

View Point



Turning Returns Management into a Competitive Advantage in Hi-Tech Manufacturing

Prasad Thrikutam, Sandeep Kumar

The evolving challenge of returns management

There was a time when a customer rarely returned a Hi-tech purchase unless it didn't work. All you had to do was tighten quality control and you reduced returns. Today, however, the return could be made because it isn't backward compatible with what the customer already owns, or "my kids want a different model," or "the footprint is too big", or the color "looked different on the Web page," or it simply "doesn't feel right in my hand."

Returns have become endemic in Hi-tech, with rates as high as 20% in some sectors. This high rate of return is only going to rise - with an increase in low-cost, but low-contact distribution channels like the Web, customer uncertainty that emerges from a dramatic expansion of a product choices; and shorter product cycles. Therefore, a significant impact on the corporate bottom line is inevitable.

Developing a comprehensive and cost-effective approach to handling returns is a daunting challenge that reaches well beyond the operational level. As such, however, it is no longer merely a necessary evil, but also a source of competitive differentiation and customer-retention advantage. Thus, a well-honed returns management plan can be a vital strategic asset.

How big a problem is returns management?

Let's start with some numbers. According to a Consumer Electronics Industry survey by the Reverse Logistics Executive Council, the average returns rate is 8.46%. But looking across the entire Hi-tech manufacturing value chain, one finds return rates as high as 20% or more – so how do you optimize profits if you have increased overhead for shipping, handling, repackaging, reimbursements, and customer care for one out of every five products sold? In 2004, the value of returned goods is expected to be around US\$104 billion, with the cost of managing their return running about US\$8 billion.

Product category	Indicative Return Rate	Sales - 2004 (US \$ Billion)	Value of Returned Goods (US \$ Billion)
Computers	15%	281.6	42.2
Office equipment	6%	57.7	3.5
Household A/V equipments	10%	24.5	2.5
Semiconductor chips	15%	216.9	32.5
CDs	20%	30.7	6.1
Cameras	4%	6.2	0.2
Software	20%	85.1	17
Total		702.7	104

Figure 1: The Value of Returned Goods in the Hi-Tech Industry.

Source: Internal Infosys Research.

However, looking beyond the numbers reveals two trends that could contribute to an even more dismal return-rate picture.

- **Low-contact distribution channels** – the increased traffic through such low-cost channels as the Web, catalogs and other direct-to-consumer mechanisms would seem to be a positive development. But as products become more complex, mainstream buyers are put at a disadvantage. Without the benefit of specific answers to their questions and a hands-on demonstration, they are more likely to make a less informed purchase, leading to lower satisfaction, likelier returns, and reduced customer loyalty. What's more, unlike returns in the storefront channel, the transport of the return is an additional seller's cost.
- **Build-to-Order business models** – this is a counter-intuitive factor: one would expect that the greater specificity of the ordering process would lead to lower returns. But the reality is that customer expectations are so high that the slightest discrepancy in fulfillment, particularly when the order is placed through a low-contact channel like the Web, can lead to a return.

Let us not forget the indirect and hidden costs. The conventional returns-management model only takes into account those costs related to bringing the returns back into the system, along with the cost of warehousing and returns-request management. But the cost impact of returns extends far beyond that to such areas as:

- Customer-retention efforts
- Product reworking
- Redistribution
- Inventory maintenance
- Overheads allocated to other departments
- Cost of disposal – Compliance with regulations such as WEEE (Waste from Electrical and Electronic Equipment) and RoHS (Restriction of Hazardous Substances)

Clearly, returns management is a more formidable challenge than it appears on the surface.

Where are the flaws in returns management today?

The old approaches to returns management are simply not equipped to address an issue of such immense scale. Infosys has conducted intensive analysis of returns-management solutions for the Hi-tech manufacturing industry. What we have found is that most of the issues in returns management relate to process inadequacies, coupled with the lack of a sufficiently supportive IT infrastructure:

