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US Campos Survey Results

January 2012

Methodology

- We conducted a Web-based survey using a panel of IT decision-makers.
  - Panel participants were selected from large North American companies with either $1.0B+ annual revenues or 5,000+ employees.
  - To be eligible, a participant must be responsible for managing a data center, implementing a new data center, executing contracts for a new data center or expanding existing data centers in North America. Internal data center customers are also eligible.
  - Respondents must have titles at the Senior Vice President, Vice President or Director level in IT, MIS, IS or Finance.
  - Survey responses were cut off at N=300. The survey was conducted from January 3 to 13, 2012.
  - All reported differences are significant at the .10 level or better. Confidence intervals are shown in the Appendix.

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Overall Summary

Data Center Profile

- Over two thirds (70%) of respondents have built or acquired a new data center in the past 2 years.
- The average power consumption is 8.2 kW per rack and the average IT load is 2.2 mW.
- 82% expect server density to increase in the next year.
- Most (87%) meter their power use, most at 2+ points.
- 1 in 5 (19%) reports a PUE below 2.0. The average is 2.8.
- Three fourths use hot or cold aisle containment.
- Five in six currently use DCIM software.

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Overall Summary

Expansion Plans

- Two in five (43%) of respondents say they definitely plan to expand their data centers in 2012.
  - 44% will definitely expand in 2013.
  - One in 25 is unlikely to expand in either 2012 or 2013.
- 9 in 10 will expand in the U.S., but half will also expand in Europe or the Asia Pacific Region and 1 in 5 in South America.
- 2 in 3 (68%) would consider locating a new data center within 300 miles of their current location.
- Larger companies ($15B+ revenues) are more likely to definitely expand in 2012.
- Security is the single most important reason for expansion.
- Half want 15,000 square feet or more and half want 2 mW or more.

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Overall Summary

Using a Partner

- Of those with definite plans to expand in 2012, 3 in 4 (78%) say they intend to use a partner (design/build and/or lease wholesale space) to implement their expansion.
- Most (68%) report a mix of two or more strategies for the expansion sites. Of those with definite plans for 2012:
  - 62% will build with or use a data center design and construction partner.
  - 45% will lease space from a wholesale data center provider.
  - 51% will build their expanded data center themselves.
  - 41% plan to use a shipping container module as a data center solution.
- Nearly half (48%) will use retail colocation space as part of their overall expansion strategy.

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Overall Summary

Selecting a Partner

- The list of potential partners is developed primarily within IT, but C-level executives are the most influential parties in the final selection of a partner.
- The most important qualifications in evaluating a potential partner are server management/maintenance, operational reliability and infrastructure management.
- Among other considerations that are important in evaluating a potential partner are demonstrating TCO, educating them on the issues and technical superiority.
- They seek information about potential partners from a wide variety of sources, but providers themselves and research firms are most important.
- For the last data center they built, the building spec sheet was most important.

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Overall Summary

Financing

- Half (45%) say that both capital and operating budgets will be used to finance a new data center. 24% will use their capital budget only and 30% their operational budget only.
- The most common depreciation schedule is 10 years.
- Most expect increased IT and data center budgets for 2012. The overall average is an increase of 7% for both budgets.

Locations

- The most preferred locations for a new or expanded data center in the U.S. are New York City, Chicago, Los Angeles, Dallas, San Francisco and Phoenix.
  - Two thirds (65%) prefer their home city.
- Hong Kong and Tokyo receive more frequent mention than last year. London is also mentioned often.
- Security is the most important factor in decisions about location.

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DATA CENTER PROFILE

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Data Center Summary

- The following charts describe the current data centers that are operated by these respondents. Some notable findings are:
  - 1 in 5 (19%) companies has six or more data centers.
  - Over two thirds (70%) have built or acquired a new data center in the past 2 years.
  - Two thirds of respondents report that their data centers average between 10,000 and 25,000 square feet.
  - The average power density is 8.2 kW per rack and the average IT load is 2.2 mW.
  - Over four fifths (82%) expect server density to increase in the next year.
  - 7 in 8 (87%) meter their power use, most at two or more points.
  - 1 in 5 (19%) reports a PUE below 2.0. The average is 2.8.
  - Three fourths (74%) use hot or cold aisle containment.
  - 5 in 6 (84%) currently use DCIM software.

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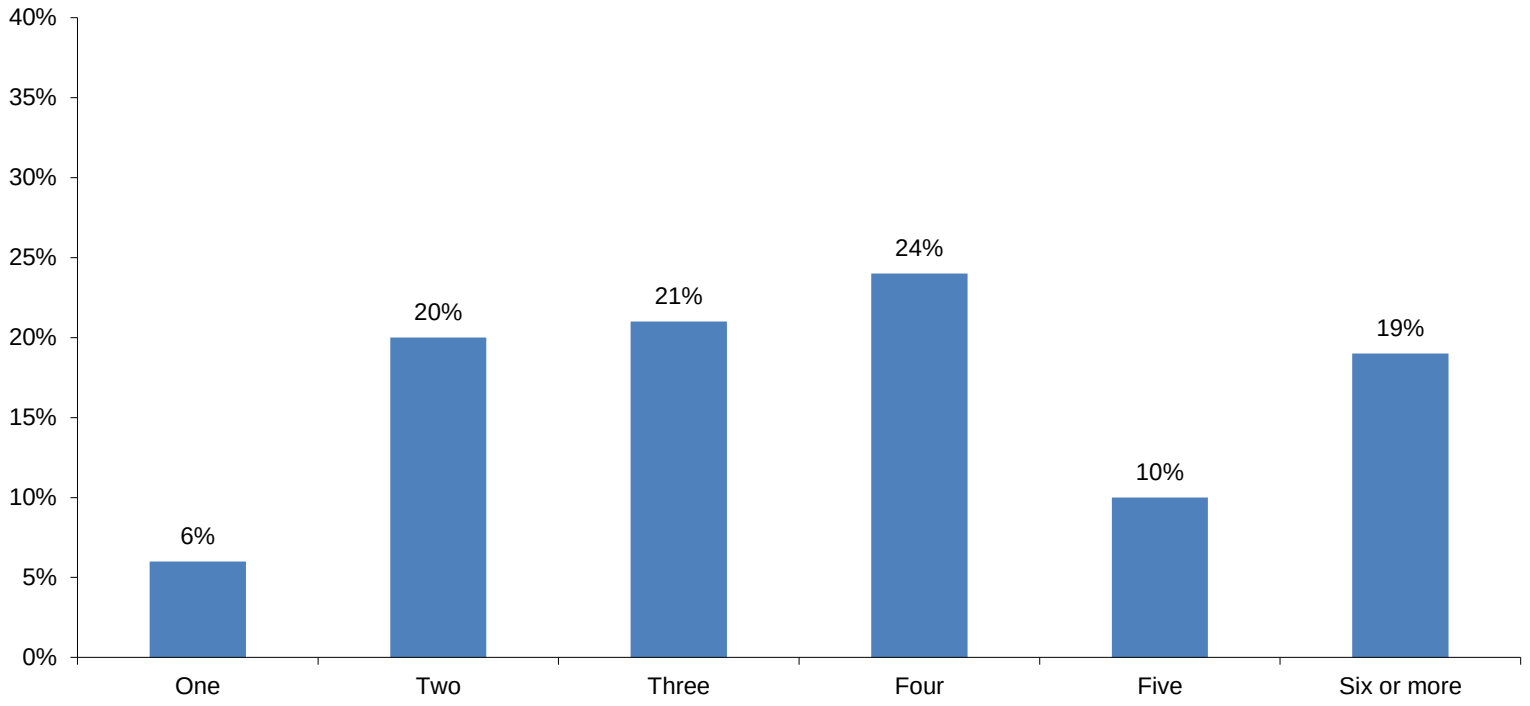
Number of Data Centers

- Respondents were asked how many data centers their company operates now, excluding “IT closets” in branch offices.
- These companies average 4.1 data centers, but nearly one in five companies has 6 or more data centers.



Base = Total (N=300)

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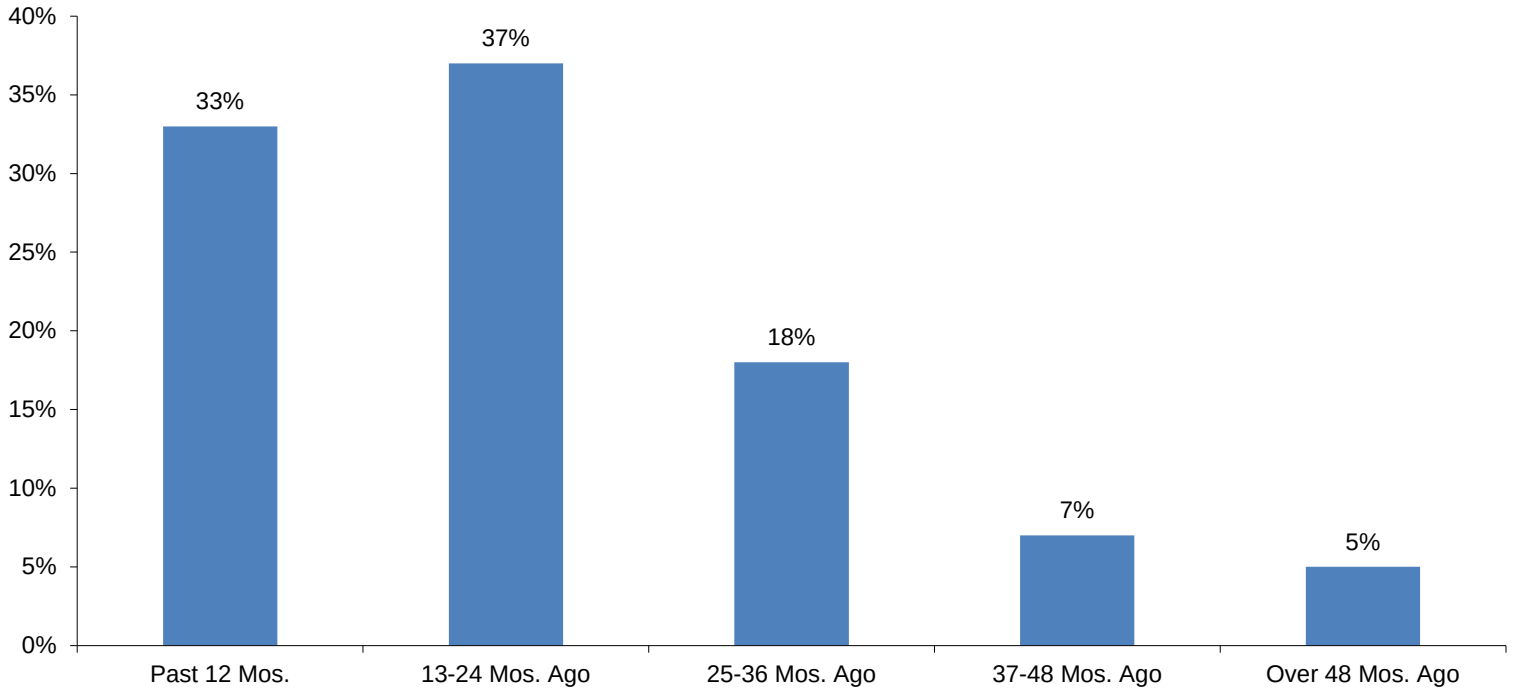
Most Recent Expansion

- Respondents were asked when their company last built or acquired a new data center.
- Over two thirds (70%) of the companies have built/acquired a new data center in the past 24 months.



Base = Total (N=300)

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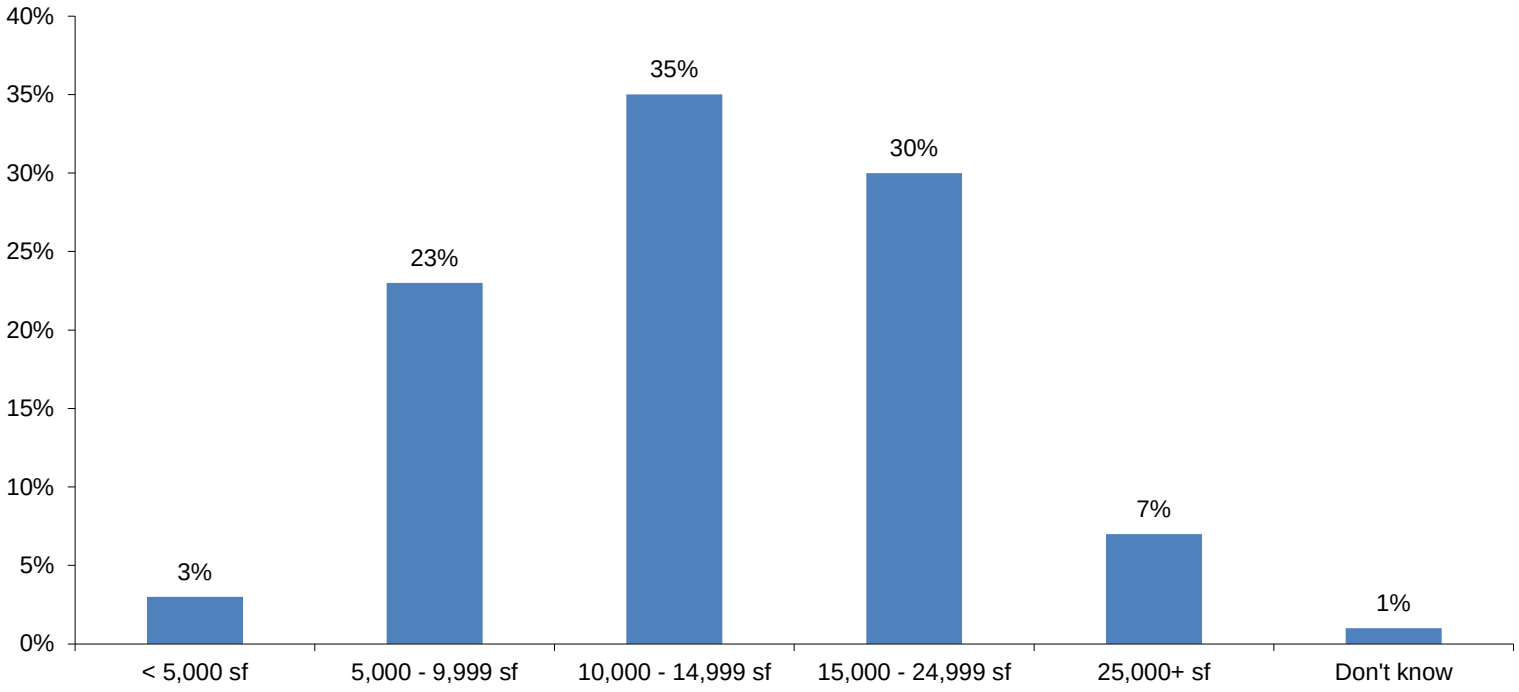
Current Space

- Respondents were asked about the average square footage of raised floors in their data centers.
- Two thirds (65%) of respondents say their data centers average between 10,000 and 25,000 square feet.
- The overall average is 14,600 square feet.



Base = Total (N=300)

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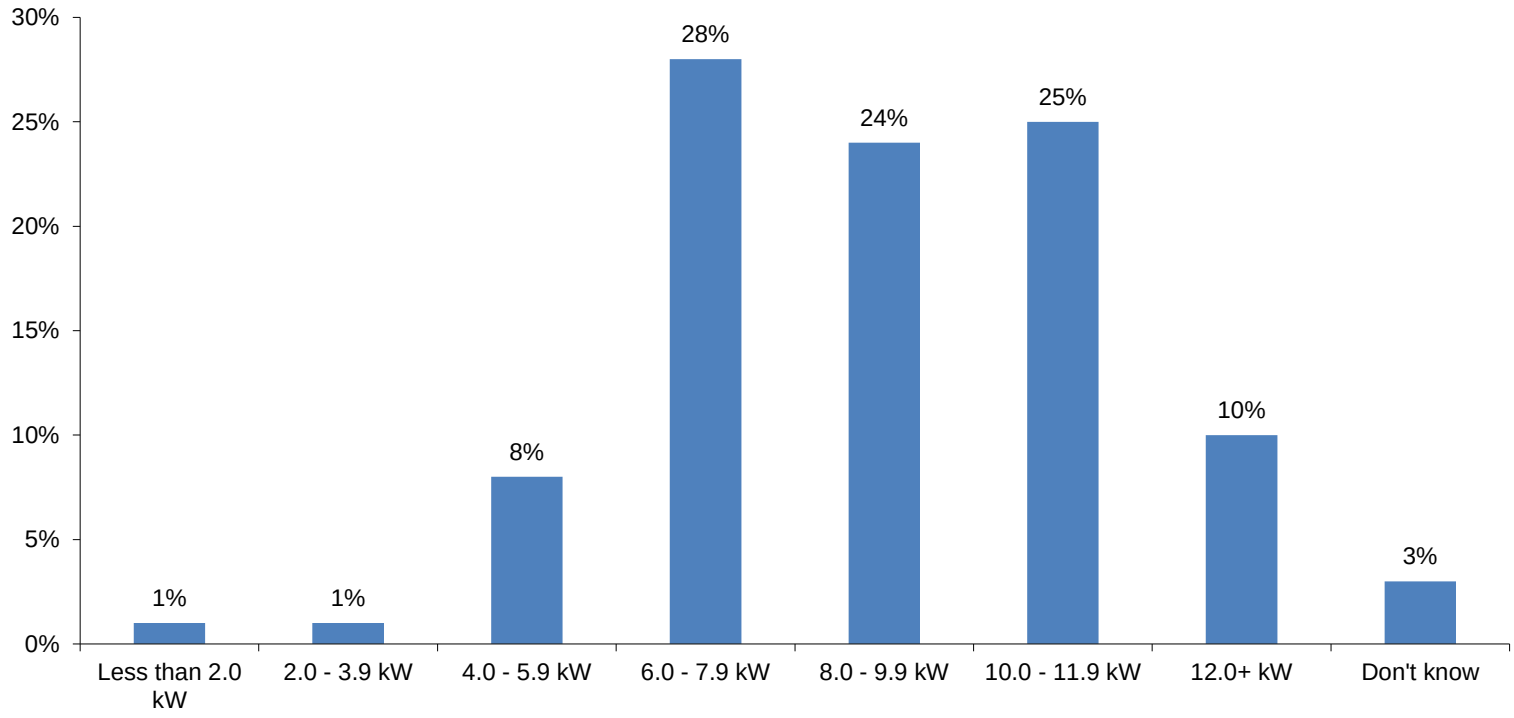
Maximum Power

- Respondents were asked about their maximum kilowatts per rack across their data centers.
- The average of the maximum power is 9.0 kW per rack, but more than one in three companies (35%) reports 10 kW or more per rack at a maximum.



