ASPIRE
CUSTOMER COMMUNICATIONS SERVICES

White paper

From Software to Services Part I:

How CaaS will fundamentally disrupt the CCM industry in years to come

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INTRODUCTION

Customer Communications Management (CCM) is defined as the creation, management, storage, delivery and presentment of data-driven, device and channel agnostic communications at scale. Traditionally, CCM referred to the production of static, outbound critical documents such as bills, statements, notifications and policies. In recent years, as the result of technological advances and changing business needs, modern CCM software has shifted its focus from operational and financial document communications to marketing and transactional customer experience strategies designed to help organizations manage communications and interactions across any stage of the customer lifecycle, including acquisition, onboarding, and retention.

Figure 1: From CCM to CXM

Source: Aspire 2019

A key driver behind this evolution from CCM to Customer Experience Management (CXM) has been the shift from on-prem software installation to cloud-based solutions. In the first installment of this two-part Quadient-sponsored whitepaper series, we will explain why businesses must deploy micro-services as a managed services to secure a CX-driven future. We will also review the latest advances in CCM cloud computing and explore the market's ongoing transition to containerization. The second part of the series will conclude by outlining Quadient's role in this emerging field while detailing the benefits their newly developed cloud platform offers clients.

KEY RECOMMENDATIONS

1. Enterprises working to modernize their IT infrastructures for customer communications should evaluate Communications-as-a-Service (CaaS) platforms. Hosted and managed by their provider, these solutions offer a range of benefits including deployment flexibility, compliance and security, faster time-to-value, and lower operational cost.

2. By shifting to CaaS, enterprises can quickly and easily build new customer experience solutions, or extend existing business-facing processes with customer-facing digital experience capabilities. For enterprises accelerating digital transformation in response to post-COVID-19 market conditions, CaaS provides a faster and more agile way to deliver innovation and better customer value.

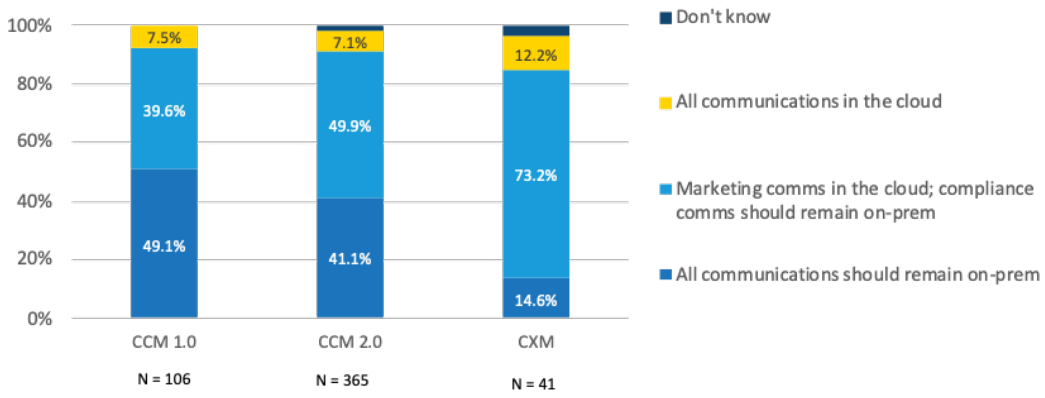
3. CaaS is not only relevant for enterprises, but is also a very useful tool for services providers who are developing innovative customer engagement solutions so that they can sell on business goals and strategic outcomes instead of the simple transactional delivery of technical capabilities.

RECENT CLOUD DEVELOPMENTS IN CCM

TECHNICAL DRIVERS OF CCM CLOUD ADOPTION

Since the emergence of public cloud infrastructure in the late 2000s, enterprises have been gradually shifting their IT infrastructures and software applications to the cloud. Now that public cloud service providers such as AWS and Microsoft Azure have become more mature, better regulated, and more affordable, we're seeing a strong acceleration of CCM software to the cloud. In our latest research, we found that 29% of U.S. enterprises have projects underway to migrate outdated CCM-IT infrastructure to modern, cloud-based platforms.

