



2006 Kentucky Technology Trends

*Results of the 2006 ConnectKentucky
Business Technology Survey*





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Computer Use Among Kentucky Businesses



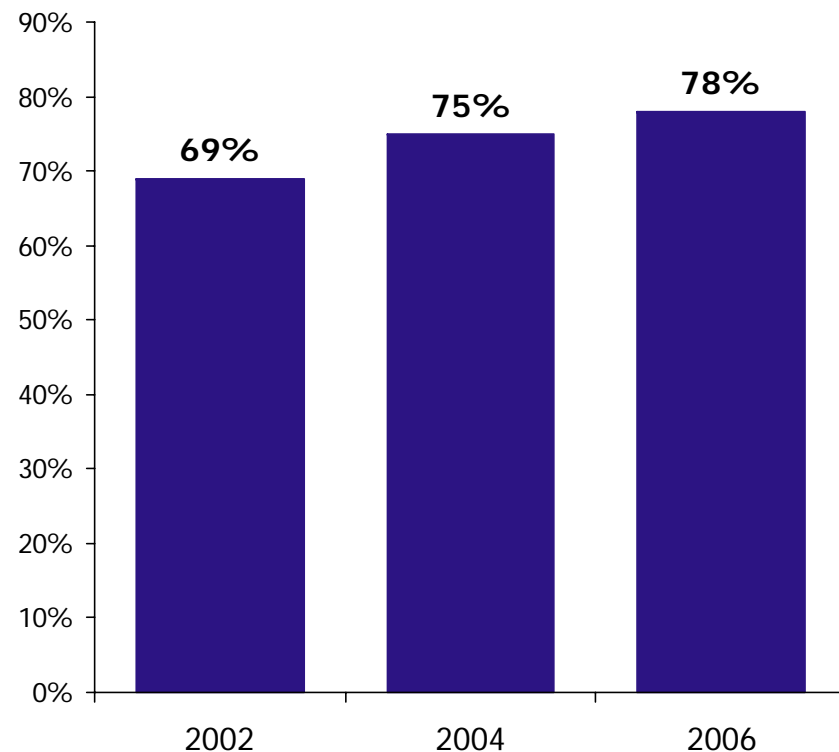
Use of Computer Technology

- In 2006, more than three out of four businesses surveyed report using computer technology for business purposes.
- In absolute terms, this ratio converts to a current estimate of 154,000 businesses in Kentucky that use computers.

Q: Does your company use any type computer technology to handle some or all of its business functions (for example: sales, cash receipts, accounting, inventory control or management reporting)?

Total number of Kentucky businesses based on Kentucky Secretary of State reported figures from December 2006.

Use of Computer Technology
(Percent of all businesses)

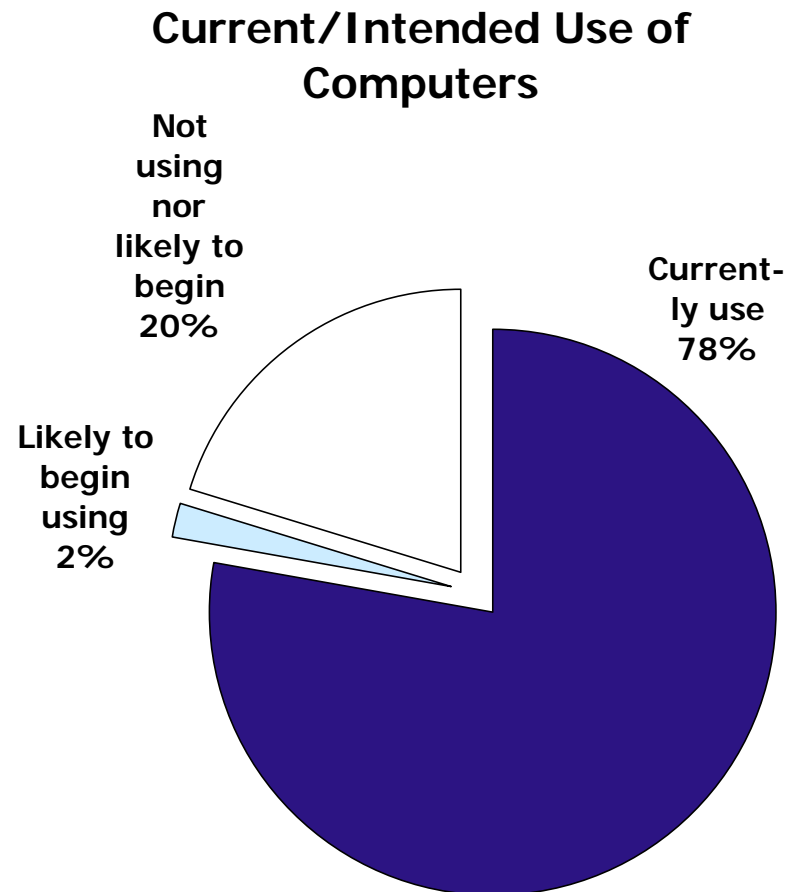


Source: 2002-2006 connectkentucky surveys.



Use of Computer Technology

- More than three-quarters (78%) of Kentucky businesses presently use computer technology for business functions.
- Another 2% of businesses are not currently using computers in their business, but are highly likely to begin doing so within the next 12 months.



Q: Does your company use any type computer technology to handle some or all of its business functions (for example: sales, cash receipts, accounting, inventory control or management reporting)? (n=808)
If no, Q: How likely is your company to begin using some type of computer technology to handle some or all of your business functions in the next 12 months?" A: 5 point scale, top 2 box reported here as likely to begin.

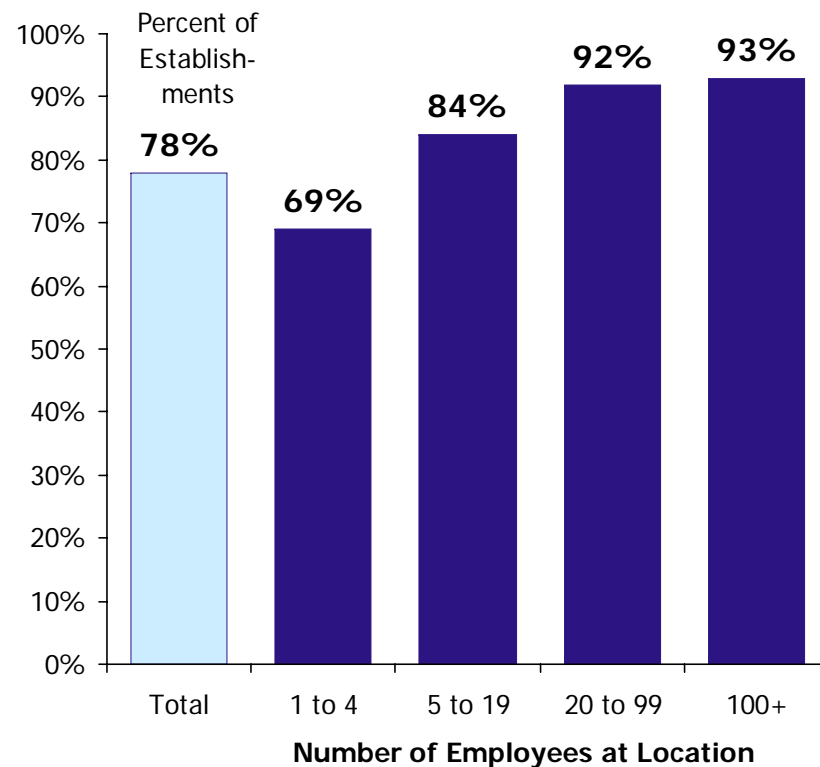
Source: 2006 connectkentucky survey of businesses.



Computer Use by Size of Company

- The state-wide rate of computer technology adoption varies significantly with size of company, rising from 69% of the smallest establishments to more than ninety percent of medium to large businesses.

Computer use by Size



*Q: Does your company use any type computer technology to handle some or all of its business functions (for example: sales, cash receipts, accounting, inventory control or management reporting)?
(n=808 total, 200+ in each size bracket, except 100+ where n=81.)*

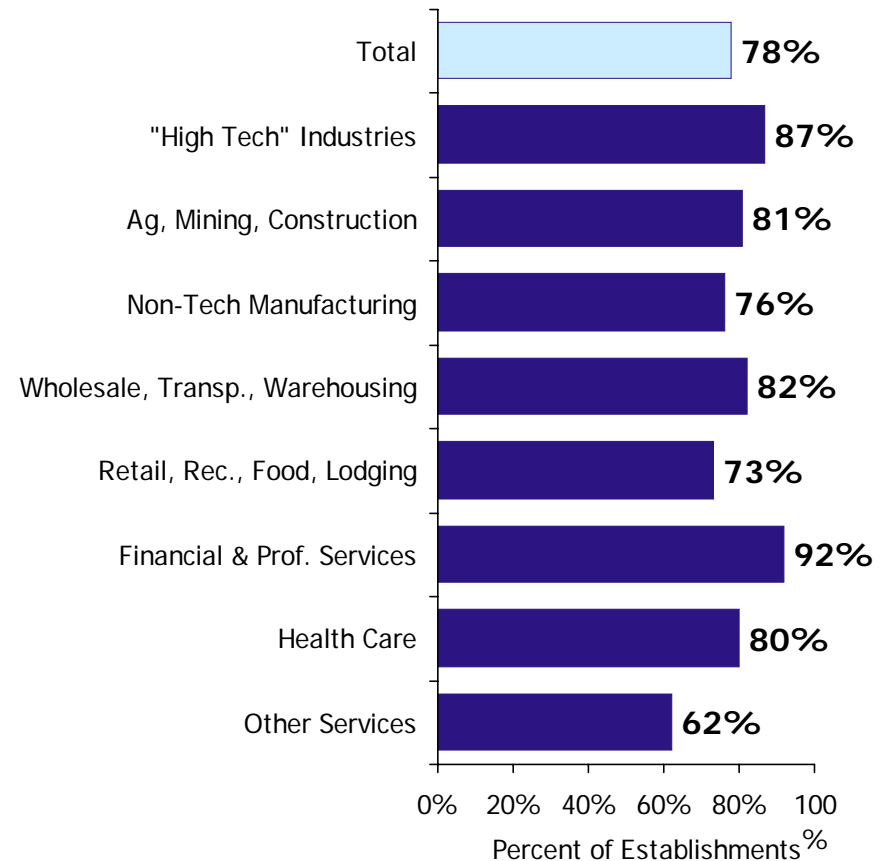
Source: 2006 connectkentucky survey of businesses.



Computer Use by Industry Sector

- Businesses in the Financial and Professional Services sector have the highest rates of computer usage in the business (92%).
- Lower than average rates of computer use are found in retail, recreation, lodging and food service businesses. Companies in the Other Services classification have a significantly lower rate of technology adoption.

Computer Use by Sector



*Q: Does your company use any type computer technology to handle some or all of its business functions (for example: sales, cash receipts, accounting, inventory control or management reporting)?
(n=808 total, ~100+ in each sector.)*

Source: 2006 connectkentucky survey of businesses.



Internet Use Among Kentucky Businesses



Use of Internet for Business

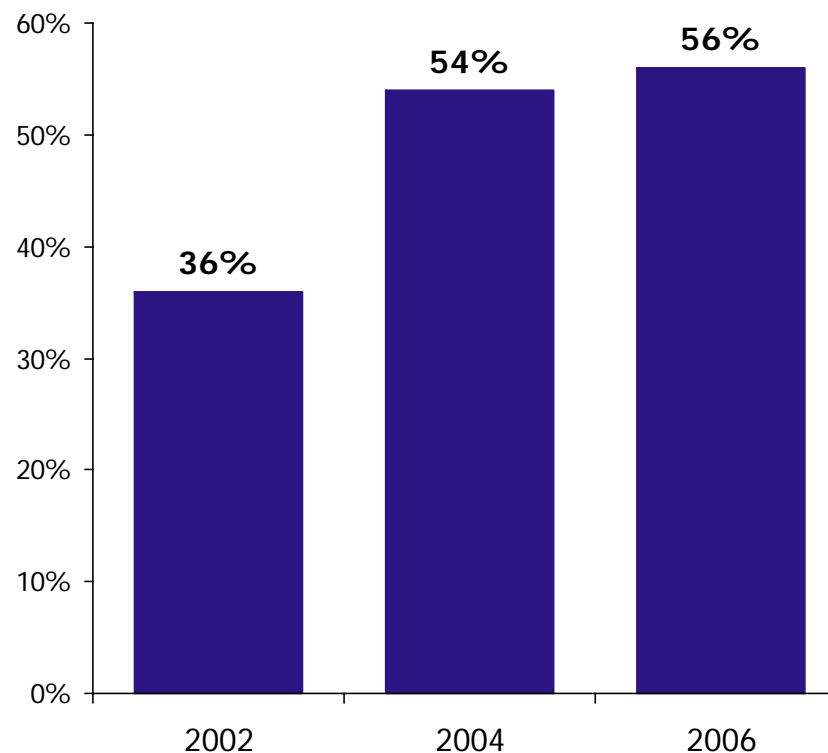
- In 2006, 56% of businesses surveyed reported actively using the Internet to handle business functions, up 2% from the comparable figure reported in 2004.
- This converts to over 111,000 business establishments that are using the Internet to handle business functions.

Q: Does your company use the Internet to handle any of your business functions?

•Note: Wording of this question differs slightly from year to year. In 2002-03 the clause "for example ordering supplies or services" was appended. In 2004, use of e-mail for business was asked separately and included in the published "Internet usage" rate of 64%.

Total number of Kentucky businesses based on Kentucky Secretary of State reported figures from December 2006.

Use of Internet for Business
(Percent of all businesses)

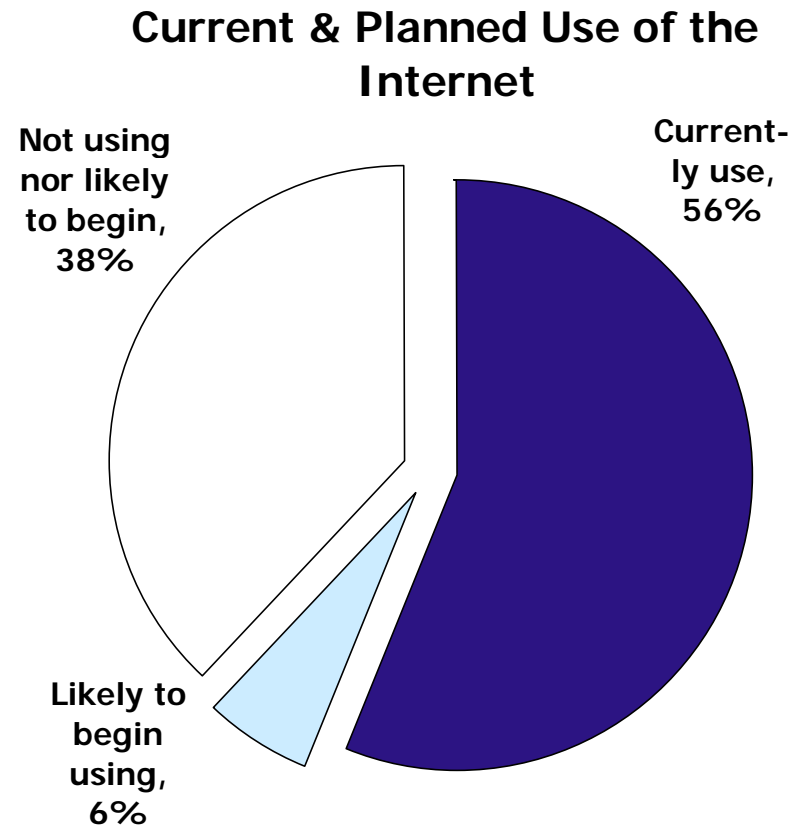


Source: 2002-2006 connectkentucky surveys.



