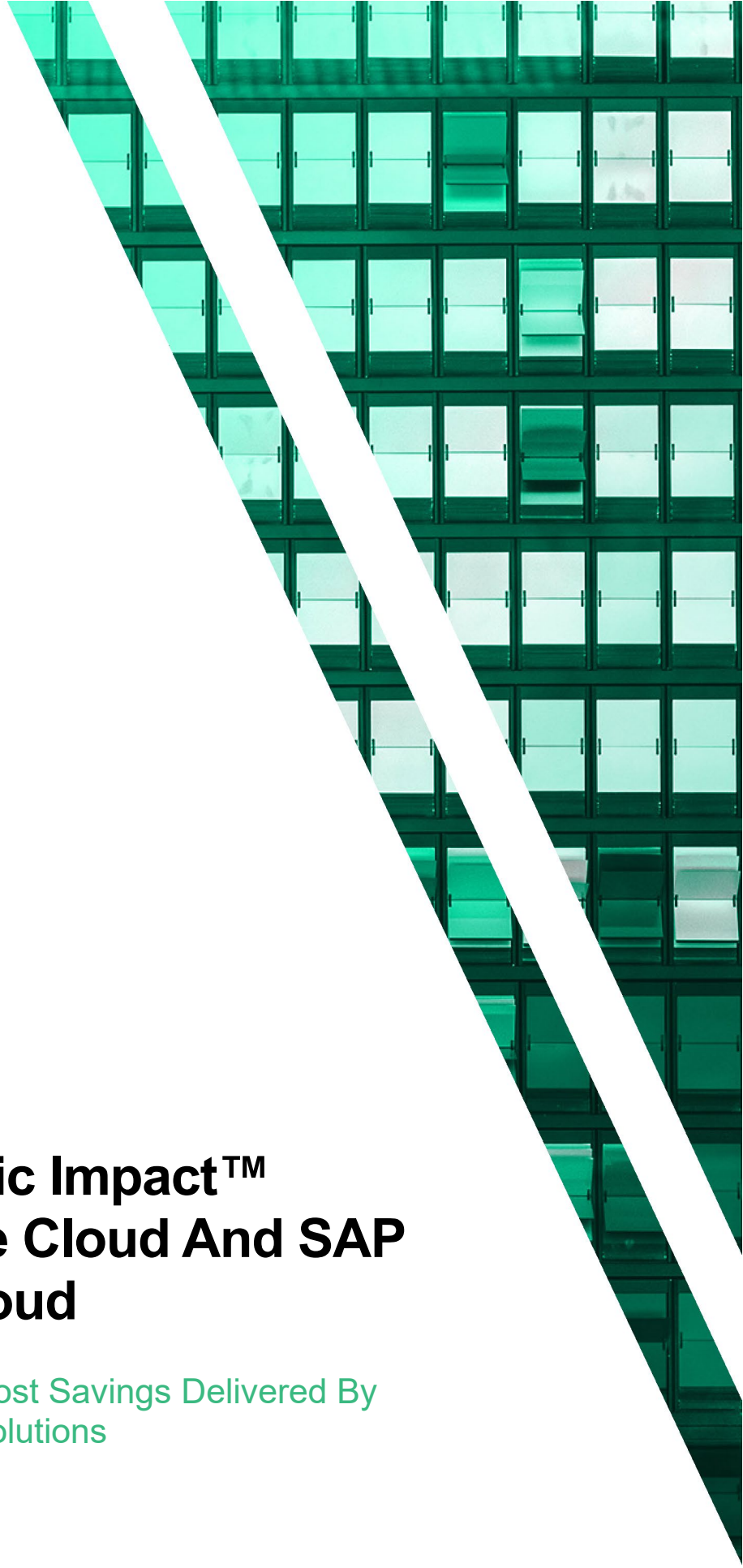
FORRESTER®



The Total Economic Impact™ Of SAP Commerce Cloud And SAP Customer Data Cloud

Key Business Benefits And Cost Savings Delivered By SAP Customer Experience Solutions

NOVEMBER 2020

A FORRESTER TOTAL ECONOMIC IMPACT™ STUDY COMMISSIONED BY SAP

Table Of Contents

Executive Summary 1

The SAP Commerce Cloud And Customer Data Customer Journey 7

Key Challenges 7

Solution Requirements/Investment Objectives 8

Composite Organization 10

Analysis Of Benefits 11

Revenue Uplift 11

Time-To-Market Gains 13

Ongoing IT Operation Savings 15

IT Cost Savings On Scaling 17

Unquantified Benefits 19

Flexibility 20

Analysis Of Costs 21

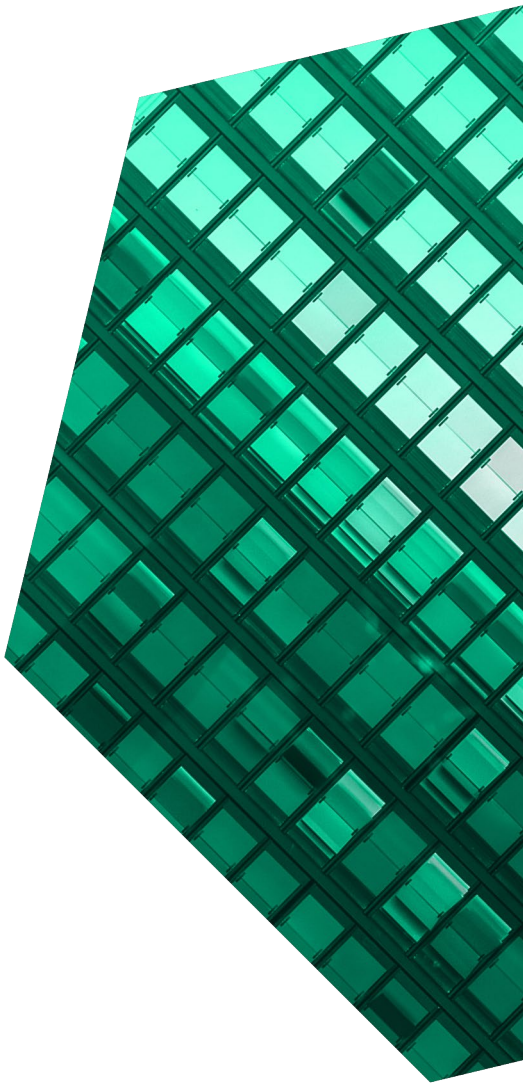
Licensing Fees 21

Implementation And Professional Services 22

Financial Summary 24

Appendix A: Total Economic Impact 25

Consulting Team: Henry Huang
Luca Son



ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. For more information, visit forrester.com/consulting.

