

Re-imagining e-Government

Minnesota's new CIO has ambitious plans for building the state's technology framework. His challenges: An aging state-government work force and tech-savvy younger citizens who want faster service.

The state of Minnesota, in 15 years, will face a major operational crisis," Gopal Khanna says. "We need to do things now to reinvent how government is run."

This isn't the alarmist prediction of a coffee-addled political blogger, but the considered opinion of a state cabinet member. Khanna was named the state's first CIO, or chief information officer, by Governor Tim Pawlenty last August. The crisis he was hired to handle is a collision of supply and demand that could bring Minnesota government screeching to a bumper-to-bumper slowdown. Call it the information superhighway equivalent of the Crosstown/I-35 interchange at rush hour.

According to Khanna, the causes of the growing crunch include a rapidly aging state work force—Minnesota will lose roughly 14,100 employees to retirement in the next decade—and the growing expectation among "consumers" of government that services such as licensing and mortgage processing should be as easy to obtain as a book from Amazon.com.

BY DAN HEILMAN

Khanna is almost evangelistic in his fervor for remaking Minnesota's IT structure. As he describes his goals, he punctuates his narrative by jumping up and scrawling on an erasable whiteboard, scribbling flow charts and diagrams to illustrate his points. His vision isn't exactly that of running government like a business. But Khanna, who has an MBA and extensive private-sector experience, wants to put many of the technology lessons that companies have learned to work in state government. As he puts it, "We need to take an enterprise view."

United State

In the corporate realm, the CIO is a senior executive who oversees all information technology systems and personnel, concentrating on long-range IT planning and strat-



Gopal Khanna's job is to bring greater efficiency to the Minnesota government's IT system. Or perhaps the word is "systems," given that most departments have their technology frameworks.

egy. Khanna's cabinet-level appointment was part of the governor's Drive to Excellence Transformation Roadmap, a 2005 initiative aimed at identifying opportunities to provide government services more effectively and at a lower cost.

An émigré from India who earned an MBA from the University of Maine, Khanna worked for Mutual of New York Insurance and later for the National Council on Compensation, finally landing with Minneapolis-based American Hardware Insurance Group in 1990. Long active in the Republican Party, he was named CIO and CFO of the Peace Corps in 2002. There he oversaw the development of a standardized computing platform for the corps' 72 posts worldwide, the design and implementation of an enterprise architecture program, and the creation of the first set of audited financial statements in the organization's 44-year history.

Khanna's newest boss has long espoused bridging technology gaps in the state. While interviewing with the governor, Khanna recalls that "I was impressed with his clarity of vision, the way he articulated what he expected—a government that is responsive to its citizens, and continuously improving. Since this was the state CIO position, I expected him to ask what I was going to do from a technology standpoint. But he talked in terms of processes, not just technology, and that was very different."

As state CIO, Khanna oversaw the development of the Office of Enterprise Technology, a new state department that provides IT planning and oversight not just for state agencies, but also for the state's K-12 schools, the University of Minnesota, and the Minnesota State Colleges and Universities system. Its services, he suggests, will be crucial. "The government operations are going to be burdened on the demand side of the equation and the supply side of the equation," says Khanna, "because the expectations of the citizens are changing rapidly."

On the demand side, he says, "Twenty-four percent of Minnesotans—the boomers who drove technology in corporate America and corporate Minnesota

over the last 20 years—are saying, 'If I can get online on a Sunday afternoon and do my banking, or buy an airline ticket at 10:30 at night, why can't I do my business with the government then?'

"Then you have the remainder—Gen X, Gen Y, and younger. They've all grown up with technology. They're putting pressure on the demand side in terms of how these services are delivered. So if government operations aren't designed to fit the outcomes that the coming generations are expecting, there's a major crisis."

On the supply side, Khanna says that 47 percent of Minnesota's state government workers will be eligible for retirement by 2014, and budget projections show that it will be all but impossible to replace each worker. "The convergence of those two factors—the ever-increasing expectations coupled with the brain drain—is a strange condition that really crunches the operations of state government," he says.

