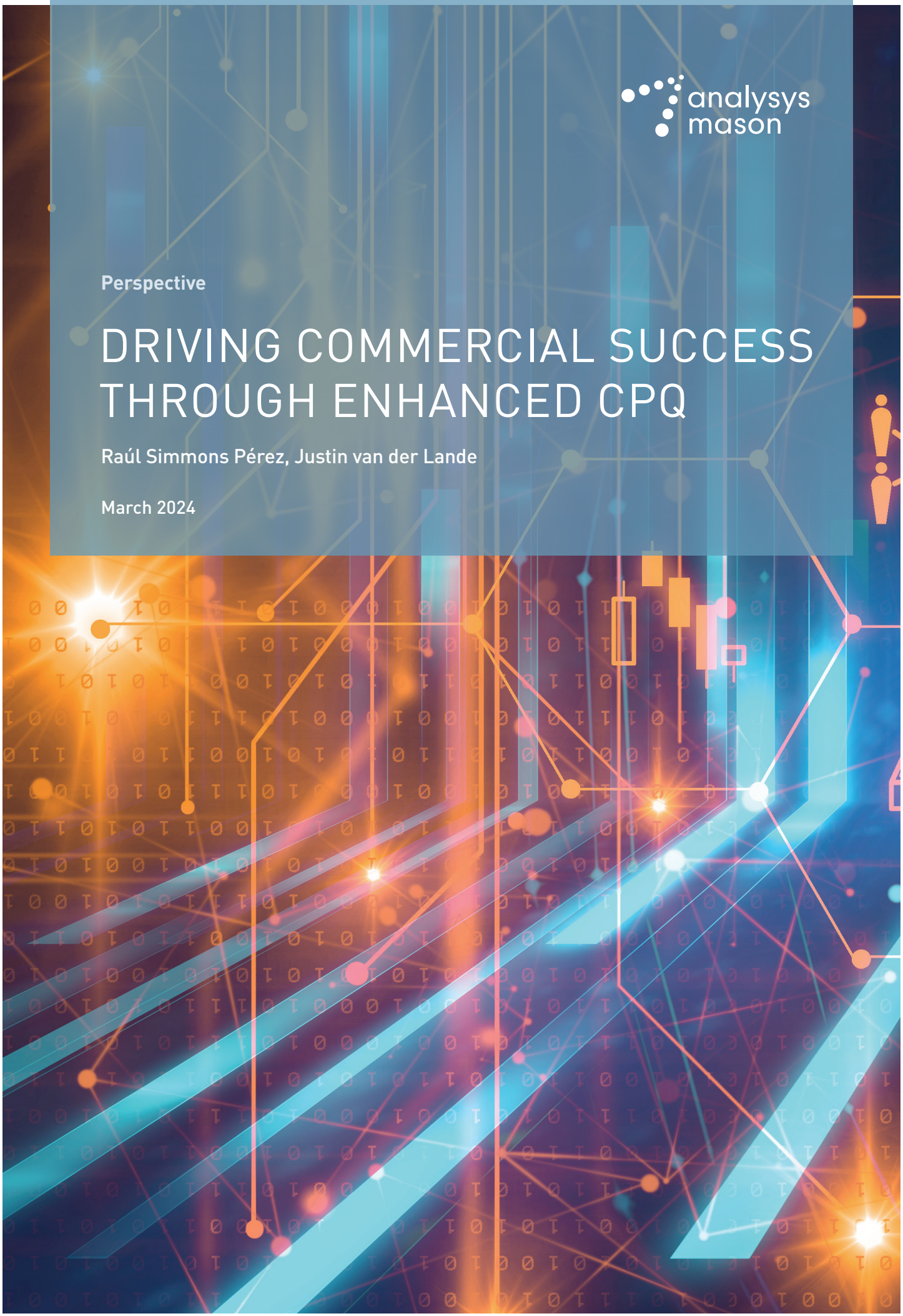

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Perspective

DRIVING COMMERCIAL SUCCESS THROUGH ENHANCED CPQ

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March 2024

Contents

1. Executive summary

Communications service providers (CSPs) are beginning to deploy advanced 5G services following their significant investment in the network. They are starting to see early signs of revenue growth as a result, forecast to expand from USD400 billion in 2023 to USD722 billion by 2027. There is not yet widespread deployment of 5G standalone (SA), but CSPs are beginning to prepare their commercial and operational systems to be able to support the full breadth of 5G SA-based services.

