

Closing in: The development of CPaaS towards a cohesive market structure

The opportunity for consolidation is rife within the CPaaS market. To succeed, large players should look to leverage significant synergies possible through acquisition of smaller players



Communications platform as a service (CPaaS) allows businesses to develop and manage communications features without needing to develop and maintain the infrastructure on the back end of the service. CPaaS makes it easier than ever for companies to create differentiating customer communication experiences while promising to reduce costs and speed up innovation.

Rise of CPaaS

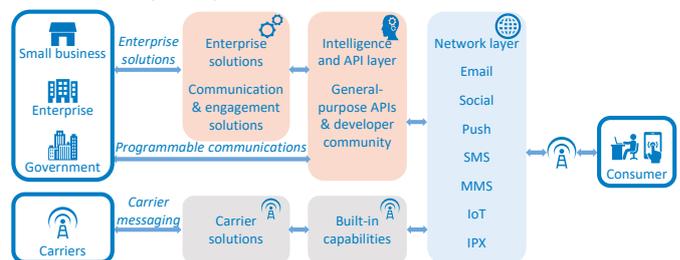
CPaaS has grown at a CAGR of over 10% along with the boom in digital business, omnichannel software as a service (SaaS), and infrastructure as a service (IaaS) that has taken place over the last 10 years. These products offer quick and easy ways for businesses to build features that allow them to communicate with their customers safely and reliably, helping to speed up innovation in a fast-moving market. Today, omnichannel communication is a major driver of customer satisfaction, since communication preferences are so varied and customers expect to be contacted on the platform of their choice. Furthermore, CPaaS offers increased data security, net promoter score (NPS), and new forms of innovative customer interaction.

Key CPaaS use cases

Initial CPaaS adoption was driven by digital companies such as on-demand economy players (e.g., Lyft, Uber, and Airbnb), the over-the-top (OTT) players (e.g., Snapchat, Twitter, and WhatsApp), and the cloud companies (e.g., Amazon, Microsoft, and Google). However, over the past couple of years, a large number of traditional enterprises have adopted CPaaS, including Daimler Group, Goldman Sachs, and Nike, among many others. The first figure opposite depicts the CPaaS journey across different use cases.

Use cases are diverse, but some of the largest include marketing, authentication, and customer support. Each of these can be delivered over a variety of different platforms, including SMS, voice, OTT, RCS, email, and so on (see second figure opposite).

CPaaS use case journey



Source: Arthur D. Little analysis

CPaaS use cases

- Marketing and sales use cases – Offering well-timed incentives and information to simplify and accelerate the purchase process
- Authentication use cases – Improving security of customer accounts and transactions with 2FA
- Customer support: engagement use cases – Contacting customers who have forgotten something or need to know something important
- Customer support: notification use cases – Alerting customers to changes in delivery status of their purchases
- Customer support: feedback use cases – Offering customers the opportunity to give invaluable feedback, both positive and negative

Source: Arthur D. Little analysis

Authentication

CPaaS enables businesses to use services such as two-factor authentication (2FA) over SMS or OTT to enhance security for them and their customers. This is already a mature use case; businesses in a variety of industries around the world use 2FA as an extra layer of security during the customer-onboarding process.

Marketing

CPaaS capabilities allow companies to conduct orchestrated large-scale marketing campaigns towards customers over a variety of different platforms. Customers can be contacted over their preferred platforms — customers in Latin America over WhatsApp, in China over WeChat, and in Japan over Line — helping to foster higher customer read and response rates and improving the effectiveness of the campaign. Furthermore, many CPaaS providers offer extensive analytics services as part of the bundle, allowing businesses to further tailor their marketing campaigns.

Customer support

CPaaS services enable businesses to contact customers over their preferred platforms to offer individualized customer support. By managing customer communications over the cloud from a single platform, businesses no longer have to build a full communications stack, simplifying an otherwise complex process. 'Inbox' features are offered, where customer support agents can see all communications with a particular customer in one place. Furthermore, chatbots and automated response services are typically available.

