PORTFOLIO OPTIMIZATION AND ASSET MANAGEMENT

The Future of Corporate Real Estate and the Workplace
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I. INTRODUCTION

Corporate Real Estate 2020 has brought together more than 280 of the industry’s most thought-provoking and leading minds, as well as several other professionals from areas outside the CRE realm.

Have you ever tried to imagine what work will be like in 2020? It’s not easy, but that is exactly what CoreNet Global’s Corporate Real Estate 2020 initiative is all about – envisioning the future of corporate real estate (CRE) and the workplace. Corporate Real Estate 2020 is a research and leadership development program designed and managed by CoreNet Global members to address the business environment in the future and to collect and distribute best practices, tools and studies to meet future business needs effectively. A follow up to Corporate Real Estate 2000 and CoRE 2010, Corporate Real Estate 2020 has brought together more than 280 of the industry’s most thought-provoking and leading minds, as well as several other professionals from areas outside the CRE realm.

Given today’s climate of protracted economic uncertainty, forecasting has never been more challenging. Predictive modeling is often an inexact science, yet considering the outcomes of many of the forecasts CoreNet Global has made in previous renditions, it can prove to be an effective tool for setting expectations. Volatility withstanding, companies, industries, professions and other types of networks need to set a baseline to gauge and anticipate change as best as current indicators and history allow.

This report explores the major trends discovered and studied by the Portfolio Optimization and Asset Management research team to aid corporate real estate executives and professionals in becoming the most effective leaders in an increasingly complex business environment.
Corporate Real Estate 2020 began in August 2011 and continued through May 2012. The program was launched at the AT&T headquarters in Dallas, where a group of more than 70 senior thought leaders convened to discuss the business environment in the year 2020 and create an overall vision of the future and what the impact on CRE will be. From this discussion, it was concluded that the research would be carried out by breaking down the profession into eight dimensions unique to CRE.

Following the official launch meeting in Dallas, each of the eight teams was tasked with defining its goals and predictions. Using the overall vision of the world in 2020 and its impact on CRE as context, each team created a set of Bold Statements.

The Bold Statements were developed, evaluated and finalized throughout the first months of the project using recent research findings from a variety of resources and topic-specific group discussions. The statements, a prediction of where a typical CoreNet Global member firm would stand in 2020, were based on what the teams “thought” would happen, not what they “wanted” to happen, reflecting varying degrees of forward thinking.

Using the overall vision of the world in 2020 and its impact on CRE as context, each team created a set of Bold Statements.

The predictions were also presented at the CoreNet Global Paris, Atlanta and Singapore Summits, where members from the across the globe were given a chance to provide feedback on the Bold Statements. These predictions served as the research questions to be validated based on in-depth qualitative interviews with CRE leaders and topical content experts plus a quantitative survey of CoreNet Global’s end-user members across the world.

Throughout the process, leading organizations and industry experts were identified for interviews and further research. Telephone and in-person interviews that followed a structured interview guide (Appendix C) were documented and analyzed for patterns to help the teams understand the current views and future perspectives of these business leaders. In addition, case-study materials were solicited as part of the interview process, and some of those real-world examples have been incorporated into this report. The research teams also used articles, books and reports to ground the theories and compare results.
Interview insights, materials and Summit feedback were synthesized on a number of levels. The research team met regularly to review the materials collected to determine emerging viewpoints and implications. The following diagram illustrates the research timeline/process. Appendices B and E list the Portfolio Optimization and Asset Management team members and organizations interviewed.

**FIGURE I.1 | KEY STEPS IN RESEARCH PROCESS**
The concept of portfolio optimization in the corporate world continues to change and adapt to business cycles, technology and even new business theories.

Portfolio Optimization and Asset Management is one of the eight work streams that comprise CoreNet Global’s Corporate Real Estate 2020 research initiative. The concept of portfolio optimization in the corporate world continues to change and adapt to business cycles, technology and even new business theories. As businesses approach 2020, even the idea of what comprises an enterprise portfolio is shifting: from a simple concern with real property and fixed assets to a more broadly based understanding that includes human and capital resources, technology and other components that contribute to a company’s ability to compete in a global marketplace. This new definition creates new opportunities as well as new challenges regarding portfolio optimization, forecasting, measurement of asset effectiveness and integration of resources.

Portfolio optimization is ideally driven by real-time data, management input and often-complex metrics that measure the supply and location of resources against the needs of the organization and can be aided by a variety of technologies and tools created by both internal and external providers. The idea of a fully networked enterprise without geographic boundaries has replaced the traditional view of the corporation as a fixed entity defined by its geographic location(s), so optimization of all the resources in the portfolio enables real estate professionals and senior management to make intelligent decisions about people, technology and, of course, real estate, both for the present and the future.

Portfolio optimization is challenged by many of the factors that are also seen as advantages in the current business climate. Globalization has made the world smaller, opening up new markets for products and services, but it also has multiplied the number of market and regulatory forces that must be taken into account. Technology has enabled talented employees to reside anywhere, but it has also made it easier for those same workers to more easily change their employers without giving up the quality of life they enjoy in their current location. And while advances in technology will enable more accurate and timely collection of data needed for effective analysis of portfolio assets, the complexity of managing this data may increase as new types of tools are integrated into the enterprise framework. In this environment, the importance of data, technologies and employees communicating effectively with one another cannot be overstated.
The importance of shared knowledge and understanding across the business enterprise will only continue to grow in coming years, fed by the growth of technology and the accelerating pace of change. Lines between various entities in the enterprise will continue to blur as the maintaining of separate silos within a company becomes ever more a drag on growth and increasingly indefensible regardless of a company’s historical culture. In this environment, the very idea of what constitutes the workplace is in flux, as is therefore the role of the corporate real estate (CRE) team. CRE professionals have unprecedented opportunities to add value to the enterprise while guarding against increasing costs related to this significant portion of a corporation’s expenses.

As we advance toward the benchmark year of 2020, real estate will increasingly grow into an essential part of long-range planning, and the need for accurate modeling and forecasting will create new demands on CRE resources. While no one formula or process will fit the needs of every company or industry, managing change and preparing for a more demanding environment with more tools at hand will enable CRE professionals to add value to the organization and prepare for their enhanced place at the table – and the increased exposure that comes with it.

**FIGURE 3.1 | RESEARCH CONCLUSION**

<table>
<thead>
<tr>
<th>BOLD STATEMENT</th>
<th>RESEARCH CONCLUSION</th>
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<tbody>
<tr>
<td>Demand forecasting will improve and significantly narrow the band of uncertainty in regard to future requirements. Forecasting will become less dependent on management’s predictions and better able to use external factors to predict demand.</td>
<td>Demand forecasting has improved and will continue to get better, but truly accurate and reliable long-term forecasting is probably unachievable.</td>
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<td>At the same time, we will develop the ability to future-proof portfolios with built-in flexibility to respond to the residual uncertainty.</td>
<td>The market will innovate new ways to create flexibility, and companies will increasingly understand how to use third places programmatically, in response to persistent residual forecast uncertainty.</td>
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<td>Technological innovation will enable integration of data streams from different parts of the organization into cross-functional dashboards to better support real-time decision making.</td>
<td>Data integration combined with advanced analytics and dashboards will provide powerful business intelligence tools to support improved, continuous portfolio optimization.</td>
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<td>Significant progress will be made in developing a set of tools to achieve financial optimization of the global portfolio in collaboration with corporate treasury, finance and taxation functions.</td>
<td>More consistent financial doctrine and increased cross-functional integration among CRE, finance and tax will lead to improved financial optimization of corporate portfolios.</td>
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<td>Organizations will recognize the potential detrimental impact of cost cutting on productivity, changing the conversation from cost containment to value creation.</td>
<td>Changing the focus of CRE from cost to value will significantly contribute to enterprise competitive success.</td>
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<tr>
<td>Competition for talent will yield a more distributed work force, dramatically altering space demand.</td>
<td>Continuously improving mobile technology and the competition for talent will result in more distributed work forces, but the tradeoff between remote working and face-to-face collaboration, from a productivity and cost standpoint, is not yet clear.</td>
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Demand forecasting will improve and significantly narrow the band of uncertainty in regard to future requirements. Forecasting will become less dependent on management’s predictions and better able to use external factors to predict demand.

Among CRE professionals, there is a great deal of hope that demand forecasting will improve in the coming decade. The notion that useful, real-time metrics can enable corporations to reduce both costs and uncertainty and accurately predict demand is the “holy grail,” of portfolio optimization. As Brian Banke, BCCR, SLCR, Global Real Estate Portfolio Manager for Procter & Gamble, stated, “The biggest gap in our strategic planning is demand forecasting.”

Still, alongside that hope, many professionals surveyed for this report are skeptical that it can be achieved in the next eight years. Indeed, the graph below shows that survey respondents are almost evenly divided on the issue, with a slight majority either neutral or in disagreement with the notion that demand forecasting will improve within the next eight to 10 years.

Generally speaking, most professionals interviewed for this report do agree that the tools and methodologies of demand forecasting have improved significantly in recent years and will continue to do so. While varying from industry to industry, the increase in standardized or customized solutions – including software products, proprietary modeling and human resources tools – has brought some measure of increased confidence to CRE professionals.

FIGURE 4.1 | BOLD STATEMENT 1 SURVEY RESULTS

Demand forecasting will improve and significantly narrow the band of uncertainty in regard to future requirements. Forecasting will become less dependent on management’s predictions and better able to use external factors to predict demand.

Source: CoreNet Global End User Survey December 2011
The trouble with accurate forecasting, as these same professionals see it, lies largely with the uncertainty provided by external factors. The same external factors that are assumed to aid in predicting demand in the above Bold Statement are seen by real estate leaders as making long-term demand forecasting impossible, according to Patrick De Gendt, Head of Corporate Real Estate Management for ING Bank. Richard Podos, President of Lance Capital, believes that the, “the methodology of demand forecasting is definitely getting better,” but the task of forecasting has grown harder. Whether it’s the price of oil, volatility in financial markets or political uncertainty, there are too many factors to accurately predict, much less account for in long-range forecasting.