CSPs have increasingly been pushed into non-telecom business-to-business (B2B) services in search of new revenue streams. This has resulted in CSPs facing new competitors, often with historically superior customer experience capabilities using self-service and faster responses for quotes. The new demands of these complex services, which must be provided faster and at a lower cost, requires investment as CSPs' legacy systems with siloed data are not fit for purpose. In addition, CSPs need to update their operational systems to create new service offerings faster, and deploy them quicker, to take advantage of the increased number and scope of customer requirements. CSPs have also begun to create services in collaboration with ecosystem partners, which requires an efficient management and operational system to support them.

The most effective solution to these challenges is the deployment of a single 'configure, price, quote' process (CPQ) that can deal with all the complexities associated with telco B2B and B2B-to-customer/user (B2B2X) value chains, and increasingly important partner ecosystems. This single CPQ approach must cover the most complex scenarios, whilst also supporting the simpler services typically found as standard in many generic customer relationship management (CRM) platforms.

A CPQ system is typically front-end agnostic, meaning that it can connect to best-in-class CRM systems and provides a CSP with an integrated system that delivers quote-to-cash, while supporting functionally rich services within the B2B and B2B2X value chains. In addition, CSPs that have a strong CPQ system are in a better position to monetize their partner ecosystems more effectively.

CSPs should deploy single CPQ systems with tight integrations beyond the traditional CPQ footprint, including all the key elements that support the quote-to-cash process for complex service types, such as B2B and B2B2X, as well as future intent-based 5G-SA services. This tight integration enables hyperautomations to be added to the complete business processes. Integrations to the CRM, inventory management, service orchestration and assurance, service order management and billing ensure that all aspects of the process can be delivered in a highly coordinated manner.

2. Recommendations

By deploying a single CPQ, CSPs can standardize workflows across all services.

- **CSPs should deploy a master catalog as part of their CPQ.** CSPs should center their offers on a single, master catalog, which includes partner-based services and is able to act as a sole point of reference.
- **CSPs should deploy a single CPQ for all service types.** By deploying a single CPQ, CSPs can standardize workflows across all services. It is easier to both maintain and integrate with adjacent systems, specifically front-end CRM systems.
- **CSPs should use a platform to build a rich ecosystem of partners.** CSPs should take advantage of deploying an end-to-end commercial and operational platform to foster a rich ecosystem of solution partners to be able to bolster their own connectivity-based offerings. By deploying on an integrated platform, a CSP can take advantage of full omnichannel deployment (direct, self-service, partner) of a wide range of offerings.

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3. Market dynamics

What is CPQ?

Current CPQ systems cover the configuration, price and quote phases of the sales cycle. Typically, they have been deployed as discrete, standalone systems that need to be integrated into the surrounding business support system (BSS) operational fabric. The CPQ process needs to check and verify that resources are available for each quote to ensure each service request can be delivered and to determine that each service can be delivered as specified against service level agreements (SLAs). This can result in slow response times to provide quotes to customers, potentially resulting in customer dropout, or inaccurate quotes due to the manual processes involved.

The need for a new generation of CPQ solutions has become apparent as current systems fail to support new revenue opportunities that are accompanied by increases in service complexity, operational scale, use of solution partnerships, speed of operations and application costs. CPQ systems have been increasingly tested under changing market conditions. In the meantime, CSPs are becoming more reliant on complex business services for the monetization of their investments in 5G, fiber and software-defined wide area network (SDWAN) solutions. Falling margins, due to increased competitive pressures, means operations need to become much more efficient to continue to deliver services with sustainable margins. As a result, CSPs are increasingly under pressure to ensure their CPQ systems are equipped to support new revenue aspirations.

