Make CRM and Customer Experience a Technical Reality: A Gartner Trend Insight Report

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Behind every successful customer experience lives a complex, connected and dynamic mix of cloud and on-premises applications and technologies. Technical professionals responsible for architecting and deploying CRM and customer experience technologies can use this research to guide their deployments.

Opportunities and Challenges

- Expectations for CRM implementations are high, and time frames for deployments and ongoing enhancements are condensed. This challenge is acute in Internet of Things (IoT) and digital business initiatives where CRM is critical for customer interaction and support.
- A majority of new CRM deployments are now cloud-based. When combined with adjacent cloud and on-premises infrastructures in the enterprise, the result is a fragmented environment that creates challenges for governance, data protection, identify management and integration.
- Digital marketing analytics is a critical source of customer insight, driving personalization and product recommendations. Organizations that cannot effectively integrate their multiple online and offline data sources will create business intelligence (BI) silos and lose opportunities.
- Leading CRM and customer experience vendors include cloud-native companies like Salesforce, mature software conglomerates like Microsoft, Oracle and SAP, and focused contenders like Adobe. They are complemented by hundreds of smaller vendors delivering point solutions in the many-faceted CRM and customer experience market. Technical professionals will contend with a diverse and complex vendor landscape for the near future.

What You Need to Know

- Seventy-five percent of CRM applications are not deployed enterprisewide. Integration and interoperability between multiple architectures, applications and vendors are mandatory.

- CRM will become an integral component of IoT and digital business initiatives. In a Gartner survey, 45% of enterprises that had begun or completed IoT projects identified CRM as the enterprise application that would be most significantly impacted by IoT initiatives.
- API-centric integration (aka "headless applications") and agile development for CRM are both high-interest topics in the developer community. API-centric applications are valuable assets to leverage, but they can also add a level of complexity or require resources and skills beyond what some organizations can provide.

Insight From the Analyst

"Behind the Scenes" of a Great Customer Experience


Chris Fletcher, Research Director

Delivering a successful and profitable customer experience is like trying to stage a successful Shakespearean play or an arena-level rock concert. The audience becomes part of an engaging, creative and compelling experience in which they are not simply "seeing" a performance, but instead are becoming a part of it. Behind the scenes, however, a complex, highly integrated and tightly orchestrated ecosystem of events, content, technologies and skills must come together to make that experience a reality.

In the almost 20 years that I have been involved with CRM, I have seen the segment expand and innovate beyond its early roots as a tool for managing sales and service — and far beyond what I ever thought possible. The CRM segment today comprises dozens of functional areas, spanning sales, commerce, marketing and customer service, and it provides highly specialized functionality, data analysis and insight.

CRM technology is fundamental to the customer experience. That customer experience drives revenue, which in turn drives more investment in optimizing and monetizing that customer experience.

This document highlights recently published research that, taken together, underpins our focus on enterprise applications within Gartner for Technical Professionals. These areas include:

- CRM fundamentals — what technical professionals need to know
- Making digital commerce a secure, scalable and engaging reality
- Implementing marketing analytics that enable a superior customer experience
- Extending and securing Salesforce's cloud offerings
- Using an API-centric approach to CRM application implementation

With the research collected here, our goal is to enable technical professionals to put on their own great CRM performance behind the scenes.

