

Technology industry at the cross-roads:

Transforming quote-to-cash operations

Technology Institute

Executive summary

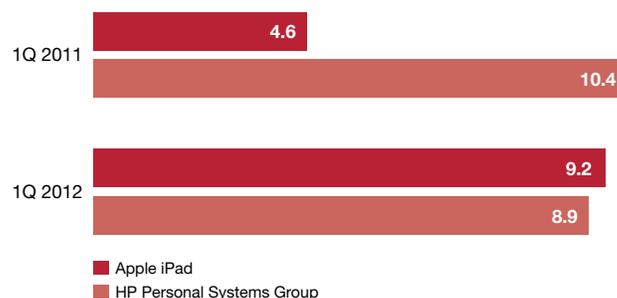
The global technology industry is going through an evolutionary period, driven by major market trends including the proliferation of tablets and other mobile devices, adoption of social media platforms within the enterprise and the increasing pervasiveness of the cloud. The combination of these has resulted in an explosion of data around the customer/consumer/user that represents in itself an unprecedented opportunity for the technology industry. Hardware, software and technology services companies now have an opportunity to make up for ground lost over several recessionary years of postponed spending by their customers.

However, the technology industry faces a host of internal and external challenges in pursuit of these opportunities. Reaching new emerging markets with very diverse customers across countries and orchestrating global operations creates tremendous pressure within the organisation. The regulatory environment is changing in the US, and varies significantly in other major economies. Meanwhile, budgets need to stretch farther than ever. Outdated and inefficient legacy solutions, disconnected processes and systems due to mergers and acquisitions and outdated business models drive up operating costs and complexity and need to be addressed.

All the while, customer experience is being shaped by companies like Apple, Amazon and eBay, which can identify consumers wherever they enter the browse/buy/use cycle, identify their purchase history and buying patterns and tailor propositions accordingly. These are companies that provide customers with products and services that delight and inspire, while addressing specific desires. Companies that follow a similar trajectory in understanding and leveraging these shifts in customer expectations and in the industry have vastly successful results and differentiate themselves from competition in a profound way. (See Figure 1)

Currently though, few companies deliver an Amazon-like buying experience for their customers. In fact, the evolution of the technology industry into more integrated hardware and software propositions, alongside complementary services and content-based offerings, means that, increasingly, companies seem to be operating on a continuum of business models, rather than just focusing on one or two sources of revenue. (See Figure 2) When combined with global expansion, an essential requirement for sustaining growth, this results in significant fragmentation of the customer experience and enormous complexity within the sales cycle and the buying process.

Figure 1: Apple vs. HP quarterly revenue (US \$bn)



Executive summary (continued)

To address this successfully, companies must have a clear vision of the future—an operating model comprising robust processes and enabling technologies that is simultaneously capable of delivering a seamless customer experience, global scalability along with rapid change and adaptation when needed. It is a compelling proposition—one that efficiently supports current businesses and adequately enables new revenue streams as they take shape through innovation and/or acquisition. It is a proposition that inspires and drives transformation inside the enterprise—a profound change that may be achieved in iterations, but is comprehensive in nature.

Is it possible to realise this vision completely? The authors believe that while this may be the ultimate moving target for companies, there is significant value to be realised along the transformation journey—identification of the current and future DNA of revenues for the company in line with market opportunities and strategic priorities, along with the ability to design, develop and deploy a robust business architecture and enabling platforms and technologies.

Why optimise Q2C?

Optimising quote-to-cash (Q2C) operations is one high-impact way technology companies can respond to these challenges. Based on PwC's research and analysis of a wide range of transformation and operations improvement projects conducted by technology companies, we have identified Q2C as particularly ripe for improvement because it affects all of these areas:

1. Evolving customer expectations, including consumer-like shopping patterns among enterprise users and buyers;
2. New business models and product propositions that market segments across the globe and
3. Concentration of competitive advantage within customer-facing processes and product innovation.

Q2C processes touch almost every function within the organisation—sales, finance, IT, R&D, marketing, legal, supply chain, order management and customer service—and are integral to successful channel partner relationships. As a result, improving Q2C operations has a potentially profound effect across both the front and back office.

