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# Europe Campos Survey Results

November 2011

# Methodology

- From 24 October to 3 November, 2011, we conducted a Web-based survey using a European panel of IT decision-makers.
- 201 panel participants were selected from:
  - Large companies with at least €500M/£500M annual revenues or 2,000+ employees (for Ireland and Netherlands, €250M/£250M annual revenues or 1,000+ employees).
  - Six countries: France (N=42), Germany (N=25), Spain (N=20), United Kingdom (N=65), Netherlands (N=25) and Ireland (N=24).
- Participants must be IT/MIS/IS, Finance, or Real Estate Executives or Management.
  - Participants must be responsible for managing a data centre, contract execution for or implementing a new data centre or expanding existing data centres. Internal data centre customers are also eligible.
- 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 Centre Profile

- Most (66%) of the companies have 3 or fewer data centres, but one in ten (10%) has 6 or more.
- Over half (60%) of the companies have built a new data centre in the past 24 months.
- Two thirds (66%) of participants report an average raised floor area of more than 10,000 square feet and the average is 14,000 square feet.
- The average power capacity is 5.3 kW per rack and nearly two thirds (66%) use less than 6 kW per rack.
- More than four in ten have dedicated backups (2N or better) for components in their data centres.
- Three fourths (73%) meter power use, up from 68% in the previous wave. The average reported PUE is 2.61.
- Over half (54%) report using a shipping container module as a data centre solution, up from 46% in the previous wave.
- Three in five (60%) report using hot or cold aisle containment, up from 51% in the previous wave.

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# Overall Summary

## Expansion Plans

- Six in seven (85%) say they plan to expand their data centres in 2012.
  - One in four (23%) say they definitely plan to expand in 2012 and another 62% say they will probably expand.
  - One in ten (10%) are unlikely to expand in either 2012 or 2013.
- Spain (35%) and UK (32%) are more likely to definitely expand in 2012 than France (14%) or Netherlands (12%).
- One third (34%) of the larger companies (€10Bn+) will definitely expand in 2012 vs. 17% of the smaller companies.
- Among those with any plans to expand (definitely or probably in 2012):
  - Half (51%) say they plan to expand in two or more locations.
  - Disaster recovery, power issues and security are the most important reasons for expansion.
  - Among the possible types of expansion, increased power capacity (50%) and cooling (49%) are more often mentioned.

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# Overall Summary

## Expansion Plans (Cont'd)

- On average, participants want 15,600 square feet for their expanded data centres, compared with 14,500 square feet in the previous wave.
  - Among the largest companies (€20Bn+), 29% want 25,000 square feet or more.
- Participants want 5.7 kW per rack on average in their expanded data centres.
  - Larger companies (€20Bn+) want more power per rack (average 6.6 kW).
- For each of the components in their data centres, approximately two in five (38% to 44%) want high redundancy (2N or better).
- Information about power reliability and supply, data centre operations/ management and managing expansion is seen as most important for data centre decisions and planning.

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# Overall Summary

## ExpanSion Strategies

- Respondents who had any plans to expand their data centres were asked to select among the alternatives below how they planned to implement the expansion:
  - Build with or use a data centre design and construction partner.
  - Lease space from a wholesale data centre provider.
  - Lease space from a colocation provider.
  - Use a shipping container module as a data centre solution.
  - Build themselves.
  - Have not decided yet.
- Respondents could choose one or more of these alternatives.

## Implementing Expansion

- Three in five (59%) will use a partner, either for design and build (42%) or to lease wholesale data centre space (31%) or both (14%).
  - Use of a partner is down from 69% in the previous wave.
- Respondents are considering more alternatives to using a partner for either design/build or to lease wholesale space than in the previous wave.

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# Overall Summary

**Implementing Expansion (cont'd)**

- Alternatives to using a partner are:
  - Over two in five (42%) plan to build the expansion themselves.
  - One in three (32%) will lease space from a colocation provider and one in four (26%) plan to use a shipping container module as a solution.
  - One in twenty (5%) has not decided yet.
- One in three (34%) of those who would use a partner are aware of DLR, up from 28% in the previous wave.
- In each country in the survey, at least as many plan to use a partner as other implementation methods.
  - Spain is more likely to lease colocation space than any other country.
  - France is more likely to use a partner.

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# Overall Summary

## Data Centre Locations

- When asked in which countries they would prefer to locate a new data centre, most prefer countries in Europe, led by UK (39%), France (31%) and Germany (30%).
  - The majority choose their own country (69%), in addition to sites in other countries.
- The most preferred cities are London (32%) and Paris (26%).
  - Over half (53%) choose cities in their own country.
- When asked about factors in choosing a data centre site, site availability and security are the most important, followed by telecom and accessibility to company personnel.
  - Labour pool and taxes are less important.

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# DATA CENTER PROFILE

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# Data Centre Summary

- Most (66%) of the companies have 3 or fewer data centres, but one in ten (10%) has 6 or more.
- Over half (60%) of the companies have built a new data centre in the past 24 months.
- Two thirds (66%) of participants report an average raised floor area of more than 10,000 square feet and the average is 14,2000 square feet.
  - Companies in Ireland have smaller existing space (11,000 sf) and France (19,000 sf) reports the largest.
- The average power capacity is 5.3 kW per rack and nearly two thirds (64%) use less than 6 kW per rack.
- More than four in ten have dedicated backups (2N or better) for the components in their data centres.
- Nearly three fourths (73%) meter power use.  The average reported PUE is 2.61.
- Over half (54%) report using a shipping container module as a data centre solution, with Spain (70%) and UK (65%) reporting more use.
- Three in five respondents (60%) report using hot or cold aisle containment in their data centres.

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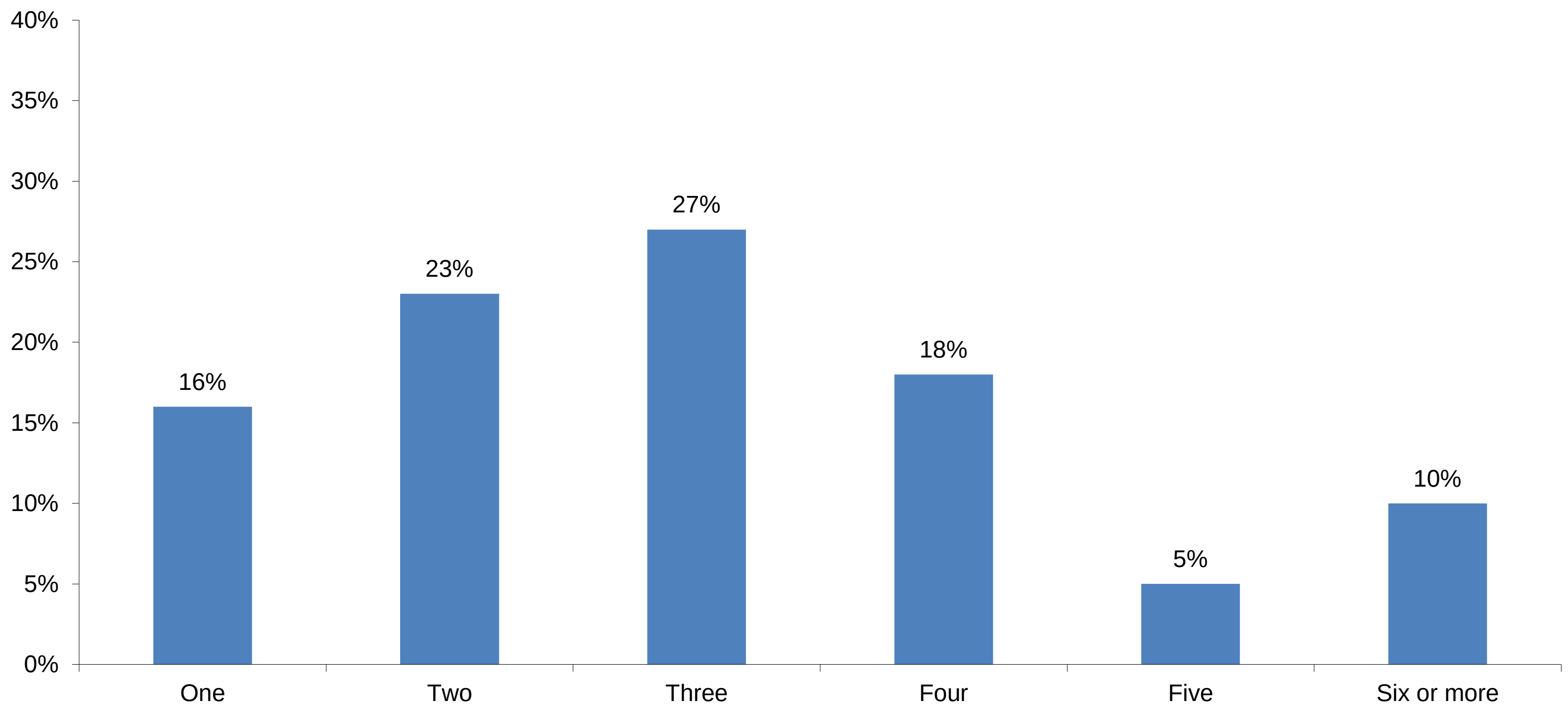
# Number of Data Centres

- Participants were asked how many data centres their company operates now, excluding “IT closets” in branch offices.
- Most companies (66%) have 3 or fewer data centres, but one in ten companies has 6 or more data centres.




Base = Total (N=201)

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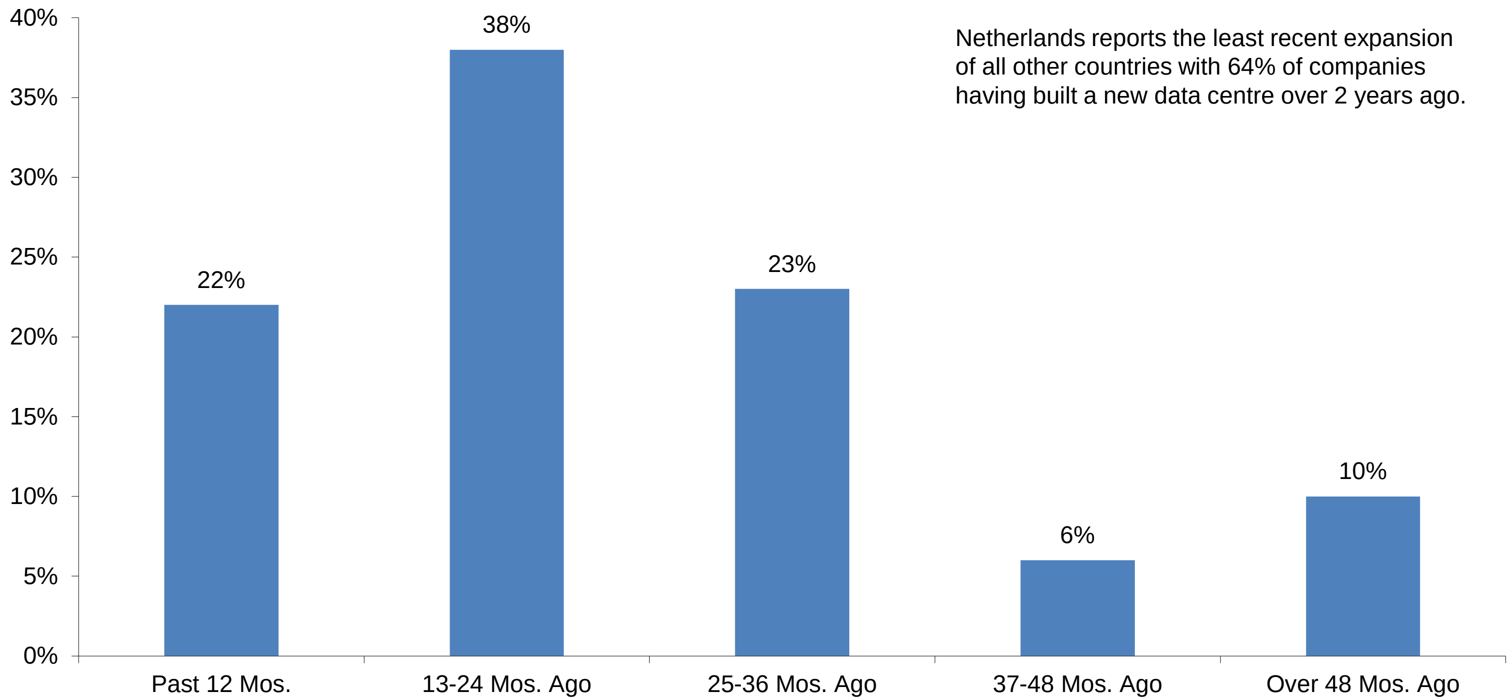
# Most Recent Expansion

- Respondents were asked when their company last built or acquired a new data centre.
- Over half (60%) of the companies have built a new data centre in the past two years.