“Even though we’ll be much more attuned to our forecasts, that doesn’t mean that our predictions are going to become, honestly, much more accurate,” says Charles Meachum, MCR, Regional Director-Americas at Nokia. “We’ll probably have better information and be able to predict more accurately in the short term, but where it matters in the long term, we’re still going to face challenges.”

Another concern impacting confidence in demand forecasting lies closer to home. In addition to changing economic conditions, Michael Walling, Regional Vice President with Travelers, identifies factors such as “changing leadership, shifting management philosophies, earnings pressures and merger & acquisition activity” as impacting the ability of CRE professionals to plan beyond a short time window. In a fluid business environment with tighter and tighter business cycles, the likelihood that last year’s long-range plan requires an overhaul after, for instance, this year’s acquisition of a competitor is higher than ever.

In fact, this is exactly the issue that recently faced Stan Gibson, MCR.h, Senior Vice President with Wells Fargo. Following Wells Fargo’s acquisition of Wachovia, the firm spent three years integrating personnel, systems and space, optimizing their holdings and reducing their footprint by approximately 12 million square feet (1.1 million square meters) to 100 million square feet (9.3 million square meters). Gibson points out that while it’s important to manage for growth, demand forecasting is made more complicated by the number of contingencies that are difficult to predict and thus to plan for. “Short term, you’ve got a better line of sight,” said Gibson, adding that while forecasting demand across the enterprise is less common for them, “We’ll hone in with what the demand is for a particular region or market.”

This phenomenon was seen by other leaders, with Karen Whiteknact, Vice President of Corporate Real Estate at Liberty Mutual, observing that demand forecasting is problematic at the enterprise level, but seen with more regularity in individual business units. She also pointed out the disconnect that arises when business units want the flexibility to change direction without having to pay for it.

Each industry faces its own challenges in many areas, and demand forecasting is certainly one of these. One executive in the financial services field spoke candidly and anonymously about the challenges facing that particular industry sector. The executive lamented that the need to make long-term decisions stands in stark contrast to the volatility of the

Many professionals interviewed for this report are skeptical that improved demand forecasting will significantly narrow the band of uncertainty by 2020.
financial services industry, adding that, “Developing a tool that can predict future needs can’t be done.”

“Investment banking as an industry is in shambles,” the financial services CRE executive said. “No one can tell what it’s going to look like in the future because there are so many different issues that affect it – laws, politics, etc. This industry has been driven by very specific factors over the past 20 years – tech boom, the housing market collapse, etc. Where is the next brass ring coming from? No one knows. There isn’t one sector driving growth, unlike the past.”

Clearly these concerns represent systemic limitations to effective demand forecasting.

One firm with very specific challenges is Parsons, an engineering and construction firm that owes much of its work to government contracts. Christopher McGivern, Parsons’ Vice President of Corporate Facilities, observes that the lack of clarity in government funding means they are, “unable to predict what our growth pattern is going to be in areas of business outside of our current backlog.”

“Because of that, outside of our ability to be able to forecast headcounts for a five-year term, because typically that’s what we will do, it is very, very hard for us to be able to form and cast future needs in a proactive manner based upon projected income,” said McGivern. “That’s why we don’t do that. We only ever source space for the headcount that we have at that given time.”

In this environment, demand forecasting may simply be an exercise in wishful thinking.

A third obstacle to better demand forecasting may be short lived, but it is nonetheless an issue for the next few years. Brandon Tanner, Senior Manager of Space and Operational Planning with Southern California Edison, notes that sorting through all of the available data and assessing its value will be key to developing better demand forecasting tools.

“We now have an overabundance of data, and knowing which data pieces to pay attention to is really going to drive the future,” said Tanner.

Software developers and other service providers will need to work closely with CRE and other corporate leaders to create and review models for accuracy and usefulness.

Tom Willow, Senior Director, Worldwide Real Estate and Facilities at NetApp agrees that pulling data from different systems is a challenge and adds that data from end users is often biased, contributing to the difficulty of judging data quality. He notes that even internally, each department has its own data...
Bold Statement 1

“We now have an overabundance of data, and knowing which data pieces to pay attention to is really going to drive the future.”

(HR, real estate, etc.) and often its own agenda tied to its interpretation of that data.

John Peterson, Head of Global Planning & Analysis for Google, observes that the search-engine giant has, “A tool that looks at trends, that looks at history and then based on what we learn from the business units, kind of a bottom-up perspective, obviously getting the top-down perspective as well, from finance, we do the best we can to marry the two and develop a demand forecast.”

“I’m also pursuing a simpler, elegant and quick way of forecasting demand that provides the direction that we need, and then just adjusting it as we get more information,” continued Peterson. “We have tools that estimate it, but inevitably we have to adjust on the fly. Maybe some of the growth has hidden some sins. As we’ve grown, maybe we’ve picked up space in certain locations around the world that, if we were Monday-morning quarterbacking, we wouldn’t have, but then the growth eventually covers up that sin. We can’t continue to double our headcount every year, so we’ve got to get better at this.”

Peterson concluded, “I need to make sure that there’s one source of truth. Right now at Google, there are different business units forecasting different sets of numbers, and so it gets down to a tool that you can use: that single source of truth, a portfolio-planning tool. Two years from now, I want that portfolio-planning tool to be the single source of truth that we all agree upon.”

These challenges certainly don’t mean that better demand forecasting isn’t worth pursuing, only that professionals should be realistic about what they can and cannot achieve. While uncertainty can be diminished, “Forecasting at its core is not a perfect science,” noted a technology CRE executive formerly based in Hong Kong. “Forecasting will always be reactive to internal and external factors and thus inherently difficult.”

Given the limitations to accurate demand forecasting, it’s important to make sure that processes are built, managed and reviewed regularly for best practices and useful results. Larry Wolfert, MCR, Senior Director for Real Estate with Salesforce.com, reflects that the discipline is cross-functional, requiring input from CRE, HR and IT professionals. He feels that, “If you don’t have that three-sided group, businesses are less likely to think in the level of detail that’s required.”

Jeri Ballard, Vice President of Strategy and Portfolio with Shell Oil, added that if the right questions aren’t asked, or aren’t framed well, “We usually get back bad answers.” And while third-party programs and models are proving invaluable to some, Michelle Myer, MCR, SLCR, Vice President of Real Estate & Facilities for Oracle, expressed concern that outsourced providers are “too broad brush” for their needs, though they can help to validate or challenge assumptions.

Participants in the recent Singapore Global Summit highlighted the issues related to demand forecasting in emerging Asian markets, with some pointing to layers of property ownership that restrict corporations’ ability to expand quickly, as well as increasing real estate costs in markets such as China. In some
cases, the tail can wag the dog as companies are tempted to alter business strategy to suit existing and long-term real estate commitments, rather than adding or shedding space in response to changing business strategy. This also showcases the reality that each market may experience external factors differently. As a result, many of those attending this event were skeptical about this Statement.

The band of uncertainty surrounding long-range plans can be positively impacted by advances in demand forecasting that are either being made now or are anticipated in the near term. Corporate real estate professionals understand that there are no silver bullets that will “future-proof” business initiatives but remain confident that improvements to demand forecasting will provide added value to management.

TAKEAWAY: Demand forecasting has improved and will continue to get better, but truly accurate and reliable long-term forecasting is probably unachievable.

A reduction in purpose-built facilities would make corporate real estate more commercial with realistic exit strategies.

As Brian Banke of Procter & Gamble puts it, “I don’t think we’re ever going to have perfect information, so I think it’s going to be very important that we continue to develop our modeling and scenario tools because no demand forecast is going to be exactly right, even if we have a good tool for it.”
At the same time, we will develop the ability to future-proof portfolios with built-in flexibility to respond to the residual uncertainty.

• Reduction in purpose-built facilities, making corporate real estate more commercial with realistic exit strategies
• Focusing on lease flexibility options (contraction, expansion, termination) and shorter terms
• Leveraging the use of alternative work locations (co-share, etc.). Companies will learn how to use serviced-office solutions and “third places” programmatically.
• Caveat: In certain situations, maximum flexibility does not necessarily produce best result in terms of productivity and cost.

Regarding this Bold Statement, survey respondents were much more optimistic than on the first one. A solid majority agreed with the statement, as seen in the accompanying graph. There is greater assurance that firms can adjust for uncertainty than that they can eliminate it. As Richard Podos of Lance explains, “You have to build more flexibility into everything to accommodate the fact that you can’t properly demand forecast.”

Many firms are already working to increase flexibility in their portfolios and are confident that they will continue to do so.

Among those corporate real estate (CRE) professionals interviewed for this report, responses varied more widely than the above graph would indicate. Royce Anthony, Vice President and head of Strategic Planning/Real Estate for India with Deutsche Bank, says it is already there, adding that they are able to demand flexible terms from landlords and can move out with relative ease.

Conversely, Tom Willow of NetApp feels that, “Firms will never be able to future proof because business is fluid.”

Dr. Monique Arkesteijn, Assistant Professor of Real Estate Management at Delft University of Technology in the Netherlands, identifies four areas of flexibility that companies are seeking to achieve:

1. **Technical** – the ability to shift walls, move things around the office space, etc.
2. **Spatial** – the capacity to build or acquire extra office space (or to shed it as needed)
3. **Organizational** – enterprise planning, multiple shifts at different times of day, etc.
4. **Financial and jurisdictional** – the determination of how much space should be owned vs. leased to balance flexibility against costs, taxes, accounting, etc.
In terms of the first of these areas, John Peterson of Google offered some particularly helpful observations, noting that Google has its own global director of workplace design.

“Now it’s about people working anywhere, anytime,” said Peterson. “How do you design workspace so that there’s a dedicated seat but it’s just a desk in a building, and you can go work at another building? You’ll have smaller work spaces and less room for paperwork and files, and, working from anywhere, the good news from a real estate perspective is you’ll have tighter density.

“I would say that 10 years from now, a major goal would be, as a percent of the company’s total operating expense or of the company’s revenue, real estate expenses would reduce,” Peterson continued. “We just need to make that happen. I continue to be impressed by how Google has been able to really efficiently use its workspace. We don’t have to worry about manufacturing, and there’s not a ton of lab space, which helps. But just in the office-space arena alone, they have done a very good job of optimizing their portfolio.”

Brian Banke says that Procter & Gamble is moving toward a standard template for every building they occupy. He also noted the importance of ensuring that the space build-out is not so specialized that no else can use it.

