



A Big Deal in a Little Package

They may have a small footprint, but data centers are a huge priority for corporate users. Where they're located should be just as important.

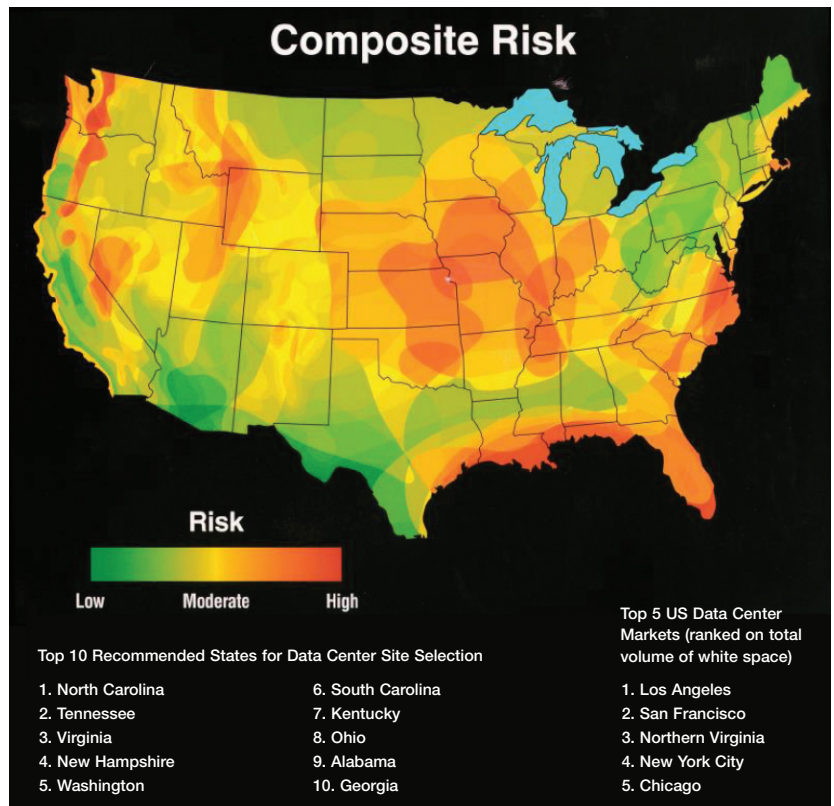
They're frequently small in scale, with total square footage measured in the tens of thousands rather than hundreds of thousands or millions. Yet data centers—or the data they process—command a prominence in the corporate user's universe that's disproportionate to their modest size, and should not be plunked down willy-nilly on the landscape. That's one of the conclusions to be drawn from a white paper prepared by Ronald H. Bowman, EVP of Tishman Technologies Corp., a Tishman Corp. division that specializes in data centers.

"Most data centers require less than 10,000 square feet of space, and most data center capacity is utilized by small users," Bowman writes. "However, requirements are growing at a faster velocity due to Moore's Law—the principle that data center bandwidth doubles every 18 months. This, combined with users' general reluctance to spend significant money on mission-critical facilities that protect assets rather than return visible profits, makes it incumbent to locate data centers wisely and economically."

The wisest and most economical locations for data centers, according to TTC, aren't necessarily convenient to the major metro areas where decision-makers are based. The largest five markets for such properties are "driven by large corporate industries and are adjacent to large cities, for convenient access from the headquarters offices," writes Bowman. However, he continues, today "only critical applications need to be in or near headquarters." Non-critical applications, which require most of the data center space, can be located remotely to save money.

"The criteria that make a state good, or even a region within one, is what we call the Total Cost of Ownership," a proprietary model of life cycle cost analysis, says Bowman. Included in the TCO model is the cost of energy, "which is a very large part of these projects. A large data center can take as much energy as a small city; you can see the thermal footprint from outer space."

If the economic downturn has provided any opportunity, Bowman says, "it would be to really drive down operating expenses: 'Where can I do this cheaper? What levels of dis-



stances can I actually live with?' " He anticipates seeing more data center activity in TTC's top 10 states (*see graph*).

"Now, that is not an anti-New York or anti-urban statement. It just means that there are technological solutions," he adds. "Two phrases you're going to hear over and over again are 'virtualization' and 'cloud computing.' These allow you to do data processing remotely and with a smaller footprint. And these footprints are very expensive." Data centers typically cost between \$200 million and \$400 million to build.

The urban data centers are certainly not going away, though. "What will happen is that they will become part of the IT topology," relates Bowman. In New York City and other large urban markets, "you'll find a lot of these data centers inside office buildings," Bowman says. "Given what land costs are, you won't find a lot of stand-alone data warehouses there."—Paul Bubny ♦