Use of the Internet for Business

- More than half of all Kentucky businesses surveyed report using the Internet to specifically handle business functions.
- Another 6% of those currently not using the Internet are highly likely to begin in the next 12 months.



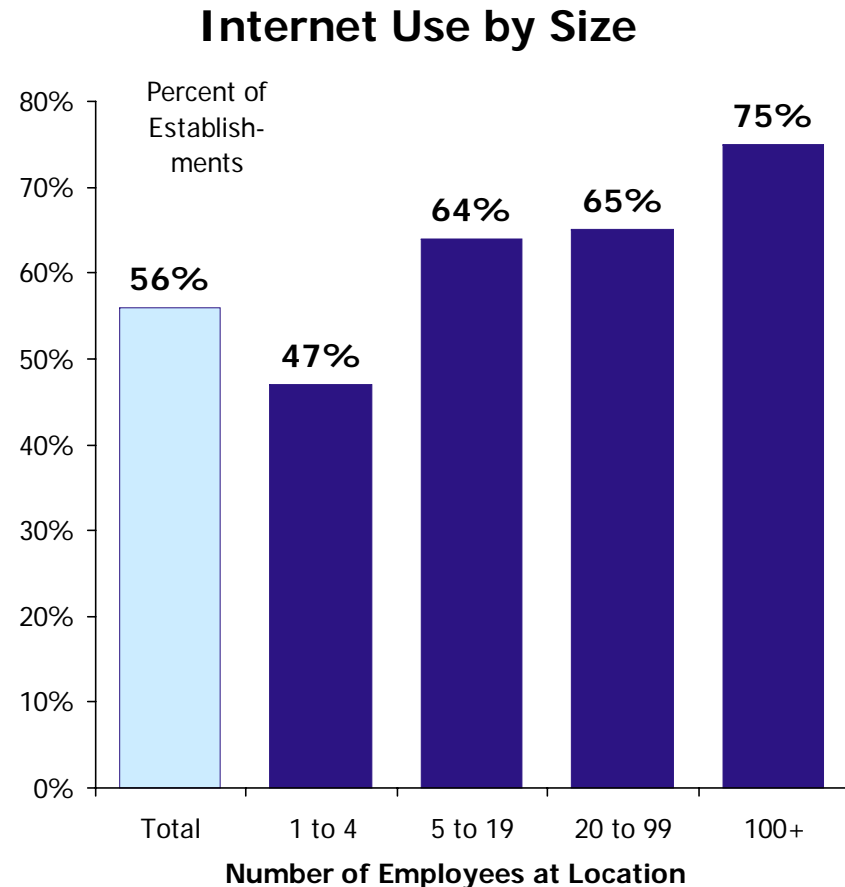
Source: 2006 connectkentucky survey of businesses.

Q: Does your company use the Internet to handle any of your business functions? If no, Q: How likely is your company to begin using the Internet to handle any business functions in the next 12 months? A: 5 point scale, top 2 box reported here as likely to begin. (n=808)



Internet Use by Size of Company

- The state-wide rate of Internet adoption varies with size of company, ranging from 47% of the smallest establishments to three out of four of the largest establishments.



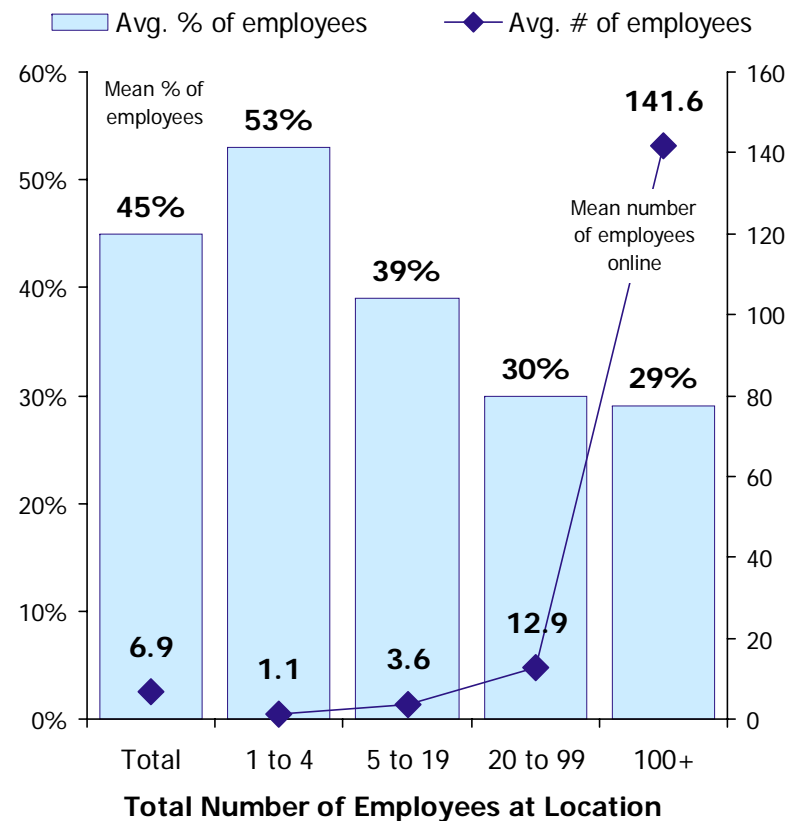
Q: Does your company use the Internet to handle any of your business functions? Source: 2006 connectkentucky survey of businesses. (n=808 total, 200+ in each size bracket, except 100+ where n=81.)



Internet Access Within the Company

- On average, 45% of employees within a business establishment that is connected to the Internet use the Internet from that location for business purposes, (down from 60% of employees in the 2004 survey).
- This decline is due mainly to reduced access among smaller firms with under 20 employees.
- Smaller firms report a significantly higher percentage of their employees using the Internet for business than larger businesses.

Avg. % and Number of Employees that Use the Internet



Source: 2006 connectkentucky survey of businesses.

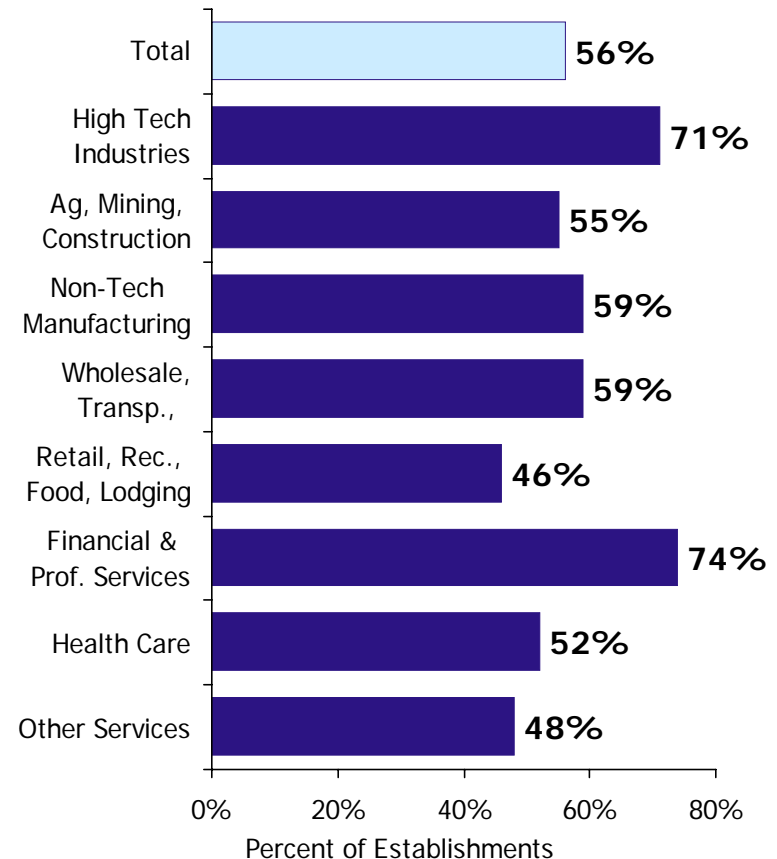
*Q: How many employees at this business location use the Internet for business purposes?
(n=606 total, 100+ in each size bracket.)*



Internet Use by Industry Sector

- High technology businesses and those in the Financial and Professional Service sector have the highest rates of Internet usage.
- Agriculture, Mining, Construction firms, Retail, Recreation and Food Service firms, Health Care firms and miscellaneous Other Services are less likely to be actively using the Internet for business purposes.

Internet Use by Sector



Q: Does your company use the Internet to handle any of your business functions? (n=808 total, ~100+ in each sector.)

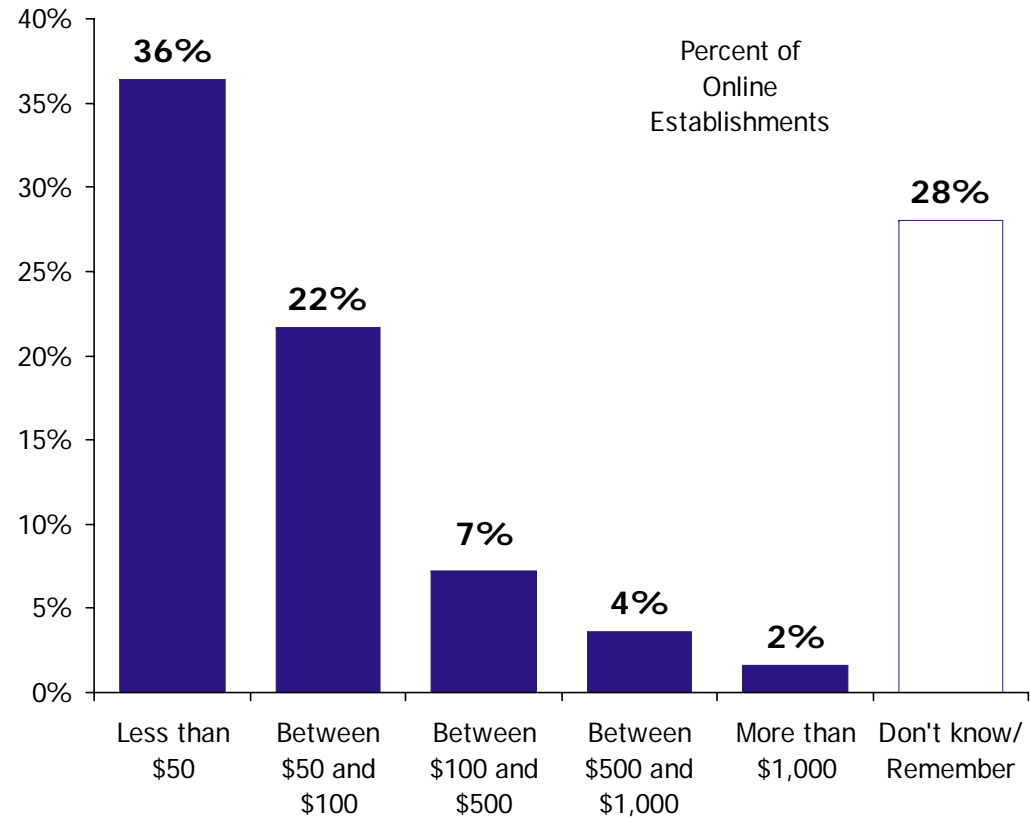
Source: 2006 connectkentucky survey of businesses.



Cost of Internet Service

- Over one-third of Kentucky businesses pay less than \$50 per month for Internet service, and over half pay less than \$100.
- The median monthly fee is \$49, while the mean is \$144.
- More than one-quarter of businesses reported not knowing the cost of their Internet service.

Monthly Access Fees



Q: How much per month does your organization pay for its Internet connection? (n=514 online businesses)

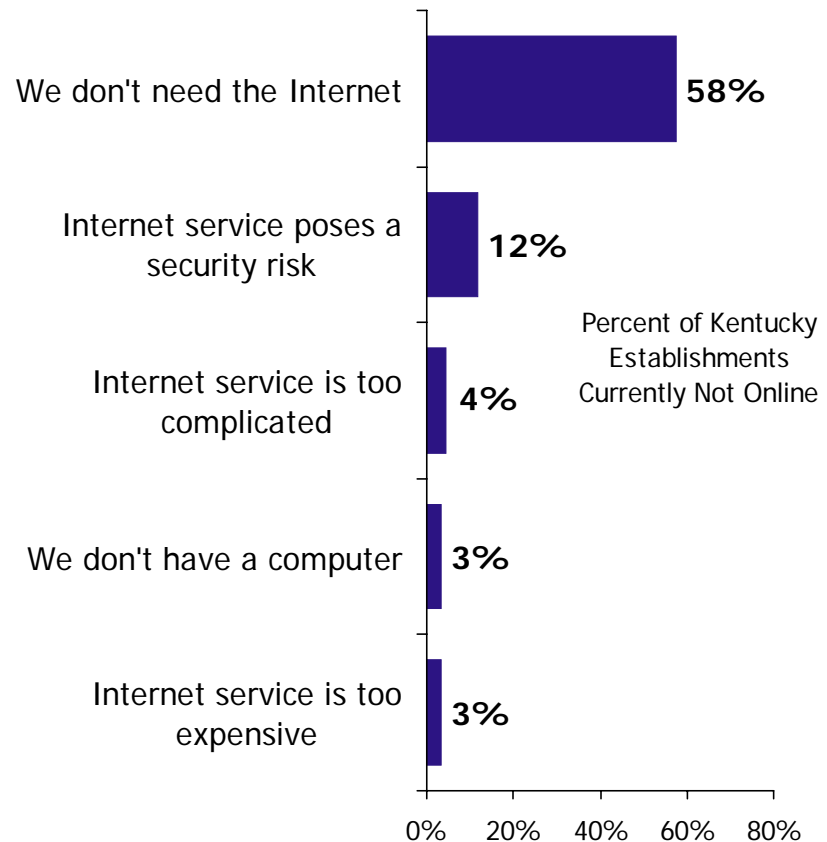
Source: 2006 connectkentucky survey of businesses.



Barriers to Internet Use

- The majority of businesses currently not connected to the Internet today say they do not need the Internet.
- A further 12% cite perceived security risks.
- Only 3% say Internet access is too expensive.

Barriers to Internet Use



Q: Why doesn't your organization use the Internet? (n=157 Kentucky businesses)

Source: 2006 connectkentucky survey of businesses.



