Next-Generation Communications Platform as a Service

A New Chapter for Developers and Service Providers in Integrated Collaboration

Integrated collaboration platforms: a vital bridge in the age of digital transformation

It's no longer a debate. Digital transformation (DX), enabled by technologies such as cloud and mobility, is a necessary endeavour not just for success but survival in today's digital economy. However, IDC's research shows that a majority of organisations in the Asia-Pacific region are still struggling to digitally transform[1], and siloed communications is a major roadblock.

75%
of enterprises in APEJ have a DX strategy

ONLY
15%
have well-advanced DX capabilities

62%
are stuck in the initial stages of their DX journey

Standalone unified communications and collaboration (UC&C) **solutions** is one of the key reasons for this digital deadlock.

A game-changing approach for developers

The siloed nature of UC&C solutions creates challenges for organisations seeking to integrate communication functionalities into their business processes. **Communications platform as a service (CPaaS)** is born out of this enterprise need to overcome silos and reimagine messaging and communications to revolutionise customer engagement.

CPaaS takes application innovation to a new level. With a platform approach, developers have the tools they need to embed communications functionalities such as voice and video into enterprise apps to increase productivity and enhance customer experience.

This **IDC InfoBrief** looks at how devlopers, service providers (SPs), and systems integrators (SIs), can take advantage of the massive opportunity of CPaaS.

MARKET PREDICTION

By 2022, at least

70%

of enterprises will leverage CPaaS platforms to simplify and customise a broad range of communications applications, including video, to enhance customer experience

¹ Source: IDC DX MaturityScape Benchmark Survey
² Source: IDC Worldwide FutureScape Telecom Predictions 2019: APEJ Implications

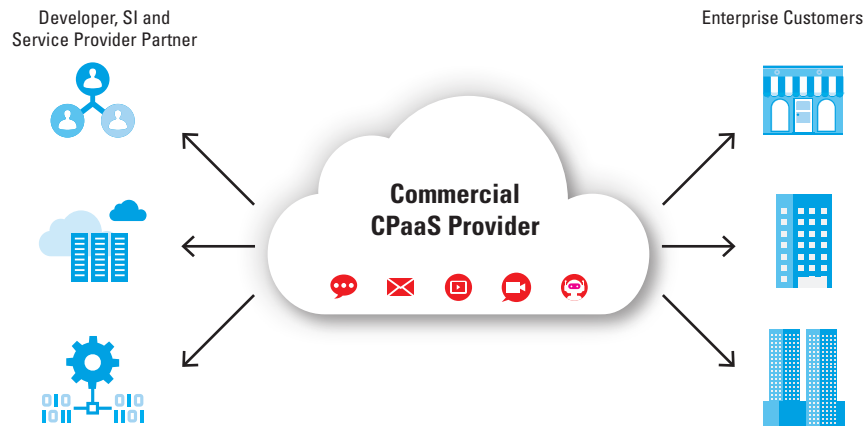# CPaaS: Enabling communications-rich applications

A cloud-based platform, CPaaS enables developers to embed real-time communications features (including voice, text, video, instant messaging and social media) in their internal and external applications using developer-friendly application programming interfaces (API) as building blocks.

✓ Flexibility to integrate functions into mobile and web applications for internal business processes and customer-facing experiences.

✓ By focusing on creating applications, the platform environment encourages development innovation.

✓ Developers can create custom applications perfectly tailored to each unique business environment.

CPaaS Ecosystem

Developer, SI and Service Provider Partner

Enterprise Customers

Commercial CPaaS Provider

How is **UCaaS** different from **CPaaS** ?

Unified communications as a service (UCaaS) **is largely a standalone collaboration environment**. Organisations use **pre-built** standalone communication applications hosted in the cloud.

CPaaS enables organisations to **embed collaboration functionalities** into their enterprise applications and to **create customised versions of UC solutions**, instead of using out-of-the-box UC solutions.

5-year CAGR (2017 – 2022)

Although still in its infancy, enterprise investments in CPaaS are expected to grow at an exponential rate over the next 3-5 years.

