



Information Technology II

# Why IT means business at General Motors

Under technology chief Ralph Szygenda, the ultimate measure of IT's success at the giant automaker is the bottom line. Here's how this visionary CIO makes it happen.

*Szygenda: "At a company this size, if you don't have information technology linked to business, you could waste a lot of money—not a thousand dollars, or even a hundred million dollars, but billions of dollars."*

■ “Destined for failure.”

That is how Ralph Szygenda sums up what people were saying about his prospects when he joined General Motors Corporation as the carmaker’s first CIO in 1996. They couldn’t have been more wrong.

Within the GM Information Systems and Services organization, installing systems on time and within budget is a given; the ultimate measurement—what matters most—is business results. And since taking over the technology function, Szygenda has delivered, leading an extraordinary effort that has helped GM slash new product development time from four years to less than two, cut the delivery time on new vehicles from 70 days to 30, and saved the company millions per year in crash testing by moving to digital simulation.

At GM, IT is considered a key part of the business. Starting at the top, Szygenda himself is an integral part of the senior management team, reporting directly to Chairman and CEO Richard Wagoner. Moreover, each member of Szygenda’s staff reports not just to him but to one of his business counterparts as well.

In addition to CIOs for each business, Szygenda also looks after a team of PIOs—process information officers—who are responsible for global business process improvement, such as manufacturing and product development, and who work alongside the CIOs and their business process leaders to determine what processes need to be in place and how they should be automated. Szygenda keeps his far-flung team working together in this \$186 billion

company through weekly staff meetings. To accommodate global time differences, the meetings are scheduled for every Friday morning in the United States—with his executive teams in Asia, Europe and Latin America attending by videoconference.

Because he has both a CIO and a PIO looking at issues, Szygenda ends up with two different points of view—and lots of tough debate (he likens his meetings to sessions of the US Congress). He feels that the debate forces a decision—and that it helps build an important skill for technology people, who usually are more comfortable discussing software code than making a business case for a technology investment.

Each of his reports has written performance objectives against which they are reviewed twice a year. In the formal performance review sessions, Szygenda listens while executives walk through their business objectives and explain how they performed against them.

This novel organizational structure and business-focused approach to IT clearly has paid off. And Szygenda has made it all work while cutting what used to be the auto industry’s highest IT budget—in terms of percentage of sales—to one of the lowest. In fact, in the past eight years, he has reduced his budget by more than \$1 billion per year.

When Accenture associate partner Jeanne Harris sat down with Szygenda in August, he said that although achieving these remarkable results had been “hard, very hard,” he is still having fun because there is much left to do. He will not be satisfied until GM is not only

the biggest auto company in the world but also the most successful.

**Outlook:** How do you think information technology contributes to GM's business performance?

**Szygenda:** All of our information technology is driven by business need and business value.

We have a mindset here of what I call "precision information technology." You only use information technology to get a particular business change, and you should be able to measure whether you're getting that change.

At a company this size, if you don't have information technology linked to business, you could waste a lot of money—not a thousand dollars, or even a hundred million dollars, but billions of dollars.

**What do you do to ensure IT is tied to the business?**

Everybody that reports to me also reports to a president of a business unit or the business leader for processes such as manufacturing or product development. Our IT leaders are aligned to our business leaders; they are part of those business operations on a daily basis.

IT is not something that somebody throws over a wall here. We are part of the business discussions up front. So when it comes time to apply information technology, it's almost a slam dunk, because it's been so integrated into the business.

**Tell me more about these process IT leaders.**

There were a couple of things that were very clear here at GM. It was big, it had a lot of business areas—we had lots of CIOs, about 50. If we

just relied on them coming together in a committee, [an approach] some companies use, I don't think it would have worked.

CIOs don't know what's going on in areas not in their line of business. So asking them to do common things across businesses is difficult, especially given the size of GM. If it was a billion-dollar company, I could probably get away with it. For GM, we needed process information officers.

We started with a problem of lack of commonality in General Motors businesses. Our heritage was autonomous businesses. We had 7,000 information systems. The process information officer is there to help drive commonality and standardization; they can concentrate on business processes full-time and help educate the CIOs. A committee of CIOs could never accomplish the goals of our chairman and CEO in creating one unified company. We needed to knit our business together with process information officers.

