



White Paper

TeleSign Poised for Market Leadership in CPaaS

Sponsored by: TeleSign

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IDC OPINION

Communications platform as a service (CPaaS) is a nascent market today, but IDC has seen a growing number of new and emerging communications service providers (such as Twilio, Genband, Plivo, Nexmo/Vonage, and TeleSign) and even more traditional unified communications (UC) players (such as Cisco, ALE, Avaya, and ShoreTel) entering this market. Thus we think it's a market poised for high growth in segments such as messaging, voice, and video. CPaaS utilizes a cloud-based development platform for embedding real-time communications (e.g., voice, SMS/text messaging, video) with business processes and applications. Whereas traditional communications solutions typically appeal to a broader swath of enterprise users (i.e., a horizontal focus), organizations are finding that CPaaS can better address their more custom requirements in verticals such as healthcare, retail, manufacturing, and customer service.

This IDC white paper is intended for TeleSign customers, specifically product owners and developers of leading websites and mobile applications, enterprise decision makers (i.e., line-of-business [LOB] executives, managers), and IT managers who are expecting to enable communications with their end users, prevent fraud and secure end-user accounts, address mobility challenges, and meet new applications requirements in their networks. Its purpose is to help build awareness of the momentum around CPaaS as well as highlight TeleSign's recent business expansion into broader CPaaS use cases beyond security.

SITUATION OVERVIEW

CPaaS, APIs, SDKs, Cloud Economics

A lot of organizations are looking at platform-as-a-service (PaaS) solutions to migrate workloads to cloud infrastructure. As many of these organizations are currently undergoing digital transformation (DX) initiatives, IDC suggests that DX initiatives require a cloud transition strategy as the underlying fundamental for success. While most organizations are approaching new IT investments with a cloud-first stance, there's less clarity on how to use cloud solutions for the migration of existing workloads. Not all workloads should migrate to the cloud, but for those that are identified as a priority or good candidates – communications, for example – standardizing on a CPaaS platform can drive consistency, scale, speed, and quality in the transition. CPaaS provides a cloud-based development platform for communications that can be utilized in lieu of an organization building or installing its own back-end network infrastructure and interfaces.

An application programming interface (API) is an enabler, not a finished product. At a basic level, an API makes it faster and easier to develop an application by providing all the building blocks; a good API provides the rules for communications between software components, applications, or systems. It unlocks latent value in data and information assets by combining them with other internal or external assets, exposes read-write access so that the entire software application doesn't have to be replicated, and deconstructs an application into subsets to deliver only those subsets, which are relevant to the use case.

A software development kit (SDK) typically includes an API but in addition comprises common tools such as debugging facilities and other utilities, often presented in an integrated development environment. SDKs also frequently include sample code and supporting technical notes or other supporting documentation to help clarify points made by the primary reference material.

With CPaaS, web and app developers can work in the language of their choice, can prototype in hours, and stand up a production run of real-time communications in days. There are no up-front hardware and software costs, no contracts or commitments, and no subscription fees. Payment is based on micro-billing tied to actual usage. In contrast to traditional UC solutions and cloud-based UC services, CPaaS is a radical new approach to building communications-enabled applications. Its simplicity and low cost allow developers to create large numbers of niche communications applications. Separately, they are fascinating applications serving important business needs. The fact that developers can build any interaction they want on CPaaS makes it a persuasive, far-reaching growth opportunity.

IDC has published forecast data around segments of the CPaaS market, highlighting some of those growth opportunities:

- The worldwide voice and text messaging CPaaS market is forecast by IDC to grow from \$867 million in 2016 to \$8.2 billion in 2021. This market is transitioning from a hypergrowth, start-up phase to a critical-mass phase. It continues to grow at a rapid pace with a 57% CAGR expected from 2016 to 2021.
- Voice and messaging services are growing at approximately similar rates. Voice is slightly larger, growing from \$475 million in 2016 to \$4.5 billion in 2018. Messaging is growing from \$392 million in 2016 to \$3.67 billion in 2021.
- IDC also forecasts the U.S. video CPaaS market to grow from \$44 million in 2015 to \$1.7 billion in 2020 (representing a 107% compound annual growth rate from 2015 to 2020). Video services currently only represents 5% of the overall CPaaS market, with forecast growth reaching 20% by 2020.

