White Paper

Competitive Differentiation through Operations

Leveraging the Quote to Cash Cycle for Telecom OEM Companies

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Industry Trends and Key Considerations for OEMs

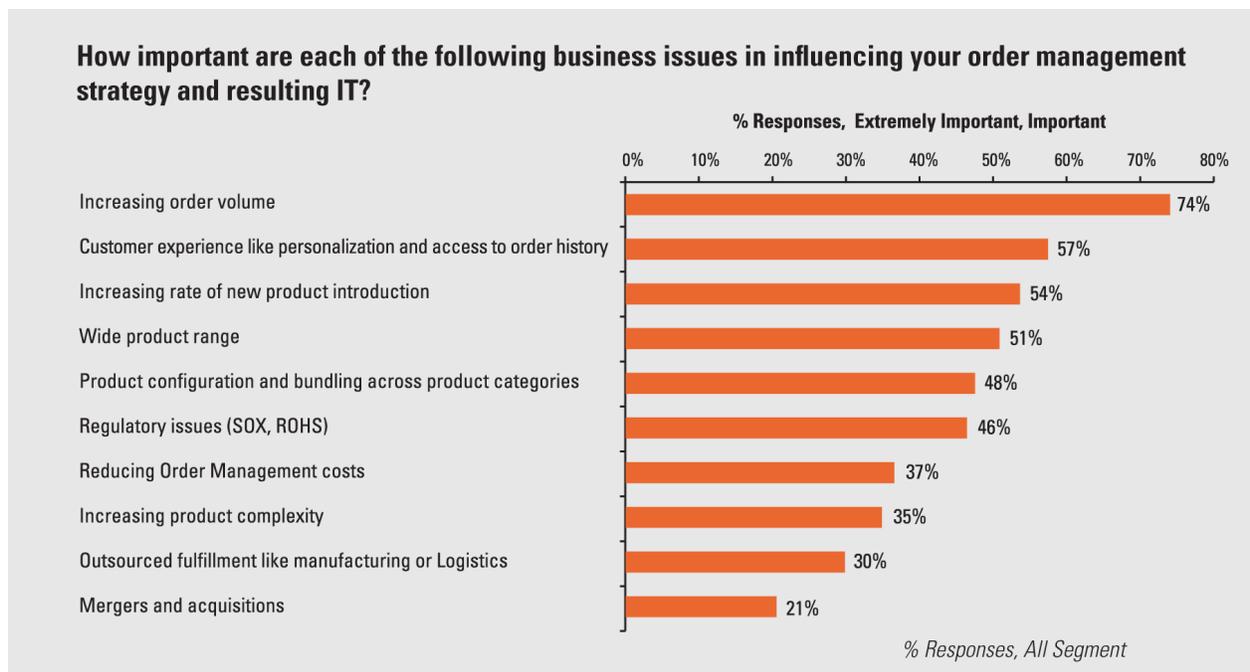Three mega-trends characterize the high tech industry's rapid evolution:

1. Consumerization, resulting in mass customization of products and increasing customer expectations
2. The emergence and swift assimilation of new technologies, increasing pressure on product time-to-market windows
3. The impact of globalization, both on markets and supply chains, resulting in complexities in products and customer requirements

In collaboration with industry groups such as the Electronics Supply Chain Association—and analysts such as AMR Research, and Manufacturing Insights/ IDC—Infosys has identified the implications of these mega-trends for telecom OEMs.

Oct 2006

These mega-trends impact how telecom OEMs manage their customer-facing processes, specifically in the quote to cash (QTC) cycle. Infosys identifies four key drivers in the market and customer facing areas below:

Change Driver	Description	Possible Impact
Increased customer expectations and complexity of requirements	Customer experience is increasingly critical for securing repeat business and loyalty (wallet share). Significant jump in customer-driven complexity regarding product/service choices, sales and service, and channel proliferation. Need for consistent coverage across lines of business, operating units and geographies.	Higher customer service level expectations, as well as increased flexibility, visibility and responsiveness within fulfillment processes.
Need to sell solutions combining products & services	Shift towards bundled propositions, from selling products to selling solutions. Companies need to achieve differentiation through a combination of products and services.	Effective bundling of products and services during sales cycle, quote to order, and finally, order to cash. This may require additional reliance on external service partners.
Increase in product and solution portfolio complexity	Complexity in design and configuration	Optimizing pricing by proposition while accounting for cost and product availability during the sales process.
Multiplicity of systems and processes within organization	OEMs in the telecom sub-segment have grown, and continue to grow significantly, through repeated M&A activity. This has resulted in retention of multiple systems and operating processes within the consolidated organization.	Ensuring a single face for the customer, while executing across multiple entities that may be using a diverse set of systems and processes.