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The effect of increased competition is that the percentage of quotes resulting in sales will fall for CSPs, furthermore there is a clear correlation between reducing the response time for a quote request and its success.

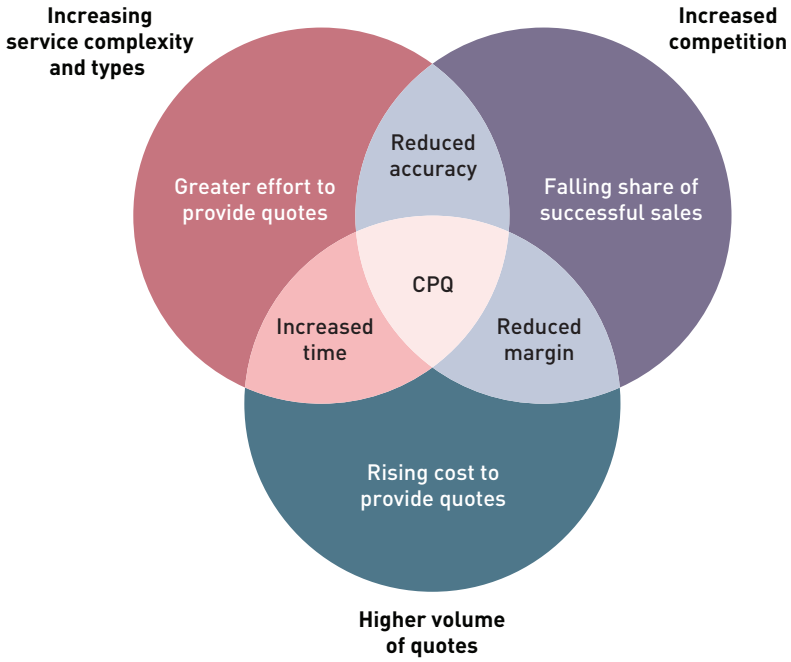

Figure 3.1: CPQ market challenges [Source: Analysys Mason, 2024]

3.1 Increased competition and customer experience

CSPs are operating in a market that is becoming increasingly competitive. As CSPs launch new service propositions beyond their core connectivity services, they are competing with newer and more agile non-telco entrants (such as hyperscalers). These digital service providers deliver competitive offerings based on newer operational software solutions and processes that are highly automated, offering better customer experiences. New service offerings are often not restricted by the footprint of the physical networks over which they are delivered, enabling many more companies to offer services from regions where connectivity services are not already being offered by a CSP. The effect of increased competition is that the percentage of quotes resulting in sales will fall for CSPs. Furthermore, there is a clear correlation between reducing the response time for a quote request and its success. Being able to swiftly respond to a request without incurring a significant increase in cost (reducing margins) has become more significant for CSPs.

3.2 Increased service complexity

The type of services CSPs are offering has expanded beyond connectivity and this drives more demanding requirements when launching new digital services. Services are increasingly tailored to each customer's need for:

- connectivity around their location, using a connectivity partner's network where necessary
- performance of services or SLAs required for a specific use case
- service scope beyond connectivity, requiring the use of complex value chains including the use of CSP solution partners.

Each of these three factors affects the time, resources and accuracy in the delivery and monitoring of each service. Many of these process steps are often manually verified, adding time and introducing risk of error into the processes. Complexity in calculating margins increases when partners are used to supply elements of the service, each sub-component used potentially has different pricing models and settlement arrangements. The increasing number of service elements increases the operational and financial risks that each service represents.

Digital services add operational complexity

Legacy CPQ deployments formed of systems primarily focused on providing connectivity-based solutions are ill-equipped to support the plethora of digital applications and services. Additional functionality is needed to manage digital services which have different configurations and pricing associated with them, potentially through accessing a partner's procurement portal.

