

# Leveraging SAP in a Salesforce Environment with CPQ



## The Key Takeaways

- Companies using SAP ERP are adopting Salesforce as a platform for digital transformation and customer engagement
- In these companies, SAP ERP is the system of record for the critical data and the operational infrastructure necessary to enable digital transformation initiatives
- There are two approaches for SAP ERP customers with Salesforce: move the data and processes out of SAP, or build upon SAP as a foundation
- CPQ is emerging as a catalyst for the leverage of SAP in Salesforce. The challenge for most Salesforce CPQ solutions is that they were not designed for this purpose
- Directly leveraging SAP natively in Salesforce is possible with Revvu CPQ for SAP which was designed from the ground up to interoperate with SAP pricing procedures, SAP Variant Configurator and SAP Order Management out of the box
- There are over 100 companies using the patented technology that enables the seamless interoperability between Revvu CPQ and SAP ERP

## A New Focus on Growth

Over the last several decades, enterprises have leveraged information technology and business process re-engineering to become lean and cut costs. These companies have spent millions of dollars to improve efficiency and drive savings to the bottom line. This trend in corporate investment fostered the growth of the major packaged application platforms, and in particular SAP which has become the core operational backbone of many of the world's leading companies.

However, CEOs today have shifted their focus from cost savings through automation toward driving growth through transforming their company's engagement with the customer using digital technologies. A recent McKinsey study cites that over three quarters of the executives they surveyed said that the primary strategic intent behind their digital initiatives is to drive growth either in building existing businesses or opening new business opportunities.

**“CEOs have shifted focus from cutting cost to driving growth.”**

Digital transformation initiatives have the highest levels of visibility at many companies, with over 40% of McKinsey's respondents indicating that their CEO's had responsibility for their digital transformations. In addition, customer engagement is confirmed as the leading area of focus for corporate digital transformation. Over 50% of executives in the McKinsey study ranked customer engagement in the top two for both strategy and spending for digital transformation.

## Salesforce as the Customer Success Platform

Digital transformation is ushering in a new world of technology to the corporate IT landscape. Cloud computing, mobile, social, and big data are emerging technologies that are shaping and enabling transformation efforts. The providers of emerging technologies are also establishing new corporate technology platforms.

Salesforce has become a leading platform for digital transformation. The company has positioned itself as the customer success platform fueled by rapid growth in front-office applications, particularly Customer Relationship Management (CRM). According to industry analyst Gartner Group, almost 50% of all CRM applications sales in 2014 were cloud-based and Salesforce leads the market with almost 20% of worldwide market-share. Salesforce revenues are growing at almost four times faster than the next nearest competitor.

As a result many companies, that have made major investments in SAP are also bringing the Salesforce platform into their organizations to transform engagement with customers at every point in the customer life cycle. But this is posing some challenges for their corporate IT organizations. For many enterprises, SAP ERP has been the system of record for core financial and manufacturing processes, and the backbone for efficient operations of the company.

Initial projects in digital transformation have often been limited to front office processes that are independent of core ERP systems. However, as companies expand their efforts to drive growth they often find that the critical data required to achieve their objectives is in the corporate ERP.

## A Bridge Between SAP and Salesforce

SAP and Salesforce are two systems representing two worlds. One very structured, bullet-proofed and the transaction system of record. The other flexible, customer facing and the relationship system of record. At Model N, we see a growing requirement to bridge the worlds of Salesforce with SAP in a way that leverages SAP strengths as the core systems of record for the enterprise.

This is different from the cloud-for-everything approach that encourages transfer of data out of the ERP, or actual replacement of ERP functionality. The technology suppliers in this camp advocate moving from on premise to the cloud for all the end-to-end processes involved in digital transformation. For example, quote-to-cash applications propose to move core processes such as order management outside of the ERP. Most Model N customers have invested significantly in their SAP systems and do not find this approach attractive for a host of reasons, including the possibility of errors in duplicate data and the additional costs of implementing and managing redundant systems.