The possible impacts of these drivers highlight the need for a seamless customer experience throughout the QTC cycle.

How important are each of the following business issues in influencing your order management strategy and resulting IT?

% Responses, Extremely Important, Important

Business Issue	%
Increasing order volume	74%
Customer experience like personalization and access to order history	57%
Increasing rate of new product introduction	54%
Wide product range	51%
Product configuration and bundling across product categories	48%
Regulatory issues (SOX, ROHS)	46%
Reducing Order Management costs	37%
Increasing product complexity	35%
Outsourced fulfillment like manufacturing or Logistics	30%
Mergers and acquisitions	21%

% Responses, All Segment

Quote to Cash Cycle: Infosys Experience

Our interactions with key players in this industry space corroborate that telecom OEMs are redefining their customer management strategies to address the change drivers mentioned above i.e. increased product complexity, increased product configuration and bundling and an enhanced customer experience. Most telecom OEMs are also reacting to the recent uptake in business resulting in the need for rapid scaling after a long drought of minimal investment.

Infosys experience also indicates that "cost" within the customer order management cycle has been eclipsed as a key business issue with the primary focus shifting to successfully addressing increased order volumes, high rate of new product introductions, product range and complexity due to configuration and bundling options.

Infosys observes that more mature companies are therefore applying sophisticated practices to differentiate themselves in the marketplace through:

- Enhancing the customer experience
- Responding to customer's need for complex product configurations and bundling
- Offering a breadth of product range

Market-leading telecom OEMs are successfully applying these unique differentiators, despite prevailing complexities such as M&A activity and regulatory requirements.

Key Metrics and Improvement Opportunities

The QTC cycle can be split across three areas:

Indicators of high performance in QTC include:

- Supporting new business models, such as bundling and subscription, by rapidly extending existing processes and systems
- Driving efficient and effective pricing and quotation management, characterized by active demand-shaping while the customer exhibits a high degree of responsiveness
- Processing and capturing orders in a seamless manner while providing a high degree of visibility throughout the cycle

When building robust, best-in-class QTC processes, telecom OEMs should consider the following key metrics to measure these performance indicators:

Change Driver	Quote to Order Metrics and Indicators*	
	Leading	Lagging
Increased customer expectations and complexity of requirements	Quote turnaround time (1-day)	Customer satisfaction (99%)
Need to sell solutions combining products & services	Revenue leakage (<1%) % of services revenue per order	Order profitability (order margin)
Increase in product and solution portfolio complexity	% of services revenue per order Cost per quote	Order productivity – cost per revenue Order profitability (order margin)
Multiplicity of systems and processes within organization	Quote turnaround time (1-day) Cost per quote	Customer satisfaction (99%)

(Best-in-class in parentheses)

Change Driver	Quote to Order Metrics and Indicators*	
	Leading	Lagging
Increased customer expectations and complexity of requirements	On-time shipments (97% to promise date) Accuracy of order capture (99%)	Customer satisfaction (99%) % orders manually touched (25%) % expedites (5%) % change orders (3%)
Need to sell solutions combining products & services	% of services revenue per order	Order profitability Order productivity – cost per revenue
Increase in product and solution portfolio complexity	Cost per order (< $5)	Order profitability Order productivity – cost per revenue
Multiplicity of systems and processes within organization	Order to cash cycle time (45 days) Accuracy of order capture (99%) Cost per order (<$5)	Customer satisfaction (99%) % orders manually touched (25%) % expedites (5%) % change orders (3%)

(Best-in-class in parentheses)

Ultimately, an OEM's ability to monitor and improve the leading metrics will drive improvements to the lagging metrics.

