

MindTree

Automotive Industry in India: Harnessing Knowledge using IT

Subroto Bagchi

I thank you for inviting me to speak on the subject of Information Technology in the Automotive Sector. It gives me great pleasure to be with you today

MindTree Consulting has been lucky to be closely associated with your sector from its very inception and has built significant knowledge in many areas of the automobile industry.

We design chips that are under the bonnets of cars you make using sonar systems for collision detection. We work in the area of Bluetooth technology that has huge impact on hands-free applications in the automotive sector. We work with a large automotive company in creating efficient manufacturing processes. We have created dealer management systems and used vehicle systems that are deployed in different countries. We also write software that is used for emission control and, we work in areas like automotive finance and insurance.

This list would be somewhat incomplete if I forget to tell you that one of the largest online reservation systems for car rentals in use today was also built by us. Thus, it is not without reason that I say I am glad to be with all of you today.

Talking to the automotive sector on management in general or Quality and Information Technology in particular, is like preaching to a choir. You have taught the world the concept of the assembly line, and without your contributions to Total Quality Management (TQM), we would not have comprehended the meaning of Six Sigma. Had it not been for you, the world would not have known the meaning of "Just-in-Time". Today, the service industry is seeking to emulate what you had accomplished on the shop floor ages ago. Your industry leads the world in the adoption of technology, process innovation, product innovation, quality and customer centricity. It is a difficult task, therefore, for me to evangelize in front of the representatives of the global automotive organizations sitting here.

What makes my task even more difficult is the fact that the IT services industry to which I belong, is actually looking at your industry for guidance in several key areas. Experts tell us that we are trailing you in many ways. You have graduated from "build to stock" to "build to order". You have led the way, along with the construction industry, in the area of componentization and reuse. We, on the other hand, are merely taking baby steps in both. You have seen the maturity of collaboration through the tiered architecture of supply chain and the consequent consolidation of vendors. We are following the concept with a lag time of a decade.

You created the concept of standardized platforms for building mass value when Volkswagen produced the Golf, Beetle, Audi, and Jetta all using the same assembly line. Today's standardized Enterprise Resource Packages (ERP) mimic that concept.

Given these facts, I felt humbled and somewhat nervous when you invited me here. To gain self-confidence, I told myself that even the prettiest of faces needs a mirror. I proceed therefore, with the functional humility of a mirror, to tell you a few things you may need to know to look even more beautiful.

The usage of automobiles indicates the state of development of an economy. From that standpoint, we can confidently say that while the automotive industry is ahead of many of us in terms of management practices and usage of technology, there is a large gap between the developed and the developing world. To that extent, even though some of the things I will share with you today may be motherhood and apple pie to some, they are still relevant to many others represented here. With that background, let me talk to you about four major directions I see from my vantage point.

With the Internet, Supply Chain Collaboration Takes On A New Meaning

The automotive industry is responsible for bringing the concept of supply chain into practice. It refined and perfected the concept with just-in-time production and anticipative management. When I visited Araco Corporation in Japan in 1996, they were producing car seats for Toyota with four hours of inventory and replenishing Toyota with car seats by the hour. That however was an example of limited, though near perfect, supply chain collaboration. Today, thanks to the Internet, we are witnessing the dawn of mass collaboration. Today, the extended supply chain is able to connect and create a white-box view of manufacturing using inexpensive Internet-based technologies. Thanks to ever-increasing penetration of the Internet and expanding bandwidth, even in developing countries, we are seeing larger and more intelligent collaboration among the supply chain members. For a leading manufacturing goods company in India, we have implemented an Internet-based system that enables its suppliers to get a white-box view of its manufacturing process. Today its suppliers fill inventory without waiting for purchase order generation. In the old world, the concept of collaboration was limited to departments within a plant or at an enterprise level between many plants. Thanks to the Internet and a host of affordable technologies, we are seeing the beginning of

mass collaboration.

