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Is VoIP Right For Your Medium-Sized Enterprise?

The hype is inescapable --- converged networks and VoIP promises to drastically lower telecom and networking costs, and usher in a new era of converged data and voice applications. But is the hype real--- is VoIP the solution for your midsized company? Here's what others are doing, and advice to get you started.

By Matthew Friedman

Courtesy of [Networking Pipeline](#)

For Bozzuto and Associates Inc., the migration to voice over IP (VoIP) was a simple question of good business sense. The Greenbelt, MD-based development and construction firm was in a sharp growth curve four years ago and, to accommodate the new staff, it decided to branch out to an office up the road.

"We were at maximum capacity in our building, so we relocated our homes division and accounting to a new building," says Bozzuto Associates' IS director Chad Cooley. "The problem was that there were no conduits between the buildings, so we had to find a way to do our data and voice systems for the whole company."

Although the company was probably a little ahead of its time four years ago, Cooley says that Bozzuto Associates wasn't sure it wanted to make a major long-term investment in telephonic equipment and network infrastructure. Conscious of the speed of technological change and the rapidity of its own growth, the company wanted a voice and data system that gave it the flexibility to adapt.

The solution was to join the new location to the head office by a wireless network connection and route IP telephones through a VoIP gateway. "It solved a whole lot of problems," Cooley says. "We were able to get the new location up and running, and we were able to save half the cost of doing it by consolidating the network on one infrastructure."

Indeed, that's the appeal of VoIP to midsized organizations. For all of the hype about toll bypass and advanced telephony integration features, the bottom line at the midmarket is the bottom line: VoIP makes sense because it can help reduce capital expenses while greatly simplifying the deployment and management of the company telephone system.

"Ease of maintenance, ease of integration, ease of managing multiple locations, these are the issues," says Info-Tech Research analyst George Goodall. "The benefits of VoIP for midsized companies aren't just about toll bypass at all, they're about using a phone system



as a phone system. You find the advantages of VoIP at a very practical level, and that's the level that these companies are thinking about the technology."

As a result, they're essentially technology-agnostic, as long as the technology works. "When midsized organizations talk about telephony, they don't talk about TDM or Frame Relay, they talk about phone service," he says. "It's the same thing about VoIP."

Why Vendors Ignore Medium-Sized Companies

Infonetics Research directing analyst Matthias Machowinski says that VoIP vendors have focused their attention on the enterprise market, and medium-sized organizations can be excused for feeling a little left out of the IP telephony revolution. Bozzuto Associates aside, most of the action in VoIP has been up-market.

"That's certainly one of the complaints leveled at the larger vendors," he says. "Part of that is because vendors aim at where they can make more money, and the large enterprises are more prepared for the technology."

With tighter budgets and a lot to lose, midsized organizations have been more conservative than their bigger counterparts, but that has begun to change, and vendors like market leaders Avaya and Cisco see great midmarket potential.

"We think that midsized organizations have waited to see what the large businesses are doing to be sure that the technology was sound," Avaya midmarket marketing director Jeff Koehler says. "Midsized companies have lagged behind in consideration, making a determination and making a decision, but a third of them have made the decision and selected a vendor."

Indeed, vendors say that they are taking this interest seriously. A midsized company, says Julie O'Brien, senior product marketing manager for Cisco IP Communications, is not just an enterprise on a smaller scale. "Midsized companies have different pain points than enterprises," she says. "Enterprises were the early adopters, and the midsized companies have been keeping an eye on them. They want to know things like is the quality there? Are the applications there? Does the TCO cover what I have today?"

Making The Migration To VoIP

What an organization has today will have a lot to do with whether they are ready to migrate to VoIP, and how. Goodall notes that many midsized businesses that have invested in key systems for smaller branch offices in the last few years are already using IP telephony anyway. "These systems run IP inside, but it's transparent," he says. "It's



invisible to the user. Vendors are using VoIP for the advantages, like scalability and ease of management, and not for the hype value."