These metrics may be applied in a representative operating scenario in the following manner:

Change Driver	Use of Metrics
Increased customer expectations and complexity of requirements	Monitor on-time shipments, expedites, and # change orders to measure customer satisfaction
Need to sell solutions combining products & services	Track revenue opportunities that may have been unaccounted for in the form of revenue leakage
Increase in product and solution portfolio complexity	Monitor order profitability and productivity to effectively optimize margins and profits

Multiplicity of systems and processes within organization	% of orders manually touched to measure seamlessness of the process and system workflow

Opportunities for Change

Many telecom OEMs sell complex products with service bundling options and employ complex revenue recognition rules, while contending with an array of internal systems and processes. Infosys posits that significant change opportunities exist within both, Quote to Order and Order to Cash.

Focus Areas: Simplification of the quoting/proposal process to ensure effective deal approvals, bundling, consistent pricing, and a single partner/customer purchasing experience.

Key operating metrics to be addressed here include quote turnaround time, cost per quote, and revenue leakage.

Quote Turnaround Time

Most telecom OEMs experience high quote turnaround times due to:

- Complexities arising from long quote approval cycles, as most deals are non-standard, requiring specific discounting terms and approval workflows.
- Complex processes for product pricing and order placement
- Complexities arising from rigid product and services bundling, which require significant effort in orchestrating quote management processes and workflows
- Level of integration among the various systems critical for developing a quote.

Telecom OEMs can reduce the complexities of bundling products and services by:

- Standardizing services into repeatable SKUs.
- Effectively bundling financing options with their offerings to drive buying decisions and reduce discounting complexity during the deal process.
- Predefining configurable bundles to reduce the complexity of providing concessions.
- Applying appropriate pricing business rules to minimize the number of non-standard deals—effectively "getting the price right" the first time. This can help sales personnel focus on selling, as opposed to driving the approval process.
- Creating a unified view of the order, from quote to invoice, to reduce the complexity of reconciliations by improving integration between systems.

These advancements will also improve order productivity and the number of change order requests, and reduce revenue leakage.

Cost per Quote

Most telecom OEMs also experience high cost per quote rates, given the complexity of their quote and order processes. The complexities listed above often lead to significant process inefficiencies that subject the customer to a disjointed experience.

Telecom OEMs can redesign processes and outsource key steps in quote preparation and response, to improve their cost per quote. Outsourcing quote management back office processes to a specialist vendor, significantly reduces the cost per quote by up to 40% while ultimately improving customer and reseller experience. Over time, a tailored guided selling process based on stakeholder knowledge of products and services may be instituted as well which would enable partners to achieve self sufficiency in selling the telecom OEM's products.

Revenue Leakage

Revenue leakage is a major issue for most telecom OEMs, as it causes lost opportunities to maximize revenue based on effective bundling of services with products. Revenue leakage can be reduced by building a platform supporting self-management of entitlements, and balancing customer satisfaction with internal transaction load management considerations. Additionally, these improvements will increase revenue and reduce change order requests through favorable up-selling, cross-selling, and substitution rates.

By improving the order to cash process, telecom OEMs can increase the order throughput volumes while reducing cost per order and maintaining customer satisfaction levels. This may be achieved by increasing the percentage of zero touch orders that flow through the system.

Percentage of Zero Touch Orders

Lack of automation leads to manual intervention for key steps such as order validation, configuration checks, expedites, and exception handling. This can be addressed by:

- Application enhancements and bolt-ons to transaction backbone system addressing unique requirements for configuration and bundling.
- Proactive configuration library management with periodic updates for pricing, logistics, and service related offers. This may also require periodic master data synchronization across multiple applications as required.
- Reducing the manual handling of change, cancellation, and expedite requests by implementing appropriate work flows for change order management. Manual intervention is therefore the last resort where management decisions associated with deviations from operating guidelines are required.

The above changes will also positively impact overall order to cash cycle times, and reduce the cost per order.