© 2020, Forrester Research, Inc. All rights reserved. Unauthorized reproduction is strictly prohibited. Information is based on the best available resources. Opinions reflect judgment at the time and are subject to change. Forrester®, Technographics®, Forrester Wave, RoleView, TechRadar, and Total Economic Impact are trademarks of Forrester Research, Inc. All other trademarks are the property of their respective companies.

Executive Summary

SAP Commerce Cloud and SAP Customer Data Cloud enable agile, data-driven digital commerce. SAP Commerce Cloud is a headless, cloud platform designed to help businesses innovate quickly. SAP Customer Data Cloud helps brands deliver hyper-personalized experiences that build trust with customers by honoring their rights as data subjects. The SAP public cloud approach decreases operational costs while increasing scalability, flexibility, and data protection and privacy compliance readiness.

SAP commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying SAP Commerce Cloud and SAP Customer Data Cloud. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the two solution sets on organizations, when used as the core technologies deployed to enable consumers to shop on the channels they prefer.

As consumers' adoption of online shopping accelerates in this pandemic-induced new normal, organizations too must accelerate their focus on digital transformation to deliver the experience needed to win the wallets of consumers. Organizations need more powerful and scalable digital commerce solution sets that integrate real-time, consent-driven customer data with advanced personalization capabilities to meet the changing market dynamics. Speed-to-market and the agility to quickly adjust are now essential elements that organizations must achieve to be successful. Architectures like the cloud and headless commerce are no longer just nice to have, they've become necessary to be competitive.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed five customers with experience using SAP Commerce Cloud and SAP Customer Data Cloud solution sets. Specifically, these customers used the SAP Commerce Cloud platform combined with two solutions from SAP Customer Data Cloud: SAP Customer Identity and Access Management (CIAM) for B2C and Enterprise Consent and Preference Management.[1] For the purposes of this study, Forrester aggregated the experiences of the interviewed customers and combined the results into a single composite organization that is an aggregation of the interviewed customers' results.

Prior to using these two solution sets, the customers had varying on-premises solutions — many of which

KEY STATISTICS



Return on investment (ROI)
269%

Net present value (NPV)
€39.88M



SAP Commerce Cloud and SAP Customer Data effect on revenues:

+14%

> **SAP has set a foundation for extreme scalability as our digital business grows. It has allowed us to achieve almost 80% growth in revenue and gives us options for extensibility into new ventures of the business like DoorDash and other integrations. Finally, it is a true omnichannel platform.**
>
> – Senior manager, convenience chain

lacked the ability to scale easily with their growth. Geographical growth, especially across country boundaries, was difficult as consumers became more global. Consistency in the delivery of content based on customers' previous behaviors also became more important for driving higher sales. This requires enabling capabilities like in-moment personalization and real-time order and inventory management by integrating multiple, disparate systems of record. The problem, though, was that using primarily on-premises solutions resulted in a lack of real-time integration and an inability to scale with organizational growth at both the content and geographical levels. These limitations led to a less than optimal capture of revenues and missed opportunities to grow customer loyalty and lifetime value.

After the investment in SAP Commerce Cloud and SAP Customer Data Cloud, these SAP customers realized economies of scale in multiple areas. Key results from the investment include the ability to continuously deliver product updates at a faster pace, achieve value more quickly with new touchpoints, expand content delivery across multiple geographies, and capture more sales by better understanding customers through data-driven insights.

KEY FINDINGS

Quantified benefits. Risk-adjusted present value (PV) quantified benefits include:

- **Revenue uplift of 14% through customer data usage and personalization.** Organizations using the combination of SAP Commerce Cloud and SAP Customer Data Cloud experienced a significant uplift in their online and mobile revenues — with it being lifted by 20% in some cases. The driver behind the uplift was: 1) personalization capabilities — fueled by first-party, permission-based data — that delivered the right content to the right person and 2) consent for information usage from customers that led to more relevant additive marketing communications.
- **Time-to-market improvements by 70% on speed and scaling efforts with SAP Commerce Cloud.** Digital expansion efforts are typically easier done than physical expansion, but they still have specific functional requirements such as localized content and currencies, customer identity and access management, and region-specific preferences. Without headless commerce, organizations previously developed multiple product catalogs to connect to varied

> **SAP Commerce Cloud and SAP Customer Data Cloud has given us more flexibility, scalability, possibilities, and a better user experience across all our service departments.**
>
> – Head of customer engagement, infrastructure

front ends that required added developer resources. By avoiding the need for multiple developments, a reduction of 70% in time and effort is achieved with new touchpoints that are added and managed. The monetary gain over a period of three years is €6.4 million PV.

- **IT operational costs decrease with the move to SAP Commerce Cloud and SAP Customer Data Cloud by thousands of hours per year.** Legacy on-premises infrastructure designed to drive services is costly not only for capital expenditure and service/maintenance costs, but also for costs related to load balance and scale during traffic spikes. Further still, there was the task of managing multiple sets of data across geographies. In all, the composite organization stands to recover €1.3M PV over a three-year period for the IT labor expenses by moving away from the legacy architecture and onto a cloud platform.
- **IT capital expenditures decrease significantly when scaling to enter new markets with SAP Commerce Cloud and Customer Data Cloud.** Expansion into new geographies is difficult, such that those efforts are frequently mired by regional complexities such as customer data management regulations, laws, and payment processing. Technology infrastructure purchases, build-outs of new e-commerce platforms, and meeting acceptable service levels are also concerns when expanding into new territories with on-premises platforms. These legacy solutions simply cannot scale easily without heavy capital investments — to the tune of approximately €200K in infrastructure costs alone at new locations, not counting developer costs, all of which can be saved by deploying SAP cloud solutions. Total savings across a three-year period is €3.4M PV.

Unquantified benefits. Benefits that are not quantified for this study include:

- **Regulatory fines can be avoided with the use of SAP Customer Data Cloud.** Different countries, provinces, and states all have different fines that can be levied against companies for improper handling of customer data, which makes it important to use a centralized solution to honor and manage consumers' consent and preference data and access rights. Growth across geographical borders is easier when done on a public cloud infrastructure, and SAP does that while helping businesses mitigate regulatory repercussions.
- **Customer lifetime value is improved by building trust and providing relevant material.** The long-term effect is to be determined quantitatively, but any improvement in customer experience and trust-building generally results in increased customer lifetime value. By using a trusted platform for customer identification and access management, SAP Customer Data Cloud

helps businesses build trust with their customers. In turn, data gathered with appropriate consent is used to provide the targeted and relevant online buying experiences that customers now expect.