Figure 2: Technology company business models

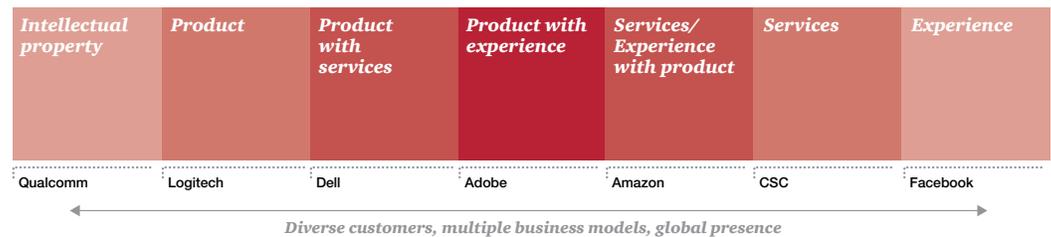


Figure 3: Impacts of Q2C optimisation

Select corporate metrics

Total revenue	10–15% increase
Sales per customer	10–15% incremental revenues
Cross-sell and upsell revenues	20–35% increase
Sales cycle time:	30–60% reduction
• Quote-to-order cycle time	25–50% faster
Order processing cycle time:	20–40% reduction
• Cycle time to generate invoices	10% reduction
• Order change processing cycle time	20–30% reduction
• Percentage of invoices created without errors	15–20% improvement

Source: PwC

Companies that have transformed Q2C operations realised significant agility and efficiencies, while reporting significant improvements on critical metrics across the transaction lifecycle. (See Figure 3) While not every organisation can achieve all of these results, Q2C leaders are actively using customer data and purchase history to customise offerings and speed the buying cycle. Standardised back-end processes help them respond with more flexibility and agility to changing market conditions, while customer-facing technologies allow them to deliver tailored interactions. By automating as much of the Q2C cycle as possible, from contracts and pricing approval to order management, they reserve hands-on attention and resources for complex and/or high-value orders.

What seems to separate leaders from laggards and mainstream organisations in their quote-to-cash operations is that they put the customer at the centre of their view of the world. As such, they streamline Q2C operations, automate processes, consolidate functions to avoid misalignment of requirements and otherwise provide an outstanding customer experience. (See Figure 4)

This paper explores ways that transforming Q2C enables organisations to enjoy a wide range of top and bottom-line benefits by giving partners and customers seamless user interactions, reducing time to market and increasing organisational efficiency while cutting costs.

Figure 4: The Q2C performance spectrum—leaders, laggards and the mainstream

	Laggards	Mainstream	Leaders
Customer experience	<ul style="list-style-type: none"> Fragmented experience with multiple entry points and high complexity Heavy reliance on customer's/user's own understanding of the company's product and product structure Heavy reliance on customer's/user's self-reporting of purchasing history 	<ul style="list-style-type: none"> Single starting point with defined pathways based on customer type Abundance of SKUs results in complex choices and unclear pricing tradeoffs between individual products and bundled options Inability to leverage new purchase patterns (social/recommendation-based, try-and-buy, etc.) across new customer constituencies 	<ul style="list-style-type: none"> Context-specific routing through Q2C cycle, driven by customer profiling based on feeds from purchase history and entitlements Multiple buying cycle options: rapid, standardised guided path for most customers, as well as richer, more flexible alternative paths that allow for customised offerings
Q2C business architecture	<ul style="list-style-type: none"> No governance model Lack of standardised, common processes Outdated and conflicting business policies for pricing, credit approvals and contracting Multiple manual data entry efforts and check-backs through Q2C cycle 	<ul style="list-style-type: none"> Strong leadership with centralised governance team making recommendations across Q2C for all product lines Lack of understanding of region-specific needs Exception-based prioritisation of strategic customer needs 	<ul style="list-style-type: none"> Federated governance model across major customer segments, product groups and geographies Template-based approach with allowance for variations Frequent updates to templates for rapid market response
Q2C technology platform	<p>Multiplicity of peripheral systems for pricing, configuration and contracts around core Q2C cycle, accompanied by 'enforced adoption' of main transaction backbone by all acquired companies</p>	<ul style="list-style-type: none"> Acquisition-based growth with ensuing significant lag between technology enablers and business needs Recognition that different business models may require different enabling solutions supported by a flexible, extensible enterprise architecture 	<ul style="list-style-type: none"> Focus on customer-facing solutions and enabling technologies for a tailored customer experience Back-end processes are enabled by global standard platform
Order management	<ul style="list-style-type: none"> Manual order validation and booking Non-standard assignment of orders for resolution Manual checks for pricing, contracts and trade compliance 	<ul style="list-style-type: none"> Autobooking for standard orders Manual intervention for more complex orders Partially automated checks 	<ul style="list-style-type: none"> Autobooking for majority of orders with clear ownership of the rest, leveraging a unified order management console Order prioritisation applied Automated trade compliance checks
Data	<ul style="list-style-type: none"> Manual processes Contracts and pricing approval not integrated 	<ul style="list-style-type: none"> Pricing automation at time of quoting Limited integration with sales contracts 	<ul style="list-style-type: none"> Contracts integration with automated controls Streamlined approval management with automated application and control of pricing modifiers and qualifiers Integration with Installed Base/Entitlement Master
Organisation	<ul style="list-style-type: none"> Separate functions in silos control individual steps along the transaction continuum Overlapping roles and responsibilities with duplication in skill sets, along with resource gaps; legacy ownership of resources by function Frequently duplicated controls and activities 	<ul style="list-style-type: none"> Limited number of functions along the transaction continuum Initial alignment of integration between functions Cross-functional forums at manager/senior manager levels for collaboration and rapid decision-making; this is accompanied by executive-level cross-functional forums as well Some duplicated controls 	<ul style="list-style-type: none"> Integrated function owns the full transaction flow or institutionalised understanding and ownership of end-to-end process by participating functions Integrated process view drives collaboration across functions; strategic and operational decision-making within Q2C through cross-functional groups Harmonised requirements and controls No duplication