“If it’s a commercially viable, market-driven building, that’s going to make the rents cheaper,” said Banke. “It’s going to make the whole arrangement from exit strategy, termination options, length of the lease, rent, all that, more palatable to the landlord. So, number one, if people are not already doing that kind of thing with a realistic exit strategy, they’re probably behind the times.”

As to paying more for shorter lease terms, Banke sees different solutions in different markets. “Where you can project that there’s not going to be an increase in rental

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**FIGURE 4.2 | BOLD STATEMENT 2 SURVEY RESULTS**

At the same time, we will develop the ability to future-proof portfolios with built-in flexibility to respond to the residual uncertainty.

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<th>Agreement Level</th>
<th>Percentage</th>
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<tr>
<td>Disagree</td>
<td>7%</td>
</tr>
<tr>
<td>Neutral</td>
<td>17%</td>
</tr>
<tr>
<td>Agree</td>
<td>52%</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>21%</td>
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*Source: CoreNet Global End User Survey December 2011*
rates for the foreseeable future, people may choose to go shorter simply because they don’t have to take a discount,” he said. “Markets like New York and D.C. are starting to go back up and are substantial in some places, and so there people say, ‘I still need that five- or seven-year lease to lock in,’ whereas in Phoenix, it’s a totally different story.”

Many of those interviewed focused their attention on the leasing or owning of space, and the balance between the flexibility of shorter leases and the cost savings associated with owning or leasing long term. Karen Whiteknact of Liberty Mutual noted the value of universal workstation sizes and not tailoring space to one particular business unit. Christopher McGivern of Parsons hopes for greater partnership with landlords.

“I see our relationships with landlords in the future developing more as a partnership of provision versus needs – compared to the current and past philosophy of landlords only ever caring about generating revenue,” said McGivern. “If they are clever, landlords are going to be looking to work with the bigger tenants in order to fulfill and develop longer-term relationships.”

Agreeing with McGivern that it’s in landlords’ best interest to work with large corporations, Chris Davidson, Executive Director of Operations with Time Warner, adds that “(Time Warner) is currently trying to build in more flexibility in all new leases and paying attention to build-out and lease options.” And Troy Riccitelli, MCR, Director of Real Estate Planning with The Hartford, noted that his team does their best to utilize reductions, early terminations and short-term leases to address the continued uncertainty.

Several of those interviewed expressed the belief that landlords have the leverage. A financial services CRE executive in India sees an opportunity to regain some of that leverage in new buildings.

“You can take the first mover advantage in new construction,” said the CRE executive from India. “You have rights and options at no cost or at a nominal cost, so you’re able to have space and have the flexibility to expand. At the same time, you can have built-in provisions in your contract to give up space later.”

As far as flexibility in build-out goes, most of those interviewed are already seeking enhanced functionality, with some offering the caveat that, as Charles Meachum of Nokia noted, “It’s important that when a person is in a Nokia facility, they know they’re in a Nokia facility, meaning it’s not going to be a vanilla box where you walk in and don’t understand the brand, the culture, the business that we’re in.”

Richard Podos is cautious about the ability to effectively balance cost and flexibility, adding that “Shorter lease terms are, in a way, overpaying for optionality.” He thinks that alternative workspaces from Regus to even a local Starbucks, can be a “great way to build in flexibility in the portfolio.”

Jeri Ballard of Shell Oil goes a step further, wondering why hotels don’t do more to offer workspace during the day, between the busy mornings and evenings when business centers are teeming with guests.
“If you had a business center that was largely unoccupied during the day, I’d be renting that space to business people,” he said. “A lot of business travelers use it morning and evening, but during the middle of the day, everybody’s off doing whatever work brought them there to begin with.”

Ballard points to one issue that could increase the need for third places. “Regulation could drive it if enough countries outlaw driving and talking on the phone, which would mean that if you are a truly mobile, on-the-road kind of person, you won’t be able to make calls from your car,” said Ballard. “You’re going to have to think differently about where you stop to do calls. As we see social tolerance waning for driving and talking on the phone, that could actually drive some changes in how that happens. I think we’re going to see more of the Regus-type places in the future, or people are going to get more clever about where you can do productive work.”

Koo Stengle, Strategic Planning Manager at BB&T observed, “The traditional leasing structure has really not changed over the years, and there are going to be some opportunities to redefine that. I don’t know that it necessarily means going toward ‘office-in-a-box’ retail solutions, but just building more flexibility within your current leasing structure that gives you the ability to grow and shrink in a space. The benefit is something that you will pay for, but I think the ability to shift real estate to more of a just-in-time asset outweighs the additional cost.”

“Also, as everyone likely is going to be faced with these accounting rules and carrying our leases on our balance sheet, it’s going to drive different behaviors as to how we structure those terms,” added Stengle. “But it would likely impact businesses universally, so I think those with larger scale will have an advantage. We’ve got the same infrastruc-

“Ture costs as a big bank like Wells Fargo, with the requirements for audit and all these other things, but we have a much smaller base over which to distribute those costs.”

While proposed accounting changes will impact all users of leased space, Brian Banke is disinclined to allow such changes to alter their business plans. “We’ve never let accounting classifications drive the right business decision,” said Banke. “You address the accounting and make sure it’s accounted for properly, but you don’t let the accounting drive your business decision.”

The financial services executive expressed concern at the mixed messages companies often send. Real estate teams are instructed to condense space, seek efficiencies and move to smaller workspaces, while business units are encouraged to offer perks, including large offices, to hire new talent. This professional also noted that the need to get in the space and up and running as quickly as possible often gets a higher priority than cost savings.

Another leader who observes that some issues outrank savings and flexibility is Karen Chan, Executive Client Account Manager with Aedas Interiors in Hong Kong. “Given the powerful element of rental costs in Hong Kong and other key markets, flexibility is less relevant than stability,” said Chan.
“Regulation could drive it if enough countries outlaw driving and talking on the phone, which would mean that if you are a truly mobile, on-the-road kind of person, you won’t be able to make calls from your car.”

One participant at the Singapore Summit remarked that whatever the plans and however confident one is that all contingencies have been considered, no one can predict events such as those experienced in the financial markets in the fall of 2008 – it’s impossible to prepare for everything.

Still, flexibility is valued highly by most professionals surveyed, including Patrick De Gendt with ING Bank, who said that CRE’s role is, “To proactively create real estate portfolios that enable companies to breathe. The resulting portfolio can be easily adjusted to maintain a fit-for-purpose size and lowest possible total cost of ownership.”

Larry Wolfert, Senior Director of Real Estate at Salesforce.com, thinks this goal is “Very aspirational. I don’t know that eight, 10 years from now we’re going to have that. But I think everybody’s going to try to make strides toward it. I think we might have that in certain leases, certain deals but not across our entire portfolios.”

Wolfert engages in some wishful thinking, imagining a brave new world of real estate on demand.

“It’s like, ‘Hey, I need something in two months.’ And you can get it in two months, the right size and the right place,” Wolfert explained. “When you need to get rid of it you can get rid of exactly what you need. Take the 40,000 feet and say, ‘Hey, I only need 15,000 feet.’ You can get rid of 25,000 feet just with a snap of the fingers. And that’s the perfect world, that’s future-happy.”

**TAKEAWAY:** The market will innovate new ways to create flexibility, and companies will increasingly understand how to use third places programmatically, in response to persistent residual forecast uncertainty.
As discussed earlier, one issue with data concerns the ability to know what’s most important in a sea of information. Another issue lies with timely access to the data and the need to see it in relation to other data points from other teams or divisions. The idea of a cross-functional dashboard is an appealing one to most corporate real estate (CRE) professionals, and most survey respondents expect such a tool to be increasingly prevalent as we approach 2020. As noted in the accompanying graph, a broad swath of CRE professionals agree with the Bold Statement and anticipates strides in this direction during this decade, with fully 80 percent of respondents in agreement with the Statement and six percent in disagreement. This represents the closest thing to unanimity that can be expected from a diverse group of professionals and points not only to the confidence that this will occur, but also to the desire for a one-stop solution to a diverse set of issues that impact short- and long-range planning. As the financial-services CRE executive from India pointed out, for management to make a decision, they need to have everything available in one place.

Some of the professionals who were interviewed for this report are already seeing progress on this front. Jeri Ballard noted that Shell Oil has a data warehouse to combine property information based on lease or ownership and facility management data, as well as financial components, and adds that they are now looking to add their safety data. She sees an advantage in that suppliers can run their own systems, and Shell can take data feeds from them.

Acknowledging that this arrangement can lead to data architecture concerns, Ballard discussed the need for tools such as translation tables to connect the different types of data and create something useful. “What we’re doing now is a data-architecture project to design the structures we want for all systems that touch any real estate information,” he said. “It’ll take us some time to get that fully embedded in everything we do, but you’ve got to take the time to develop the architecture to set the road map for the future.”

Google is another company making progress in this area. Google’s Peterson confirms that an RFP process is in place to create a “single source of truth,” adding that not only will it save time on reporting, but will hopefully also enable the company to track green initiatives as it moves into more healthy workplaces. Other companies working on this include

Technological innovation will enable integration of data streams from different parts of the organization into cross-functional dashboards to better support real-time decision making.
Time Warner, where Chris Davidson said they are not aiming for a single view of everything but something more integrated than before, with tax, human resources and real estate, and Microsoft, where the aforementioned technology CRE executive formerly based in Hong Kong is confident that there will eventually be a “single-source system” rather than multiple modules. And Arnold Ng, MCR, MRICS, Head of Facilities Management with Standard Chartered Bank in Hong Kong, added that metrics are becoming more standardized, though “regional nuances” do require some adjustments here and there.

Richard Podos of Lance Capital said that companies have been working on this challenge for years, but there is still a long way to go. He pointed out that as more components are added to such a project, the harder it becomes to make it effective. Still, it’s important that not only real estate but all corporate infrastructure functions be brought together to create a high-level dashboard that senior management can use for planning.

“It’s not going to help in terms of demand forecasting,” he said. “It’s going to help you understand that you have to do massive scenario planning to address the need for flexibility.”