Base = Total (N=201)

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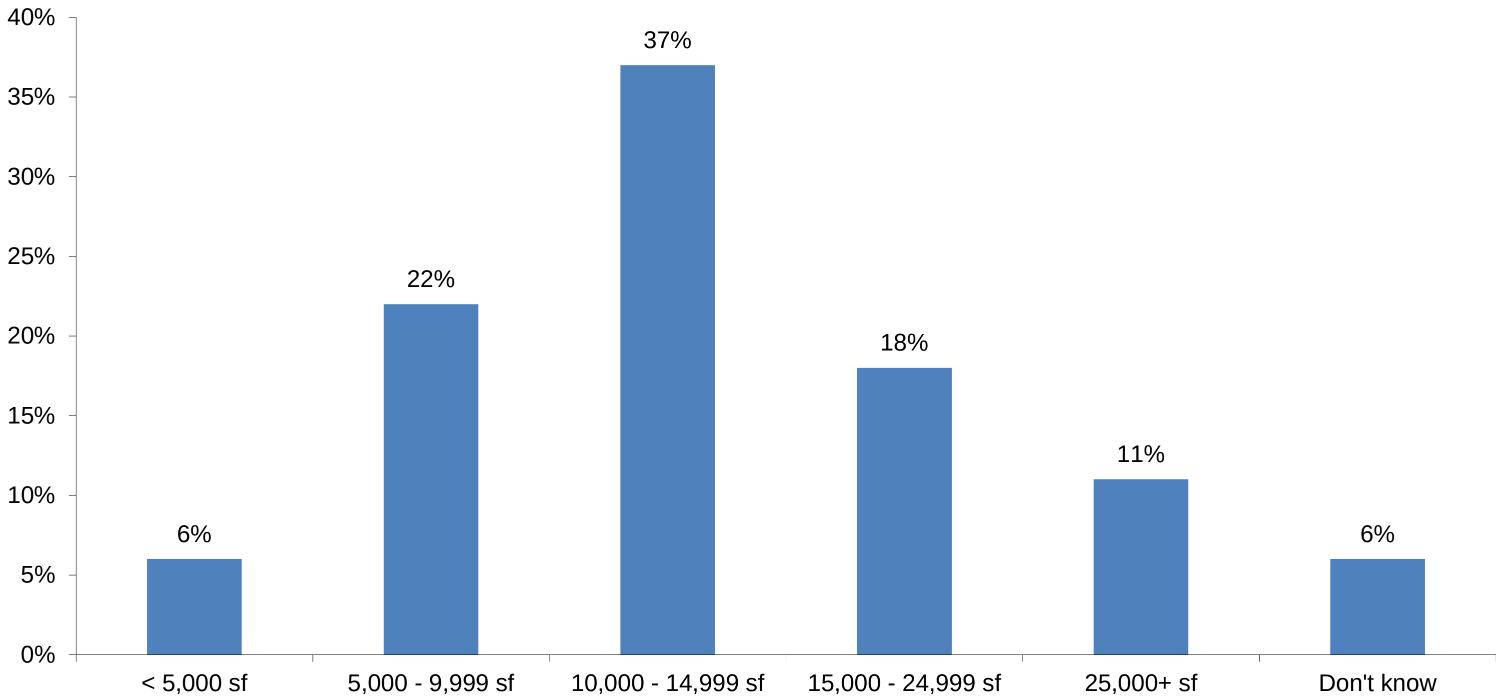
# Current Space

- Participants were asked about the average area (both in square metres and square feet) of raised floors in their data centres.
- Two thirds of participants (66%) report averages of 10,000 square feet (100 square metres) or more.  The overall average is 14,200 square feet, compared with 13,900 square feet in the previous wave.




Base = Total (N=201)

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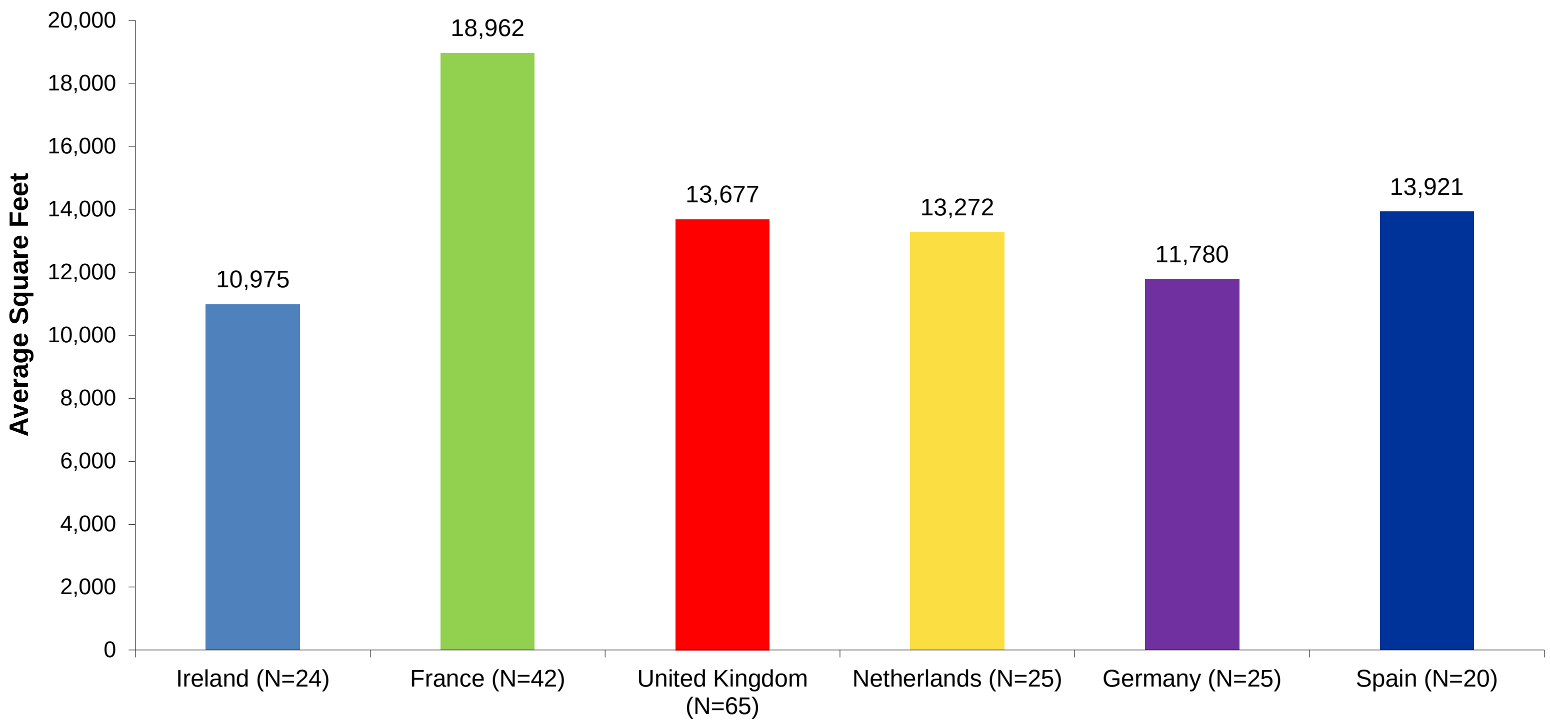
# Country and Current Space

- This chart shows the average square feet of raised floor space in their current data centres by country (asked in both feet and metres).
- Companies in Ireland report smaller average existing space than other countries, but there is a high percentage of 'don't know' responses. France reports the largest data centres.

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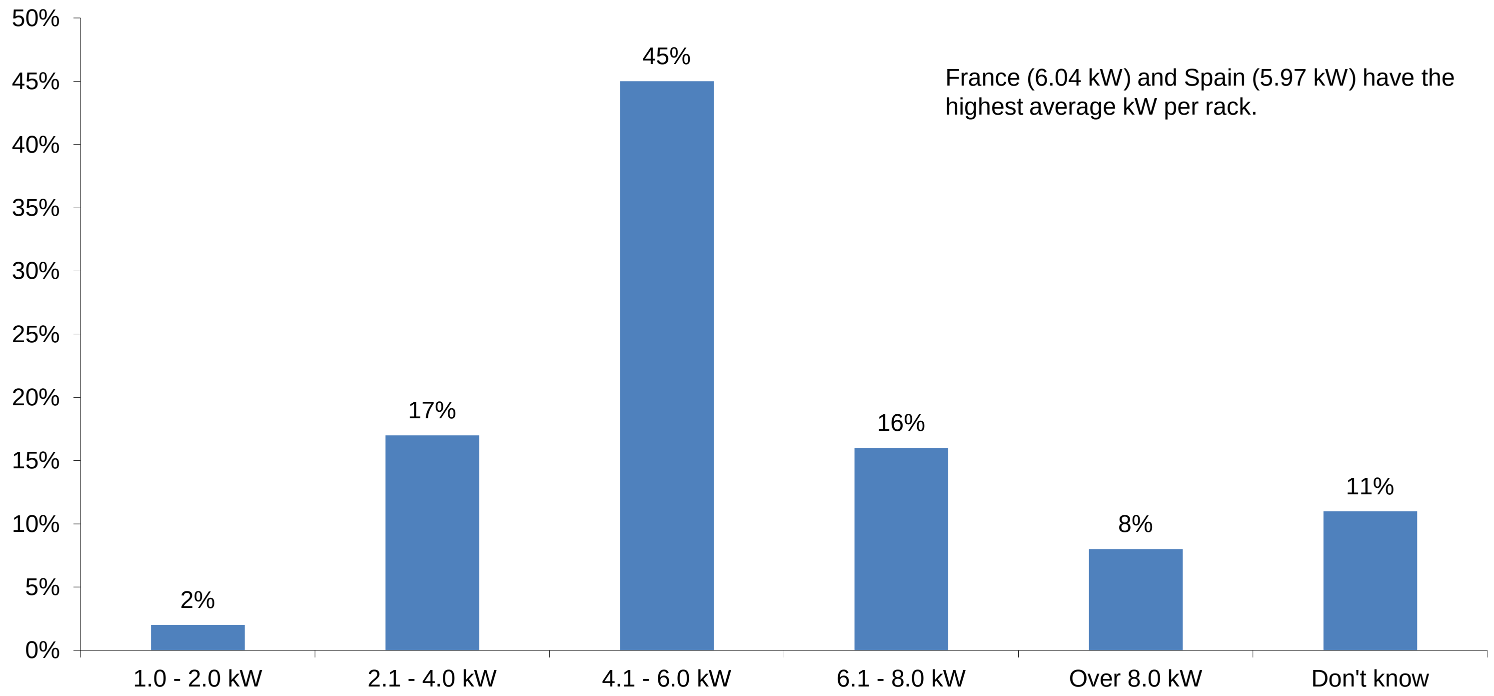
# Current Power

- Participants were asked about the average kilowatts per rack across their data centres.
- The average power capacity is approximately 5.3 kW per rack, compared with 5.5 kW in the previous wave.
- Nearly two thirds (64%) use less than 6 kW per rack.




Base = Total (N=201)

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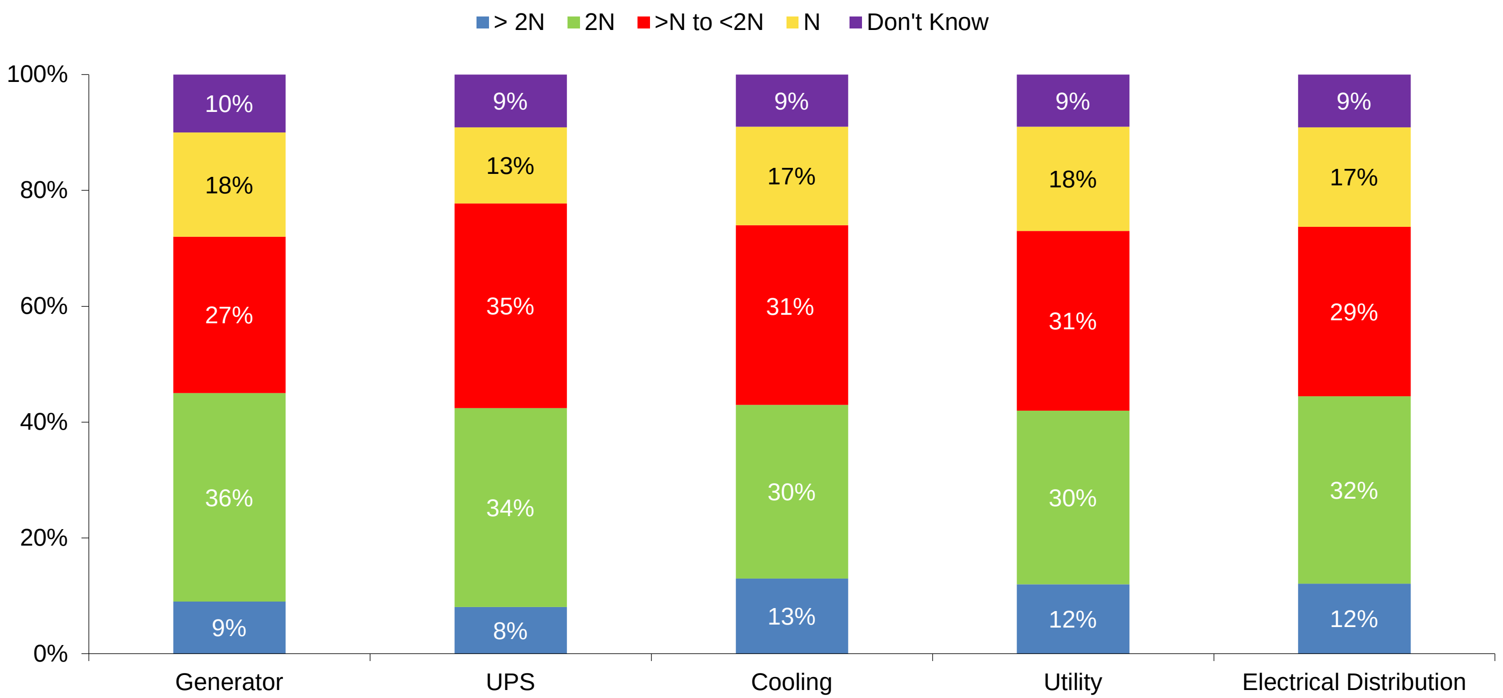
# Current Levels of Redundancy

- Participants were asked about redundancy for the components in their data centres.  Approximately 1 in 6 have no redundancy (N).
- Approximately 3 in 10 have more than N but less than 2N levels of redundancy (shown as >N to <2N).
- More than 4 in 10 have dedicated back-up (2N) or better than dedicated back-up (greater than 2N).