CPaaS – Video **131**%

CPaaS – Voice and Text **57**%

UCaaS **25**%

UC&C (premise-based) **7**%
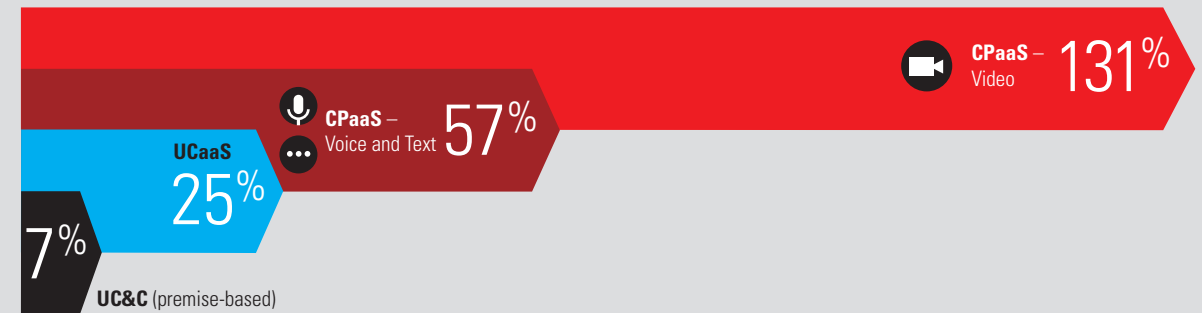
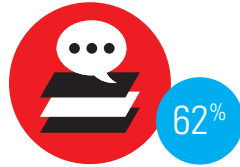Source: IDC's Worldwide UC&C and CPaaS Tracker

Five key drivers of enterprise CPaaS adoption

IDC's Asia/Pacific Digital Life and Collaboration Survey shows that CPaaS has changed the unified communications play from a technology conversation to a business one. More than 50% of organisations cited the following as key factors for investing in CPaaS:
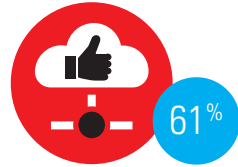
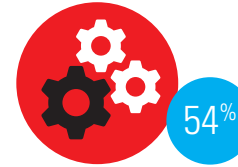| **64%**	**62%**	**61%**	**54%**	**50%**
Secure communication	**Ability to embed communications and collaboration into business apps and processes**	**High reliability of back-end infrastructure**	**Interoperability with existing systems**	**Lower cost of ownership**
CPaaS provides service providers and developers with an enterprise-grade platform to develop highly secure communications solutions for their enterprise customers.	CPaaS is about solving business problems seamlessly, rather than implementing siloed UC solutions.	An application-focused approach, independent of the infrastructure, allows developers to work with their preferred language, and as a result prototype, and stand-up applications quickly. No need to worry about hardware or middleware.	CPaaS enables seamless integration of existing on-premise communication systems such as telephony or media servers, allowing enterprises to fully utilise their investments while allowing them to add new cloud-based functionality on top.	No upfront hardware or software costs. In some cases, no contracts, commitments, or subscription fees as billing is tied to actual usage. Hence, reducing overall cost structure.

Key CPaaS drivers
BY INDUSTRY

FINANCIAL SERVICES
- Secure communication
- Ability to embed communications and collaboration into business apps and processes

