direct-to-consumer advertising & physician sales
-

Telecommunications Spending Report

- Telecommunications spending by region & by category
- Telecommunications costs & budgeting
- Bandwidth supply & demand
- Government spending & capital investment forecasts

Travel Market Worldwide Report

- Market size & growth by segment & and by category
- Leading travel service vendors & trends in vendor consolidation, expansion & partnerships
- Leisure & business traveler demographics & channel preferences
- Impact of 11 September 2001 & new technologies on travel market

US eBanking Report

- Market size & usage
- Small business & mobile banking
- Electronic bill presentment & payment, account aggregation & CRM

US Holiday Shopping Report

- Spending forecasts
- Consumer purchasing preferences & average spending per buyer
- Peak buying periods
- Confronting the competitive environment (increasing market share, improving customer satisfaction)

For more information, or to order a copy, contact eMarketer at:

Phone: 212.677.6300

Fax: 212.777.1172

eMail: sales@emarketer.com

Web: www.emarketer.com

For media inquiries:

David Berkowitz, dberkowitz@emarketer.com

For inquiries about this report or other eMarketer reports:

Nick Fainelli, New Business Development, nfainelli@emarketer.com