Regards,

Chris Fletcher

Executive Overview

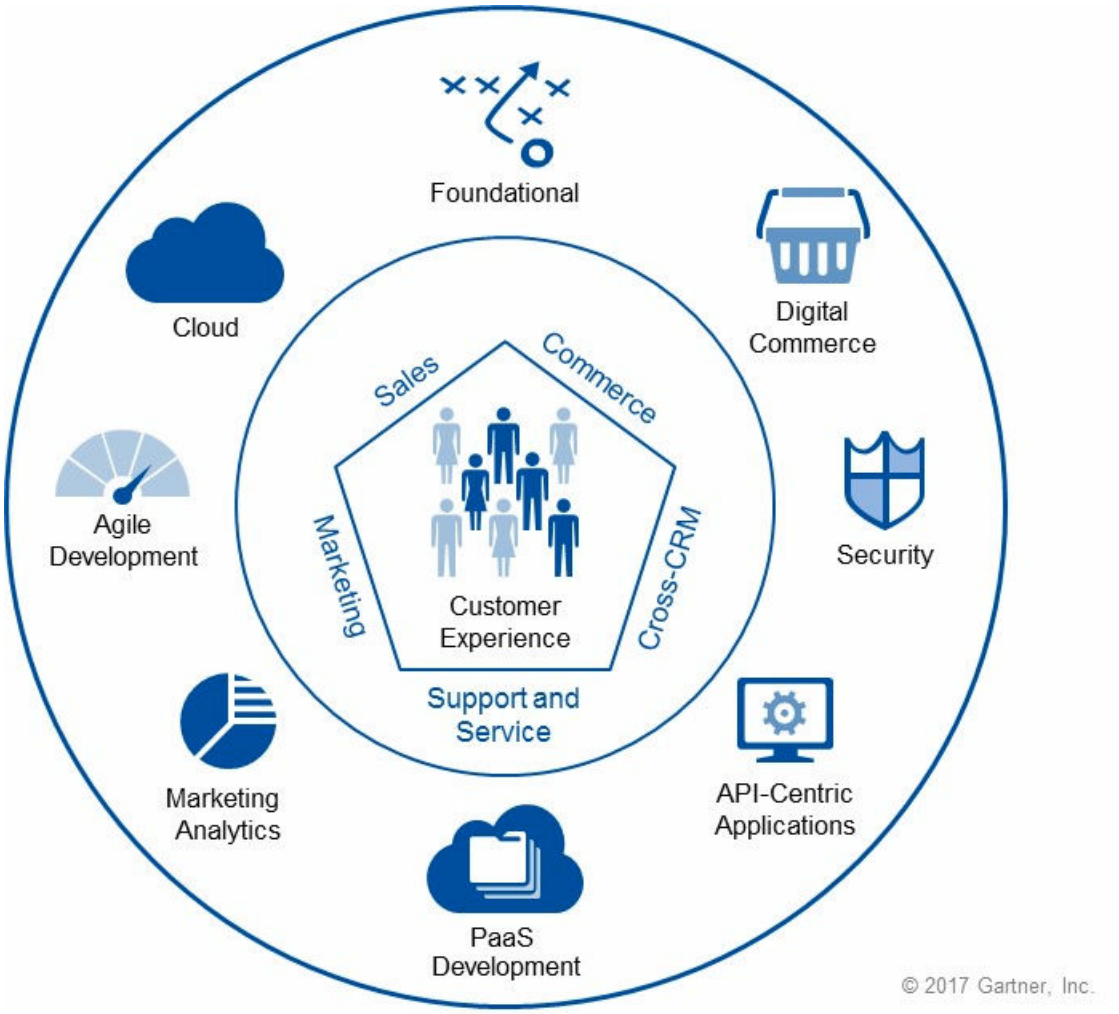
Definition

CRM is a complex and challenging undertaking, where best practices are still evolving. CRM has rapidly embraced new ways of doing things, more quickly, than any other technology-driven business discipline. It is driving the evolution toward cloud-based deployments and applications. Due to the myriad functionality segments, integration is a major challenge. Moreover, CRM deployments are increasingly cloud-based, spanning software as a service (SaaS), platform as a service (PaaS) and infrastructure as a service (IaaS) across multiple providers. This leaves technical professionals with the challenge of managing, securing and extending multicloud environments. CRM is extremely vendor-centric: Seventy-five percent of CRM deployments include vendor-provided applications, tools or data. This means the developers, architects and project leads who manage CRM deployments spend more time assembling application components using vendor-provided tools than developing functionality by writing code.

> CRM is a business strategy with outcomes that optimize profitability, revenue and customer satisfaction. CRM technologies should enable greater customer insight, increased customer access, more-effective customer interactions, and integration throughout all customer channels and back-office enterprise functions.

CRM will continue to rapidly evolve as an innovative combination of technologies, processes and strategy. At the same time, deploying, supporting, integrating and orchestrating the technologies that underpin successful and effective CRM initiatives will become an increasingly rewarding — and challenging — undertaking for technical professionals. These professionals will need to build their foundational understanding of CRM technologies, address new cloud deployment and security challenges, stay abreast of trends in digital commerce and marketing analytics, and become adept at disciplines such as API-centric integration and agile development (see Figure 1).

Figure 1. Key Technology Priorities and Challenges Surrounding CRM



Source: Gartner (September 2017)

Research Highlights

CRM Fundamentals: What Technical Professionals Need to Know

CRM is challenging, to say the least. The CRM market is made up of multiple subsegments of functionality, hundreds of vendors and a history of rapidly embracing disruptive technologies, including cloud, analytics and, more recently, IoT. A majority of CRM applications are deployed for departmental or business unit requirements, and they are not deployed enterprisewide. Cloud is just one example of how the CRM market has provided competitive advantage to business users through the use of new or disruptive technology. The challenge for developers and architects then becomes how to reconcile and support the multicloud deployments that are an unintended byproduct of moving to cloud deployments. Technical professionals can use the reports described below to quickly come up to speed on CRM essentials.

Related Research

"Mastering the CRM Universe: A Framework for Technical Professionals" discusses Gartner's definition and market structure of the CRM industry. It also provides the context to help technical professionals understand the business context of how and why CRM applications are acquired and used.

Digital business is forcing companies to adapt to leaner, quicker and more efficient ways of doing business and interacting with customers — and CRM applications are critical to making that happen. Marketing automation applications, for example, can collect, aggregate and analyze customer information from connected devices. This information will ultimately inform and enrich the customer experience, and strengthen customer loyalty. However, these benefits won't materialize without sound technology planning and collaboration between business and IT teams on CRM application deployment and integration projects.

Technical professionals must address the challenges and opportunities posed by the growing deployment of diverse CRM technologies in their organizations. Recommendations include:

- Prove your value by anticipating and planning for current and long-term functional requirements. Work with peers in sales, service, commerce and marketing, and identify areas where they lack resources and expertise.
- Assess the product architectures, infrastructures and deployment models that will be part of your CRM architecture, and define an integration framework. Map mandatory integration points, and identify the resources required to support the business objectives.

