# Leveraging Cloud Communications for Digital Transformation

Communications-as-a-Services (CaaS) Takes SIP Trunking To the Next Level

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# Table of Contents

## Executive Summary

Modern SIP trunking providers are evolving to become Communications-as-a-Platform services offering global reach, improved customer engagement, and the ability to craft custom communications services to meet your needs. Organizations can leverage emerging services like virtual phone numbers and messaging services as part of a digital transformation and customer experience strategy, optimizing their access to Unified Communications-as-a-Service and Communications-Platform-as-a-Service to reduce costs and improve operational efficiencies.

IT leaders should

- Revisit their SIP plans and evaluate the applicability of cloud-based Communications -as-a-Service (CaaS) offerings that go beyond PSTN access to offer a programmable platform for voice, messaging, and application customization.
- Align cloud communications plans with digital transformation initiatives, adopting approaches that provide measurable business value in six months or less.
- Evaluate potential cloud communications partners based on what they offer today, what they plan to offer tomorrow, their feature sets, and their proven ability to execute.
- Evaluate potential cost savings and operational benefits from utilizing a CaaS provider that integrates with your UCaaS and CPaaS partners.

## Digital Transformation Driving Communications Evolution

As shown in Figure 1, Digital Transformation (DT) is the "innovative application of technology that improves or creates a process, product or experience that ultimately drives business value—quickly."

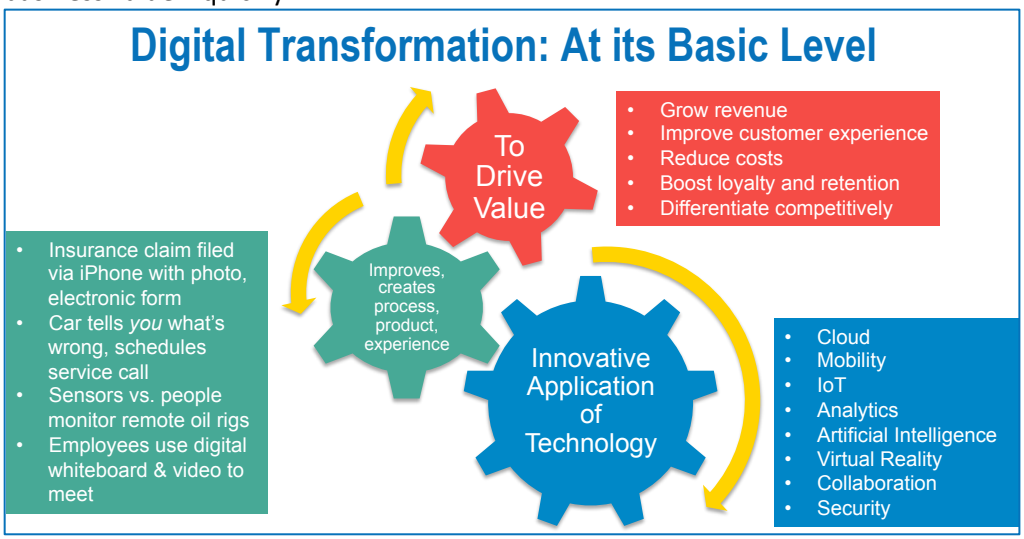


**Figure 1: Digital Transformation Defined**

There are three main components to the definition, which are all interdependent on one another:

1.) **Innovative Application of Technology** defines the existing and emerging technologies that an organization can leverage as part of its digital transformation initiative.

2.) **Improves or creates a process, product, or experience** is the tangible outcome of the application of the new technology. As shown in Figure 2, this could represent vertical-specific benefits such as new features in connected cars, or it could represent broad application of technologies to achieve business benefit.

3.) **Drives measurable business value** is the key. A DT initiative is useless unless it delivers some measurable business value. Typically, this means that it increases revenue, reduces expenses, or leads to a measurable improvement in a business process (e.g. onboarding of employees, responding to customer inquiries, and so on.)

Above all else, a digital transformation initiative must quickly show results, typically within six months. This doesn't mean the entire transformation project must be complete within six months; it means there must be a checkpoint with measurable changes. Without this firm deadline, competitors may come out with something faster, new technologies may emerge that make existing approaches obsolete, stakeholders may lose interest, or budgets may dry up.

As shown in the blue box in Figure 2, existing and emerging communications technologies are often the basis of digital transformation efforts; delivering new ways of engaging with customers, new channels for service delivery, and/or improvements to internal processes and collaboration. Examples include:

- Supporting mobile interactions with customers, using SMS, social messaging, and/or RCS.
- Leveraging communications services to quickly establish a presence in a remote market via provisioning of virtual phone numbers.
- Leveraging WebRTC to enable customers and prospects to click-to-call from within web sites or mobile apps, delivering that call to a salesperson or customer service agent along with contextual information providing customer insight that leads to faster response, higher close rates, and/or increases in customer satisfaction.
- Integrating messaging services into existing business applications to deliver text and rich messaging to customers for scenarios such as order status, appointment reminders, marketing campaigns, and record updates.
- Enabling customers and prospects to send texts to existing business numbers, improving engagement and eliminating separate mobile numbers for texting (that are often out of company control).