- **Process Inadequacies**
 - **Poorly defined returns processes** – while reverse supply chains have expanded, returns processes are not sufficiently structured to accommodate the greater complexity in the supply chain. This can also lead to disparities in process management, which has an additional impact on costs.
 - **Lack of feedback loop** – returns management processes often lack any feedback loop that can lead to improvements in other processes such as new product development or quality assurance.
 - **CRM disconnect** – Customer relationship management has become a very popular mechanism for building revenues with reduced effort and cost. But CRM initiatives are focused largely on the selling process. A comprehensive CRM program recognizes that your returns processes can have a significant impact on building customer loyalty, particularly as the return rates increase.
- **IT Infrastructure Inadequacies**
 - **Insufficient IT investment** – most organizations live with labor-intensive, manual, inefficient, and often undisciplined returns-management processes. The reason – the bulk of their supply-chain-related IT investments is on outbound projects (e.g., order management and fulfillment).
 - **Low reliability among standard IT solutions** – most ERP and SCM systems provide partial or limited returns-management capability (e.g., credit orders, limited return-material authorization support). They also lack end-to-end capabilities in such areas as returns forecasting and customer-return collaboration (i.e., customer self-service), and fail to provide robust decisionsupport for returns authorization and disposition. In the area of point solutions, the insufficient maturity of the offerings from pure-play vendors make it risky to implement their solutions. Finally, as with all system-integration issues, it is a continuing challenge to automate and link distributed and often unrelated processes.
 - **Data visibility limited** – this covers a broad range of deficiencies – from unreliable and inaccurate data capture, to insufficient monitoring of customersatisfaction levels that may drop due to a frustrating returns process. Most organizations suffer from an inability to stay in touch with the identity, location, status and condition of returned goods going backwards through the supply chain. They are unable to follow the testing of returned products, which is exacerbated by long cycle times. Then there is the ripple effect from poor data visibility: new-product development and product life cycle management are hurt by the lack of pertinent feedback and a skewed analysis of consumer trends, as is forecasting and production.
 - **High management and direct costs** – inefficiencies in the system are always costly, from slower response times to poorly handled product recalls. Then there are the direct costs of charge-backs for returned products.

The failure of the standard approach is a failure of perspective

Before you can productively address your returns-management challenges, it is vital to understand why the existing solutions fall short. In an era when the Hi-tech marketplace is undergoing dramatic change, the thinking behind the typical approach to returns management remains embedded in the past.

Firstly, these solutions grew out of a simpler time – when people had a TV, not a home entertainment system; when they had just one home computer with a dial-up ISP, rather than multiple computers connected by WiFi and linked to the home entertainment system; when people returned a product because it didn't work for them, not as part of a strategy for buying it back later at the discounted “open-box” price. Products were simpler. Buying decisions were simpler. The reasons for returning a purchase were simpler.

And while many manufacturers have been quick to embrace the Internet and direct-to-consumer merchandising, their pre-existing returns-management solutions were devised for the brick-and-mortar reseller environment. They don't account for the return complications that arise from remote purchasing, particularly in the face of the rapid expansion and increasing sophistication of product options, nor do they recognize how a mismanaged returns process can undercut their customer-retention program.

Infosys believes that the development of effective solutions must be built on forward-thinking perspectives. That is one of the primary differentiators in the Infosys approach to returns management.

For instance, typical returns-management solutions take a very generic approach:

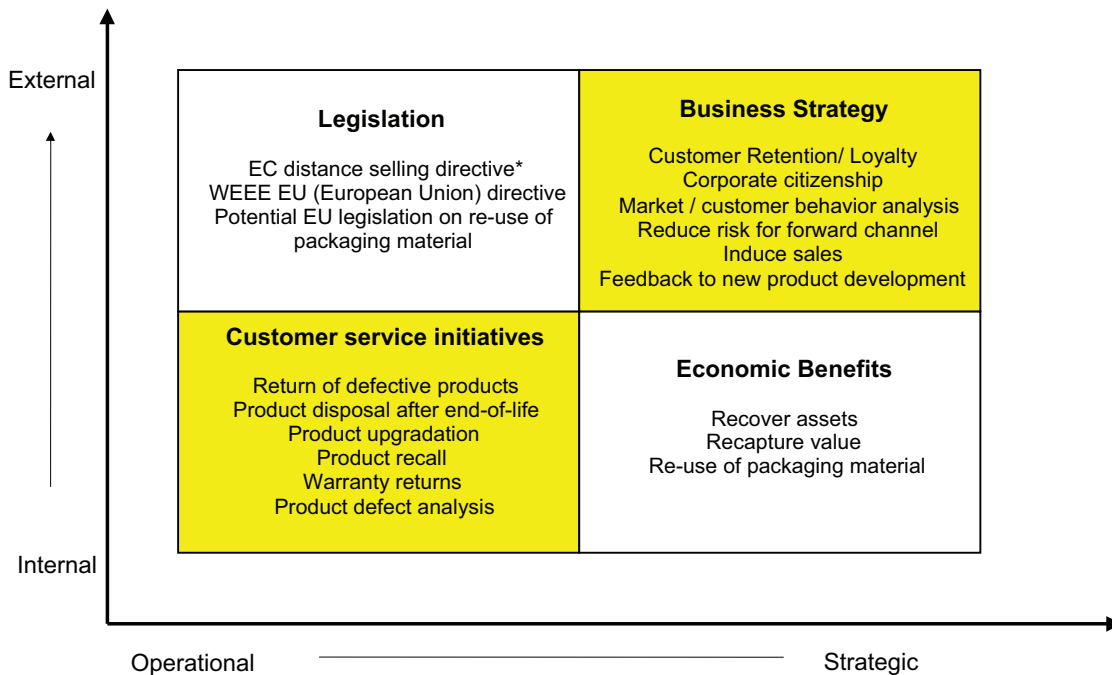
- **Digitize** – employ enabling technologies on the enterprise
- **Streamline** – reduce the number of touchpoints and transfer key activities to vendors
- **Partner** – collaborate with supply-chain partners
- **Outsource** – centralize and contract out returns processing to a 3rd party