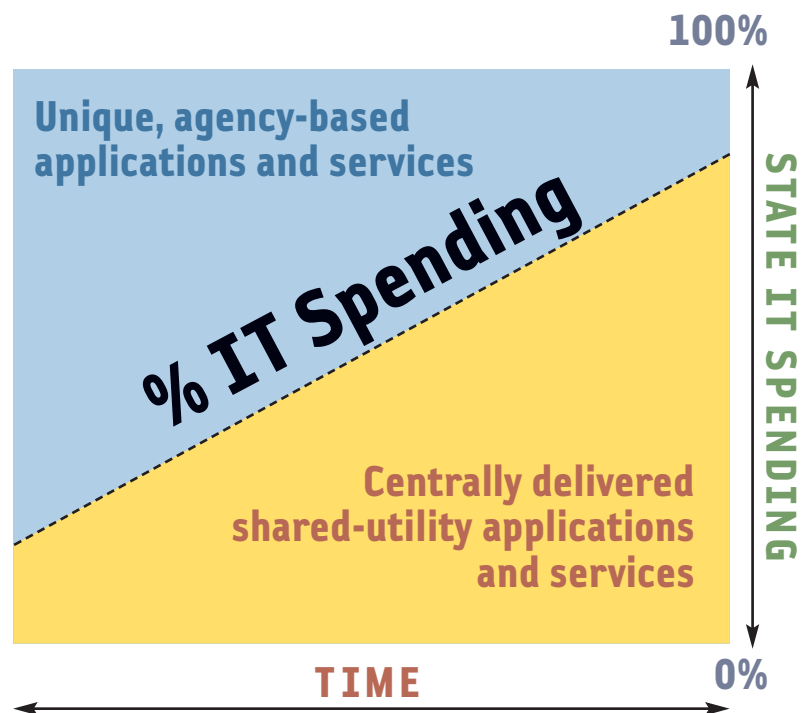
Minnesota is hardly alone here. The retirement of aging populations in the United States, Europe, and Japan means that getting the most from every government dollar is becoming a top priority. Ac-

cording to *Boosting Government Productivity*, a 2004 report published in the online business journal *McKinsey Quarterly*, "Governments typically respond to such fiscal pressures by reducing the level or growth rate of benefits, raising taxes, or cutting public services for the rest of the population. But they have another, often overlooked option: enhancing public-sector productivity could take the sting out of the hard fiscal choices our societies will need to make."

Clearly, information technology is key to the solution. Currently, it's part of the problem.

Federal at the State Level

Forty years ago, private and public entities alike were beholden to mainframe systems that stored all data centrally. But in the 1980s, the rise of the personal computer and specialized software gave state agencies and departments more autonomy—but also more overlap. Currently, the majority of the 66 Minnesota agencies participating in the Drive to Excellence initiative have their own IT departments. While the state's Office of Technology—



Khanna's brief is to reduce the amount of state IT spending devoted to unique applications—though these can't be done away with completely.

predecessor to the Office of Enterprise Technology—worked with the agencies via its centrally managed mainframe and telecommunications infrastructures, it operated primarily in a supporting role for the agencies' IT projects.

Plans for the Office of Enterprise Technology are more ambitious—to be the overseer of the state's growing IT needs. "It's not uncommon that different agencies have the same issues, and technology can help them manage a mutual function or solve particular issues together," asserts Khanna.

With developments such as networked applications becoming the norm in large enterprises, Khanna believes that the time is right for departments to start sharing wherever possible. His office is pursuing what's called a federated model. In IT, a federated model is a structure where certain business processes and applications are shared and standardized across organizational boundaries, putting each function into one of three categories:

- *The agency layer*, containing functions used exclusively by one organization within the government.
- *The enterprise layer*, consisting of services shared by more than one agency, but not across all agencies. This might be the most crucial level of the federated model, for it's here that agencies will be asked to work together on technologies used for common management functions, such as hiring and procurement.
- *The infrastructure layer*, which includes basic functions used at all levels and areas of government, such as Internet and word-processing programs.

Behind all this is the notion of efficient consolidation. Take licensing. Minnesota processes nearly 700 kinds of professional licenses through more than 40 departments and agencies. The Drive to Excellence initiative seeks to implement a one-stop portal for state-issued licenses and permits, in the process combining or eliminating redundant license applications.

Improvements to the state's accounting and procurement system, as well as its cyber-security efforts, are other areas that

could benefit from consolidation. Before Khanna's appointment, Minnesota was spending about \$600 million a year on IT systems, many of which were agency specific and sometimes incompatible with each other—and which lacked a central authority to ensure integrity and security across the state's systems. All told, there were 1,000 separately managed networks and more than 500 different Web sites.

"We found that there were hundreds of different products purchased from about eight different vendors," Khanna says. "We went to different agencies and asked, 'Could your people get by with using the same models of computers?' And in most cases, they could. Before, agencies were purchasing and maintaining about 30,000 computers in total. But now, including county, city, and K-12 schools in the equation, it becomes almost 150,000. The vendors see numbers like that, and they come back with much better prices." By standardizing IT procurement and maximizing the state's buying power among its vendors, Khanna says that the state has already seen savings of up to 44 percent on desktop and laptop computers. He says the Drive to Excellence study that led to the formation of his department projects net savings for the state of \$354 million by the time the transformation is complete.

Ideas being pursued by the Office of Enterprise Technology aren't completely new to state employees. "We had tried a couple times to create a more centralized function for IT decision-making, but it never worked out," observes Senator Sheila Kiscaden, a DFL member from Rochester who authored the legislation that created Khanna's office. "We felt the restructured [Office of Enterprise Technology] had the combined appeal of centralizing some functions around procurement and standards, but also letting some departments have authority to make decisions based on individual needs. We liked that it was staff driven, and focused on what rank and file could do to streamline processes."

Getting government to adapt the kind of technological innovation embraced by business might seem simple, but the cul-

ture of the public sector is often the apple to the corporate world's orange.