"Apply the Eight Building Blocks of CRM to Ensure Successful Projects" presents the eight key elements — or "building blocks" — that underpin many successful CRM initiatives, focusing in particular on the "technology" building block. Technical professionals can apply the business guidance in Gartner's Eight Building Blocks framework to their CRM implementations.

CRM technology is an essential building block of any modern CRM business strategy. Far-reaching decisions must be made on sourcing applications, designing or buying into architectural constructs and standards, and choosing styles of application integration. CRM applications are not peripheral systems that can be left to grow within the enterprise in an unstructured fashion. Rather, the role and goal of CRM technology deployments should be to provide integrated functionality that supports seamless, customer-embracing processes across all areas of the enterprise and its partners.

To help technical professionals effectively support the technology building block, Gartner has identified several best practices and recommendations. A sampling of this guidance is shown in Table 1.

Table 1. Summary of Best Practices and Recommendations for the Technology Building Block

Best Practice	Recommendations
Apply Different Governance and Technology Frameworks for CRM Systems of Innovation, Differentiation and Record	■ Adapt your architecture, governance and technology frameworks to business requirements by using bimodal IT and pace layers to segment use cases by systems of innovation, differentiation and record. ■ Protect critical systems of record by establishing an architecture that will govern data access, storage and security.
Avoid the Trap of Limiting Yourself to One CRM Vendor	■ Prepare for a multivendor CRM environment by segmenting applications with a pace-layering methodology (systems of innovation, differentiation or record) and by aligning your development and integration architectures to those layers. ■ Address the need for integration of multivendor CRM systems by evaluating and implementing cross-vendor development and integration tools.
Determine Your Future CRM Architecture	■ Build a CRM architecture that evolves to embrace current and future requirements by adopting a cloud-first approach for systems of innovation and engagement, such as sales force automation (SFA) and digital marketing. ■ Enable the ability to extend, build and integrate new application functionality by leveraging both vendor-provided and vendor independent development environments.
Use a Hierarchical, Weighted Evaluation Model for Vendor and Software Selection	■ Influence vendor selection by working with users to define requirements that incorporate functionality, scalability, integration, cloud and development platforms as a core part of the evaluation. ■ Plan ahead for future application development and integration requirements by evaluating vendor-provided tools as an integral part of the due diligence and vendor selection process.
Focus Applications on Cross-Departmental Collaboration, Customer-Journey-Centric Process Design and Multichannel Experience Management	■ Anticipate multicloud CRM requirements by establishing governance and management processes that accommodate software as a service (SaaS), platform as a service (PaaS) and infrastructure as a service (IaaS) CRM environments. ■ Deliver systems of innovation more quickly by applying an agile methodology to deliver a minimum viable functionality and by adding incremental functionality as user requirements adapt and mature.

Source: Gartner (September 2017)

Making Digital Commerce a Secure, Scalable and Engaging Reality

Digital commerce platforms today provide more than an online storefront and shopping cart. Digital commerce is the foundation for your company's ability to generate revenue by anticipating what products the customer is interested in, and by making the shopping experience engaging and

fruitful. Furthermore, commerce platforms need to integrate with and optimize adjacent systems, including search, payments, order management, inventory management and marketing. Digital business and IoT require integration with digital commerce functionality to enable the customer to purchase a product or service directly or as an automated part of an IoT process. Technical professionals should leverage the research featured below to develop an implementation plan for their organizations' commerce projects.