Base = Total (N=201)

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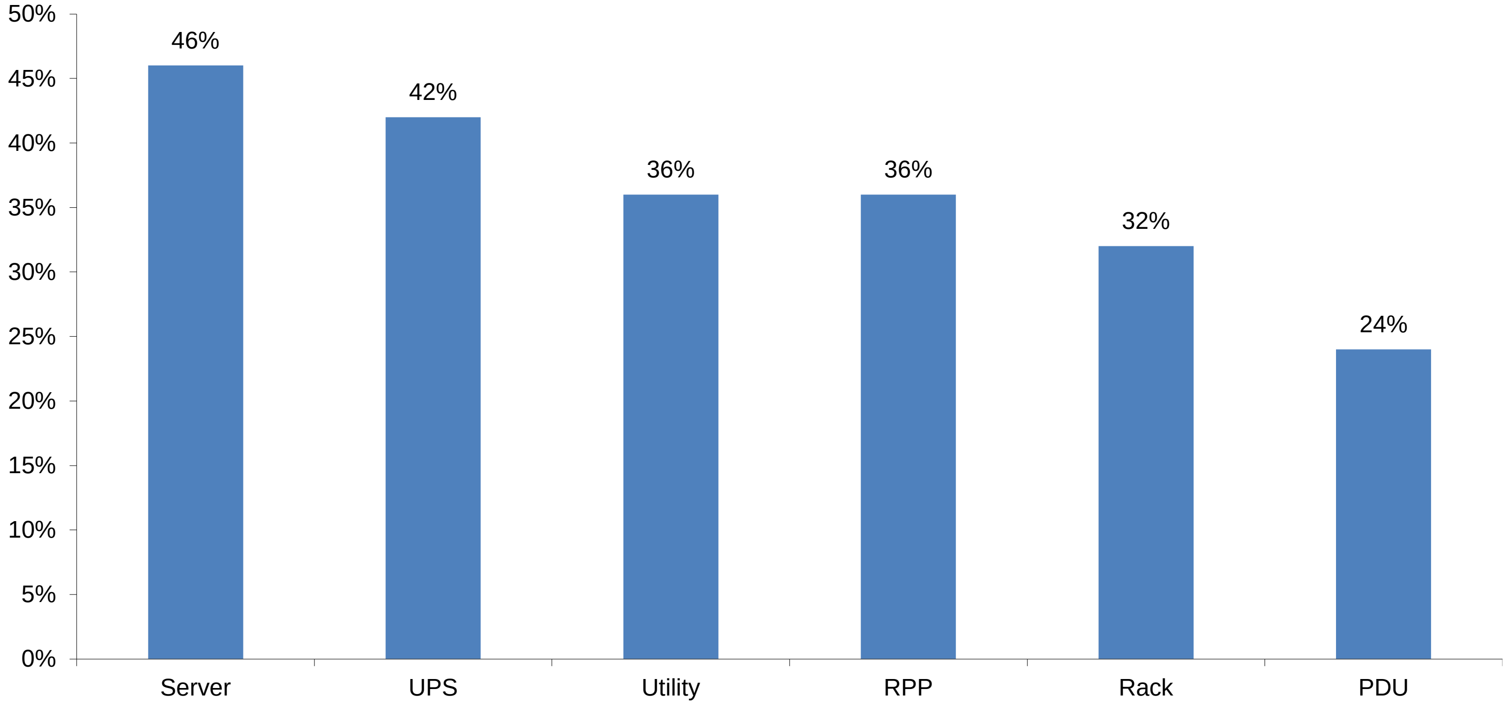
# Power Metering

- Respondents were asked whether they measure power use and, if so, where they measure it.
- 73% say they measure power use, versus 68% in the last survey wave.




Base = Measure Power (N=146)

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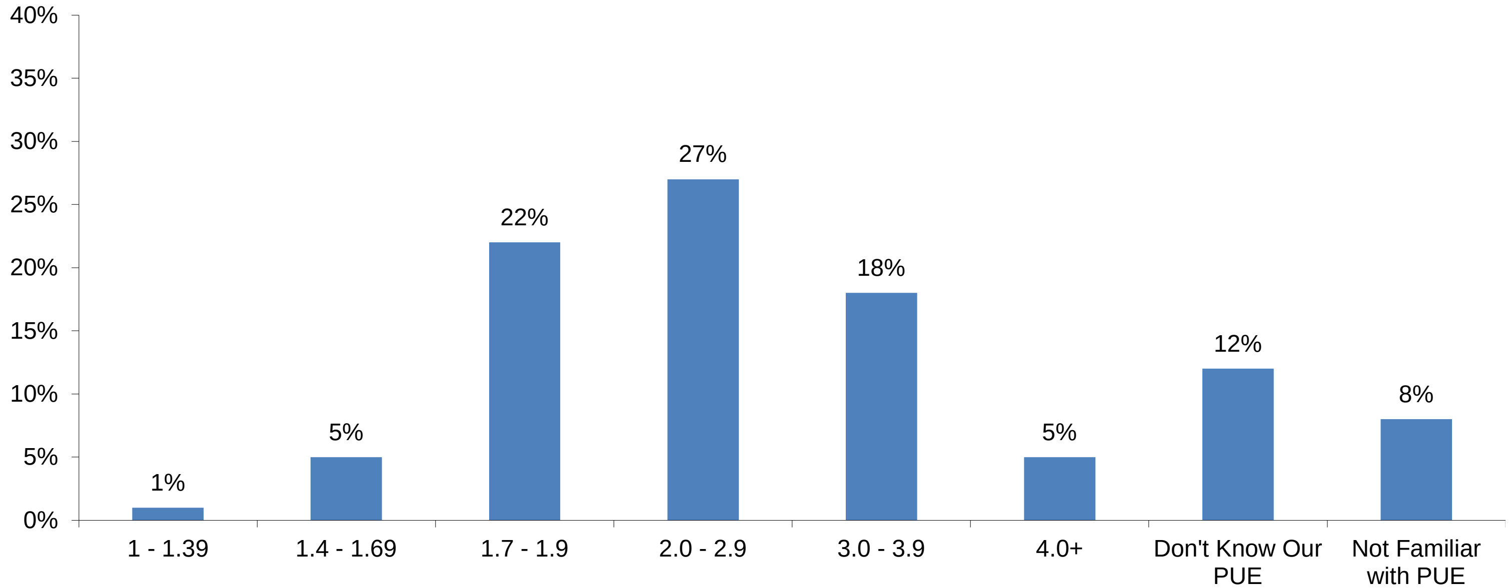
# Power Usage Effectiveness

- Respondents were asked about the average power usage effectiveness (PUE) of their data centres.
- One in twelve (8%) is unfamiliar with the term PUE.
- One in eight (12%) doesn't know their PUE, compared with 18% in the last wave.
- The average reported PUE is 2.61.  Nearly one in four (23%) reports a PUE of 3 or more and 28% report a PUE below 2.0.




Base = Total (N=201)

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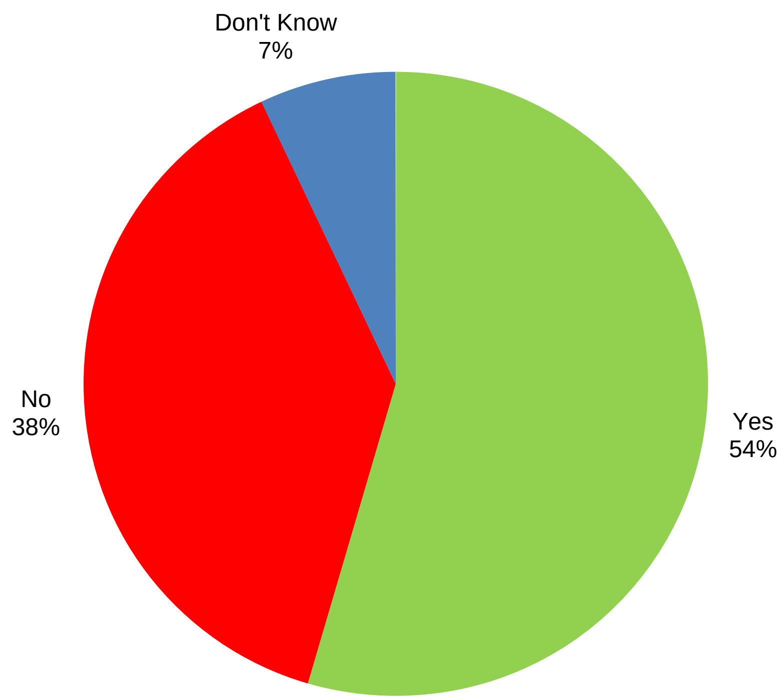
# Container Solutions

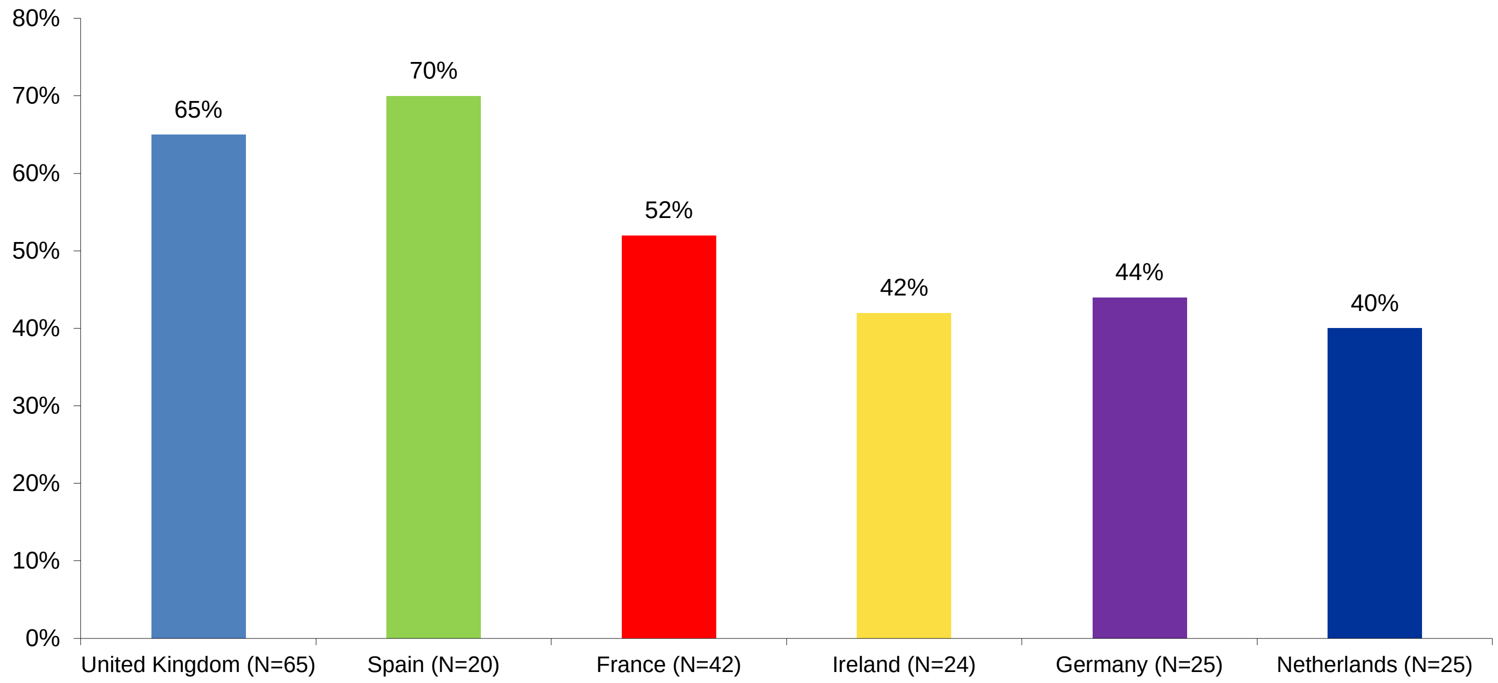
- Over half of the respondents (54%) report using a shipping container module as a data centre solution, compared with 46% in the previous wave.




Base = Total (N=201)

# Country and Container Solutions

- The reported use of shipping container modules as a data centre solution varies widely among countries.
- Spain (70%) and UK (65%) are more likely to report using a shipping container solution than other countries.




Note: Small sample sizes

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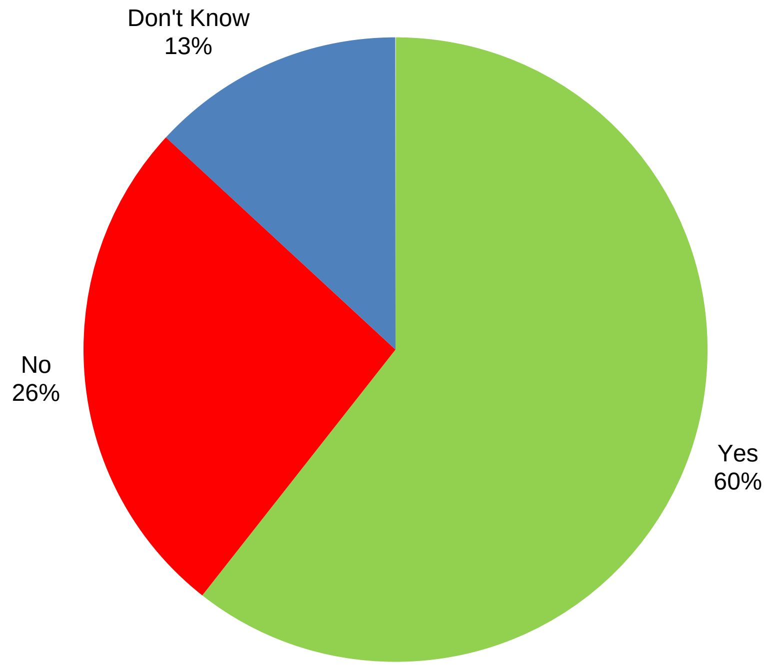
# Hot/Cold Aisle Containment

- Three in five respondents (60%) report using hot or cold aisle containment in their data centres, up from 51% in the previous wave.