Brandon Tanner of SoCal Edison remarked that the process of integrating data begins at the point of hire, with a new onboarding process to deliver the seat, the person and the technology all at the same time. Tanner explains:

“What we have now is a shared metric to track the effectiveness and all the different streams of data coming from different sources to a single dashboard. The dashboard indicates that, in 60 days or 30 days, we’re going to have individuals onboarded with the technology, with the space, etc. There’s quite an elaborate process that’s been set up.

“Let’s say you’re a hiring manager, and you say, ‘I need an analyst. And I need the analyst out in L.A.’ The discussion would then turn to space, saying, ‘OK, you need a spot. We can provide you a spot.’ And then it goes in through the system and moves to the next group. Well, if you have a spot, you’re going to need the telecom equipment. What telecom equipment do you need? It’s all provisioned ahead of time. Then, the hiring process happens. When this

**FIGURE 4.3 | BOLD STATEMENT 3 SURVEY RESULTS**

- Technological innovation will enable integration of data streams from different parts of the organization into cross-functional dashboards to better support real-time decision making.

Source: CoreNet Global End User Survey December 2011

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new person shows up, right in their space is a seat, a desk, technology, a phone, and a computer. Everything has been set up ahead of time, versus where we were a year ago, when someone would show up and they would sit in the corner waiting for an office. Then they would wait for a BlackBerry and a computer, etc. So, the metric for this process is total cycle time to provide a new employee space and all of the tools they need to be productive.

“All of the internal metrics flow into that dashboard. So, you could look up and see that, for example, IT and HR are taking too long, or the background from corporate security is taking too long. So it’s fully integrated. Once you have that single dashboard containing metrics for all of these sub-processes, you’re going to start tracking the total cycle time metric as the key metric on the dashboard. In order to get that metric improved, it’s going to take efforts from all the different groups involved.”

Some of those interviewed were more skeptical than the survey responses would suggest regarding the success or even necessity of this kind of data integration. Brian Banke of Procter & Gamble, while acknowledging that analytics are necessary to spot connections and find opportunities, wonders if standardization is that important. Frank Kayden, MCR, SLCR, Director, Real Estate Portfolio Management of Dow Chemical, said his firm is not headed in that direction, noting that they would reconsider if the value of the investment could be shown. And Tom Colarrusso said that Staples is not likely to invest in something that is still flawed. Kathy Winkler, Vice President of Corporate Real Estate with Prudential, is of the opinion that, “There are a lot of good systems out there, but none of them are robust enough to replace all systems or tie all systems together. There are weaknesses to all current systems. As quickly as technology is improving, we just can’t get this right.”

Still, Stan Gibson of Wells Fargo noted, “If and when the silver bullet gets produced, I think everybody will climb on board.”

As is often the case with new technologies, there are those who adopt early and those who wait to assess its value. Many of the professionals interviewed for this report were interested in the prospect of integrated dashboard applications but are still determining how best to use the technology in their particular industries. Koo Stengle of BB&T noted that her organization is still considering how to integrate multiple database systems. “Primarily, if you think of real estate and HR and IT as the three primary drivers – and also financial – oftentimes those are held in very different database systems that don’t always speak to each other very well,” she said. “The ability to remove the barriers of integration among the systems is going to be key.”

One attendee at the Singapore Summit in March shared the impression that technology is less a roadblock than HR or other departments may be, noting that CRE has a different language and tracks different metrics and that different groups within an organization must not only share information, but agree on overall priorities and metrics as well. This kind of direction will most likely come from the C-suite and require a number of longstanding habits to be broken down.
Karen Whiteknact of Liberty Mutual is aware that there are systems already available from third-party providers but is weighing the cost against projected accuracy. She feels that it’s relatively easy to achieve 85 percent accuracy but wonders about the costs associated with inching that figure higher. One telling example involves a Liberty Mutual office in Texas that the company thought was at capacity, but on further consideration turned out to be one-third vacant. Whiteknact acknowledged that they had the data, but no one had looked at it in a way that gave them the information they needed. This points to the need to get data into a useful format, which Whiteknact considers to include the following criteria:

1. Data needs to be sortable.
2. Data needs to enable you to see trends.
3. Data needs to serve your company’s strategy, not just process.

Patrick De Gendt with ING Bank views data integration into dashboards leading to more rational and substantiated decision making. He does, however, expect such integration to lead to a stronger focus on accuracy, which doesn’t always accompany speed. He further estimates that real-time decision making is more applicable to operational activities (e.g. facility management). And Michael Walling of Travelers is convinced that continued refinements will translate into better reporting over time, while The Hartford’s Troy Riccitelli is confident that dashboards will allow leaders to plan and produce “what if” scenarios at a moment’s notice.

Several professionals explored the need to justify the investment needed to develop this kind of technology into a useful system. One of those, Larry Wolfert of Salesforce.com, framed the issue succinctly. “I think this is very doable,” he said. “It’s just a matter of people making the investment,” adding that “some never will.”

The coming years will tell if this represents a fork in the road between winners and losers or just a different choice made by some executives.

**TAKEAWAY:** Data integration combined with advanced analytics and dashboards will provide powerful business intelligence tools to support improved, continuous portfolio optimization.
As with the integration of data into dashboards, there is also a wide spectrum of thought regarding the integration of financial data. Among those interviewed, there were fewer convinced that this is happening or even will soon, given the complexities involved in development as well as the traditional working relationships among and between financial professionals. Even more skepticism regards its need or potential efficacy, but all agreed that it could be a valuable tool – under the right circumstances. Michelle Myer of Oracle added that the key groups to be brought together are finance, tax, legal and human resources.

Stan Gibson of Wells Fargo is one of those who feel such a set of tools would need to be able to show its value, while John Peterson of Google wonders what a single source of information would cost and whether the results would justify the expense in time and resources. Richard Podos of Lance Capital feels that this pursuit is harder than the previous question related to dashboards, as different functions speak different languages.

“It’s hard enough for treasury, tax and finance to talk to each other, without adding in real estate people who may not speak one or more of those languages,” said Podos. “The more components that are included in any integrated system, the more difficult it can be to create something worthwhile – and comprehensible.”

It can be easy to convince one’s team that a unified program or tool answers all the questions in a particular area, only to find that a crucial piece was left out of the equation, damaging the usefulness of the whole resource. Podos related this story, which bears repeating at some length: “I was in a meeting with some pretty advanced guys here in New York on the service provider side, and I asked the question, ‘When you’re doing analysis in support of large transactions for your corporate clients, obviously you do a cash flow analysis, how much deeper do you get to go?’ And they said, ‘Well, we do accounting.’

“And I said, ‘What about tax?’ They said, ‘No, no, we don’t do tax at all.’ And I didn’t want to get in a fight with the guy, but you can’t do accounting without doing tax.

“If the service providers aren’t doing it, for the most part the corporate guys aren’t doing it either, or at least not in an integrated fashion. So this should hap-
pen, and quite frankly, it should have happened a long time ago. The reality is, especially when it comes to corporate real estate, the industry as a whole is way, way behind where it should be. There’s much further to go, and that’s not to say that there aren’t some companies that have it together and some service providers that are very smart to understand all this stuff. But for the most part that’s not the case.”

Michael Walling of Travelers echoed Podos’ comments, pointing out that differing cultures will continue to be the headwind, endangering a unified solution out of habit or the deeply ingrained tendency to treat various financial areas separately and keep departments walled off from one another. Erica Chapman, Vice President for Real Estate and Facilities with inVentiv Health, expressed the need for the parties that approve major decisions to be linked, giving them access to the integrated data and a voice in the look and feel of the end product, which also conveys needed credibility to the entire project. Chapman reiterated that treasury, tax and finance should take advantage of the synergies these tools could create because they would benefit these teams’ ultimate goals.

Robert Schuur, Project Manager of Strategic Planning with Southern California Edison, articulated the current situation and why he hopes for improvements in the integration of financial data:

“The current process is not fully integrated. For instance, one of the largest business units would come up with an idea, and had to get this project constructed in the current year. The finance organization would approve it, and then, realize that they need real estate to acquire and/or construct the project,” said Schuur. “They’d then come in at the tail end of a project looking for real estate assistance when it was too late. Our goal is to be integrated with the business units and finance up front just as described in this statement.”

One who sees real value in the prospect of bringing financial data together into one framework is Jeri Ballard of Shell Oil, who expressed the belief that too often the most important decisions are left by default in the hands of workers at too-low a level on the organizational chart where people don’t have the perspective to see what the options are.

Ballard elaborated: “Say we’re buying a piece of property and it’s sitting in this country. ‘What legal entity do we have in that country? Fine. Put it into that one.’”

“That’s not tax planning at all, but if you understand what levers you need to pull, you can craft transactions to be the most bottom-line, best deals for what your company needs.

“Every company will do this analysis and come up with a different answer, but I think the three groups working together and realizing the value of working together is the key, because when we started doing our holding-structures project here at Shell, it opened our eyes to a lot of other things that you could do to improve. We found inefficiencies in how property taxes were being handled because, with a lot of companies, property tax sometimes sits in real estate, sometimes in tax – it can be all over the place.

“We’ve been going through a ‘reduction-of-corpo-
rate-entities’ project and – because every legal entity you hold open draws costs for auditing, balance, etc. – keeping a legal entity alive takes a great deal of money. We’ve been able to work with the Corporate Controllers Group, who probably should be on the list of groups that work together, to reduce a lot of them because we found that there were legal entities being held open just because there was a piece of property sitting there.

“So it was about moving the property out so we could close the legal entity. Or, in some cases, we had done a country exit, but a piece of surplus property was holding up closing the books. Coming up with a strategy for how we were going to sell this surplus property and get rid of it allowed us to shut down whole legal entities.”

The above example clearly shows the implications of unifying financial data and identifies the need for all of those constituent groups – tax, treasury, accounting, etc. – to work more closely with real estate, legal and even IT and HR departments. In a complex global business environment, instances of one of these groups facing a decision that impacts no other department are becoming more and more rare.