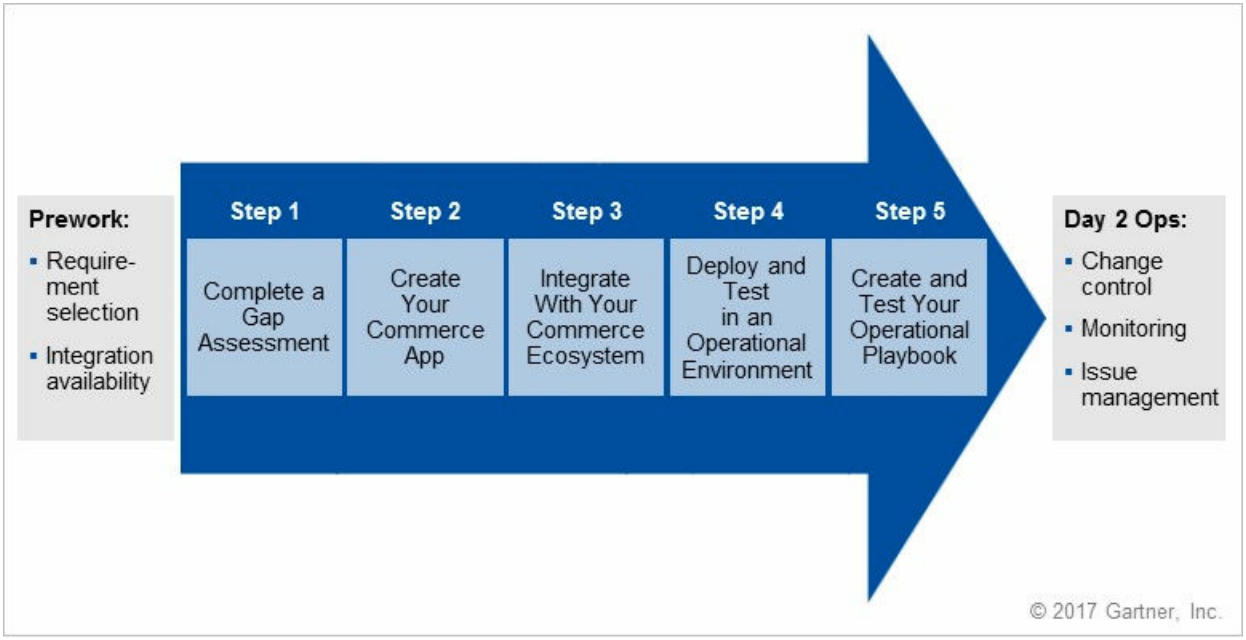
Related Research

"A Guidance Framework for Successful Digital Commerce Platform Implementations" provides our recommended process for implementing digital commerce solutions. It also includes a summary of high-priority areas that can have a significant impact on performance, security and scalability of digital commerce sites.

Running a modern digital commerce solution is a constant stream of separate, yet related, implementation efforts. Commercial digital commerce vendors continually release version updates and are increasingly offering cloud/SaaS-based versions of their own offerings and functionality. Your business users have a never-ending list of requirements that you must deploy and take responsibility for maintaining. Your customers and your business will not tolerate the slightest dip in performance or blip on the security radar. These challenges leave technical professionals asking, "How do I successfully implement a digital commerce solution using a vendor-provided digital commerce platform?"

Technical professionals can continually support rapid changes in their digital commerce solutions by following our five-step framework (see Figure 2) — and by applying these steps in an iterative approach, with each iteration providing an opportunity to improve.

Figure 2. Digital Commerce Implementation Steps



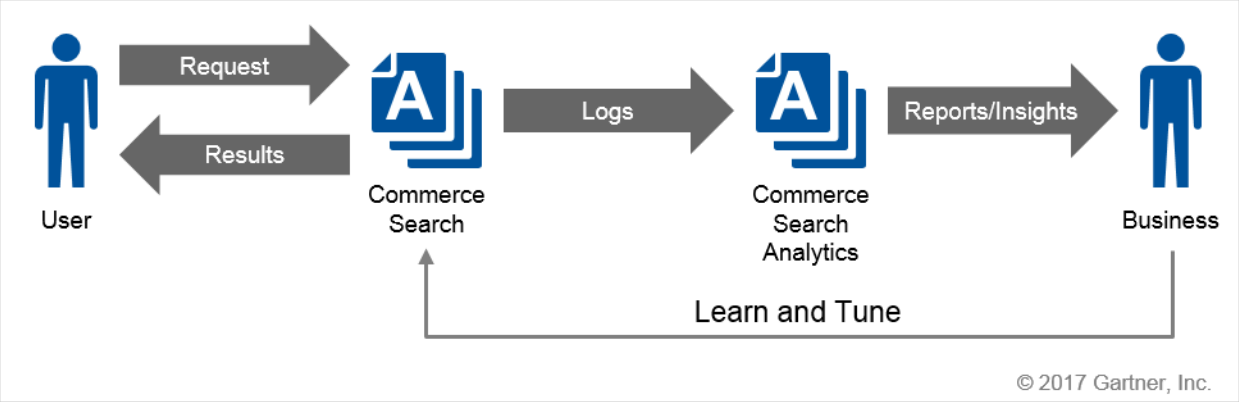
Source: Gartner (September 2017)

"A Guidance Framework for Implementing Digital Commerce Search" discusses the major requirements and recommended steps needed to achieve a successful search technology implementation for digital commerce. Digital commerce search is a critical and powerful function when it is implemented in a way that optimizes the user experience.

Search is essential for digital commerce solutions that have large, complex product datasets. A successful search implementation reduces the friction of product discovery for your customers and also empowers your business with the customer insights gained and used. By implementing a solution that is well-integrated with your data sources and augmenting it with modern personalization techniques, you will ultimately create an adaptive solution with constantly improving accuracy.

Technical professionals responsible for commerce search should solidify foundational components and integrate modern search functionality within their commerce solutions. Technical professionals who follow Gartner's implementation guidance framework will deploy a holistic solution that creates an adaptive and constantly improving search process (see Figure 3).

Figure 3. Digital Commerce Search Flow



Source: Gartner (September 2017)

Implementing Marketing Analytics That Enable a Superior Customer Experience

Having reliable analytics data at the disposal of decision makers is no longer a "nice to have" feature but, rather, is a vital tool for making critical business decisions. But implementing analytics without a clear strategy turns into a costly endeavor that can fail to deliver actionable insights to the business. To get the most out of an implementation using a web analytics tool, for example, the data points of the implementation must be customized to measure the key performance indicators (KPIs) that are uniquely key to your business. Technical professionals should avoid the pitfall of creating implementation rules or data layer architecture around expected user journeys, and expose all of the necessary contextual data points in the data layer of every page on your sites. These are among the lessons surfaced in our published guidance on implementing Adobe Analytics — and Gartner plans to publish similar guidance in the future on other analytics tools, such as Google Analytics.

