



CPaaS: the Digital Age Communications engine

White Paper

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Alcatel-Lucent Enterprise 

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What is CPaaS?

Communication Platform as a Service (CPaaS) is a digital hub, offering open APIs and SDKs, that provides connections between people, objects and applications, enabling all these components to interact and understand each other.

CPaaS expands communications far beyond people-to-people interactions, embracing the power of Internet of Things (IoT), Artificial Intelligence (AI) and new cloud-based models.

CPaaS is set to become a cornerstone of enterprise communications strategies, bringing unprecedented benefits by reducing latency, accelerating the decision-making process and making exciting new business models possible.

While the most popular (and visible) application of CPaaS is Unified Communications as a Service (UCaaS), its capabilities go well beyond, taking you into the world of bots and Artificial Intelligence (AI) where context-enabled answers are provided to customers, objects are connected and become intelligent, and the next level of analytics is possible, fueled by predictive business-driven engines.

Built on the as-a-service model, CPaaS uses the flexibility of the cloud to deliver connectivity between applications, people and objects. It connects everyone to everything, enabling machines and people to understand each other.

- In the early days, the first adopters of CPaaS were the pioneering, digitally-transformed enterprises capable of incredible agility. Today, **CPaaS demand is growing**. As we head towards 2024, IDC predicts that this value will increase to \$17.7 billion¹.

A good enough reason to pay attention to it without any further delay.

How CPaaS helps organisations succeed in the digital world

CPaaS is unlocking a new era of accessibility for modern technology, especially for companies and public organisations that want to transform their services to better serve employees and customers in the digital age.

In the past, adding new services to a system meant investing in additional manpower, a more expensive infrastructure, and new software and hardware. As an example, amongst all the companies that have invested in on-premises unified communications solutions, very few were able to demonstrate a clear ROI. This was due to an unexpected deployment complexity, topped by serious integration problems lasting over time due to the maintenance of a very complex system made of multiple layers and software from various parties. The cloud-based CPaaS model eliminates these disadvantages by providing more flexibility in how companies deploy and pay for digital engagement tools.

About 20% of global organizations today use CPaaS APIs to enhance their digital competitiveness. But, by 2023, nearly 90% of organisations will use CPaaS, according to a Gartner report on the CPaaS market².

"In a world where people actively research businesses before connecting with them online, CPaaS is essential for driving better discussions with customers. From chatbot integrations to delivery status notifications sent to a smartphone, CPaaS makes the customer-company relationship stronger. Jacques Der Ohanian, Head of Vertical Solution Marketing, ALE

¹ [IDC](#)

² [Gartner](#)

CPaaS and the power to connect everything

The way we communicate has changed drastically in recent years.

The introduction of new services and applications is making connectivity easier. However, it also means that companies have more avenues to consider when deciding how to support employees and customers. According to ALE's recent CPaaS study on more than 300 enterprises, 86% of respondents believe that the way we connect to things has evolved in recent years. This transformation is fueled by a growing appetite for cloud architecture as organisations no longer question whether they should initiate their digital transformation. This has led enterprises to rethink their processes and look for ways to connect everything and create a coherent environment where people and objects both play a role in global corporate performance.

Here's how CPaaS is leading the way to a new age of connectivity.

Connect People: CPaaS and the Hybrid Digital Workplace

1. CPaaS and the Hybrid Digital Workplace

Unified Communications as a Service (UCaaS) makes updating your workplace exceptionally easy. There's no deployment required, and no need to invest in expensive Capex systems. Instead, everything you need is provided via a subscription model, so you can pay for only what you use. UCaaS is available either as a standalone service implemented over the top of your existing applications and processes, or as an add-on to existing communication equipment. For companies making their way into the cloud for the first time, it's an excellent introduction to the concept of hybrid architecture. This access to a flexible, agile and bespoke version of cloud technology means that you can adapt and enhance your workplace in a range of ways.