Cost per Order

Telecom OEMs are experiencing a relatively higher cost per order than other high tech companies. Typically, this is due to global scope (multiple geographies for market access and fulfillment partners) and process inefficiencies across multiple systems, in addition to legacy transaction processing operations in high-cost locations. Costs per order can be reduced by:

- Consolidating and standardizing transaction processing while grouping geographies to mitigate disparities caused by legacy decentralization and differences in transaction handling.
- Identifying opportunities for workforce globalization within the QTC cycle, and utilizing offshoring capabilities for order validation, confirmation, and processing.

Order to Cash Cycle Time

Disjointed systems and processes can lead to higher-than average order to cash cycle times.

- This can be improved by ensuring an integrated, global view of price, contracts and warranties that can extend into the supply chain in areas such as inventory and manufacturing capacity. This enables customer service personnel to accurately view product, customer, installed base and warranty information through a globally visible system and consolidated process.

- Additionally, the use of outsourcing vendors for specific steps in order validation, confirmation and processing must be leveraged to drive reduction in cycle time by instituting SLAs for each activity within the overall order management cycle. Expectations of 10-15% reduction in cycle time are appropriate as one-time impact followed by incremental improvements due to productivity gains.

Managing Customer Information to Drive Additional Improvements in Key Quote to Cash Metrics

In order to effectively support and transform the quote to cash cycle, telecom OEMs must shift their focus from spending money on information to making money from information. Customer information management is a proposition that provides an integrated view of the customer. This integrated view enables strategic perspectives on customers and markets and effective decision-making within the quote to cash cycle, and requires a robust foundation of data management and governance. In addition, effective use results in enhanced order productivity, sales force effectiveness, and eventually customer profitability.

To achieve this, telecom OEMs should:

- Derive value from flexibility in business processes, both by building a global view of customers, channels and related attributes, and by utilizing business rules to drive QTC workflows.

- Since most transactional systems are not designed for day-to-day decision making and simulation, they are typically insufficient to support the entire quote to cash process. Moreover, the bulk of relevant customer, pricing, and product information is typically housed in multiple silo systems and databases outside of the ERP footprint. Given the typical capabilities of ERP systems, it may prove difficult for telecom OEMs to use the transactional backbone system to support the complexities of the QTC cycle. External data sources, such as marketing databases and partner data, may add to this complexity. An effective customer information management scheme would enable telecom OEMs to do the following:
  - Use quote histories, and information on won/lost opportunities, to monitor quote conversion and patterns
  - Effectively link quotes, orders, and service agreements to facilitate monitoring of a single "deal"
  - Use pricing information across multiple dimensions including region, channel, and customer (to do what?)

- Develop this integrated global view to enable monitoring of the appropriate leading and lagging metrics outlined earlier in the paper.

Client Success Story:

Transforming Order Management for a Telecom OEM

Client Situation

Key Concerns for the client were centered on non standard order management processes as well as high cost per order. This was further complicated by a vast number of product configuration and bundling possibilities tailored to multiple geographies.

Key issues identified by Infosys:

- End-customer complaints relating to outsourced order processing services
- Order quality and turnaround times
- Limited process improvements derived from outsourcing
- High costs per order processed

Client Impact

The client made a strategic decision to work with Infosys on both the IT and processes within order management. Since Infosys provides tight integration between order management processes and the supporting applications environment, the client has realized significant improvements in case resolution cycle times, productivity, and overall processes—as continuously monitored by the following key leading metrics:

- Case resolution cycle time – the time required to close a case following a new request from the customer
- Productivity – the number of cases closed per hour
- Orders entered, but not booked – number of orders entered by the customer that do not reach "booked" status

Use of these leading metrics has ultimately driven improvements in the lagging metrics—such as improvements in order cycle time, customer satisfaction, and order productivity. The client has additionally experienced key benefits including:

- 50% reduction in annual costs
- Average productivity improvement of 10-15% across multiple processes
- 25% reduction in order cycle times, releasing up to US $30 million in working capital
- Continuous ongoing improvements in workflow efficiency and customer satisfaction through root cause analysis
- Execution excellence that includes a phased transition and strong data security

Summary & Conclusions

Telecom OEMs have significant opportunities to create both short- and long-term value in quote to cash operations. These opportunities can be realized by addressing the following metrics through a structured program covering both IT and processes in an integrated manner:

- Order cycle time
- Cost per order
- Revenue leakage

By partnering with an experienced order management vendor who has expertise in integrating global processes with appropriate IT support, telecom OEMs can improve their performance in quote management, order management and customer information management for true competitive differentiation.