Related Research

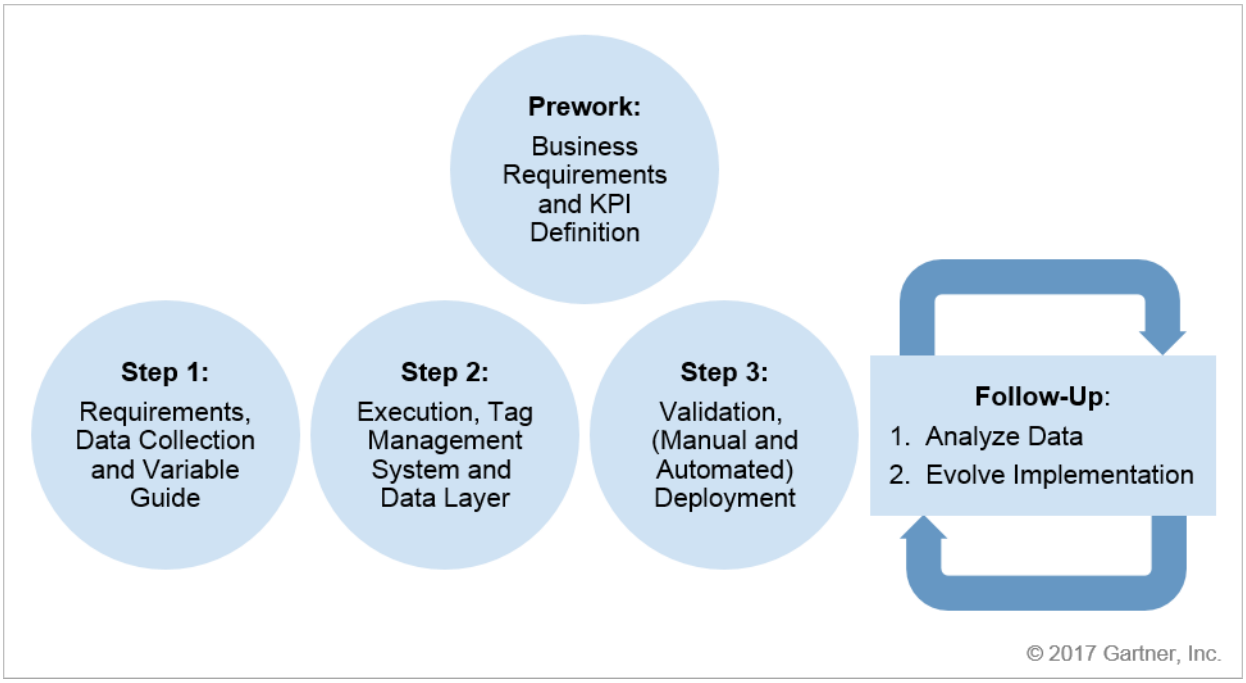
"Three Steps to Implement Adobe Analytics With Tag Management" provides a framework to successfully plan, implement and validate an Adobe Analytics project. Organizations seeking to maximize business value from Adobe Analytics should follow the steps defined in this framework to help ensure a successful implementation.

A successful implementation is not defined just by its technical execution, but also by its capacity to answer key fundamental business questions. The data collected at the end of the implementation should allow analysts to answer these questions in ways that are useful and compelling for decision makers. As the old adage goes, "You can't

improve what you can't measure," and the same could be said about what an organization is trying to improve: "You can't measure what you don't define."

Adobe Analytics implementation projects fail when expectations on the part of business stakeholders and analysts aren't met. To ensure success, the implementation process (see Figure 4) should begin with well-defined business goals, KPIs and metrics. Other critical priorities along the way include creating a data collection architecture, deploying a data layer and configuring a tag management system. At least half of the planned development time should be devoted to quality assurance and validation.

Figure 4. Recommended Process for Implementing Adobe Analytics



Source: Gartner (September 2017)

Extending and Securing Salesforce's Sales Cloud and the Salesforce Platform

By most measures, Salesforce is the largest CRM vendor in the industry, and its Sales Cloud product has been widely licensed and implemented. Many technical professionals need to extend the capabilities of Sales Cloud, however, and are challenged with choosing the right approach and the correct tools to work with. Security considerations and challenges regarding integration with non-Salesforce applications are key areas of concern for developers and architects implementing Sales Cloud and the Salesforce Platform (formerly named App Cloud).