Figure 2: Enterprise cloud strategies for CCM, 2019-2021



Source: Aspire, "The State of CCM-to-CXM Transformation", 2019

There is a general consensus by CCM industry followers that we've reached a tipping point and that cloud adoption will now overtake on-prem deployments going forward. Nevertheless, it must be said that cloud adoption by enterprises today is most often accomplished by shifting the entire IT infrastructure to the cloud or by buying a CCM solution from a service provider running traditional, perpetual licensed software in a single tenant virtualized environment. We expect this also to change in the near future, as most vendors in the CCM space have already begun to port their software over to cloud-native architectures that support containerization based on technologies like Docker and Kubernetes.

THE IMPORTANCE OF CONTAINERIZATION

The shift to containerization is important because it gives enterprises more deployment flexibility, allowing those in a container-environment to run on-prem as well. While on-prem containerization typically prevents an enterprise from elastic scaling compared to public cloud-based containerization, the benefit of on-prem installation is that enterprises can build hybrid models in

which some components (the ones that process sensitive personal information) run on a fully controlled network while other containers (the ones dealing with tracking, metadata, dashboarding, or the processing of non-personal customer data) can be deployed in a public or multi-tenant cloud environment. Another benefit is that if the organization is not ready yet for full cloud deployment, they can start on-prem and shift to a public cloud once certain security or risk management requirements have been met.

The componentized nature of containerization is accelerating the shift to more micro-services as well. This means that CCM software is developed in a more granular fashion, enabling vendors, enterprises, and service providers to build industry-specific or even company-specific solutions by integrating CCM into a wider set of enterprise IT solutions. These could be digital marketing or digital experience solutions that help the enterprise not only optimize and shorten acquisition-type processes, but also enable them to deepen the integration with back-office or core industry systems to improve the customer experience of mission-critical business processes in billing, customer service, legal, risk and compliance, or even HR processes for better employee engagement.

New technical developments such as containerization will further the uptake of cloud CCM, even when those cloud-native solutions are deployed in on-prem or hybrid environments. Beyond technical development, certain market and business drivers also play a crucial role in the growing adoption of cloud-based CCM.

MARKET AND BUSINESS DRIVERS OF CCM CLOUD ADOPTION

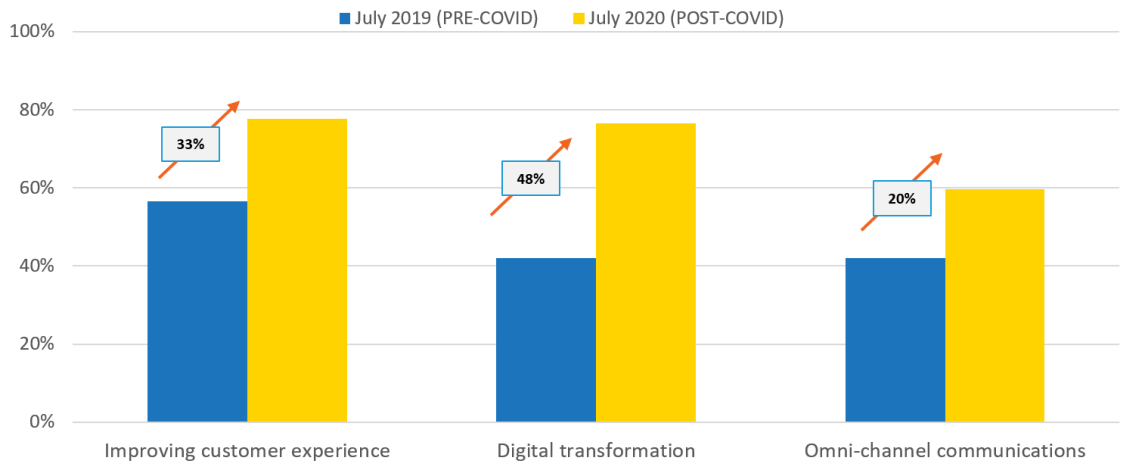
In our 2019 study on the evolution of CCM to CXM, we found a strong correlation between omni-channel maturity and cloud adoption. Enterprises with a low omni-channel maturity, which we define as CCM 1.0 organizations, made up an estimated 30% of the market in 2019. These businesses favor mostly on-prem deployment and primarily send print or static electronic documents. On the other hand, CCM 2.0 enterprises have passed control of customer communications to line-of-business users who want to leverage the benefits of mobile messaging, and prefer to run marketing communications in

" In times of crisis, superior customer communications and interactions are essential elements in any effort to instill trust with consumers and retain a customer base."