Some time ago, one of our large international automotive customers asked us to redesign their dealer management system for developing countries. We developed the system with infrastructural realism as the starting point. What we take as “base line” in terms of quality and quantity of infrastructure in the West is nowhere near ground reality in Eastern Europe, Africa and many parts of Asia. We created a system that works within the constraints of available technology, yet connects to and speeds up integration with a global manufacturing process. Today, the system is on its way to deployment in 30 countries worldwide. Similarly, for their dealers, we created a used-vehicle system, which helps them to profitably mine the used-truck business. We are told that 60% of trucks that are bought by customers are previously owned. On a separate note, MindTree's international expertise in developing dealer management systems is bringing to fruition a leading Indian auto company's efforts to redefine its customer experience. Among other things, the system will radically reduce waiting time when a two-wheeler is brought to a dealer for servicing.

Yet, in a maturing economy, we need to look beyond manufacturing and distribution. The use of Information Technology must be pervasive in engaging the customer, leading innovation and proactively participating in the globalization game.

Data Warehousing, Business Intelligence and Customer Relationship Management (CRM) = Broad-based customer value creation and reinventing the customer

Like many of us in India, when I started working, I purchased a motorcycle and used it till my wife and I had our second child in 1985. In 1986, with a Citibank loan, I bought my first Maruti van. Since then, in 18 years, I have personally purchased, used and sold 5 Maruti vehicles, 2 GM vehicles and in the last four years, 3 Honda Accords. I am certain that none of you here will see me in the computer database of your respective companies. The reason is simple. Though I was the effective owner of the vehicles and was responsible for the purchase decisions, in your databases, the financing company appears as the owner. Consequently, as I shifted my loyalty from Maruti to GM to Honda, no one saw that as an actionable piece of information.

The airline industry treats me much better than your industry does. I have flown Delta for most of my life, and only switched loyalties after Lufthansa started a direct flight to Bangalore. Each time I approach a service agent, my entire history is flashed before her. I do not just stand in front of her. My history precedes me. Now that I have chided you enough, let me proceed to tell you that we are about to see a huge movement towards sharply defining who our customer is and meeting the stated and unstated needs of the customer.

Your industry has pioneered the concept of tiered architecture of collaboration. That is how a Tier Three vendor delivers raw material. A Tier Two vendor delivers components and assembly and a Tier One organization owns the brand and the customer experience. With the advent of CRM platforms and increased traction in data warehousing and business intelligence, we will see newer value creation. After all, I do not just buy an automobile, I make repeated purchases, I buy service, I buy insurance and I certainly buy financing. Sadly, to most of you, I do not exist.

Leaders in your business, however, are seeing the huge importance of business intelligence it is not only influencing real-time customer relationship, but is feeding into the strategic decisions that companies are making. General Motors found out that trucks and sports utility vehicles (SUVs) are no longer about male stereotypes, but that an increasing number of women are making the decision to purchase and drive them. According to Rick Wagoner, Chairman and CEO at GM, the number of women who will buy cars and trucks in the US will go up from 6.4 million in 2002 to 7.5 million in 2010. Women now account for 45% of vehicle purchase decisions and influence 85% of all vehicle purchases. Consequently, GM has taken a strategic decision to increase the number of women as leaders in their organization so as to effectively represent the femininity of America

Beyond quality, it is about innovation at the intersection of invention and insight. It is about knowledge, unstated customer needs and value creation

Ladies and Gentlemen, the future we will live in is going to be defined by innovation. Organizations of the future will have to use technology to create innovative products and services that will take us to the realm of an experiential economy. Recently, I had the pleasure of meeting Mr. Nick Donofrio of IBM who is chartered with leading IBM's efforts to make it the most innovative company in the world.

Painting the future of innovation, Mr. Donofrio cites the example of an automobile that is biometrically enabled such that it recognizes whether it is you or your teenager driving the car. A built-in Global Positioning System (GPS) tracks where the vehicle is taken and how long it is used. Accordingly, it determines the insurance premium, which shifts from a flat rate to a pay per use. Just so we know, even companies like HP and GE are clearly looking at innovation as the next great frontier. The study of innovation in the past indicates that it is more witchcraft than science. It is more secluded exploration and not teamwork.