While many of the most exciting benefits of CPaaS relate to elevating the customer experience, they also have the power to transform the employee experience too. For instance, in the digital workplace, where remote employees and mobile workers are becoming more common, CPaaS is excellent for keeping everyone in the loop. For example, HR professionals could use CPaaS technology to send out company-wide notifications through the channels that employees prefer to use. This keeps employees updated on the latest industry news. CPaaS is also incredibly useful in emergencies, such as when severe weather might affect a field worker, or when business leaders need to verify the location of staff. If a field agent needs to be deployed to help resolve a problem, they can upload information directly into the company's system, giving context to the whole team. CPaaS can even improve employee engagement in your organisation. You can pull information from an HR system to automatically send out birthday cards or anniversary messages to make your people feel like valued members of your organisation. You can also conduct surveys to access employee feedback.

2. Connect Objects: CPaaS and IoT

Currently, there are more IoT-enabled devices worldwide than people. The number is set to reach 20.4 billion by 2020, and it includes everything from security cameras, to speakers, lightbulbs and more. These connected objects don't just change the way we live; they affect how we work too. McKinsey believes that the link between digital and physical worlds will generate incredible economic value – worth up to \$11 trillion per year by 2025³.

Although smart devices are exciting, they aren't capable of much alone. While we're increasingly learning that the future of communications will include discussions between people, objects and things, it's worth noting that CPaaS is at the heart of these connections. The objects in your business environment have the power to act on behalf of your company, gathering essential data and sending useful messages. However, a vast majority of these objects don't have intelligence on

³ [McKinsey](#)

their own – only the potential for connectivity, even though we are seeing more and more objects demonstrate some computing capabilities. In any case, it's CPaaS that unlocks the true potential of IoT. With CPaaS, businesses can make the most of the objects and devices in their organisation. This could mean setting up triggers with “if this, then that” technology, creating automation in the workplace, or simply collecting useful data from devices.

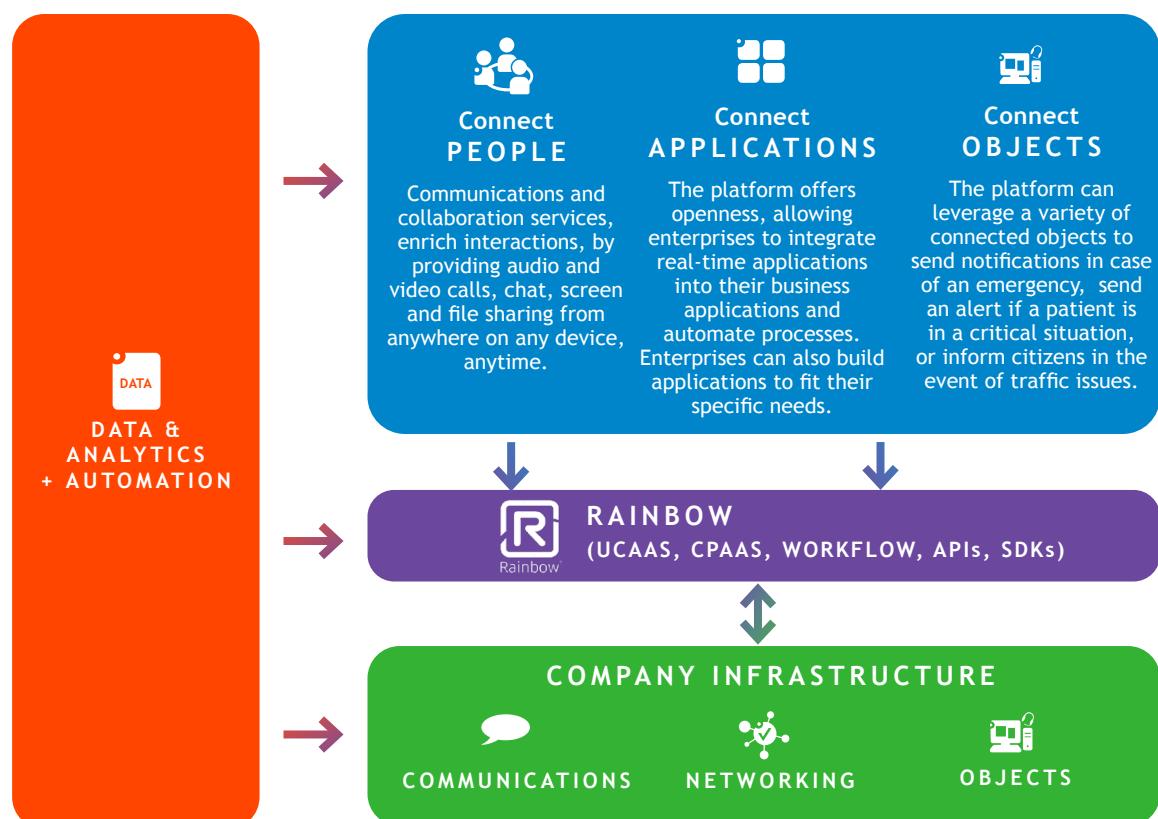
3. Connect Applications: CPaaS and business processes