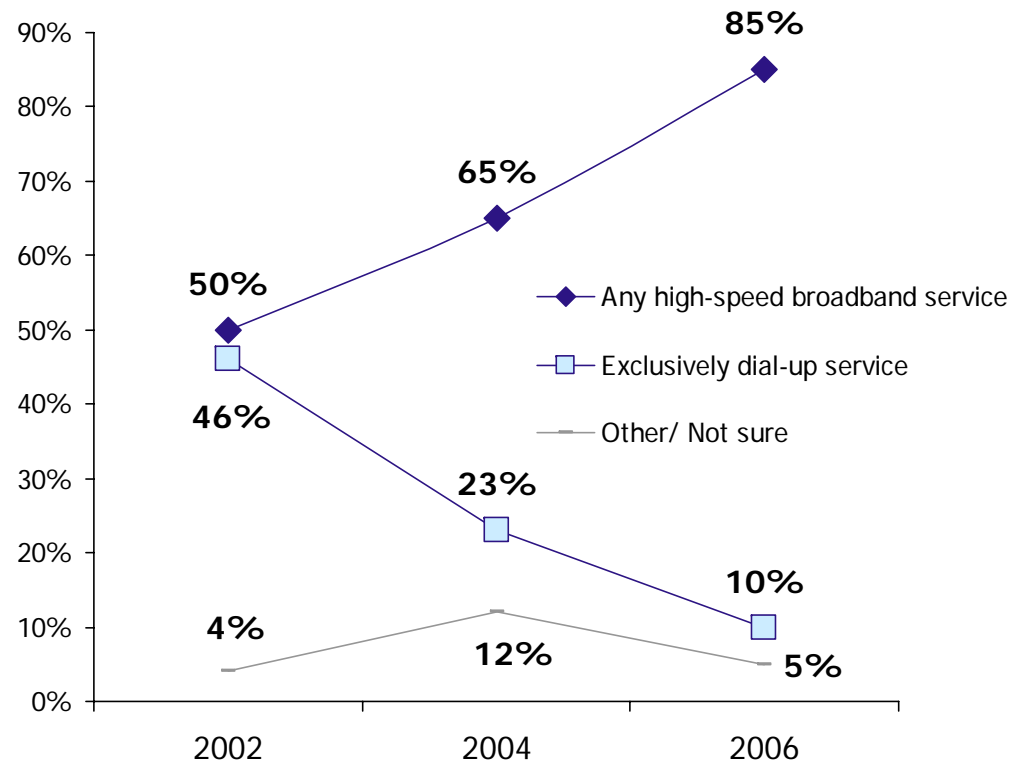
Broadband Use Among Kentucky Businesses



Broadband Use

- Approximately 85% of Internet connected businesses report using a high-speed broadband connection (such as DSL, cable modems or dedicated connections) in their business, up significantly from 65% in 2004.
- In absolute terms, the current ratio converts to over 94,000 business establishments in Kentucky that have high-speed Internet access.

Type of Internet Access
(Percent of online businesses)



Q: Which of the following describe the type of Internet access your company has? Base=Online businesses. Question was not asked in the 2003 survey. Only one response was permitted in 2002.

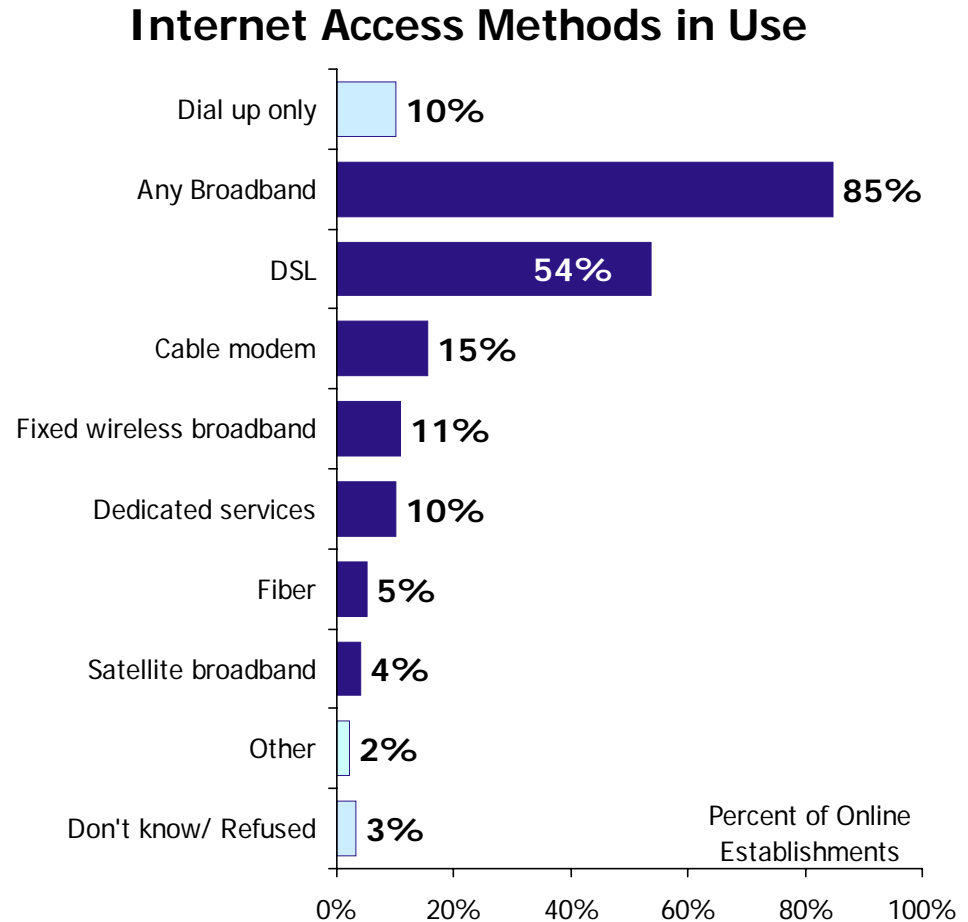
Source: 2002-2006 connectkentucky surveys.



Broadband Type

- Approximately 85% of Internet connected businesses in Kentucky have some form of broadband or high-speed Internet access serving their business.
 - DSL lines serve over-half of businesses with high-speed connections, and 30% of all online businesses in the state.
 - Cable modems, fixed wireless broadband and dedicated services such as T-1 lines all serve at least 10% of online businesses.
 - Only 10% of online businesses rely exclusively on dial-up Internet access.

*Q: Which of the following describe the type of Internet access your company has? (n=514 online businesses)
Shading indicates forms of "broadband" access.*



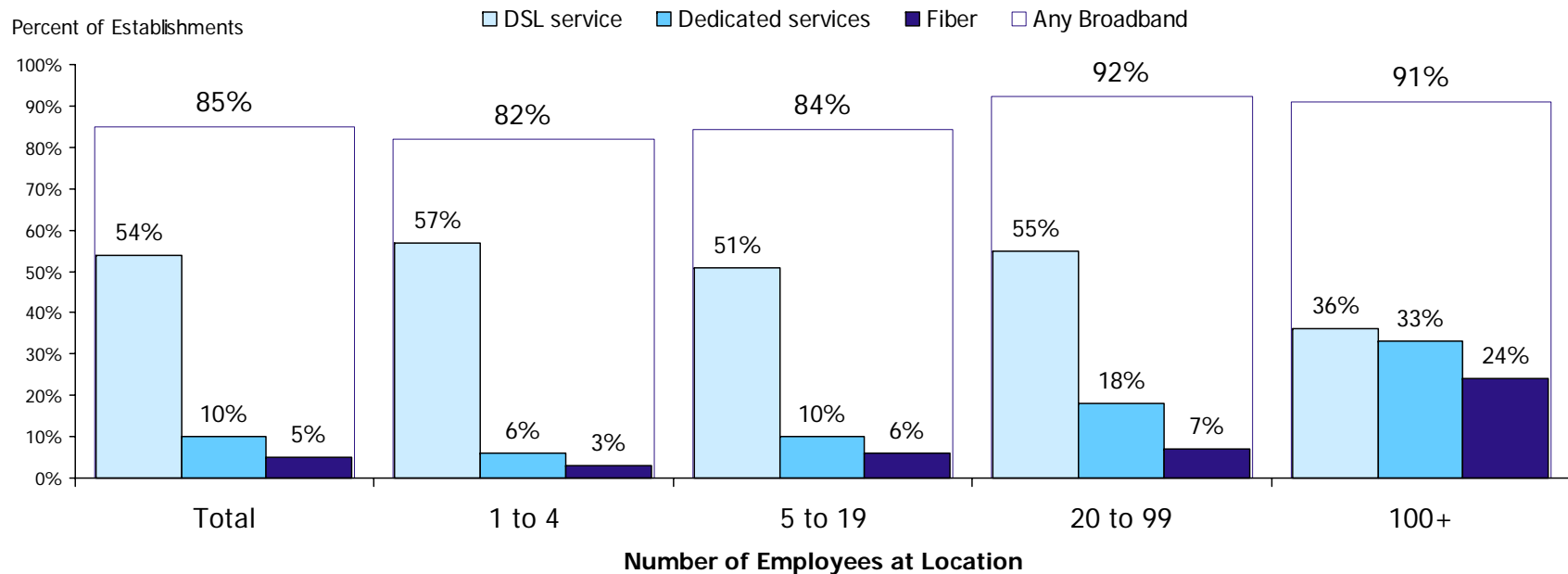
Source: 2006 connectkentucky survey of businesses.



Broadband Use by Size of Company

- Businesses with under 100 employees primarily have DSL service, while businesses with 100 or more employees are more likely to have dedicated or fiber-based services.

Type of Internet Access



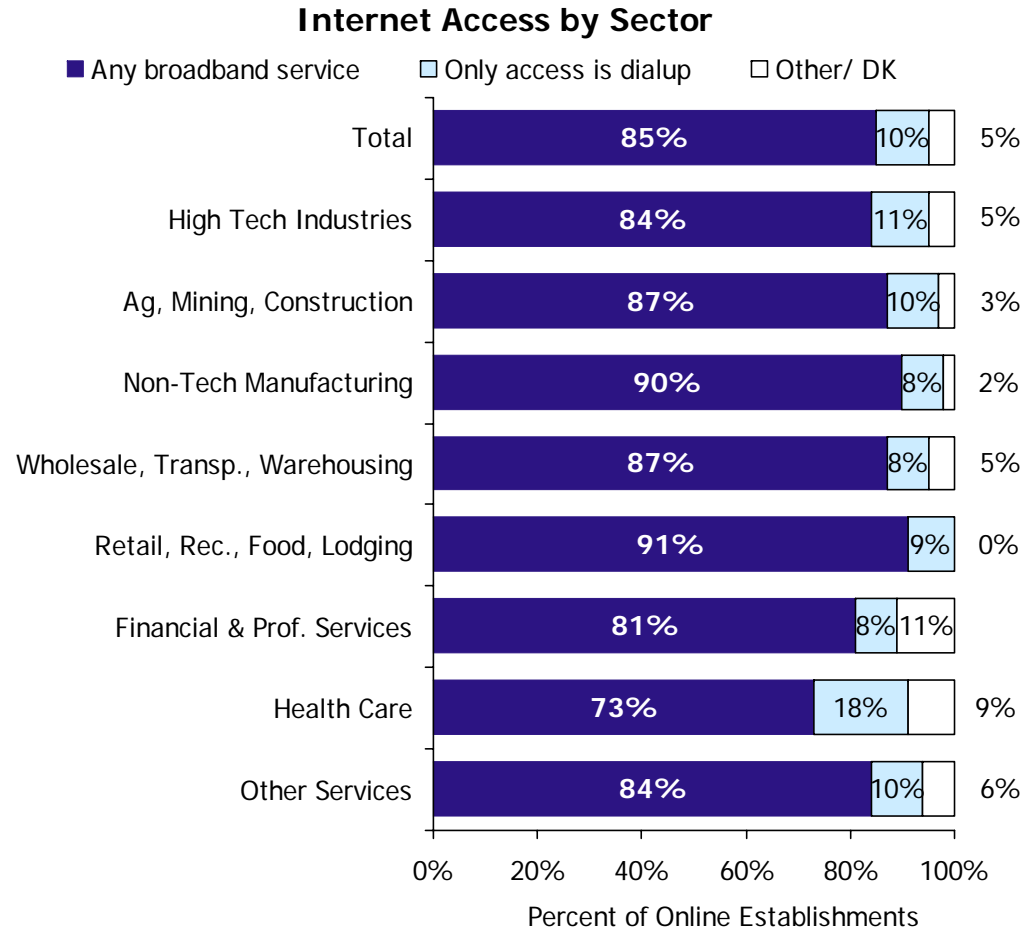
Source: 2006 connectkentucky survey of businesses.

Q: Which of the following describe the type of Internet access your company has? (Base: online businesses n=514.)



Broadband Use by Industry Sector

- Among Internet connected businesses, broadband adoption is highest among businesses in Retail, Recreation, Food and Lodging and Manufacturing, and is significantly lower among Health Care establishments.
- When based on the total universe of all businesses, firms in the High Tech and Professional and Financial sectors have the highest overall rates of broadband usage.



*Q: Which of the following describe the type of Internet access your company has?
(n=514 online businesses in total, between 49-78 in each sector)*

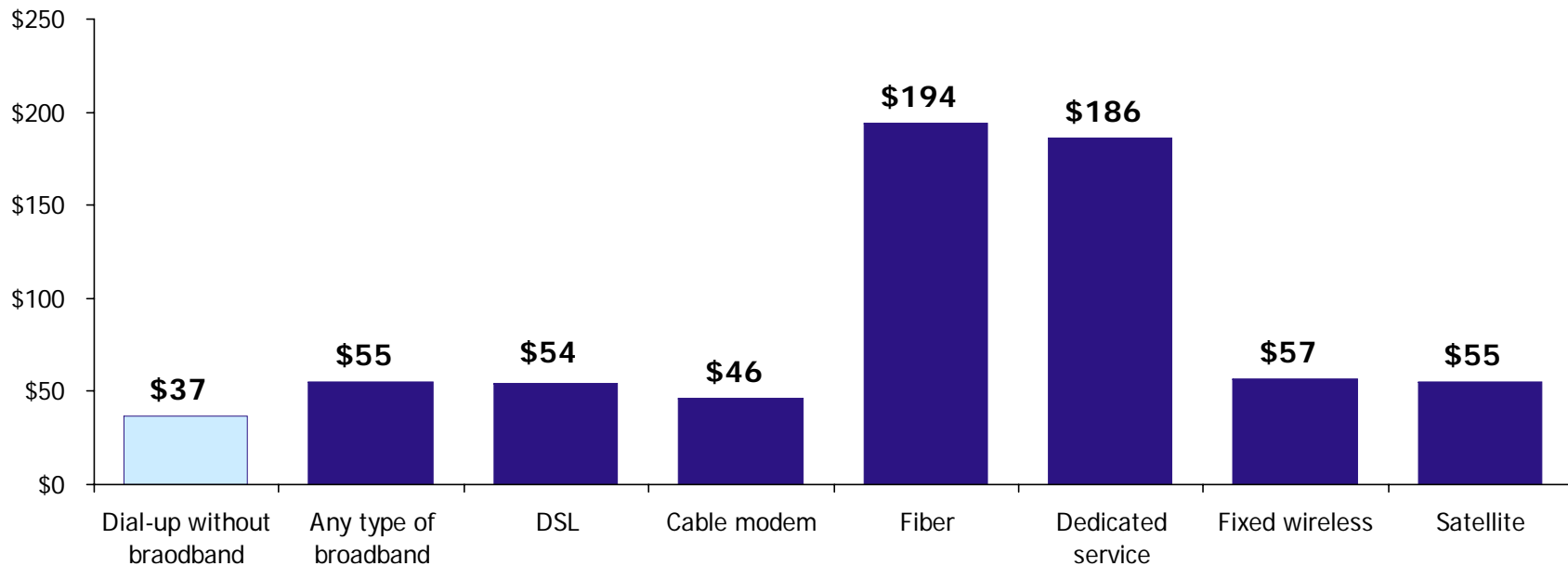
Source: 2006 connectkentucky survey of businesses.



Median Monthly Cost by Internet Type

- The median monthly cost of service for broadband enabled businesses as a whole is \$55 per month, with lower costs reported among businesses using cable modems.
- The median cost of fiber optic or dedicated service is closer to \$200 per month.

Median Monthly Access Fees



Source: 2006 connectkentucky survey of businesses.