Base = Total (N=300)

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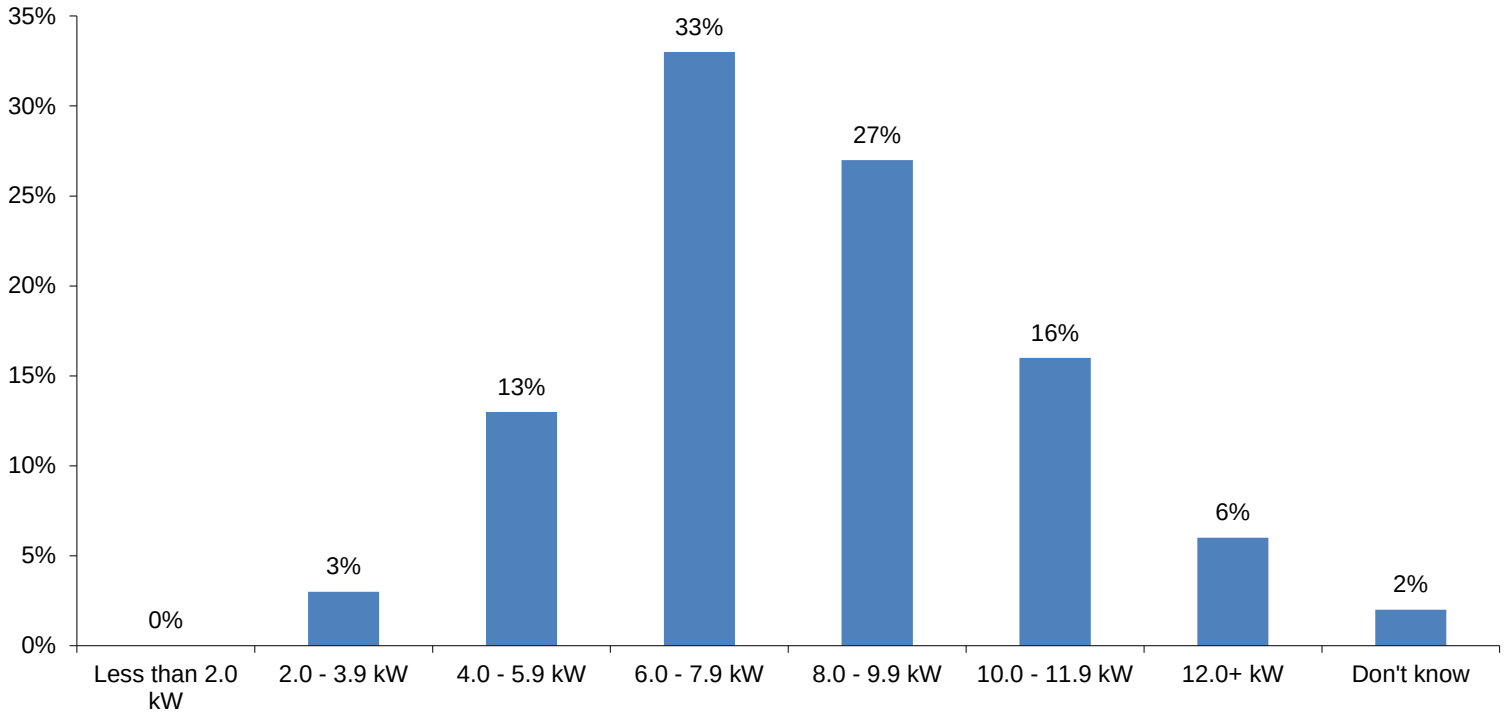
Server Density

- Respondents were asked about the current density of servers or blade servers across their data centers.
- The average power density is 8.2 kW per rack, but more than one in five (22%) companies averages 10 kW or more per rack.



Base = Total (N=300)

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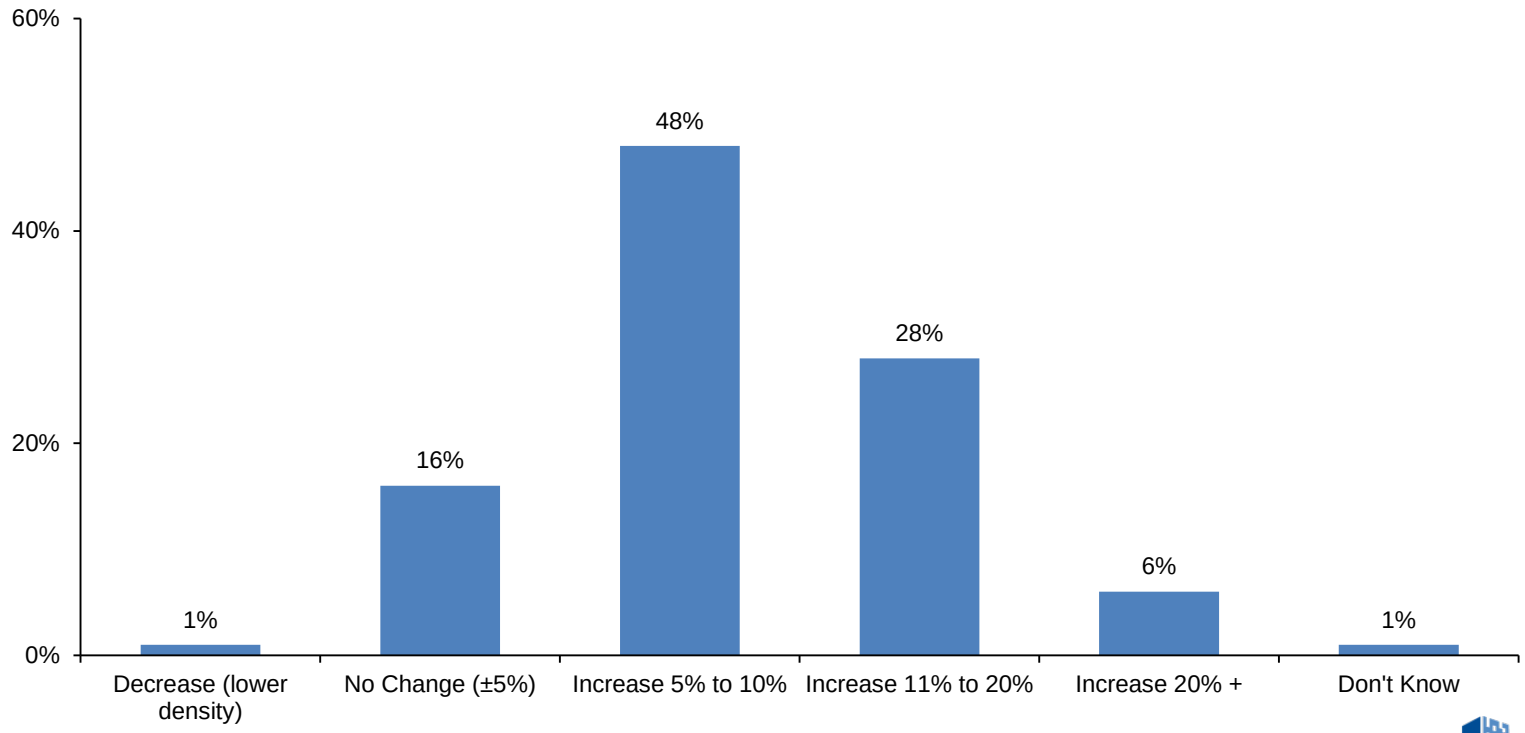
Change in Server Density

- Respondents were asked by what percentage their server density will change in the next 12 months.
- Four fifths (82%) expect increases in server density during the year.
- The average expected increase has changed from 7.7% in 2011 to 9.3% in 2012.



Base = Total (N=300)

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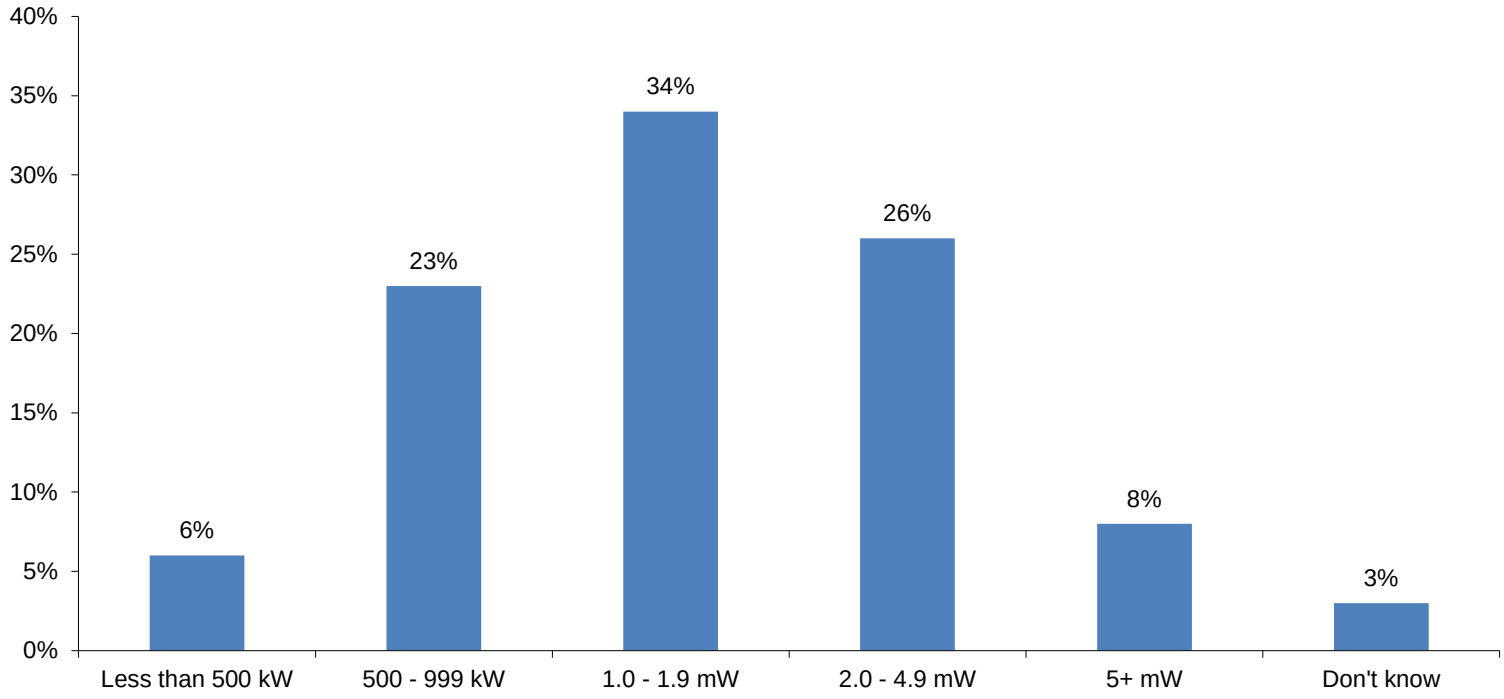
Average IT Load

- Respondents were asked about the average total kW load for IT consumption across all their data centers.
- The average IT load is 2.2 mW. One in four (34%) reports 2.0 mW or more.



Base = Total (N=300)

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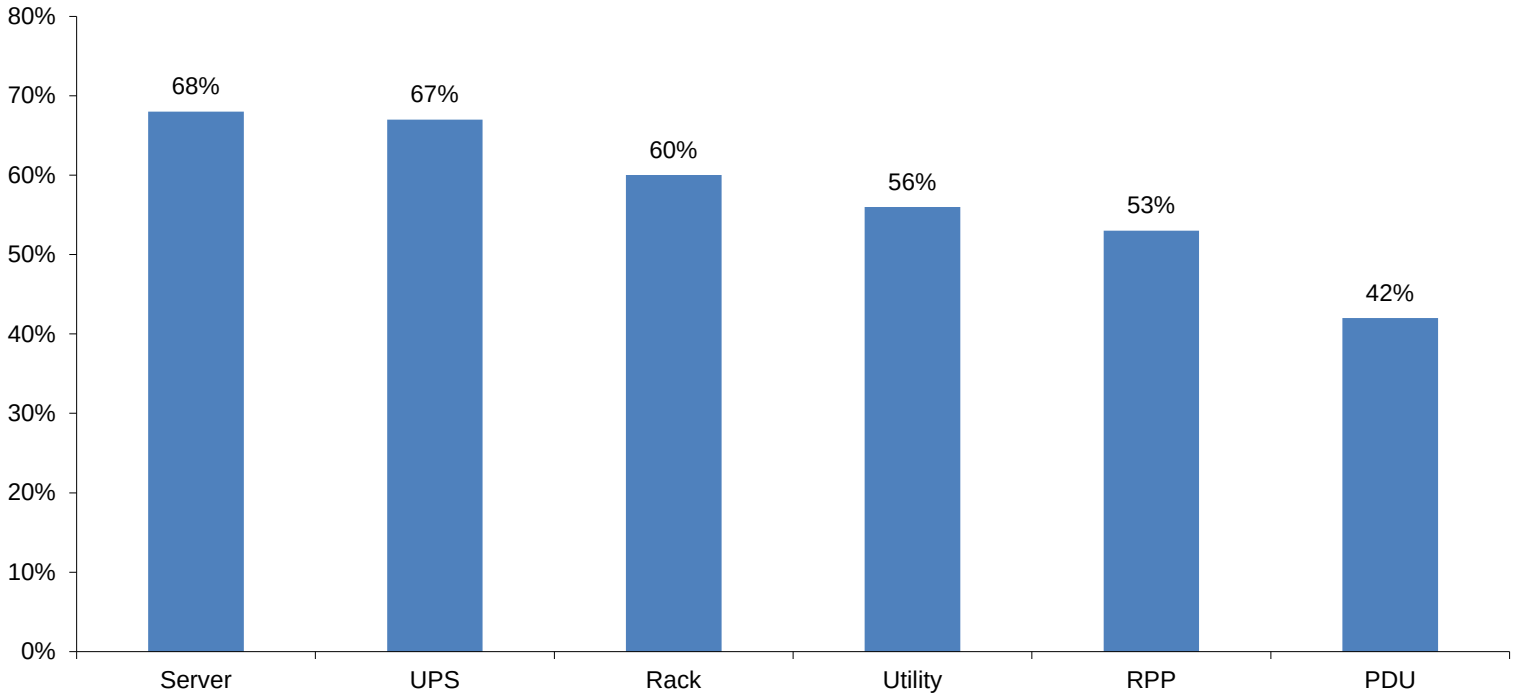
Power Metering

- Respondents were asked whether they measure power use and, if so, where they measure it.
- 87% say they meter power use, up from 76% in 2011.
- More are measuring at the UPS and RPP than in 2011.



Base = Measure Power (N=260)

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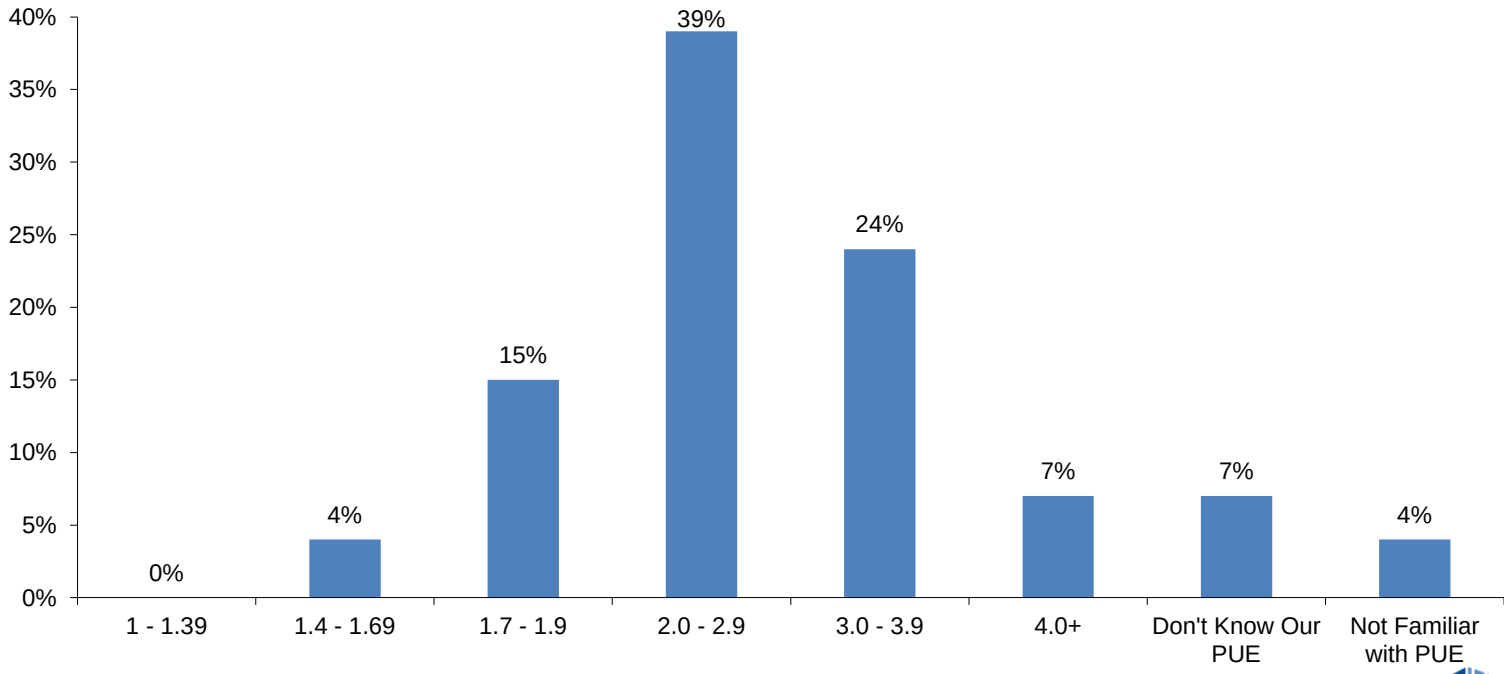
Power Usage Effectiveness

- Respondents were asked about the average power usage effectiveness (PUE) of their data centers.
- Few (7%) don't know their PUE and even fewer (4%) are unfamiliar with PUE.
- One in five (19%) reports a PUE of less than 2.0. The average reported PUE is 2.8.