Source: PwC

Solving the Q2C conundrum

Q2C operations are more complex than other business areas because they are almost always cross-functional and multi-layered, especially for hardware and software companies. The diversity of business models supported by most technology ecosystems can increase this complexity by an order of magnitude.

Consider the following:

- Different customer segments (large enterprises, government, small and midsize business, consumers) require different approaches to pricing, configuration and quoting, as well as purchase order submission, order visibility and invoicing.
- Sales channels have multiplied; direct channels now include e-commerce and mobile options as well as call centres and the traditional sales force, while indirect channels include distributors, OEMs, system integrators, resellers and VARS, with increasingly complex partner programmes.
- Order types have proliferated in all sectors of the tech industry.

These developments require careful design and transition management that will depend on how a company has evolved from its core business model of five to ten years ago. For instance, a hardware company with lagging Q2C processes may still cling to traditional pick-to-order, order-to-stock, assemble-to-order, configure-to-order and engineer-to-order processes. Companies with a traditional model continue with these processes, but also have to embrace other processes due to new revenue streams. The expansion of the universe of revenue sources and routes to market, along with more complex product offerings, means that the same 'hardware OEM' company has to combine devices, software and services into one complete package.

To do so, it must enable several additional transaction types within Q2C operations, including:

- Demos/try-and-buy
- Freemium (first use free)
- Volume Purchase Agreements (VPAs)
- Maintenance services
- Software as a Service (SaaS) and subscriptions

- Hosted solutions
- Enterprise License Agreements (ELAs)
- Enterprise Service Agreements (ESAs)

The technology industry's approach to Q2C processes has typically been highly manual, requiring multiple touches and pricing modifications on virtually every quote and order. With the advent of multi-offering quotes that span several locations and require alignment across business units and geographies, Q2C processes are more fragmented than ever for these laggards.

Laggards' multiplicity of systems and manual processes challenge their Q2C procedures at every turn. Pricing complex solutions offerings requires input from multiple departments, delaying the ability to respond to customer needs quickly and increasing the odds that customers will turn to a competitor who can deliver a faster quote. A complex configuration process requires partner training and makes sales and service more difficult, decreasing channel partners' incentive to sell a product. Lack of visibility into transactions can lead to conflicting information about orders, inconveniencing partners as well as customers. High-touch manual pricing processes are time-consuming and financially complex, creating further sales delays and introducing tax, audit and compliance risks. The Q2C process becomes so complex, costly and slow that channel partners and customers alike can easily be tempted to turn elsewhere.

Even mainstream technology companies face substantial challenges. Their minimal standardisation and automation governing deal management or pricing results in a lack of a single source of truth across systems, functions and products. So, senior executives and financial management in technology companies with mainstream Q2C processes typically do not have complete and accurate data about pipeline status, revenue projections or other key financial metrics.

Indeed, the lack of a single enterprise-wide Q2C information source is having deleterious effects throughout most organisations, not just laggards. The following table highlights some of the most vexing impacts of inferior Q2C processes on key functional areas. (See Figure 5)

Figure 5: Inferior Q2C processes lead to widespread dysfunction

Finance	Sales	Marketing	Quoting operations/ Order management	Operations	Customer service
Issues with tax, reporting and compliance due to a lack of consistent information	Relentless pressure to maintain or improve margins on all transactions	Missed opportunities due to the lack of competitive information	Lacks efficient system-driven compliance and validation checks, creating increased exposure to compliance risk	Suboptimised fulfilment, production and logistics conditions due to poor order visibility	Poor service response and revenue leakage due to fragmented processes and limited visibility of data around service contracts, warranties and entitlements
Revenue and profit forecasting challenges due to inadequate or conflicting data	Lost opportunities because many (if not most) deals require manual intervention	Inaccurate information leads to less competitive offers	Lack of seamless integration with quote, leading to data misalignment and erroneous order creation/booking	Quoting channel partners hesitate to do business, or even to maintain the partnership	Poor customer service due to limited visibility of data about customer installed base and its entitlements
Cannot generate timely, accurate invoices without intervening manually in the invoicing process after invoice creation	Incorrect or missing information leads to poor customer service and reducing effectiveness of cross-sell and upsell programmes	Inaccurate information leads to overly generous offers and reduced profits	One-size-fits-all model for all business processes, including order review and management, leads to customer and channel partner dissatisfaction, prolonged order review and order booking cycle times	Supply chain visibility is minimal at best, making the fulfilment cycle and order status difficult or impossible to track	
	Manual price approvals slow deal velocity				

Source: PwC

In short, as nonstandard processes proliferate throughout the Q2C cycle, so do high costs, poor communication, errors and inefficiencies—chipping away at revenues, profitability, customer satisfaction and the ability of business decision-makers to spot opportunities and make accurate, timely decisions.