Current practices are often expensive to manage and too reliant on manual processes to deploy new services at scale, with some CSPs having different CPQs deployed for different service types. This increases the time to supply customer quotes, reducing a CSP's competitiveness – affecting their revenue. It is critical that this complexity is effectively managed, with simplification and automation as the new imperatives. CSPs that are restricted by legacy operational systems with multiple catalogs for their offerings and systems that are not based on any standardization, not telco-specific or siloed will struggle to take full advantage of 5G SA for their digital value chains. In addition, a front-end agnostic approach using a telco CPQ provides a key opportunity for CSPs to rapidly onboard new solution partners, helping them offer customers more compelling services.

5G SA and slicing

5G SA has opened many new possibilities for CSPs by being an 'application-aware' network but has also increased the risks of deploying new services due to their configurational complexity. All new services have required at least the configuration of current tools or the deployment of new applications. 5G SA requires CSPs to undergo digital transformation projects to prepare new service types in their installed applications. These projects have updated the operational fabric to enable a change from 'best efforts' to specific intent-based services with stricter requirements.

CSPs' operational fabric must be able to support a wide range of digital service and delivery options in supporting solution and reseller partners if they are to remain competitive, both with one another and with non-telco competitors. CSPs may be selling their services against much more agile and automated service providers in new markets.

5G SA requires CSPs to undergo digital transformation projects to prepare new service types in their installed applications.

To deliver growth in profit margins, CSPs must focus not just on offering new services, but deploying them with optimized and cost-efficient underlying commercial and operational platforms.

Wholesale network services and reseller partnerships

To make the most of emerging digital value chains, CSPs need to expose their networks to enable partners to offer additional value-added services. To be able to compete successfully with non-telco competitors, CSPs need to improve their ability to offer partner services on their networks and be able to invite value-added reseller partners to develop within their ecosystem. CSPs that are tied down with legacy infrastructure will typically struggle to handle and onboard resellers quickly, resulting in a slow time-to-market and a reduced quality of experience for partners and their customers, ultimately resulting in a reduced set of reseller offerings.

3.3 Increased service volumes

CSPs are looking to create revenue growth through the selling of new services. The growth in B2B and B2B2X service offerings is at the core of many CSPs' plans to capitalize on the new 5G SA capabilities to target enterprise services. New services, such as internet of things (IoT) or eSIM-based services, alongside 5G SA and enterprise services, will result in a surge in service volumes. In addition, the number of change requests beyond the initial service deployment will also increase. Expectations in aspects of customer services, such as self-service and real-time fulfilment, that have been set by public cloud providers are becoming required for customers' communication needs. This will not only encourage many more changes to live services but force significant change on current processes and systems. Services are likely to become more dynamic as customers become aware of these self-service capabilities, and therefore volumes are again likely to increase. Current levels of automation will leave CSPs at a significant disadvantage compared to more agile, non-telco entrants that will be more comfortable with deploying these services at scale.

Increased cost

There is significant topline growth available because of new connectivity in 5G services, as well as CSPs' expansion of services outside of connectivity. This upside will be affected, however, if CSPs are reliant on manual processes to configure, price, quote and deploy services. CSPs run the risk of facing unmanageable rising operational costs. To deliver growth in profit margins, CSPs must focus not just on offering new services, but deploying them with optimized and cost-efficient underlying commercial and operational platforms.

4. How CPQ solutions must evolve to support new market demands

Current standalone approaches to CPQ applications and how they sit in relation to operational and commercial platforms have reached their limit. An approach that deploys a single CPQ that works in close integration with surrounding systems can enable a full quote-to-cash business process to be implemented. By using a telco-specific, front-end agnostic CPQ that is pre-integrated with service orchestration, CSPs can take advantage of the full breadth of benefits, such as faster time-to-market, deeper integration and higher degrees of automation.

CSPs should aim for complete integration throughout the phases from initial engagement through to configuration, pricing, contract management, pricing negotiation, fulfilment and monitoring. If CSPs adopt open standards or application programming interfaces (APIs) they will be able to implement a platform approach in a modular way, without creating the same level of proprietary integrations which have stifled innovation in the past.

CSPs should aim for complete integration throughout the phases from initial engagement through to configuration, pricing, contract management, pricing negotiation, fulfilment and monitoring.