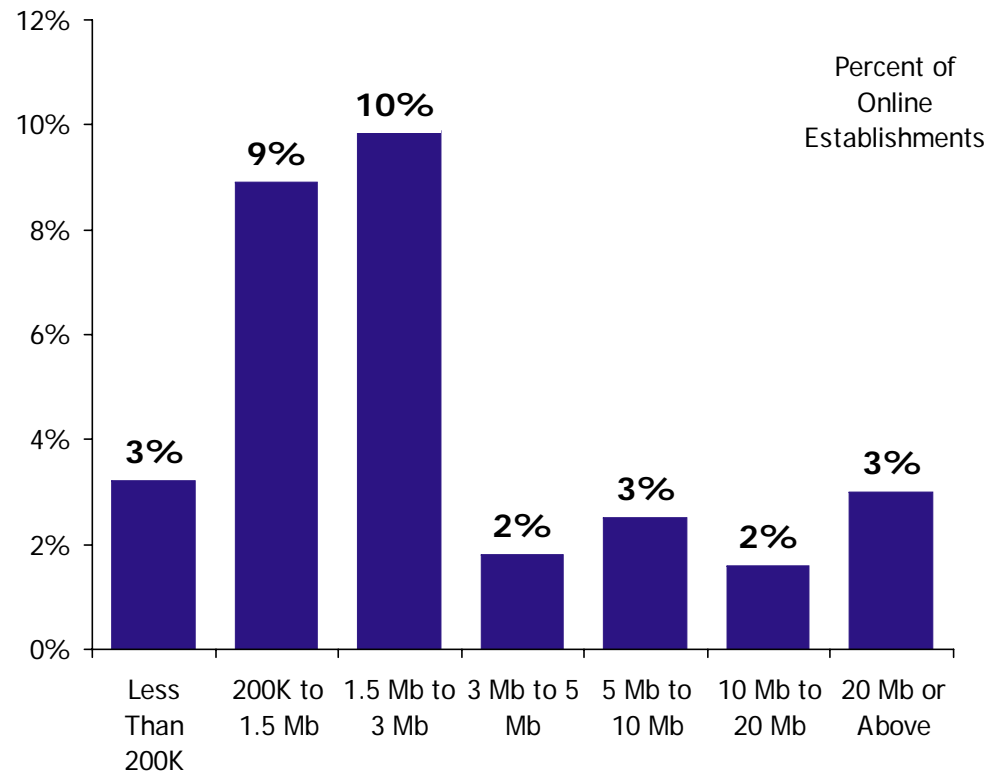
Q: How much per month does your organization pay for its Internet connection?
Median estimated from distribution of spending across spending brackets, and excludes respondents who don't know or refused to indicate spending.



Broadband Speed

- Most businesses surveyed could not estimate the speed of their Internet connection.
- Those that could choose a bandwidth range were most likely to fall in the 200kb to 3Mb ranges.
- Knowledge of bandwidth levels is strongest in high tech businesses and larger businesses.

Current Estimated Bandwidth



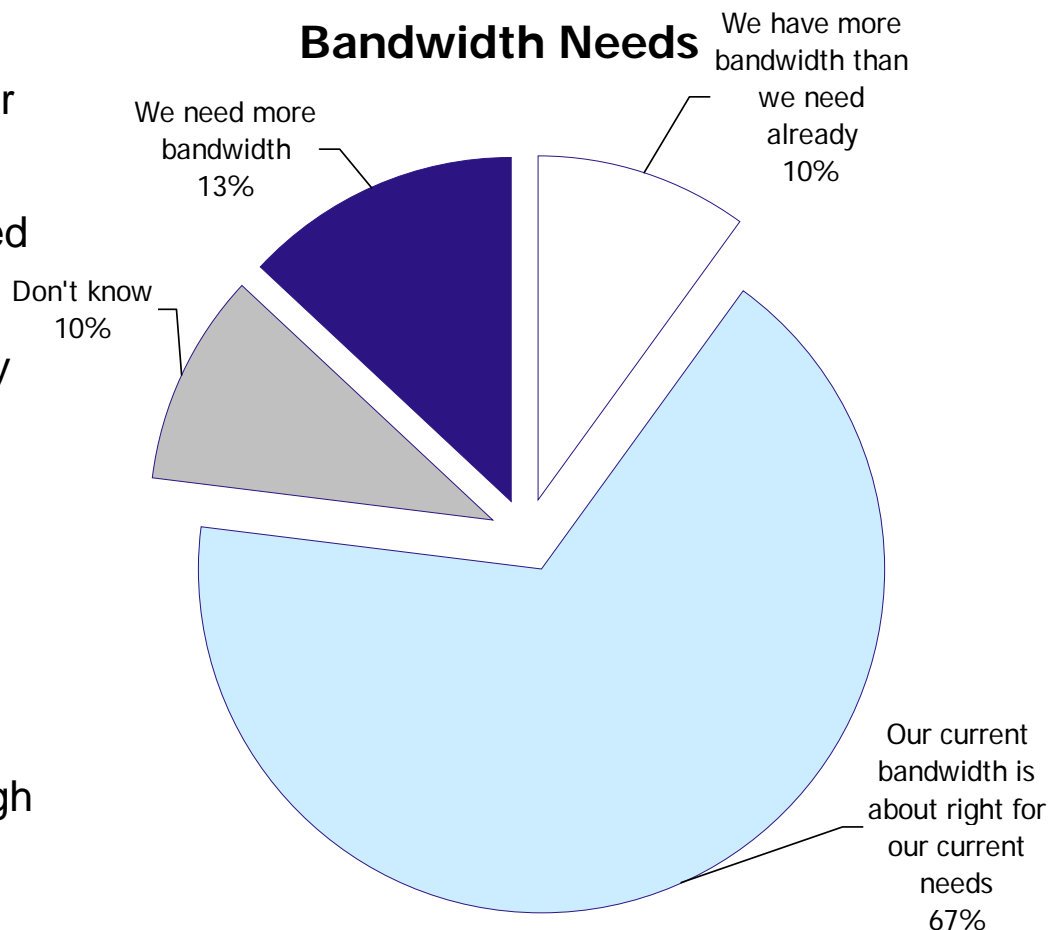
Q: How much bandwidth does your current Internet service provide? (n=514 online businesses) Chart omits 69% of respondents who did not know the current bandwidth in their business.

Source: 2006 connectkentucky survey of businesses.



Bandwidth Needs

- More than two-thirds of online businesses report that their current Internet speed is fine for their needs.
- One out of eight online businesses (13%) say they need a faster Internet speed.
 - Among firms in the High Tech sector, 24% say they are in need of more bandwidth.
 - This ratio is also higher among firms that rely exclusively on dial-up service (32%), but is also high among firms using fiber optic service (33%).
- A slightly smaller share (10%) say they have more than enough bandwidth.



Q: How well does your current bandwidth meet your needs? (n=514 online businesses)

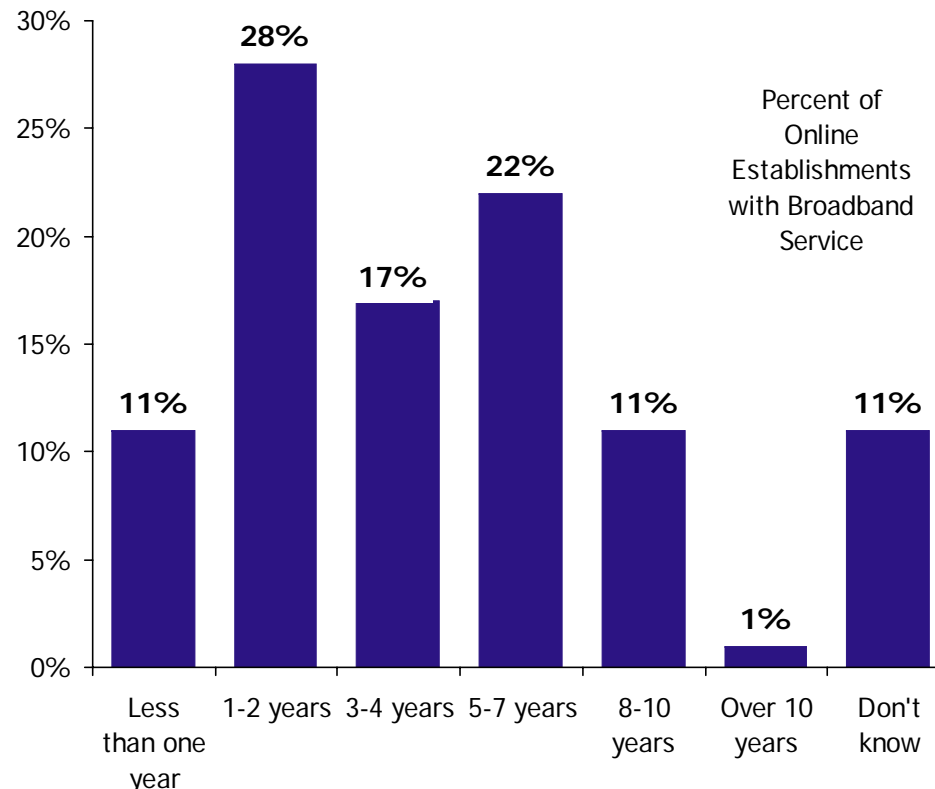
Source: 2006 connectkentucky survey of businesses.



Years of Broadband Use

- The majority of companies using broadband service today have begun doing so within the past four years, with the average tenure being 3.8 years.
- Larger companies, and those in the High Tech sector have the most experience with broadband, while those in the Agriculture, Mining or Construction sector and Retail, Recreation and Accommodation sectors have adopted broadband more recently.

How Long Has Your Organization Been Using Broadband Service?



Source: 2006 connectkentucky survey of businesses.

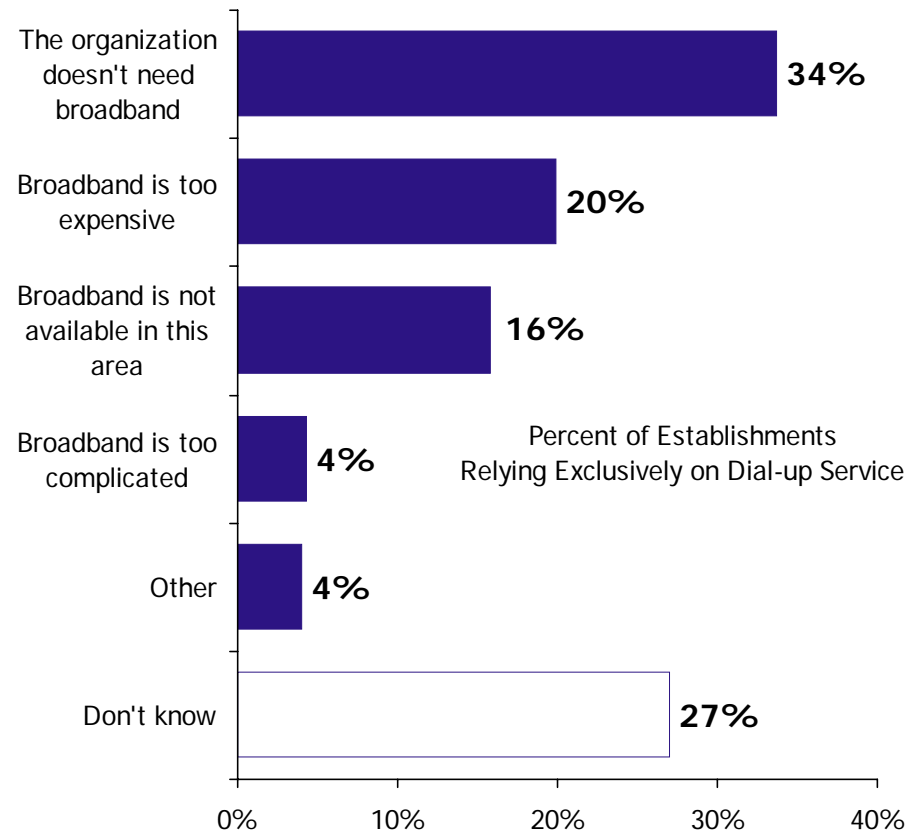
Q: How long has your company been using broadband? (n=514 businesses with a broadband connection)



Barriers to Broadband Use

- Among those businesses that rely exclusively on a dial-up connection (which now constitutes only 10% of Internet connected businesses), over a third say their organization doesn't need broadband, and over one-quarter say they don't know why they don't subscribe.
- Cost is cited among only 20% of dial-up businesses.
- Local broadband availability is a problem for only 16% of these businesses.

Barriers to Broadband Use



Q: Why doesn't your organization subscribe to broadband service? (n=53 online businesses with dial-up only access)

Source: 2006 connectkentucky survey of businesses.



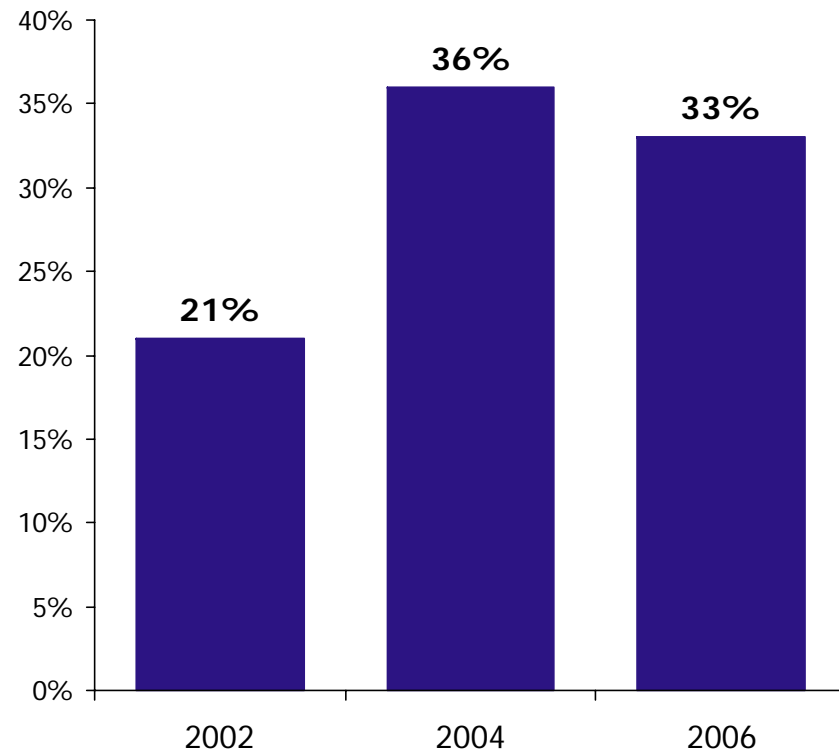
Company Web Sites



Use of Web Sites

- As in prior studies, one-third of all Kentucky businesses surveyed report having a company Web site.
- This ratio converts to more than 65,000 businesses in the state that have a Web site.