The Enterprise View

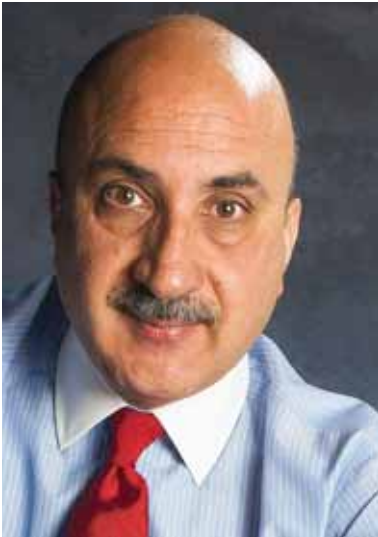
State agencies and departments are spread out in terms of function as well as geography. That makes imposing consistency and efficiency on a state government a much trickier proposition than it might be for a private business. But Khanna notes that even major companies with sprawling organizational structures have made similar transitions.

"When [former CEO] Lou Gerstner came to IBM in 1992, he was horrified that they had 128 CIOs and 155-plus data centers, and 31 networks," Khanna observes. "Thirteen years later, they have six data centers and one network. They were able to share the service." Minnetonka-based Cargill, Khanna says, is another company that led the way in centralizing shared functions such as human resources and accounting.

The state's Drive to Excellence initiative is the product of five months of surveys, interviews, and brainstorming conducted by Deloitte Consulting and more than 200 employees from agencies across the state. The initiative aims to improve efficiency by building enterprise platforms in six areas: IT governance, licensing, building-code regulation, state property management, purchasing, and grant management (the pursuit, management, and distribution of the state's annual \$1.1 billion in incoming grants, such as the Minneapolis-based McKnight Foundation's gift of \$1 million to support teacher education, and \$1.4 billion in outgoing grants, including \$375,000 given to St. Paul's Transoma Medical to train its employees in medical-device regulations, among other areas).

The statute that produced the Office of Enterprise Technology also gave Khanna a budget and a mandate to create an organization capable of coordinating and streamlining Minnesota's tech infrastructure over the next five years. But instead of spending months setting up formal task forces and departmental groups, Khanna formed loosely structured "skunkworks"

teams composed from 240 city, county, and state employees who were interested in helping get the process improvements and new enterprise initiatives started. This approach provided a faster, less bureaucratic way to develop new methods, and has also helped avert turf battles among the various state agencies.



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The 15 teams volunteered to band together to help root out the best vendor prices and help construct the best IT buying plans for their departments. “The skunkworks teams are valuable for drawing on the expertise of the various agencies,” says Dan Storkamp, director of information and technology for the state

Department of Corrections and a team member. “Various teams looked at things like hardware, software, and IT professional services, and worked with vendors to create some common standards for purchasing. They were then able to pass along what they learned to the other teams.”

In the 11 months since the new the Office of Enterprise Technology began work, signs of transformation in government operations are already evident. The office is nudging the state onto voice over Internet protocol (or VOIP) telephone systems through the existing Minnesota’s Network for Enterprise Telecommunications, a private/public partnership that brokers data, voice, and video services for state and local government and education agencies.

The technology office also recently announced plans to work with the departments of Transportation and Revenue to identify which agency IT functions should become shared or centralized. Some of the candidates for central management include all local-area networks (LANs, which connect just a few users), wide-area networks (connecting several LANs), data centers, server-management chores, security technology, help-desk services, IT training, and server-based applications that are used throughout as many state agencies as possible.

“This statute is saying, ‘Let’s move toward a shared computing model and see what utilities can be centrally managed, but let’s leave enough for unique processing of applications at the agency level,’” Khanna says. “So over a period of, say, 10 years, I’m hoping that the level of shared services goes up, allowing enough focus at the agency level for unique processing. It’s a work in progress.”

Khanna’s department has another aim: Recruiting talented young people, particularly those with IT capabilities, to work in state government. “When most people think of the public service sector, they think of a system that’s slow and not innovative—a bureaucracy. When they think

of the private sector, they think of innovation, and how nimble and dynamic it is,” he says. “But public workers are equally hard working, equally innovative, and equally passionate.”

Sticking to the Budget

Even with his passionate advocacy, Khanna is limited by the Office of Enterprise Technology’s budget, which was set in legislative stone before his arrival. He had to submit a supplemental budget request to deal with the state’s cyber-security issues. “The statute has given a huge operational agenda to [the technology office], and that’s out of sync with the realities of the budget,” Khanna says. “So we have a lot of work to do, and we’ve started by defining the processes that need to be developed. I’m convinced that if we do the right things up front, we will get the funding that we need.”

One factor in his favor is that the Office of Enterprise Technology’s plans have virtually unanimous bipartisan support in the legislature. Khanna has made it clear that the need for those plans is urgent.

“We’re five years behind in technology compared to the private sector; but so is every other state,” he observes. “We don’t need to be cutting edge. But we can’t afford to be 10 years behind, either.” **TCB**

Dan Heilman is editor of ComputerUser magazine. “The Google Stalker,” his article on the ePrécis Internet search program, appeared in the April TCB.