That definition stands rejected by BMW, winner of 2004 German Innovation Award. According to Prof. Dr. Burkhard Goschel, Board Member at BMW, "the cliché of the genius inventor who carries out his research alone, in his workshop, has long been out of date in the automobile industry. It has been replaced by complex processes. The key to the successful realization of new ideas in the automobile industry is, therefore, control of the innovation process, in which the best inventions are promoted and efficiently embodied in series production."

The Indian automobile industry is witnessing its rebirth. It is no longer a monopoly, cocooned in a closed economy. The air of freedom in which a Mahindra tractor or a TVS two-wheeler hums today is very different from the past. Today Sundaram Fastner is redefining the boundary of the possible. In this new age we are clearly recognizing that the focus of management has to be in harnessing knowledge at all levels so that we are building differentiation through innovation. Increasingly, we find that access to capital and technology is becoming universal. The job of management is shifting to harnessing human capital, expanding structural capital and harvesting customer capital. At the heart of this pervasive, collaborative, value-centric effort is the role that IT is playing like never before.

The IT industry has proven that India can be a global player. The new automobile industry, to which you all belong, can be an outward-looking global player too. That, and not economic protectionism, will enable the industry to be globally competitive.

As you contemplate the transition from being an adaptive industry to being led by innovation, you will have to look at IT as the basic plumbing for the process-centric view that has made BMW an example of innovation.

Globalization = Money is in bits and bytes, product development is boundary-

less, sourcing is where it makes most sense, and environmental issues and concerns are as pervasive as MTV

In the last century, you defined the meaning of work. You created the assembly line; you also created the suburban lifestyle. You have pioneered concepts like the value chain and responsive collaboration. Gartner Group tells us that you, along with the High-Tech industry, are leading the offshore outsourcing game. You have pioneered the concept of distributed product design and more than anyone else, you are at the forefront of human safety and research related to the hydrogenation of the planet.

It is therefore in fitness of things that the automobile industry is poised to be one of the largest beneficiaries of globalization. General Motors has proven that fact by making China a profitable proposition for itself. Everyone, from Daimler Chrysler to Mico Bosch, is getting its products designed in India. At a consumer level, as economic protectionism gives way to greater porosity of ideologies, we will see a future in which an Indian entrepreneur can tap into an American source of funding to buy a used Volvo truck in Europe and get it serviced in India.

In making all this happen, as you look back, you will find us standing rock solid behind you. Yet, that assurance is of little consequence. I have no shame in admitting that it is not IT in itself, but the quality of the mind that uses it that will make the difference.

Dr. Burkhard Goschel of BMW says it well while outlining the reasons for BMW's success in the premium segment. He outlines four factors:

- A substantial emotional impact
- Uncompromising engineering
- Innovative technology
- And the very highest quality

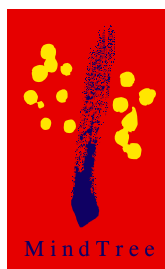
It is not without reason, Ladies and Gentlemen, that BMW lists "substantial emotional impact" ahead of the other three factors. It begins in the collective BMW mind.

We can create the supply chain platform for you. But only you can create the inclusion with your stakeholders. We can create the best of CRM tools, but only you

can rise to create the emotive experience for your customers. And for your customer's customer. We can intersect Radio Frequency Implanted Devices with Data Warehousing and Business Intelligence. Only you can put a human face on it. We will create powerful Knowledge Management systems, but only you can pour knowledge into it. Given your mind, what technology can do is limitless.

Thank you very much for inviting me today. I wish you the very best in your efforts in creating "Advantage: India" the theme chosen for this year's convention. As you take a strategic view of your customer and what you want to be, the Information Technology sector is fully ready to partner with you. So, go ahead and create the future.

(The above is adapted from the speech of Subroto Bagchi delivered at the Annual Convention of the Society of Indian Automobile Manufacturers held on September 1, 2004 at New Delhi. Subroto Bagchi is co-founder and Chief Operating Officer of MindTree Ltd.)



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