The economics of cloud in the context of CPaaS include the following:

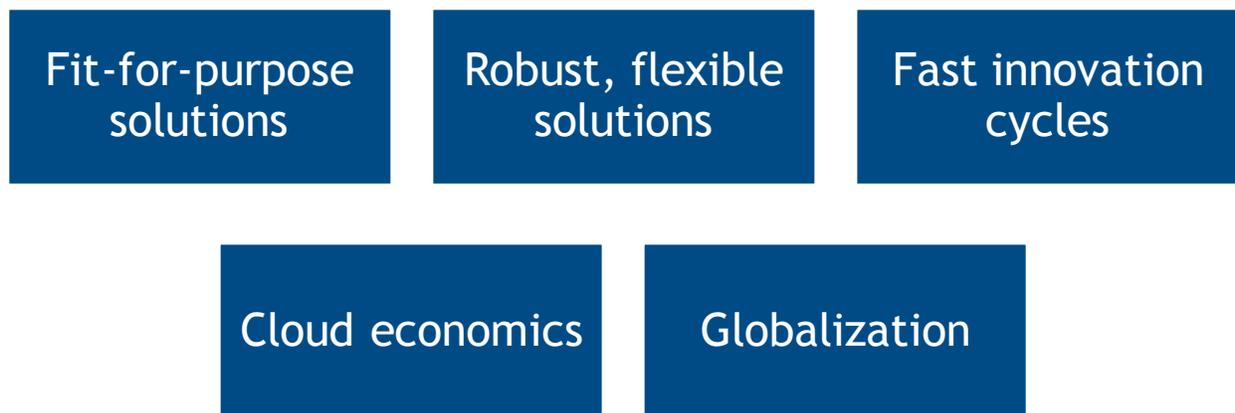
- Software-driven, programmable communications (via cloud, APIs, SDKs)
- Simplifies how communications (messaging, voice, video) are delivered – embedded into applications, websites, business process workflows, and connected objects
- Enhances applications with a richer communications-enabled experience (see Figure 1)
- Changes how communications are consumed – per the consumption model based on usage, no up-front investment
- Has introduced significant market disruption versus traditional and even cloud-based UC models

- Can better address custom requirements of organizations for specific vertical segments versus the more horizontal approach of traditional communications solutions (i.e., one size fits all)
- Enables user authentication and fraud prevention through phone verification, transaction verification, and data intelligence
- Powers two-factor authentication (2FA) to stop account takeovers/compromise (2FA is a method of confirming a user's claimed identity by utilizing a combination of two different components [e.g., a bank card and a passcode].)
- Enables communications to occur inside daily use applications (e.g., Salesforce, BMC Remedy, Marketo, Amazon Web Services). This can alleviate the need for an employee to invoke a separate application for sending a message or starting a video call, for example.

Figure 1 presents the API value proposition.

FIGURE 1

The API Value Proposition



Source: IDC, 2017

- **Fit-for-purpose solutions:** Existing communication solutions from carriers and hardware/software suppliers don't meet specific needs. Developers and product owners increasingly want communications solutions that are specific to the problems needed to be solved (i.e., more customized solutions).
- **Need for robust flexible solutions:** Existing solutions are rigid and fragile and very difficult to change. This makes it difficult to respond to changing business conditions. Communications APIs are flexible because:
 - Developers can build communications applications using standard web language (Rest APIs) rather than proprietary vendor-specific languages, which are inaccessible to most developers.
 - Configurable, white-labeled communications applications provide both product and go-to-market flexibility.
- **Fast innovation cycles:** Developers, product managers, CTOs, and CIOs alike constantly see demand for new requirements; innovation cycle demands can't be met by traditional communications solutions.

- **Cloud economics:** Everything is moving to cloud. Enterprises increasingly see the value of an operational expense (i.e., OpEx) model where they don't capitalize hardware and build for peak capacity.
- **Globalization:** Companies want to standardize on the same simple, flexible, scalable services worldwide; it enables them to utilize the same code and solution for any country.