Costs. Risk-adjusted PV costs include:

> **"For me Customer Data Cloud is one of the most important pillars for the digital transformation of our organization, because it builds the ground with data for us to deliver digital services that our customers' and consumers' demand."**
>
> *Program manager, pharmaceutical*

- **Licensing fees from SAP.** SAP's pricing is clear in how it is assessed, based upon either gross revenue across the channels that SAP drives and the number of customer contacts funneling through SAP Customer Data Cloud. For our multibillion European-based composite organization, which pushes roughly half a billion euros per year from SAP channels, the license costs amount to €13.9M PV over three years.
- **Implementation and professional services.** The transition from legacy on-premises systems to SAP Commerce Cloud and SAP Customer Data Cloud required approximately seven internal FTEs over three months along with external professional services. Over the initial deployment period, this cost amounted to €863K.

The customer interviews and financial analysis found that a composite organization experiences benefits of €54.70M over three years versus costs of €14.81M, adding up to a net present value (NPV) of €39.88M and an ROI of 269%.

> **"One of the driving factors for adopting SAP was the ability to drive promotions to customers. We are able to configure very complex promotions for the business and one of the reasons is the wider reach and better data. Another reason is the level of personalization. A lot of the success in customer base growth is because of this."**
>
> *Senior manager, convenience chain*

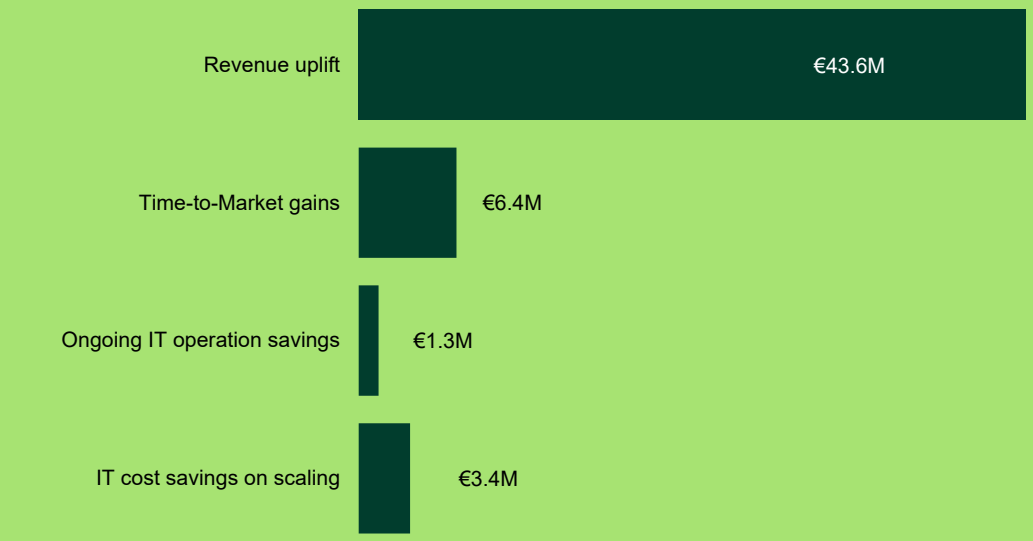
ROI
269%

BENEFITS PV
€54.70M

NPV
€39.88M

PAYBACK
<6 months

Benefits (Three-Year)



The effects of personalization are amplified with the use of customer data, producing uplift gains of 6% in Year 1 up to 14% in Year 3.

IT generally saves upwards of €780K per year on operating expense by using the cloud versions of SAP versus legacy products.

Organizational expansion costs are lowered due to the avoidance of additional IT infrastructure and code development.

TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in SAP Commerce Cloud and SAP Customer Data Cloud.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact the two solutions can have on an organization.

DUE DILIGENCE

Interviewed SAP stakeholders and Forrester analysts to gather data relative to the Commerce Cloud and Customer Data Cloud.

CUSTOMER INTERVIEWS

Interviewed five decision-makers at organizations using the Commerce Cloud and Customer Data Cloud to obtain data with respect to costs, benefits, and risks.

COMPOSITE ORGANIZATION

Designed a composite organization based on characteristics of the interviewed organizations.

FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organizations.

CASE STUDY

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by SAP and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in the Commerce Cloud and Customer Data.

SAP reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

SAP provided the customer names for the interviews but did not participate in the interviews.

The SAP Commerce Cloud And Customer Data Customer Journey

Drivers leading to the Commerce Cloud and Customer Data Cloud investment

Interviewed Organizations

Industry	Region	Interviewee	Use case
Pharmaceuticals	Global	Program manager	B2B
Events marketplace	Global	Chief operating officer (COO)	B2C, B2B, and B2B2C
Infrastructure	Global	Head of customer engagement	B2B, B2C, and B2B2C
Consumer packaged goods (CPG)	Latin America	• Executive director of IT • Senior manager	B2C/D2C, B2B
Convenience chain	Americas	Implementation lead	B2C, B2B2C

KEY CHALLENGES

The interviewed organizations had a few common themes in their struggles with their prior commerce and customer identity platforms. One topic that surfaced again and again was that previous solutions were extremely limiting on the scalability front. In a world where digital commerce is growing, these organizations simply could not scale efficiently to capitalize on the opportunities. Along with this, the existing solutions simply did not offer sufficient modern features that make digital businesses successful. Going more in depth, the organizations faced the following struggles:

- **Lack of flexibility and agility with legacy solutions to address dynamic business needs.** In the previous environment, the organizations leaned heavily on developers to build out new front and back ends — something that a headless platform could have made much easier with APIs providing increased agility and efficiency. Modern capabilities such as a machine learning-powered personalization engine and chatbots were also not present in legacy systems, causing potential revenue to be left on the table.
- **Inability to scale out into new markets or scale up in existing markets.** To be successful in the growing e-commerce market requires: 1) the maximization of sales within existing markets and product lines and 2) the expansion into new markets — all of which required scaling. In areas like Europe, Latin America, or Asia, this becomes especially important as digital services need to traverse borders. For many, this was a difficult feat to achieve with the requirement of new data centers, colocation sites, and new development build-outs on the software side. With capital costs in mind, scaling into new markets proved to be cost- and time-prohibitive with existing solutions that resided on-premises. Associated ongoing operating costs of these locations also were of concern for interviewed organizations. Building out the solution and associated team and architecture was out of the question from the start.

For the COO from an event marketplace organization: “The make-or-buy decision was easy. It was buying from a big player that could help us to go live and do a global rollout of seven languages with over 70 currencies and 30 payment methods. If we did this ourselves, we wouldn’t have been able to scale. We would basically have to throw away the code and restart

after two years. We were looking for something that we could rollout globally and scale quickly."

- **Legacy and custom-built solutions were difficult to maintain and improve upon over time.** Maintaining the disparate systems across multiple locales, brands, and channels was impossible. For many of the interviewed organizations, having data centers spread globally — which required different geo-based teams to support these systems — made for quite the endeavor to keep standing.
- **Disconnects between business lines created silos that make synergies impossible.** Without a cloud commerce platform or a comprehensive view of customers' identities, many of these organizations leveraged different systems of record and had separate sets of customer data, making for a disconnected experience between different countries. Worse than that was the data between the geographies, channels, and product lines couldn't be shared or aggregated easily. And this made cross-marketing difficult.