The way forward:

Transforming Q2C operations

Addressing these challenges requires more than a point solution or a system implementation project; it requires business transformation on multiple levels. PwC has found the following to be key prerequisites to successful Q2C transformation:

- **Transformation based on strategic imperatives:** The transformation process needs to take into account the organisation's strategic imperatives for the next five to ten years. In our experience, business transformation projects of all types must define the value to be delivered in terms of the company's objectives. Without aligning all design decisions to the company's strategic objectives, projects are unlikely to deliver the expected outcome. This is particularly critical in improving the Q2C process for technology customers. The cross-functional nature of Q2C operations demands an equally cross-functional transformation, one that meets the distinct needs of technology customers and is tailored to their particular business models.
- **Strong C-suite support:** Sometimes customer feedback alone is not persuasive enough to overcome internal resistance to changing Q2C processes. It is critical that executive leaders establish and communicate goals and priorities for transforming Q2C operations. This can be reinforced by supporting early 'quick wins' that illustrate the business value of change, as long they align with overall design directions as well. Implementing KPIs to track progress delivers proof of success as well.
- **Customer experience:** Changes to the business architecture and operating model of Q2C operations must make customer experience issues a priority. Improved customer satisfaction is a clear, powerful, visible impact, both short- and long-term.
- **Iterative approach:** While the scope and vision of a Q2C transformation should be end-to-end, an iterative approach to design, implementation and user training is generally recognised to be the best possible approach. This allows ample time to modify design aspects before finalisation, build any necessary regional variations into a globally consistent process and ensure that systems

and operations remain stable during the migration to the new process.

- **Foundational capabilities:** As with any major business transformation, changes to Q2C operations must begin with foundational capabilities. Organisations can add 'nice-to-haves' after the 'must-haves' are established and fully functional.
- **Organisation and people:** The transformation journey has a very significant impact on people and the organisation in focus. It is critical to leverage a pervasive communication plan, conduct a detailed organisation impact analysis and to anticipate significant changes at multiple levels. The use of champions across all levels of the organisation, and specifically within the most impacted functions, fosters adoption and reduces organisational resistance to change.

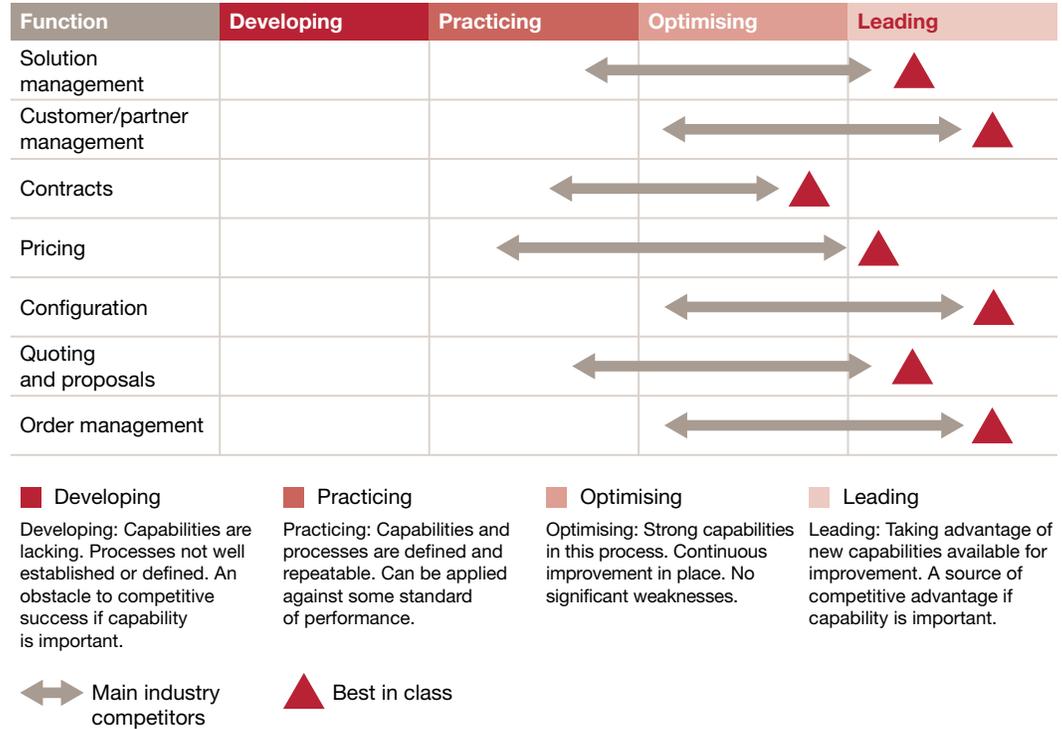
The first step to transforming is benchmarking the various processes that touch the Q2C process to determine the enterprise's position against its primary competitors. This is followed by implementation of the relevant and appropriate parts of the PwC Q2C reference architecture.