Source: Aspire, 2021

the cloud while keeping compliance communications behind their firewall. We estimated that 60% of enterprises had reached this stage by 2019. True CXM organizations, those with the highest level of omni-channel maturity, enable centralized customer experience (CX) teams to manage customer communications and are the most comfortable with cloud distribution. They design communications based on their customers' channel preferences, track every interaction for better insights as well as behavioral analysis, and (as much as they can accommodate it) they allow customers to seamlessly switch between channels. We estimated that only 10% of the market had evolved to this point by 2019, but we expect many more companies to join the ranks as a result of the COVID-19 pandemic. As Figure 3 illustrates, since February 2020, we have witnessed a rapid shift toward digitalization and omni-channel messaging with a focus on improving customer experience through superior communications interaction. In times of crisis, superior customer communications and interactions are essential elements in any effort to instill trust with consumers and retain a customer base.

Figure 3: The importance of CX, Digital Transformation, and Omni-channel Communications for the U.S. corporate C-suite, 2019 vs. 2020



N = 300 enterprises in the U.S. (2020)
N = 138 enterprises in the U.S. and Canada (2019)

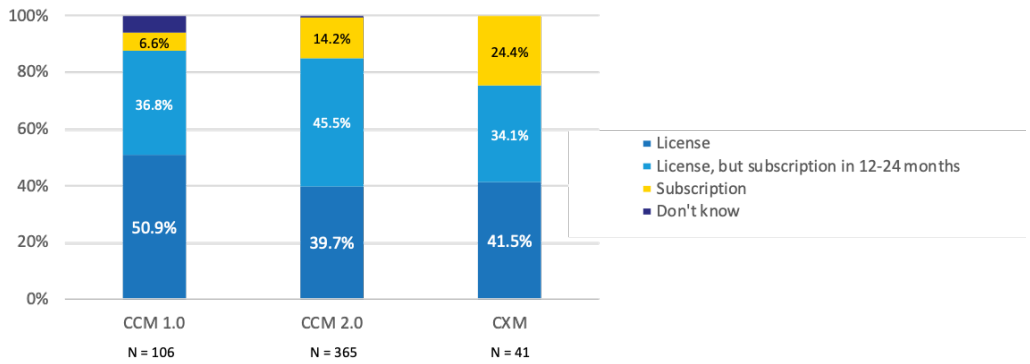
Source: Aspire, "Understanding the New Reality", 2020

"43% of respondents said that they expect to switch to subscription-based pricing in the years ahead."

Source: Aspire 2020

New corporate buyers in marketing and customer experience have different needs than the traditional ones in IT, and as Figure 4 shows, they are also more likely to buy CCM software as a subscription. Interestingly, on average, 43% of respondents said that they expect to switch to subscription-based pricing in the years ahead.

Figure 4: CCM purchase preferences by omni-channel maturity level



Source: Aspire, "The State of CCM-to-CXM Transformation", 2019

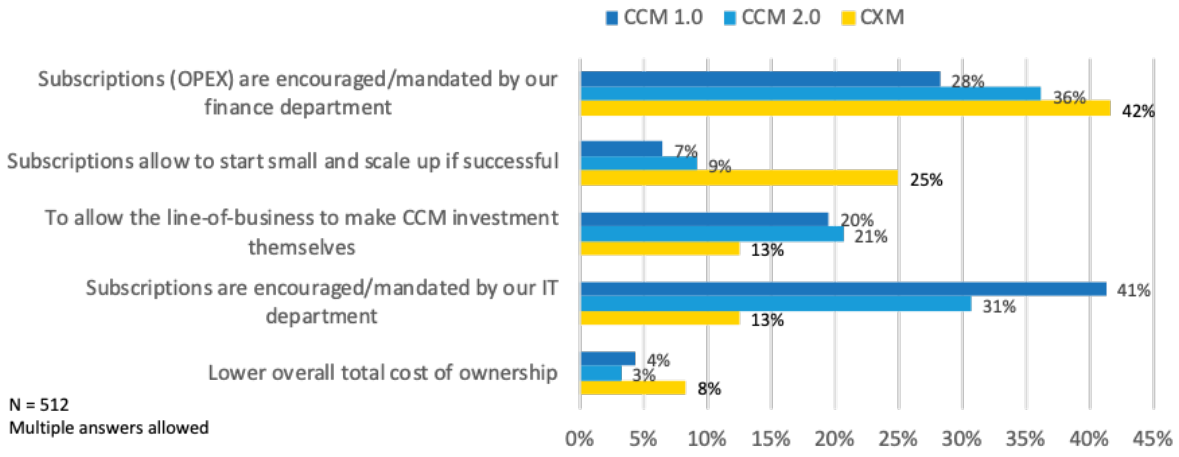
"DevOps is a set of practices that combines software development (Dev) and IT operations (Ops) with a goal of shortening the system development life cycle and providing higher quality software through continuous delivery."