> **"We had one successful site with an on-premises solution, but it was not implemented in the way that we could use it across business units. We really had to think about how we could bring this solution into the different organizations across business units and product lines, which really ended up being impossible."**
>
> *Head of customer engagement, infrastructure*

- **Compliance and regulatory measures were difficult to navigate across country borders.** With regulatory measures like California Consumer Privacy Act (CCPA) and General Data Protection Regulation (GDPR) already well-known, there still existed many others that were differentiated between countries. To scale across regions, the organizations spent an exorbitant amount of time planning and implementing customer identity and data consent measures, which brought organizations into compliance with regulatory measures and made customers confident.

> **"SAP helps to secure customer data in specific regions in accordance with the locale along with helping us staying compliant with GDPR. If we had to build this ourselves or use different tools for our old e-commerce solution in the different regions, it would have created a terrible customer experience with disconnected data and multiple logins."**
>
> *Head of customer engagement, infrastructure*

SOLUTION REQUIREMENTS/INVESTMENT OBJECTIVES

The interviewed organizations searched for a solution that could:

- **Improve scalability.** The COO for an event marketplace organization stated: "SAP had an advantage in terms of how you could scale up, especially on the SAP Customer Data Cloud. We use S/4HANA as our ERP system. It was easiest to get everything from one provider."

  Interviewees emphasized the importance of a cloud-based architecture as this foundational difference allowed for organizations to spend less time standing up infrastructure and more time on creating the proper customer experience.

- **Work with an established and reputable vendor.** Many organizations exclaimed that as they ventured into their digital expansion, it was important to know that they were working with an organization that would continue support and continuously improve upon their product. The COO of an event marketplace organization spoke of their selection in SAP saying: “It’s important to note that SAP works on a human level. They understand and care about where we are coming from and the needs that need to be addressed.”
- **Wider reach to customers.** Digital commerce has come a long way with organizations selling to consumers and B2B2C formats. The direct-to-consumer (D2C) format was also in play, but the marketing reach wasn’t sufficient, and exploring other avenues to reach the end consumer was needed. Being able to use a single platform to drive multiple business models would have been a huge benefit. One interviewee said: “Ultimately we want to get closer to the decision-makers, the end customers. We want to build up our B2B2C digital experience, especially within the digitalization topics that we have, where we also see the common cloud solution in place there.”
- **Modernize functionality to drive sales.** Customers needed to be hypercompetitive with organizations becoming more creative in their march to place their stake in the online market. The senior manager at a CPG organization stated: “One driving factor was the need to drive promotions for the customers at a personalized level. We will also be able to configure very complex promotions for the business and reach the customers at the right time. A lot of the success for the growth of the customer base is that there are some very configurable promotions which can reach many different customers’ segments.”
- **Meet and exceed compliance standards.** With concerns on maintaining customer trust and compliance with regional regulations, the interviewed organizations were concerned on both fronts as they eyed expansionary moves. The existing on-premises solution delivered an inconsistent experience that was mismatched between countries and required constant attention to maintain compliance. This jumpstarted the search for a new solution that would bring best practices on compliance and deliver a smooth customer experience.

  The head of customer engagement for an infrastructure organization stated, “We are based here in Austria and for us it’s quite important to also have this GDPR topic handled properly across all of Europe.

  “GDPR guidelines have already been implemented across Europe. We needed a platform where we can manage content that is compliant to data privacy, especially with special legislation in [and] around data centers in China and Russia. SAP Customer Data Cloud is the preferred solution because they are extremely quick to provide a solution that works across all these regions.”

  Program manager, pharmaceutical

- **Incorporate the headless commerce approach.** The head of customer engagement at an infrastructure org stated, “We were looking for a headless approach to B2C online commerce and solutions where you want to go really into an experience-driven commerce way.” More importantly however, interviewed organizations sought to ease the developer utilization on rebuilding systems of records and integrations between the front and back ends.

Another interviewee from a CPG firm said to Forrester, “The availability of the API framework from SAP was important because we knew from the start that this has to be a very componentized architecture and having that Omni Commerce Connect framework that SAP comes with was a plus in connecting all our pieces.”

“Our goal with the Customer Data Cloud was to have one solution for all touch points where we can collect not only the login with user activity, but also associate it with different login types like social login. We of course also want to make it more convenient for the customers and to build trust.”

Head of customer engagement, infrastructure

COMPOSITE ORGANIZATION

Based on the interviews, Forrester constructed a TEI framework, a composite company, and a ROI analysis that illustrates the areas financially affected. The composite organization is representative of the five companies that Forrester interviewed and is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

Description of composite. The composite organization is a European-based B2B and B2C organization that is in the CPG market, fulfilling the entire manufacturing-to-fulfillment value chain. B2C e-commerce has more recently taken prominence, with it composing 15% of its annual revenues. Digital commerce for the B2B segment is increasing as well, streamlining the entire order and fulfillment process. Given this, it’s important for this organization to enable information-sharing between different business units and geographical regions, as customers too are now becoming more global. Having a solution that can support its B2B, B2C, and potentially B2B2C business models all on the same platform has key advantages.

Recently, the organization has shifted away from their existing legacy on-premises e-commerce and homegrown customer identity management platforms, as increasingly varied regulations between regions make it a difficult task to manage. In general, the rate at which the enterprise is growing its digital footprint is impossible for IT to keep up with, as initial labor, both internal- and external-based, is extremely expensive and difficult to maintain. Over the course of three months, the composite organization transitioned from the existing solutions to cloud-based SAP Commerce Cloud and SAP Customer Data Cloud solutions, relieving IT of maintenance, development, and additive integration activities.

Key assumptions

- **€480 million in Year 1 e-commerce sales**
- **B2B and B2C**
- **Multinational organization**
- **Coming from on-premises legacy e-commerce solution**
- **Uses customer data to improve long-term results**

Analysis Of Benefits

Quantified benefit data as applied to the composite

Total Benefits						
Ref.	**Benefit**	**Year 1**	**Year 2**	**Year 3**	**Total**	**Present Value**
Atr	Revenue uplift	€7,128,000	€16,090,800	€31,771,740	€54,990,540	€43,648,760
Btr	Time-to-market gains	€0	€3,780,000	€4,347,000	€8,127,000	€6,389,932
Ctr	Ongoing IT operation savings	€295,951	€538,951	€781,951	€1,616,854	€1,301,952
Dtr	IT cost savings on scaling	€0	€1,500,600	€2,817,900	€4,318,500	€3,357,295
	Total benefits (risk-adjusted)	€7,423,951	€21,910,351	€39,718,591	€69,052,894	€54,697,939

REVENUE UPLIFT

Evidence and data. Using SAP Commerce Cloud and SAP Customer Data Cloud brought new revenue potential to the interviewed organizations. What Forrester has heard is reflected below:

- Due to real-time machine-learning personalization techniques, the interviewed organizations saw a significant uptick in revenue. Customers were presented with offerings that are relevant to their shopping habits and preferences.