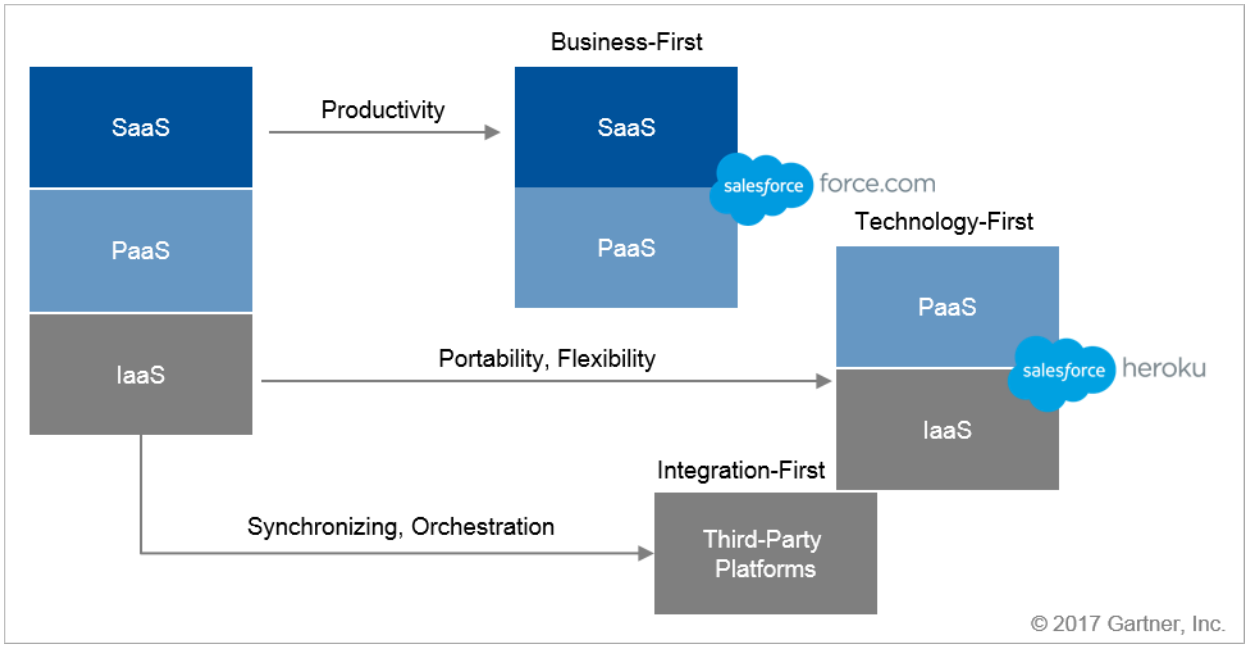
Related Research

"Choosing a Platform for Building and Extending Salesforce Sales Cloud Applications" examines the different tools available to build or extend Salesforce's Sales Cloud applications, and it guides technical professionals through the process of deciding which of these alternatives to follow.

Technical professionals responsible for building customer systems extending their Sales Cloud data face a multifaceted decision due to a variety of factors. This decision will impact all aspects of the application, including user experience, the required developer skills, operational concerns and long-term supportability. It will determine where business rules reside, how the application data is managed and the nature of integration needed with other enterprise and third-party systems.

Application PaaS (aPaaS) offerings provide a self-service, on-demand, managed platform for building, deploying and operating cloud applications. They are offered in two primary forms: high-productivity aPaaS, which is well-suited to a "business-first" approach; and high-control aPaaS, which is better-suited to a "technology-first" approach. The Force.com and Heroku offerings within Salesforce Platform are good examples of each type (see Figure 5).

Figure 5. One Salesforce PaaS Does Not Fit All Scenarios



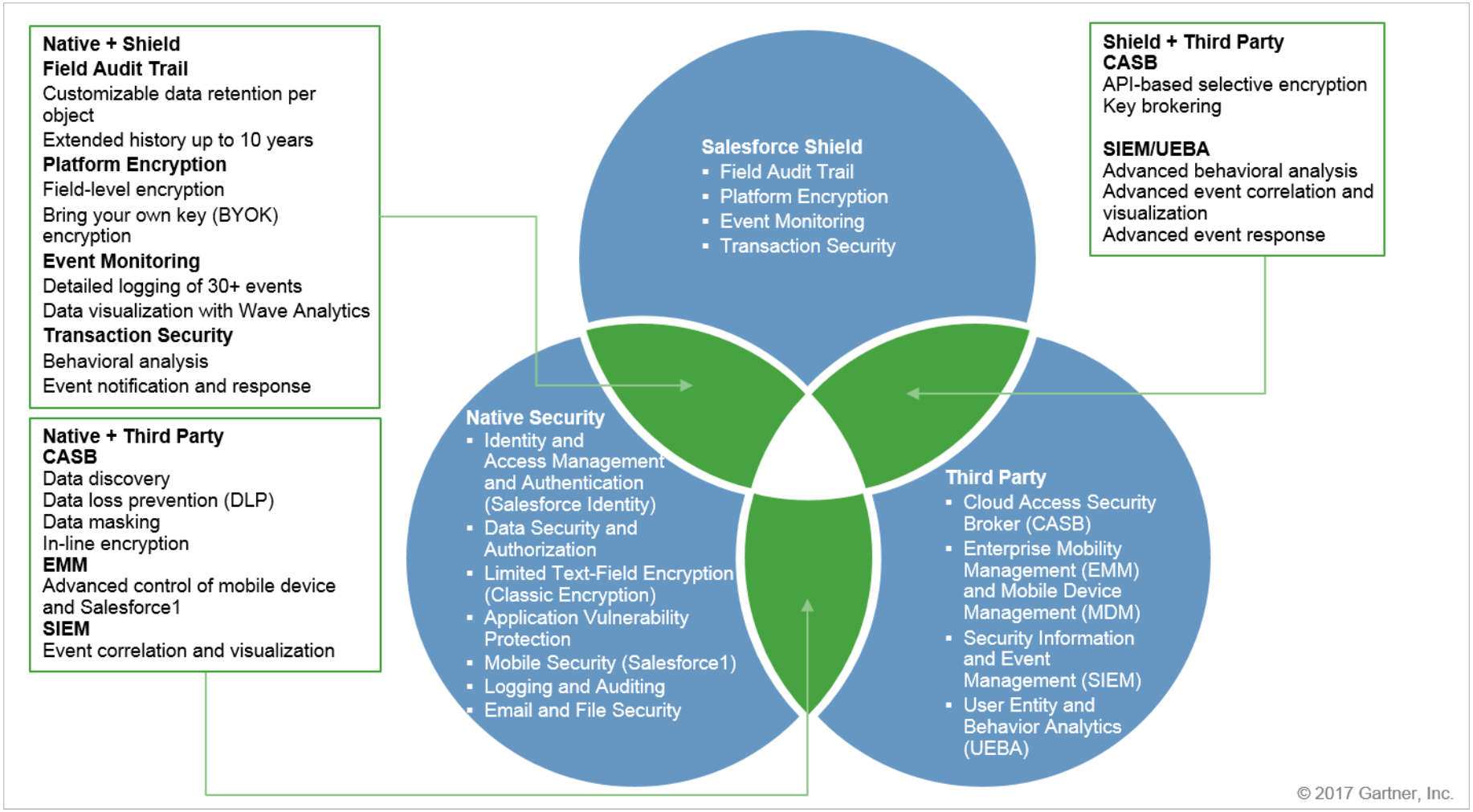
Source: Gartner (September 2017)