HEALTHCARE
- Ability to embed communications and collaboration into business processes
- High reliability of the back-end infrastructure
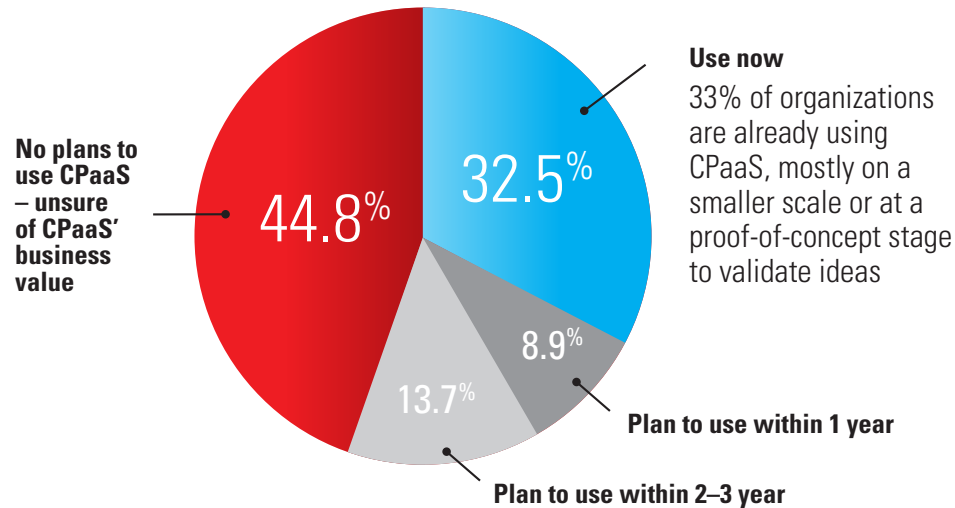
SERVICES
- Lower cost of ownership
- Secure communication

CPaaS in Asia/Pacific – A big opportunity for developers and service providers

Adoption of CPaaS in Asia/Pacific is poised to grow. Over **55%** of organisations surveyed are either using CPaaS at the proof of concept (POC) stage or have plans to adopt CPaaS over the next three years and are seeking guidance in implementation. While they understand the theoretical benefits of CPaaS, they are looking for partners who have the business knowledge and technological capabilities to help them create exciting customer experiences.

Untapped potential

Beyond the strong appetite among users and those planning to adopt CPaaS, there's a large untapped potential among those who have no plans to use CPaaS because they are unsure of its business value.

No plans to use CPaaS – unsure of CPaaS' business value

44.8%

32.5%

13.7%

8.9%

Use now
33% of organizations are already using CPaaS, mostly on a smaller scale or at a proof-of-concept stage to validate ideas

Plan to use within 1 year

Plan to use within 2–3 year

CPaaS services/usage indicated by current and future adopters

63%
File and screen sharing

59%
Voice – IVR, customer support, voice authentication for security, etc

57%
Messaging and text

57%
Multi-party video conferencing

57%
Recording and archiving functionalities

51%
Machine-to-machine communications

Key verticals
Percentage of respondents using or willing to adopt CPaaS

71% **FINANCIAL SERVICES**

50% **RETAIL**

49% **HEALTHCARE/ EDUCATION**

62% **SERVICES**

[1] Source: IDC Asia-Pacific Digital Life and Collaboration Survey

Top real-life CPaaS use cases

A majority (67%) of current and future CPaaS adopters are using or planning to use CPaaS to enhance their customer service and helpdesk function, according to IDC's research. The technology's applicability to customer service is obvious, but it isn't the main business function to benefit from enhanced business communications. The possibilities for CPaaS on organisational effectiveness are wide and near limitless.

Here are some real-world examples of how communications-rich applications are being used by other functions such as sales, field service, and technical operations to transform business, reduce costs, and create new revenue streams by delivering differentiated customer experience and supporting new levels of collaboration.

CPaaS for customer service

67%

Show me

- **Insurance assessors** are using video to talk to insurers in real time. For example, after a motor vehicle incident to illustrate the conditions and actions of the drivers.

- Prospective clients can remotely show **builders**, **plumbers**, **and other repairers** real-time video of the site to receive a better quote and help tradespeople prepare for the job.

- **Frontline telecommunications agents** can see customer-premises equipment using embedded video functionalities on the user mobile app.

Notify me

- **A municipal department in Australia** uses SMS or app notifications to remind citizens of appointments and to also alert them in a civil defence situation or on changes to rubbish collection schedules.

- **Nike (Retail)** uses CPaaS to let customers know about new shoe drops in nearby stores.

Simplify the sales process

- **A leading bank in Singapore** uses embedded collaboration solutions such as video, file sharing and messaging to allow customers and bank representatives work through more complex processes such as mortgage applications without requiring an in-person visit to the bank, resulting in almost 50% reduction in lead times.