For most companies, the driving value behind CPaaS comes from the ability to enhance business processes. Digital transformation is changing the way we support employees and engage customers. CPaaS has the power to strengthen business processes like never before. For instance, when it comes to serving customers, employees are no longer limited to phone calls and contact centres. We can connect with clients through a wide variety of avenues, ranging from chatbots and self-service programs, to instant messaging and social media.

CPaaS can also optimise business processes by improving the way tasks are delegated and performed. For example, intelligent routing ensures that customers are passed to the right agents to solve their problems the first time. Integrations with CRM and supply chain information ensure that teams always have access to contextual information. Even collaborative APIs ensure that staff can work together on solutions to complex problems. Agents can even access historical data so that they can unlock new cross-selling opportunities and make relevant recommendations to clients. CPaaS can transform the entire communication stack, improving internal technology processes, external communication and more. Automatic tool and machine maintenance can be set up in an industrial environment to ensure that business leaders are the first to know when a system is about to fail. Preventative strategies can then be put in place to minimise downtime. Connections between supply chain information and artificial intelligence could mean that your machines automatically order new parts and equipment when needed.

The whole business can flow more seamlessly without the constant input of human workers.

Figure 1. Connect everything with Rainbow CPAAS



Knowledge: CPAAS and augmented intelligence

Augmented Intelligence (AI) is probably one of the next important steps moving forward in the digital revolution. Combining AI capabilities with communications will completely transform the enterprise landscape, unleashing unexplored areas in which humans and robots will work and interact together making cognitive communications a reality. Cognitive communications are taking organisations into the “human-centric” era where collaboration and communication systems adapt to different behaviours, expectations and preferences.

In this new workplace, employees can use voice commands to interact with natural language bots to get help with daily needs and issues. Guided by artificial intelligence, smart bots can also anticipate user needs based on context. These smart bots can streamline workflows by providing immediate answers and solutions to questions and problems.

Fortunately, part of the benefits of CPaaS is that it provides access to intelligence that will help you gain real insights into your organisation. With AI and machine learning, businesses will be able to use the information they gather from endless crucial interactions to inform company-wide decisions. Some companies may even decide to build their own AI solutions, based on the information they collect about customer browsing experiences, conversations and more.

Of course, CPaaS-enabled AI offers many more applications in every domain. Face and voice recognition, learning machines, pattern recognition and decision trees are unlimited exploration areas which are enabling organisations to put their communications in context and embrace the digital revolution. Connecting people, processes, applications and knowledge to turn it into intelligence has multiple applications within the organisation, and we have detailed three of them (customer service, efficient operations and proactive maintenance).

The CPaaS development journey

The potential and flexibility of CPaaS make it a crucial component of digital transformation for many businesses today. With CPaaS, companies of any size have the freedom to explore new cloud-based technologies at a pace that suits them. The cloud and CPaaS mean that companies can convert their legacy methods of connecting with things, people and processes without excessive investment. What's more, when they implement new technology, they can gather information from the development journey to determine which strategies are having the most positive impact. According to Wainhouse and ALE's whitepaper on CPaaS, 95% of organisations surveyed suggest that they're in the process of a digital transformation today. Only 2% said that they weren't affected by digital transformation at all. The most important thing to keep in mind is that most companies can't afford to simply rip and replace their legacy strategy with a new way of working.

That's one of the reasons why CPaaS is so appealing; it gives organisations a flexible step-by-step approach to implement hybrid communications, digital engagement strategies and more.