Base = Total (N=300)

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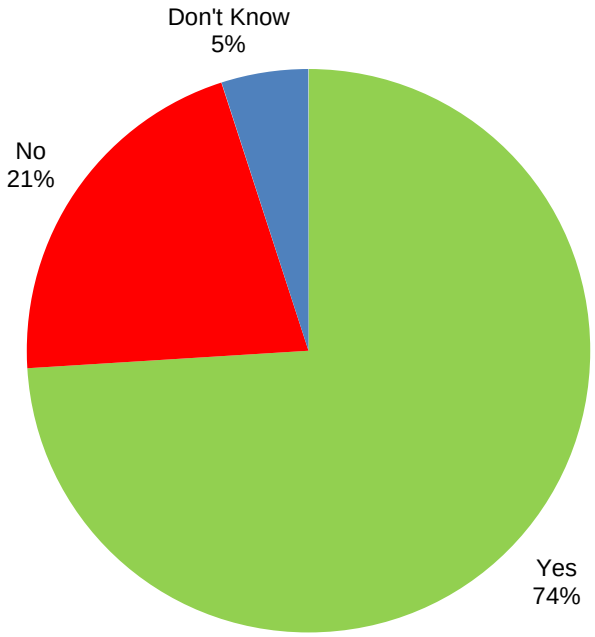
Hot/Cold Aisle Containment

- Respondents were asked if they are using hot or cold aisle containment.
- Nearly three fourths (74%) of the respondents say they are using hot or cold aisle containment, compared to 62% in 2011.



Base = Total (N=300)

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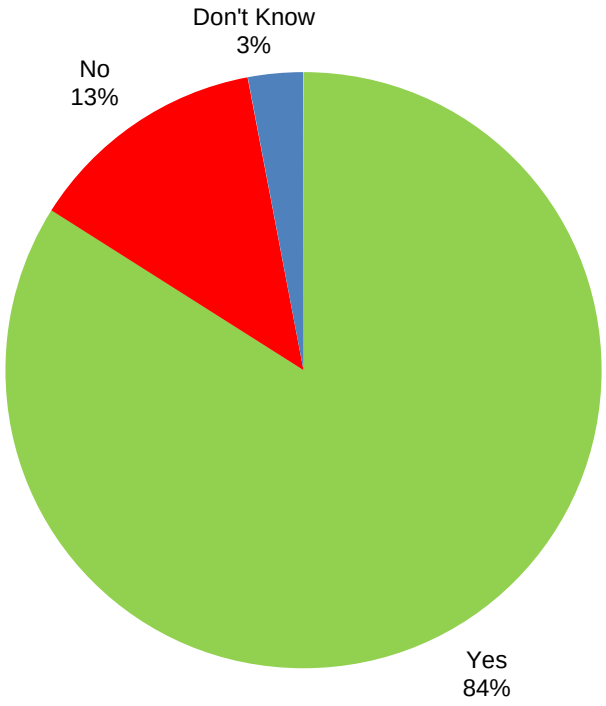
DCIM Software

- Respondents were asked if they are currently using Data Center Infrastructure Management (DCIM) software.
- Five in six (84%) say they currently use some form of DCIM.
- Three in four (75%) say they plan to add DCIM software in the next 12 months.



Base = Total (N=300)

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EXPANSION PLANS

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Expansion Plan Summary

- Two in five (43%) of respondents say they definitely plan to expand their data centers in 2012.
  - 44% will definitely expand in 2013.
  - Only 4% are unlikely to expand in either 2012 or 2013.
- 9 in 10 will expand in the U.S., but half will also expand in Europe (52%) or the Asia Pacific Region (48%).
  - 1 in 5 (21%) will expand in South America.
- 2 in 3 (68%) would consider locating a new data center within 300 miles of their current location.
- Larger companies are more likely to expand: Nearly half of companies with $15B+ revenues will definitely expand in 2012.
- Security is the single most important reason for expansion.
- 2 in 5 (38%) companies will expand in 3 or more locations
- Over half (54%) want 15,000 square feet or more.
- Half (49%) want 2 mW of power or more and 1 in 8 (12%) wants 5 mW or more.

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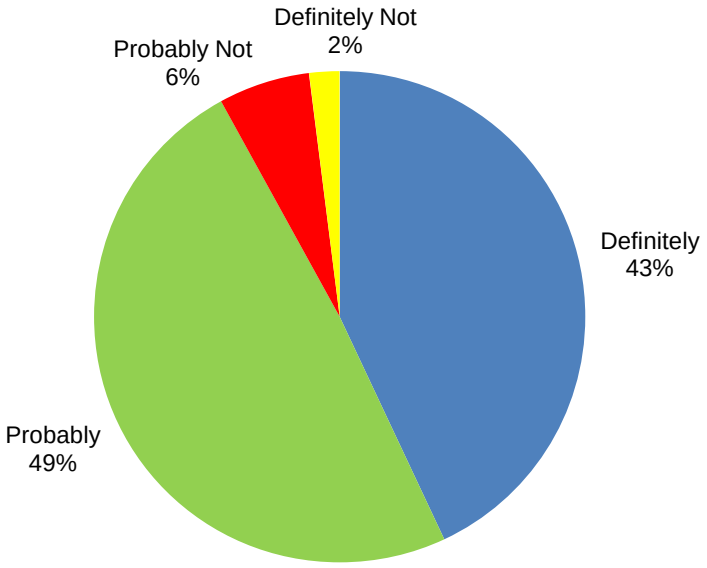
Expansion Plans in 2012

- Respondents were asked how likely they are to expand their data centers during 2012.
- More than two in five (43%) say they definitely have plans to expand in 2012. Nearly half (49%) say they will probably expand in 2012.
- Over nine in ten (92%) say they will definitely or probably expand in the current year, an increase from those who said they would definitely or probably expand in the previous wave (84%).



Base = Total (N=300)

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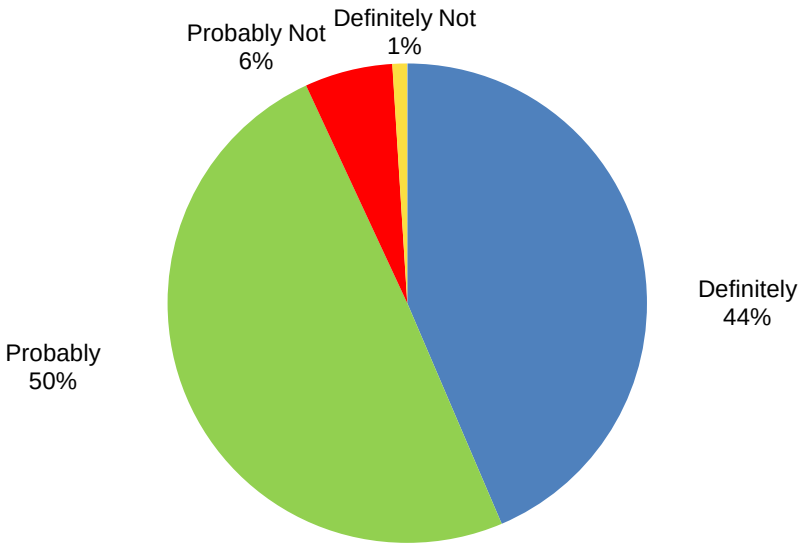
Expansion Plans in 2013

- Respondents were asked how likely they are to expand their data centers during 2013.
- Over two in five (44%) say they definitely have plans to expand in 2013.
- One in three (35%) will definitely expand in both 2012 and 2013.
- One in twenty-five (4%) are unlikely to expand in either 2012 or 2013.



Base = Total (N=300)

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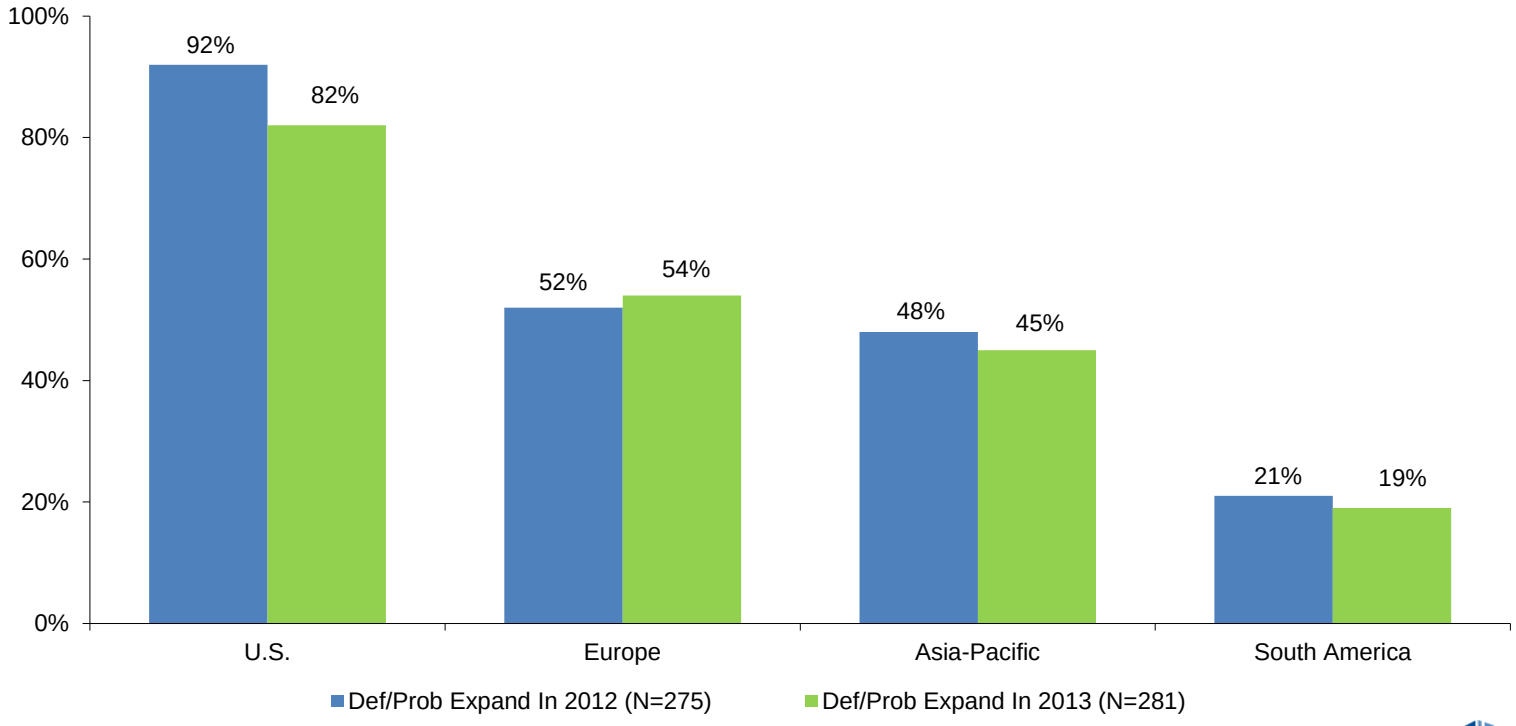
Regions for Expansion

- For those who plan to expand this year or next, most plan to expand in the United States.
- About half are considering Europe, half Asia-Pacific and one in five South America.



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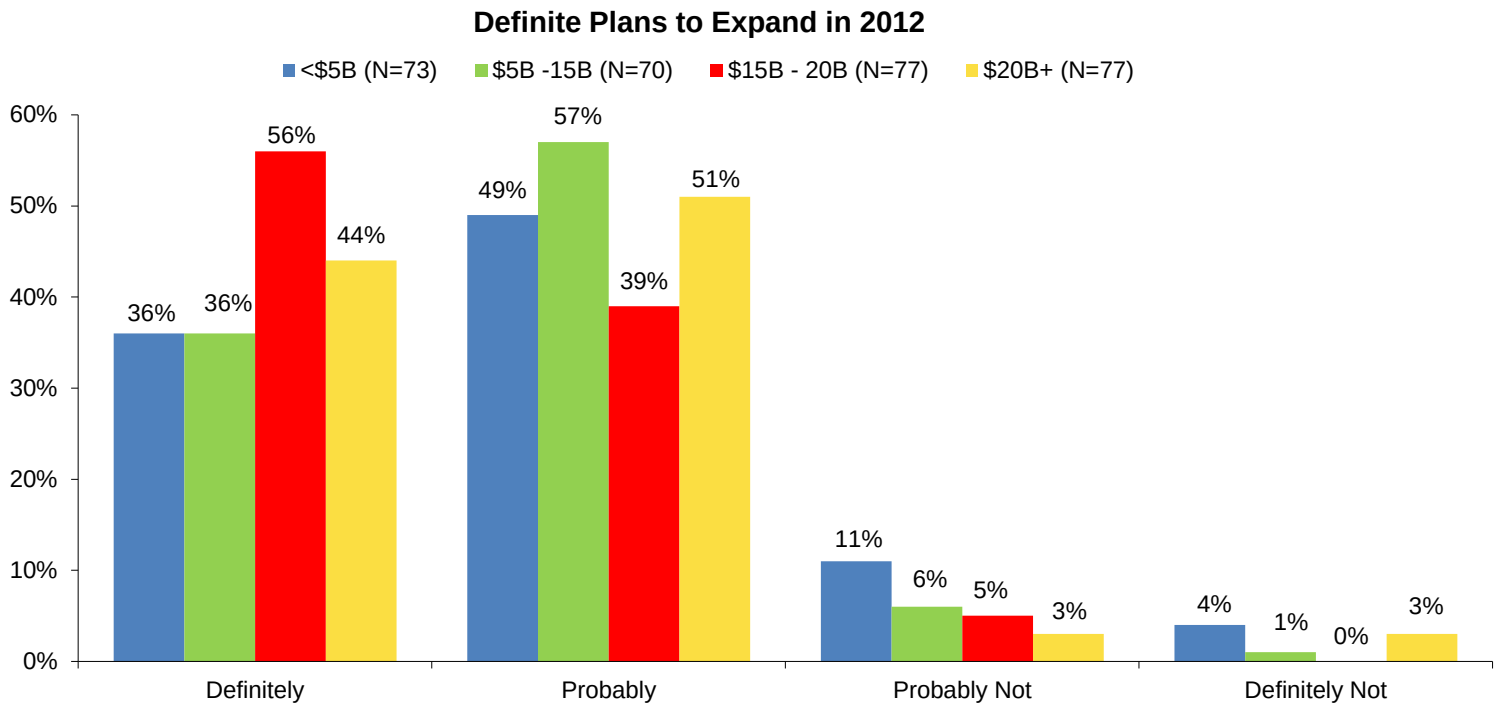
Expansion Plans by Revenue

- Larger companies ($15B+) are more likely to have definite plans to expand in 2012. Half (50%) say they will definitely expand.
- Among smaller companies (<$15B), fewer (36%) say they will definitely expand.



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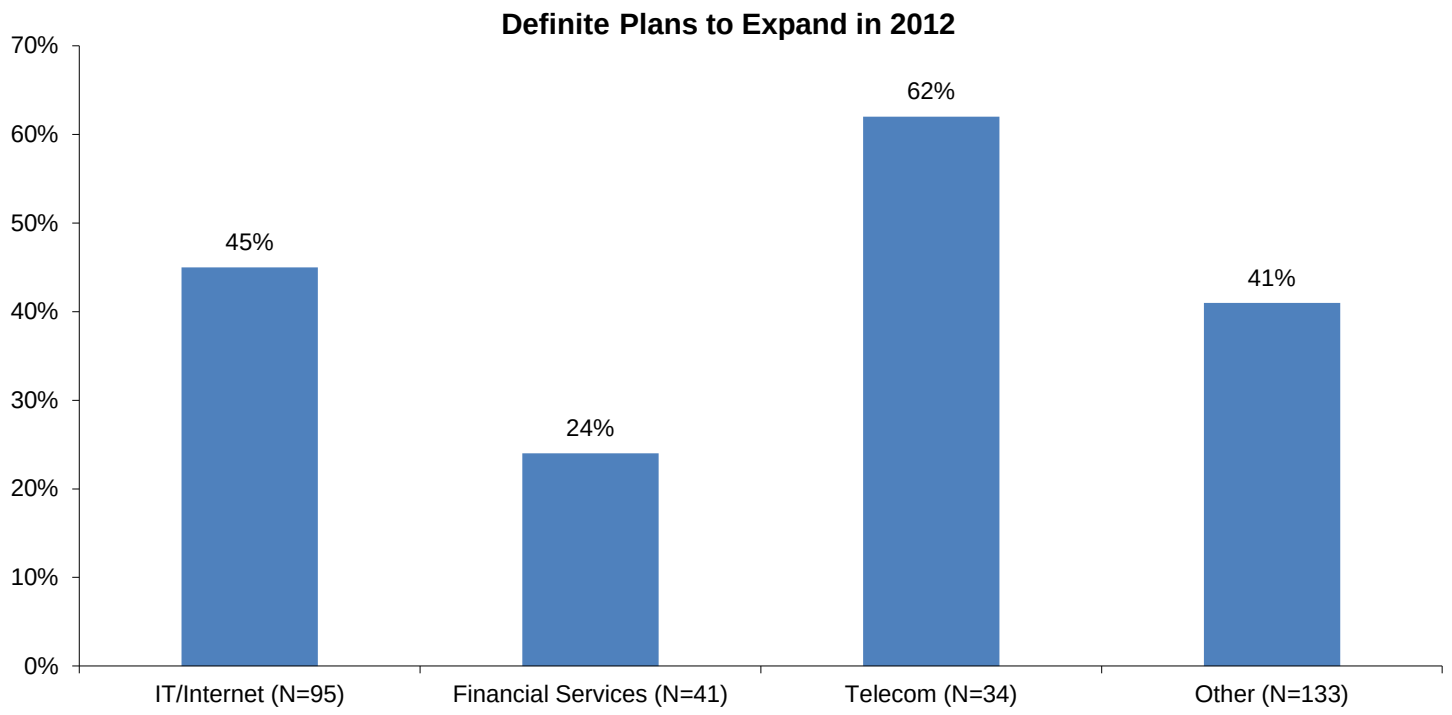
Expansion Plans by Industry

- Telecom companies are more likely to definitely expand in 2012 than companies in other industries.
- Financial services companies are less likely to definitely expand in 2012.