Benefits of CPaaS

CPaaS is a compromise between infrastructure as a service (IaaS) and software as a service (SaaS), combining the customization of IaaS with the ease and speed of SaaS. It offers a fully built back end while maintaining the ability for a developer to build software and applications over the top. In a nutshell, PaaS gives customers the platform and all the tools required to develop their own SaaS platform, with precisely the specifications required for their unique business.

While businesses could build their own communication stacks or purchase unified communications as a service (UCaaS) software, CPaaS offers the following three benefits:

1. Customization and scalability. CPaaS is cloud-native, thus easily scalable. A wide range of purpose-built environments can be easily added offering customization.
2. Time to market. CPaaS offers a ready-made environment, on top of which development is easy. Applications can be quickly created and integrated; developers have no need to focus on the underlying mechanics of the back-end infrastructure.
3. Cost structure. CPaaS is sold on a pay-per-use model, and upfront CAPEX purchases are not required — CAPEX effectively becomes OPEX. Furthermore, software development knowledge is required only at the level of the application rather than the system. Therefore, CPaaS requires no in-house experts, reducing the OPEX.

CPaaS is not yet a cohesive market

Despite the hype that CPaaS generates, it can hardly be called an established market; there are no clear bounds in terms of what constitutes a real "CPaaS service". Many companies seeking to associate themselves with the growth coming from the CPaaS industry brand themselves as CPaaS players, despite offering limited services across a limited number of communications channels. To simplify, market players can broadly be split into applications-focused businesses and network-focused businesses (see figure below).

CPaaS market players

Applications businesses	Network businesses/Aggregators
 MessageBird  infobip  sinch  twilio  TeleSign	 zenvia  OpenMarket  kaleyra

Source: Gartner, Arthur D. Little analysis

Applications businesses

These "pure-play" CPaaS firms are software businesses that provide a wide range of APIs, sample code, software development kits (SDKs), and libraries to help developers quickly build their own applications. They specialize in quick delivery without getting into the depths of telecom networks and are often perfect for smaller businesses just getting started with their communications stacks. Onboarding of the long tail of smaller customers is typically fully automated, and a developer ecosystem exists to offer support to developers.

Aggregators/network businesses

These businesses typically start off as network owners and expand to add APIs to their core offering.

Market growth and trends

Market size and forecast

Over the next five years, the CPaaS market is expected to exhibit strong growth, at 27.6% CAGR, as shown forecasted in the figure below. This would bring the market from 15.3 billion euros as of 2019 to 51.7 billion euros as of 2024.

CPaaS market revenue, in EUR bn, global



Source: GlobalData, IDC, Gartner, Arthur D. Little

Market growth potential

Growth will be driven primarily by the expansion of CPaaS services into more areas of the market. As the world becomes increasingly digital and more commerce takes place online, CPaaS services will be crucial for facilitating transactions, marketing, and customer support.

Furthermore, new features in development include:

- Predictive messaging. Natural language processing (NLP) offers the potential for hyper-relevant, personalized responses to customers.
- Intent mapping. Customers can be moved into automated conversation flows based on their intent.
- Personalization engine. Artificial intelligence and automation will help hone personalization efforts.

Each of these new features will likely drive revenue growth and more than compensate for the price erosion in communications services that is taking place within the broader telecoms market.

Is global CPaaS domination on the horizon?

At the time of writing, there is significant hype around what we have termed applications-focused businesses, since companies in this field offer the potential to dominate the entire CPaaS market across all types of communication. Achieving this level of technological domination would provide huge revenue growth.

However, the R&D costs required for any company to reach this point of market dominance are staggering. Twilio currently looks to be the closest to such a position, having already spent massive sums on R&D; in 2019, Twilio spent US \$391.4 million on R&D, compared to revenues of \$1.134 billion, with an operating loss of \$369.8 million. At the time of writing, profits are incredibly slim. Furthermore, a focus on breadth of service can sometimes come at the cost of reliable functionality, and such high R&D spend often means less is spent on customer support and customization for large companies.

Strategic consolidation in the industry

While consolidation is underway in the industry, the market is not yet mature, and it is still an open race to see which player might come to dominate it.