This may be especially true in the U.S., where expected changes to healthcare may impact HR, benefits, tax and even legal departments, while at the same time proposed changes to the way in which leases are handled for accounting purposes threaten to change fundamentally the relationship between real estate and accounting groups and perhaps legal and even tax teams as well. Koo Stengle of BB&T suggested that much of the desire for new integrated financial tools is, “Likely in anticipation of some of the changing FASB rules around how we account for leases. We don’t have a global portfolio, but certainly whether you have an ownership position or a leasing position within your portfolio is going to impact your bottom line. The ability to leverage real estate as financial assets can absolutely be improved. Typically, it’s just been viewed as a cost of doing business and, to date, has not been leveraged as something that can be a competitive advantage financially.

“I can only believe that as corporations get more and more pressure to reduce costs - and real estate always hovers in that number two or three line item of most expensive costs - there will be innovation in terms of how this is done,” Stengle continued. “Ideally, it’s a cross-functional tool among corporate finance and accounting and corporate real estate that will drive better long-term real estate decisions.”

Brian Crockford of Microsoft agrees with Stengle’s assessment, believing that collaboration among financial teams – and between those teams and real estate and other groups – is increasingly vital to a firm’s performance, particularly given the impact of real estate decisions on a firm’s overall financial health. In fact, the implications of real estate decisions on other arenas may lead to new solutions, as one participant at the Singapore Summit suggested: If changes in tax laws are significant, firms may choose to structure deals differently, and in some cases the Regus-type model might be preferable in a new or expanding market.

“Say we’re buying a piece of property and it’s sitting in this country. ‘What legal entity do we have in that country? Fine. Put it into that one.’”
Solutions will differ across different industries, and corporate footprints will surely impact the choice of strategy as multinational companies will require a different approach to national or even regional organizations. Still, no one wants to be left behind in the search for more efficient methods of tracking finances, and many teams are already building, testing and integrating models into their review procedures. Dan Fitzgerald, Vice President of Worldwide Real Estate and Facilities with EMC Corporation, points out that his firm is already marching in this direction, assuring that they will reach their goal well before 2020, and others are working to keep up with or even beat that pace.

**TAKEAWAY:** More consistent financial doctrine and increased cross-functional integration among CRE, finance and tax will lead to improved financial optimization of corporate portfolios.

In recent years, cost containment and reduction has been a huge priority for most companies, either as a

“Ideally, it’s a cross-functional tool among corporate finance and accounting and corporate real estate that will drive better long-term real estate decisions.”

**FIGURE 4.4 | BOLD STATEMENT 4 SURVEY RESULTS**

Significant progress will be made in developing a set of tools to achieve financial optimization of the global portfolio in collaboration with corporate treasury, finance and taxation functions.

Source: CoreNet Global End User Survey December 2011
Organizations will recognize the potential detrimental impact of cost cutting on productivity, changing the conversation from cost containment to value creation.

Survival mechanism or to gain competitive advantage during the recent downturn. The above Bold Statement reflects the sentiment that in coming years, the pendulum will swing away from cost containment toward value creation for many corporations as they recognize the limits of slashing costs (staff, real estate, etc.) without an eye toward the potential for future opportunities. Or as Jeri Ballard of Shell Oil (among others) told us, “You can’t cut your way to greatness.”

Survey responses to this statement were largely positive, as shown in the accompanying graph. Sixty percent of respondents agree, with only 17 percent disagreeing. Shell’s Ballard remarked that if a company continues squeezing costs, eventually it lacks necessary human capital to meet needs as they arrive.

“You get to a point where there’s definitely a law of diminishing returns where you don’t have enough people,” said Ballard. “There are several initiatives where you invest a little bit, and you can save a lot. If you’re willing to add a staff to deal with some issues, the payback is 10 times their salary, but the cost cutting gets so focused on knocking out heads.”

**FIGURE 4.5 | BOLD STATEMENT 5 SURVEY RESULTS**

Organizations will recognize the potential detrimental impact of cost cutting on productivity, changing the conversation from cost containment to value creation.

Source: CoreNet Global End User Survey December 2011
“And you can ruin these facilities,” Ballard continued. “You can start dropping all your preventative maintenance programs, and that has a huge impact on asset integrity. When you finally get out of your austerity program, you find that the cost to get everything back up to where it needs to be is far greater than what you would’ve spent if you’d have just kept running it in a professional manner.

“Also, let’s say you have five floors of office space, but if you refurbished it to something more modern, you could get it down to three floors,” according to Ballard. “Well, nobody wants to spend the capital. You’re just going to ride with an extra two full floors of space forever because you’re not willing to invest the capital to save long-term operating expenses? You see a lot of silly decisions get made.”

On a similar note, Robert Schuur of SoCal Edison observed that sometimes companies lose sight of the big picture and, “Focus on saving a million dollars in facility costs (while) not accounting for the possibility of $2 million or $3 million in lost labor costs due to a suboptimal facility decision.” Brandon Tanner, also of SoCal Edison, added, “As we all emerge out of what has been the worst economy where everyone has cut back, they’re going to start realizing maybe we cut in the wrong areas.”

BB&T’s Koo Stengle sees this as a hot topic these days and pointed out that, “If you shift to employees as a commodity, you absolutely remove competitive advantage. At some point cost reductions become a losing proposition. I think the challenge is, how do you measure productivity and how do you measure value?

“I think you have to look at things that HR believes are relevant, so whether that’s employee retention or fewer days missed from work, or some teams that have actual productivity measures, whether they are sales or revenue-generation metrics,” continued Stengle. “Ultimately, you need to be able to report out on it in a relevant metric that relates to the business that you’re trying to convince.”

Stengle raised two interrelated issues that came up regularly in interviews: the need to speak the language of the department or group with which one is communicating, and the question of how productivity and value are actually measured. The latter question in particular rose to the top repeatedly in addressing this and the following Bold Statement.

Brian Banke of Procter & Gamble offered these thoughts on the topic, “If we think about it just purely from a real estate standpoint, it’s hard to say if more meeting rooms made people more productive, or eight-by-eight or six-by-six or bench-style seating makes people more productive. I think those are hard to quantify, which is why we’ve struggled in this industry (with) coming up with what productivity means.”

Another executive struggling to address this question is Dan Fitzgerald of EMC, who recalled that the recent drive toward alternative workplace strategies (AWS) was in large part driven by a desire to cut costs. He added that productivity is discussed all the time, even though, “No one knows how to measure it. What does ‘productivity’ mean? If it can be measured, you are going to see a very different way of
“There are several initiatives where you invest a little bit, and you can save a lot. If you’re willing to add a staff to deal with some issues, the payback is 10 times their salary, but the cost cutting gets so focused on knocking out heads.”

working. We don’t want to kill ourselves for savings at the cost of employees,” said Fitzgerald.

Gautam Saraf, National Head of Office Agency Services with Cushman & Wakefield in India, thinks of the difference in terms of locational decisions, noting that companies determine what’s best for them based on their priorities.

“By 2020, the CRE portfolio should witness various changes in India,” said Saraf. “We will witness different trends such as companies maintaining smaller offices in the central business districts (CBDs) to serve the top management – especially in the corporate strategy function – to maintain their visibility and prominence.” Meanwhile, the bulk of their staff may work from more cost-effective locations such as large campus-style developments in the suburbs, away from the traditional CBDs, and closer to the residences of their talent pools.

“These suburban offices will also help to serve the corporate social responsibilities of the companies as the emphasis will be on ‘green buildings’ and reduced ecological footprints through savings in fuel consumption and lesser pollution,” continued Saraf. “Whilst there may be more emphasis on different work practices such as ‘flexi-timings’ and work from home to maximize on space utilization, reduce operational costs and improve employee efficiencies, these may not work for all business types and in all cities.”

Still, there are a number of CRE executives convinced that cost cutting will not vanish from their radar screens. Michael Walling of Travelers argued that some firms will always be about cost cutting, and it’s naïve to think otherwise.

“Although value creation is always celebrated, it must be tangible and definable,” said Walling.

Both Royce Anthony of Deutsche Bank and the European financial services corporate real estate executive expressed the belief that cost containment is here to stay and can exist in conjunction with value creation. Another executive in the financial services field noted that this is not a new conversation and that the pendulum mentioned above swings back and forth periodically, just as people moved out from city centers to the suburbs only to return to the cities 20 years or so later.

Charles Meachum of Nokia identified swings with business cycles as much as the economy: If business is up, value creation is a priority; during lean times, cost cutting comes to the fore. And Wells Fargo’s Stan Gibson pointed out the toll of recent economic conditions.

“Over the past few years, we’ve all been locked into declining earnings, and we’ve all been under this cost-containment pressure,” said Gibson. “The tide will turn, and it’s anybody’s guess as to when that will happen. But the big fear is to go ahead and optimize out of any flexibility. Then, all of a sudden the tide turns and you have to go out and take this (space) at a higher rental rate. It’s just a matter of knowing when and being able to not overcompensate right now as you’re trying to compress square footage to improve earnings.”
Brian Banke is also aware of the risks involved in cutting too much space or staff, preferring wherever possible to make intelligent investments that serve long-term value. While acknowledging above that productivity is a slippery metric to measure, he insisted, “We want to optimize our costs while, at the same time, increasing employee productivity. We don’t want just to give people low-cost space that they can’t function in. At times, spending a little bit more on technology may be the right thing to do to make people that much more productive and reduce other types of costs that are in the system.”

NetApp’s Tom Willow stressed the need to keep the long view while containing costs: “If you’re going into it to drive costs down, it’s the wrong approach.” Similarly,

Michelle Myer of Oracle believes that companies with a singular focus on cost cutting run the risk of lagging behind competitors. On balance, there remains the desire to accomplish two seemingly contradictory goals at the same time. As Karen Whiteknact of Liberty Mutual put it, the challenge is to be both big AND quick.

**TAKEAWAY:** Changing the focus of CRE from cost to value will significantly contribute to enterprise competitive success.
This last Bold Statement generated a largely positive response from survey respondents. As seen in the accompanying graphs, more than 70 percent agree with the prediction that a competitive quest for talent will lead to a more distributed work force. While still a majority of responses, a smaller group agrees with the second portion of the statement, which puts more specific numbers to the growth predicted for alternative work spaces (AWS) or teleworking. A full quarter of respondents were neutral on this question. And at the recent Singapore Summit, one attendee even asked, “Are people going to come to the office in 2020?”