Business Has a Web Site
(Percent of all businesses)



*Q: Does your company have a World Wide Web site?
(Asked to online businesses, but reported here as a percent of all businesses.)*

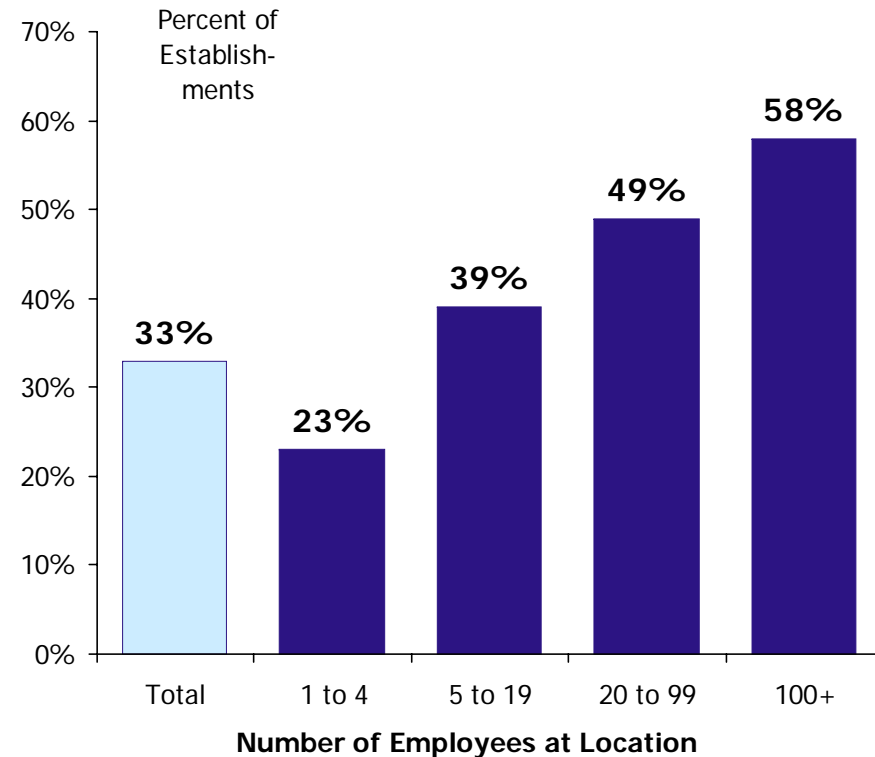
Source: 2002-2006 connectkentucky surveys.



Web Site Presence by Size of Company

- The likelihood of having a web site increases significantly as the size of the business increases.
- The majority of businesses that employ at least 100 people have a web site.

Business Has a Web Site



*Q: Does your company have a world wide web site?
(n=808 total, 200+ in each size bracket, except 100+ where n=81.)*

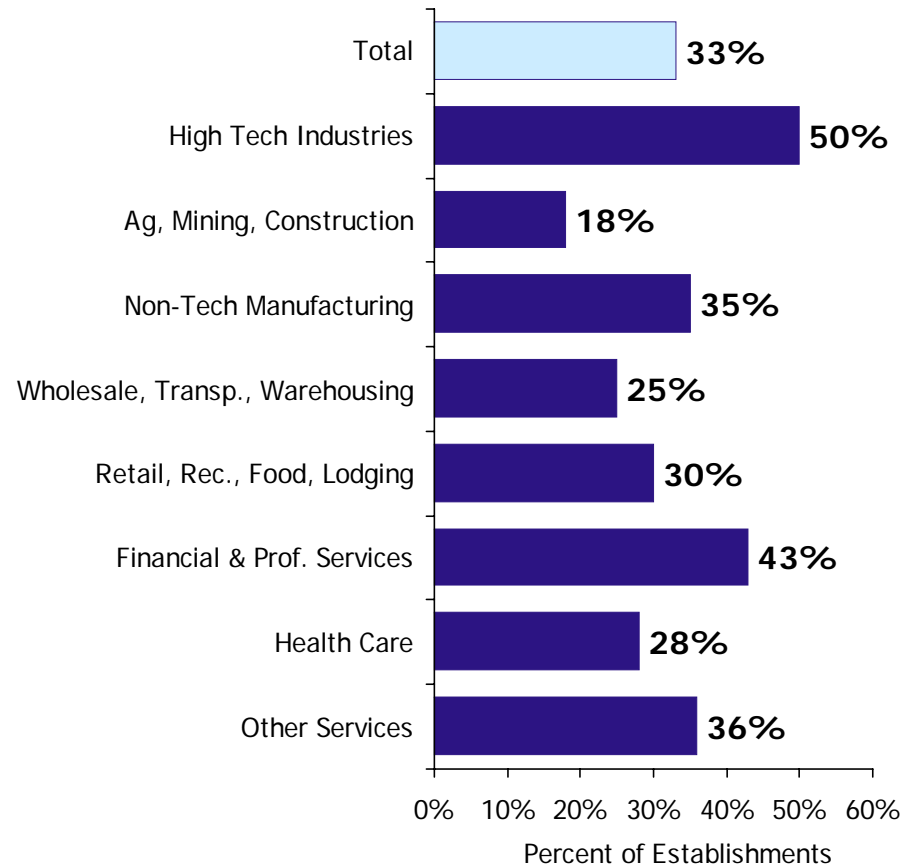
Source: 2006 connectkentucky survey of businesses.



Web Site Presence by Industry Sector

- High Tech industries are significantly more likely than businesses in most other sectors to have a web site.

Business Has a Web Site



*Q: Does your company have a world wide web site?
(n=808 total, ~100+ in each sector.)*

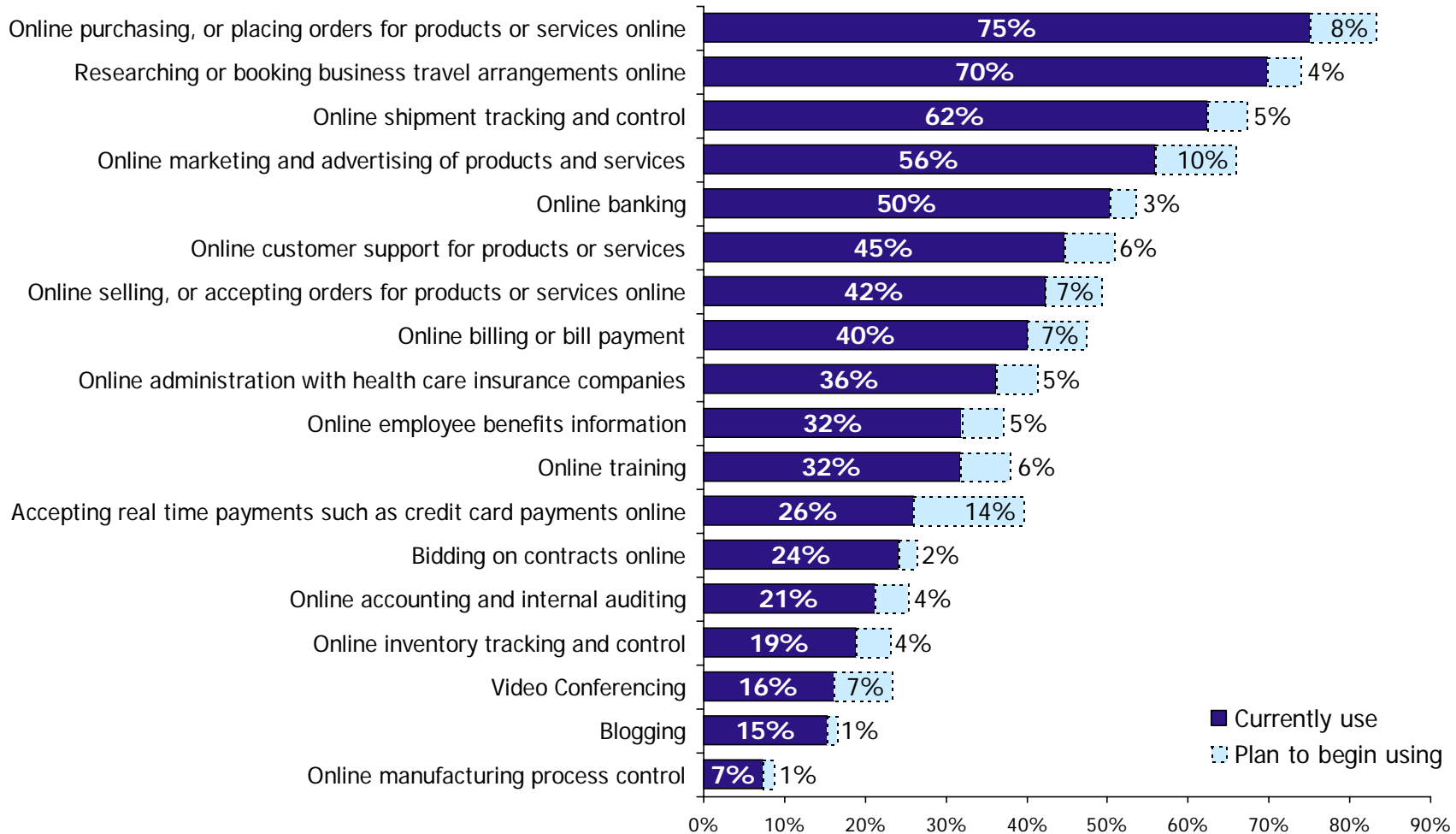
Source: 2006 connectkentucky survey of businesses.



Internet Applications and IT Functions Used by Kentucky Businesses



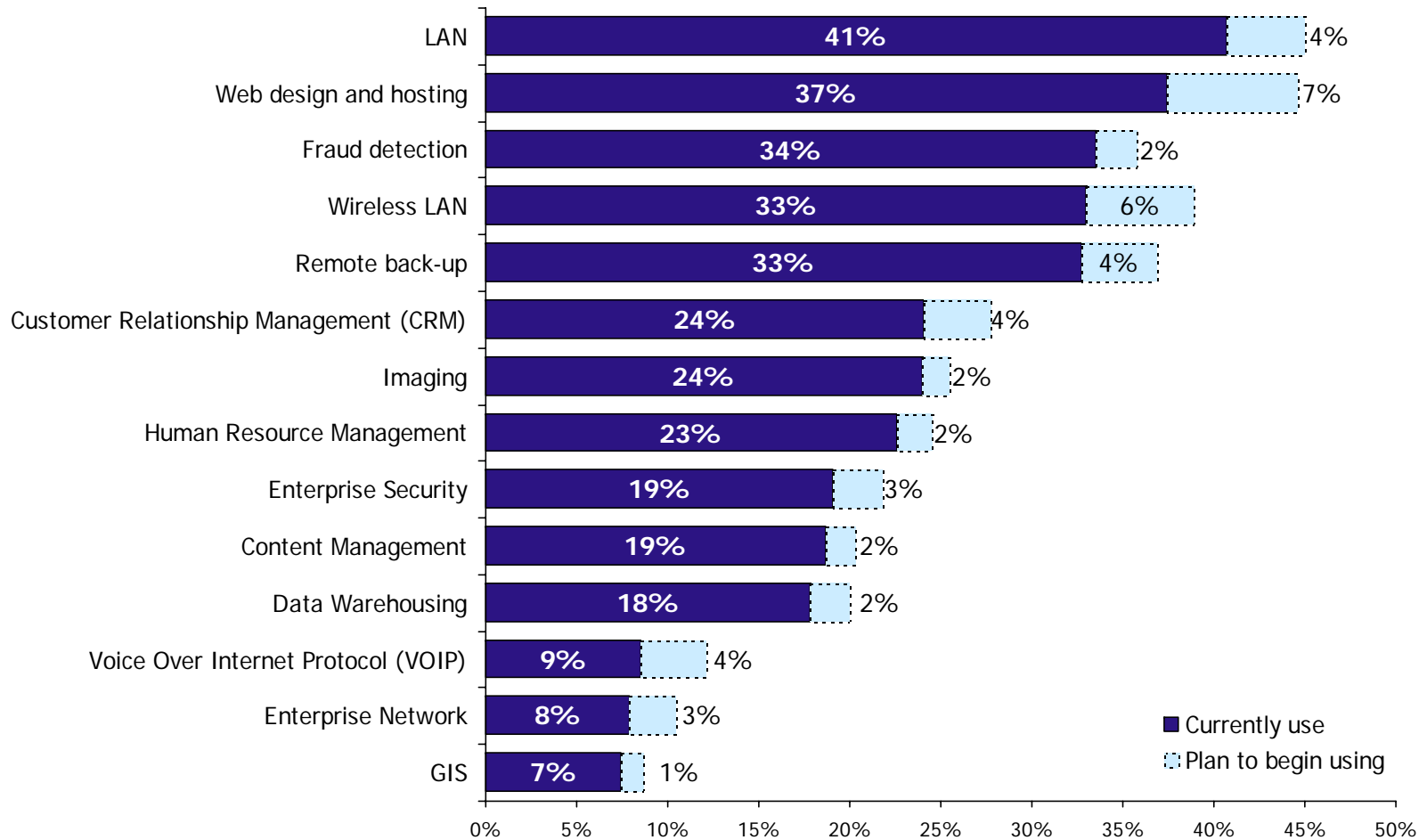
Internet Applications Used by Online Businesses



Q: Which of the following does your business currently use? Q: Which of these does your business plan to begin using in the next 12 months?



IT Functions Used by Online Businesses



Q: Which of these does your company currently use? / Which of these does your company plan to begin using in the next 12 months?

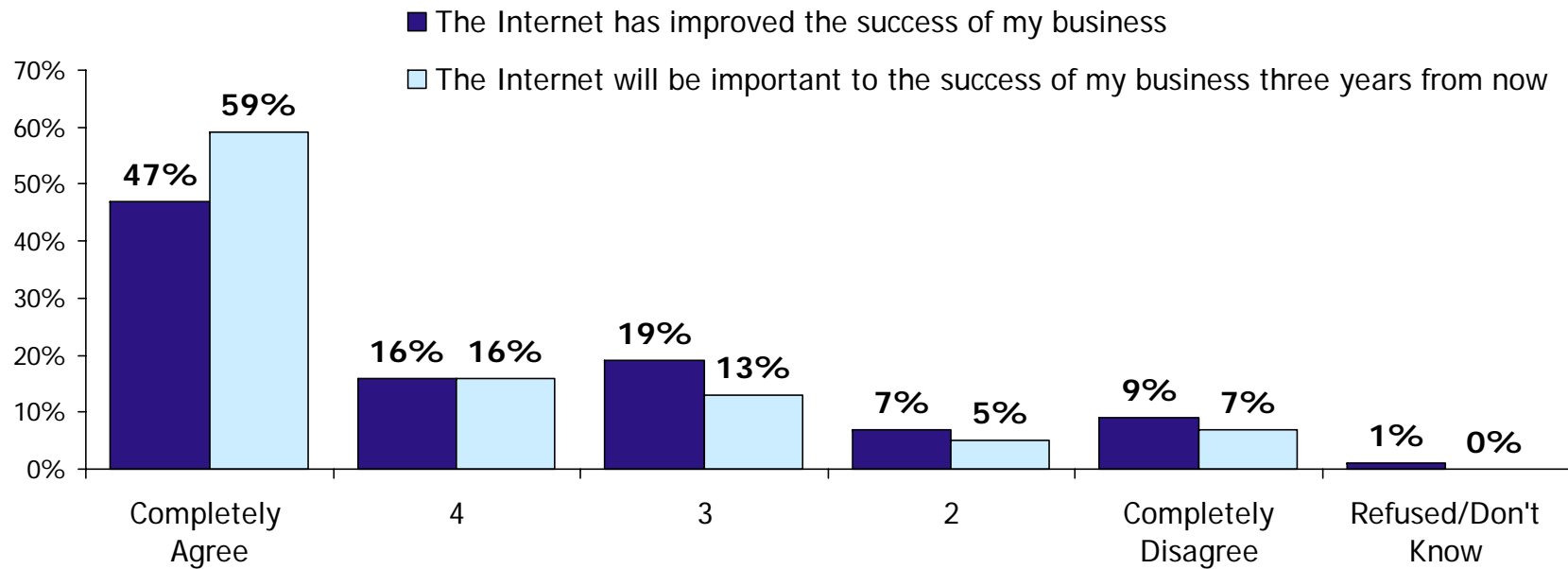


Internet Impacts on Business Success and Competitiveness



Internet Impact on Success

- While 47% of Internet connected businesses today “completely” agree that the Internet has improved the success of their business, an even larger share (59%) completely agree that the Internet will be important to the success of their business three years from now.