  The head of customer engagement at an organization that has been using SAP Commerce Cloud for over a year said, “We have seen our web shops increase in online sales by 10% in the first year and are now at 15% since we implemented SAP.”

- Consent-based, first-party data compounded the effect of personalization. The interviewees found value in the data because it helped them to know their customers better. As the relationships progressed, customers’ profiles became richer, which enabled more relevant, high-value engagements.

More specifically, the organizations saw that as customer data was collected, these organizations were able to cross market to accounts and business units across borders. As digital expansion increased to more regions and sales channels, the effect was amplified.

“The major benefit that we get from SAP Customer Data Cloud is that we can very easily and very flexibly create and capture information from customers, potential customer’s needs, and do progressive profiling. So, we capture all information today, when they come back to it later, we can capture additional information. We go slowly building their profile.”

Executive director of IT, CPG

- Going beyond the pure aspect of reflected revenue uplift, organizations also report SAP Customer Data Cloud creates customer loyalty. It impacts engagements at every stage of the customer journey, from anonymous online visitors to loyalty rewards.

> **"The business impact of it is massively growing. We are seeing 100% year-over-year growth across digital channels supported by SAP that we have in place that went live April of last year."**
>
> *Executive director of IT, CPG*

Modeling and assumptions. For the composite organization that Forrester has formed, the following factors have been factored into the results:

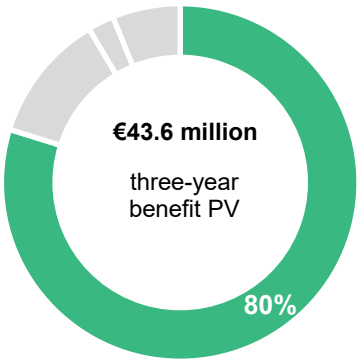
- Organizations see a gradual rise in the revenue uplift, increasing by 4% year over year due to increased intelligence from customer data and behavior characteristics collected over time. The eventual result is expected to be 14% after the third year of usage, but it is not expected to rise significantly thereafter.
- The ability to personalize customer experiences to drive more sales is multifactored — a primary one being SAP Commerce Cloud's real-time personalization capability. Additional considerations include product offering updates and the ability of the organization to provide humanistic pieces to finish the sale.
- SAP Customer Data Cloud adds to the uplift equation by delivering consent-based, first-party customer data from multiple channels and regions to build insights powering personalization. Factors that contribute include:
    - The transparency in data collection and seamless sign-on options build trust, which in turn leads to increased loyalty. A unified look and feel across borders further builds good will.
    - Loyalty increases over the course of a three-year period, effectively increasing customer insights and yielding greater results from personalization efforts.
    - Contribution rates to the overall gain on personalization rises from 15% in Year 1 until it hits 35% by Year 3.

Risks. Possible risks that are involved with this benefit bucket are as follows.

- The growth of e-commerce. While growth on the digital channels have been great in 2020 due to the pandemic, the growth rates could be different in future years.
- Percentage of revenue that is from digital channels versus traditional channels differ greatly between organizations.
- The effectiveness of overall growth strategies.

To account for these risks, Forrester adjusted this benefit downward by 45%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of €44 million.

Revenue Uplift



Revenue Uplift					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
A1	Purchase rate increase from new personalization, inclusive of SAP Commerce Cloud and Customer Data Cloud		6%	10%	14%
A2	Total sales passing through SAP Commerce Cloud		€480,000,000	€552,000,000	€634,800,000
A3	Attribution to SAP Commerce Cloud real time personalization		30%	30%	30%
A4	Uplift attributed to Commerce Cloud	A1*A2*A3	€8,640,000	€16,560,000	€26,661,600
A5	Attribution to SAP Customer Data Cloud insights, loyalty, cross-channel marketing		15%	23%	35%
A6	Uplift attributed to SAP Customer Data Cloud insight and cross-marketing/omnichannel	A1*A2*A5	€4,320,000	€12,696,000	€31,105,200
At	Revenue uplift	A4+A6	€12,960,000	€29,256,000	€57,766,800
	Risk adjustment	↓45%			
Atr	Revenue uplift (risk-adjusted)		€7,128,000	€16,090,800	€31,771,740
	Three-year total: €54,990,540		**Three-year present value: €43,648,760**		

TIME-TO-MARKET GAINS

Evidence and data. As an additive benefit to revenue uplift, organizations also saw an acceleration in time-to-market with content and marketing assets. Forrester's observations of the interviewed organizations are as follows:

- Headless commerce was a theme that came up repeatedly, with some organizations even white labeling their content pages and API access to their repositories so that it could be further monetized on a B2B2C basis. Primary drivers of the efficiency as reported by the interviewees was the fact of reduced development and separation of work duties because of headless commerce. Front-end and back-end developers could be separated in roles, making for easier hiring, while the API connectivity made for simple connections between all points.
- As the organizations grew across region borders and expanded with their partners, the organizations saw a drastic reduction in time spent to stand up the different versions of the front ends and back ends. Organizations reported savings of 70% on development or approximately 2.1 months in expanding into new markets.

> **"We previously had a custom commerce solution. And on that, it took three times the effort and time to build new pages and features versus using SAP ... the build time is much faster with SAP."**
>
> *Executive director of IT, CPG*

- With the expansion into multiple markets and multiple channels, identification of customer data was more important than ever. For a CPG firm that reached consumers via D2C over different

digital mediums in multiple countries, it became crucial for them to quickly know their customer and present a cohesive shopping experience. With the scalability of SAP Customer Data Cloud, this was made possible, allowing the organization to expand faster without sacrificing on customer experience.

- Interviewed organizations also spoke to the fact that integration between different assets across country borders were much simpler with SAP Commerce Cloud and SAP Customer Data Cloud. Similarly, channel integration and extension capabilities from existing assets were much easier to accomplish. One interviewee said, “It has never taken any more than two months to complete any integration whether it’s a payment solution or data that we get from all those channels to connect and some are done much more quickly than that.”

  Another interviewee that led the implementation of SAP said, “SAP Commerce Cloud allowed us to make the integration in the matter of weeks where we went from 30 stores to more than 600 stores, and with DoorDash, there wasn’t really a huge technical hurdle to get there.