Telehealth

- **Hospitals in India** are using remote diagnostics, virtual patient-doctor visits, appointment reminders or rescheduling, and provides updates of waiting times in busy clinics such as outpatient departments.

Education and learning

- **Schools in various parts of Asia/Pacific (e.g., Malaysia, Australia and Japan)** are using embedded video, voice, and messaging for real-time online tutoring and allowing students to collaborate (among themselves and with teachers) remotely.

- **Online private language learning app** gets a boost from enhanced student-tutor interactions via virtual classrooms (e.g., tutormandarin.net).
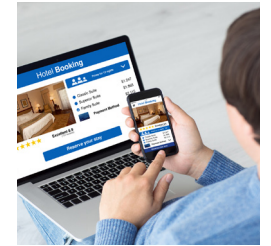
Travel, entertainment and social

- **Travel booking aggregators, dating and other social apps (e.g., Booking.com)** embed video, voice and messaging into applications using CPaaS platforms to deliver a differentiated customer experience.

On the horizon *virtually* – CPaaS 3.0

What we have seen so far is just the start of exciting new possibilities that will transform the way we interact with one another. The next stage of CPaaS, referred to as CPaaS 3.0, is already upon us and set to be at the heart of Industry 4.0 transformation by acting as a bridge and blending physical and digital experiences.

Leading CPaaS providers have moved beyond basic voice, text, and video APIs, to provide integrated platforms that allow for mashups of next-generation technologies, such as AR/VR, AI, ML, and IoT, to provide vertical-specific solutions. Think new ways for remote collaboration and sales via an immersive environment that will truly upend the status quo.

Augment AR/VR functionality.

Service providers are already working with CPaaS vendors to augment offline journeys with digital experiences. One goal is to reduce operational complexities in which augmented reality/virtual reality (AR/VR) technology is meshed with voice, video and messaging functionality in a manufacturing environment to allow for remote troubleshooting by a specialist engineer while a local technician attends to an issue.

AI-powered call centres

As these platforms evolve, CPaaS will enable service providers to integrate advance capabilities such as real-time translation (for multi-lingual support), facial recognition (for customer identity verification), and even deploy a team of chatbots to provide customer support.

CPaaS: What's in it for you?

CPaaS has leveled the playing field for organisations, big and small, to leverage communications in a way that never existed before. The API-driven approach to real-time communications gives developers the tools needed to build secure, private communications functionality into their applications instead of traditional PSTN telephony systems, removing the need to worry about any network infrastructure.

KEY OPPORTUNITIES FOR
Service providers and system integrators

- Develop custom enterprise apps on top of CPaaS platforms
- Monetise existing infrastructure by offering and hosting CPaaS in your datacentres
- Provide additional integration and orchestration services
- Create further revenue pull through from adjacent offerings

KEY OPPORTUNITIES FOR
Developers

- CPaaS' pre-built code and APIs that connect directly to the telecom infrastructure allow developers to create innovative applications on top to solve business challenges.
- Extend expertise into other vertical industries beyond traditional competency
- Virtually no limits on any developer's imagination or ambition! The biggest market disruptors started from a personal need and experience
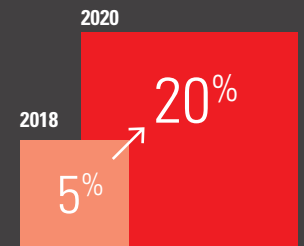
WORLDWIDE
CPaaS
MARKET

$8.2 BILLION

The worldwide CPaaS market is forecast to exceed $8.2 billion in 2021, driven by enterprise demand for mobile enablement, cloud consumption, and differentiated customer experiences.