Base = Total (N=201)

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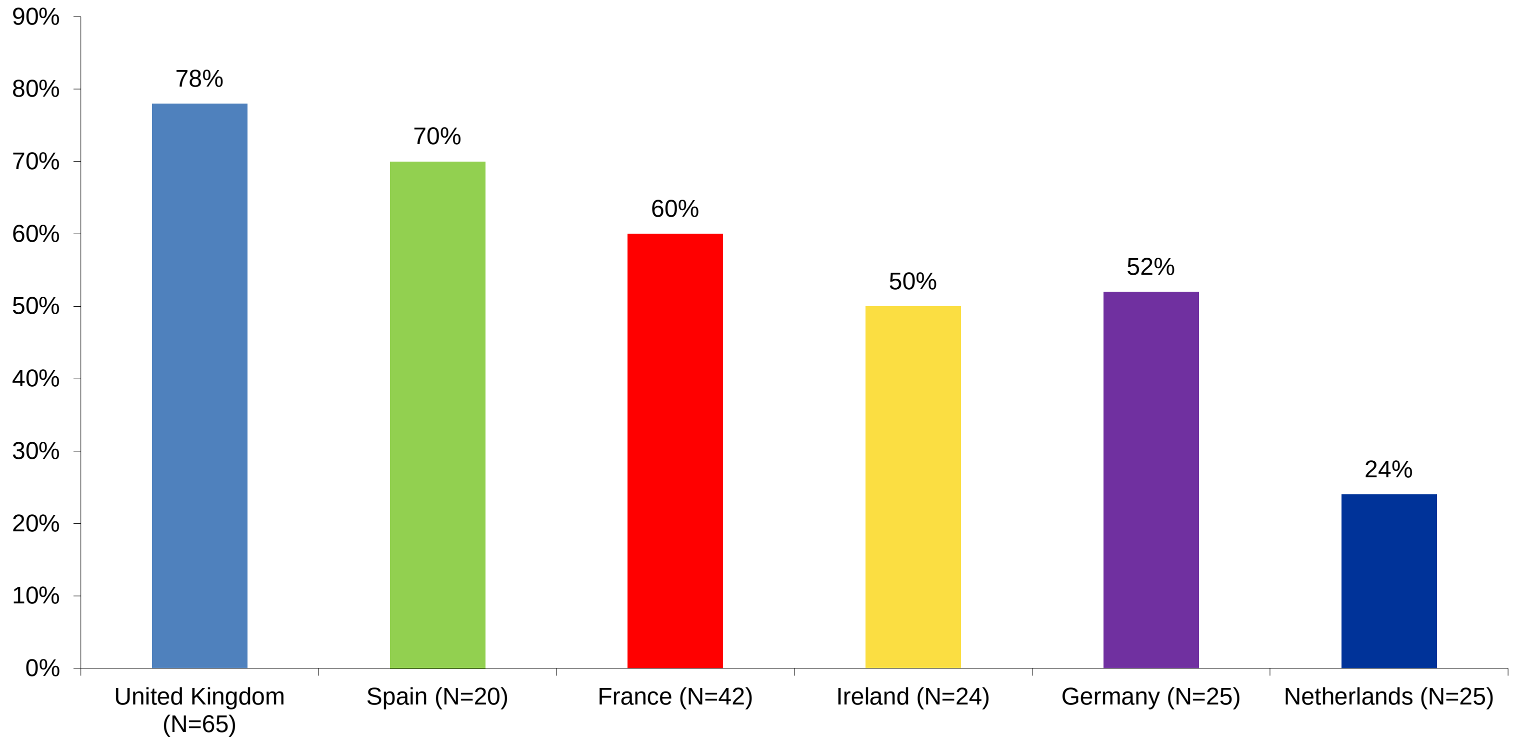
# Country and Aisle Containment

- The reported use of hot and cold aisle containment varies widely among countries.
- UK (78%) and Spain (70%) are more likely to report using hot/cold aisle containment and Netherlands (24%) is least likely.




Note: Small sample sizes

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# EXPANSION PLANS

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# Expansion Plan Summary

- Six in seven (85%) say they plan to expand their data centres in 2012.
  - One in four (23%) say they definitely plan to expand in 2012 and another 62% say they will probably expand.
  - Nearly one in four (22%) say they will definitely expand in 2013.
  - One in ten (10%) are unlikely to expand in either 2012 or 2013.
- Spain (35%) and UK (32%) are more likely to definitely expand in 2012 than France (14%) or Netherlands(12%).
- One third (34%) of the larger companies (€10Bn+) will definitely expand in 2012 vs. 17% of the smaller companies.
- Among those with any plans to expand (definitely or probably in 2012):
  - Half (51%) say they plan to expand in two or more locations.
  - Disaster recovery, power issues and security are the most important reasons for expansion.
  - Among the possible types of expansion, increased power capacity (50%) and cooling (49%) are more often mentioned.

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# Expansion Plan Summary (Cont'd)

- On average, participants want 15,600 square feet for their expanded data centres, compared to 14,500 square feet in the previous wave.
  - Among the largest companies (€20Bn+), 29% want 25,000 square feet or more.
- Participants want 5.7 kW per rack on average in their expanded data centres.
  - Larger companies (€20Bn+) want more power per rack (6.6 kW).
- For each of the components in their data centres, approximately two in five (38% to 44%) want high redundancy (2N or better).
- Information about power reliability and supply, data centre operations/ management and managing expansion is seen as most important for data centre decisions and planning.

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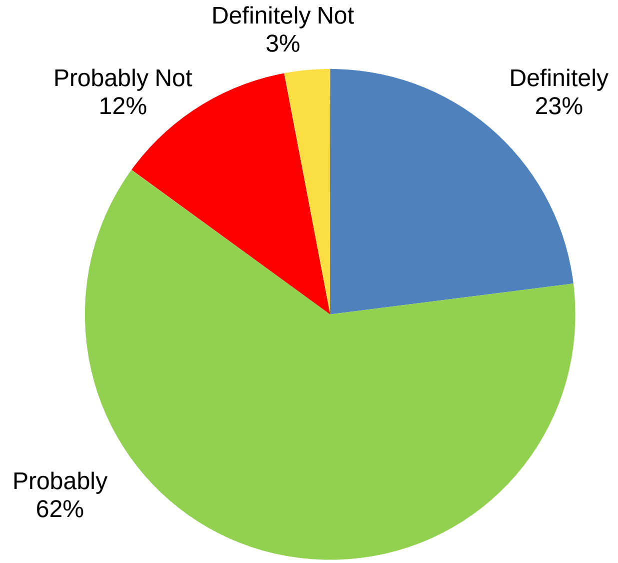
# Expansion Plans in 2012

- Respondents were asked how likely they are to expand their data centres during 2012.
- More than six in seven (85%) say they will definitely or probably expand in 2012.
  - This compares with 82% who said in January that they would definitely or probably expand in the coming year (2011).
- Nearly one in four (23%) say they have definite plans to expand in 2012, compared to 25% in the previous wave.




Base = Total (N=201)

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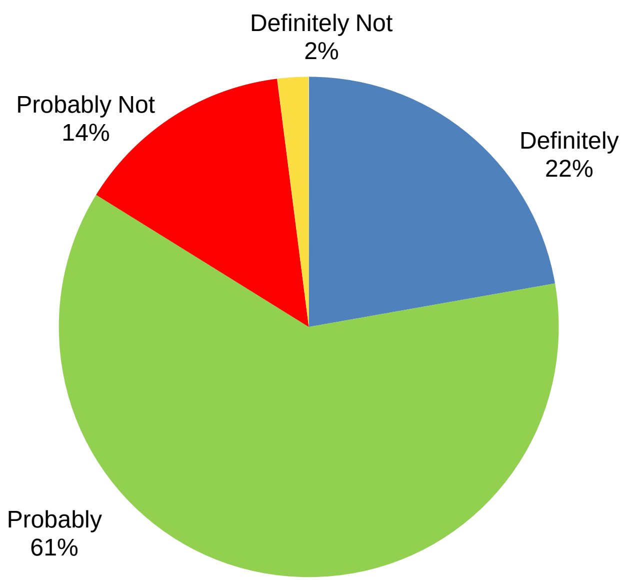
# Expansion Plans in 2013

- Respondents were asked how likely they are to expand their data centres during 2013.
- Five in six (83%) say they definitely or probably expand in 2013.
- One in eight (13%) will definitely expand in both 2012 and 2013.
- Nine in ten (90%) will definitely or probably expand in either 2012 or 2013.




Base = Total (N=201)

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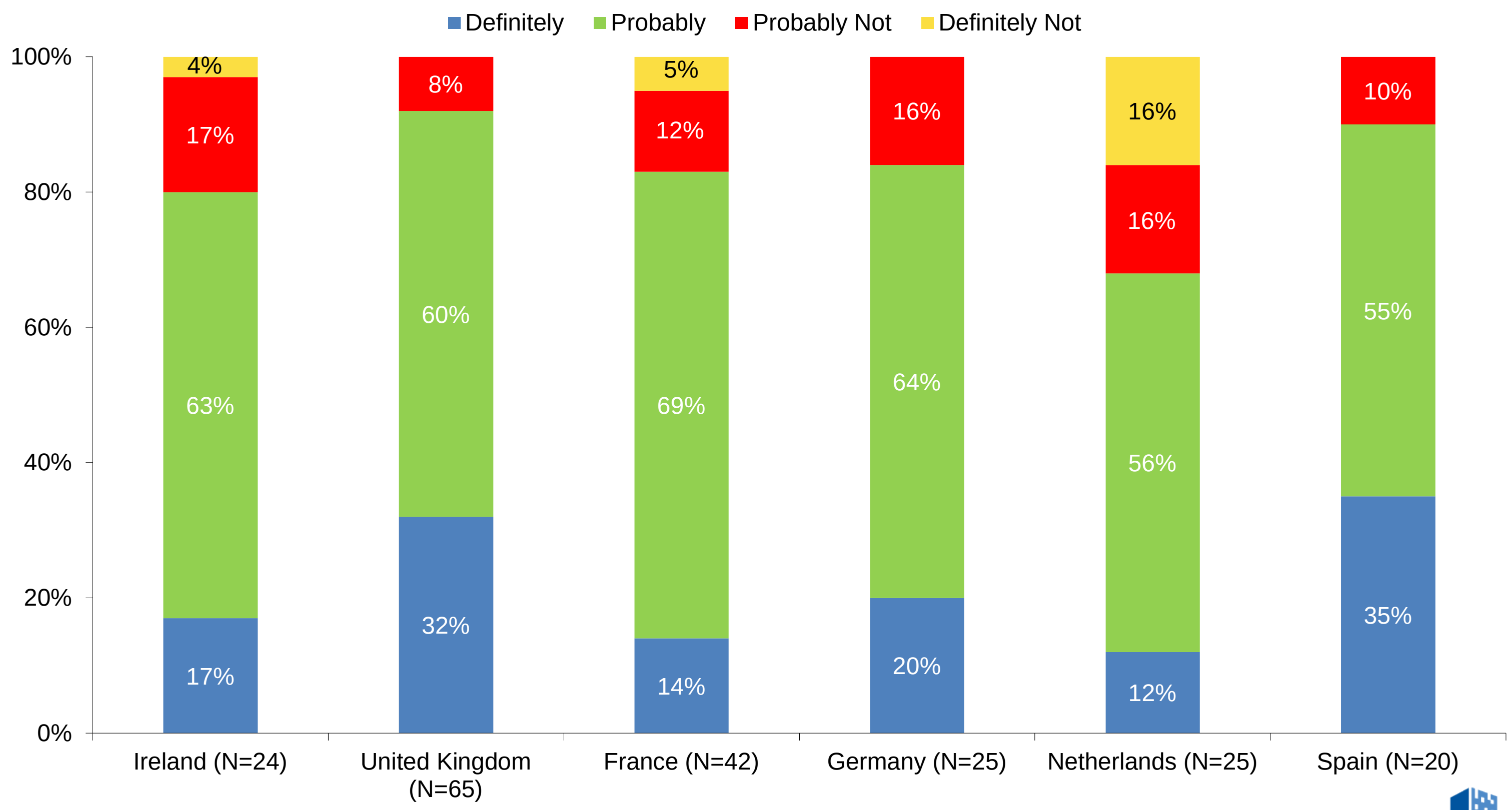
# Country and Expansion Plans

- This chart shows the expansion plans for 2012 by country.
- Ireland and France are less likely to 'definitely expand' their data centres than in the previous wave, while Spain is more likely to 'definitely expand'.




Note: Small sample sizes

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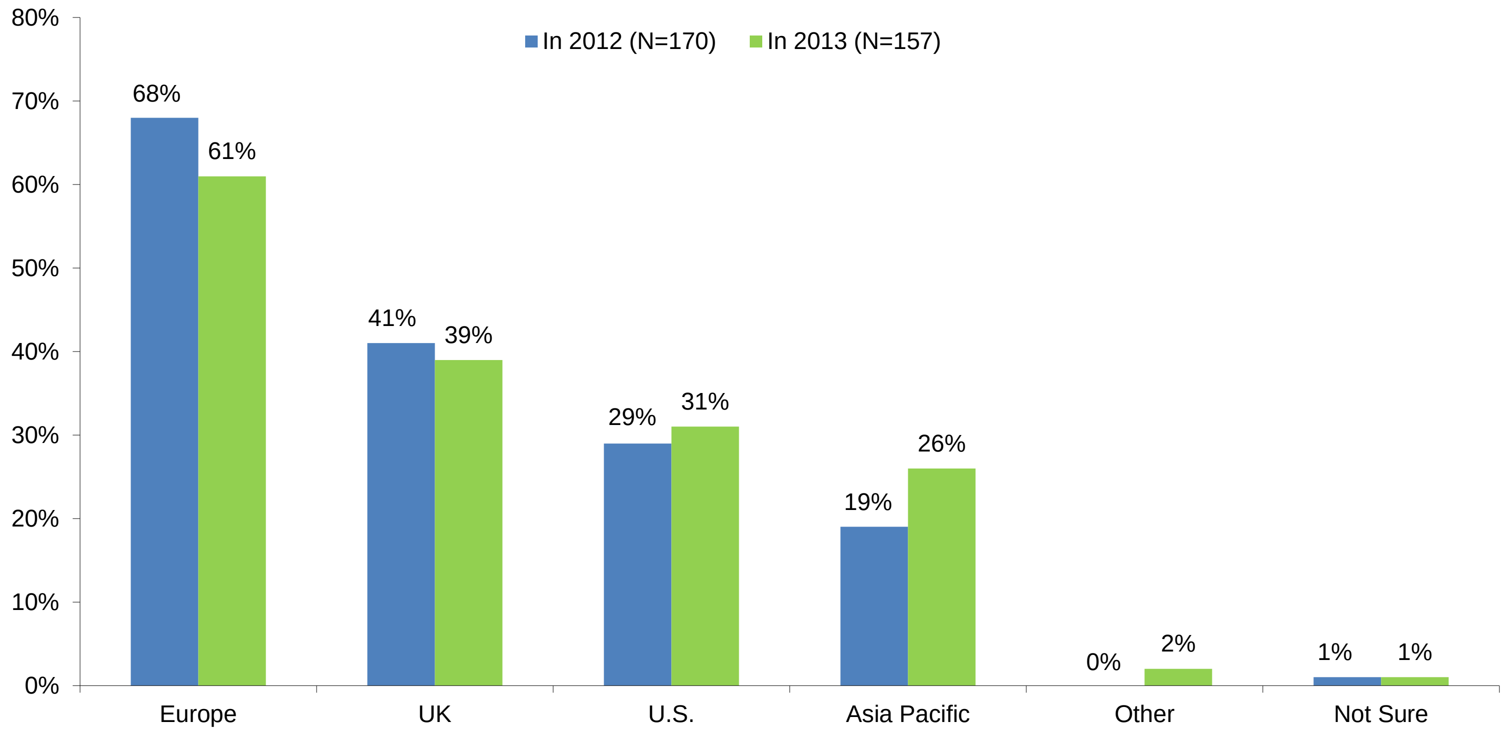
# Locations for Expansion

- Respondents with any expansion plans (definitely or probably) in 2012 and/or 2013 were asked where they would be likely to expand.
- The majority plan to expand in Europe, although two in five also plan to expand in the UK and many plan to expand in the U.S. or in the Asia Pacific region.




