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Center for an Urban Future

Commentary/Op-Ed - May 2003

Call for Backup

If the city's serious about making downtown thrive, a small investment in wireless technology will pay huge dividends.

by Jordan Silbert

How much would it be worth to the city to be able to tell employers that lower Manhattan is the most reliable place in the world to do business? A billion dollars? Two?

Then imagine that boast could be fulfilled within one year. Without digging up the city's streets.

Now how much would you pay?

What if all this could be ours for a public investment of less than $10 million?

That's the number initially estimated by technology providers for the Lower Manhattan Telecommunications Users Working Group--a group of senior telecom executives from a variety of downtown's leading companies. The group, convened after September 11, 2001, by the Alliance for Downtown New York, the Real Estate Board of New York, the Association for a Better New York, and the New York Building Congress, charged itself with identifying the potential telecom weaknesses revealed by the attacks, and developing a strategy for ensuring that the area's communications infrastructure was made more secure and reliable than ever before. The participants found two important ways in which individual building owners could make tenants' telecom connections more secure, but it determined that what lower Manhattan needs most is a true redundancy, or backup, system.

It also learned that with new wireless technology such a system could be implemented for what, in the context of the larger rebuilding effort, amounts to pocket change.

The payoff, however, would be enormous. When companies choose a location, they are increasingly considering "business continuity"--that is, how certain they can be that their ability to do business will not be interrupted. This is particularly true of the communications-dependent businesses that are both predicted to grow over the coming decades and inclined to be attracted to New York City. The world's most reliable telecom service would be a very compelling reason for such businesses to remain or relocate here.

Says Richard Kennedy, a senior director at the commercial real estate firm Cushman & Wakefield: "With the emphasis on business continuity planning, more and more tenants in the market for new space are asking, 'How reliably will the telecommunications infrastructure at this particular location serve my business?'"

Fortunately, one of the best-kept secrets about lower Manhattan is that, due to decades of investment aimed at meeting the needs of the world's leading financial companies, its telecom infrastructure is already superb. Second only to a tiny island in Hawaii, which serves as a meeting point for the trans-Pacific fiberoptic cables to Japan and Australia, lower Manhattan is the "most wired" place on the globe. With billions of dollars invested in optical fiber, routers and switches, and fiber-optic cable running under virtually every street and into virtually every major building, downtown's capacity for communication is already one of its great competitive advantages.

Since lower Manhattan has such a solid head start, taking the next steps to make it the undisputed world leader in telecom reliability would be a quick and relatively cheap way to attract and retain jobs in New York City.

The Lower Manhattan Telecommunications Users Working Group identified a wireless redundancy system as the most cost-effective means of rapidly enhancing the reliability of lower Manhattan's telecom infrastructure. Recent technological advances make it possible to transmit enough data through the air at speeds high enough to ensure business continuity in the event of the disruption of traditional communication lines, even for firms that are heavily dependent on their ability to share information. The city could make use of this technology to build a wireless backup system that serves all of lower Manhattan.

Here's what such a system would look like: An individual company's data would flow wirelessly between equipment mounted on the roof of the building it occupies and transceivers placed atop strategically chosen tall buildings in lower Manhattan. These transceivers would in turn connect--also wirelessly--to already existing hubs both within lower Manhattan and elsewhere (e.g. Brooklyn or New Jersey). These would safely shunt the information onto or off of the proverbial information superhighway in the event of a problem with the traditional communication lines.

Companies including Merrill Lynch and Bank of New York have already given a de facto stamp of approval to such plan by implementing their own wireless redundancy systems. However, as one might guess, their systems are custom-designed to serve their needs alone--a solution that is prohibitively expensive for all but the largest companies, and which doesn't allow businesses to share infrastructure costs, as they could with the district-wide system described above.

In a very preliminary analysis for the Lower Manhattan Telecom Users Working Group, telecom providers estimate that the shared infrastructure for such a system would require a public investment of less than $10 million. Though both the city and the state are currently cash-strapped, this small investment would quickly pay for itself. The Economic Development Corporation estimates the direct fiscal impact of one $150,000 financial-services job at $150,000 in present dollars, over ten years. That includes only the income and sales tax paid by the employee. Consequently, a lower Manhattan wireless redundancy system would have to retain or attract only 67 jobs over the next 10 years to make the initiative cost-effective. And since these numbers do not take into account the indirect benefits, also known as the "ripple" or "multiplier" effect, the actual economic impact would be far greater.