Among those who were interviewed for this report, there was less support for the projected increase in distribution of the work force than the survey would indicate, though responses depend somewhat on the industry represented. John Peterson of Google expressed a sentiment held by many that the more people are together, the more productive they are likely to be. While there still may be room for the isolated genius who is unwilling to relocate upon being recruited, the company prefers to put people in the same area to bounce ideas off of one another, said Peterson. On the other hand, “Will there be those cases where you have that super-talented, super-productive, super-bright engineer that wants to live in Norway? We’ll probably leave him there,” he said.

Karen Chan of Aedas Interiors, while agreeing broadly with the Bold Statement, also stressed the value in face-to-face interaction and relationships that will have a material effect on productivity.

Raising other concerns, Shell Oil’s Jeri Ballard ponders the intricacies of onboarding the virtual employee. “How do you help them understand your company’s culture and its values, and how do you help the new person develop any kind of relationships if all the relationships are sending email?” asked Ballard. “When everything’s going well and everyone’s in harmony and we’re all working on the same thing and we all agree with each other, yes, email’s fine. When we have a problem, when something’s not going well, when there’s conflict, when there’s tension, you can deal with it much more easily when it’s a face-to-face situation where you can get people together, talk about it and read the body language.

“I’ve had these meetings where we have most of the people in the room and you have a couple of the virtual people on the phone,” continued Ballard. “They are at such a disadvantage. Complex business problems are harder to solve when no one’s near one another, and you have very few options to get together.”

Karen Whiteknact of Liberty Mutual also noted that reliance on video conferences limits effectiveness, while Troy Riccitelli of The Hartford recognizes that the long-term value of AWS has not been fully vetted.
Considering the issue from a cost perspective, Erica Chapman observed that InVentiv Health holds the view that the productivity of those who work from home or elsewhere doesn’t necessarily equate to the cost savings associated with that employee working remotely. And another reason to put people together comes from Lance Capital’s Richard Podos, who observed, “Talented knowledge workers like hanging out together.” He also cautions that the quality of space can be a factor in attracting talent, noting that “to the extent that there is going to be competition for talent and knowledge workers, which I agree with, by the way, it means that they have to like the real estate even more.”

Michelle Myer of Oracle echoed this sentiment, observing that creating an environment that stimulates creativity and makes people want to come to work is a significant productivity driver, and she included amenities in that equation. At times, the quality, location and overall attractiveness of work space can be a tie breaker as highly sought-after talent decides

**FIGURE 4.6 | BOLD STATEMENT 6 SURVEY RESULTS**

Competition for talent will yield a more distributed work force, dramatically altering space demand.

Source: CoreNet Global End User Survey December 2011

**FIGURE 4.7 | BOLD STATEMENT 6 SURVEY RESULTS**

50 percent of workers in developed economies and 25 percent in developing economies will use AWS/teleworking, improving optimization, driving down costs and reducing carbon footprint.

Source: CoreNet Global End User Survey December 2011
which offer to accept, and businesses must weigh this against costs and other factors as they prioritize spending. (In an example of how interconnected many of these issues are, the question of how much to spend on providing knowledge workers with attractive workspace is a perfect example of weighing cost containment against value creation.)

As noted previously, some reticence to the idea of a more widely distributed workforce is based on an industry’s culture or business model. As an example, Tom Colarrusso asserted that a retailer like Staples doesn’t have, or need, a focus on AWS, while Christopher McGivern pointed out that Parsons is “a company of engineers and a lot of them are comfortable working in an office environment on a day-by-day basis. We have pockets of talent within the organization that are able to work in the more distributive manner, but it certainly is not a majority,” said McGivern.

Other corporations are embracing this trend, whether in order to cut real estate costs or to attract and retain talent with a desire for flexibility, with Royce Anthony of Deutsche Bank pointing out that even a decrease in a company’s carbon footprint will positively impact overall costs. Another financial services CRE executive from India feels that AWS is here to stay, primarily because of real estate costs. He sees that people can connect from anywhere without the work product suffering, though he is also aware that the needed cultural shift has not hit everyone yet, with some managers assuming a worker isn’t really “at work” if they can’t be seen. Chris Davidson allows that Time Warner currently employs an “old world” workplace model with no telecommuting but adds that their long-term planning includes AWS. Microsoft is a significant player in an industry that arguably launched this trend, and the tech CRE executive formerly based in Hong Kong recognizes that with a pronounced shortage of talent, companies need to be flexible. While many firms have moved toward AWS, he sees many industries unable or unwilling to move in this direction, particularly client-facing workers in fields like banking and insurance, among others.

The technology CRE executive formerly based in Hong Kong also raised a question covered earlier, asking if AWS leads to increased productivity and how it can be measured. This quasi-philosophical question is expressed particularly well by Richard Podos who, while noting that AWS is not a new concept, wonders at the fact that this question of measurement still vexes companies.

“How do you help them understand your company’s culture and its values, and how do you help the new person develop any kind of relationships if all the relationships are sending email?”

“What productivity metrics are applicable to a corporate real estate portfolio, and how do you apply the use of those metrics across the portfolio?”
Microsoft is a significant player in an industry that arguably launched this trend, and the tech CRE executive formerly based in Hong Kong recognizes that with a pronounced shortage of talent, companies need to be flexible.

asked Podos. “If somebody said to me, ‘we’ve figured out the productivity equation for AWS, and now we’ve gone over and applied it to traditional space, and here’s the lessons learned, and here’s what we’ve decided to do about it,’ that would be great. I don’t think people are picking up on that question and saying, ‘how do we tie AWS with portfolio optimization together based upon productivity metrics?’”

Podos concluded with the observation that at the end of the day, space often is still needed to serve AWS workers.

“You have got to have space for people to show up, and it’s not half of the people,” said Podos. “It’s basically all of the people. And it may be flexible, but you still have to have space there. In fact, in a lot of cases, you have to have communal space as well because companies want you sitting together and collaborating.”

Another notion observed earlier is that of trends moving in cycles. Frank Kayden recalled that Dow Chemical cut 50 sales offices to “virtually zero” only to begin the process of opening eight regional sales offices recently, and Stan Gibson of Wells Fargo remarked that every 10 years or so produces a different approach to space. Noting that we now have the technology to work nearly anywhere, Gibson feels that retaining quality staff requires the tools to be flexible when the job warrants it. In fact, he’s convinced that a progressive work environment should be a recruiting tool. Prudential’s Kathy Winkler added that younger workers will be able to do more from outside the workplace, while reiterating that, “You can’t lose sight of creating an office that people (will) want to come to.”

This is because knowledge workers entering the work force today have different priorities than their older colleagues, said Arnald Ng of Standard Chartered Bank. “This generation has placed a premium on lifestyle choices and is willing to work in a number of work spaces (e.g. home, office, coffee shop),” said Ng. Still, she feels that the projected percentage of AWS workers is too high, as does BB&T’s Koo Stengle, who reiterates the geographical limits of client-facing workers.

Some of the most pertinent and insightful comments about the likelihood of AWS workers reaching such numbers came in relation to developing or emerging countries. Brian Banke of Procter & Gamble appreciates the virtues of mobility but notes that developing countries have to have the infrastructure to enable workers to get work done out of the office. Additionally, there are fewer third places in developing economies. And Dan Fitzgerald observed that EMC implements AWS from day one in emerging markets, except where there is no infrastructure outside the office. Given their concern for security, AWS for EMC often takes the form of flex shifts, different ways of seating teams and other alternative programs that primarily exist in the office.

Koo Stengle thinks that the lack of cultural baggage in emerging markets may in fact serve to accelerate the growth of AWS.

“Between developed economies and developing economies, you might actually see greater adoption
in developing economies where they leapfrog some workplace practices because there is no resident history or precedent holding them back,” said Stengle. “The legacy operating model that exists in developed economies becomes a limiting factor. It’s like how some developing countries go straight to wireless because there is no construction from which to change. So that may actually end up being a greater number than we have predicted.”

In the final analysis, the question is how best to get the work done. Nokia’s Charles Meachum agrees that there will always be a need for face-to-face interaction, but noted, “Work flexibility in how and when you work is going to continue to increase. You still have to interact and you still have to come together to exchange ideas and find solutions.”

NetApp’s Tom Willow offered the reminder that, “The driving factor is not to get people out of the office. It’s to address how people work. There are always going to be those who need to be in the office and those who need to telecommute, but the main goal is collaboration.”

**TAKEAWAY:** Continuously improving mobile technology and the competition for talent will result in more distributed work forces, but the tradeoff between remote working and face-to-face collaboration, from a productivity and cost standpoint, is not yet clear.
CONCLUSIONS

Portfolio optimization covers a broader range of territory across the enterprise than it ever has, offering CRE professionals unprecedented opportunities to add value, as well as new challenges – challenges, oddly enough, that more often than not arise from a surplus of data rather than the inability to collect it that troubled earlier professionals. Two of the most vexing concerns raised by executives interviewed for this report were:

1. How do we know which data is most valuable in a sea of information?
2. How do we measure productivity gains in an increasingly mobile, knowledge-based economy?

These are challenges that come from too much data rather than not enough, arguably a nice problem to have, but one that will concern CRE professionals in the coming years. Each company will find its own solutions, with firms in similar industry groups sharing discoveries and advancements as appropriate.

As CRE professionals navigate these waters, there are other issues to consider. One is the complex set of challenges associated with expanding into new markets and countries. This exposes companies to more governmental and regulatory environments. Lance Capital’s Richard Podos identified the issue this way: “If you go to France or to Germany, or Finland or Sweden, there are very significant regulatory constraints on what you can do with physical space, (and) there’s nothing in here about how to optimize a portfolio in the context of an increasing regulatory burden.”

As the enterprise expands globally, CRE professionals need to learn new languages and not just those spoken in new markets. It’s a mistake to assume that lessons learned in one market are totally applicable in another part of the world. Jeri Ballard of Shell Oil shared a dilemma that may come as a surprise to firms just beginning to expand into other countries.

“If your whole portfolio is U.S. based, there’s a great deal of publicly available information that can help you, but the challenges go up once you get out of a North American context,” said Ballard. “You’re in places where there’s not a lot of publicly available information at all about real estate. I can’t tell you the pains we’ve gone to trying to figure whether or not we actually owned a property or not. There are some countries where no one can own property except for members of the royal family. That’s a challenge that means you’re just leasing land.
“People think, ‘well, I’m going to buy the land, I’m going to get to title it, of course there’ll be title insurance so I know they have the right to sell it.’ Guess what? Title insurance is not a global concept. There are a lot of places where you have to research back hundreds of years to figure out who has had it, and did they have the rights.”