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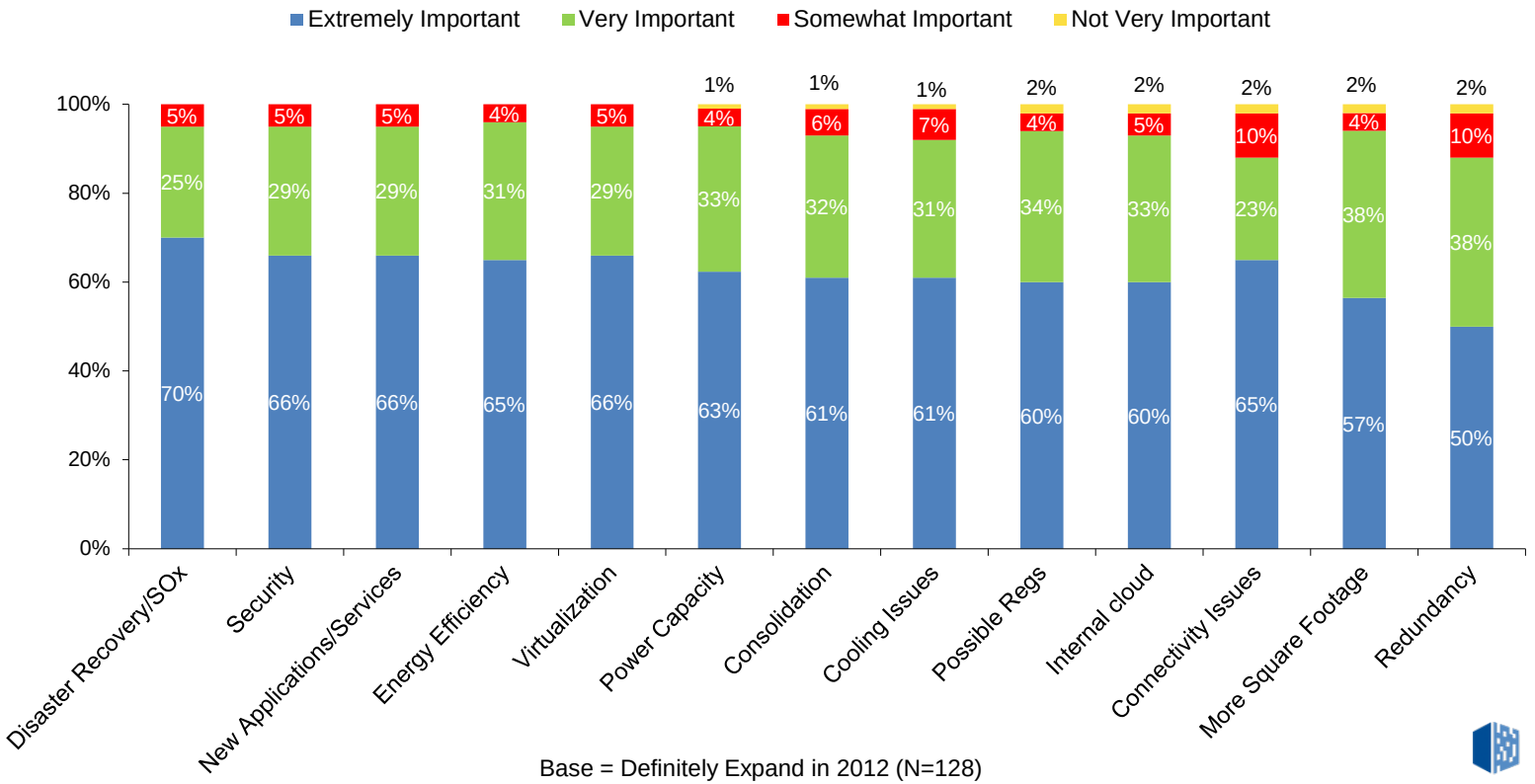
Reasons for Expansion

- Respondents with definite plans to expand in 2012 were asked to rate the importance of several reasons for expanding their data centers.
- Disaster recovery/Sarbanes-Oxley is most important, followed by security, new applications and services, energy efficiency and virtualization.



Base = Definitely Expand in 2012 (N=128)

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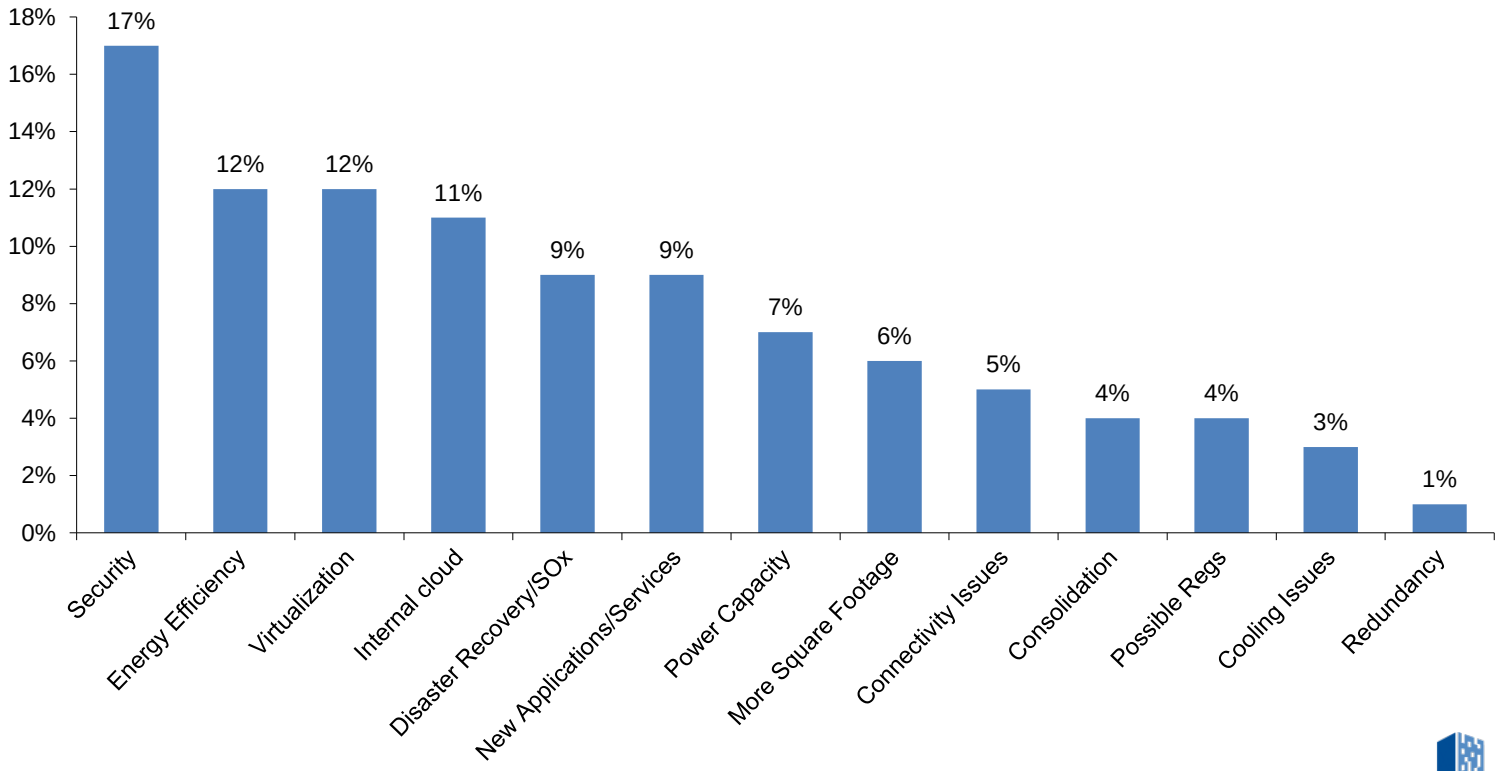
Main Reason for Expansion

- Respondents with definite plans to expand in 2012 were asked to indicate the single most influential reason for expanding their data centers.
- Security is most influential for 17%, followed by energy efficiency, virtualization and internal cloud development.



Base = Definitely Expand in 2012 (N=128)

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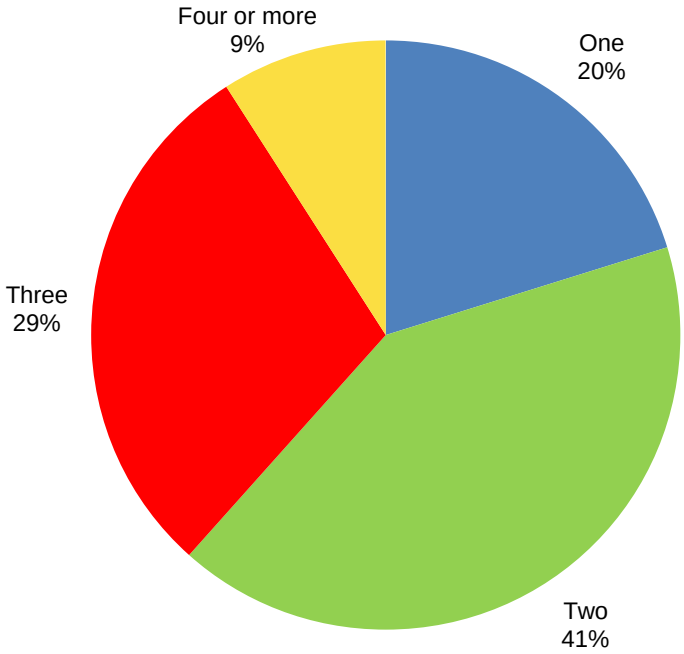
Number of Locations for Expansion

- Respondents with definite plans in 2012 were asked in how many locations the company plans to expand its data centers.
- Over one third (38%) say they have plans to expand in three or more locations, up from 26% in 2011.



Base = Definitely Expand 2012 (N=128)

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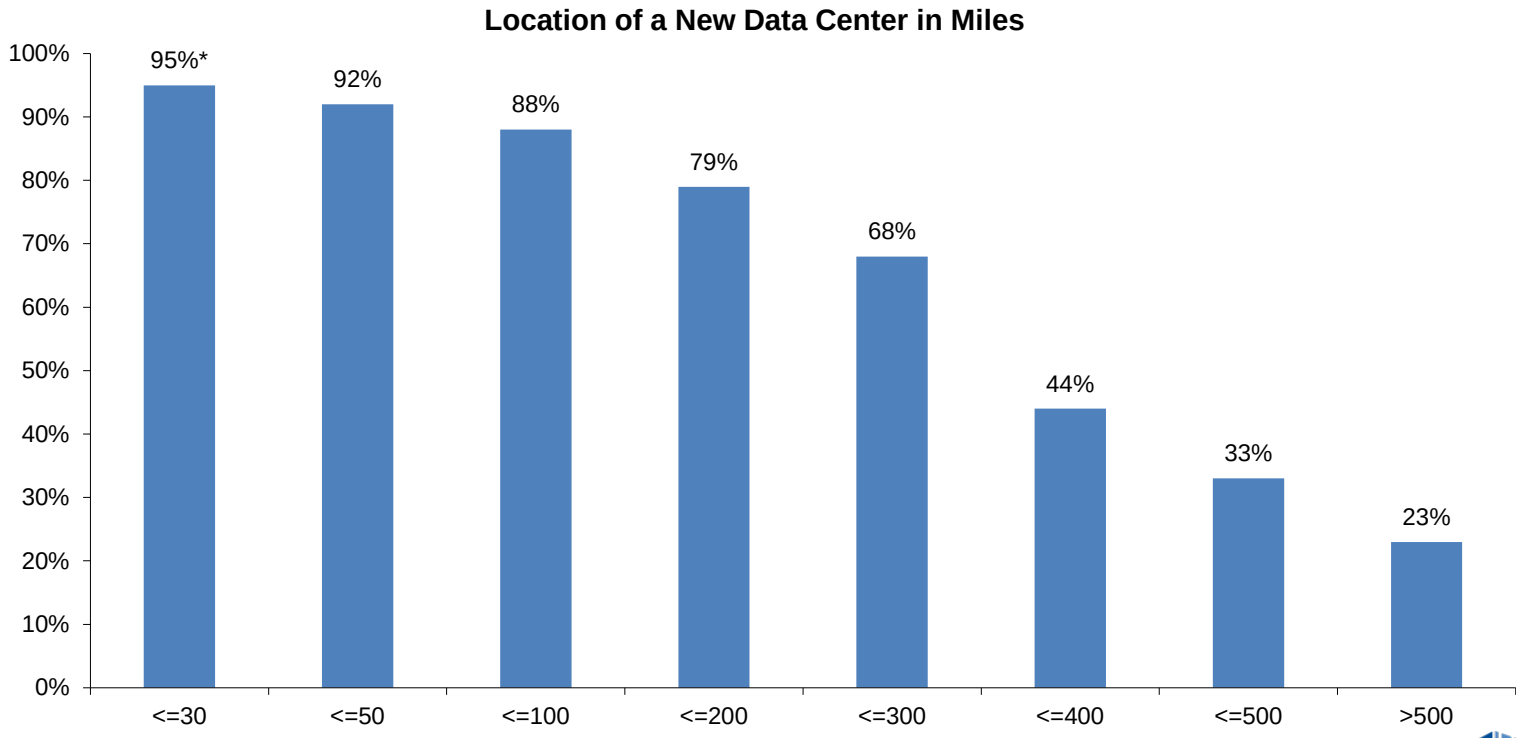
Locations for Expansion: Distance

- The chart below shows the percentage of respondents who say they would locate their new data center no more than a specified distance from their current location.
- Each bar is read as the following example:
  - 68% of the respondents would consider a data center within 300 miles of their current location.



Base = Definitely/Probably Expand 2012 (N=275)

* 3% will expand, but not build a NEW data center; 2% don't know the acceptable distance.

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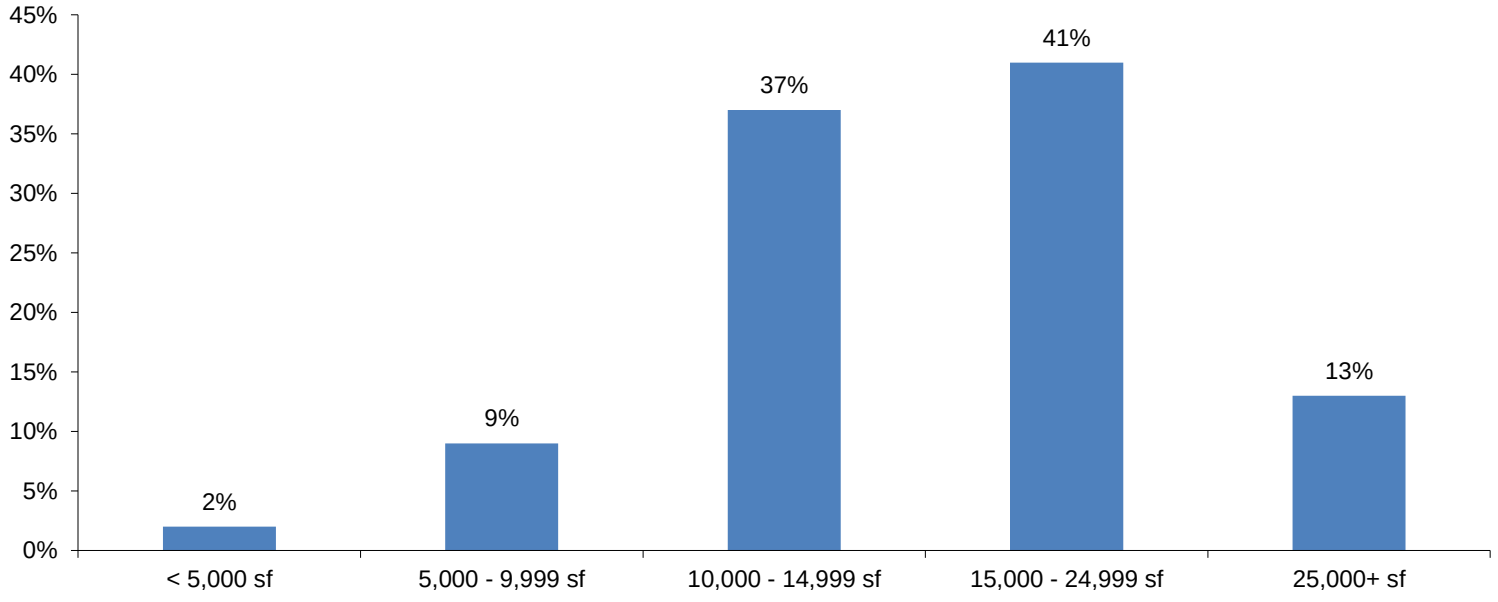
Expansion Space Requirements

- Respondents with definite plans in 2012 were asked about the average square footage of raised floors for their expanded data centers.
- Most (78%) respondents are seeking between 10,000 and 25,000 square feet.
- Fewer (13%) want 25,000 square feet or more in their expanded data centers than in 2011 (21%).
- The average is 17,200 square feet.