Source: "Integrating the IOT into Software Engineering Practices", Advances in Systems Analysis, Software Engineering, and High Performance Computing, IGI Global, April 2019

Source: Aspire, "The State of CCM-to-CXM Transformation", 2019

demonstrates that organizations with the highest omni-channel maturity (the CXM-led organizations) are more likely to favor OPEX over CAPEX. Furthermore, when compared to IT-led organizations (CCM 1.0), they are about three times more likely to buy CCM to start small, experiment, and then scale up once successful. This "land-and-expand" model does not make sense if one thinks of CCM in the traditional way as a large scale, corporate-wide document generation system with 12 to 18-month implementation cycles. However, it makes perfect sense if CCM is part of a DevOps process in which the CX team works hand-in-hand with the business to quickly develop cutting-edge omni-channel applications as part of a digital transformation project. An example would be turning paper-based onboarding into a next-gen digital process that leverages the latest digital identity services, intelligent forms, personalized videos, digital signatures, and integrates with a cloud-based CCM system to manage and track interactions in a scalable and compliant manner.

Figure 5: Primary drivers for buying CCM as a subscription versus perpetual licensed software?



Source: Aspire, "The State of CCM-to-CXM Transformation", 2019

CAAS: THE NEXT FRONTIER

WHAT IS "COMMUNICATIONS-AS-A-SERVICE?

So far, we have established that:

1. CCM buyers are shifting to cloud in order to reduce operational cost while improving productivity and gaining scalabilty.
2. Providers are breaking CCM software into components by relying on web-based micro-services resulting in greater innovation and a faster time-to-value.
3. Emerging buyers in digital transformation, marketing, and CX are turning to new development practices (such as DevOps) that favor cloud integrations, rapid prototyping, scalabiltiy, and OPEX pricing. These efforts improve operational excellence, reduce operational and labor cost, and help their

organizations better meet security, compliance, risk, and accessibility regulations and pressures.

In order to meet the evolving needs of their customers, software vendors and service providers are beginning to change the way they develop and distribute CCM solutions. Most vendors have evolved their underlying architectures and development practices from cloud-ready to cloud-native, and are now working on new ways to make their cloud software available to customers. So far, we're seeing two main approaches emerging in the CCM industry:

1. **CCM clouds**. Here, the traditional CCM solution is re-ported into a cloud-native architecture based on web-services, containerization, and browser-based user interfaces, and offered as a unified set of services and interfaces. As we will see, popular CCM product components such as rendering, content authoring, and interactive elements are turned into dedicated, stand-alone services. Those services are part of a vendor-developed CCM platform that includes foundational services dealing with user management, setup/administration, authentication, billing and payments, data services, reporting, content services, emerging AI technologies, and more. This platform is either hosted at the vendor's own data center, a public cloud provider such as Amazon Web Services (AWS), Microsoft Azure, or Google Cloud, on the buyer's own infrastructure, or even using a combination of the three, depending on how much deployment flexibility is built into the platform.

2. **Enterprise Clouds**. The other option that we see emerging is a so-called enterprise cloud, which differs from the Communications-specific SaaS or Platform-as-a-Service (PaaS) approach above in that it provides a unified environment for a single point of control of *all* enterprise IT applications that the vendor offers, not only those exclusive to CCM. Enterprise clouds often manage their infrastructure centrally as well, meaning that they can typically run in any cloud, including private, public, distributed, multi-cloud, and more. It is important to note that partner solutions may have a place here as well. Most providers of enterprise clouds are keen to extend the

value of their platform by including partner solutions as "apps", by facilitating integrations through a market exchange of prebuilt connectors, or by using integration (iPaaS) solutions. In a similar fashion, enterprise IT providers who do not offer CCM, may invite CCM partners to make their solution available as "app" or "service" on their enterprise cloud. Examples include enterprise clouds from Salesforce, Microsoft, IBM, Oracle and other enterprise-class providers.