Note: Small sample sizes

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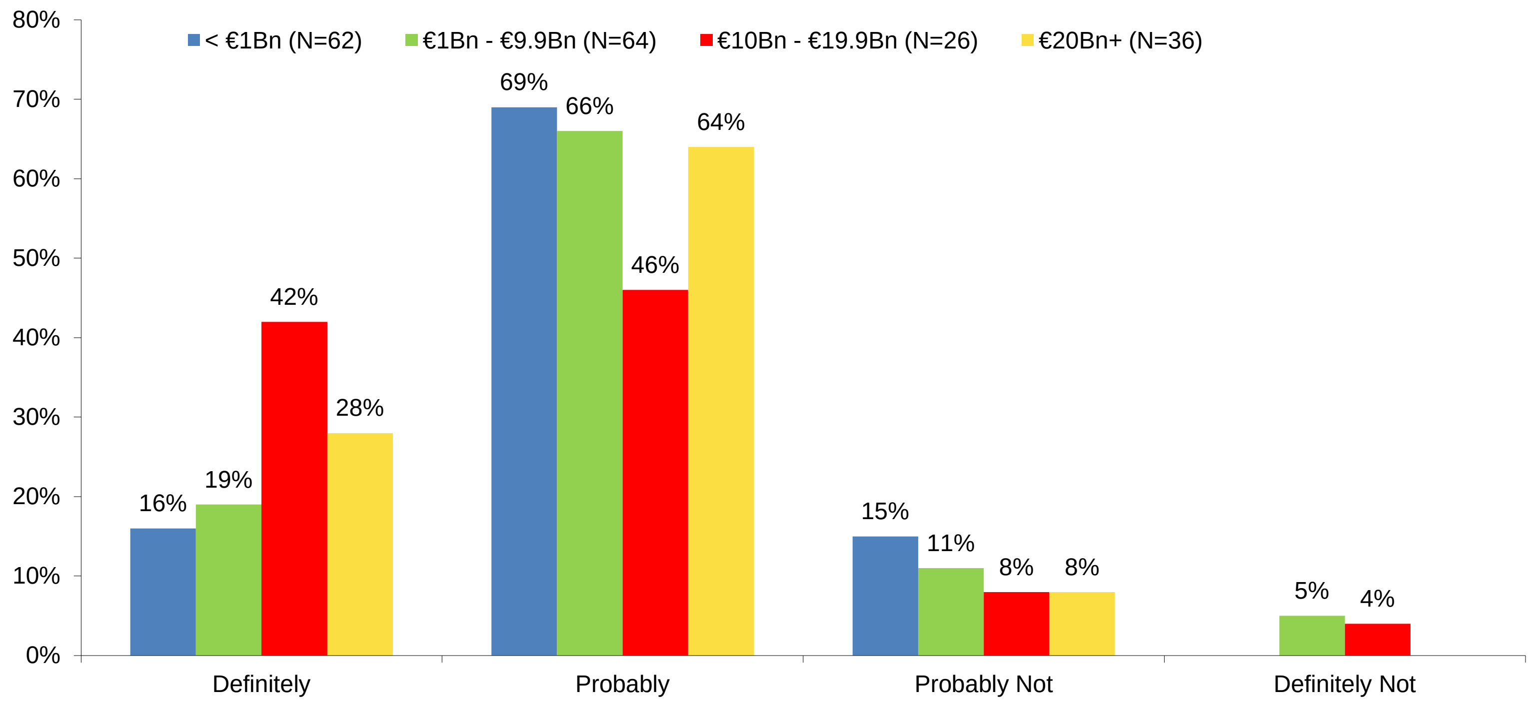
# Expansion Plans by Revenue

- One third (34%) of the larger companies (€10Bn+) say they will definitely expand in 2012.
- Half that many (17%) of the smaller companies (<€10Bn) say they will definitely expand in 2012.




Base = Expansion Plans in 2012

Note: Small sample sizes

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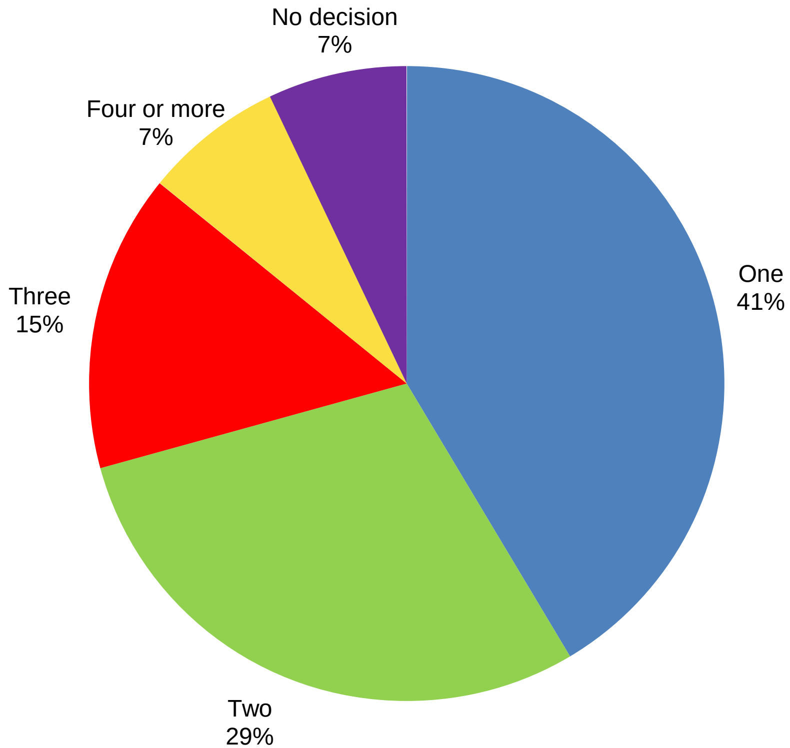
# Number of Locations for Expansion

- Participants were asked in how many locations the company has plans to expand its data centres in 2012.
- Half (51%) say they have plans to expand in two or more locations.
  - France and Germany are more likely to expand in only one location.




Base = Expansion Plans in 2012 (N=170)

Note: To produce a large enough sample for analysis, the discussion of expansion plans will use those companies (N=170) that will definitely or probably expand in 2012.

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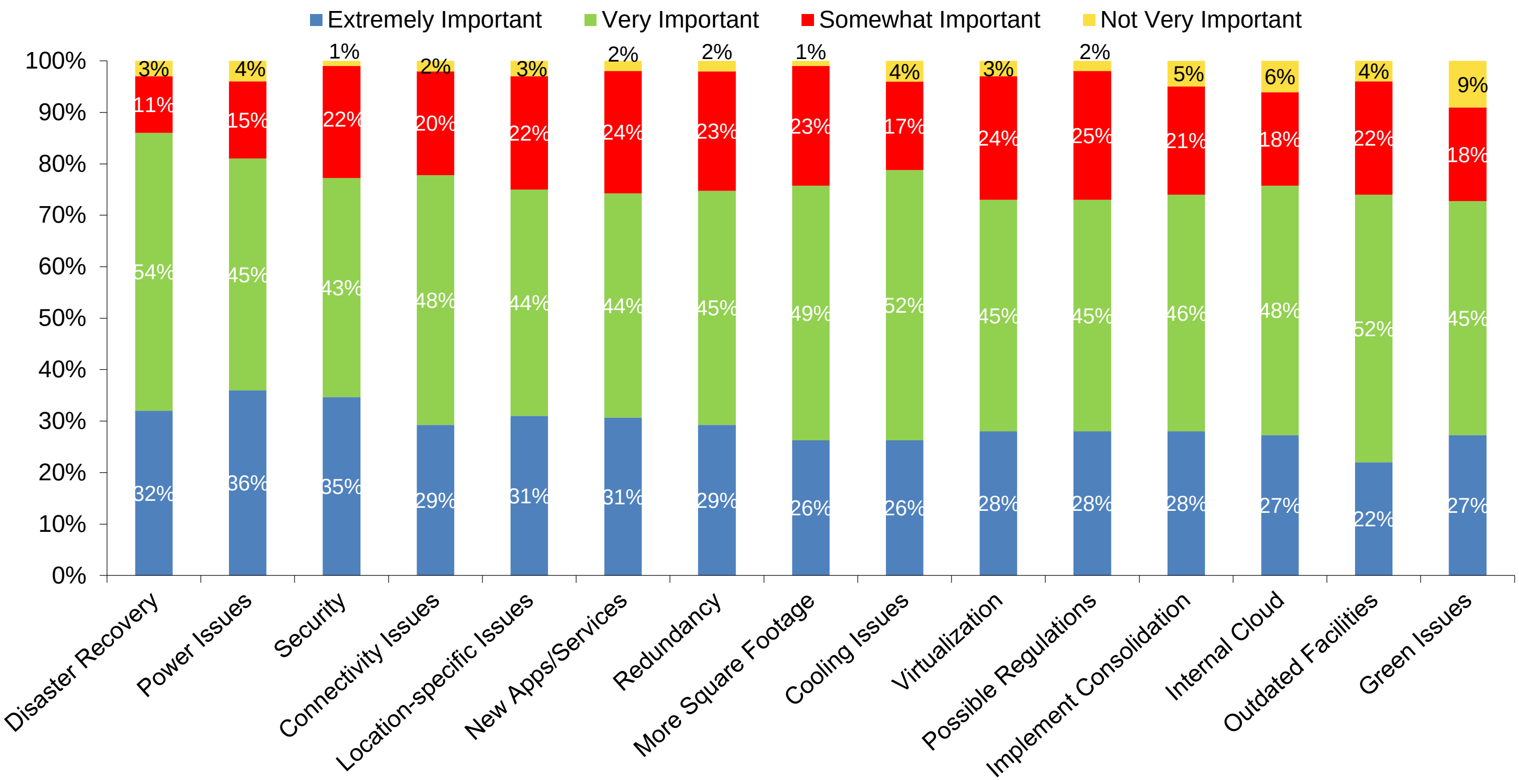
# Reasons for Expansion

- Participants were asked to rate the importance of several reasons for expanding their data centres.
- Disaster recovery, power and security are more important than the other reasons.
- New applications/services and redundancy are more important than in the last wave.
- Consolidation, internal cloud and regulations are less important than in the last wave.




Base = Expansion Plans in 2012 (N=170)

Note: Location-specific refers to labour pool, property cost or flood risk. Connectivity refers specifically to synchronous communications

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# Reasons by Country

- The following countries place relatively more importance on the following reasons for expansion:
  - **Ireland** is most concerned with implementing virtualization and the internal cloud.
  - **Germany** is most concerned with disaster recovery and security.
  - **Spain** is most concerned with disaster recovery, redundancy and virtualization.
  - **France** is most concerned with security and power related issues. Overall, France has the highest overall importance ratings across many reasons.
  - **Netherlands** has the lowest overall importance ratings across all reasons and no issue stands out in importance.
  - **UK** is most concerned with power-related issues, security and consolidation.

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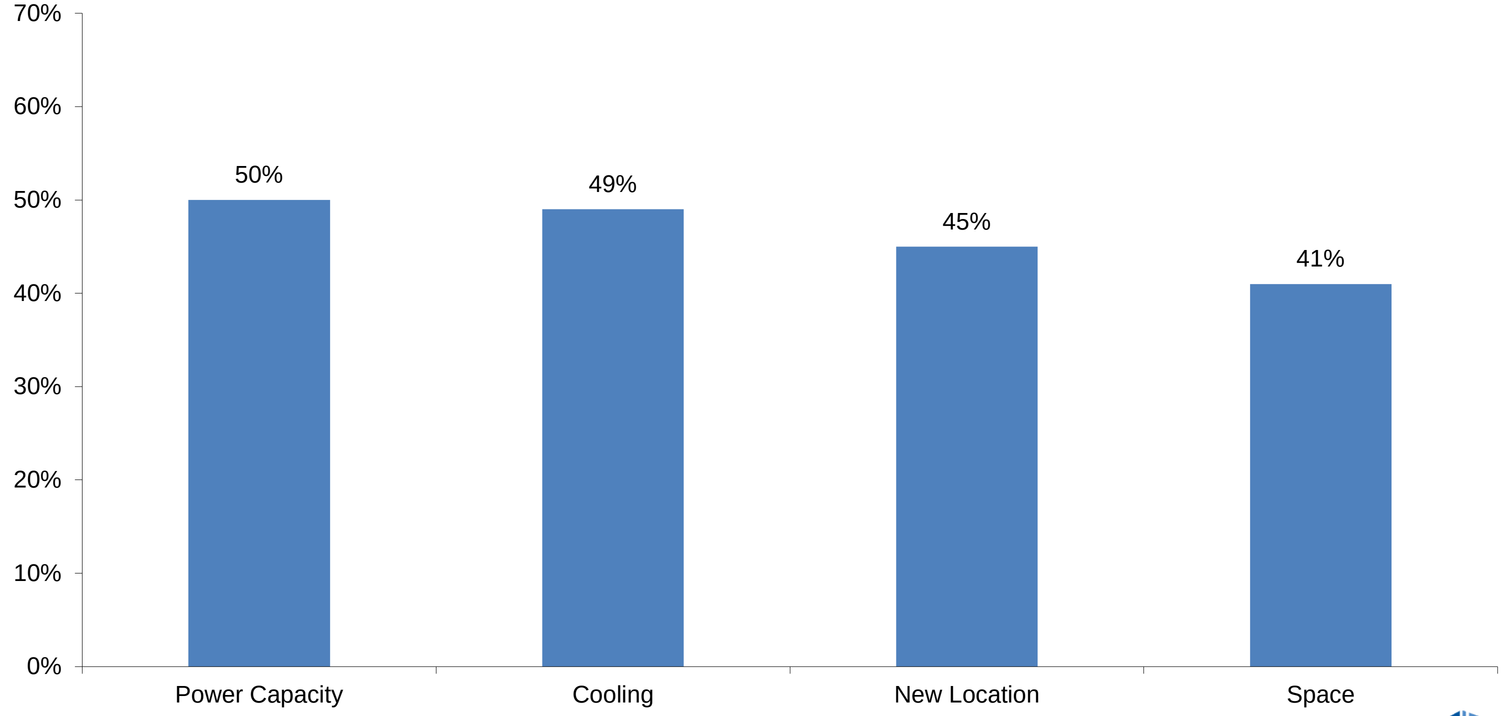
# Dimensions of Expansion

- Participants indicated which of these areas were objectives of the expansion.
- Half (50%) express the need for additional power.
- Half (49%) are planning to add cooling capacity, compared with 32% in the previous wave.