Base = Definitely Expand 2012 (N=128)

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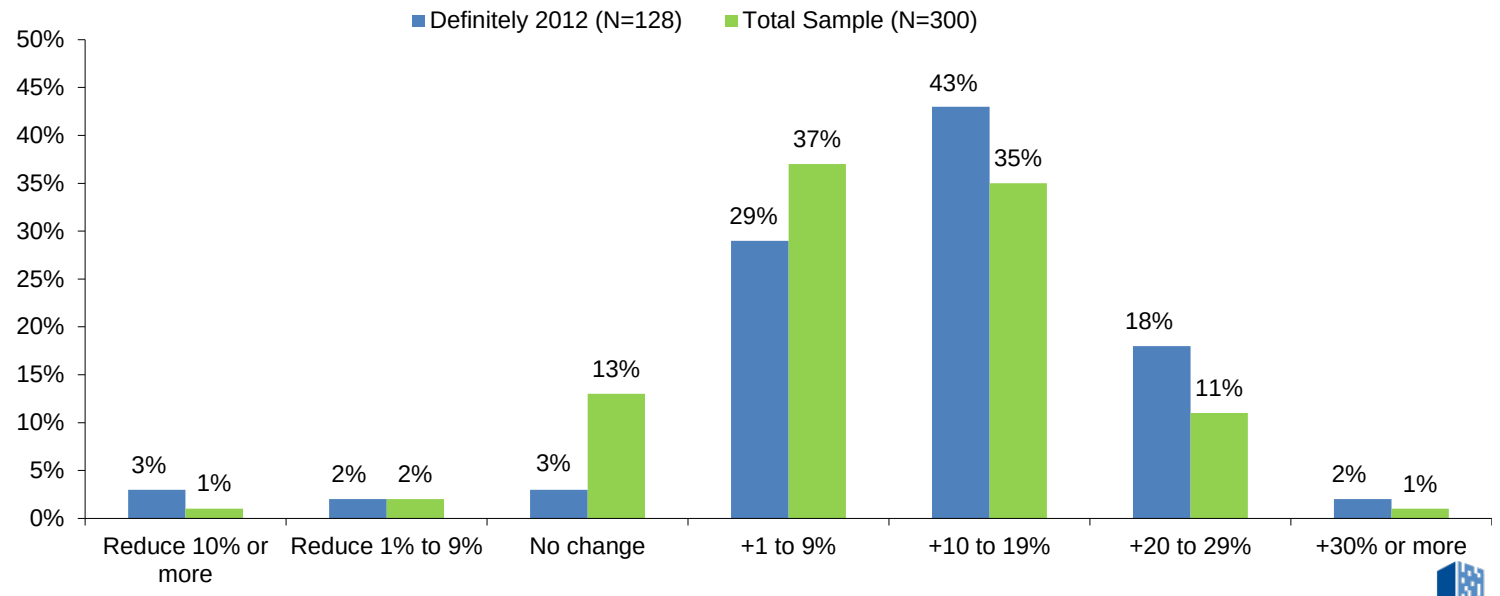
Net Change in Data Center Space

- Respondents with definite expansion plans in 2012 were asked how much their total data center space in all locations will change in the next 12 months.
- Nearly two thirds (61%) of those who will definitely expand in 2012 plan to add between 10% and 29% in total space. The average amount of expansion is 12.2%.
- For the total sample, the average change in data center space is 10.0%, which is not significantly different from 9.0% in 2011.



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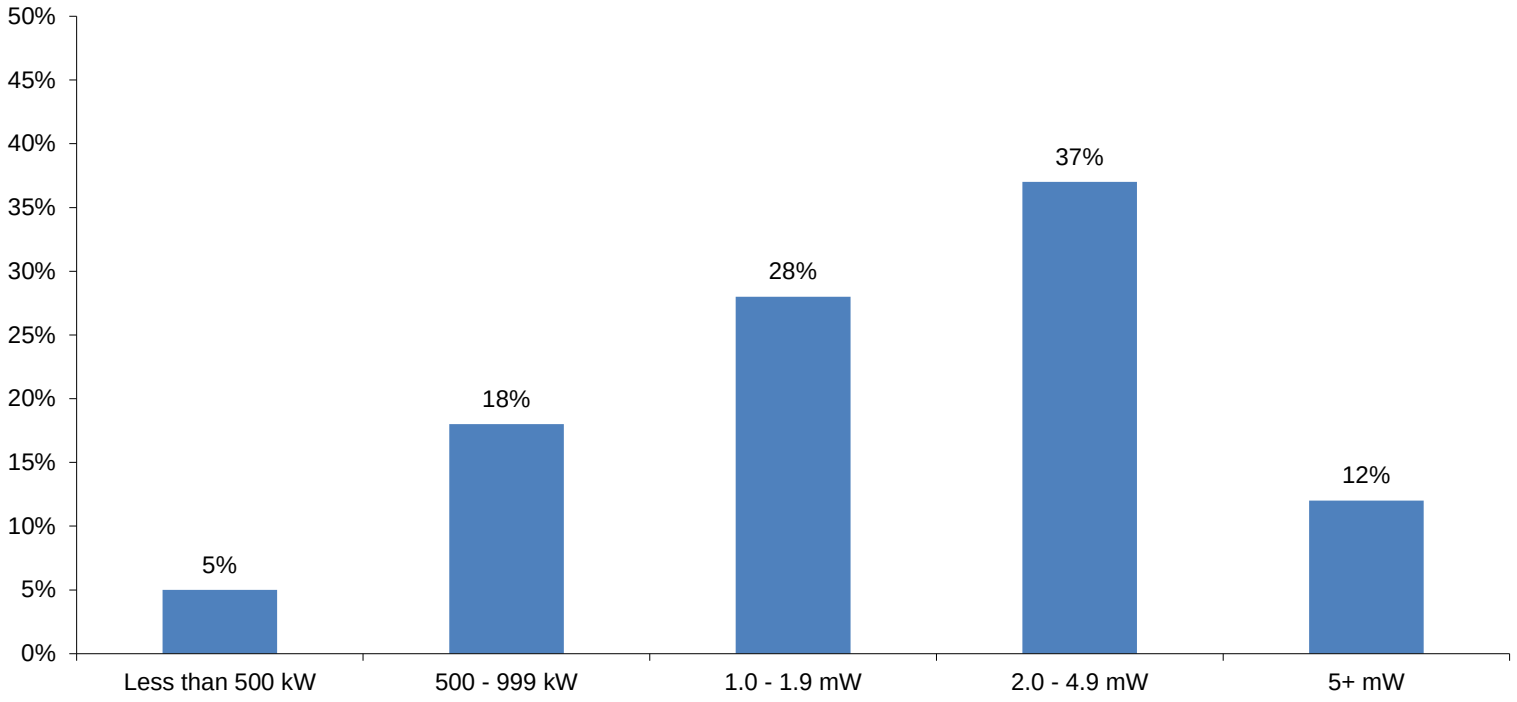
Expansion Total IT Load

- Those who will definitely expand in 2012 were asked about the total available IT load for their expanded data centers.
- The average maximum available IT load is 2.6 mW, compared with 3.4 mW reported in 2010 and 2.8 mW in 2011.
- Half (49%) want 2.0 mW or more.



Base = Definitely Expand 2012 (N=128)

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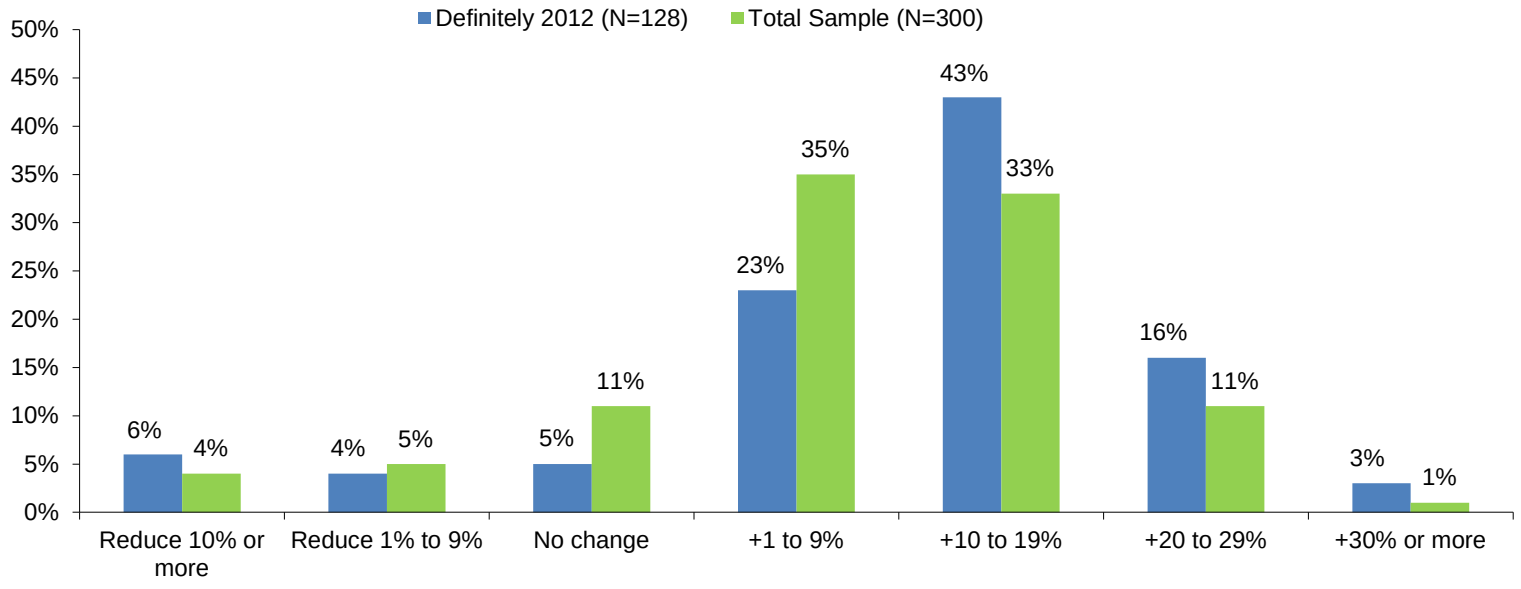
Net Change in Power Usage

- Respondents with definite expansion plans in 2012 were asked how much their total power usage in all their data centers will change in the next 12 months.
- Two thirds (66%) of those who will definitely expand in 2012 plan to increase between 1% and 19% in total power use. The average amount of increase is 11.4%.
- For the total sample the average amount of power increase is 9.0%, greater than the 7.7% increase for 2011.



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IMPLEMENTING EXPANSION

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Expansion Strategies

- Respondents who had any plans to expand their data centers were asked to select among the alternatives below how they planned to implement the expansion:
  - Build with or use a data center design and construction partner.
  - Lease space from a wholesale data center provider.
  - Use a container solution.
  - Build themselves.
  - Have not decided yet.
- In 2012 another option was added:
  - Use a retail colocation solution.
- Respondents could choose one or more of these alternatives.

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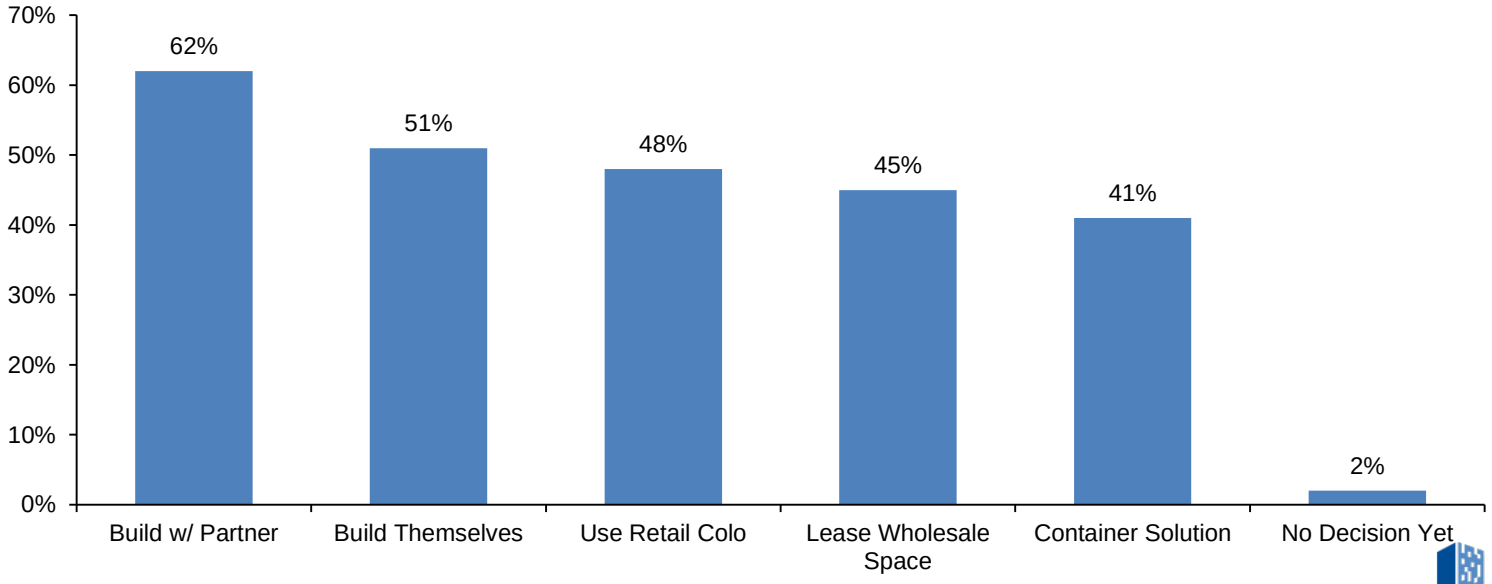
Use of a Partner

- Nearly two thirds (62%) of those with definite plans for 2012 will build with or use a data center design and construction partner.
- Less than half (45%) will lease space from a wholesale data center provider.
- Half (51%) will build their expanded data center themselves.
- Half (48%) will use retail colocation space.
- Two in five (41%) plan to use a shipping container module as a data center solution for their expansion.
- Three fourths (78%) will use a partner for either design/build and/or wholesale leasing as part of their expansion, compared to 91% in 2011.



Base = Definitely Expand 2012 (N=128)

Note: Total responses exceed 100% because of multiple data centers and/or using multiple methods on a single data center.

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Analysis of Using a Partner

- For the balance of this report, a partner is defined as those who say they will:
  - Use a design/build partner ***and/or***
  - Lease wholesale space.
  - The analysis includes all those who have any plans to expand (definitely or probably expand, N=275) in 2012.
- Of those who have any plans to expand, 76% will use a partner for their expansion.

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Multiple Expansion Strategies

- Respondents who will definitely or probably expand in 2012 (N=275) have a mix of strategies that reflects multiple sites for expansion as well as complementary approaches to a single site.
- 69% of those who plan to expand their data centers say they will use two or more approaches to expansion, compared to 55% in 2011.
- Of those who will use a design/construction partner:
  - 43% will lease space from a wholesale provider.
  - 44% will lease retail colocation space.
  - 44% will use a container solution.
  - 46% will also build an expansion themselves.
- Of those who will lease wholesale space:
  - 58% will use a partner to build and/or design the expansion.
  - 49% will lease retail colocation space.
  - 45% will build it themselves.
  - 39% will use a container solution.

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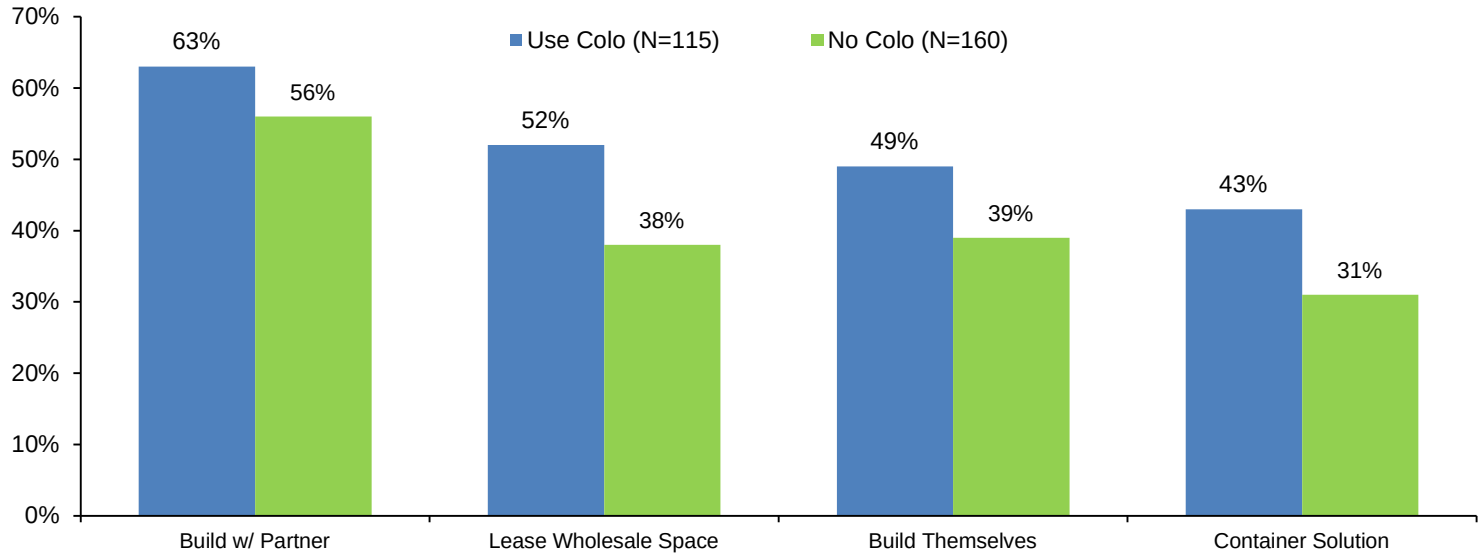
Use of Retail Colocation

- Two in five (41%) of those with any plans for 2012 will use retail colocation space as a solution for data center expansion.
- Nearly all of those (94%) will also use another strategy for expansion.
- Those who plan to use colocation are at least as likely as others to use additional expansion strategies.
  - 80% of those who will use colocation will also use a partner (build and/or lease) compared with 73% of those who will not use colocation.
- Nearly half (48%) of the larger companies ($15B+) will use retail colocation compares with one third (32%) of the smaller companies.



Note: Total responses exceed 100% because of multiple data centers and/or using multiple methods on a single data center.

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SELECTING A PARTNER

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Partner Summary

- Three fourths (76%) of the respondents with any plans to expand in 2012 say they intend to use an implementation partner to design/build and/or lease space.
  - Less than half (43%) plan to implement at least part of the expansion themselves.
  - Half (50%) of those who will use a partner are aware of DLR.
- The consideration list of potential partners is developed primarily within IT.
- The most important qualifications in evaluating a potential partner are server management/maintenance, operational reliability and infrastructure management. However, many other qualifications are also important to their choice of a partner.
- Among other considerations that are important in evaluating a potential partner are demonstrating TCO, educating them on the issues and technical superiority.

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Partner Summary (cont'd)

- They seek information about potential partners from a wide variety of sources, including providers themselves, colleagues in the company, trade shows, research firms and consultants.
  - The single most important source of information is the data center providers themselves, followed by research firms.
- When asked about the last data center they built, the building spec sheet is the most important information source, followed by the provider's Web site.
- Although many groups participate in partner decisions, C-level executives and IT are the most influential parties in the final selection of a partner.