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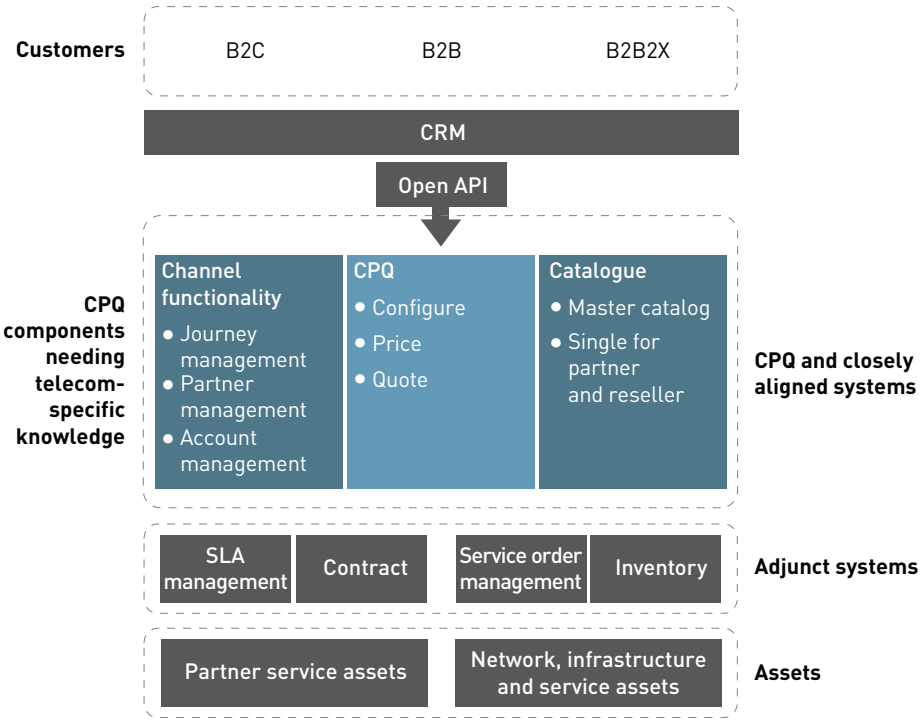

Figure 4.1: CPQ and adjacent systems [Source: Analysys Mason, 2024]

By adopting a more integrated approach, CSPs can reap the benefits of hyperautomation, which will enable them to deliver advanced services at scale.

The above diagram illustrates the full range of applications which a CPQ system needs to work with. By adopting a more integrated approach, CSPs can reap the benefits of hyperautomation, which will enable them to deliver advanced services at scale. CSPs will strongly benefit from topline growth because of the wide range of new services they can offer – which they are able to offer at scale and with a reduced time-to-market, both of which are not possible with many legacy approaches to CPQ.

4.1 Competitive offerings

CSPs with an operational fabric that supports high levels of automation throughout can foster more innovation through being able to trial new services quickly, easily update existing services and support a wider range of offerings. In addition, CSPs' services will be more reliable and delivered faster, also improving the customer experience. CSPs should focus on integrating their BSS stacks as much as possible. Integration based on TM Forum specifications between applications improves levels of automation and makes it far easier to roll out new features and services. Dynamic orchestration of orders enables the CPQ to facilitate a seamless transition from quote-to-order processing whilst having the capacity for in-order price modification, which is vital for CSPs to rapidly respond to market changes.

Integration to provide a better customer experience

Increasing levels of integration between systems in the quote-to-order processes will improve a CSP's omnichannel offering. CSPs must also provide a consistent and personalized experience to the customer. Non-telco competitors are often perceived to be ahead in this regard and offering a better experience to their customers. For this reason, CSPs can only provide the equivalent level of customer experience by having non-telco-specific CRMs and front-end systems that are seamlessly integrated with a telco-specific CPQ.

CSPs that are held back by legacy customer engagement systems are unable to offer a coherent customer journey when moving between channels. Most CSPs have multiple front ends, which are provided by different vendors. This makes it difficult to introduce any changes to the user interface, to share data across channels to provide a consistent and contextual interaction and to properly deploy journey orchestration across its channels. By moving to one integrated CPQ solution, CSPs can drastically change the interaction experience for a customer and address one of the key historical weaknesses of CSPs compared to non-telco competitors.