Base = Expansion Plans in 2012 (N=170)

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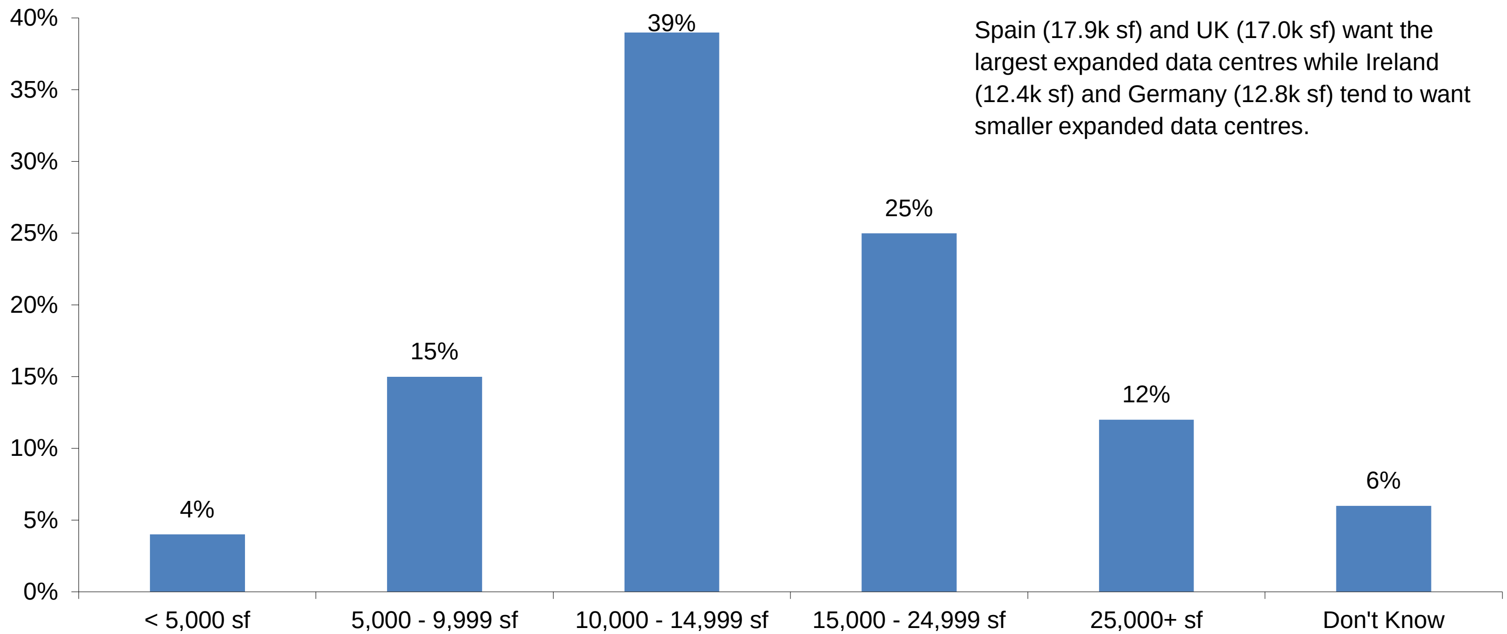
# Expansion Space Requirements

- Participants were asked about the average area of raised floors for their expanded data centres (in both feet and metres).
- The average desired space is 15,600 square feet, compared to 14,500 square feet in the previous wave.
- Among the largest companies (€20Bn+), 29% want 25,000 square feet or more.




Base = Expansion Plans in 2012 (N=170)

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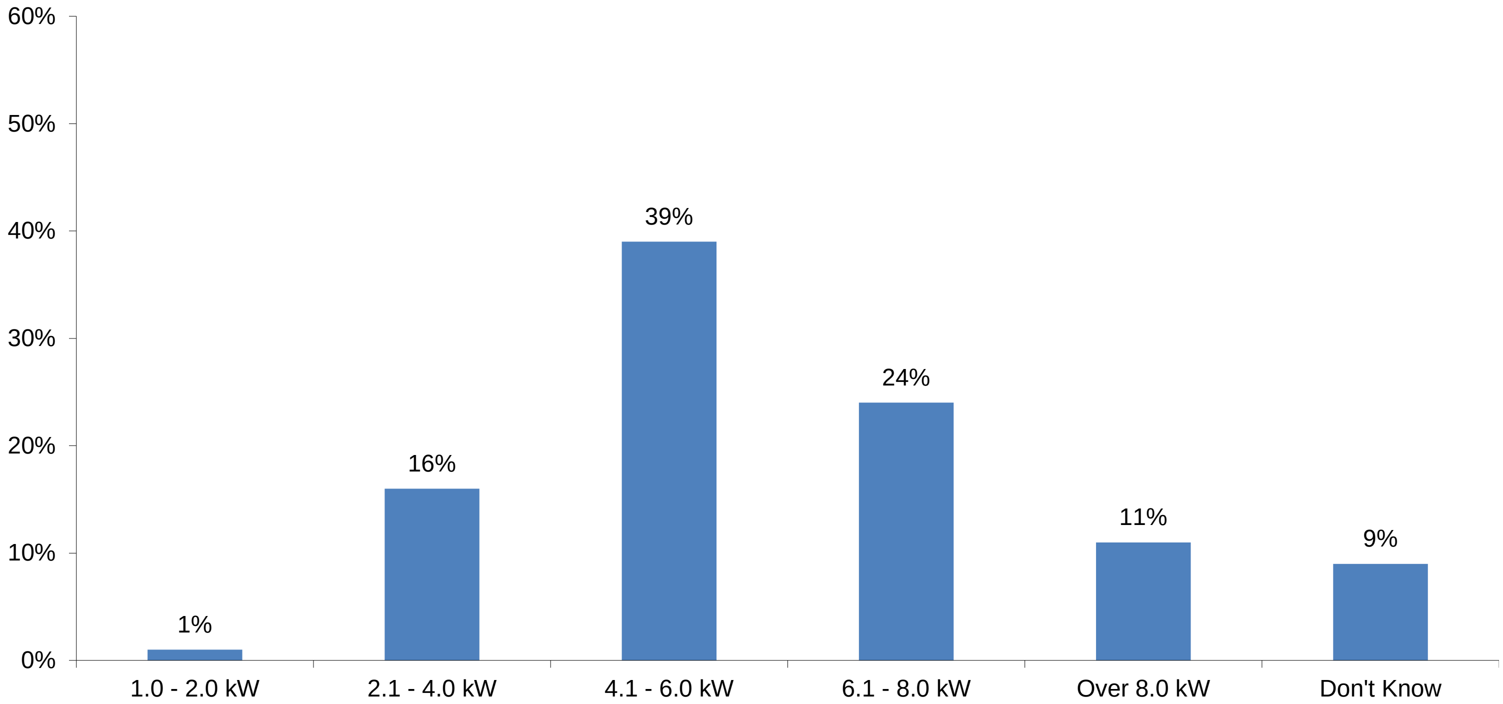
# Expansion Power Requirements

- Participants were asked about the average kilowatts per rack for their expanded data centres.
- The average power requirement is 5.7 kW per rack.
- Larger companies (€20Bn+) want more power per rack (6.6 kW).




Base = Expansion Plans in 2012 (N=170)

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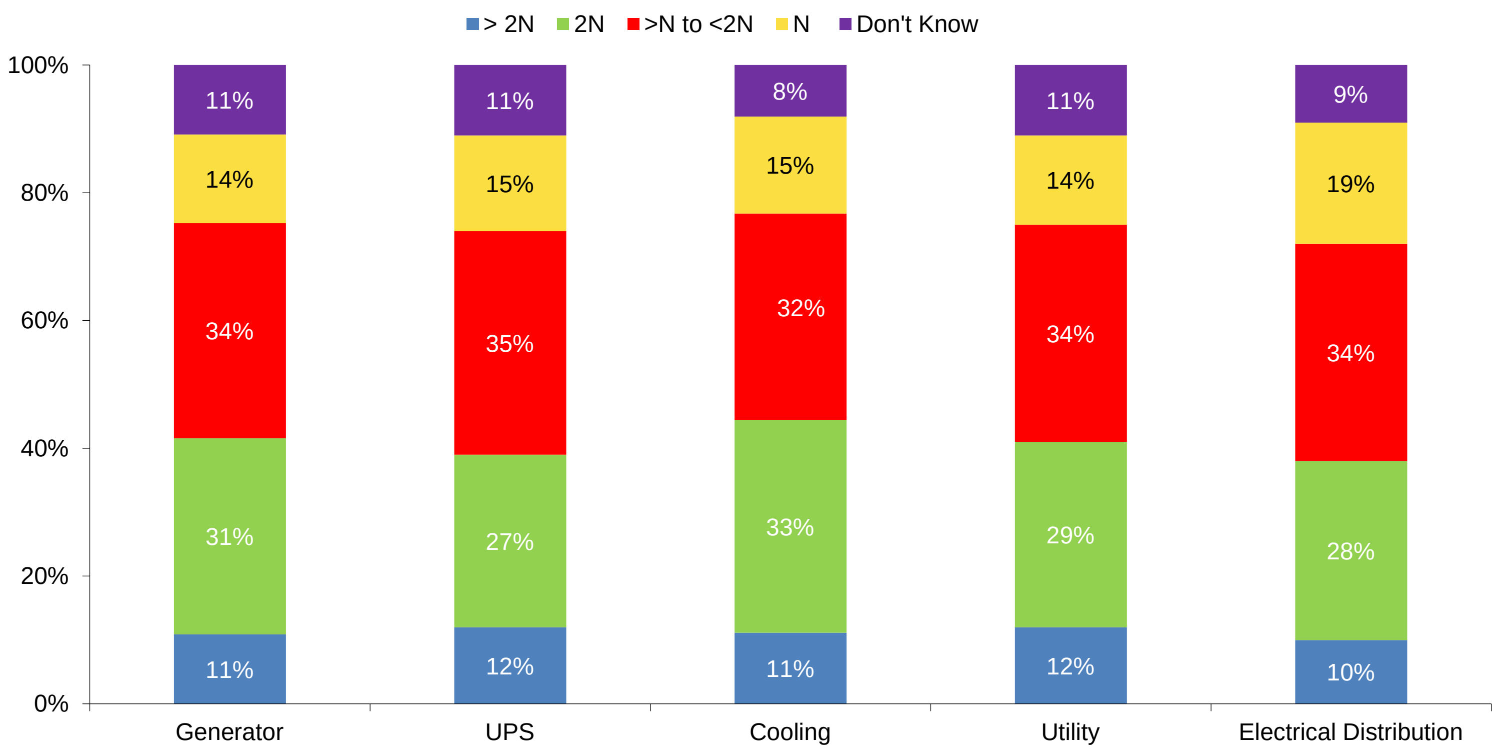
# Planned Levels of Redundancy

- Participants were asked about redundancy for the components in their expanded data centres.
- Approximately two in five (from 38% to 44%) want 2N or better for their components.