**“Over 100 companies managing \$200+ billion annually on Model N.”**

Model N’s heritage has been to augment the ERP with mission critical management of the end-to-end revenue lifecycle. For over 16 years, Model N has been successfully delivering enterprise grade Revenue Management applications including pricing, quoting, contract life cycle management, rebates and channel management on a global scale. These applications manage over \$200 billion in annual revenues in over 100 countries and are designed to be interoperable with our customer’s ERP systems, in particular SAP.

**“Over 50% of executives rank customer engagement a top priority.”**



Model N is bringing that proven expertise to the Salesforce platform in a suite of applications called Revvy Revenue Management. These applications are built natively on the Salesforce platform and are designed specifically to leverage the data and operational applications within SAP ERP.

## CPQ – A Lynch Pin Unifying the Two Worlds

A lynch pin in the unification of Salesforce and SAP is the Configure Price Quote (CPQ) application. CPQ is a powerful driver for growth in organizations doing digital transformation. A study by AMR Research showed an over 55% increase in cross-sell and up-sell rates by companies employing CPQ solutions. CPQ is also an effective driver for transformation of sales. An Aberdeen study found that organizations using CPQ saw an increase of 45% in responsiveness to customer inquiries and a 28% reduction in sales cycles.

While first generation Salesforce native CPQ solutions primarily focused on automating the quoting process, Model N saw CPQ as a critical point of convergence of data, process and organizations in digital transformation. Our enterprise customers wanted to build from the foundation of pricing and product information in SAP and utilize existing SAP operational infrastructure such as financials, manufacturing and order management. In this approach, CPQ becomes the conduit for interoperability between SAP and the Salesforce platform, aligning data and organizations and leveraging core back-office systems into a unified solution.

**“Using CPQ drove a 55% increase in cross-sell and up-sell.”**

When addressing these enterprise level requirements, other CPQ solutions rely on custom integrations to SAP as a part of their implementation projects. Integrations to SAP are not new to corporate IT organizations, but experience has shown that they are complicated and expensive to maintain and enhance as business changes.

In particular, integrations with CPQ pose additional challenges. For example, SAP is typically the system of record for pricing. Any pricing of products or services exposed in the digital transformation project should be exactly as if priced in the SAP system.

To achieve this, a typical Salesforce native CPQ application will attempt SAP pricing integration through real-time BAPI calls. However, that method has significant drawbacks including performance, error handling, monitoring and ongoing supportability. These CPQ solutions use a ‘chatty’

integration, making frequent and expensive calls between Salesforce and SAP. Some solutions may try to get around this by implementing a “calculate price” or “re-price” button in the UI, which results in a less than optimum end user experience. In addition, this integration performs the ‘Create Order’ BAPI call that simulates placing a sales order to return customer specific prices. Dependent on the number of order lines and complexity of pricing procedures this is one of the most computing intensive transactions in the SAP system.

Considering that these integrations are custom projects, the cost to operate and maintain integrations is quite heavy. There are significant data transformation and mapping requirements to make the data consumable by the CPQ tool. Typically, direct integrations are limited to less complex data operations. In addition, using web services and direct

BAPI calls, though technically feasible, requires an extra layer of services to monitor, log, trace, and recover when necessary. Direct API-like calls can be fragile and changes on either side of the process can have an impact. This adds an extra layer of planning, effort and cost to any modifications the business needs to make as it reacts to changing business requirements.

Integrations with product data are equally, if not more complex. In general, typical Salesforce CPQ solutions try to export the data from SAP and duplicate the data in their systems through some type of conversion. However, if the translations can be made to work, it will invariably deliver poor performance. Alternatively, the data and rules can be recreated within the modeling environment of the CPQ application to gain better performance. Both approaches increase the possibility of errors and create a maintenance nightmare of testing, optimizations and retesting to get it to work exactly as in the SAP system. What’s even worse is that the implementation process is repeated with every change.

**“Typical integrations are ‘chatty’ making frequent calls.”**

## Building SAP into a Salesforce Native CPQ

Model N started with the principle that interoperability with SAP would be the basic use case for Revvy CPQ. Rather than rely on a bolt-on approach using integrations, Revvy CPQ for SAP was built with patented technology that leverages the pricing and product configuration data directly in SAP without the chatty interface, maintenance and cost issues associated with integrations. With Revvy CPQ for SAP products are priced and configured exactly as they would be in the SAP system, but all business logic is run natively in Salesforce. And conversions of quotes to orders result in full functioning orders in SAP order management systems. This approach enables a native Salesforce quote to cash process that seamlessly incorporates existing SAP data and systems as a fundamental component of the architecture.