"Assessing the Security Capabilities of Salesforce Sales Cloud" examines Salesforce's Shield solution for enabling security on Sales Cloud implementations, and highlights areas for technical professionals to focus on as they ensure a secure CRM environment for their users.

Salesforce takes a "low code" or "no code" approach to functionality in many areas, simplifying basic installation, configuration and development for many use cases. Complexity, while mostly abstracted away from users, still lingers in the inner workings and exposes itself in some of the more advanced features. This is not uncommon in a modern PaaS, and Salesforce has done its homework in designing and refining the platform. However, organizations embarking on a Salesforce Sales Cloud implementation can inadvertently create security gaps, particularly as they start to leverage some of the advanced security functions or create custom code.

Salesforce provides a range of native security features as part of its standard licensing. Other advanced security features are licensed separately as part of Salesforce Shield. Native encryption, branded as Classic Encryption, carries some limitations that may not satisfy all aspects of regulatory restrictions or organizational security policies. Organizations with higher complexity, or those in highly regulated industries, will typically require one or more Shield capabilities to satisfy the security needs of their organization. Figure 6 provides an overview of security capabilities, highlighting where an organization might need a combination of products to satisfy a particular security requirement.

Figure 6. Salesforce Sales Cloud Security With Native, Shield and Third-Party Options



Source: Gartner (September 2017)

Using an API-Centric Approach to Application Implementation

Teams are finding that tools provided by enterprise applications limit their ability to create highly customized, innovative and scalable user experiences. An API-centric approach has emerged as an alternative method to implement the UI and integration for these types of applications. The API-centric approach involves using APIs provided by the enterprise applications to implement the optimal user experiences and integrations.