CSPs that are held back by legacy customer engagement systems are unable to offer a coherent customer journey when moving between channels.

Integration of CPQ, omnichannel management, customer journey orchestration, product catalog and product design – as well as the ability to absorb relevant network, partner and billing data – will have widespread benefits for CSPs' commercial and operational platforms, such as providing predictive analytics. This can be achieved through the deployment of an end-to-end BSS stack or through a modular solution that is pre-integrated with popular solutions, as well as through close adherence to industry standards. Proprietary systems and extensions to open standards will create difficulties for CSPs in terms of achieving and maintaining a high level of integration and automation.

4.2 Efficient delivery of complex services

To combat the complexity of new services, CSPs must simplify core commerce systems before deploying new services. CPQ can address this through a standardization of systems. A consolidation of legacy systems onto one commercial and operational platform, supported by catalog-driven approaches, will enable CSPs to address a large part of the complexity introduced by new service types, whilst increased integration will result in reduced cost through operational efficiencies and likely a higher degree of automation. Open ecosystems for platforms, systems and technologies is key to delivering the level of automation required to offer these services at scale.

CSPs with BSS stacks that include siloed data sources with many proprietary systems or interfaces will struggle to automate, which will result in slower time-to-market from the many manual processes involved in deploying

A single catalog must be placed at the heart of the commercial platform and be able to dynamically ingest changes to components from both partners and CSPs.

complex services. By rationalizing and consolidating these systems and data siloes into one catalog-driven platform, CSPs can address a large part of the complexity of their evolving digital value chains.

Single comprehensive catalog

A single catalog must be placed at the heart of the commercial platform and be able to dynamically ingest changes to components from both partners and CSPs. By having all services and elements modeled in a single catalog, CSPs can benefit from simpler integration, can apply automations and enable consistent editing for all service types.

A single catalog enables the standardization of operational workflows and business rules, as well as providing a single view of all service components. Furthermore, using the catalog as a centralized reference source throughout the quote-to-cash cycle enables CSPs to realize huge improvements in their internal processes, as well as achieving the degree of automation required to support high volume wholesale offerings.

Catalogs provide reusability of components to enable faster time-to-market for new service offerings, whilst providing consistency across the service portfolio. Catalogs that use low-/no-code development tools enable non-technical staff to create new services quickly and efficiently, resulting in potential increases in revenue.

Integrated partner management functionality

Strong partnership ecosystems can be created by a platform that is used by vendors, CSPs and partners together for development and delivery. This enables CSPs to be in a strong position to foster a rich ecosystem of partner services to supplement their connectivity offerings. Platforms that enable easier support for partner services can attract and retain bigger ecosystems, mutually supporting customers, partners and CSPs in the process. Without a coherent platform for development and delivery of services, CSPs will find it hard to collaborate with partners to create innovative new services that are appealing to consumer and enterprise markets.

4.3 Scaling of services delivered through a high degree of automation

The CPQ platform must support highly automated self-service channels for its business customers and reseller partners.

High degrees of automation are vital as CSPs have increasingly high-volume and low-margin offerings, such as IoT or other enterprise services. CSPs addressing high-volume, low-margin services have typically installed a single CPQ to retain their current levels of profit margin – both offering self-service capabilities and reducing the number of manual steps to offer these at the volumes required.

CPQ must be integrated with omnichannel systems

To achieve true omnichannel enterprise engagement, BSS will require integration between all parts of the quote-to-cash cycle on their commercial platform. Broken down quotes will need to be exposed to all channels, including partner channels, to enable dynamic and accurate pricing. Some services within the catalog can be pre-configured and offered as a move towards zero-touch sales in self-service channels. More complex bundles can be partially automated via pricing rules, which will then only require sign-off from a sales agent at the end of the process.