PwC benchmarks the Q2C processes against industry best practices for various business models, using the following scale:

- **Developing:** Capabilities are lacking. Processes not well established or defined. An obstacle to competitive success if capability is important.
- **Practicing:** Capabilities and processes are defined and repeatable. Can be applied against some standard of performance.
- **Optimising:** Strong capabilities in this process. Continuous improvement in place. No significant weaknesses.
- **Leading:** Taking advantage of new capabilities available for improvement. A source of competitive advantage if capability is important.

Figure 6 depicts a typical Q2C process benchmarking analysis of a technology company relative to its peers.

Figure 6: Benchmarking Q2C process weaknesses and strengths



Source: PwC

The results of this benchmarking help to identify and prioritise the aspects of Q2C operations with room for improvement across an organisation’s functional areas, including sales, finance, operations and customer service.

Once the benchmarking analysis indicates which aspects of Q2C operations are most in need of revision, each aspect can be broken down for deeper analysis. PwC has a reference architecture that includes all of the direct and indirect activities involved in the Q2C process,

customised for the technology industry. (See Figures 7 and 8) The direct drivers constitute the primary flow of the transaction, while the indirect processes provide the supporting data and systems necessary to complete the transaction.

Applying the reference architecture against the results of the benchmarking provides a road map of what the optimised Q2C process should be, based on PwC’s proprietary best practices data for each activity.

Figure 7: Core Q2C processes

The PwC Q2C reference architecture includes almost 40 core process tasks encompassing opportunity management, quote development and review, deal review and order management.

Opportunity management	Solution design & pricing		Manage change orders	Order fulfilment	Invoicing & rev mgmt
Register deal Create deal object Deal review and disposition Deal conversion to opportunity	Manage quote object Quote creation Quote status advancement Quote conversion to order Quote archiving Available to promise	Manage price & discount Apply list price Apply discounts Generate final price for quote Profitability and margin management Contract review/development	Order management Capture order Validate order Book order Manage order Manage change orders	Product delivery Prepare product Deliver product Install Activate/deploy	Invoicing & rev mgmt Billing & payments Credit & collections Revenue management Indirect tax
Manage opportunity Opportunity creation Opportunity sales stage advancement Opportunity closing Opportunity conversion to quote	Solutioning Initiation of the configuration Creation of a configuration Addition of the configuration to the quote Joint solution design	Present quote Print quote Iterate and finalise quote Generate quote			

Source: PwC

Figure 8: Enabling process & data

The PwC Q2C reference architecture includes almost 70 indirect process tasks including data analytics, business policies and models, compliance and regulatory activities.

Metrics and analytics Predictive analytics Operational insights Throughput analysis Reporting platform	Product release management process New product introduction Product lifecycle mgmt Configuration rules management Product roadmap management Configuration library management Catalog setup & maintenance Content setup & maintenance SKU management (s/w)	Pricing data management Discounting rules definition GTM offering price definition and setting Pricing administration Pricing data publication and distribution Pricing treatment rules	Customer experience management Organisation structure Account teams Contract attribute repository Dashboards Documentation consistency Quality of service	Compliance SOX setup Export compliance setup	Contract management process Contract creation Contract renewal amendment termination Contract repository creation and maintenance Strategic deal desk	Master data management Customer data management Partner data management Item master management
Business models/scenarios New to industry New to company New to quote-to-cash operations	Install base creation & update Products & services entitlement & licensing Terms & conditions Payment positions Fulfilment positions Order details including channels & locations	Pricing & discounting strategy Promotions governance List price strategy Discount strategy	Partner management Partner programme definition Partner recruitment strategy Multi-tier go-to-market Retail strategy	Policies Revenue policies Tax treatment policies Booking policy Global order requirements policy	Offering rules management Consumption rules Treatment rules Merchandising rules Programme rules Go-to-market offering definition Licensing model and attributes	Manufacturing data management Item creation BOM creation ECO (engineering change orders) Printing (certificates, artwork)
Usage set up & maintenance Prod licensing setup Offerings entitlement Capacity & duration entitlement		Sales force management process Territory management Sales compensation strategy Sales compensation execution		Sales & operations planning Sales forecasting Operations forecasting S&OP processes		

Source: PwC

As you can see, each component of the Q2C process may contain multiple sub-processes, not all of them necessarily performed by the same department or even an internal function. For example, in the case of a physical product, order fulfilment includes product delivery, which may incorporate product preparation, transportation, installation and activation/deployment, and crosses supply chain, customer service and (potentially) one or more channel partners.