All organizations should have a strategic priority to better serve their customers and create differentiated customer experiences. To improve the customer experience, companies should constantly enhance and expand upon their traditional inbound/outbound contact center calls, email campaigns, mobile app push notifications, websites, and so forth. By building communications services into applications, websites, and products with CPaaS, companies can enrich customer engagement through real-time communications. CPaaS can revolutionize digital advertising and contact centers by making it easy to embed click-to-call and click-to-text buttons into web pages and mobiles so that customers can instantly contact a business at the click of a button. Digital native companies such as Uber, Lyft, and AirBnB, among others, are examples of popular B2B2C use case scenarios today.

Communications Market Trend Drivers

IDC has observed the following major trends shaping global communications market. These trends are expected to impact (or disrupt) the market over the next several years:

- **Cloud consumption.** Cloud is accelerating customer migration from on-premises solutions to UCaaS or CPaaS solutions. The cloud portion of the worldwide unified communications and collaboration market is expected to grow to \$22.5 billion in 2020, with a five-year CAGR of 13.9% for the 2016-2020 period. Virtually none of what IDC terms as *3rd Platform* technologies – cloud, mobile, social, Internet of Things (IoT), and cognitive/AI technologies – or major digital transformation business initiatives, are possible in scaled-up implementations without cloud as the foundation.
- **Communications platform as a service.** CPaaS is a newer, cloud-based approach to building and embedding real-time communications in business processes and applications using APIs and SDKs. Its simpler approach and low cost allow developers to create niche communications applications quicker, particularly in vertical markets where a more customized approach may be needed or preferred versus the "horizontal" appeal of many core UC&C solutions today.
- **Mobile enablement.** Smartphones will account for an increasing majority of total mobile phone shipments worldwide (feature phones plus smartphones = 1.99 billion in 2017). Having accounted for the bulk of all mobile phone shipments in 2016 (74.7%), smartphones will occupy an even larger share in 2017, reaching 77% of all mobile phone shipments. By 2021, this number will climb as high as 87.3% (see *Worldwide Mobile Phone Forecast, 2017-2021*, IDC #US42366117, March 2017).
- **Digital transformation.** Digital transformation is the process of transforming workforce communications, team collaboration, and customer engagement through connectivity and self-service channels. We've entered an era where the technologies and processes that businesses deploy are so tightly linked to customers and markets that the boundary between the internal operations of the enterprise and its external ecosystem (e.g., customers, markets, competitors, partners, and regulators) is rapidly disappearing. Business leaders are challenged to move their enterprises to the next level, that of digital business transformation, employing digital technologies coupled with organizational, operational, and business model innovation to create new ways of operating and growing businesses.

- **Differentiated experiences.** Differentiated experiences include delivering real-time interactions and engagement to retain customers and improve workforce productivity. Demand is being driven by mobile enablement, cloud consumption, and a strategic priority by businesses in all sectors to create differentiated customer experiences.
- **Increasing online fraud and risk of account compromise.** 2016 saw U.S. data breaches hit an all-time high with companies sustaining more than 1,000 data breaches, representing an increase of 40% over 2015 data. The millions upon millions of exposed account credentials that flood the market, compounded with consumer password reuse, resulted in a growth in end-user account fraud, account takeovers, and highly targeted attacks.

CPaaS Use Cases and Benefits

CPaaS is a good choice for companies that want to quickly launch differentiated services for customer engagement. CPaaS can also lead to increased customer engagement, satisfaction rates, and customer lifetime values (CLV) and ultimately faster growth, as it provides another effective critical customer touchpoint. The following are some compelling use cases that we've highlighted, among others:

- Send customer alerts and notifications, delivering timely and personalized business information to customers to increase brand awareness and sales revenue, and provide a better customer experience.
- Deliver appointment and event reminders to prompt customers to recall scheduled appointments, events, and services to enhance the customer experience.
- Add a second layer of security to online accounts with two-factor authentication via SMS and voice one-time passcodes (OTP), push authorization, and code challenges.
- Send mission-critical notifications to consumers on the go in industries from banking to travel.
- Build two-way communications to send and receive messages that create a chat-like interaction with customers.
- Address online account-based fraud to reduce fake accounts, prevent account takeovers, secure account recovery, and minimize fraudulent transactions using SMS and voice-based authentication, one-time passwords, and phone data intelligence to help the business make decisions regarding user identities and fraud risks.
- Companies with mobile apps including chat features and push notifications can reduce costs and ensure timely delivery by sending messages interchangeably via SMS and IP message. Users who are not logged into the app will receive a text message instead.
- Use password-less login. Mobile apps are increasingly using just a verified phone number in lieu of a full account registration/creation process, leveraging the phone number as a trust anchor versus having to create and enter credentials.