While these tactics will certainly improve pre-existing procedures, they don't go far enough. There is extraordinary diversity and complexity among today's Hi-tech companies and products. Thus, there can be no one-size-fits-all solution to managing returns. The returns characteristics for Dell are very different from those of HP due to the differences in their business models. Likewise, the returns characteristics for a Dell and a Solectron differ because of the services they offer, and they differ between Dell and a PalmOne due to the differences in their product lines.

It is imperative that every organization take into account its unique combination of operating characteristics as it designs its reverse supply chain. Thus, the most effective returnsmanagement solutions are built from the ground up: **customized, comprehensive, and horizontally integrated across departments.**

The Infosys perspective – strategic versus operational

But even such a customization approach will fall short if it only addresses operational factors. As virtually every business has come to realize in recent years, operational tactics must be driven by business objectives. After years of experience in the returns-management field, Infosys has developed the following matrix for better understanding the business drivers of returns management.



*Clause 14 of the EC (European Commission) Distance Selling Directive says "Whereas the consumer is not able actually to see the product or ascertain the nature of the service provided before concluding the contract; whereas provision should be made, unless otherwise specified in this Directive, for a right of withdrawal from the contract". This clearly indicates that providing proper returns channel is a legal requirement for firms offering web-sales, catalogue sales and over-the-phone sales.

As you can see, the left-hand quadrants of customer service initiatives and legislation represent conventional operational drivers. But the drivers in the right-hand column all have major bottomline, brand and loyalty-building advantages that transform returns management from an operational nuisance to a strategic asset.

Take customer retention and loyalty, for instance. If you have launched a customer relationship management (CRM) initiative that doesn't encompass returns, you risk undercutting your customer-retention efforts. Customer loyalty erodes when customers are unhappy with poor returns handling. On the other hand, when you have a comprehensive, horizontally integrated returns-management program in place, it can dovetail with your CRM program.

To consider another example, look at what you can do if you cross-index data on product lifecycles and customer replacement-purchase patterns for fast-depreciating products like PCs and consumer electronics, and link it to your reverse-logistics processes. This would allow you to offer timely customized promotions to individual customers, upselling a replacement product with a turnkey offer to provide "trade-in" value on the product they currently own and handle its recycling so that they don't have to.

These are a few examples of strategically driven opportunities that a well-designed, fully integrated, returns-management program can provide. Clearly, the most significant business drivers are largely strategic. This is why Infosys believes that returns management demands executive-level focus and attention on how to optimize its impact on areas such as customer retention, environmental compliance, gate-keeping to reduce return rates, quality management, and new product design.

What makes the Infosys approach different?

In a word, it's holistic. The question we ask is not "How do you handle returns?" It is "How do you create a comprehensive returns-management program that transforms an inherently negative customer experience into a valuable strategic asset?" Viewed from that perspective, the Infosys approach to returns management involves multiple parties, processes and applications.