The breakthrough to seamless interoperability is a patented technology that synchronizes Revvy CPQ with SAP pricing and SAP VC, keeping SAP the system of record. Revvy CPQ’s SAP engine has three services that enable Revvy to price and configure products natively in Salesforce exactly as if they were being priced and configured in SAP. The first is a service that extracts SAP prices, including standard or custom price conditions, price access sequence, price procedures, and the entire KMAT knowledgebase of the SAP Variant Configuration. The second is a service that compiles the extracted data into an in-memory runtime component of the Revvy SAP engine. The third is the service that executes the pricing and configuration based on the compiled versions of the data from SAP.

**“Patented technology enables SAP pricing and configuration in Salesforce.”**

The materials master is also extracted from SAP using Revvy’s built-in Enterprise Application Integration technology (EAI) combined with Salesforce native web services. The SAP data is loaded into the Revvy CPQ catalog. This data can then be augmented by catalog administrators with additional product attributes, images, rich text, marketing materials, product specific terms and conditions, as well as assigned to a category in a sales catalog.

## Synchronizing SAP with Salesforce Native Revvy CPQ



Product configuration and pricing during quoting occurs natively in Salesforce by utilizing the Revvy SAP engine which includes the compiled price and configuration data from SAP as an in-memory service. This unique architecture avoids round trip calls to SAP for each product configuration or price change during quoting, and delivers a solution that is highly optimized for fastest performance and is scalable to thousands of concurrent users.

Placing an order from a quote will send orders to SAP also using Salesforce Web Services and Revvy EAI in real-time. After order placement in SAP, the Quotes in Revvy CPQ will have the SAP order number so sales can follow-up on the order. The order placed in SAP by Revvy CPQ is identical to the quote and is functionally complete so that it may be reconfigured or re-priced in SAP without issue if order changes need to be performed by sales operations.

The technology that drives the Revvy SAP engine has been proven over 10 years in hundreds of companies using SAP for complex configured products and services in industries including automotive, industrial manufacturing, high tech, HVAC and life science.



## Price and Configure Exactly Like SAP ERP

The most common use case for Revvu CPQ for SAP, and one that delivers significant value, is to leverage SAP pricing and VC natively in a Salesforce environment. Companies can transform customer engagement and provide direct sales reps and channels sales reps an easier more flexible user experience without the additional burden and costs of integration. With Revvu CPQ for SAP, companies keep SAP ERP as the system of record, while knowing that quotes and orders created in Salesforce will be configured and priced exactly as if they were executed directly in SAP.

## Flexibility to Mix SAP and Non-SAP Products

Many companies take advantage of digital transformation to drive growth through the expansion of their product and services offerings. Often quotes can include combinations of products from SAP and other systems, or even write-in products or materials that are unique to the specific quote. Revvu CPQ for SAP enables companies to combine configurable products that are modeled and priced in SAP with products that are authored in other systems. Also, Revvu CPQ for SAP offers powerful capabilities to create models and pricing that can be combined with the master data from SAP.

## Maximize Revenue and Competitiveness with Solutions

The digitally empowered customer expects a solution tailored to their business needs, which drives a greater level of personalization or customization on the part of their business partners. A key to improved competitiveness and growth is the ability to understand and meet customer needs better with the products and services that the company can deliver now.

Many Model N customers build upon Revvu CPQ guided selling and capability for creating solutions to better meet customer needs, gain competitive advantage and maximize revenues through cross-sell and up-sell.

Guided selling institutionalizes knowledge and the observed buying patterns of customer segments to ensure that engagement with customers is consistent and effective. And guided selling also enables a more effective sales process, centered around matching customer needs to combinations of products and services that win more business.

Leveraging Revvu CPQ for SAP's comprehensive modeling and rules features, companies can assemble optimized combinations of products, services and pricing models that can be embedded directly into the quoting process. Changes can be quickly incorporated to include new or modified products and services to respond to market feedback and competitor actions. In addition, solutions and pricing can be targeted to geographies or specific customer segments based on rules created in Revvu CPQ that leverage data derived directly from SAP.