Application-to-person (A2P) messaging and voice services, a dominant portion of CPaaS, is a business with significant economies of scale, both on the revenue side and the costs side:

1. Large CPaaS providers have better prices per unit with mobile network operators (MNOs) and aggregators.

2. Large CPaaS providers have more direct carrier routes (routing slows down message delivery with a larger risk of lost messages).

To put it simply: more direct routes give better quality; higher volumes give better prices. Small local providers have neither advantage, while global providers have both. This is particularly important for those CPaaS companies that are heavily invested in message and voice termination, but less so for those that focus on OTT services. On the applications side, larger providers have the advantage of being able to offer customers increased functionality and a broader ecosystem around APIs.

Given these realities, smaller players are at a disadvantage competing in the market, except in certain niches. Many are seeking acquisition before their value erodes due to lack of scale. For large companies, this represents an opportunity to become even larger, with the possibility for significant synergies along the way.

Strong synergy economics support consolidation

Significant synergies are available, particularly through a reduction in costs. Synergies have been seen to range from anywhere between 5% (Sinch purchase of Wavy) to 60% (CLX purchase of Mblox) of combined EBITDA, depending on the nature of the merger. These synergy calculations are the primary driver of consolidation in the market.

Revenue synergies

Synergies on the top line come from three primary areas:

1. Cross-selling. Companies have the possibility to cross-sell different products to each other's customers, with the advantage of being a reputed vendor. Combining platforms and customers increases the industry and geographical reach and overall target market of the combined company. However, note that big businesses typically value customization and support more than extensive functionality, and thus are often willing to purchase multiple cloud communication solutions from different providers. Therefore, cross-selling synergies are more difficult to achieve unless the merging entities have a unique value proposition.
2. Improved carrier routes/relationships. A merged company can combine the best routes of the two companies, meaning more high-quality direct routes overall.
3. Increased data quality and quantity. Greater total volume of data that can be used to enhance core CPaaS services or any other products offered. Telesign, for example, uses the data from its CPaaS platform to enhance services in digital ID verification.

Cost synergies

Reducing the workforce and footprint by eliminating overlap can result in extraordinary synergies — sometimes reducing the cost structure of an acquired company by up to 60%:

1. Reduction in cost of goods sold (COGS). A2P termination is a volume-driven business, and with combined higher volumes, the termination cost per message can be negotiated down. According to previous M&A benchmarks, COGS reduction can reach up to 4–6% of total SMS COGS.
2. Administrative function savings. Most of the administrative structure of an acquired company (HR, finance, etc.) is redundant, since there is typically significant overlap. Moreover, companies can aim to combine carrier relations teams in overlapping footprints, maintaining only those personnel who hold the best relationships. Wherever costs remain, the quality of direct carrier relationships has increased.
3. Platform OPEX and CAPEX. Platforms are typically combined across merged companies, though it takes significant time and effort. Migrating traffic from two different platforms into one reduces long-term technical operations costs, mainly from the reduction of licenses, maintenance, and support for network operations centers, system engineering, data centers, and platform refactoring and maintenance. Furthermore, planned CAPEX on the redundant platform becomes obsolete.

Companies typically maintain sales and technology development staff post acquisition. They need sales staff for account management and to manage the expected larger client base. Technology development staff have skills that might be hard to recruit from the market.

Outlook: what is the way forward?

The CPaaS market is predicted to grow at an astonishing 27.6% CAGR over the next five years, providing huge opportunities for growth and investment. The firms that come to dominate the market will achieve their growth through a variety of paths. Growth can arise through securing multi-channel leadership with a global carrier footprint and high-quality capacity and reliability, facilitating high transaction volume goals at low cost. It will arise as well through ingenious cloud platform architecture, supporting scaling capacity, microservices, and an extending platform upon which data unification, analytics, and enablement can be easily developed. Perhaps most importantly, growth will come through acquisitions. The race to CPaaS dominance is on, and the company with the most visionary acquisition strategy will likely emerge with the gold medal.

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