Source: 2006 connectkentucky surveys of businesses.

Q: On a scale of 1 to 5, with 5 being completely agree and 1 being completely disagree, how much do you agree...

The Internet has improved the success of my business (n=514 online businesses in 2006)

The Internet will be important to the success of my business three years from now (n=514 online businesses, 2006)

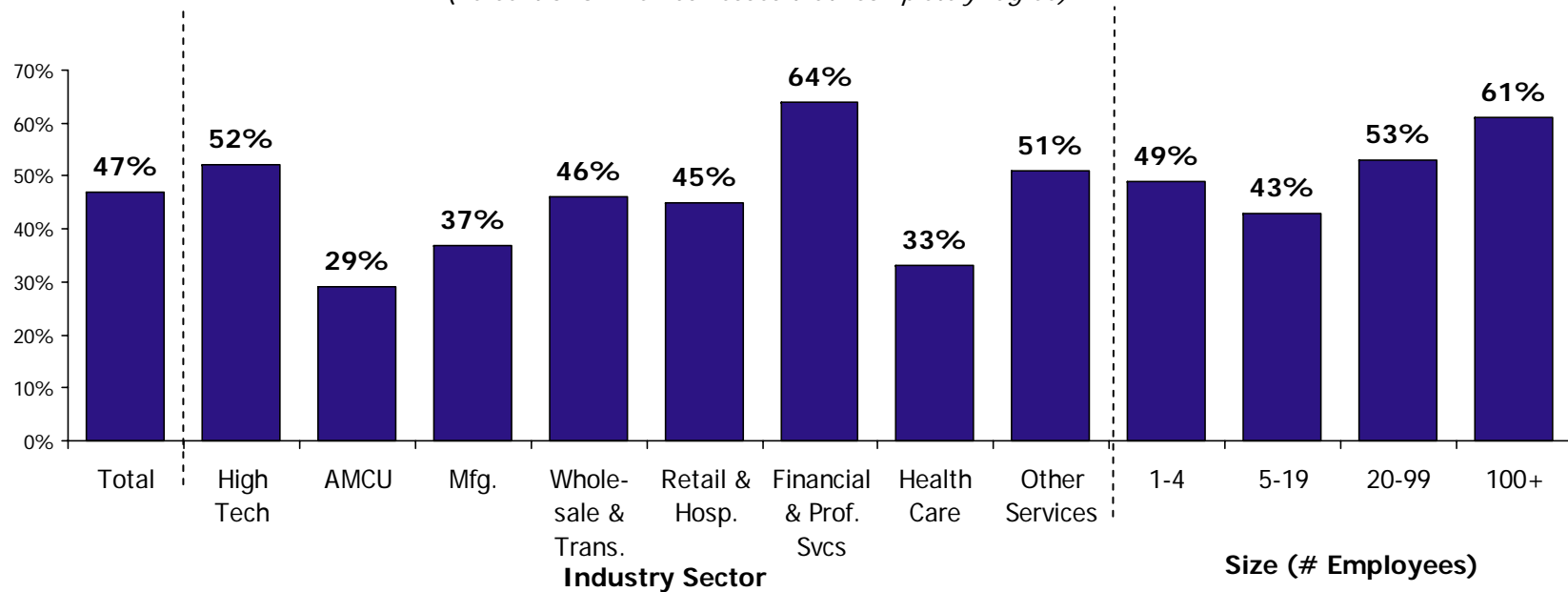


Internet Impact on Success

- Companies in the Financial and Professional Services sector are most likely to agree that the Internet has improved their success.

The Internet has improved the success of my business

(Percent of Online Businesses that "completely" agree)



*Q: On a scale of 1 to 5, with 5 being completely agree and 1 being completely disagree, how much do you agree...
The Internet has improved the success of my business*

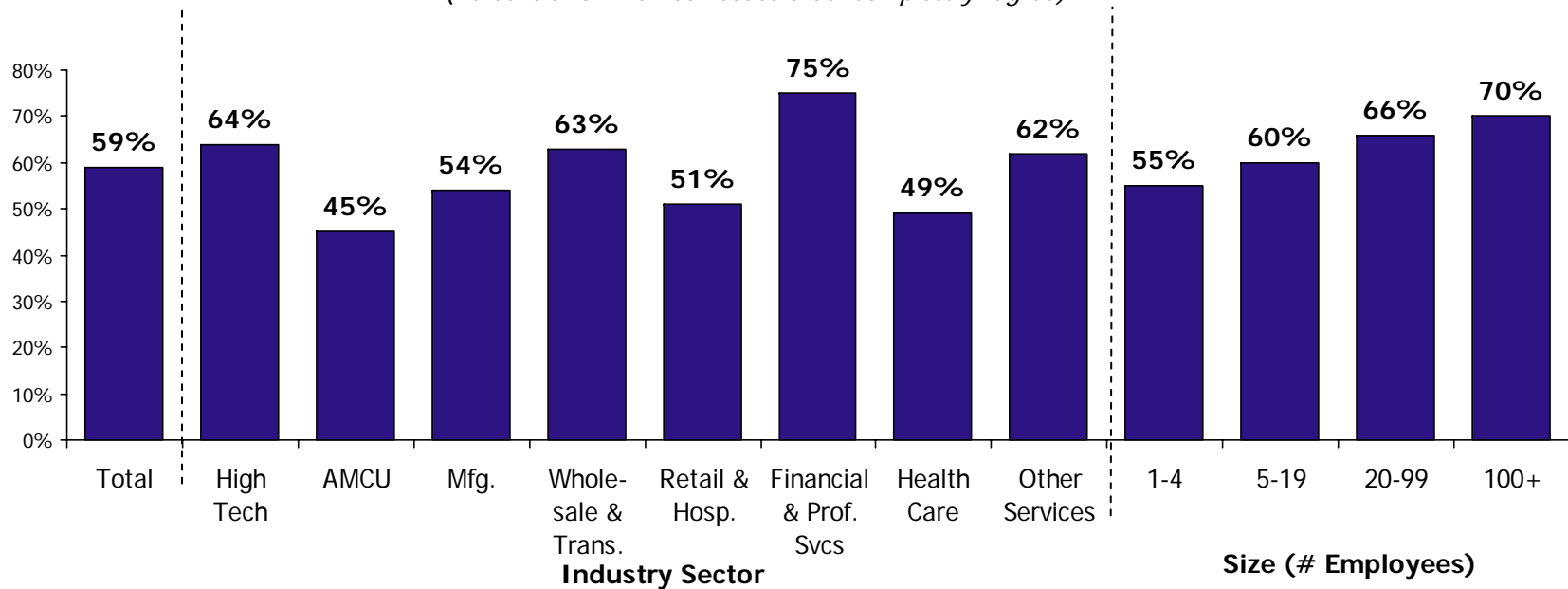


Internet Impact on Success

- Likewise, three out of four companies in the Financial and Professional Services sector completely agree that the Internet will be important to their success in the future.

Internet will be important to the success 3 years from now

(Percent of Online Businesses that "completely" agree)

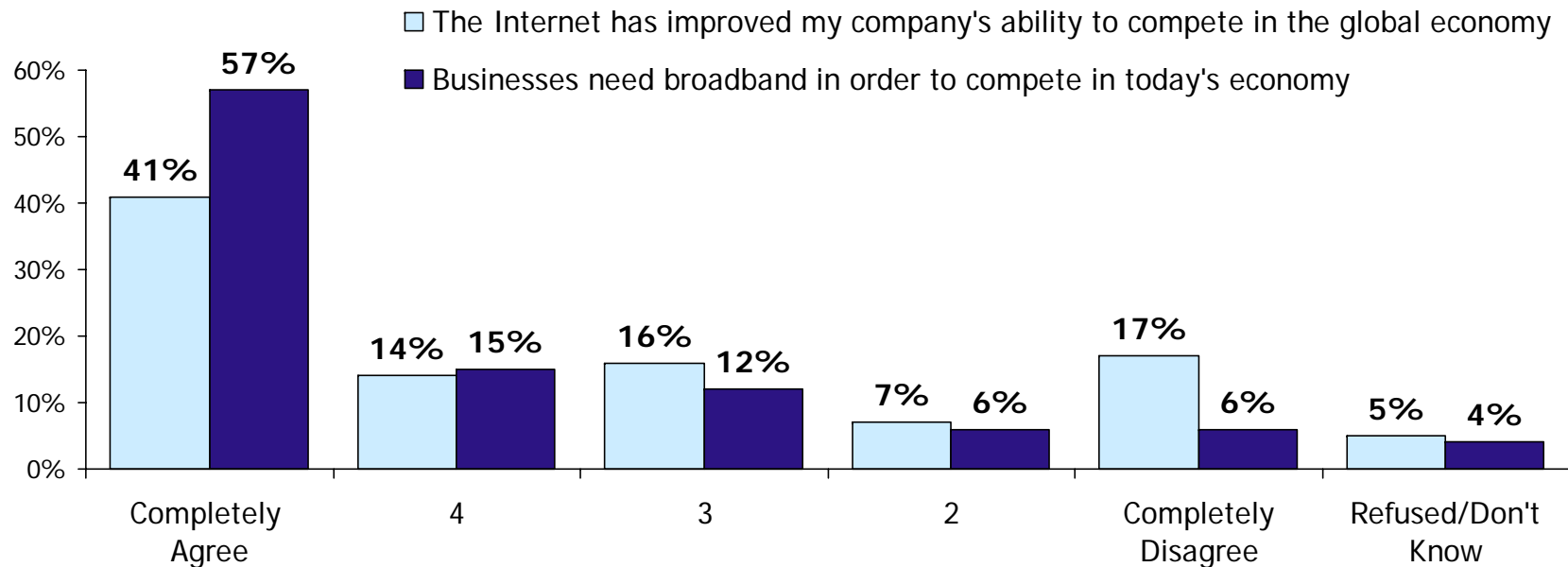


Q: On a scale of 1 to 5, with 5 being completely agree and 1 being completely disagree, how much do you agree...
The Internet will be important to the success of my business three years from now.



Internet Impact on Competitiveness

- Forty-one percent of Internet connected businesses today “completely” agree that the Internet has improved their ability to compete in the global economy (up from 31% in 2004.)
- Over half (57%) completely agree that businesses need broadband in order to compete in today’s economy.



Source: 2006 connectkentucky surveys of businesses.

Q: On a scale of 1 to 5, with 5 being completely agree and 1 being completely disagree, how much do you agree...

The Internet has improved my company's ability to compete in the global economy (n=514 online businesses in 2006)

Businesses need broadband in order to compete in today's economy (n=514 online businesses, 2006)

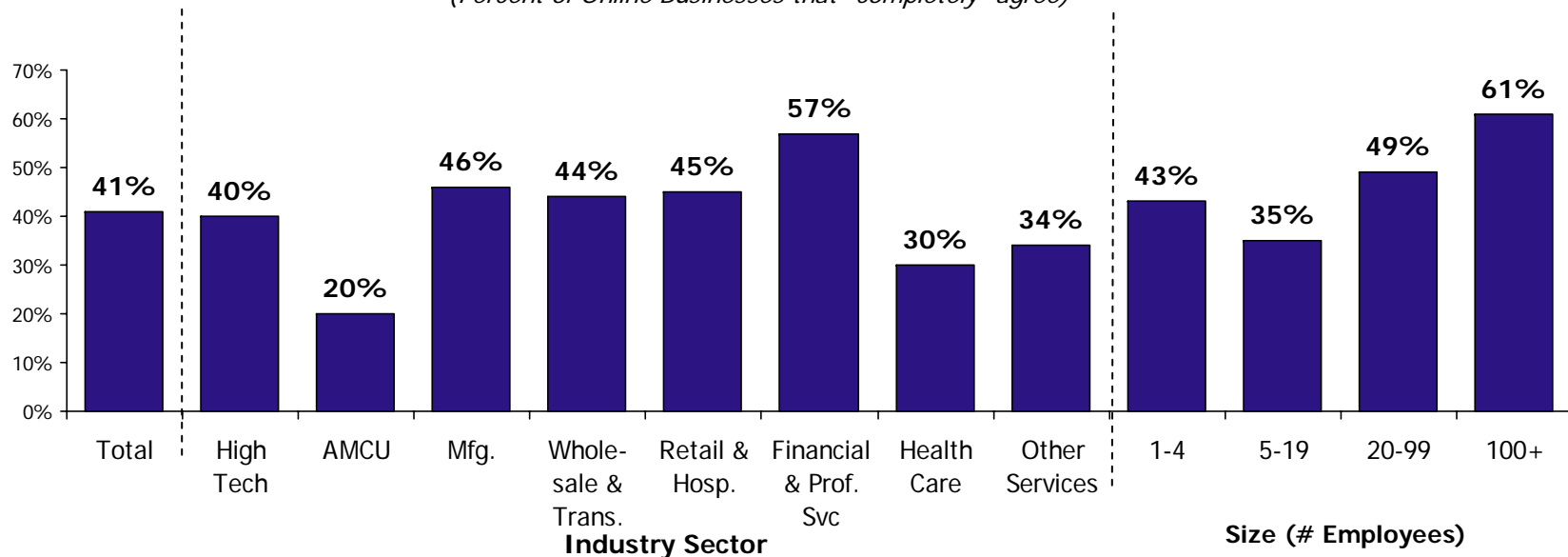


Internet Impact on Competitiveness

- Companies in the Agriculture, Mining and Construction sectors are least likely to say that the Internet has helped them compete in the global economy.
- Among Kentucky's Internet connected businesses that derive at least 1% of total sales from customers outside the U.S., 63% completely agree that the Internet has improved their ability to compete

The Internet has improved my company's ability to compete

(Percent of Online Businesses that "completely" agree)



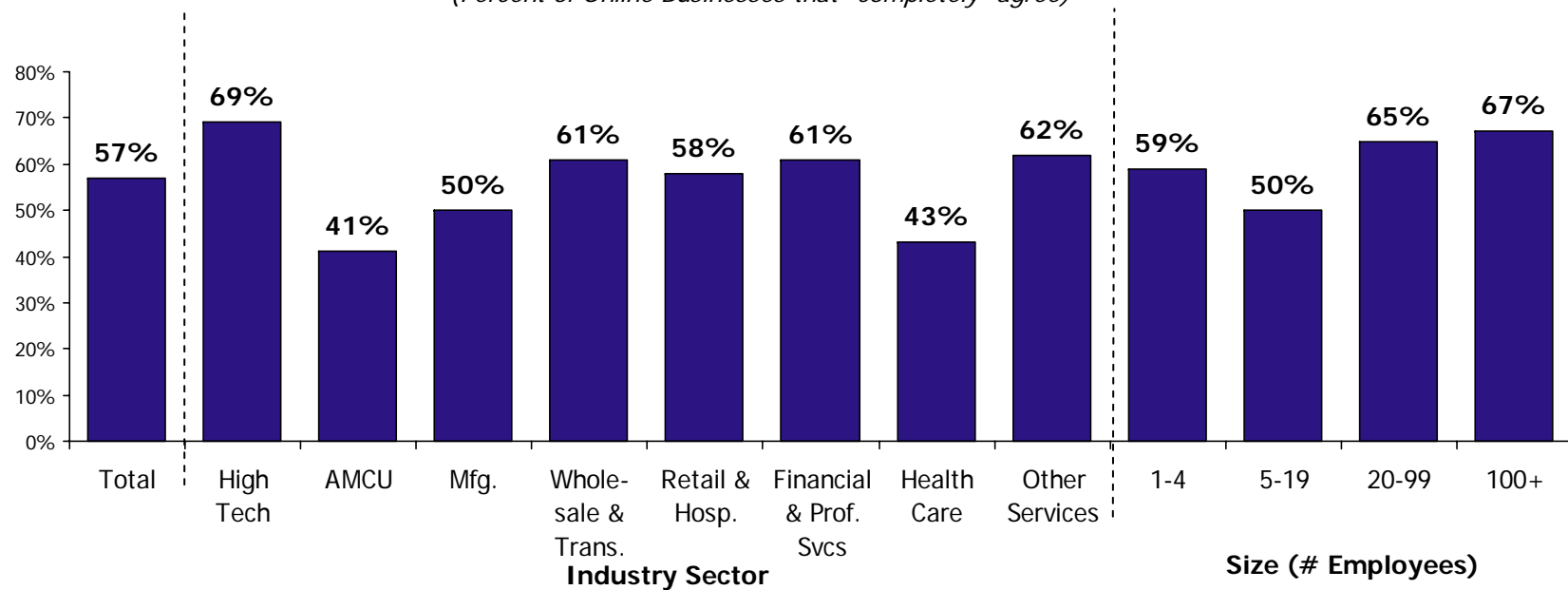
*Q: On a scale of 1 to 5, with 5 being completely agree and 1 being completely disagree, how much do you agree...
The Internet has improved my company's ability to compete in the global economy.*



Broadband Impact on Competitiveness

- Companies in the high technology sector are most likely to agree that businesses need broadband to compete in today's economy.