**“Changes and product additions are quickly injected into the sales process.”**

## Management of Service Contracts and Installed Base

Revyv CPQ supports the tracking of services in service contracts. Configurable hardware products already managed in SAP can be combined with services with Revvy CPQ. This allows sales reps to build a single quote that has a mix of products and services.

Revyv CPQ can track services that are sold on a quote and support the entire renewal process including pro-rating to account for early renewal. During the service renewal, the configuration of the hardware might play an important role as certain types of services might be incompatible with some product options. Revvy CPQ tracks configured hardware in the installed base records to control what type of service, service price, and service options are available during the renewal. The entire service renewal process can be enabled without even touching the SAP set-up.

## Add on Modeling to the SAP Knowledgebase

Revyv CPQ provides the ability for administrators to enhance many aspects of the extracted SAP data. For example, administrators can decide that certain products cannot be sold in certain markets. Usually such decisions are done locally by regional marketing. SAP, although a very strong solution, does not provide an easy to use administration UI to allow occasional administrators to quickly make changes in the rule set of a configurable product. Revvy CPQ has easy to use administrative applications to specifically address enhancement of the extracted SAP knowledgebase.

## Living Up To Enterprise IT Expectations

Enterprise IT organizations have high expectations of their technology infrastructure, in part due to the capabilities that they have driven into the SAP products over decades. The Salesforce platform has often been viewed as less “enterprise ready” than SAP in that regard, and used for less transaction intensive, mission critical operations. While Salesforce has made significant progress to address enterprise IT requirements, this is not always the case for typical Salesforce native CPQ.

Model N has been deploying high volume transaction processing systems in mission critical revenue management applications for over 16 years. Our systems are designed for interoperability with SAP and proven on a global level to deliver the enterprise grade capabilities that are required to support mission critical applications.

Model N brought this proven experience to the architecture for Revvy CPQ for SAP and to the entire Revvy Revenue Management Suite on Salesforce 1. When designing Revvy CPQ, Model N focused on three areas that our customer’s highlighted as requirements for an enterprise grade solution.

**End-to-end.** Streamlining selling processes and enabling sales to increase revenues is dependent on an end-to-end solution incorporating pricing, configuration, quoting, contract life cycle management, rebates and analytics working together seamlessly for direct and indirect channels. Revvy CPQ is complemented by Revvy Pricing, Revvy Contract Management, Revvy Rebates and Revvy Intelligence applications. Revvy CPQ automatically recognizes rebates and special pricing programs, easily converts quotes to contracts with contract redlining and negotiation, and digital signature of contracts built in and places full function orders into SAP.



**Robust and interoperable.** Optimized for complex configured products and services, Revvu CPQ introduces innovation in rules, catalog and modeling to simplify complexity while fitting into an enterprise IT landscape. Revvu CPQ utilizes an attribute driven catalog and rules engine that not only enables easier additions and changes to the catalog without impacting rules or the models, but also reduces the rules needed to manage complex configurations. Unlike tools that use standard Salesforce administration pages, Revvu used Salesforce native technology to develop more powerful administration and authoring interfaces including WYSIWYG model creation and navigation, a tabular editing mechanism for rule writing and an easy formula builder.

Native on Salesforce 1, Revvu CPQ is interoperable out of the box, including native synchronization to SAP pricing procedures, Variant Configuration and order systems. And Revvu also embeds enterprise grade ETL and data management for interoperability with other enterprise applications.

**Performance and Scalability.** When configurations and solutions get complex, first generation CPQ on Salesforce is notorious for being slow and hard to scale. The ability to implement CPQ on a corporate-wide basis is key to achieving the levels of improvements cited in many studies. Model N has introduced an advanced performance architecture utilizing the latest capabilities in Salesforce App Cloud coupled with patented Virtual Tabulation technology that delivers an order of magnitude faster response for complex configuration challenges. More information on performance and scalability can be found in our technical brief - "Performance Architecture for Salesforce Native Applications."

#### **Sources**

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