Omnichannel commerce platforms will require integration between the CPQ and the CRM for quote-to-activation automation. This has the added benefit of enabling the deployment of generative AI (GenAI) tools to suggest alternative actions during the sales process, or for the configuration of custom bundles tailored to the individual customer, based on the pricing and catalog rules of the CPQ. To achieve this, the platform will require integration with a customer data platform (CDP) to provide a complete view of the customer and their purchasing history. Integration between the CDP, CRM and CPQ will also provide context for consistent interactions as a customer moves between sales channels.

Broken down quotes will need to be exposed to all channels, including partner channels, to enable dynamic and accurate pricing.

5. Summary

As outlined in the sections above, there are many advantages for CSPs adopting a single CPQ approach from quote-to-cash.

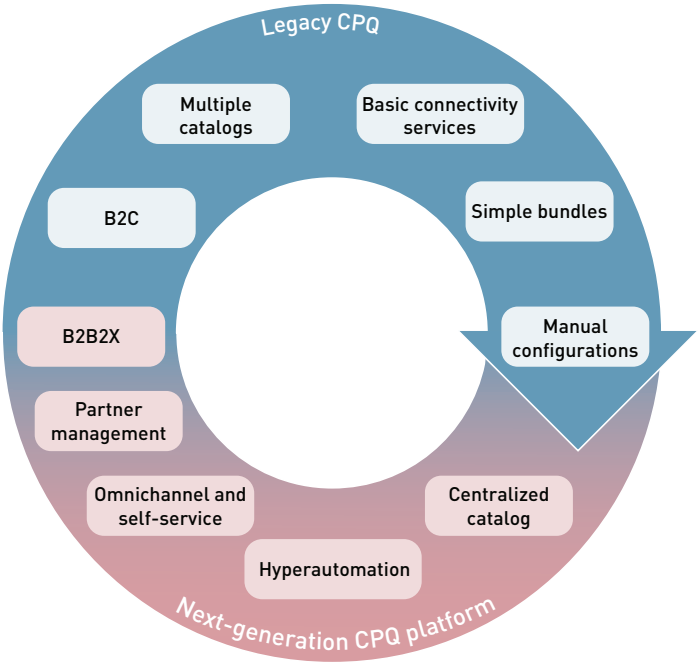

Figure 5.1: CPQ and adjacent systems [Source: Analysys Mason, 2024]

As outlined in the sections above, there are many advantages for CSPs adopting a single CPQ approach from quote-to-cash. A rationalization of legacy systems onto an end-to-end integrated platform, alongside a consolidation of siloed data sources into one centralized catalog, can enable CSPs to prepare their operational fabric to support new service types, support higher volumes and strengthen their offerings to compete with non-telco competitors as they move outside of their legacy connectivity offerings.

If CSPs are successful in deploying a single CPQ at the center of their commercial and operational platform, they will be empowered to build a rich ecosystem of solution partners to bolster their own connectivity offerings as well as expand into B2B2X and wholesale. They will be able to support new and highly complex 5G value chains. They will also be far better equipped to compete in an increasingly competitive market with flatlining revenues in recent years, where platforms that are able to foster and encourage innovation are key.

6. Appendix
(Ericsson Core Commerce portfolio)

Ericsson's core commerce offering is a microservices-based and cloud-native suite that is comprised of the Catalog Manager, Order Care and Digital Experience Platform. These components cover the entire order-to-cash cycle and are designed to improve time to revenue, support an omnichannel user experience and manage user journeys across all channels, whilst ensuring that all touchpoints provide consistent, personalized and contextual interactions. Designed as a cloud-native solution, this portfolio supports both B2B and business to consumer (B2C), employing TM Forum Open APIs for ease of integration.

The Ericsson Catalog Manager is a product that works as a centralized catalog for all the elements available, from both the CSP and its partners, to simplify product management, fulfilment, charging and assurance. The centralized catalog enables reusability of components for different orders, reducing the number of manual steps required and reducing the time-to-market for new services or bundles. This enables service creation teams to focus on business tasks rather than the manual configuration of new offers.