Businesses need broadband to compete in today's economy
(Percent of Online Businesses that "completely" agree)



*Q: On a scale of 1 to 5, with 5 being completely agree and 1 being completely disagree, how much do you agree...
 Businesses need broadband in order to compete in today's economy.*

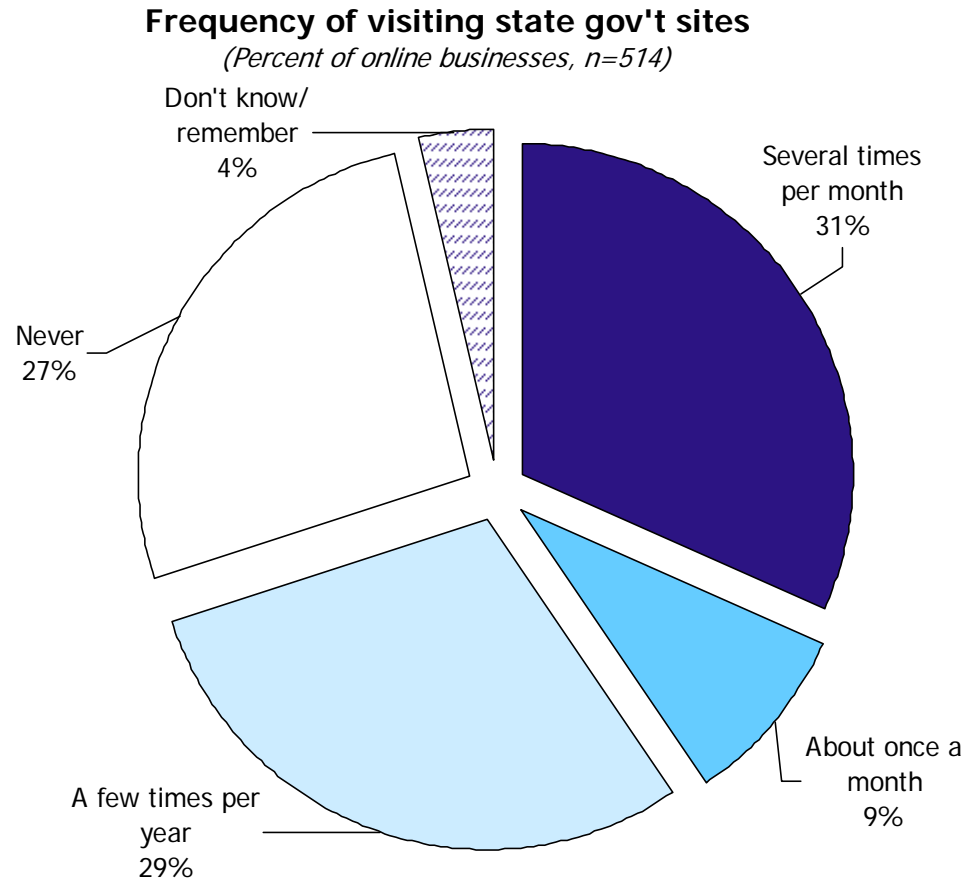


Use of e-Government Services Among Kentucky Businesses



Business Use of State Government Web Sites

- Nearly 70% of Internet connected businesses report that their employees use Kentucky state government Web sites for business purposes, including 40% that visit these sites at least once per month.



Source: 2006 connectkentucky survey of businesses.

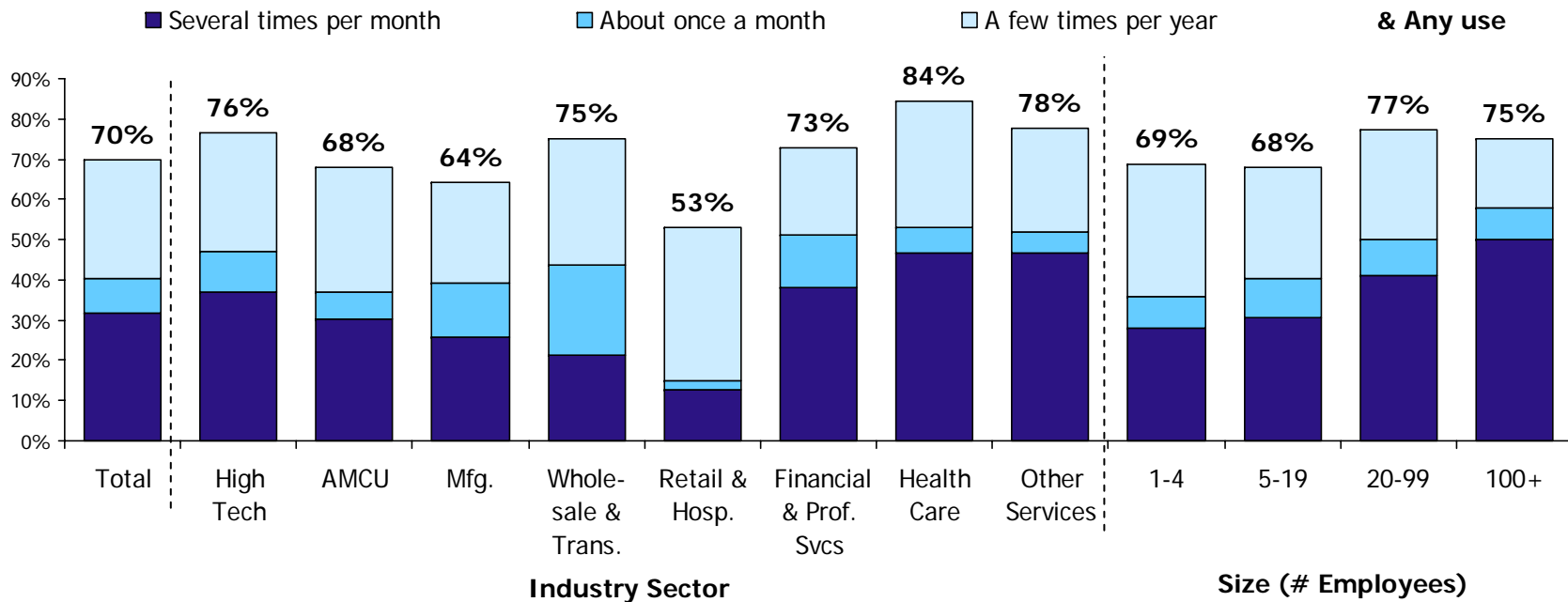
Q: How often, if ever do employees of your company visit Kentucky state government Web sites for business purposes?



Use of KY Government Web Sites by Size and Sector

- Businesses in the retail and hospitality sector are significantly less likely to use state government web sites.

Visits to KY State Government Web Sites for Business



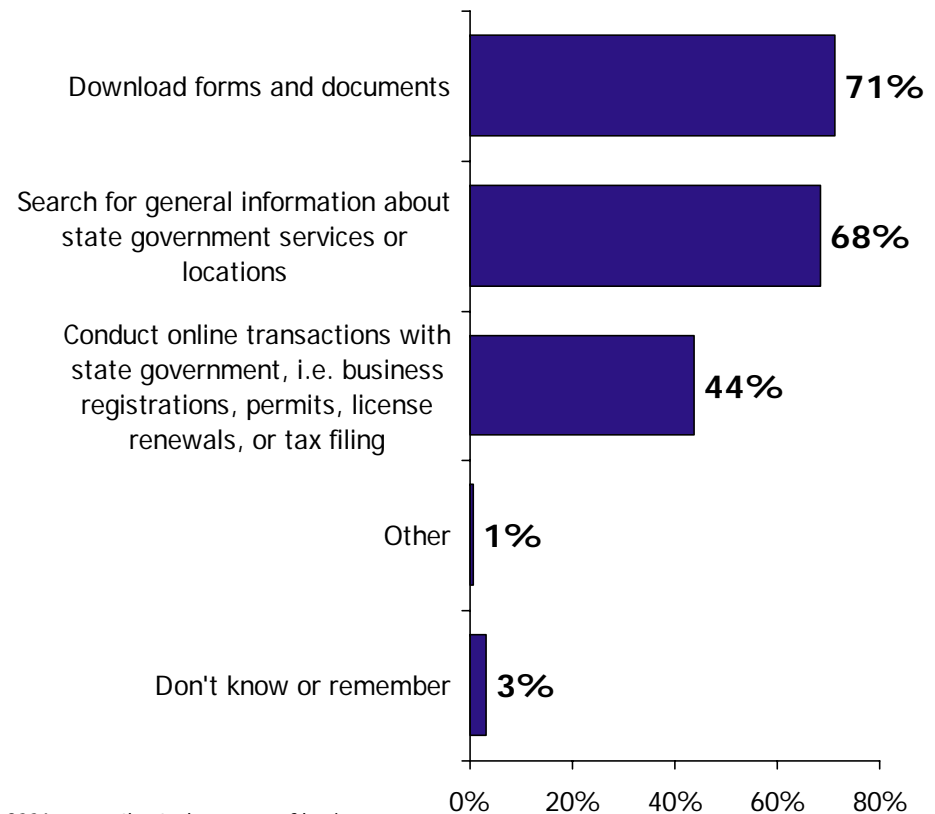
Q: How often, if ever do employees of your company visit Kentucky state government Web sites for business purposes?



Activities at KY State Government Sites

- The most common applications used by businesses that visit Kentucky's state government sites are downloading forms and documents, and searching for general information about state government services or locations.
- More than 4 in 10 businesses (44%) that visit state government sites report conducting business with the state government online, such as filing business registrations, permits, license renewals or taxes.

Online State Gov't Applications



Source: 2006 connectkentucky survey of businesses.

Q: What types of activities does your business conduct at Kentucky's state agency Web sites? (n=377 businesses with employees visiting Kentucky state government web sites at least a few times per year.



Research Methodology and Background



Methodology Overview

- 808 businesses were contacted by telephone between November 2 and November 21, 2006. Data were collected by Wilkerson Research of Louisville, Kentucky.
- The error interval or sample tolerance for the 2006 survey is +/- 3.4% at the 95% confidence level.
- On average, once agreeing to participate in the survey, the average interview lasted 10 minutes.
- Similar surveys were sponsored by ConnectKentucky in 2002, 2003 and 2004, using many of the same questions, allowing for the ability to track changes over time.
- Sample quotas were established by company size (4 brackets) and industry sector (8 sectors). Within these 32 cells, Dun & Bradstreet provided random sample of businesses selected for the survey.
- This approach gathers enough interviews within size and industry subsectors to analyze with confidence.
- Weighting of the survey data enables the total sample to also be representative of all Kentucky business establishments.



Methodology: Weighting

- The 2006 survey data were both sampled and weighted by quotas defined by the size of establishment and dominant industry sector using the most recent *County Business Patterns* data as targets.
- Respondent estimates of number of employees at the business location called were used in place of employee size data from Dun & Bradstreet. Industry sector quotas were defined based on NAICS groups used by ConnectKentucky, according to Dun & Bradstreet data.
- Sampled vs. Actual distribution of businesses summarized in tables below.

Sample Distribution by Size and Sector				
Sector	1-4	5-19	20-99	100+
High Tech	4.1%	4.0%	3.7%	0.7%
AMCU	4.0%	4.1%	4.0%	0.5%
Manufacturing	3.7%	4.0%	3.5%	1.2%
Wholesale, T&W	3.2%	3.7%	5.0%	0.6%
Retail, food, lodging	3.6%	4.1%	3.0%	2.1%
Prof. & Fin'l Services	4.5%	3.7%	3.5%	0.6%
Health Care	2.7%	4.7%	3.3%	2.0%
All Other Services	4.7%	2.7%	2.7%	2.2%

Desired Distribution per 2004 <i>County Business Patterns</i>				
Sector	1-4	5-19	20-99	100+
High Tech	3.5%	1.7%	0.9%	0.3%
AMCU	6.6%	3.3%	1.1%	0.1%
Manufacturing	1.0%	1.2%	0.9%	0.5%
Wholesale, T&W	4.0%	2.6%	1.1%	0.2%
Retail, food, lodging	10.7%	11.1%	4.8%	0.5%
Prof. & Fin'l Services	10.5%	5.4%	1.1%	0.1%
Health Care	4.5%	4.6%	1.4%	0.4%
All Other Services	9.6%	4.7%	1.2%	0.3%



Kentucky Business Universe

- The federal government classifies and tabulates the number, size and type of businesses in two ways:
 - Business establishments with paid employees
 - Non-employer business establishments.
 - A business establishment is defined as “a single physical location at which business is conducted or services or industrial operations are performed.”
 - Businesses with paid employees are reported in the *County Business Patterns* (CBP) data from the U.S. Census Bureau based on payroll tax information. This is the most comprehensive and consistent year to year measurement of private employer businesses. For this reason, many state agencies rely on these data for economic development and planning purposes.
 - In 2004, there were 91,797 business establishments in Kentucky which employed nearly 1.5 million residents.
 - Non-employer establishment counts are derived from business income tax returns filed by a non-employer businesses. Generally these businesses have at least \$1,000 in sales receipts, but naturally most of these are very small, and often are not a primary source of income for the owner(s).
 - In 2004 there were 256,753 *non-employer* businesses in the state.
-



Sample Frame

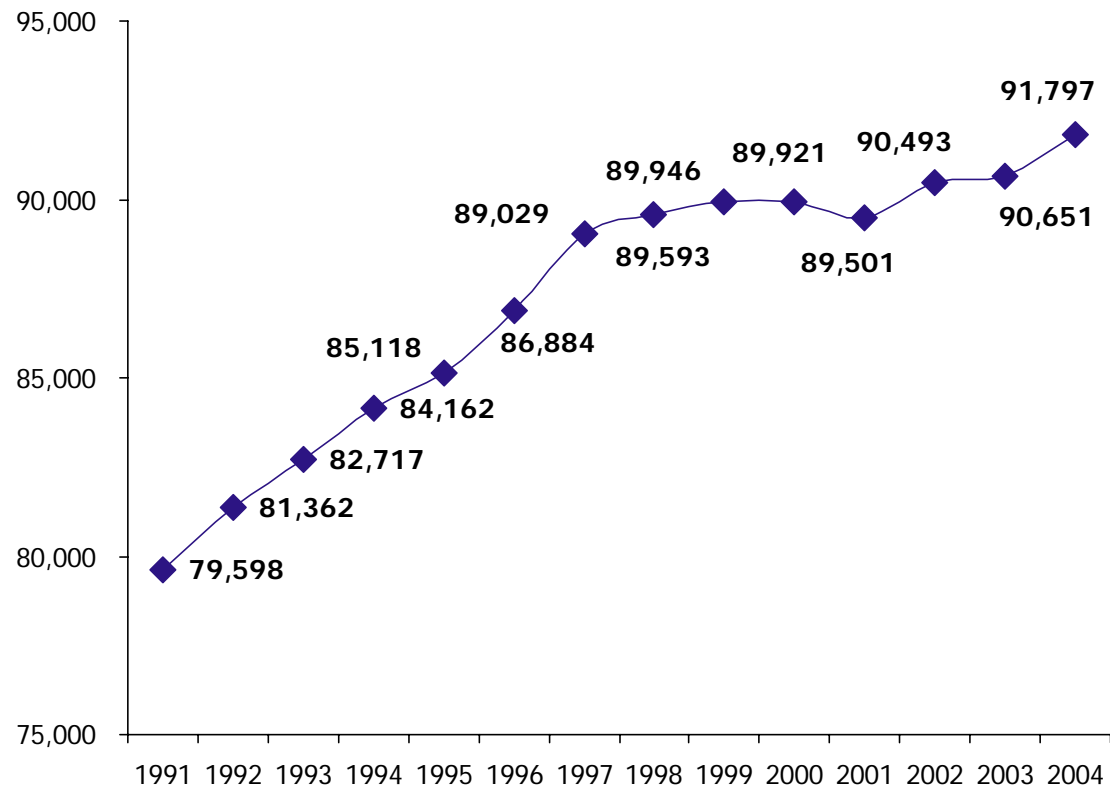
- *County Business Patterns* data are used in the analysis and reporting of the ConnectKentucky business survey to define a business and ensure that the sample of business establishments interviewed for the survey is representative of Kentucky businesses at large.
- Dun & Bradstreet (D&B) maintains the most comprehensive database of mailing and telephone lists of businesses, and is the sample source most often used for surveying businesses.