**How do the CIO and PIO work together?**

We look at business value from two perspectives—from the CIO and the PIO [points of view]. With everything that gets done, there's tension that forces you to look at every situation two ways. It forces out the real answer. In most companies, you don't have two views of the same problem. We run somewhat of a debating society. You have to debate well here, and to debate well you have to understand the business. Sometimes your view wins; at other times your colleague wins, based upon the business situation. Therefore, working as a team is a must.

**"We run something of a debating society. Sometimes your view wins; at other times your colleague wins, based upon the business situation."**

## **"GM has probably the most outsourced information technology organization in the world."**

I guess this is something like the US Congress; the only difference is that usually at the end we're going to make a decision, where in Congress that doesn't always happen.

GM is so big that you're not in total control of everything personally. And therefore you have to share responsibility and success and failure. You could not survive here if you couldn't share responsibility. I had to pick people that I thought could team.

### **What is one of the biggest problems of technologists trying to deliver business value?**

They cannot communicate to the business management what value is. So we develop competent, business-savvy IT leaders who are great communicators.

### **How do you work first with the business side to identify and develop the business innovations that had a really significant impact on GM?**

We use a portfolio process leveraging our business leaders, CIOs and PIOs. One of the results of this process is our product development area. We had 21 or so different computer-aided design systems a few years ago to build cars and trucks. This didn't make sense. The process information officer for product development, teaming with the business process leader for engineering, had to figure out how to run this process area with common processes and systems.

Why? If you share common platforms across all of our different car companies, you get your costs down and improve speed and quality. You might have a different physical design, but underneath that design is a common vehicle platform.

Today, there is one computer-aided design system. We are now doing global design, so a car might be designed in three areas of the world, 24 hours a day.

### **What else do you do that makes you so successful?**

Success is in the eye of the beholder, but another area we feel good about is that GM has probably the most outsourced information technology organization in the world. We don't build code inside this company. We don't have thousands of information technologists whose career growth we have to worry about. We buy these services from vendors, but we manage and take full accountability for their success and failure, which is very different from other companies' IT models. We feel good about the benefits of our business model.

Our people have 70 to 80 percent of their time dedicated to understanding the business; they are not just working on technology. Therefore, the IT effort is more likely to meet the business-improvement goals desired.

### **How do you measure up next to your competitors?**

We do competitive assessments on everything we do. For every process in this company, we try to understand what our competitors are doing. We have processes broken down into sub-processes, and this lets us know where we're behind and where we're leading.

When we decide where we're going to spend money on information technology, we have the business needs and the competitive assessment available. We put those two together and generate

## Driven to perform

For GM CIO Ralph Szygenda, performance objectives go far beyond IT. They are specifically focused on favorably impacting key business drivers for the automaker, including:

- Improved productivity and quality
- Business continuity
- Business and information security
- Global business process improvements
- Acquisition assimilation
- Product launch successes
- Market share
- Profitability

a solution leveraging commonality across different business units of GM to deliver bottom-line benefits and competitive-gap closure. In the end, we feel good about our competitive position, but we still have to significantly improve.

### And you've had success with that approach?

Today, I would say our IT expenditure as a percent of sales is one of the lowest in the automotive industry. In 1996, it was the highest, and there was nobody close. Today, we spend over a billion dollars less on information technology than we did in 1996, and deliver better value.

### What role does your staff play?

My senior managers can be considered information technology brokers. They buy and implement information technology to improve the business. They are measured on the success or failure of positively changing the business, not generating software code. You can build two million lines of software code, on time and budget, but if it doesn't improve the business, it's a failure at General Motors. In most other companies, they would say the IT organization was a success, but the business was wrong. Well, we don't let that happen here.

### How do you account for the difference?

The difference is in our business model. We strategize and define what needs to be done with our business leaders. We architect the information systems used; we use a number of different IT companies to develop and operate the systems. Accountability is always with a GM IT executive that reports to me.

You can't give away accountability to outside IT vendors for changing your business. It is ours. When I came into GM, we spent well over \$4 billion a year on information technology: We spent more than anybody, but that didn't give GM the best processes in the automotive industry. We now make sure we have business measurements for IT projects.

### What are some of the measurements?

It could be units lost, meaning vehicles that didn't come off the assembly line because of IT problems. It could be cycle-time improvements.