Modeling and assumptions. Development time to enter into new markets and expand existing capabilities such as becoming mobile-friendly saw resource reductions for the IT and development team, who were reallocated to other value-creation tasks.

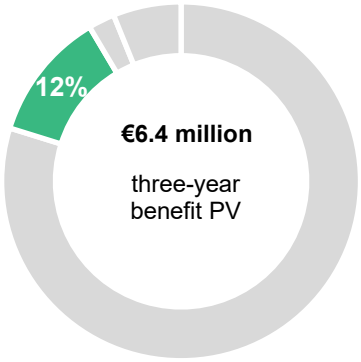
- The composite organization sees a 70% reduction in development effort, which encapsulates multichannel and multisite expansion efforts.
- Accounting for the revenue of the new channels/sites, the composite organization is able to garner revenues sooner, resulting in millions of euros as an early market player.
- Forrester assumes that the new markets can open up as much as 50% of digital revenue from added channels like mobile or voice (smart home speakers) and expansion into new countries.

Risks. Forrester has factored a risk that could potentially change the benefit value calculated.

- Due to the degree of expansion into new categories that the composite organization is enacting, this may affect actual results of organizations adopting SAP Commerce Cloud.

To account for this risk, Forrester adjusted this benefit downward by 40%, yielding a three-year, risk-adjusted total PV of €6,389,932.

Time-To-Market Gains



Time-To-Market Gains					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
B1	Previous time to develop for multichannel/multisite efforts, in months	Interviews	3	3	3
B2	Development time savings from singular product base to multiple front ends	Interviews	70%	70%	70%
B3	Reduction in time to develop for multichannel efforts with Commerce Cloud, in months	Interviews	2.1	2.1	2.1
B4	Percentage of revenue from new sites/channels		50%	50%	50%
B5	Value of acceleration per month	YoY revenue increase on SAP / 12 months *B3*B4		€3,000,000	€3,450,000
Bt	Time-to-market gains		€0	€6,300,000	€7,245,000
	Risk adjustment	↓40%			
Btr	Time-to-market gains (risk-adjusted)		€0	€3,780,000	€4,347,000
	Three-year total: €8,127,000			**Three-year present value: €6,389,932**	

ONGOING IT OPERATION SAVINGS

Evidence and data. Separate from revenue improvements, there are also cost savings for the IT segment of the organization. This benefit bucket covers the gains and how they are attained by moving to SAP solutions in the cloud.

"The effort needed on our side to upgrade the legacy solution took about 100 to 150 days — really big efforts. Now, [with SAP Commerce Cloud] we do the general upgrade in just one sprint. And that's less than 10 days."

Head of customer engagement, infrastructure

- Interviewed organizations commonly cited that their capabilities were lacking in homegrown or legacy content management systems/e-commerce solutions. Upgrading these to incorporate new features such as machine learning simply were neither a possibility nor would they have been, due to their cost-prohibitive nature. In lieu of upgrading, the organizations created measures that maintained and provided better uptime for the services, which was a comprise that did not meet the needs of marketers. Some minor improvements on the capability front were made, but ultimately the legacy platforms were limited by IT resources and consistently lagged in capabilities compared to modern solutions.



Reduction of IT effort to develop new features

80% effort reduction

Even with creating and maintaining updates to keep the solutions operational, IT teams spent significant time doing upkeep-related work on

infrastructure even before expansion plans started taking place.

- Forrester captured that organizations were using two FTEs in the home country with an additional FTE allocated for each additional country of expansion.
- Clients of SAP noted that while there were some upfront costs involved with migration, the ongoing costs in general were of a significant discount to operational expenses while freeing IT resources to handle or build on other organizational needs.

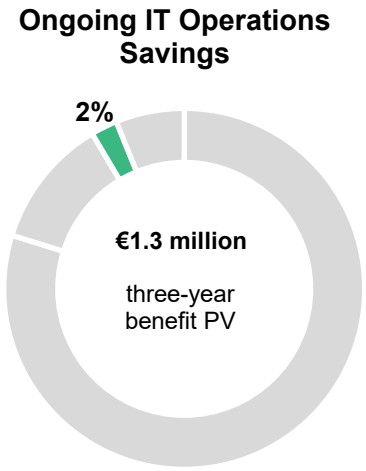
"I would say it's really worth what we spend with SAP and we will have a big return on investment from moving to a centralized solution, especially in the Cloud. So that is really the future and we see now also the benefits which we are getting from that, especially looking to new modules, new functionalities, new features which have been developed and enhanced during the last years. That's exactly what we need."

Program manager, life sciences

Modeling and assumptions. The information collected from users of SAP Commerce Cloud and SAP Customer Data Cloud gave Forrester the basis to make a few assumptions for its model:

- The composite organization assumes that to keep up with modern capabilities and feature sets, organizations need to either do continuous improvement or at least deliver two new releases of the solution per year to be consistent with software-as-a-service (SaaS) solutions on the market.
- The development effort typically requires at least five members, with ancillary input from the business unit using the solution.
- SaaS solutions such as SAP Commerce Cloud and SAP Customer Data Cloud push releases, reducing at least 80% of the effort necessary to deliver an upgrade.

The final count on the monetary benefit from this category amounts to a three-year, total PV of €1,301,952



Ongoing IT Operation Savings					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
C1	Number of annual upgrades required to advance capabilities		2	2	2
C2	Average days to upgrade on legacy on-premises solution, in days	Interviews	150	150	150
C3	Number of FTEs dedicated to upgrades and maintenance		5	5	5
C4	Percent of time total labor dedicated to upgrades		40%	40%	40%
C5	Total upgrade labor hours before Commerce Cloud		4,800	4,800	4,800
C6	Percent reduction in upgrade time		80%	80%	80%
C7	Total upgrade labor hours saved with Commerce Cloud	C5*C6	3,840	3,840	3,840
C8	Cost of labor hours per individual, fully loaded	€70K/yr* 1.35x benefit multiplier/ 2,080 hours	€45.43	€45.43	€45.43
C9	Duplicative data maintenance costs avoided due centralized data	1 FTE per geography	€121,500	€364,500	€607,500
Ct	Ongoing IT operation savings	C7*C8+C9	€295,951	€538,951	€781,951
	Risk adjustment	0%			
Ctr	Ongoing IT operation savings (risk-adjusted)		€295,951	€538,951	€781,951
	Three-year total: €1,616,854			**Three-year present value: €1,301,952**	

IT COST SAVINGS ON SCALING

Evidence and data. Customers who had already begun their digital transformation journeys are not only enjoying operational savings, but they are also seeing scaling-related savings that often involve heavy capital expenditure. While expansion expenses were kept down by minimizing physical infrastructure growth into different regions, many of the interviewed organizations still needed digital infrastructure to deliver content.