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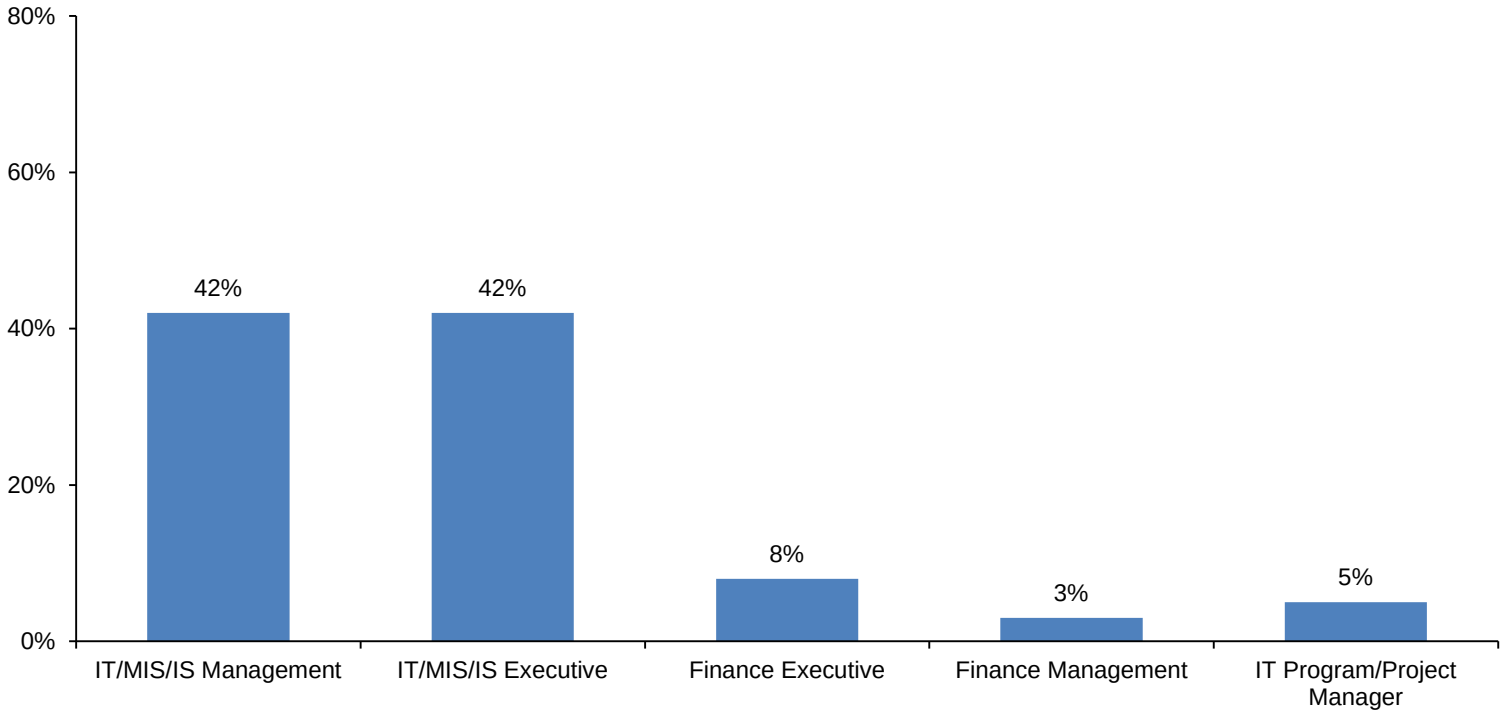
Developing a Consideration List

- Respondents were asked who participates in developing a comprehensive list of all potential providers.
- The principal participants are from IT: management level (Directors and VPs) and executives (CIOs and Senior VPs).



Base = Those who might use a partner (N=219)

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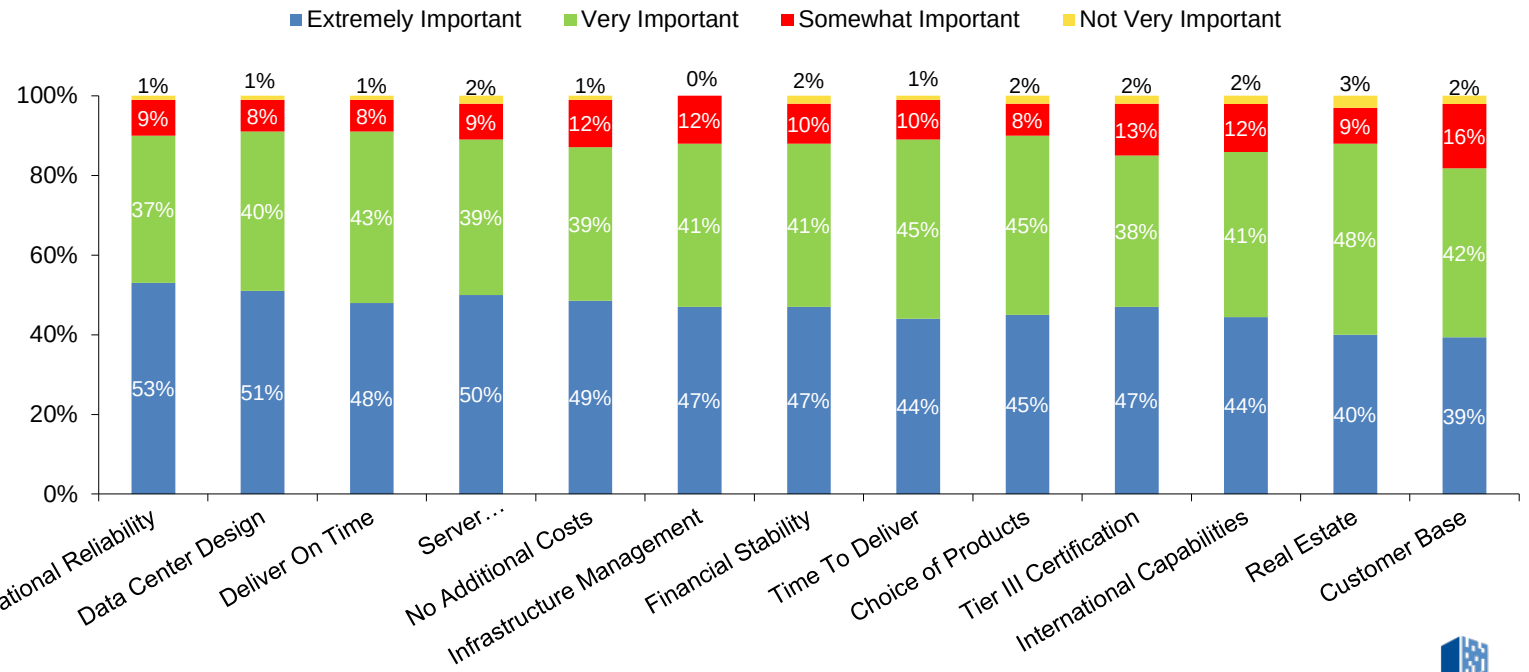
Evaluating Partners: Qualifications

- Respondents who are planning to use a partner were asked to rate the importance of several areas of qualifications in considering a partner for expanding their data centers.
- The most important factors are operational reliability and demonstrated experience in data center design. The least important factors are Tier III certification, international capabilities, real estate experience and the size/quality of the customer base.



Base = Those who plan to use a partner (N=219)

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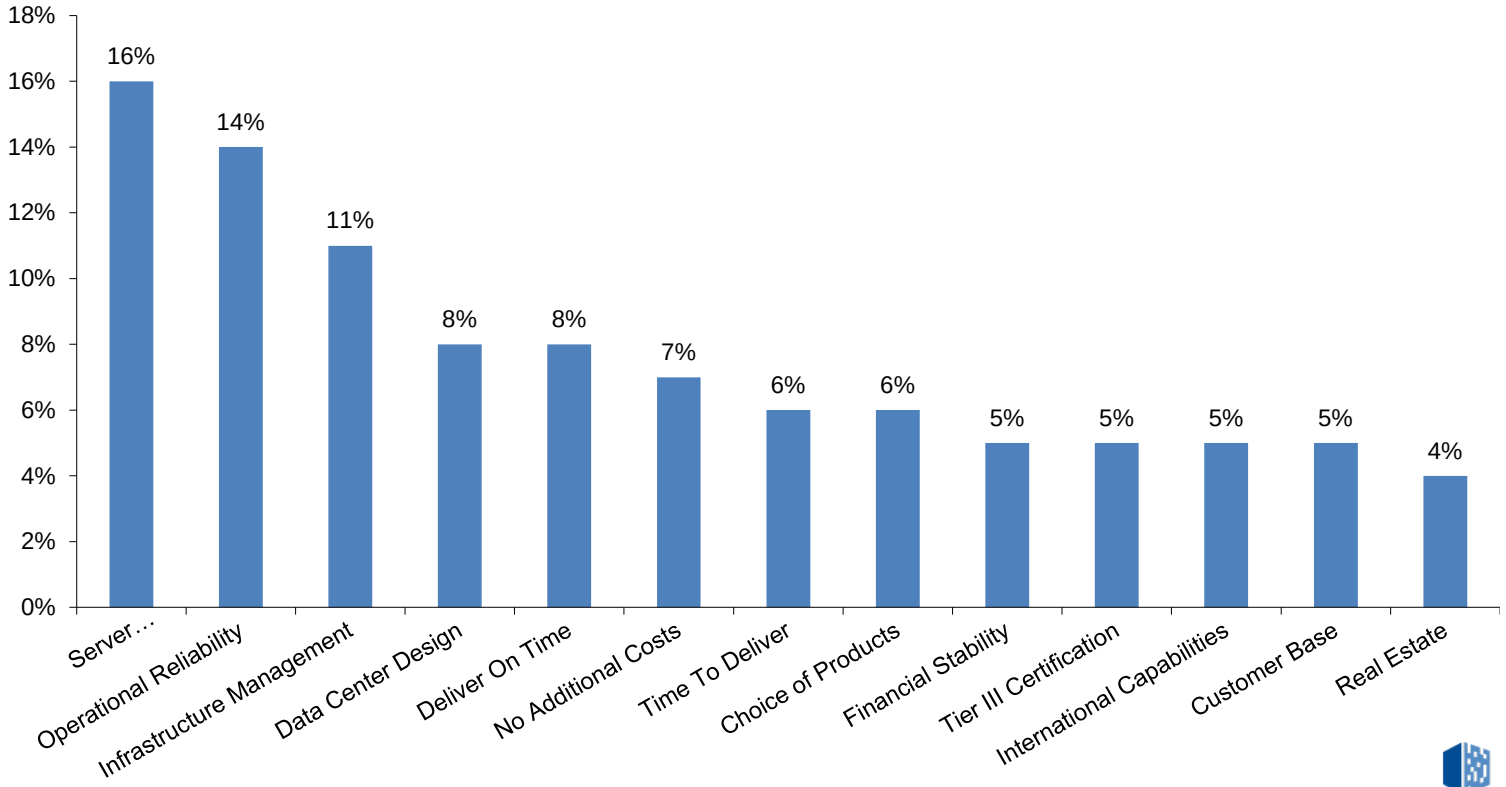
Evaluating Partners: Main Qualification

- Respondents were then asked which one of these qualifications is most important in choosing a partner from a short list of acceptable providers.
- The factors mentioned most often are server management and maintenance, operational reliability and infrastructure management.



Base = Those who plan to use a partner (N=219)

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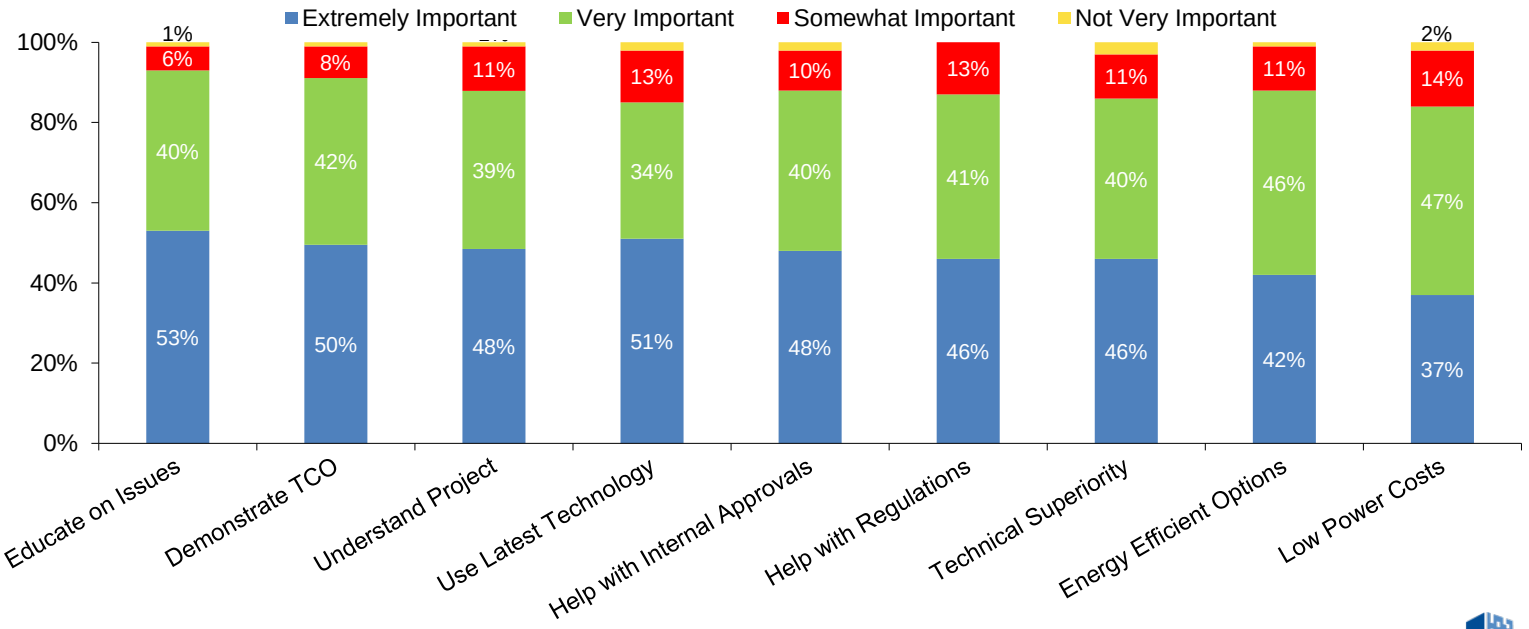
Evaluating Partners: Considerations

- Respondents who are planning to use a partner were asked to rate the importance of several other considerations in considering a partner for expanding their data centers.
- The most important factors are educating their staff on critical issues and demonstrating the total cost of ownership. The least important factors are demonstrating technical superiority, knowledge of energy efficiency options and providing the lowest possible power cost.



Base = Those who plan to use a partner (N=219)

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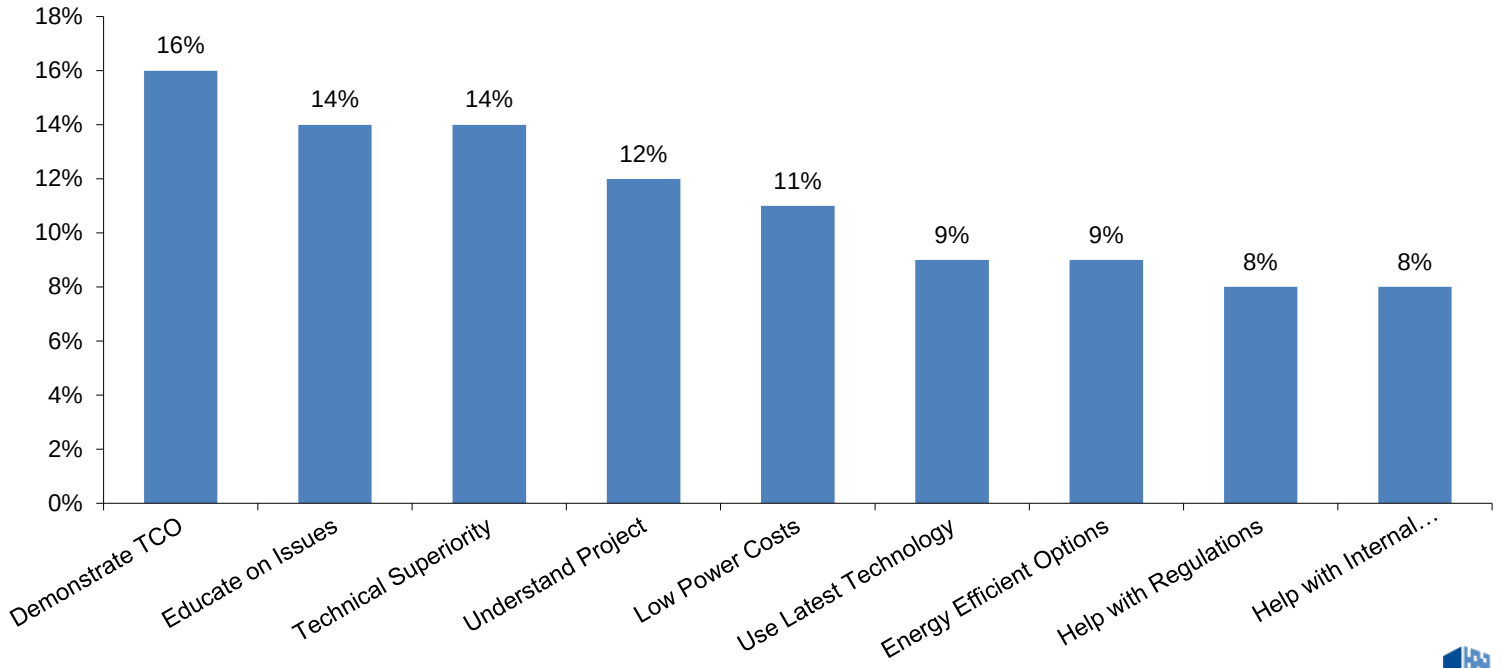
Evaluating Partners: Main Consideration

- Respondents were then asked which one of these considerations is most important in choosing a partner from a short list of acceptable providers.
- The most important factors are demonstrating the total cost of ownership, educating their staff on critical issues and demonstrating clear technical superiority. All of these considerations are considered most important to a significant minority of respondents.



Base = Those who plan to use a partner (N=219)

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FINANCING EXPANSION

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Financing Summary

- Nearly half (45%) say both capital and operating budgets will be used to finance a new data center.
  - One in four (24%) will use their capital budget only and less than one in three (30%) their operational budget only.
- Nearly half (48% build, 45% lease) use a 10 year schedule for depreciating data center assets, with 7 years (23% build, 25% lease) and 15 years (17% build, 18% lease) used less often.
- On average, over one third (39%) of the total IT budget is devoted to data center development and operations and even more (46%) for larger companies ($15B+).
- While a few (8%) expect reduced IT and data center budgets for 2012, the overall average is an increase of just over 7% for both budgets.