Nevertheless, key systems are hardly the heart and soul of the telephony market. Despite all of its advantages, the midmarket move to VoIP is more of a steady stream than a surging torrent -- particularly where full systems are concerned. "This really isn't something that companies will rush into," Machowinski says. "We see a very steady migration, and there are very specific triggers."

One of those triggers is the obsolescence of existing private branch exchanges (PBXs). The last big surge in the PBX market was in the late-1990s, when organizations upgraded their phone systems for Y2K compliance. That means that there are a whole lot of PBXs nearing the end of their five-to-seven-year life cycles and ready for upgrades, and whole lot of equipment leases are ready to expire.

"We see PBXs coming off lease at the same moment that businesses are starting to understand VoIP and see it as a viable technology," Koehler says. "They're reading about it, and they're seeing their clients do it, so it's not such a strange idea when it comes to upgrading their telephone systems."

Moreover, any company shopping for a PBX today will find it hard to buy a time division multiplexing (TDM) PBX anyway. "If you're buying a PBX now, a vendor will quote you an IP system rather than a TDM system," Machowinski says. "At most, you'll be looking at a hybrid PBX, but either way, you'll be getting IP."

Is It Time To Buy?

Whether this is the time to buy, obsolescence notwithstanding, is another thing midsized companies need to consider. An assessment of resources, infrastructure and technology is absolutely essential. You can't just plug in an IP PBX and expect it to work. In the best of all possible worlds, a company should pilot any potentially disruptive technology -- and changing something as mission critical as a phone system can be disruptive. But how do you pilot a phone system? "Some companies have implemented small systems in small call centers or a help desk, often using an open source product like the Asterisk PBX," Goodall says. "You can experiment like this, to do a very limited pilot and see what intellectual and technical resources you have in-house."

A company that doesn't have the expertise to run a VoIP system should stop right there and consider the alternatives. One of these is to start hiring staff or engaging a consultant to guide the organization through the process, another is to seriously consider a managed solution. Ultimately, a final option is to simply give VoIP a pass and wait until the



company has developed the appropriate expertise in-house. After all, VoIP will still be around next year -- and the entry costs might actually be lower.

"For a lot of companies, VoIP won't make sense just yet," Machowinski says. "If your TDM system works, and you don't have the resources to implement VoIP, then there's really no reason to."

Examine Your Network Infrastructure

If the project still has the green light, the next step is to determine if your network infrastructure is up to the challenge of VoIP challenge. VoIP is particularly sensitive to network congestion and you will hear any infrastructure insufficiencies in annoying jitter and latency. The capital expense of a VoIP system can extend far beyond the VoIP hardware itself.

"It's a genuine concern for midsized businesses," Goodall says. "That's why we're seeing companies move incrementally and trying to avoid handset replacement. On the other hand, midsized organizations are moving to level-3 switches already, so those upgrades are already baked into the LAN upgrade cycle."

Moreover, network consolidation can provide enough payback to cover the initial capital expense of a network upgrade -- an upgrade that it will inevitable have to do, anyway, O'Brien says. "There are significant savings to be had by converging onto a single network," she says. "So even if you have to make upgrades to your IP network, the payback in a year, or even in three to six months, can cover these costs. You're lowering overall management costs and maintenance fees by consolidating on a single network."

At the end of the day, Cooley says, it's about doing your homework. The key to success, of course, is ensuring that the transition to VoIP doesn't cripple the company, and Bozzuto Associates' success in one office laid the groundwork for a much wider deployment of VoIP. The company is currently implementing IP telephony at its Philadelphia office, and Colley says that it's only a matter of time before the company's phones are IP from end-to-end.

"Part of what sold VoIP internally is that the initial deployment went very smoothly," he says. "We did it over a weekend, and we find that it's much easier to manage than our digital phone system. Now the executive opinion is 'Why don't we do this across the board?'"