CPaaS benefits include the following:

- **Ease of implementation and integration.** Self-service websites, open and available documentation, resources such as GitHub (online project hosting resource) and Stack Overflow (online community for programmers), quick-start guides, sample applications, tutorials, and so forth
- **Fast innovation.** Developer friendly from idea to prototype to production stage in hours or days
- **Pay-per-use consumption model.** No contract, no subscription, no paywalls
- **Open published APIs and SDKs.** Freedom from vendor lock-in

- **Applications-first approach.** To meet employee and line-of-business needs
- **Simplified cross-platform development.** Mac, Windows, Android, and iOS
- **Use case expertise.** Tutorials, best practices, user interface/user experience reviews, compliance support, and so forth
- **More effective and engaged customer communication.** Embedded communications help the business engage and communicate more effectively with their customers, plus it provides a critical customer touchpoint directly from web or mobile applications

What to Look for in a CPaaS Provider

The current marketplace is crowded and still burgeoning with many different-sized CPaaS players, and the resulting churn that businesses are starting to experience with different services is beginning to bubble up key attributes that define a quality CPaaS solution:

- **A trusted technology platform.** The CPaaS infrastructure is a multitenant, cloud-based high-availability, high-deliverability, and scalable platform. Continuous investment is required in tools and technologies to provide the quality of service (QoS) that customers expect. This includes continuously improving cycle time and code quality, strengthening carrier interconnect systems and processes, expanding the number of direct interconnections with local in-country carriers, expanding the number of datacenters running the CPaaS software, and enhancing the software instrumentation for call routing and load balancing.
- **Global direct carrier connections.** CPaaS providers must maintain direct access to hundreds of carrier routes worldwide to ensure global reach and deliverability into the most countries. Direct carrier connections also mean the communication messages goes through fewer hops, resulting in fewer dropped or undeliverable messages and reduced latency. There are advantages for CPaaS providers to maintain a mobile network operator (MNO) status to have and utilize hundreds of direct carrier connections with most global mobile operators.
- **Performance, delivery, and completion rates.** High SMS delivery rates and completion rates are important. If communication messages are not delivered (failed to send), the customer experience can be impacted and it reduces the business' ability to effectively communicate, engage, and secure users around the world. CPaaS providers must be able to identify valid from invalid phone numbers, SMS-enabled phones from non-SMS enabled phones, deactivated numbers, plus numerous other data attributes attached to each user phone to ensure the highest delivery and completion rates.
- **A focus on innovation and a rapid release cycle.** Vendors must maintain a rapid innovation and release cycle of new features and functionality. Enhancing the usability of the platform and the APIs to meet expectations for personalized, real-time interactions is important for technological competitiveness and meeting customer requirements. Strive to be a thought leader, identifying and developing CPaaS capabilities to transform the delivery and consumption of communications.
- **Phone number cleansing.** Automatic reformatting properly formats phone number entered by the end user for more reliable and secure message delivery. Some CPaaS providers offer basic number logic and place the responsibility on the user to provide an accurate phone number. When users enter their phone number in a form, it is not always properly formatted for international delivery. Automatic reformatting and cleansing of the phone number is essential to adhere to ever-changing international dialing policies. This important step can improve SMS deliverability by more than 10% in most markets.
- **Data and analytics.** Vendors that offer risk assessment APIs can help companies combat a variety of high-impact fraud use cases, including account takeovers, phishing attacks, fake

account registrations, and more. The ability to generate reputational scoring based on phone number intelligence, traffic patterns, machine learning, and global data can uncover hidden insights and help predict/prevent fraudulent activity.