Base = Expansion Plans in 2012 (N=170)

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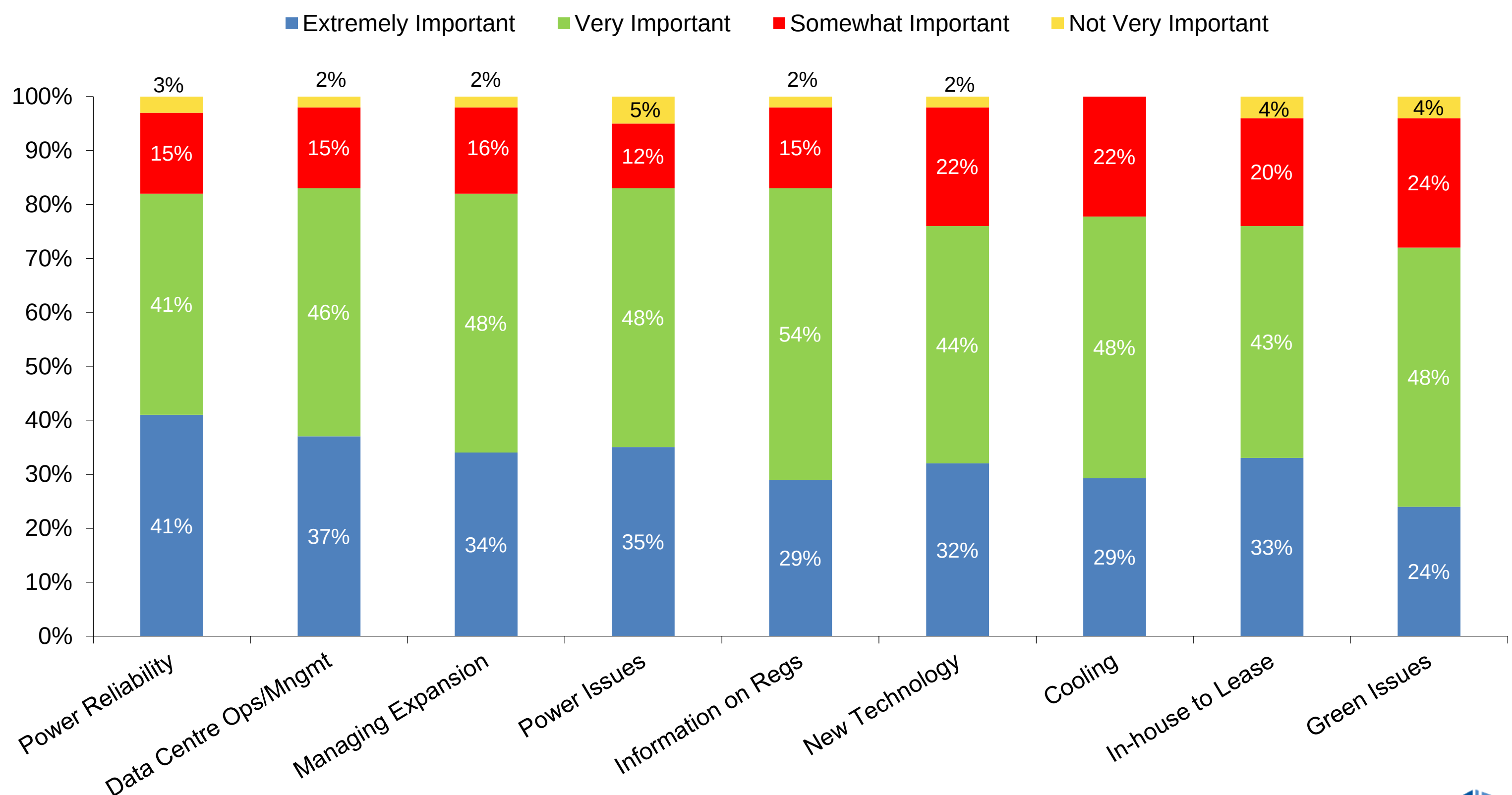
# Information About Data Centres

- Participants were asked to rate the value of information for planning and making data centre decisions.
- The most valuable information relates to power reliability and supply, data centre operations/management and managing expansion.




Base = Expansion Plans in 2012 (N=170)

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# IMPLEMENTING EXPANSION

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# Expansion Strategies

- Respondents who had any plans to expand their data centres were asked to select among the alternatives below how they planned to implement the expansion:
  - Build with or use a data centre design and construction partner.
  - Lease space from a wholesale data centre provider.
  - Lease space from a colocation provider.
  - Use a shipping container module as a data centre solution.
  - Build themselves.
  - Have not decided yet.
- Three in five (59%) plan to use a partner for either design/build or leasing wholesale space or both, significantly less than in the last wave (69%).
- Of those planning to use a partner, one in three (34%) are aware of DLR.
- In this wave, respondents are considering more alternatives to using a partner than in the previous wave.

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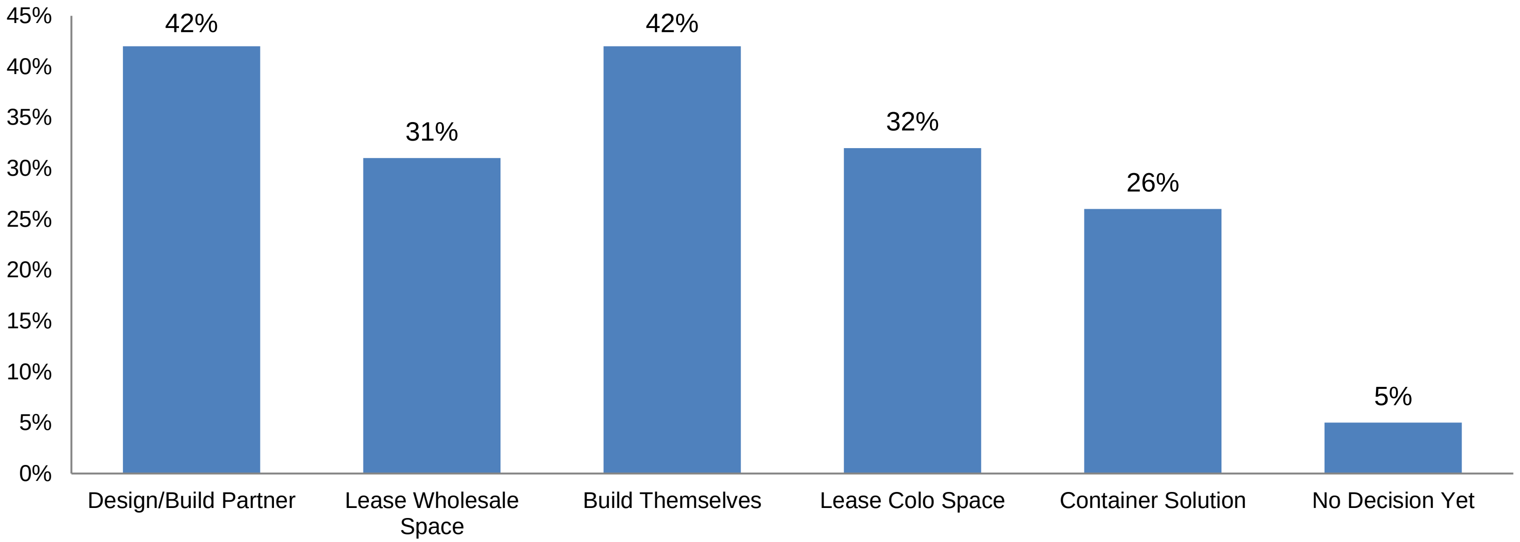
# Use of a Partner

- Participants with plans to expand their data centres were asked how they plan to implement the expansion.
- Three in five (59%) will use a partner, either for design and build (42%) or to lease wholesale data centre space (31%) or both (14%).
- Over two in five (42%) plan to build the expansion themselves.
- One in three (32%) will lease space from a colocation provider and one in four (26%) plan to use a shipping container solution.
- One in twenty (5%) has not decided yet.




Base = Expansion Plans in 2012 (N=170)

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

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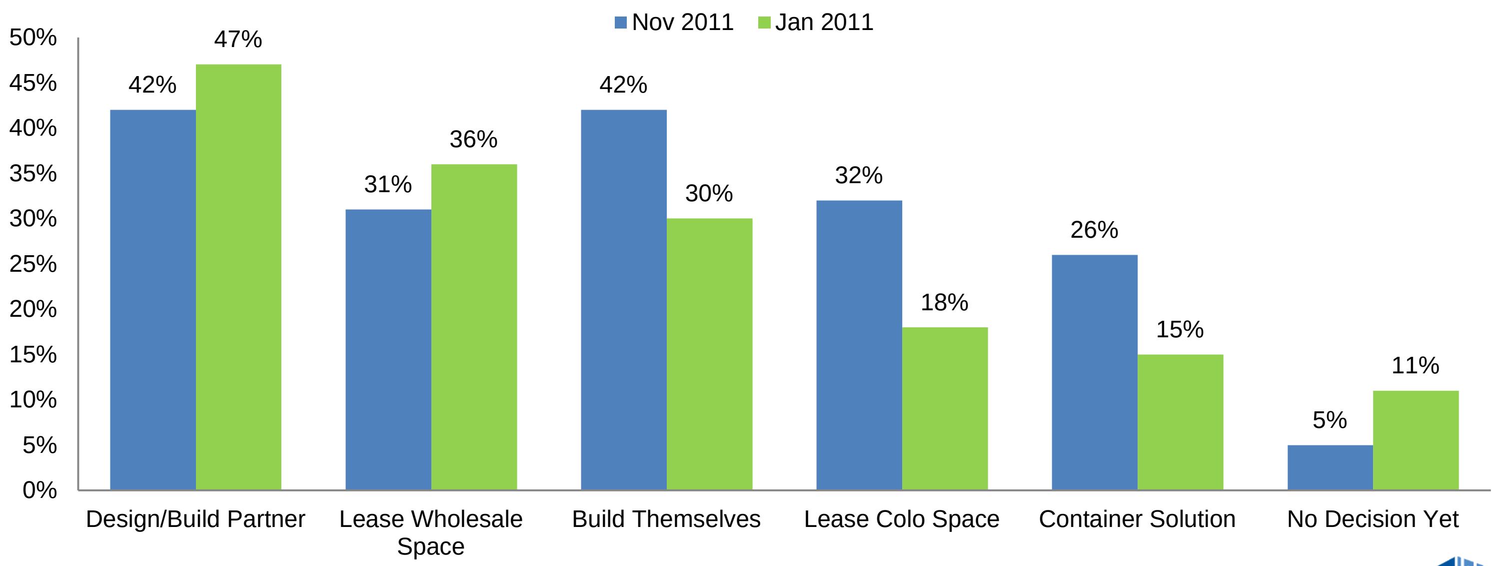
# Use of a Partner: Wave to Wave Comparison

- The plans for implementing expansion differ between the two waves in 2011.
- In this wave 59% will use a partner for either design/build or lease wholesale space or both, less than the 69% in the previous wave.
- Overall, there is more reliance on alternatives to using a partner.
  - Plans to build the expansion themselves increase from 30% to 42% in this wave.
  - Plans to lease colocation space increase from 18% to 32%.
  - Plans to use a container solution increase from 15% to 26%.

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# Multiple Expansion Strategies

- Respondents have a mix of strategies for expansion.
- Two in five (43%) of those who plan to expand their data centres say they will use two or more approaches to expansion.
- Of those who will use a design/build partner:
  - 29% will also lease space from a wholesale provider.
  - 39% will also build an expansion themselves.
  - 27% will also use a shipping container solution.
  - 33% will also lease from a colocation provider.
- Of those who will lease wholesale data centre space:
  - 42% will also use a partner to design and/or build.
  - 47% will also build it themselves.
  - 34% will also use a shipping container solution.
  - 45% will also lease from a colocation provider.
- More alternatives to using a partner are being considered than in the previous wave.

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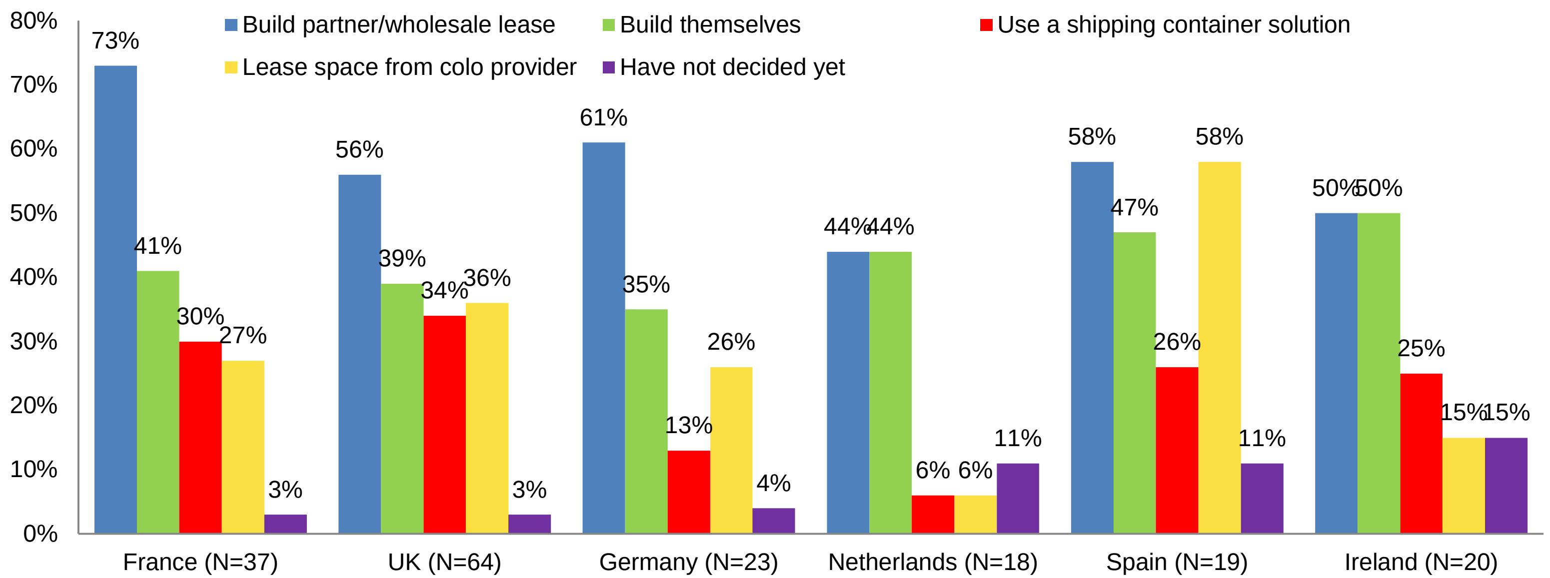
# Country and Use of a Partner

- On this chart, use of a partner includes both design/build and lease wholesale space.
- In each country, at least as many plan to use a partner as other implementation methods.
  - Spain is more likely to lease colocation space than any other country.
  - France is more likely to use a partner.