A BRIGHT FUTURE
VIDEO

A mere **5%** of the overall CPaaS market today, video is forecast to account for **20%** by 2020
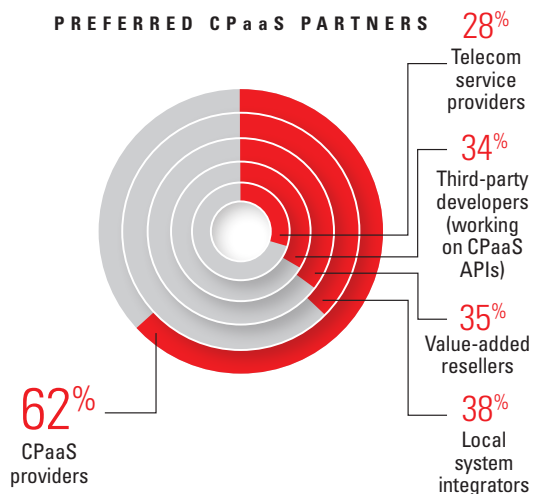
2018 — 5%
2020 — 20%

Partner right for success

CPaaS presents a timely opportunity for developers and service providers to differentiate themselves in a very crowded collaboration market.

However, IDC's Digital Life and Collaboration Survey shows that 62% organisations prefer to partner with CPaaS providers, making it vital that developers, SPs and SIs partner with a reliable and robust platform provider.

PREFERRED CPaaS PARTNERS

28% Telecom service providers

34% Third-party developers (working on CPaaS APIs)

35% Value-added resellers

38% Local system integrators

62% CPaaS providers

What should you look for in a CPaaS provider?

In addition to ensuring your CPaaS provider has enterprise-grade scalability and capabilities, bear in mind the following traits:
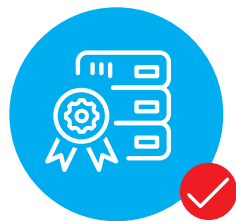
A trusted technology platform.

Select a vendor that offers a broad range of communication APIs which should include voice, video and messaging. Customers can start off with one communication function (e.g., voice call) and easily extend to offer additional function (e.g., video call) when a new use case arises.
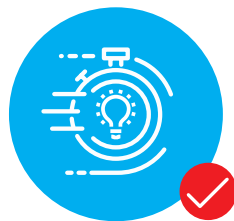
A focus on innovation and a rapid release cycle.

To stay ahead of the innovation curve and meet customers' expectations for personalised, real-time interactions, look for a vendor that maintains a rapid innovation and release cycle of new features and functionality in areas including AR/VR, AI, and analytics.
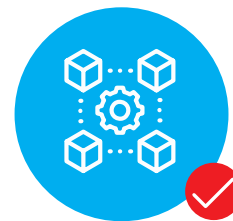
Multiple deployment models.

Select a CPaaS offering that provides multiple deployment options such as on-premise, vendor cloud, or hybrid deployment. This is key to ensuring a great end-user experience as well as compliance with organisational security and audit policies.
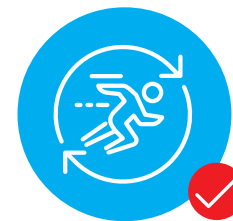
Speed and agility.

Evaluate your partner based on functionality, references, and track record. Smaller, niche players offer speed and the nimbleness to help drive enterprise growth expectations and support emerging new cases, especially as we move toward CPaaS 3.0.
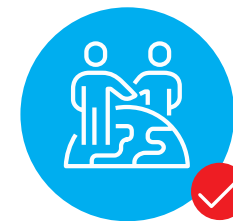
A partner-first approach.

Is there emphasis on customer value? Work with a CPaaS player that not only provides development expertise and integration support but also considers partner feedback as critical to building integrated experiences expected in customer applications.

EnableX Next-generation CPaaS

EnableX is a communications platform that empowers Communication Service Providers (CSPs), Independent Software, Vendors (ISVs) and Systems Integrators (SI) with the tools to rapidly embed real-time communications into business and consumer applications. Built on a carrier-grade platform, it offers next-generation capabilities that go beyond just voice integration to video calls that scale to the thousands and smart features that enhance users engagement.

SIMPLE

Production-ready and easy to use APIs and SDKs that come with all the toolkits and codes for fast and easy deployment.

SMART

Innovative features such as call analysis/diagnosis, AR/VR, translation and recording that revolutionise communication.

POWERFUL

Low latency, high quality, scalable cloud-based platform that you can rely on.

FLEXIBLE

Fully customisable call functionalities, UI and billing. Multiple deployment model to fit your goals, budget, security and compliance needs.

enablex