- **A single-vendor solution.** Customers are seeking multiple solutions from a single vendor to simplify the deployment and management of their communications infrastructure. The CPaaS platform should be able to deliver business-critical messages such as alerts, reminders, and notifications; verify a person's identity with two-factor authentication; send one-time passwords (OTPs); provide fraud risk scoring; and have the ability to evaluate phone number data intelligence through developer-friendly APIs and SDKs. The platform should enable multiple customer journeys and use cases.
- **Account-based fraud protection/detection.** Most companies that are building valuable user bases must be able to protect those users from fraud while also looking for ways to increase conversion rates, monthly active usage, and customer lifetime values (CLVs). CPaaS providers that focus on both security and communication use cases are more likely able to support these broader use cases.
- **Enterprise-grade quality.** For many customers, CPaaS use cases are mission critical and gaining significant scale. Vendors should provide quality assurance in a cloud environment. This means offering service-level agreements (SLAs) with credit-based commitments for service availability, voice quality, message conversions, DID provisioning, time to repair, and so forth.
- **Control and transparency.** Enterprises are hungry for analytics features to support business decisions, and communication is not an exception. The details of communication session length and frequency, as well as location, identity, network type, device type, and battery consumption, are valuable inputs for management decisions and operational efficiency improvements. API communications platforms are designed to collect mountains of minute data. The ability to create the "Fitbit of communications" and enable new levels of visibility and transparency are important strengths of video PaaS.
- **ISV and SaaS partner program.** CPaaS should have a robust ecosystem of ISV and SaaS partners to sell with and sell through. This is distinct from a developer evangelism program. It focuses on leading ISVs and SaaS providers in both horizontal functions (sales, marketing, HR, service management, accounting, etc.) and vertical sector-specific ISVs (legal, retail, automotive, healthcare, etc.) software vendors and vertical software vendors. ISVs are critical to driving CPaaS adoption in the enterprise market. ISVs perform a dual role: they help bring CPaaS to the market, and they extend the capabilities of CPaaS through validation and interoperability with their value-added software solutions.

TeleSign's CPaaS Strategy

Since 2005, TeleSign has built a \$100 million annual revenue business around account security and two-factor authentication with a customer roster that includes 9 of the 10 largest U.S. web properties, and well-known brands such as Salesforce, Evernote, Tinder, and HomeAway rely on TeleSign to secure their platforms and protect their users. As the company embraces additional CPaaS use cases, TeleSign – a registered mobile network operator – looks to incorporate the same high levels of technology, reliability, services, and expertise into the CPaaS market that it has provided in the mobile security and authentication market.

The TeleSign Score API is a telephone fraud assessment API that delivers reputation scoring based on phone number intelligence, traffic patterns, machine learning, and a global data consortium to discover and prevent fraud. This is viewed as a significant differentiator for TeleSign. Likewise, mobile

offerings such as Auto Verify (a secure, lightweight SDK that integrates a frictionless user verification process into existing native mobile applications) and Push Verify (an SDK that enables businesses to add 2FA and transaction verification for web-based accounts into their existing mobile applications), along with new iOS feature support, provide TeleSign with the flexibility to address mobile-focused use cases while supporting a seamless user experience.

TeleSign's communications APIs are designed to establish engaging, loyal, connected relationships with customers by providing timely, personalized information through SMS text-based or voice-based alerts, reminders, notifications, invites, OTPs, and other automated messages directly from websites or mobile applications. These APIs help businesses increase user engagement, satisfaction rates, customer lifetime values (CLV), and ultimately faster growth.