As we have already emphasised, transforming Q2C operations is fundamentally a business initiative, not a systems deployment. While many aspects of the transformation involve IT systems, far more involve business processes in which IT is incidental. Consequently, the redesign of the Q2C cycle needs to be outcome-focused, emphasising business value throughout the process. As market conditions and corporate strategy change, the design should shift accordingly.

Organisational impact and key changes

As mentioned earlier, the wide-ranging impact of transformative change in the Q2C context must be assessed at multiple levels for the organisation with appropriate strategy formulation and planning, followed by consistent communication and execution.

The five key areas to focus on during a Q2C transformation are:

- **Organisation structure:** during the transformation, functions often need to be realigned to streamline operations and realise the expected gains. Typical actions include consolidation of functions in a single organisation responsible for the end-to-end process and de-layering of responsibilities to expedite transactions and empower lower levels of the organisation.
- **Roles and responsibilities:** the shift in organisational structure also implies a change in roles and responsibilities for its members. Span of control and areas of responsibility change considerably during the transformation requiring the team to pay particular attention to the definition of new job descriptions.
- **Skill-sets and capabilities:** as organisations transform, so do the skill-sets and capabilities of the professionals within them. Tactical, repetitive activities are automated, leaving only complex, value-add activities to be performed manually. Orchestration and collaboration replace siloed activities, requiring a different level of training. Soft skills are required to handle first customer response. Conflict handling and resolution need to be part of the culture of the customer-facing functions/groups.
- **Changes in legacy ways of working (WOW):** leveraging enabling platforms and associated tools that are set up using rules-based models, that are in turn governed by operating policies, substantially reduces the need for individual heroic efforts and ‘tribal knowledge’.
- **Change in interactions with both internal and external customers:** as automation replaces direct contact, customer interactions require a different approach. New communication standards and guidelines need to be developed for specialists to adopt. Collaboration across functions becomes critical to maintain the expected level of service and respect SLAs agreed upon with partners and customer.

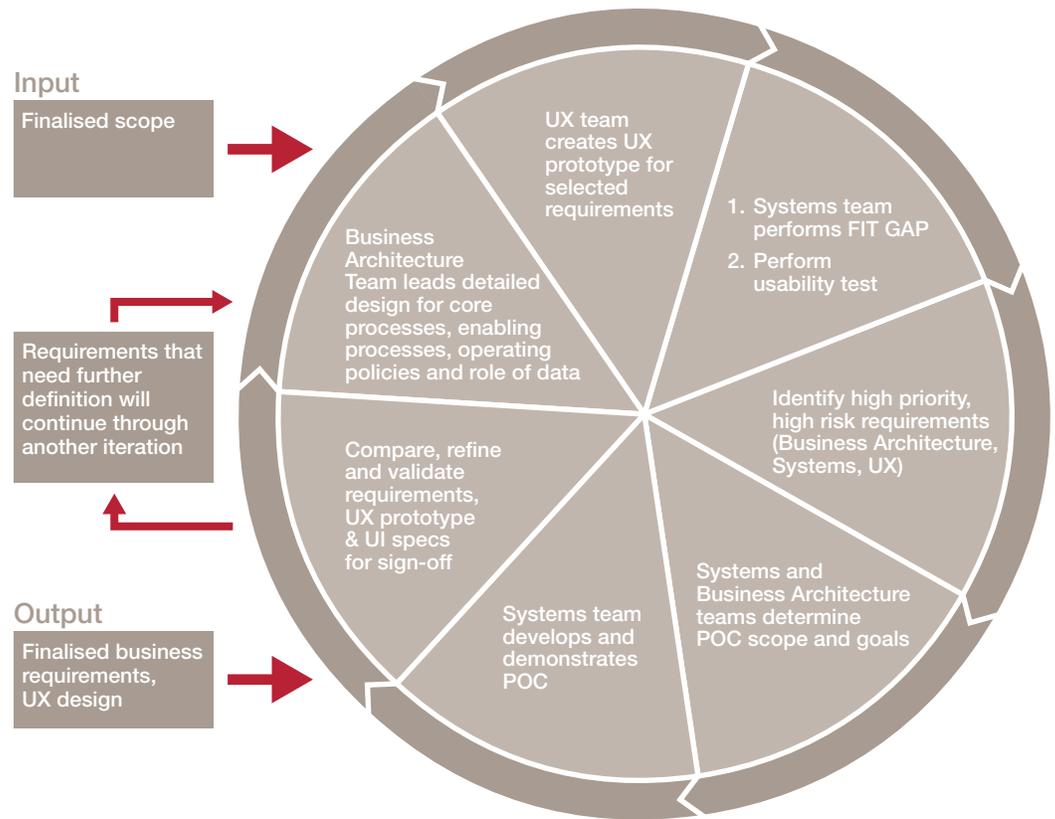
These areas need to be considered not only within the frame of the change management activities strictly defined, but in the broader transformation context. Areas that are often overlooked until later stages of the project include deployment and training. The number of releases and the deployment trade-offs (e.g., big-bang vs. pilot, limited capabilities vs. full system for limited products, all geographies vs. single country) need to be determined with an eye towards the ability of the internal as well as the external stakeholder groups to absorb change.