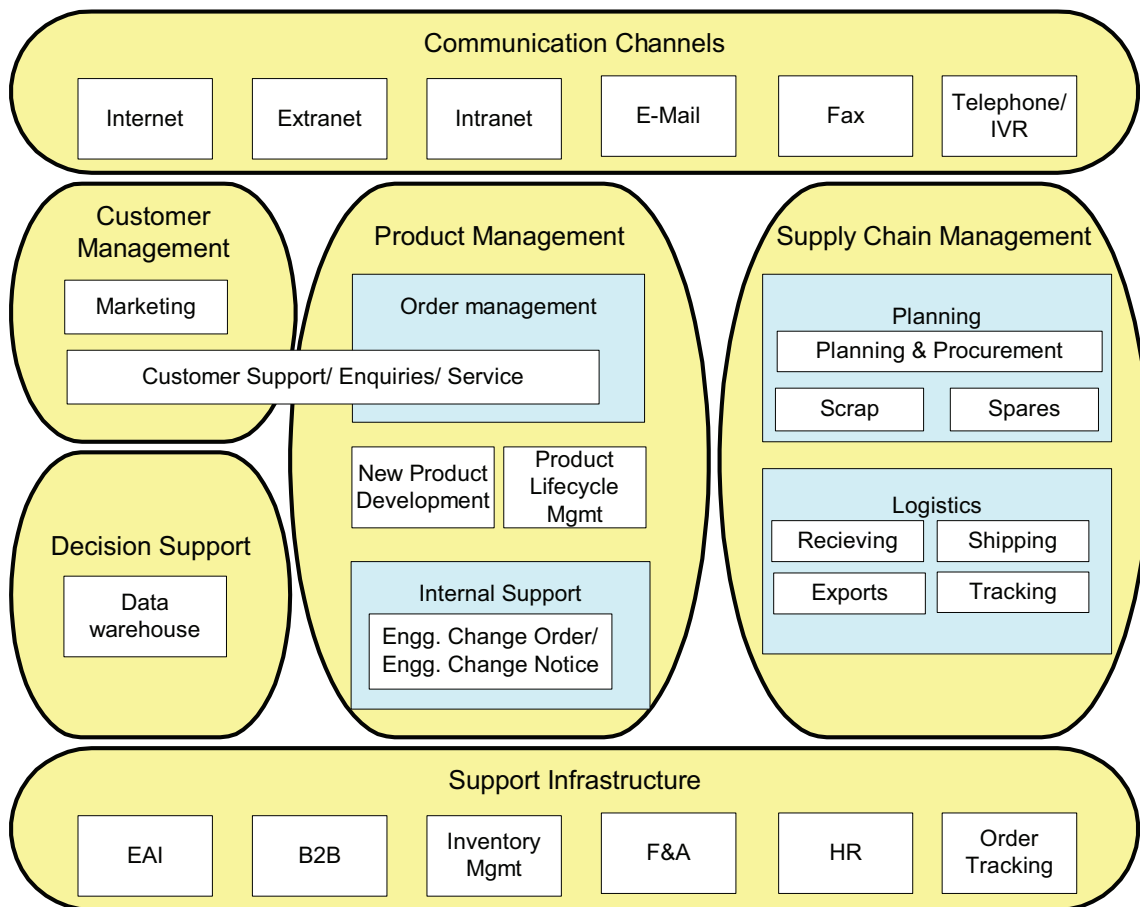


Figure 3: Reference Application Architecture for Returns Management

When you look at the entirety of an organization from the perspective of returns-management opportunities, both the complexity of the challenge as well as the promise of competitive advantage increase.

For instance, return requests are initiated through several different communications channels and typically routed to order management. But a comprehensive solution to a return-request requires coordination with supply chain management in order to provide a replacement product or update inventory if replaced in the distribution channel. It might also require interaction with product lifecycle management if the return request has revealed a product flaw that needs design, engineering or production adjustments. Discovering such a flaw could also alert a new-product-development process. Customer feedback on the product could be valuable input to the marketing department as well as a customer-retention opportunity if your returns-response provides a positive customer experience. The proper utilization of this information and effective integration into the business processes enables the creation of an adaptive enterprise, capable of accurately anticipating its customers needs.

With such a high order of complexity, the first step Infosys takes is to conduct a reverse-supply-chain process study and consider all the pieces that might play a part in the ultimate solution. This study would address a broad range of questions such as:

- How do we integrate returns management and inventory management so that both are more cost-effective?
- How do we coordinate the elements of the reverse-supply-chain in order to reduce the touch points, thus streamlining the returns process and making it more cost-efficient?
- How do we build quicker responsiveness into the customer-facing aspects of the return process in order to build customer loyalty?
- How do we need to revise our order-fulfillment processes so that late deliveries (leading to purchase returns) won't occur even at the peak of the holiday-shopping season?
- How do we better identify the target market for a particular product so that customers aren't enticed to buy something that does not fulfill their needs?