We try to leverage business metrics, not IT metrics, even though IT is required. It's a little bit of a rough society, because it's assumed that IT is a given, that you are going to get that right.

**"My senior colleagues are measured on the success or failure of positively changing the business, not generating software code."**

**"We ensure that all our IT investments are linked to business end goals, such as improved financials."**

The business change is what is in question.

**What kind of people do you hire?**  
I interviewed over 300 people to get 30 of the best IT-business-savvy leaders. Lots of nights and weekends. All these executives had something to do with running or managing business in addition to strong information technology skills.

**It's hard to be business-process-focused and to make a matrixed IT organization successful. How do you make it work?**

The one thing you have to start with is great leadership and teamwork. A lot of IT people only know information technology. Our people are business information technology leaders. They have good communications skills to convey the IT requirements. They must want to win.

Honestly, the whole IT profession is very immature. I'm kind of a veteran with 35 years in the IT world; that's almost like I was there when the abacus was invented. If you ask 15 CEOs what a CIO does, I think you're going to get about 15 different answers.

**What would your answer be?**

Simply, I would say that [the CIO] applies information technology to improve businesses. Twenty-five or 30 years from now, all IT leadership within corporations will be information technology brokers. They will be paid to acquire information technology capability to improve business. A majority of corporate IT professionals will not be building code—others can do that; it's business improvement that will define a great CIO.

**Do any of your people have automotive industry experience?**

In the beginning, some of our people in the product development and manufacturing side did; in other areas, they did not. Information technology has a lot of commonality across differing industries, and we integrated this commonality into our automotive environment. Today, most of our leaders have a minimum five years in the industry.

**Which metrics do you think are most closely linked to business value creation?**

Product development cycle is one. Being able to deliver a vehicle to the market faster or iterate a design concept is very powerful in our business. Other key metrics include manufacturing productivity and quality and order-to-delivery time.

We have secondary metrics, more IT-oriented, that we review every month. Telecommunication and computing operational performance are examples. We use red, green and yellow status indicators that alert us to present or potential problems in both business and IT areas.

Many people ask, how do you know you are getting business value from IT? And typically, an IT person will say, I'm measuring whether my project is on time, or whether it's done within cost constraints. Or they might talk about computer availability. But they won't normally tie their success to a business improvement. Here we're insistent on that.

**When are the metrics set?**

Each GM executive has performance objectives that are set every year. I have a performance agreement with my boss; then I sit down and align the IT team with these performance objectives.

**How do performance reviews work?**

Everyone now has performance objectives. Performance reviews are simple: Either you did it or you didn't do it. Five, six, seven years ago, that was not always the way it was done at General Motors. In a lot of cases, a lot of our IT people had no clearly defined objectives for the year. Everybody likes accountability; it's now easy to know the criteria for measurement. People become upset when they go in to talk to their boss, and it's the first time in a year they find out they're not doing well.

Here it's very easy. During a midyear review, I sit [with my people], and they simply do the review. They take out their performance objectives; I might say two or three things, but they typically give their review to me. And they're very honest. They know what they did or did not complete against well-defined measurements.

**Do you ever try to translate these business results into financial outcomes?**

Yes, a lot of objectives are finance-driven—cost improvements or revenue-generating success. So yes, they translate. We ensure that all of our IT investments are linked to business end goals, such as improved financials.

Every one of my direct reports has cost objectives for their areas, their projects and their operations. They have to justify expenditures in a zero-based budgeting process each year. We look at where to make investments. In many corporations, people don't go back to zero-based budgeting. We do.

**What are you going to focus on next?**

We execute about as good, or better, than any other company.

But we have issues such as significant pension and healthcare-cost liabilities. We have two-point-five retired GM employees to every active employee. We spend more on health care than any other corporation. We have to ensure that we optimize our expenditures better than our competition. Other corporations do not face these same cost challenges in their global environment.

In some areas, we have to execute better just to stay even. We as GM IT leaders must help that to happen. We have some of the most productive manufacturing facilities, improving quality and great products. But GM business processes must execute better than anyone to be the best automotive company.

**How would you characterize your experience here?**

It's been fun and hard, very hard. And it's still fun, because until we're the most successful company in the auto industry, with the best products, quality, productivity and profitability, the job's not done. ■