- Expansion into new territories as explained by the interviewees was a heavy ask, as it resulted in new data centers or colocation facilities. These resulted in capital expenditures of over €200K per location to make them service ready.



Reduced market expansion cost to IT

Up to €2.8M per year

- Additionally, the organizations spoke of load balancing issues that arise when dealing with specific events and buying periods that drove high spikes in demand. This resulted in redundancy and high availability being necessary in multiple regions that added to the cost of content delivery.
- Aggregation of customer data was extremely difficult, often requiring an FTE who would

process then collate the data. This process seemed to be a theme with added regions increasing costs to gather the data to create value.

- The executive director of IT at a CPG firm stated that: “Our driver to use the SAP solutions was to capture information so that we can easily adjust for regions and channels and not have to labor over updates and management of our many customer databases. With SAP Customer Data Cloud being the central repository feeding SAP Commerce Cloud and our other digital solutions, we can see all the different channels and regions that the same client has visited or bought from. SAP allows us to have that unity in the data.”
- Another interviewee said: “I think the long-term benefits for us is lowering the development costs. SAP will become cheaper for us as we bring more work in-house.”

“SAP is great with numerous functionalities and features. It’s scalable. It’s very fast in the response time. You’ll get these things automatically with customization for different regions. Also, what is important for us is that SAP can integrate very complex architecture and ecosystems as we grow.”

Program manager, pharmaceutical

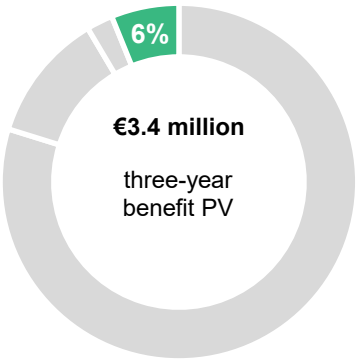
- A third customer stated: “We typically launch with 50 to 60 content pages. With SAP, the business teams themselves have the ability to easily modify those pages or create new pages. So, we’re not keeping track of those because those are all business-managed and done by the merchandising team rather than IT.”

Modeling and assumptions. Leveraging the information collected, Forrester is making some assumptions that would be applicable to most organizations.

- New territory entrances typically encounter build-out capital costs of €200K, and services and support are generally an additional 20%.
- Internal, indirect costs are not counted on the upkeep portion of the analysis.
- Developers for localization- and market-specific production is included, which generally are an IT function. Integration and data aggregation are included in our assumption.

With everything considered, Forrester believes this benefits primarily the IT team with a three-year total PV of €2,824,801.

IT Cost Savings On Scaling



IT Cost Savings On Scaling					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
D1	Markets expanded into			2	3
D2	Hardware and related infrastructure avoided, per market		€200,000	€200,000	€200,000
D3	Service and support contracts avoided, per market		€40,000	€40,000	€40,000
D4	Infrastructure and support contract savings	D1*(D2+D3)	€0	€480,000	€720,000
D5	Internal developer effort avoided, per market, in months of total labor	12 FTEs*B3*D1	0	50.40	75.60
D6	Cost of IT developer per month	€80K*1.35x benefits multiplier/ 12	€9,000	€9,000	€9,000
D7	Value of reduced IT developer effort	D5*D6	€0	€453,600	€680,400
D8	Centralized customer data and consent management savings for different markets and BUs, per market/BU	3 IT FTEs' labor at €70K*1.35x multiplier*D1	€0	€567,000	€850,500
Dt	IT cost savings on scaling	D4+D7+(D8+prior year savings)	€0	€1,500,600	€2,817,900
	Risk adjustment	0%			
Dtr	IT cost savings on scaling (risk-adjusted)		€0	€1,500,600	€2,817,900
	Three-year total: €4,318,500		**Three-year present value: €3,357,295**		

UNQUANTIFIED BENEFITS

Additional benefits that customers experienced but were not able to quantify include:

- **Regulatory fines specific to regions and verticals.** While Forrester heard from many organizations on the various regulatory fines that they faced for improperly handling customer data, the data collected was inconclusive — mainly due to how the varied it was because of geos and regulatory bodies. For instance, Payment Card Industry Data Security Standard (PCI-DSS) fines organizations $50,000 for the first offence in the US, but other fines can vary depending on revenue processed and regions in which the fine is received. By using SAP Customer Data Cloud, organizations gain a head start to address compliance and avoid fines.

Going beyond compliance fines, organizations should also think about ramifications regarding the risk of a data breach, which Is more likely for organizations that maintain their own data. Two of the interviewed organizations said the following:

- The program manager for a life sciences organization stated: "A major benefit we are receiving from SAP is proper compliance and data security. It's incredibly important to have data stored in a secure solution when you are thinking about data breaches."
- Another interviewee of a CPG firm said: "We see several state-level regulations coming into effect like the CCPA and Illinois' privacy act. Legal requirements on

privacy will soon be a major topic, and we feel like CDC is the right platform for that."

- **A better customer experience leads to a better customer lifetime value.** Forrester's interviews revealed that organizations achieved a higher score on customer experience after the implementation of SAP Commerce Cloud and SAP Customer Data Cloud. Specifically, the findings indicate that due to lower sign-on related friction and higher levels of personalization consumers felt that the business became trusted partners, extending into a higher customer lifetime value.

  An interviewee said to Forrester: "Our customers in several countries are already having better and more convenient experiences. We are seeing a shift to a self-service approach in our sales and services department. Requests to change passwords, for example, have gone down quite a lot."

FLEXIBILITY

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement SAP Commerce Cloud and SAP Customer Data and later realize additional uses and business opportunities, including:

- **Headless commerce introduces new lines of business.** With organizations seeking new opportunities, B2B2C is a strong contender that SAP is enabling, especially in the way of forming an easy way for customer organizations to harness the product library and inventory that is tied to which without considerable development. API connections are key in the instrumentation of such collaborations that could garner further revenue.
- The COO for an event marketplace organization said: "We've got an API where you can connect to multiple sites. We're now looking to extend this, perhaps even in a white-label format to many of our clients so that they can carry the sales further."

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

Analysis Of Costs

Quantified cost data as applied to the composite

Total Costs							
Ref.	**Cost**	**Initial**	**Year 1**	**Year 2**	**Year 3**	**Total**	**Present Value**
Etr	Licensing fees	€0	€4,933,307	€5,587,477	€6,338,616	€16,859,400	€13,864,870
Ftr	Implementation and professional services	€949,740	€0	€0	€0	€949,740	€949,740
	Total costs (risk-adjusted)	€949,740	€4,933,307	€5,587,477	€6,338,616	€17,809,140	€14,814,610

LICENSING FEES

Evidence and data. SAP investment costs are largely composed of licensing fees as a SaaS service. For the composite organization:

- License fees for SAP Commerce Cloud are based on order volumes and revenues generated on the solution.
- License fees for SAP Customer Data Cloud are based on the managed customer contacts. Additionally, they are inclusive of both Customer Identity and Access Management and Enterprise Consent and Preference Management solutions.
- Customers informed Forrester that regular upgrades of approximately twice a year were included. SAP Customer Data Cloud also updates with hundreds of micro-releases per year.