About the Author

Romit Dey, Group Solutions Manager & Associate Vice President

Romit is jointly responsible for leading the solutions portfolio in high-tech & manufacturing. As part of the Leadership Team of the high-tech business unit, he ensures managerial oversight is provided for accounts at all times – to drive the smooth running of the Infosys global delivery model within the client context.

Romit currently manages the portfolio of solutions in Customer Operations and Globalizing Product Innovation. He leads a team of people focused on specific solutions including Transformational Customer Order Management

Romit has been in Infosys for almost six years, and was previously responsible for running global sales operations for Infosys. In this role, he was responsible for development and implementation of appropriate operating processes and systems within Infosys. His responsibilities covered key aspects of business (including management accounting, contracting and HR) as relevant for the client-facing organization at Infosys.

Prior to this, Romit was a Principal Consultant at PwC Consulting where his most significant client relationship was one of the world's largest electronics companies that is active in about 60 businesses, from consumer electronics to domestic appliances, and from security systems to semiconductors. The client was a Top 50 global account, and he worked with the client on several mission-critical initiatives.

Romit's functional focus is front-end supply chain operations enhancement (with specific focus on S&OP, forecasting and customer relationship management) for manufacturing companies. He has also written papers on the area of differentiated supply chain operations.

While at PwC Romit has also worked on several restructuring and functional strategy initiatives in tandem with deployment of technologies including ERP, CRM, data warehousing, and demand-side modeling tools.

Partha Bose, Senior Principal, Industry Solutions

Partha has over 13 years of consulting and industry experience in customer operations, supply chain, order management and forecasting. He has consulted with many Fortune 500 companies in the High Tech and Manufacturing sectors. Before joining Infosys, Partha worked at PwC Consulting/IBM Business Consulting out of their Silicon Valley office. Prior to PwC, he spent several years in the industry, where his last position was Manager of Corporate Planning and Forecasting at FedEx in Memphis, TN. Partha holds an MBA from the University of Rochester, an MS from Virginia Tech and a B.Tech from Indian Institute of Technology (IIT), Bombay.

About the Author

Pavan Kochar, Industry Solutions

Pavan is a supply chain domain expert, with a deep understanding of supply chain processes within the high tech industry vertical. Her expertise spans across supply chain planning, forecasting, VMI, order fulfillment, order management, and purchasing.

As a Principal in the Customer Operations area, Pavan works in a cross-functional team of business and technical resources to conceptualize, develop, market, sell and deploy solutions to customers in the telecom OEM vertical.

Most recently, during the past 8 months, Pavan has been working on identifying continuous improvement opportunities within Cisco's Order Management cycle. She has been responsible for identifying the benefits associated with IT and Operations integration across the order management cycle. She worked with a cross functional team of IT and Operations (BPO) to help identify opportunities for bridging the gap between processes and the systems that support them. Benefits identified include improvements in auto-booking, reduction in case resolution cycle time, and productivity.

Prior to Infosys, Pavan worked for Valdero as a Director of Solutions responsible for selling and delivering inventory visibility and management solutions for high tech OEMs. While at Valdero, she helped sell and deploy supply chain applications for over 10 customers including Motorola, Polycom, Juniper Networks and Leapfrog.

Prior to Valdero, Pavan worked for Saltare as Director of Solutions and Presales where she was responsible for selling and delivering collaborative supply chain solutions for companies like HP and ST Microelectronics.

Before Saltare, Pavan spent 6+ years in supply chain consulting at Accenture and Deloitte Consulting where she worked on driving operational improvements for companies such as Freescale Semiconductor, Texas Instruments and Frito Lay. She also worked closely with i2 Technologies where she helped drive the requirements for the first semiconductor planning solution.

Pavan holds a Bachelor of Computer Science/Engineering from the University of Illinois at Urbana-Champaign.

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