In this sense, PwC has found the creation of a change network and change champions at all levels of the organisation to be particularly effective. These professionals act as evangelists of the solution and, given their intimate familiarity with the issues that led to the transformation in the first place, provide the team leading the transformation with critical insight into likely obstacles to adoption and inputs to the design of the new organisation.

Implementation strategy

The next step: Implementing the new Q2C process after the benchmarking, identification of the relevant parts of the reference architecture and incorporating them into a project scope. A user experience (UX) team then creates a prototype of the new Q2C experience. An IT systems team then reviews the UX to determine what is doable or needs to be added to the existing architecture and toolset and performs usability tests. The rest of the Q2C development process is illustrated in Figure 9.

Figure 9: How to build the new Q2C processes



Source: PwC

Note that user experience is also an integral part of the design. In fact, it should be a key consideration.

Emphasising the UX in the beginning of the development process contradicts traditional user experience development approach, which usually happens much later in systems design. However, taking the traditional approach risks perpetuating current UX issues in the new design—a significant risk given how often UX issues contribute to the need to improve Q2C in the first place.

Addressing UX and business requirements at the same time and allowing them to inform each other minimises this risk. Once the system redesign has progressed enough to simulate common tasks, usability testing provides feedback on performance, accuracy, ease of use and other metrics, which help further refine the new Q2C process. Iterative design that continuously aligns business process design to system implementation helps to contain costs, expedite time-to-deployment, reduce documentation and generate a truly effective Q2C solution.

Another key aspect of transforming Q2C operations involves the adoption, as part of the design of the new system, of pre-determined transaction flows which can be isolated into free-standing segments at any point in the overall Q2C process. For example, the configure-price-quote, order management, fulfilment, billing and invoicing, or any combination of processes, need to be isolatable to enable either full automation or manual intervention. Three different approaches to Q2C transactions are no touch, low touch and high touch:

1. 'No-touch' transactions are highly standardised and automated to require no internal involvement.
2. 'Low-touch' transactions demand a minimum level of internal assistance.
3. 'High-touch' transactions call for special attention because of their worth and complexity.

Not every company does everything at once. Each company has to develop a schedule to develop the specific capabilities it needs. Figure 10 provides more detail about the ramifications of the three approaches on specific segments of the Q2C cycle.

Figure 10: Q2C transaction delivery strategies

	Configure-price-quote	Order management	Fulfilment	Billing/invoicing
No-touch (fast-track/automated path)	A process with integration across systems and data is capable of automating not only sales of baseline products and simple configurations, but also of products with complex configurations through the automation of configuration and the integration with sales contracts and automated pricing approvals; such transactions do not require any involvement by the company's sales force and allow the channel partners and/or the customers to be self-sufficient.	Leveraging electronic PO submission modes such as EDI/Rosettanet/e-hubs helps automate the PO review process. This is further enhanced by systematic application of contractual agreements during the systemic validation process; in addition, leveraging the upstream quoting data to create and autobook sales orders based on predefined thresholds limits manual intervention.	Electronic fulfilment of orders with no manual intervention; this is possible for self-service and/or software products inclusive of SaaS offerings where provisioning is automated; for software products, ESD and electronic delivery of license keys. In addition, a tight electronic messaging integration with contract manufacturers and logistics partners allows for seamless fulfilment without manual intervention for standard product and solution configurations.	Utilising upstream data and a 3-way matching process between the quote, contract and purchase order to automate the generation of invoices/billing statements; this can be enhanced with a consistency along the transaction continuum allowing the customers/partners to identify and receive the invoices/billing statements in the desired format consistent with the quote and the PO; electronic invoicing is also included in this segment.
Low-touch	Heavy manual intervention is required in cases where the nature of the transaction and the customer's requirements do not allow for automation and are expected to add value to the transactions; usually associated with assembling complex billing statements from multiple systems and sources, break-up of invoices due to the requirement to bill the customer on different accounts and requiring special formats not included in the invoice library.	Standard transactions presenting small deviations require minimal manual involvement fall into this category; such cases are generally due to incomplete information on the received order, conflicting information between orders and quotes. This is typically enabled by streamlining the manual PO review process by standardising rules around allowable changes to preserve integrity between quotes, sales contracts and purchase orders.	Limited manual intervention is required when special planning requirements are included; such cases may include holds due to allocation of products, special government requirements in terms of fulfilment origin and special orders involving non-standard configurations.	Limited manual intervention required to account for special requirements around contingencies, revenue recognition rules and special legal/regional requirements.
High-touch (semi-automated/manual path)	Transactions that require special attention because their value and complexity place them beyond standard pricing rules and/or non-standard sales contract arrangements (including T&Cs) require special care because of the strategic nature of the customer.	Special transactions require manual intervention by the order management specialists to account for variations that add value to the transactions and require human judgment usually representing a small percentage of orders; depending on the nature of products and services offered, such orders may include service renewals, demos, returns, cancellations.	Orders including hardware, software and services may require the company's intervention at multiple phases of the fulfilment cycle; in particular, when customised services and highly customised product offerings require specialised expertise for delivery.	Heavy manual intervention is required in cases where the nature of the transaction and the customer's requirements do not allow for automation and are expected to add value to the transactions; usually associated with assembling complex billing statements from multiple systems and sources, break-up of invoices due to the requirement to bill the customer on different accounts and requiring special formats not included in the invoice library.