Ericsson Order Care is a CPQ and order fulfilment product that adopts a catalog-driven approach. All pricing and rules are centrally modeled in the Ericsson Catalog Manager, and dynamically enforced with CPQ. This enables full order lifecycle management automation using pre-defined process components. Ericsson Order Care is complemented by a versatile workflow engine, ensuring real-time quote generation and flexible sales experiences. Order Care uses rules configured in the central catalog to dynamically validate and price candidate products added to a quote. Automated quote and order capture processing is enabled across all channels by the Journey Experience Controller, which is a configurable journey management tool.

The Ericsson Catalog Manager is a product that works as a centralized catalog for all the elements available, from both the CSP and its partners, to simplify product management, fulfilment, charging and assurance.

The Core Commerce portfolio has achieved a golden standard status in TM Forum Open APIs and has also achieved a 'Ready for Open Digital Architecture (ODA)' status.

The Ericsson Digital Experience product contains out-of-the-box, full-digital, context-aware customer journeys. The Digital Experience Platform ingests data from relevant sources to form a complete view of the customer to provide a consistent and contextual experience.

The Core Commerce portfolio has achieved a golden standard status in TM Forum Open APIs and has also achieved a 'Ready for Open Digital Architecture (ODA)' status. Where possible, Ericsson's products use open APIs to connect to non-Ericsson solutions. Where there are proprietary solutions or interfaces, or extensions to open APIs, Ericsson provides a set of microservices known as 'connectors'. These are built by Ericsson upon deployment and translate the proprietary interface into a TM Forum compliant interface. This means the deployment is simpler to maintain and to provide regular updates on, without the need for releases to be adjusted for each deployment.

By consolidating all parts of order-to-cash onto one integrated end-to-end platform, Ericsson provides high levels of automation which will be key for CSPs to make the most of the 5G opportunity to create a dynamic digital value chain with a rich ecosystem of partner offerings. In addition, Ericsson's products enable easy onboarding of new partners, which will enable CSPs to differentiate their offerings at scale and launch new services with a fast time-to-market, with an attractive proposition for partners to develop their innovative services quickly and easily on their platforms.

7. About the authors

Raúl Simmons Pérez (Research Analyst)

Raúl is a member of the Applications research team in London. He leads the Customer Engagement programme as well as SaaS-research across OSS and BSS. Raúl's research focuses on the impact of emerging technologies and strategies such as GenAI and platform-based approaches on the Customer Engagement segment. The Customer Engagement programme helps communications service providers (CSPs) understand developments in the software market that assists them in delivering consistent, contextual and personalised engagements across marketing, sales and customer service use cases as well as maximising customer lifetime value. Raúl's areas of expertise include SaaS and configure price and quote (CPQ). Raúl holds a degree in Economics and Modern Languages from the University of Warwick.

Justin van der Lande (Research Director)

Justin leads the Applications practice. He specialises in business intelligence and analytics tools, which are used in all telecoms business processes and systems. In addition, Justin provides technical expertise for Analysys Mason in consultancy and bespoke large-scale custom research projects. He has more than 20 years' experience in the communications industry in software development, marketing and research. He has held senior positions at NCR/AT&T, Micromuse (IBM), Granite Systems (Telcordia) and at the TM Forum. Justin holds a BSc in Management Science and Computer Studies from the University of Wales.

8. About Analysys Mason

Analysys Mason is the world's leading management consultancy focused on telecoms, media and technology (TMT). We give clarity and confidence in answering our clients' biggest commercial questions: What strategy will best enhance value? What implementation plan will be most successful? What is the optimal positioning for five years' time?

We bring together commercial and technical expertise across four interconnected consultancy practices strengthened by globally respected research.

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Our advice is rooted in deep domain knowledge that combines global reach and local insight into markets to help our clients achieve their goals. Our service offerings are fully integrated across all five key strengths. This allows us to make sense of a complex TMT landscape and create valuable insights in ways that cannot be matched by narrower domain specialists or generalist consultants that lack our depth of experience.

Working with private- and public-sector clients in 140+ countries, we are committed to advancing TMT's role as a critical enabler of global economic, environmental and social transformation – and to contributing to a world where technology delivers for all.


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