Growth in Business Establishments

- In 2004, the most recent year County Business Patterns data are available, there were 91,797 business establishments in the Commonwealth, up 1.4% from 90,493 in 2002.
- These businesses employed 1,489,497 individuals.
- The average number of employees per establishment is 16.2.

**Kentucky Business Establishments
1991-2004**



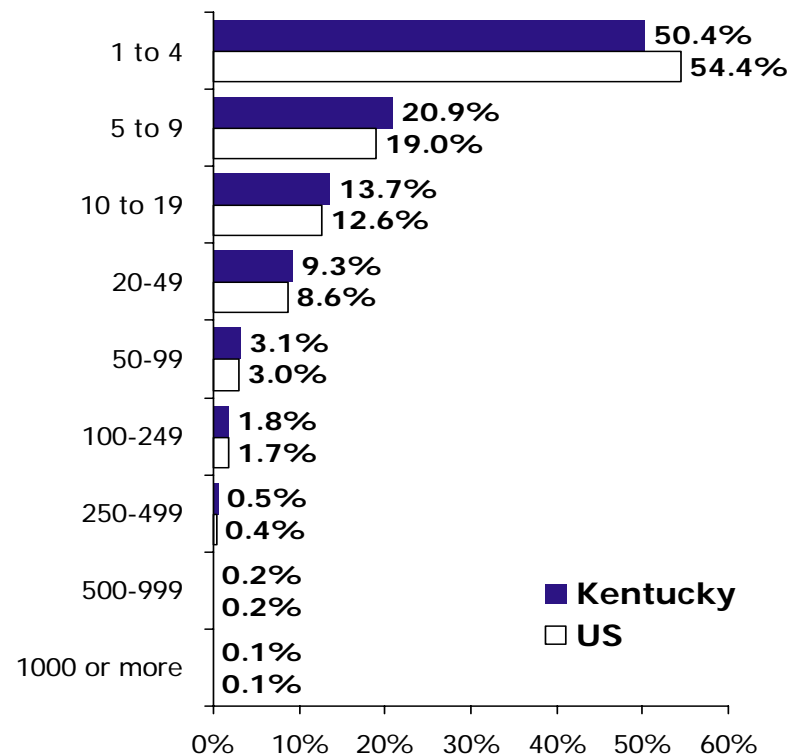
Source: U.S. Bureau of the Census, County Business Patterns.



Size Distribution of KY Businesses

- Half of all business establishments in Kentucky employ fewer than five employees while less than three percent of establishments employ at least 100 employees.
- The ConnectKentucky business survey in 2006 has intentionally over-sampled large businesses in order to achieve a minimum sample to do analysis and comparisons relative to smaller firms.
- The survey data are weighted to ensure the total picture is representative of Kentucky establishments as a whole.
- See methodology section for more specific information about sampling.

Establishments by Number of Employees



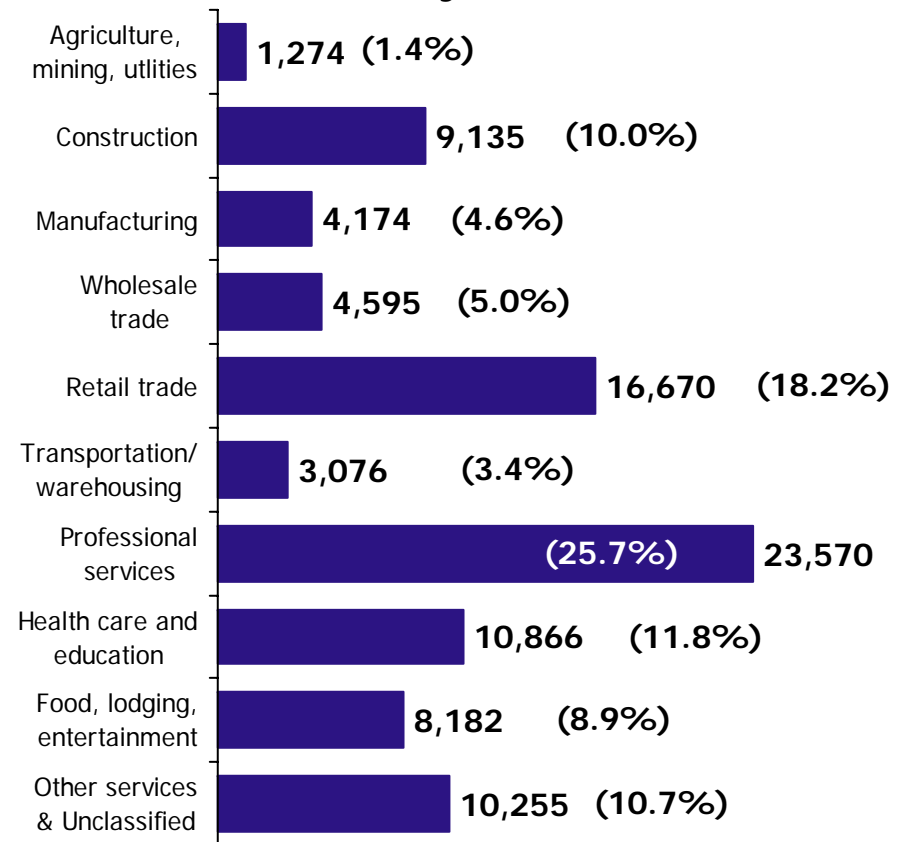
Source: U.S. Bureau of the Census, County Business Patterns, 2004.



Industry Breakdown of Kentucky Businesses

- Professional services comprise the largest share (nearly 26%) of business establishments in Kentucky, followed by retail trade.
- The 2006 survey data are also weighted with respect to industry sector to ensure the survey sample picture is representative of Kentucky establishments.

Kentucky Establishments by Industry Sector



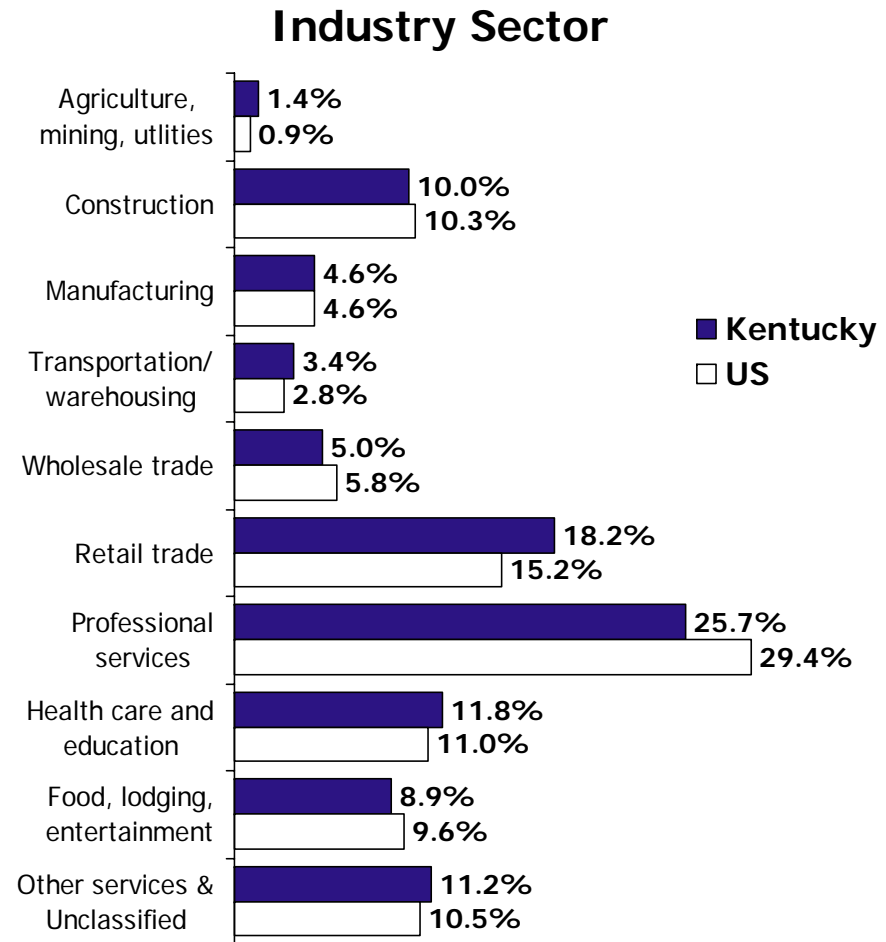
Notes: Industry sectors categorized by North America Industry Classification System (NAICS) codes. "Professional services" includes NAICS codes 51-59 (information, financial, real estate, professional, technical, management and administrative services.)

Source: U.S. Bureau of the Census, County Business Patterns, 2004.



Industry Sector Breakdown: Kentucky vs. U.S. Businesses

- Relative to the national distribution of businesses by sector, Kentucky has a greater concentration of retail trade businesses and less concentration in the Professional Service sector.

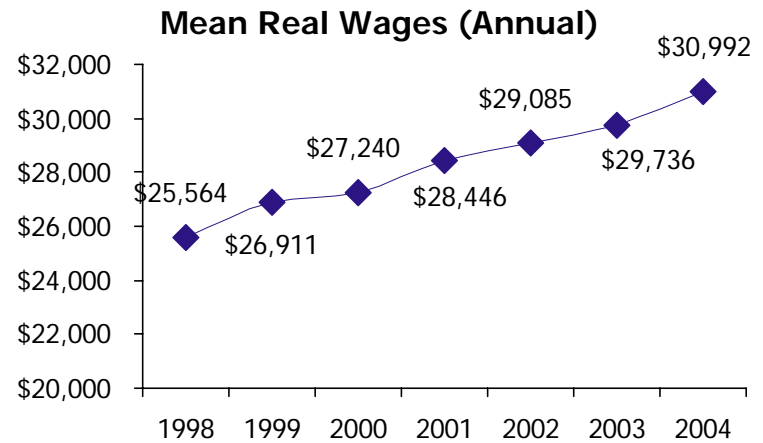
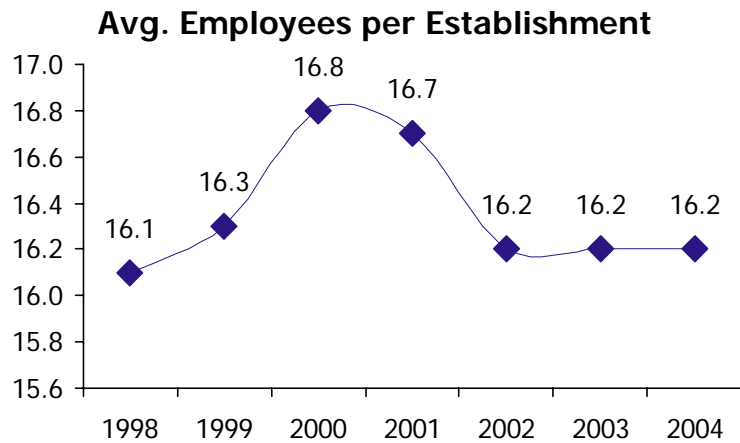
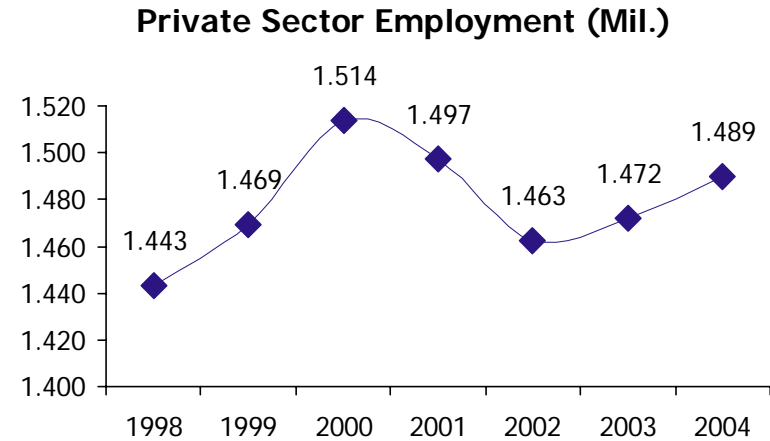
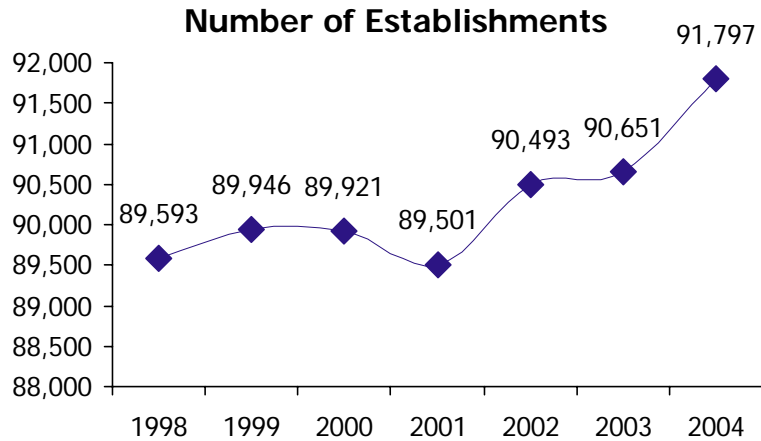


Notes: Industry sectors categorized by North America Industry Classification System (NAICS) codes. "Professional services" includes NAICS codes 51-59 (information, financial, real estate, professional, technical, management and administrative services.)

Source: U.S. Bureau of the Census, County Business Patterns, 2004.



KY Business/Employment Trends



Source: 1998-2004 County Business Patterns



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