The funds available for the rebuilding of lower Manhattan are a good and appropriate source for the needed investment monies. The Lower Manhattan Development Corporation (LMDC), a joint state-city corporation, was allocated $2.7 billion by

the federal government (out of a total federal allocation of $21 billion) and charged with "ensuring lower Manhattan recovers from the attacks and emerges even better than it was before." A lower Manhattan wireless system would do just that, by quickly positioning the area to thrive in the Information Age, and it would do so at a cost of less than four-tenths of 1 percent (.37%) of LMDC's total allocation. In addition, because a wireless system would not require any digging up of city streets, it could be implemented rapidly, easily within one year of initiation, demonstrating in a highly visible way that the new and improved lower Manhattan was already open for business.

While the wireless system would be a natural public-sector project, the Lower Manhattan Telecom Users Working Group noted that the capacity to improve the reliability of the "wired" telecom infrastructure rests largely with private building owners. It identified two specific ways in which individual property owners could shore up the reliability of the current system, making both the area in general and their properties in particular more attractive to prospective tenants.

The first is not much more complicated than drilling a hole. According to a recent Downtown Alliance survey, 63 percent of buildings in lower Manhattan have more than one entrance, or conduit, through which telecom cables enter. While this is a greater percentage than in virtually all other central business districts, upgrading the other 37 percent of buildings would eliminate one of the last cracks in the armor. Today, if something happens at the one conduit entrance in one of these buildings, whether it be a backhoe accident or a small explosion, tenants are likely to lose their voice and data connections to the world. Adding an additional conduit entrance and running additional cable through it, at a cost of approximately $50,000 per building, would dramatically reduce this vulnerability. It would also make these buildings much more attractive to existing and potential tenants.

"We've found, with our properties, that offering the best in telecommunications has helped us attract and retain tenants,"says John Gilbert, executive vice president and chief operating officer of Rudin Management, which owns and operates 14 commercial office buildings in the city, including the Information Technology Center at 55 Broad Street. "Anything that significantly enhances the reliability of tenants' telecom systems would undoubtedly help."

The second way the working group found that building owners can enhance the reliability of their tenants' telecom networksis to give tenants more choices when purchasing telecom services.

One of the barriers preventing new telecom carriers from serving a given building is that the necessary equipment and wiring is expensive to purchase and install. As a consequence, the carrier can only justify the required investment with a very large new customer or numerous smaller customers.

Individual property owners could help solve the problem by installing and maintaining central telecom distribution systems in each of their buildings--much the way they would install central heating and air conditioning units. In other words, rather than requiring each telecom carrier to install its own equipment and cables--a costly and cumbersome arrangement--a landlord would own the equipment and a universal system of cables. Then a variety of carriers could "plug in" at the building entrance and serve as many tenants as they could woo with the best combination of price and reliability.

The cost to install such a central distribution system in one of Lower Manhattan's office buildings ranges from approximately 65 cents to $1.25 per square foot, depending on the building's existing infrastructure. Assuming that the equipment can be used for 10 years, this means that additional per-square-foot cost would be between 10 and 19 cents per year. Already a mere pittance, that expense could in some cases be partially offset by existing economic incentives. For example, one provision of the Lower Manhattan Revitalization Plan offers property tax exemptions to landlords who increase the assessed value of their buildings; another offers real estate and commercial rent tax exemptions to tenants in downtown buildings that make investments in their permanent infrastructure.

In rebuilding lower Manhattan, billions will be spent and bold visions will be realized. However, this will take years, if not decades. Investing in a wireless redundancy system could, within a year, make lower Manhattan the most reliable place in

the world to do business. This would not only be a smart, cost-effective way to promote the city's economic vitality, but it would also be a high-profile, high-impact way to attract jobs that could be started right now.

New York City has faced challenges before. And each time, in a fashion that has come to be called "quintessentially New York," we have responded boldly with new bridges, new inventions and new industries. Today we have another opportunity to reach boldly. We must seize it.

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