Base = Expansion Plans in 2012-13

Note: Small sample sizes

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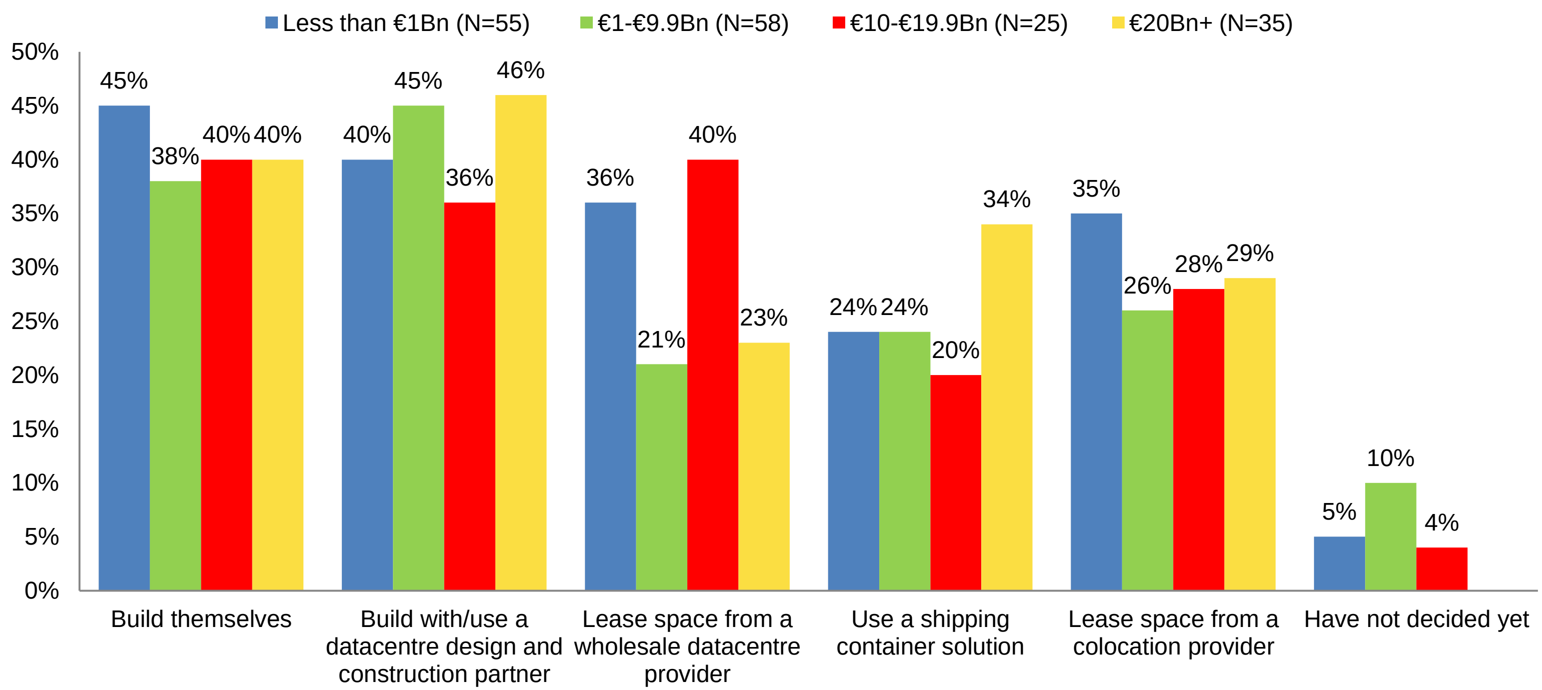
# Revenues and Use of a Partner

- This chart shows plans for expansion by revenues.




Base = Expansion Plans in 2012-13

Note: Small sample sizes

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# DATA CENTRE LOCATIONS

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# Location Summary

- When asked where they would prefer to locate a new data centre, most prefer countries in Europe, led by UK (39%), France (31%) and Germany (30%).
  - The majority choose their own country (69%), in addition to sites in other countries.
- The most preferred cities are London (32%) and Paris (26%).
  - Over half (53%) choose cities in their own country.
- When asked about factors in choosing a data centre site, site availability and security are the most important, followed by telecom and accessibility to company personnel.
  - Labour pool and taxes are less important.

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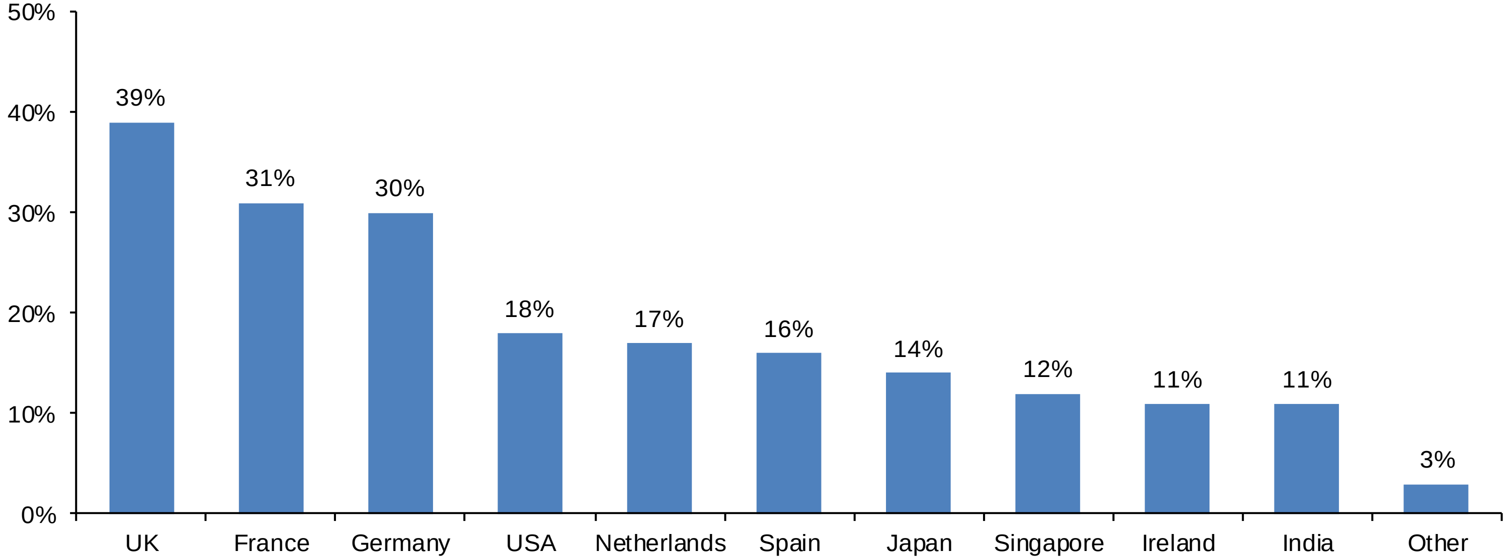
# Countries to Locate a New Data Centre

- This chart shows countries where respondents would like to locate a new data centre.  Multiple responses were allowed.
- Most of the locations are in the three largest countries in Europe.
- Over two thirds (69%) mention sites in their own country, in addition to sites in other locations.
  - France (81%) and Germany (78%) are particularly interested in their own country.




Base = Expansion Plans in 2012 (N=170)

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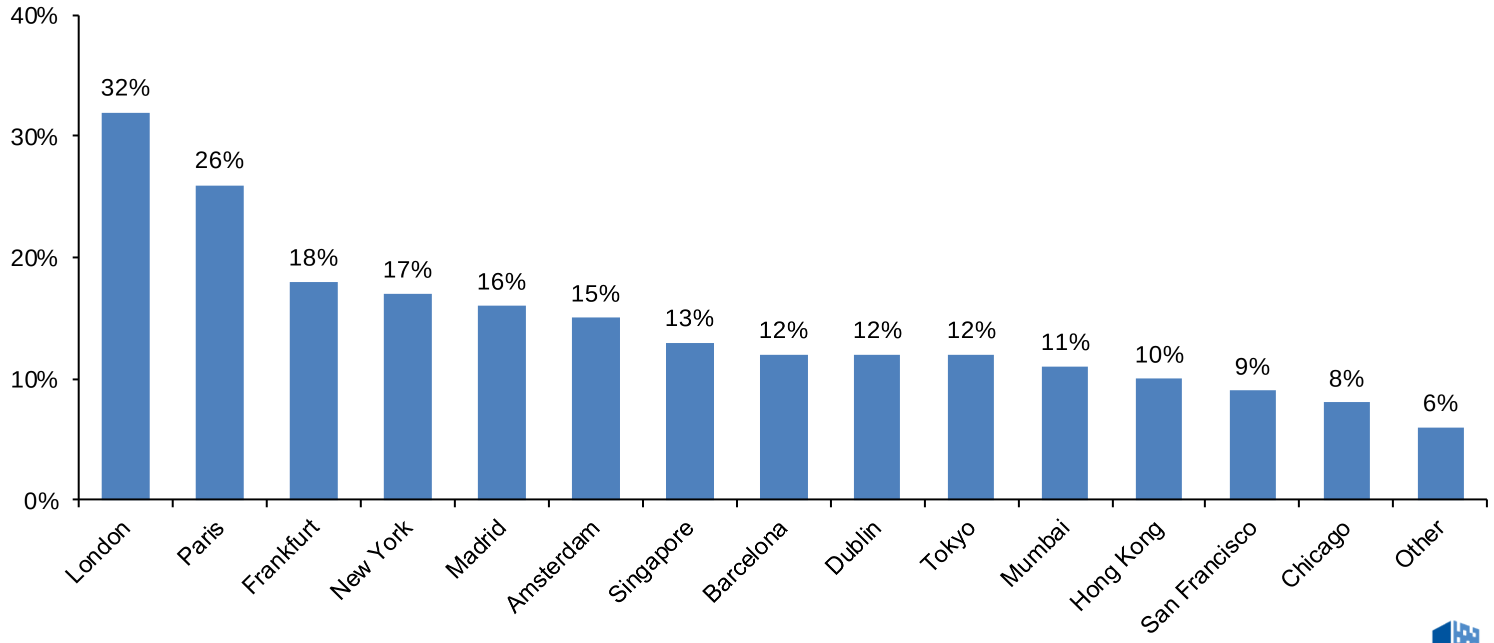
# Cities to Locate a New Data Centre

- This chart shows cities where respondents would like to locate a new data centre.  Multiple responses were allowed.
- Most of the locations are cities in Europe, followed by New York and cities in the Asia Pacific region.
- Over half (53%) of the respondents choose cities inside their own countries.
- German respondents mentioned Frankfurt but also other German cities (See Appendix).




Base = Expansion Plans in 2012 (N=170)

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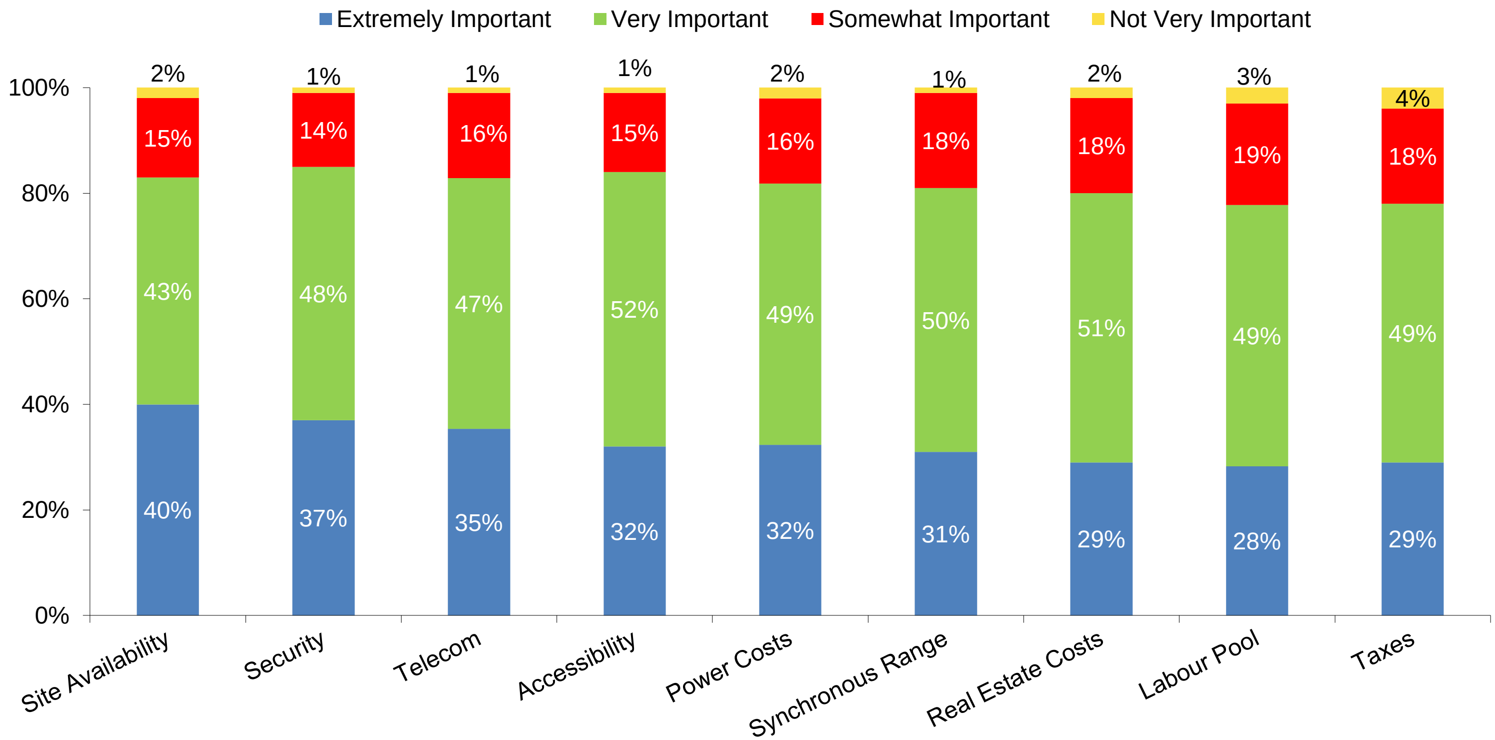
# Factors in Choosing a Location

- Participants were asked to rate the importance of several factors in selecting a geographic location for their data centres.
- Site availability and security are the most important factors, followed by telecom and accessibility to company personnel.  Labour pool and taxes are less important.




Base = Expansion Plans in 2012 (N=170)

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# APPENDIX

# Confidence Intervals

- At the 90% level of confidence for N=201:
  - The confidence interval around 50% is ± 5.8%
  - The confidence interval around 25% is ± 5.0%
- At the 95% level of confidence for N=201:
  - The confidence interval around 50% is ± 6.9%
  - The confidence interval around 25% is ± 6.0%

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