By looking at the full range of departments and applications in this manner, and asking uncommon questions that go beyond the typical conception of returns management, you can bring the full power of your organization to a solution that enhances returns management by improving a broad spectrum of business operations and processes.

The Infosys roadmap to returns-management

It is important to recognize that returns management is a dynamic process that must be able to scale and adapt to changing circumstances in the marketplace and in the business model of a company. Nevertheless, if you look at the following "roadmap," drawn from the work Infosys did with a global computer manufacturing client, you get a broad-brush picture of how Infosys applies its holistic approach to returns-management solution development, and the benefits that accrue to our clients.

Key insights for returns-management process design

In Infosys' experience, designing a return-friendly business process is essential to the success of a returns management program. Infosys sees process design breaking out into four central areas:

- **Pre-purchase considerations to ensure appropriate purchase decisions** – One of the best ways to reduce returns is to lower the number of ill-conceived purchases. This is a particularly salient point when products of increasing sophistication and converged functionality are coupled with remote purchasing.
 - Simplify product design – because when design complexity interferes with a product's ability to deliver on its promise, customers return the product rather than take the trouble to figure it out.
 - Simplify user-driven feature specification and product configuration – with the increase in remote, self-directed purchasing, it is vital that the customer is easily able to make clear and appropriate decisions about product features and configuration.
 - Post clear and highly visible returns policy – customers often assume that they can go ahead and make the purchase, and then return it later if it doesn't work out. Don't let them make that assumption.
- **Post-purchase processes that help reduce returns** – There are still several processes that can be implemented to minimize returns after a purchase.
 - Send purchase confirmation before shipping – since many customers return their purchase because the wrong product is shipped to them, this allows the customer to correct any errors in the order-placement process before the wrong product is shipped.
 - SLA with 3rd-party logistics provider – many product returns, particularly when purchases are meant to be date-specific gifts, are due to late shipments. An SLA between the retailer/distributor and the 3rd-party logistics service provider may help reduce delivery errors.
 - Effective gate keeping – many companies accept the return of products whose value can't be recovered. Proper gate keeping is required, therefore, to prevent useless products from entering the returns logistics chain and incurring costs as they move through it to the rework center.
- **Return channels** – These can vary by business model and company operational structure. However, trends clearly reveal a need for:
 - Centralized Return Centers (CRCs) – provide scale economies in transportation, better space utilization, more consistent operations, labor cost savings, compressed disposition time, improved customer service, and better inventory control.
 - Multiple channels – for processing returns face-to-face at a storefront, over the Web, or by phone.
 - Regional Routing Centers (RRCs) – where returns from customers in a given region are consolidated before being shipped to the CRC. The RRCs may also be used for initial screening of returned goods and effective gatekeeping.
 - Outsourcing – by transferring returns management to 3rd-party logistics providers who are developing capabilities that go beyond the usual management of reverse logistics.
- **An effective IT infrastructure to support returns** – The holistic approach can even be applied to system design and would include:
 - Data analysis capabilities – for predictive modeling and trends analysis
 - Gatekeeping capabilities – that include returns request management, validation checks, online support and troubleshooting etc.
 - Tracking capabilities – that can follow a return in transit and provide real-time updates of its status
 - Accounting systems – that accurately charge remediation costs to the returns processes

Infosys Roadmap in action

The Client - one of the world's largest computer manufacturers required a return-parts management solution to accommodate individual, small and large enterprise customers throughout the Americas.

The Process Study and Solution Development – the key steps included:

- Assess supply-chain strategy and blueprint, including reverse logistics
- Define supply-chain integration requirements and the interface between customers, suppliers and other partners
- Assess current business processes
- Recommend client-appropriate best practices
- Establish a client-tailored returns-management vision, including a new business model and detailed process-mapping
- Perform a gap analysis between “where we are now” and “where we want to go,” with suggestions for streamlining processes
- Facilitate the prioritizing of processes and key functionality
- Create a high-level roadmap for implementing desired solution

The Benefits – most clients will be happy if they can just eliminate the worst hassles while cutting costs. The Infosys solution did all that... and considerably more. Our client was able to:

- Achieve substantial cost savings by reducing their inventory
- Transfer activities that had been performed in-house to a consortium of OEMs and vendors
- Reduce the number of hand-offs throughout the receiving, screening, testing, stocking, and shipping of commodity parts
- Gain a higher level of integration with OEMs, which improved inventory monitoring
- Reduce the rate of verified failures by upgrading the OEMs' product knowledge
- Improve the accuracy of parts forecasting and planning through enhanced visibility of inventory
- Reduce manpower and transportation costs
- Reduce the frequency of transaction reconciliation between client and OEM by streamlining the invoicing process
- Increase customer satisfaction by reducing cycle time

In the final analysis

Returns management has become much more complicated in recent years – which makes the payoff all the greater when you do it right, and do it better, than anyone else in your sector. If we were to reduce the content of this viewpoint to just three critical points, it would be these:

- Look beyond the immediate challenge: the question you need to answer is not “How do we handle returns?” but “How do we create a comprehensive returns-management program that transforms an inherently negative customer experience into a valuable strategic asset?”
- Develop a holistic solution that addresses returns from all angles and will likely provide benefits that extend beyond the area of returns management.
- Returns-management solutions must account for a variety of factors, such as business models, product type, and market geography. The most productive solutions are developed from a ground-up approach that is contextual, comprehensive and forward-looking.

To significantly improve your odds for success, Infosys believes you need to find the right mix of technology, process change, and consulting savvy. Only by doing so, can you implement solutions with the high level of predictability needed to convert returns-management from a lineitem expense to a strategic asset.

Further reading

1. "Going Backwards: Reverse Logistics Trends and Practices". Rogers and Tibben-Lembke. 1999.
2. "Reverse Logistics – A Framework", Marisa P. de Rommert Dekker and Brito, Erasmus ResearchInstitute of Management (ERIM), 30 May 2003.
3. "Best Practice Guide To Reverse Logistics", LIS (Now part of Red Prairie) White Paper, Sourced from <http://www.idii.com/wp>
4. "From Trash To Cash", John Fontanella, AMR Research, May 1999
5. "Directive 2002/96/ec of the European Parliament" and of the council of 27 January 2003 on waste electrical and electronic equipment (WEEE), Official Journal of the European Union, 13/2/2003
6. "Getting Started In Reverse", Leslie Hansen Harps, January 2002.
7. "Service Providers tackle e-product returns", Internetweek, June 2000.
8. "Reverse Logistics Is the Icing on the Customer Fulfillment Cake", Gerald McNerney, AMR Research, July 29, 2002
9. "Getting Strategic Value From Returns", Nigel Montgomery, John Fontanella, Marc McCluskey, April 12, 2004
10. "Electronic Waste Processing: Manufacturers Running Out of Time", Vinay Asgekar, Allison Bacon, Nigel Montgomery, Gerald McNerney; March 26, 2003

About the Authors

[Prasad Thrikutam](#) is Vice President and Head, Hi-Tech and Discrete Manufacturing (HTDM) business unit at Infosys. Prasad has more than 14 years of experience in the IT services business. He joined Infosys in 1995. Mr. Thrikutam has also worked in the Indian subsidiary of a leading multinational engineering group, in various capacities related to manufacturing process design and shop floor management. He can be reached at prasadtp@infosys.com

[Sandeep Kumar](#) has more than 10 years of industry and consulting experience and has worked with clients spanning a host of hi-tech discrete manufacturing and retail industries. Sandeep can be reached at sandeep_kumar@infosys.com

Infosys Hi-Tech and Discrete Manufacturing (HTDM) Practice

The Infosys HTDM Practice delivers business solutions to Fortune 500 clients representing all parts of the Hi-tech and manufacturing value chain, spanning from semi-conductor manufacturers to OEMs, value-added resellers and distributors, software products and service companies and other discrete manufacturing companies. Infosys provides services that cover business process conceptualization, process engineering, package selection and implementation, application development, maintenance and support, infrastructure management, product engineering and business process outsourcing. To meet customer needs, Infosys leverages strategic alliances with our partners including IBM, Informatica, MatrixOne, Microsoft, Oracle, Sun Microsystems, TIBCO and Yantra.



For more information, contact askus@infosys.com

About Infosys

Many of the world's most successful organizations rely on Infosys to deliver measurable business value. Infosys provides business consulting, technology, engineering and outsourcing services to help clients in over 30 countries build tomorrow's enterprise.

For more information about Infosys (NASDAQ:INFY), visit www.infosys.com.