TeleSign is helping businesses reinvent how they communicate and protect their users. Typical use cases include:

- Communications use cases:
 - Send customer alerts and notifications
 - Deliver appointment and event reminders
 - Build two-way communications
- Security use cases:
 - Add two-factor authentication
 - Verify phone numbers
 - Reduce fake accounts
 - Prevent account takeover
 - Streamline account registration
 - Enable secure account recovery
 - Minimize fraudulent transactions

Customer Examples

- **Protecting users and combating fraud:**
 - **Validating and authenticating use case:** "Once we had TeleSign in place, we were able to block fraudulent accounts in a much more sophisticated way. It's been 100% accurate, and we've seen about a 90% reduction in spam traffic as a result, from day one." – Ryan Ogle, CTO, Tinder
- **Reaching and engaging users:**
 - **SMS invites and 2FA use case:** "We were looking at several vendors. TeleSign won out as our CPaaS provider because of their demonstrated security expertise, high-quality direct-to-carrier routes, and global coverage. We use them to send both SMS notifications and security 2FA messages." – Dave Engberg, CTO, Evernote
- **Customer communications and fraud prevention:**
 - **Alerts, notifications, invites, 2FA, and risk scoring use case:** "TeleSign's global coverage is critical to our business. Their waterfall delivery process, superior global network, and traffic monitoring increased delivery rates and reduced call center volumes. We use several TeleSign products for our SMS customer communications and fraud prevention efforts." – TJ Spinks, Postmaster, HomeAway

Overview of the TeleSign Portfolio

TeleSign is a CPaaS company founded on security. Since 2005, the company has been a trusted partner to the world's leading websites and mobile applications, helping secure billions of end-user accounts. Today, TeleSign's data-driven cloud communications platform is changing the way businesses engage with customers and prevent fraud.

As a registered mobile network operator, TeleSign can utilize hundreds of direct carrier connections to provide market-leading delivery and completion rates across more than 200 countries and territories and 87 languages, all backed by unparalleled 24 x 7 service and support.

TeleSign is well-known for having a high-quality communications platform supporting mission-critical messages for the most demanding clients in the world. It started out as a two-factor authentication company focused on securing online accounts for the biggest internet brands, ensuring its network is built to perform.

TeleSign's platform is made up of:

- **Developer-friendly APIs and SDKs.** Easy-to-integrate APIs and SDKs that combine data intelligence and messaging communications to more effectively engage customers, secure accounts, and prevent fraud, providing a complete framework for the entire customer life cycle
- **Expansive global network.** A registered mobile network operator with hundreds of high-quality, direct-to-carrier routes that ensure the highest availability and market-leading delivery and completion rates
- **Unparalleled service and support.** Developer-focused tools and documentation, best-practice guidance and support, UI/UX reviews, TCPA compliance expertise, unmatched international coverage, and more

Table 1 shows TeleSign's portfolio.

TABLE 1

TeleSign Portfolio

	Description
Use Cases	
Verify phone numbers	Establishes identity assurance and improves the customer experience by connecting each end user with his or her valid mobile number and using it as a trust anchor for authentication throughout the account life cycle.
Add two-factor authentication (2FA)	Protect brand value and users with two-factor authentication (2FA); adds a second layer of security to end-user accounts, beyond just the password.
Send business-critical communications	A2P (application-to-person) for alerts, reminders, notifications, invites, and other forms of customer communications within websites and mobile applications.
Streamline account registration	Enables businesses to identify and block potential fraud during account registration without negatively impacting the user experience.
Reduce fake accounts	Securely verify end users during the account registration process through TeleSign's phone verification and phone number intelligence solutions.

TABLE 1

TeleSign Portfolio

	Description
Prevent account takeover	Helps customers provide end users with an extra layer of security and continuous account protection, beyond just passwords, through 2FA and behavioral biometrics.
Minimize fraudulent transactions	TeleSign 2FA and intelligence solutions help distinguish good users from bad by establishing identity assurance.
Enable secure account recovery	TeleSign 2FA for account recovery improves the password reset process and reduces help desk costs.
Platform	
Developer-friendly APIs and SDKs	Easy-to-integrate APIs and SDKs that combine data intelligence and messaging communications to more effectively engage customers, secure accounts, prevent fraud.
Global network	A registered mobile network operator (MNO) with high-quality, direct-to-carrier routes that ensure high availability and optimal delivery and completion rates.
Service and support	Developer-focused tools and documentation, best-practice guidance and support, UI/UX reviews, TCPA compliance expert allow developers to create niche communications apps serving important business needs.
APIs and SDKs	
Intelligence	<ul style="list-style-type: none"> ▪ Score API is a fraud risk assessment API that delivers reputation scoring based on phone number intelligence, traffic patterns, machine learning and a global data consortium. ▪ PhoneID API is a set of APIs that deliver deep phone number data attributes that help optimize the user verification process and evaluate fraud risk.
Communications	<ul style="list-style-type: none"> ▪ Messaging API enables SMS/text messaging to be embedded into business-critical communications. ▪ Voice API enables voice/telephony to be embedded into business-critical communications.
Verification	<ul style="list-style-type: none"> ▪ Auto Verify SDK is a secure, lightweight SDK that integrates a frictionless user verification process into existing native mobile applications. ▪ SMS Verify API is an API that enables SMS messaging for account security and business-critical communications. ▪ Voice Verify API is an API that enables voice messaging for account security and business-critical communications. ▪ Push Verify SDK is an SDK that enables businesses to add 2FA and transaction verification for web-based accounts into their existing mobile applications. ▪ Behavior ID SDK enables web and mobile applications to measure and analyze a user's behavioral biometrics in order to provide continuous authentication.