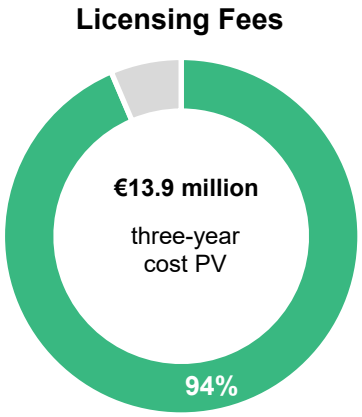
Modeling and assumptions. Additive assumptions were made on the following cost factors:

- All costs are computed at list pricing levels.
- Growth in usage is reflected in the modeling.

Risks. Forrester accounts for the following risks regarding investment costs:

- Differing levels of contacts that organizations maintain, which alter licensing costs.
- Variability in digital commerce channels against traditional channels, which in turn affects the rate charged for Commerce Cloud.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of €13,864,870.



Licensing Fees						
Ref.	**Metric**	**Calculation**	**Initial**	**Year 1**	**Year 2**	**Year 3**
E1	SAP Commerce Cloud subscription fee, based on revenue	List pricing		€4,478,000	€5,090,000	€5,793,800
E2	SAP Customer Data Cloud subscription fee	List pricing		€220,388	€231,407	€242,977
Et	Licensing fees	E1+E2	€0	€4,698,388	€5,321,407	€6,036,777
	Risk adjustment	↑5%				
Etr	Licensing fees (risk-adjusted)		€0	€4,933,307	€5,587,477	€6,338,616
	Three-year total: €16,859,400			**Three-year present value: €13,864,870**		

IMPLEMENTATION AND PROFESSIONAL SERVICES

Evidence and data. In addition to licensing costs, an investment in SAP Commerce Cloud and SAP Customer Data Cloud involves implementation costs, which are broken down as follows:

- Organizations migrating to the cloud services by SAP required a level of oversight from internal FTEs, which typically amount to a group of five to 10 employees over a period of one to five months.
- Most organizations stated that it was extremely fast to implement the solution, but the migration of data and recreation of pages took longer to develop.
- Professional services were used to not only map, but also align new processes and workflows.

Modeling and assumptions. Forrester made the following assumptions when modeling this cost category:

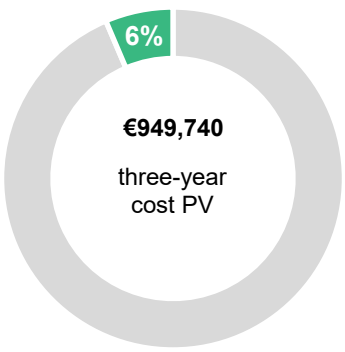
- Professional services were brought in from an external consulting firm, amounting to €750K. This figure differs between the firm hired, but in general, organizations should anticipate an engagement period of three months.
- The implementation team internally is comprised of database administrators, content owners, and product owners. In general, these are standard business FTEs who have some seniority.

Risks. Forrester accounts for risks on the investment, and they are as follows:

- Variability in professional services are due to the scope of data needing to be moved.
- Volume of revenue received through digital channels, which changes the amount of effort that needs to be applied to produce similar if not better results upon migration.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of €949,740.

Implementation And Professional Services



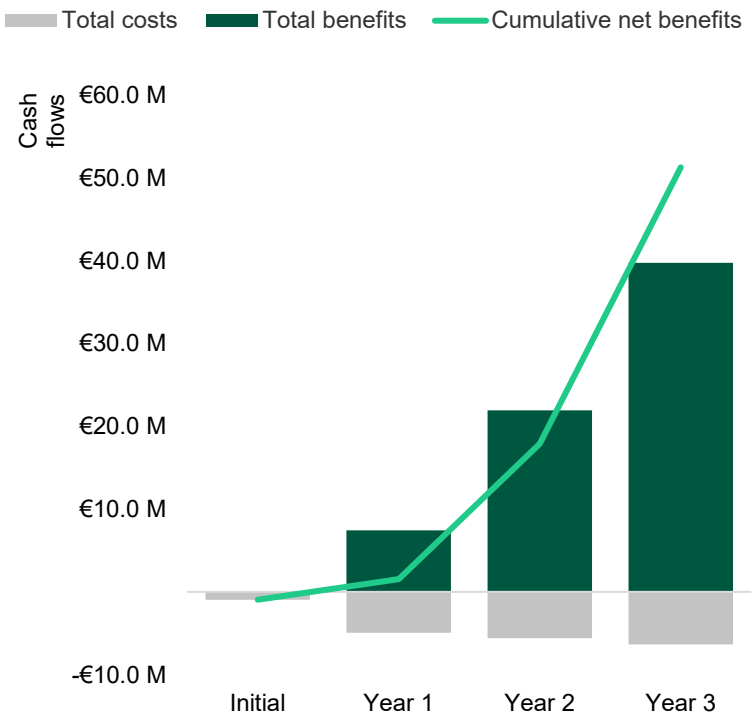
Implementation And Professional Services

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
F1	Professional services fee	Interview data	€750,000			
F2	Length of implementation	Interview data	3			
F3	FTEs involved in implementation	Interview data	7			
F4	Percent of time dedicated to implementation	Interview data	60%			
F5	FTE monthly fully burdened rate	€80K/12*1.35x benefit modifier	€9,000	€9,000	€9,000	€9,000
Ft	Implementation and professional services	F1+(F2*F3*F4*F5)	€863,400	€0	€0	€0
	Risk adjustment	↑10%				
Ftr	Implementation and professional services (risk-adjusted)		€949,740	€0	€0	€0
	Three-year total: €949,740			**Three-year present value: €949,740**		

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(€949,740)	(€4,933,307)	(€5,587,477)	(€6,338,616)	(€17,809,140)	(€14,814,610)
Total benefits	€0	€7,423,951	€21,910,351	€39,718,591	€69,052,894	€54,697,939
Net benefits	(€949,740)	€2,490,644	€16,322,874	€33,379,975	€51,243,753	€39,883,329
ROI						269%
Payback period						<3 months

Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

TOTAL ECONOMIC IMPACT APPROACH

Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."



PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.



NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.



RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.



DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.



PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

Appendix B: Endnotes

[1] For simplicity, the rest of the study refers to these solution sets as SAP Commerce Cloud and/or SAP Customer Data Cloud.


FORRESTER®