THE SHIFT TO MANAGED SERVICES

As CCM software is increasingly offered as a set of cloud services, vendors are now shifting their sequential release schedules into more continuous development cycles. For on-prem installations, upgrading to a new version requires heavy IT involvement, but in cloud-native environments, new version updates can be installed directly by the vendor and distributed instantly. In addition, many vendors have evolved their architecture to leverage the benefits of the cloud and support cloud-native scaling, setting them up for rolling updates without any downtime or performance degradation. Furthermore, they have built solutions that help their Quality Assurance teams test and release new versions in a more automated fashion without needing to dedicate IT resources.

By shifting to a continuous, cloud-based deployment model, the vendor is essentially becoming a managed services provider.

CCM-SPECIFIC MANAGED IT SERVICES

Managed services that relate to the CCM infrastructure are IT services offered by a vendor or service provider to ensure 100% availability of the cloud platform (or as close to total availability as possible). Instead of the enterprise installing and managing the software itself, it contracts the vendor, system integrator, delivery partner, print BPO or other service provider to manage the software on its behalf. Beyond managing the uptime of the platform, managed services of this type also include maintenance, bug fixes, and updating the platform to the latest versions.

DESIGN AND MANAGEMENT OF CUSTOMER COMMUNICATIONS

"Making a communications change using traditional IT models takes, on average, two or three months, but a cloud-based platform underpinned by smart content and intelligent approval workflows enables business users to make changes themselves and can significantly shorten cycle times, in some instances, making changes virtually in an instant."

Source: Aspire, 2020

A stronger push for employee engagement and better customer experience has resulted in a major trend toward empowering business users to create and manage communications themselves without IT involvement. In very traditional on-prem environments, business users must direct IT developers toward the communication templates they need to create or change, resulting in costly delays. When working under these constraints, the industry average for minor document changes can stretch to two or three months! In enterprises that have outsourced CCM, IT's role has been assumed by the service provider, but long cycle times, the frustration they inspire, and the costs they incur remain. By using browser-based software that empowers business users to make changes themselves, costs and cycle times can be minimized. Nevertheless, there is still some setup required, and in more complex scenarios, there is a need for outside expertise to build the initial version of the templates or application. This is where managed services come in to setup or develop new communications and experiences while helping client teams find their feet.

The extent to which design and management of communications is offered depends on what the customer needs and what the vendor or service provider is able to offer. On the extreme end of the outsourcing scale, all communications are fully managed by the vendor or service provider, while on the other end of the spectrum, the vendor simply offers the infrastructure.

CONCLUSIONS

In Part I of this two-part series, we have examined the drivers behind CCM cloud adoption and the importance of containerization, explored the new frontier of Communications-as-a-Service, and discussed the shift to managed services and business control of communications. In Part II, we will show how all of these dynamics are leading to the integration of CCM and digital experience platforms and the creation of consolidated, end-to-end solutions. We will also detail some of the specific services and benefits of CaaS before diving into Quadient's contribution to this emerging market.

ABOUT QUADIENT

Quadient, formerly Neopost, is the driving force behind the world's most meaningful customer experiences. By focusing on four key solution areas including Customer Experience Management, Business Process Automation, Mail-Related Solutions, and Parcel Locker Solutions, Quadient helps simplify the connection between people and what matters. Quadient supports hundreds of thousands of customers worldwide in their quest to create relevant, personalized connections and achieve customer experience excellence. Quadient is listed in compartment B of Euronext Paris (QDT) and is part of the CAC® Mid & Small index. For more information about Quadient, visit our website quadient.com/experience.

ABOUT ASPIRE

Aspire Customer Communications Services is a technology strategy firm, specializing in customer communications management (CCM) and digital customer experience (DCX). The company offers strategic, industry-leading advice to enterprise end-users, technology vendors and service providers. Visit aspireleaderboard.com for our CCM industry portal or aspireccs.com for our consultancy website.

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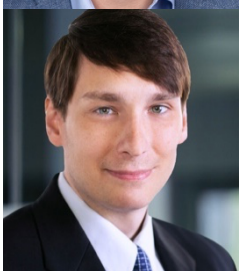

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