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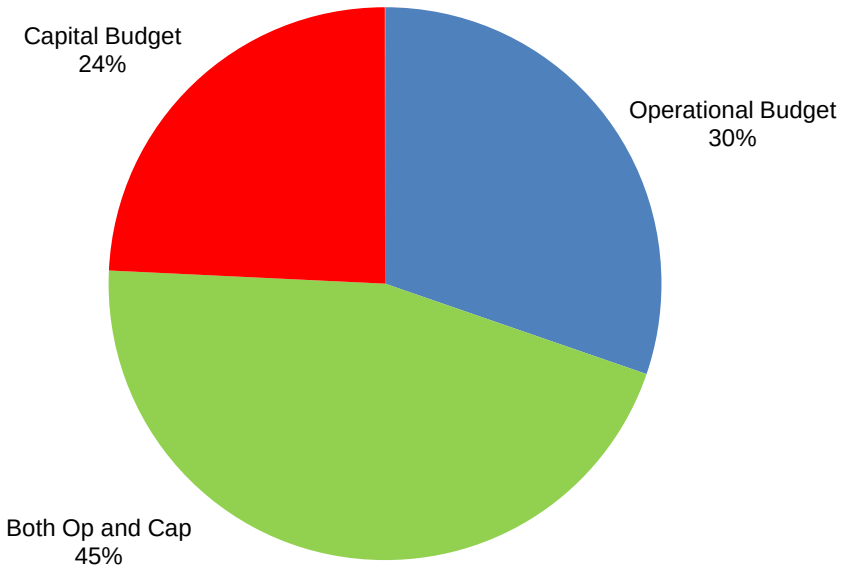
Financing New Data Centers

- Respondents who will definitely expand in 2012 were asked which budgets would be used to finance a new data center.
- Nearly half (45%) say that both capital and operating budgets will be involved in financing a new data center. One in four (24%) will use the capital budget only.
  - Fewer than one in three (30%) will use the operational budget only.



Base = Definitely Expand in 2012 (N=128)

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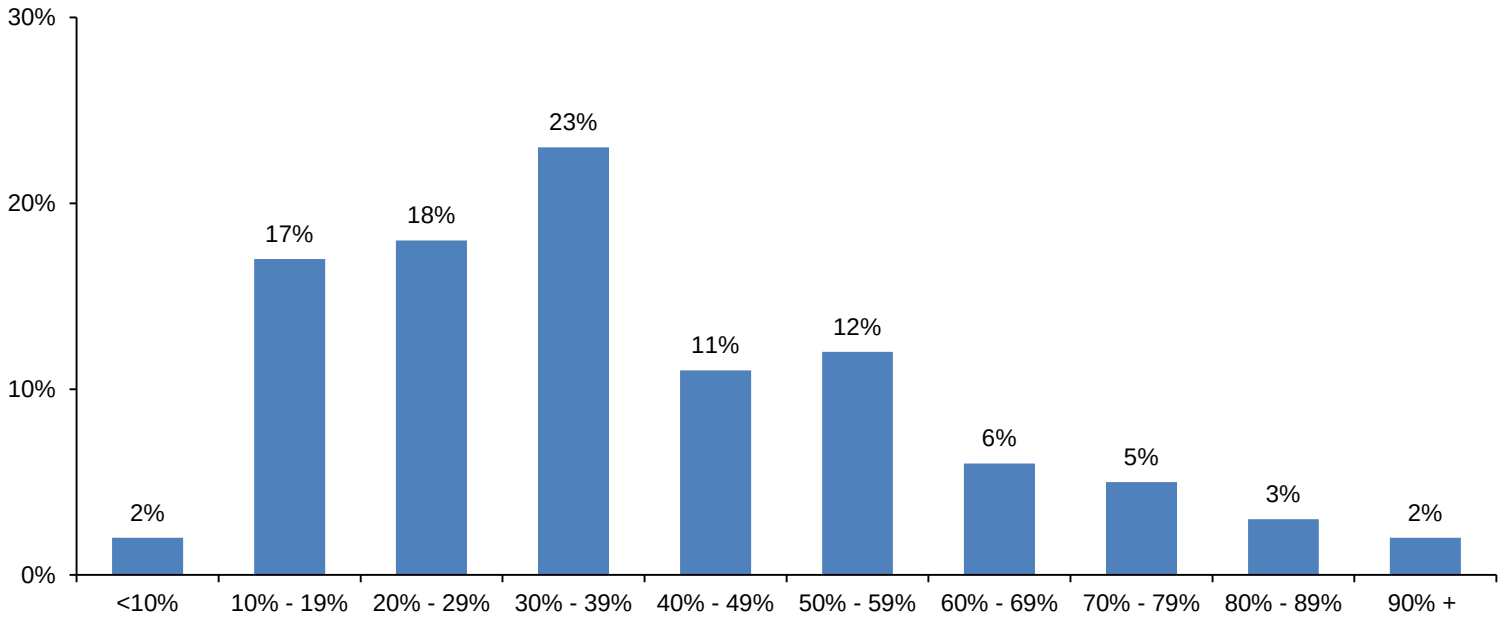
Data Center Budget

- Respondents were asked what percentage of their total IT budget is related solely to data center development and operations (but not computing hardware or applications).
- The overall average is 39%.
  - For companies with $15B+ revenues, the average is 46%.
  - For IT/Telecom companies, the average is 45%.



Base = Total (N=300)

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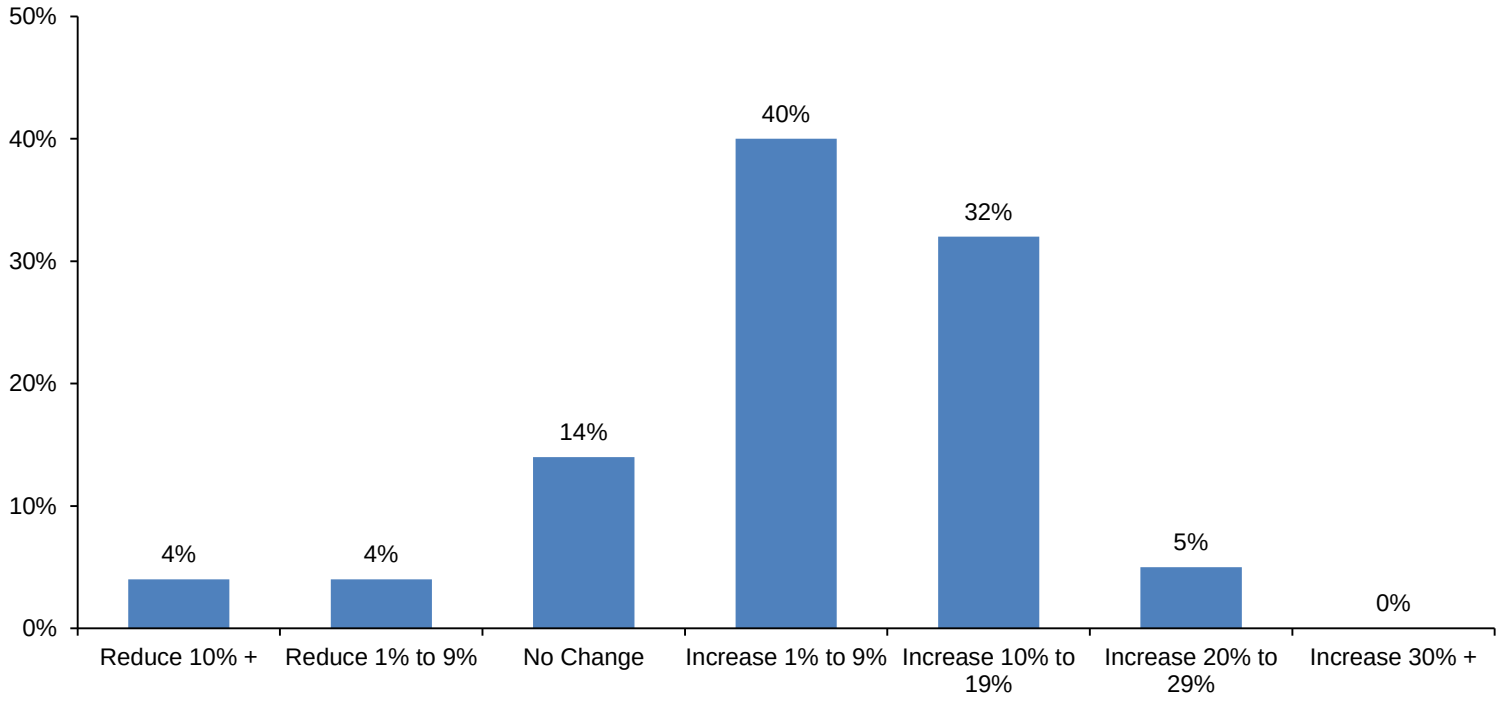
Change in Data Center Budget

- Respondents were asked by what percentage their total data center budget will change in 2012.
- Three fourths (77%) of the companies will see an increase in their data center budget. The overall average is an increase of 7.2%, similar to 7.7% in 2011.



Base = Total (N=300)

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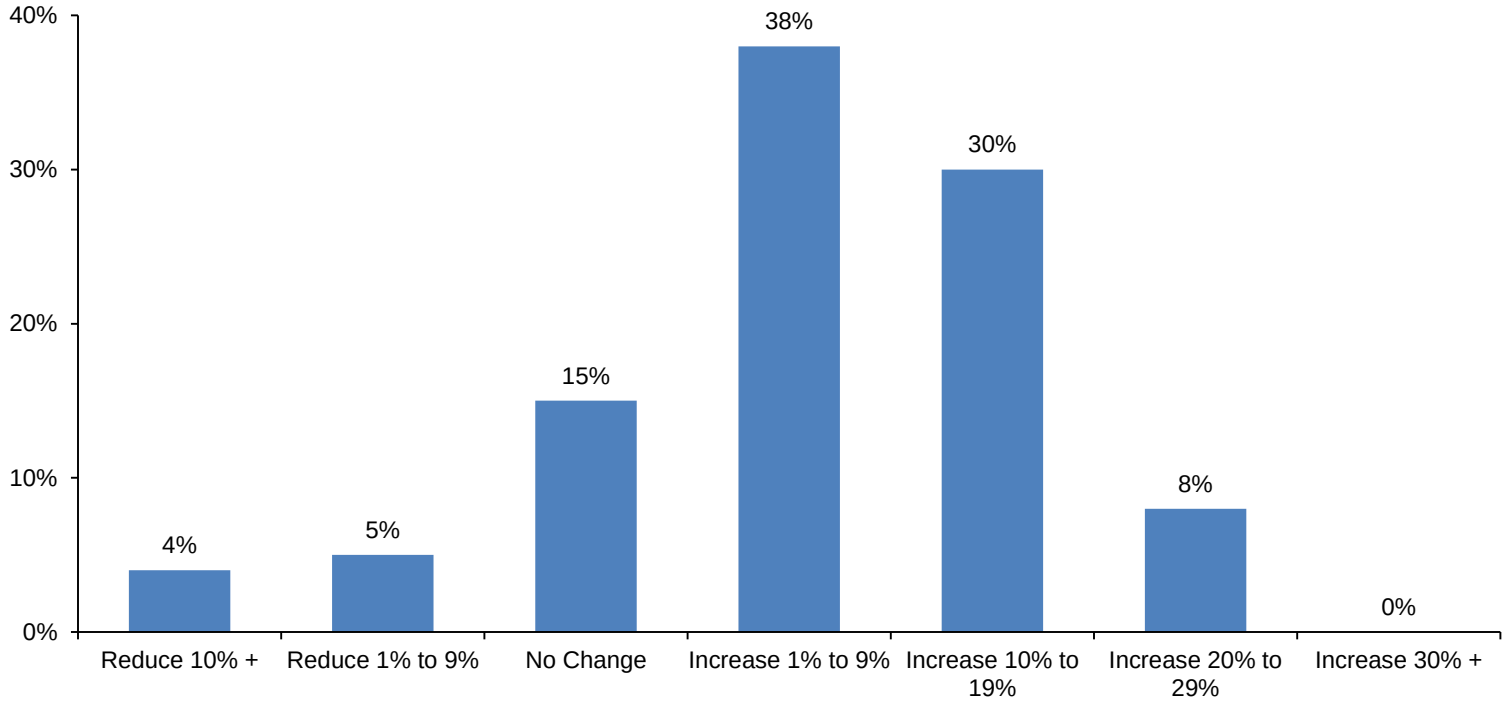
Change in IT Budget

- Respondents were asked by what percentage their total IT budget will change in 2012.
- Three fourths (76%) of the companies will see an increase in their overall IT budget. The overall average is an increase of 7.4%, similar to 7.5% in 2011.



Base = Total (N=300)

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DATA CENTER LOCATIONS

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Data Center Location Summary

- Respondents who definitely plan to expand in 2012 would prefer to locate a new or expanded data center in the major U.S. metro areas such as New York, Chicago, Los Angeles, Dallas, San Francisco and Phoenix.
- However, Hong Kong and Tokyo received more frequent mention than last year. London continues to be mentioned often.
- Security is cited as the most important factor on decisions about location.
- There is a tendency to choose a site close to the current work location. Two thirds (65%) choose their home city as one of their expanded data center locations.

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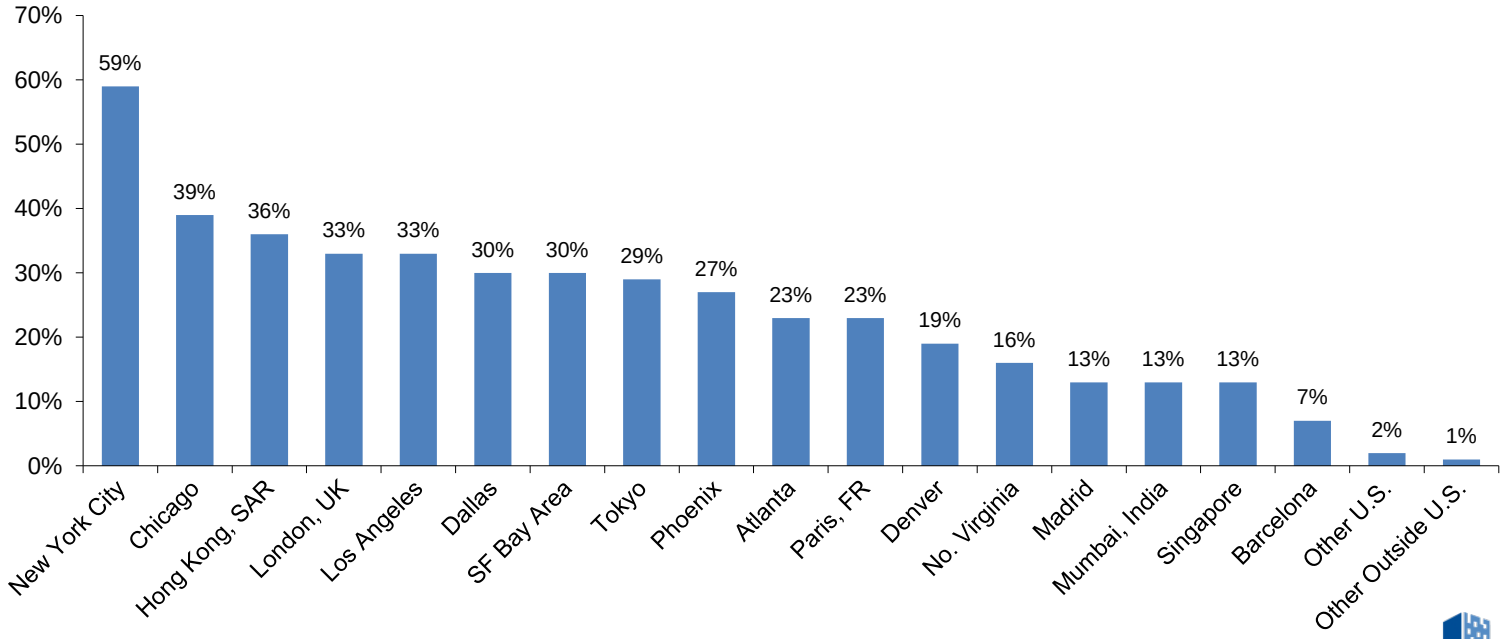
Locations for Expanded Data Centers

- This chart shows responses to the question of where respondents who definitely plan to expand in 2012 would prefer to locate a new or expanded data center.
- New York is the leading city for consideration. In the U.S., Chicago, Los Angeles, Dallas, San Francisco Bay Area and Phoenix are leaders.
- International locations such as Hong Kong, London and Tokyo rank higher than in previous years.