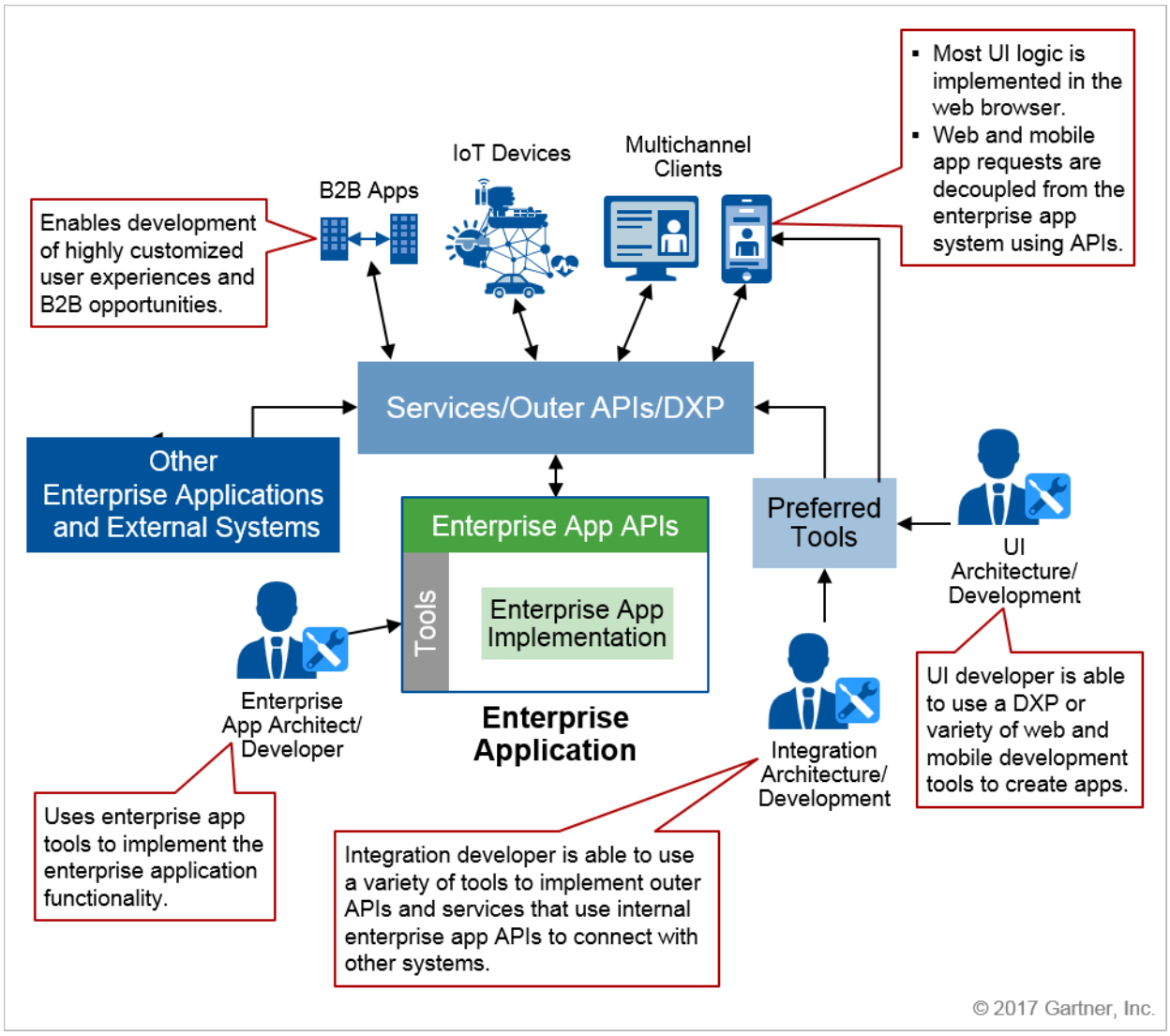
Related Research

"Assessing API-Centric (Headless) Approaches to Enterprise Applications" assesses the API-centric approach to enterprise applications and describes five use cases that benefit from it.

The API-centric approach allows teams to use preferred tools, frameworks and architectures to deliver a highly customized UI. Teams can also use a layered API architecture to provide flexible integrations, scalability and agility. The emergence of an API-centric approach leaves application architects asking the question: "When should we use an API-centric approach for an enterprise application, and what is required?"

In an API-centric approach, shown in Figure 7, the enterprise application exposes functionality via built-in APIs. The UI and custom integrations are separated from the enterprise application implementation in this approach. Separating the UI implementation from the enterprise application implementation gives the API-centric approach more flexibility and agility compared with a traditional approach.

Figure 7. API-Centric Approach



Source: Gartner (September 2017)

Related Priorities

Table 1. Related Priorities

Priority	Focus
Data and Analytics Programs	The right differentiating strategies and practices allow enterprises to fully exploit the convergence of data and analytics to deliver business value.
Digital Commerce Technologies	Digital commerce initiatives should create superior customer experiences and foster customer loyalty by balancing tactical projects with innovation.
Negotiating Software and Cloud Contracts	Effectively negotiating software license agreements and cloud contracts enables sourcing and vendor management leaders to mitigate compliance risks, cut costs, and ultimately enable business outcomes.
Mobile, Endpoint and Wearable Computing Strategies	This initiative enables IT leaders to create the endpoint computing environment components of a digital workplace that supports organizations' transition to digital business.
Application Strategy and Governance	The application strategy and governance initiative encompasses key disciplines and concepts that application leaders must embrace as organizations evolve toward digital business.
Analytics and BI Strategies	The analytics and BI strategies initiative focuses on the strategies, practices, technologies and products needed to support a variety of users across different types of business problems.
Application Development Strategies for Digital Business	Application development strategies shape the people, process and technology investments that drive the modernization and creation of innovative app experiences for digital business transformation.

Source: Gartner

Gartner Analysts Supporting This Trend


Jeffrey Skowron


Bill Delrieu


Richard Watson


Michael Isbitski


Brad Dayley

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"In-Depth Assessment of Microsoft Azure Application PaaS"

"Orchestrating Docker Container-Based Cloud and Microservices Applications"

"Protecting Web Applications and APIs From Exploits and Abuse"

"How to Integrate Application Security Testing Into a Software Development Life Cycle"

"Using Angular to Build JavaScript Web Applications"

"Assessing Event-Driven Architecture for Scalable and Reactive Web Applications"

Evidence

Supporting evidence for this analysis was obtained from the following sources:

"CRM Application Functionality Starfish."

Results were based on a Gartner study conducted to gain insight about trends among adopters of IoT. The research was conducted online from June through August 2017 among 717 respondents in four countries: Germany, Japan, the U.K. and the U.S. Participating organizations were screened to have already delivered IoT solutions or have working projects in progress and were not meant to represent the IoT market as a whole.

"Forecast Overview: CRM Software, Worldwide, 2016 Update."

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