Partnering with local service providers can be critical in such instances, but that can also bring challenges. Ballard again: “You have to rely heavily on people, in-country service providers to help you through it. There are still parts of the world where you say, ‘we would love to use one of our companies that we use all the time.’ And you get there to find out there’s not a single one of them in the entire country. When you go to Gabon and you want to hire the finest real estate company in Gabon ...”

Another issue facing CRE executives in the near term in particular is the importance of understanding the complex tangle of debt and equity that impacts lenders and owners of real estate. The tension between what real estate developers, owners, bankers and other lenders and occupiers of space require to be successful not only impacts lease negotiations, as we saw earlier in this document, but questions of leasing versus ownership and even major corporate expansion. For instance, in many markets across the U.S. and elsewhere, there’s a dramatic lack of new real estate supply in the pipeline. To the extent that companies want to implement alternative workplace strategies, move to greater space economy or move toward green principles or more advanced technology, the lack of new space in which to build out customized space solutions will represent another challenge.

It’s clear from the accumulation of information in this document that opinions are range across the spectrum regarding the set of Bold Statements examined herein. For every professional in broad agreement with one statement or another, there is one who isn’t convinced the industry will ever move in that direction.

In the final analysis, each company will learn from its colleagues, providers and competitors, adapting old tools to new situations and learning how best to integrate new tools into their models. And all of this must be in the service of larger corporate goals, or else it will remain an interesting but ultimately ineffective exercise. As Shell Oil’s Jeri Ballard noted, “If you don’t fundamentally have the business needs well defined, everything you do beyond that on your portfolio optimization will be wrong. I’ve seen that countless times. We have information, but it’s not always the information you would need to make the decisions. We have a lot of data, but we don’t have information, if that’s how you want to put it. Data is just stuff. Information, you can do something with.”
APPENDIX A:
CORPORATE REAL ESTATE 2020
TEAM LEADERS AND SPONSORS

Enterprise Leadership
Mark Schleyer, AT&T
Michael Creamer, Cushman & Wakefield

Location Strategy and the Role of Place
Mary Jane Olhasso, MCR, County of San Bernardino

Partnering with Key Support Functions
Craig Robinson, Cassidy Turley

Portfolio Optimization & Asset Management
Jack Burns, Cresa
Keith Keppler, Cresa
Russ Howell, MBA, Jones Lang LaSalle

Service Delivery & Outsourcing
Blake Layda, Jones Lang LaSalle
Scott Bumpas, Cresa
Lisa Huls-Fry, Cassidy Turley

Sustainability
Leigh Stringer, HOK

Technology Tools
Larry Sweeney, AT&T
Robin Ellerthorpe, HOK

Workplace
Anne Nathe, Johnson Controls, Inc.
Chris Mach, MCR, AT&T
Cindy Beavers, Steelcase Inc.
Margaret Gilchrist Serrato, Ph.D., MBA, AIA, ASID, LEED AP, Herman Miller
Michael Leone, Regus
Patricia Roberts, Jones Lang LaSalle
Rob Wright, Johnson Controls, Inc.
Russ McFadden, AT&T
Steve Hargis, MCR, LEED AP, HOK
APPENDIX B: PROFESSIONAL LEADERS INTERVIEWED BY THE PORTFOLIO OPTIMIZATION AND ASSET MANAGEMENT

Aedas Interiors Ltd.
Karen Chan, Executive Client Account Manager

BB&T
Koo Stengle, Strategic Planning Manager

CBRE
David Chang, Director, Regional Strategist, Global Corporate Services Asia

CBS
Ken Cooper, Senior Vice President, Administration

Citigroup
Isha Bathla, Citigroup

Cushman & Wakefield
Gautam Saraf, National Head of Office Agency Leasing Services, India

Deutsche Bank
Royce Anthony, Vice President/Head of Strategic Planning, Real Estate, India

Dow Chemical
Frank Kayden, MCR, SLCR, Director, Real Estate Portfolio Management

Delft University of Technology
Monique Arkesteijn, Assistant Professor of Real Estate Management

EMC Corp.
Dan Fitzgerald, Vice President, Worldwide Real Estate and Facilities

Google
John Peterson, Head of Global Planning and Analysis

The Hartford
Troy M. Riccitelli, Director, Real Estate Planning

inVentiv Health
Erica Chapman, Vice President, Real Estate and Facilities

ING Bank
Patrick de Gendt, Head of Corporate Real Estate Management

Jones Lang LaSalle
Russ Howell, Managing Director, Strategic Consulting

Lance Capital LLC
Richard Podos, President

Liberty Mutual Group
Karen L. Whiteknact, Vice President, Corporate Real Estate

Mary Kay Inc.
Bruce Killion, Business Analyst

NetApp
Tom Willow, Senior Director, Worldwide Facilities and Real Estate

Nokia
Charles Meachum, MCR, Regional Director, Americas

Oracle
Michelle Myer, MCR, Vice President, Real Estate and Facilities

Parsons
Christopher McGivern, Vice President Corporate Facilities

Philips
Ron Blanken, Vice President, Strategic Portfolio Management

Procter & Gamble
Brian Banke, BCCR, SLCR, Global Real Estate Portfolio Manager
APPENDIX B: PROFESSIONAL LEADERS INTERVIEWED BY THE PORTFOLIO OPTIMIZATION AND ASSET MANAGEMENT

Prudential
Kathy Winkler, Vice President, Corporate Real Estate

Salesforce.com
Larry Wolfert, MCR, Senior Director, Real Estate

Shell Oil Co.
Jeri Ballard, Vice President, Strategy and Portfolio

Southern California Edison
Robert Schuur, Project Manager, Strategic Planning
Brandon Tanner, SLCR, Senior Manager, Space and Operational Planning

Standard Chartered Bank
Arnald Ng, CFM, MCR, MRICS, Head of Facilities Management, CRES

Staples
Tom Colarrusso, Director, Non-Store Real Estate

Time Warner
Chris Davidson, MCR, Executive Director, Operations

Travelers
Michael Walling, Regional Vice President

Visa
Michael Griffiths, MCR, Director, Global Portfolio Management

Wells Fargo
Stan Gibson, MC.Rh., Senior Vice President
The purpose of this document is to assist the research teams in setting up the interview by providing consistent information on the background of the project, research areas, purpose of the interview, timeline, deliverables and expectations. Some of the people being interviewed may be very familiar with the project, while others may not. Reviewing this information prior to the formal interview can help to insure that all interviews are conducted in a consistent manner and the people being interviewed have a clear understanding of the overall project and their role in the process.

Background

CoreNet Global is the world’s leading association for corporate real estate (CRE) and workplace professionals, service providers and economic developers. Nearly 7,000 members, who include 70% of the Fortune 100 and nearly half of the Forbes Global 2000, meet locally, globally and virtually to develop networks, share knowledge, learn and thrive professionally.

Program Description

Corporate Real Estate 2020 is a research and leadership development program designed and managed by CoreNet Global to address the business environment in the future and to collect, package and distribute state-of-the-art best practices, tools, models and case studies to help our members prepare to meet future business needs.

To achieve this objective, we are interviewing a number of senior industry leaders to validate a new vision for the industry and develop a series of transition strategies to assist corporate real estate organizations in transforming themselves to meet the challenges ahead as the economy changes and new business models evolve.
APPENDIX C: PORTFOLIO OPTIMIZATION AND ASSET MANAGEMENT INTERVIEW GUIDE

Research Areas

Based on the vision of the future we have also developed a number of key Research Areas to assist our members in migrating from their current real estate practices to the new skills and strategies needed to survive and grow over the next two to five years. These include strategies for the following areas:

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<tr>
<th>Research Area</th>
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<td>EL</td>
<td>Enterprise Leadership</td>
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<td>LS</td>
<td>Location Strategy &amp; the Role of Place</td>
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<td>PK</td>
<td>Partnering with Key Support Functions</td>
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<td>Portfolio Optimization &amp; Asset Management</td>
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<td>Service Delivery &amp; Outsourcing</td>
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<td>Workplace</td>
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Deliverables

Deliverables from this project will include research reports; web-based white papers; learning seminars; workshops and panels at Summits; material and speakers for chapter programs; articles in LEADER Magazine and industry and business press; and topics and speakers for other learning events.

Timeline

Corporate Real Estate 2020 was officially launched in August 2011 in Dallas. Since then the teams have been refining their research hypotheses and synthesizing input from members obtained at the Paris and Atlanta Global Summits. Our goal is to complete the interview process by the end of January. Research teams will make their final presentations at the CoreNet Global Summit in San Diego in April 2012, with final research reports due in May.

Intellectual Property

Before we begin, I also want to explain the intellectual Property Guidelines for Corporate Real Estate 2020.

Please do not share any confidential or proprietary information with any member of the research team. If we use any specific information or materials from this interview that refer to you or your Company, we will offer you the opportunity to review that information prior to publication.
Purpose of the Interview

The purpose of this interview is to capture your knowledge and thoughts on Portfolio Optimization and Asset Management in 2020.

Do you have any questions before we get started?

Interview length approximately 1 hour

Validate the correct spelling of your name and official title:

Name:
Title:
Company:
Date of Interview:

Background Information

Note: Interviewers are encouraged to review the Annual Report and 10K form for the firm prior to the interview.