Source: TeleSign, 2017

Opportunities and Challenges

IDC sees opportunities and challenges for TeleSign, its partners, and customers as organizations consider a CPaaS approach to their communications requirements today.

Opportunities include:

- **Applications:** The simplicity and low cost of CPaaS allow developers to create niche communications applications serving important business needs. The fact that developers can build any interaction they want on CPaaS makes it a persuasive, far-reaching growth opportunity. For communication workloads identified as candidates to migrate to the cloud, there's a great opportunity to use CPaaS to build applications for deployment in public or private cloud infrastructures with agility and cost advantages.
- **Digital transformation:** Sophisticated communications applications are expected to be delivered to handle digital disruption in the market, and leading vendors are further abstracting infrastructure components to meet new developer expectations.
- **Differentiation:** With its new CPaaS offering, TeleSign is positioning itself as not just another upstart competitor in this growing market but expects to leverage its formidable expertise in mobile identification, security, and authentication (2FA) as key differentiators for customers and partners considering a CPaaS approach.

Challenges include:

- **Enterprise readiness:** A primary challenge for vendors and providers will be convincing buyer organizations that an embedded, API-driven approach to real-time communications makes sense. Can CPaaS meet the requirements of IT buyers for governance, security, support, contracts, and so forth? Can a CPaaS platform get the endorsement of IT decision makers? Large enterprises are not digital natives, so convincing traditional IT buyers will be a challenge for CPaaS providers that need to show continued market acceptance via referenceable enterprise accounts.
- **Brand awareness:** The company has a significant challenge ahead of it in building TeleSign brand awareness and mindshare among application developers and enterprise organizations regarding its new CPaaS offering; it also needs to continue to develop its CPaaS channels to market.
- **Proper skillset:** Although some organizations may possess the IT and software development expertise to take on a customized communications project, the reality is that embedding real-time communications (such as voice, text, or video) requires a combination of skills (such as IT, software development, video, and voice) that many organizations may not possess. In those cases, organizations will need to enlist the services of an experienced provider or partner with the necessary integration skills.

IDC ESSENTIAL GUIDANCE

IDC forecasts that the market for embedded communications will continue to grow significantly, and to the extent that TeleSign can embrace the opportunities and address the challenges described in this white paper, we feel it should be well-positioned to help organizations adapt to cloud-based communications.

Nearly all of TeleSign's revenue is associated with API access to text messaging and voice communications – mostly in-account security and 2FA-type transactions. The company does presently handle some other business-critical traffic for customers, but the vast majority of its business today is security. Going forward, the company expects to ramp up usage of its platform for a much broader set of use cases and customers via its recently launched self-service model.

The primary challenge for TeleSign is to convince organizations that a CPaaS approach to real-time communications makes sense. Buyers will need help with bridging the gap between API platform technology and actual use cases and business models. Make it simple for developers to sign up, build, integrate, and activate. CPaaS platforms are catalyzing growth because they are free to users for test and development, making it possible to build embedded communications applications in hours versus weeks or months. Developers should not have to talk to a CPaaS provider to register, explore, and build solutions with APIs; it should be a completely self-service model with a customer portal and an available safety net for when customers need support.

About IDC

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