Source: PwC

However an organisation applies it, segmenting transaction flow enables the organisation to focus on high value-added activities while automating standard transactions, thus limiting human error and reducing turn-around time. The ability to provide no-touch, low-touch and high-touch transactions is a hallmark of a Q2C process leader.

At the same time, standardising the process improves the organisation's ability to integrate pricing and deal management, and supports its ability to build a leading-class deals desk to maximise the profitability of non-standard deals. In this way, an improved Q2C cycle has a direct impact on both productivity and profitability.

Real world examples of Q2C transformation

PwC has successfully worked with several global technology companies to transform their Q2C operations. Although these initiatives addressed diverse challenges across multiple business models, product types and routes to market, they share common themes. For example:

- A Fortune 500 global OEM was struggling to streamline a Q2C process across eight product families, each with multiple configuration and pricing options. With PwC's help, the company identified strategic priorities and key value drivers to create new operating policies and processes, organisational mechanisms and enabling data. This allowed the company to automate substantial segments of the configure-price-quote process, order management and invoicing. The changes shrank the sales cycle and quote turnaround time by about 25%, enhanced time to market for new product introductions, reduced the incidence of order errors and reduced cost-per-order by 12%. In addition to these operational efficiencies, the improvement also significantly improved customer and channel partner satisfaction with the overall Q2C experience.
- A Fortune 500 Internet and digital media company turned to PwC for help controlling the enormous complexities of its global Q2C operations by redesigning regionally tailored processes, policies and systems. The redesign automated the creation and approval of quotes and orders, reduced hand-offs and process steps by 30%, streamlined the approval and review process and helped prevent duplications and errors in the Q2C process. As a result, the company slashed its quote-to-order cycle time by 70%, increased productivity by 15% and boosted sales to top global customers by offering them differentiated services.
- A leading electronic gaming manufacturer with global operations lost 25% of its market share in 18 months as customers complained about how hard it was to do business with them. With PwC's assistance, the company slashed paperwork for each quote from as much as 100 pages to just 3, reduced its order lead time from 14 weeks to 3 weeks and increased the percentage of orders for standard (rather than custom) products from 13% to 80%.

Conclusion

Because Q2C operations touch almost every aspect of business while having a significant influence on the overall customer experience, transformation in this area is a complex, cross-disciplinary initiative. This type of transformation cannot be approached as a problem to be solved only by applying technology solutions. Instead, organisations must address this as a business-owned exercise with an IT roadmap that aligns with clearly defined goals and continuously updated design imperatives. There should be a constant, consistent focus on defining and driving towards a target state that aligns with strategic business goals.

A holistic approach based on a framework that includes benchmarking and a reference architecture can transform Q2C operations in a way that spans business models and routes to market. By creating an operating model that focuses on a responsive, seamless customer experience, which automates all but the most complex, nonstandard and high-value deals, organisations can reserve their resources for critical transactions. In addition, this approach also gives partners and enterprise customers the smoother, simpler purchasing experience that is closer to their expectations as shaped by their shopping experiences with Apple, Amazon, eBay and others.

PwC can help

If you have any questions about the quote-to-cash transformation process or would like to explore how PwC can help to transform your business, please reach out to us.

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Let's talk

Please reach out to any of our technology leaders to discuss this or other challenges. We're here to help.

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About PwC's Technology Institute

The Technology Institute is PwC's global research network that studies the business of technology and the technology of business with the purpose of creating thought leadership that offers both fact-based analysis and experience-based perspectives. Technology Institute insights and viewpoints originate from active collaboration between our professionals across the globe and their first-hand experiences working in and with the technology industry. For more information please contact Raman Chitkara, Global Technology Industry Leader.

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