1. What is the primary industry classification for your firm? (check one)
   - Energy
   - Engineering / construction
   - Financial Services / Insurance
   - Food / Beverage
   - Healthcare
   - Heavy Manufacturing
   - High Tech Manufacturing
   - Pharmaceuticals
   - Retail / Wholesale
   - Telecom
   - Transportation
   - Other (please specify)
2. What was the **annual revenue** for your firm last year? Please specify ________ or check one of the following:

- [ ] Less than $1 Billion
- [ ] Equal to or more than $1 Billion but less than $5 Billion
- [ ] Equal to or more than $5 Billion but less than $10 Billion
- [ ] Equal to or more than $10 Billion but less than $25 Billion
- [ ] Equal to or more than $25 Billion

3. In **how many countries** do you operate? Please specify ________ or check one of the following:

- [ ] The US only
- [ ] The US and less than 5 countries
- [ ] Equal to or more than 5 but less than 25
- [ ] Equal to or more than 25 but less than 100
- [ ] Equal to or more than 100

4. What is the **approximate number of employees** in your firm? Please specify ___________ or check one of the following:

- [ ] Less than 5,000
- [ ] Equal to or more than 5,000 but less than 10,000
- [ ] Equal to or more than 10,000 but less than 25,000
- [ ] Equal to or more than 25,000 but less than 100,000
- [ ] Equal to or more than 100,000

5. What is the approximate size of your company’s portfolio in square feet (or square meters)? ___________. For which of these is the CRE group responsible?

<table>
<thead>
<tr>
<th>% of Assets</th>
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<tr>
<td>______ % Office</td>
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<td>______ % Fleet Facilities</td>
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<tr>
<td>______ % Other</td>
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Research Questions

Context on your business and the Corporate Real Estate (CRE) group

1. What business strategies or strategic initiatives are currently being deployed by the company’s core business to improve its competitive position (e.g. cost reduction, market share, M&A, etc.)?

2. Describe how your CRE group is organized, and how it reports up into the corporate organization.

Research Hypotheses developed by the Portfolio Optimization Team

Please respond to each of the following research hypotheses regarding Portfolio Optimization and Asset Management in 2020”. Do you agree? Disagree? What are your thoughts?

1. Demand forecasting will improve and significantly narrow the band of uncertainty in regard to future requirements. Forecasting will become less dependent on management’s predictions, and better able to use external factors to predict demand.

2. At the same time, we will develop the ability to future-proof portfolios with built-in flexibility to respond to the residual uncertainty.

3. Technological innovation will enable integration of data streams from different parts of the organization into cross-functional dashboards to better support real-time decision making.

4. Significant progress will be made in developing a set of tools to achieve financial optimization of the global portfolio in collaboration with corporate treasury, finance and taxation functions.

5. Organizations will recognize the potential detrimental impact of cost cutting on productivity, changing the conversation from cost containment to value creation.

6. Competition for talent will yield a more distributed work force, dramatically altering space demand. 50 percent of workers in developed economies and 25 percent in developing economies will use AWS/teleworking, improving optimization, driving down costs and reducing carbon footprint.
APPENDIX D: RESPONSE TO THE 2020 PORTFOLIO OPTIMIZATION AND ASSET MANAGEMENT BOLD STATEMENTS

The Portfolio Optimization and Asset Management team tested six Bold Statements, or research hypotheses, through interviews with senior executives, Summit education sessions and the results of the Corporate Real Estate 2020 end-user survey. Four of the six Bold Statements were supported by a strong majority of survey respondents (more than 55 percent), but, for others, respondents were less sure, with more than 30 percent in disagreement. Although the team elevated its focus beyond the interviews and survey to examine the emerging findings from other 2020 teams – and more importantly, what implications these findings held for corporate real estate/workplace executives – a summary of results to the specific hypotheses is provided below:

1. Demand forecasting will improve and significantly narrow the band of uncertainty in regard to future requirements. Forecasting will become less dependent on management’s predictions, and better able to use external factors to predict demand.

   Finding: Only 35 agreed or strongly agreed, while 37 percent disagreed or strongly disagreed.

2. At the same time, we will develop the ability to future-proof portfolios with built-in flexibility to respond to the residual uncertainty.

   Finding: 73 percent agreed or strongly agreed, while only 10 percent disagreed or strongly disagreed.

3. Technological innovation will enable integration of data streams from different parts of the organization into cross-functional dashboards to better support real-time decision making.

   Finding: 80 percent of respondents agreed or strongly agreed, while six percent disagreed or strongly disagreed.

4. Significant progress will be made in developing a set of tools to achieve financial optimization of the global portfolio in collaboration with corporate treasury, finance and taxation functions.

   Finding: 60 percent agreed or strongly agreed, while eight percent disagreed or strongly disagreed. This statement drew the largest neutral response at 32 percent.

5. Organizations will recognize the potential detrimental impact of cost cutting on productivity, changing the conversation from cost containment to value creation.

   Finding: 60 percent agreed or strongly agreed with this statement, while 17 percent disagreed or strongly disagreed.

6. Competition for talent will yield a more distributed work force, dramatically altering space demand. 50 percent of workers in developed economies and 25 percent in developing economies will use AWS/teleworking, improving optimization, driving down costs and reducing carbon footprint.

   Finding: The competition-for-talent side of this statement drew 71 percent that agreed or strongly agreed, vs. 14 percent that disagreed or strongly disagreed. For AWS, 56 percent agreed or strongly agreed, while 20 percent disagreed or strongly disagreed.
APPENDIX E: PORTFOLIO OPTIMIZATION AND ASSET MANAGEMENT
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Sam DiFranco, Managing Principal, Cresa
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Michael Griffiths, MCR, Director, Global Portfolio Management, Visa Inc.
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Clayton Hayden, MCR, Director – Strategy & Portfolio Analysis, Merck & Co. Inc.
Russ Howell, Managing Director, Jones Lang LaSalle
Roger Humphrey, SLCR, MCR, Executive Director, Global Real Estate Services and IFM Governance, Merck & Co. Inc.
Gage Hunt, Director – Facilities & Administration, Mary Kay Inc.
Mike Kalmanson, Senior Vice President, Cresa
Frank Kayden, MCR, SLCR, Director, Real Estate Portfolio Management, Dow Chemical Co.
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PORTFOLIO OPTIMIZATION AND ASSET MANAGEMENT
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Charles Meachum, MCR, Regional Director, Americas, Nokia
Alan Nager, Executive Managing Director, Newmark Knight Frank
Richard Podos, President, Lance LLC
Edmond Prins, Director, Real Estate, CEMEX
Peter Prischl, Managing Director, Reality Consult GmbH
Gary Riddle, MCR, Director, Corporate Services, CBRE
Aditi Sant, MCR, Senior Vice President, Strategy, Bank of America
Gautam Saraf, National Head of Office Agency Services, Cushman & Wakefield - India
Robert Schuur, Project Manager, Strategic Planning, Southern California Edison
Anne Sheehan, CEO, Real Property Tax Advisors
Margaret St. Andre, MCR, Director, Real Estate Services, Auto Club Group (AAA)
Koo Stengle, MCR, Strategic Planning Manager, BB&T
Wendy Taylor, Director of Business Development, Interprise Inc.
Charemon Tovar, MCR, Director, Innovation and Information Management, CBRE
Hartanto Utomo, Real Estate Manager, Standard Chartered Bank
Michael Walling, Regional Vice President, The Travelers Co.
Bailey Webb, Communications Strategist, CoreNet Global
Erin Wesson, MCR, Director, Portfolio Management, Nationwide Insurance
Larry Wolfert, MCR, Senior Director, Real Estate, salesforce.com, Director, DTZ
APPENDIX F:
CORPORATE REAL ESTATE 2020
PARTICIPATING COMPANIES

Accenture
adidas
Adobe
ADP
Aedas
Air New Zealand
Allsteel
Altisource
American Airlines
American Express
American Medical Systems
ANZ
Associated British Foods
AstraZeneca
AT&T
Atmos Energy
Bank of America
Bank of New Zealand
BASF
BB&T
BMC Software
Boston Scientific
Brenau University
BusinessSuites
Carnegie Mellon University
CASP-R
CBRE
CBS
Chevron
Ciena
Cisco
Citigroup
Coca-Cola Refreshments
Colonial First State
Cornell University
Corporate Portfolio Analytics
DEGW
Delft University of Technology
Deutsche Bank
Dow Chemical
eBay
Eli Lilly
EMC
Equifax
Ericsson
Ernst & Young
Fidelity Investments
Fisher & Company
Ford Land
Future of Work...unlimited
Genentech
Gensler
Georgia Institute of Technology,
School of Building Construction
Global Workspace Association
Google
Harvard Business School
Haworth
Hewlett-Packard
Hilton Hotels and Resorts
Hindustan Unilever Limited
HOK
Honeywell
IA Interior Architects
IMC Octave
Infineon
Infrastructure Ontario
ING Bank
Intel
Interface
inVentiv Health
iOpenner Institute
Iron Mountain
Jacobs Engineering
JDS Uniphase Corporation
John Deere
Johnson & Johnson
Johnson Controls
Jones Lang LaSalle
Kraft Foods
Lance Capital LLC
Liberty Mutual Group
Lockheed Martin
Marsh & McLennan Companies
Martin Prosperity Institute, University of
Toronto
Mary Kay Inc.
Massachusetts Institute of Technology
McCarthy Consulting Group
McKesson
MetLife
Michelin
Microsoft
Microsoft India
MillerCoors
Morgan Stanley
NetApp
Nokia
Nokia Siemens Networks
Northern Trust
Novellus
NVIDIA
Oracle
Pacific Gas & Electric
Pan-European HR Network
Parsons
Pfizer
Philips International
Polycom
Procter & Gamble
Prudential Financial
Raytheon
Red Hat
Regus
Royal Dutch Shell plc.
Salesforce.com
SAP
Shell Oil Company
Siemens AG
Siemens Building Technologies
Sony Electronics
Southern California Edison
Sprint Nextel
Standard Chartered Bank
Staples
Steelcase
Sybase
Target
TD Bank Group
Teknion
Telstra
Tenet Healthcare
Texas Instruments
The Hartford
The Occupiers’ Journal Limited
The Sage Group
Thomson Reuters
TIGNUM
Time Warner
Timken
T-Mobile
Travelers
U.S. General Services Administration
Unilever
Unilever UK
UnitedHealth Group
University at Buffalo SUNY
University of California, Berkeley
University of Michigan
University of Texas at Austin
Verint
Virginia Polytechnic Institute and State
University
Virtual Premise
Visa
Vodafone
Vodafone NZ
Westpac
Yahoo!
Zurich Insurance Group
EIGHT RESEARCH TEAMS

Enterprise Leadership
Location Strategy & the Role of Place
Partnering with Key Support Functions
Portfolio Optimization & Asset Management
Service Delivery & Outsourcing
Sustainability
Technology Tools
Workplace