Base = Definitely Expand 2012 (N=128)

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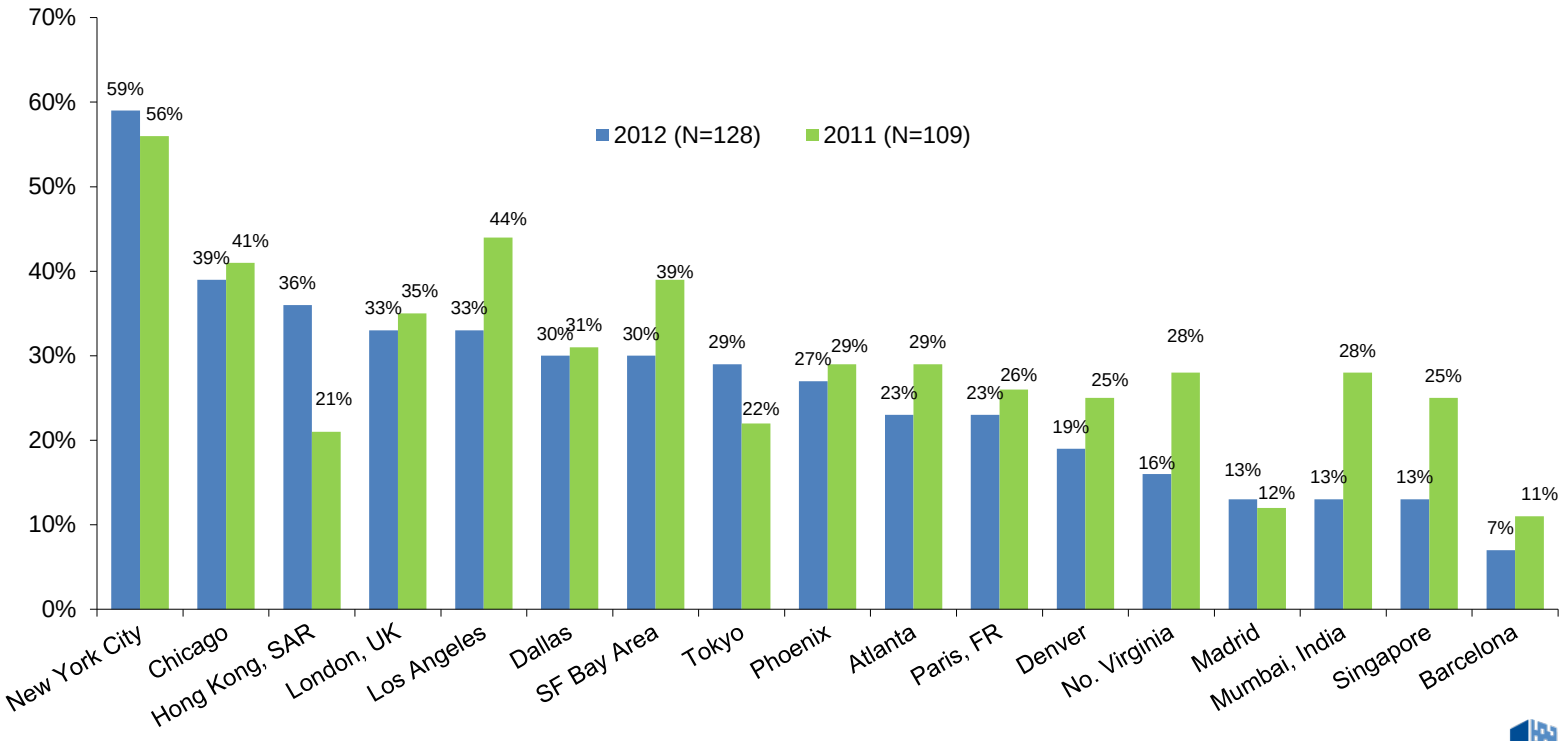
Trends in Locations for Expanded Data Centers

- This chart shows changes from 2011 to 2012 to the question of where respondents who definitely plan to expand would prefer to locate a new or expanded data center.
- The only increases are for New York, Hong Kong and Tokyo.



Base = Definitely Expand

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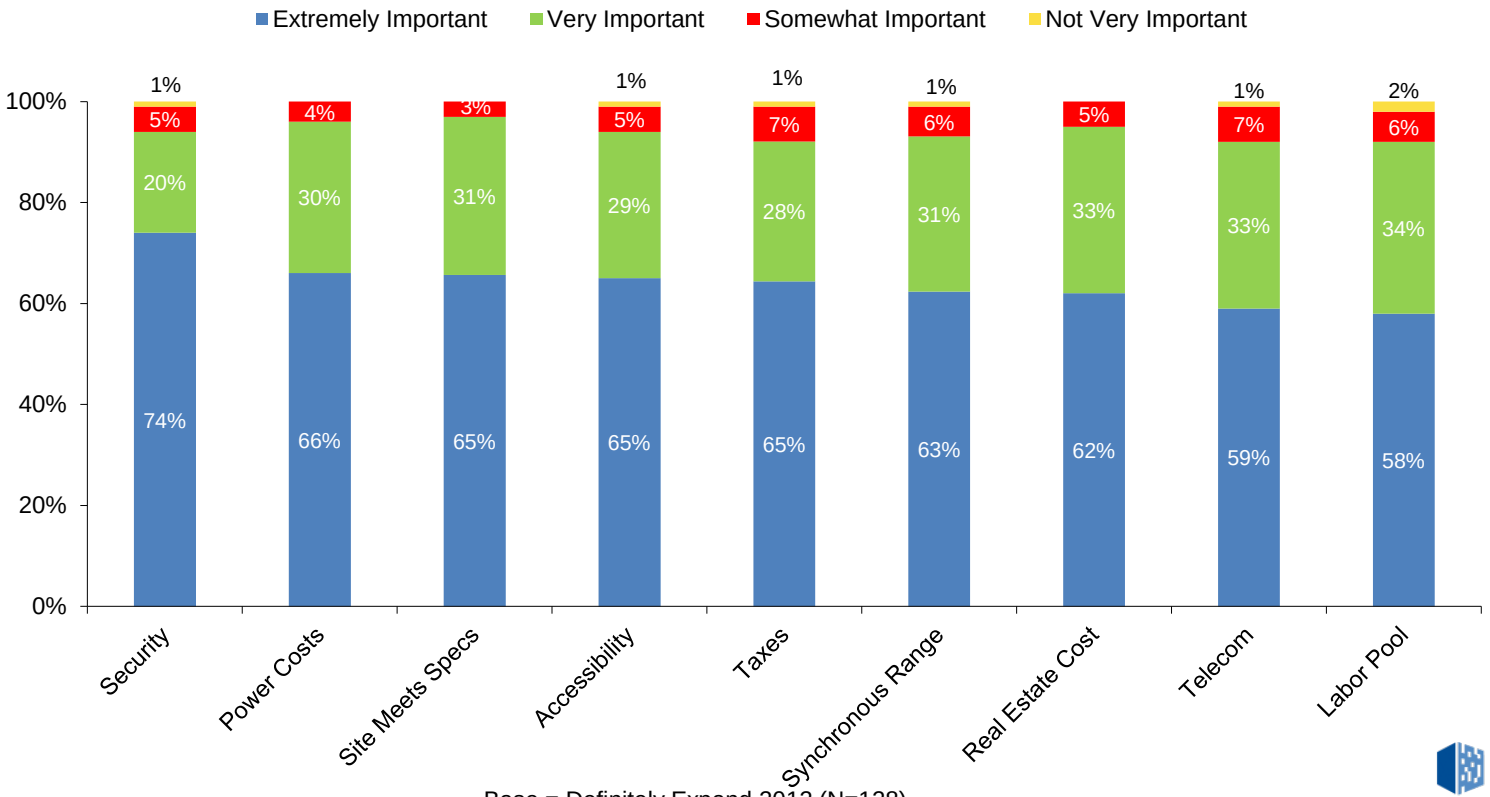
Factors in Choosing a Location

- Respondents who will definitely expand in 2012 were asked to rate the importance of several factors in selecting a geographic location for their data centers.
- Security is most important, followed by power costs and availability of a suitable site.



Base = Definitely Expand 2012 (N=128)

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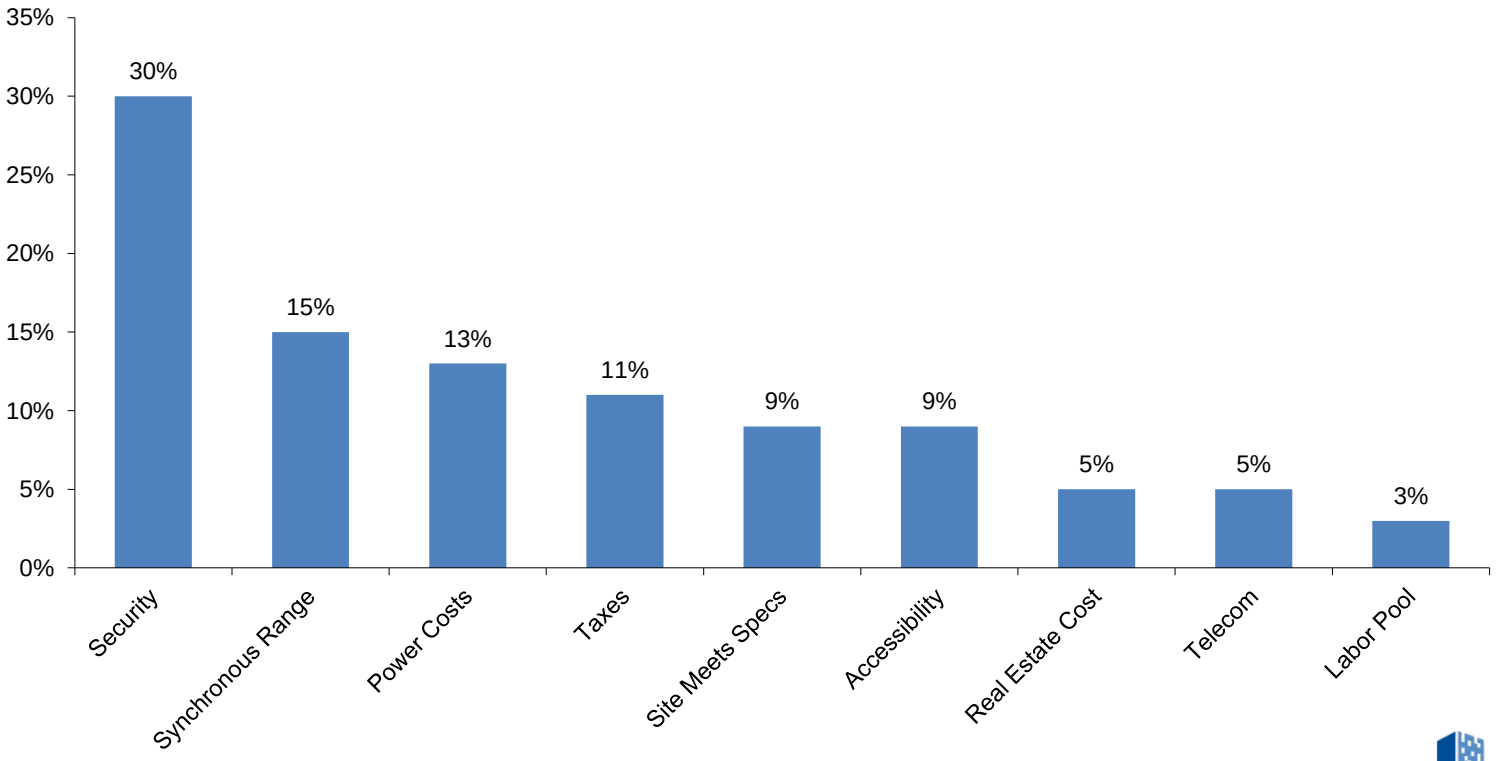
Main Factor in Choosing a Location

- Respondents who will definitely expand in 2012 were asked to indicate the single most important factor in selecting a geographic location for their data centers, assuming space were available.
- Security is most important, followed by synchronous range and power costs.



Base = Definitely Expand 2012 (N=128)

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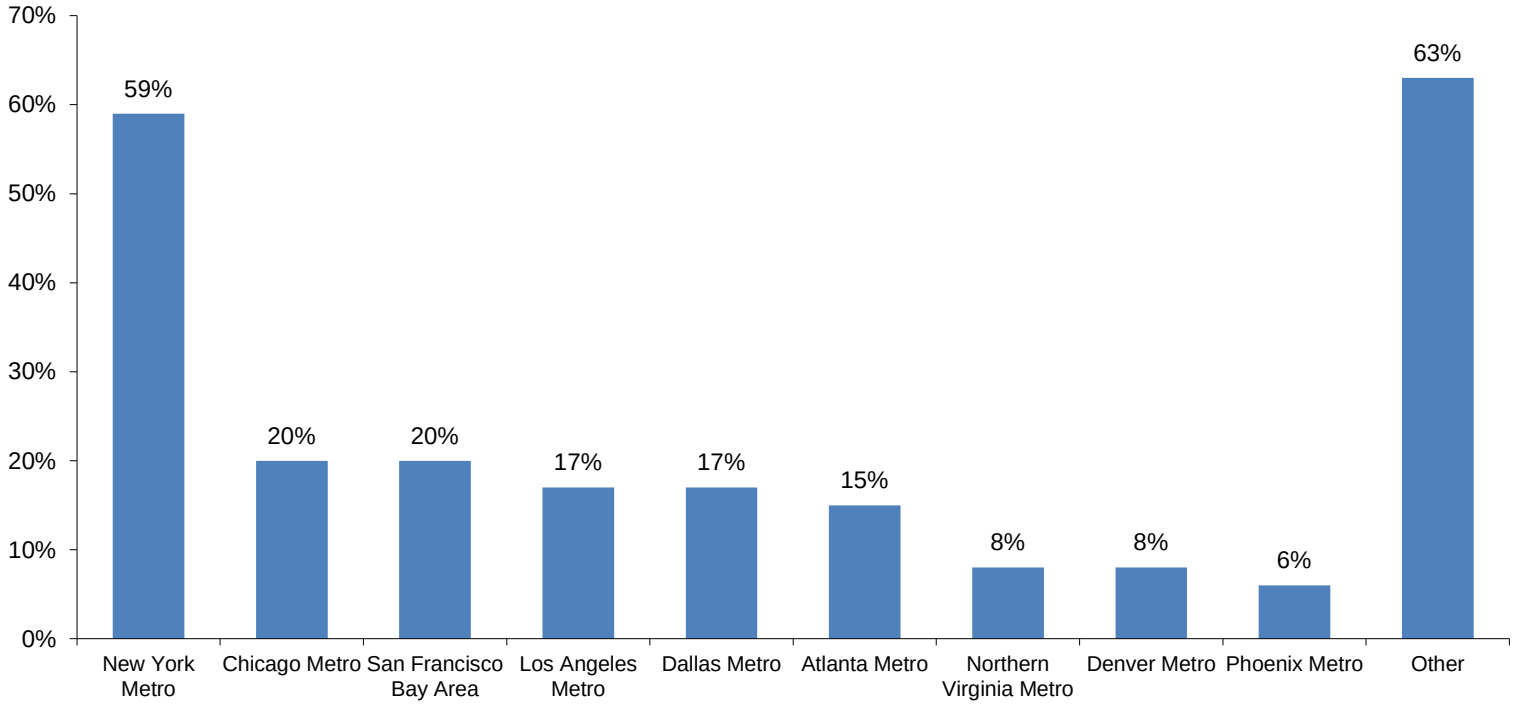
Locations of Respondent Workplaces

- This chart shows responses to the question of where respondents primarily work. Multiple responses were allowed for those with responsibilities for several sites.



Base = Definitely Expand 2012 (N=128)

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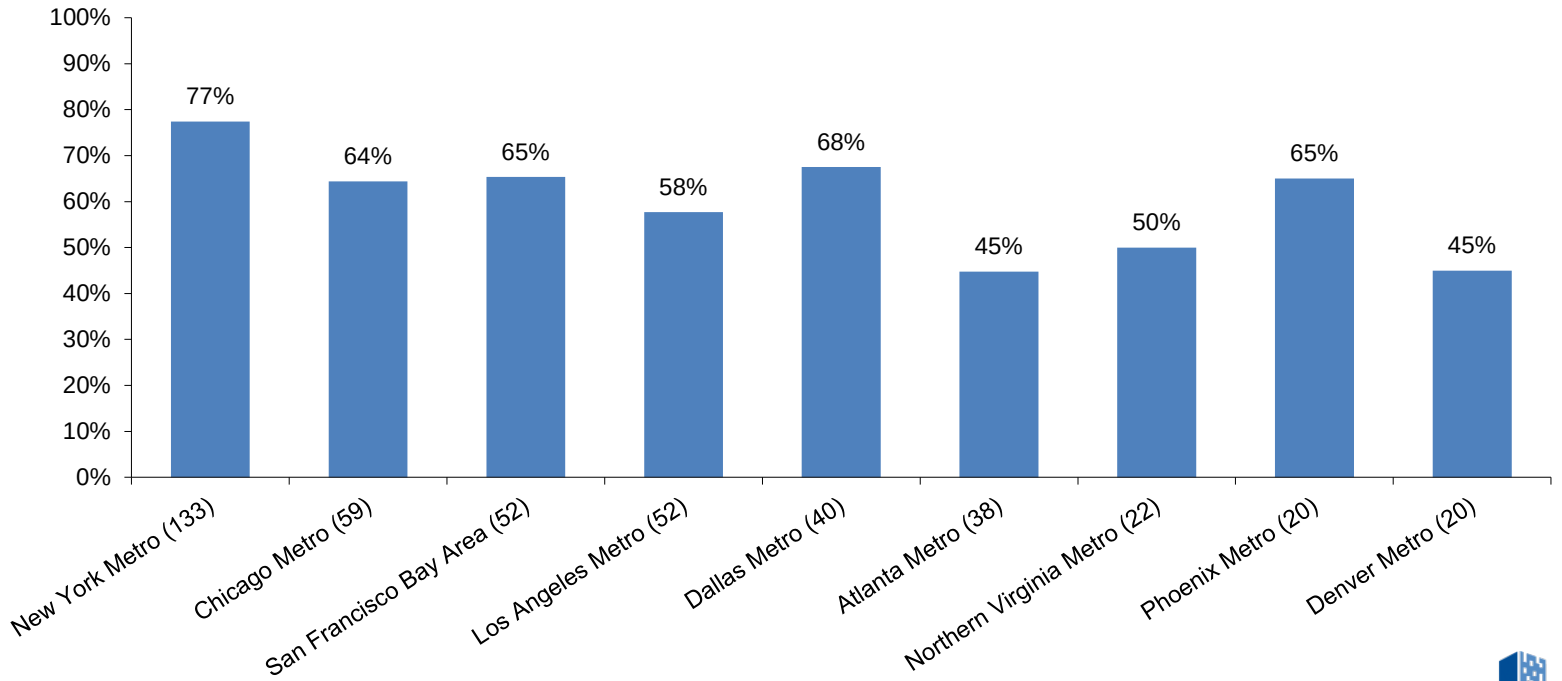
Preference for Home Town

- This chart shows the percentage of times someone who works in a metro area chose that metro area for a new or expanded data center.
- To provide enough cases for analysis, the data are based on the total sample. (Number of respondents in each city shown in parentheses. Some respondents indicated multiple cities in their responsibilities.)
- In total, nearly two thirds (65%) chose their own city.



Base = Total Sample

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APPENDIX

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Confidence Intervals

Total Sample

- At the 90% level of confidence for N=300:
  - The confidence interval around 50% is ± 4.7%
  - The confidence interval around 25% is ± 4.1%
- At the 95% level of confidence for N=300:
  - The confidence interval around 50% is ± 5.7%
  - The confidence interval around 25% is ± 4.9%

Definitely Expand 2012

- At the 90% level of confidence for N=128:
  - The confidence interval around 50% is ± 7.3%
  - The confidence interval around 25% is ± 6.3%
- At the 95% level of confidence for N=128:
  - The confidence interval around 50% is ± 8.7%
  - The confidence interval around 25% is ± 7.5%

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