## Enter SIP Trunking

The primary driver for purchasing SIP-based services over the last several years has been simple: Save money on PSTN access costs. SIP trunking offers the opportunity to both reduce PSTN access costs as well as improve access flexibility by enabling customers to only purchase the access capacity that they need at a given time, and to easily scale up or down based on business need. As a result, more than half of the ~600 companies participating in Nemertes Research's annual Unified Communications and Collaboration study have already adopted SIP trunking. (Please see Figure 2.) Of those adopting, 41% cite cost savings as their primary driver, 39% are primarily deploying SIP trunking to improve PSTN access reliability, and 14% embrace SIP trunking to take advantage of new features like cloud-based call recording or E-911 call routing and location management.

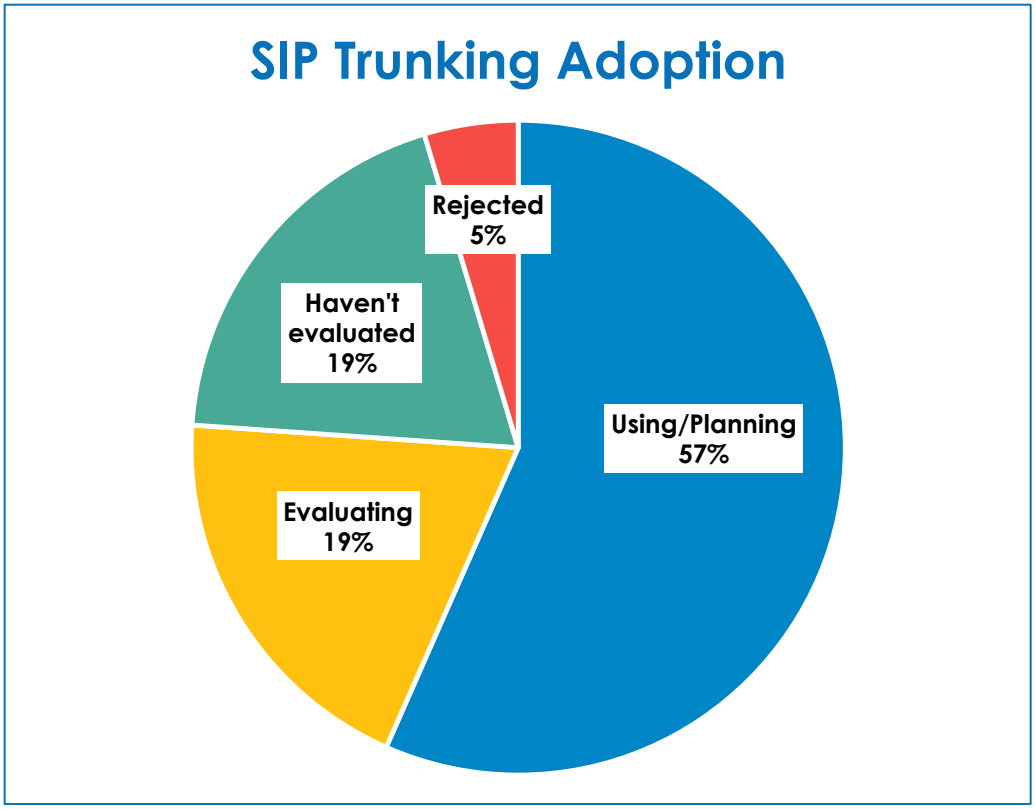


**Figure 2: SIP Trunking Adoption (Nemertes "*Unified Communications and Collaboration: 2018-19 Research Study")***

Among larger organizations, those with more than 2,500 employees, approximately 75% have already deployed SIP trunking or are evaluating it for future deployment.

Most global companies have adopted regional approaches for SIP trunking adoption, using a variety of in-region providers, which leads to management complexity, high cost, and limits based on ability of the provider to deliver a wide range of services in terms of feature and geographic scope of coverage. Thanks, however, to cloud-based SIP service providers and enterprise need for digital transformation, and a continued shift to the cloud communications, the SIP communications market is poised for rapid change.

## How SIP Trunking Supports Digital Transformation

SIP trunking supports enterprise digital transformation in a variety of ways, primarily by reducing costs and improving operational efficiencies associated with adopting of new communications services such as CPaaS (Communications Platform-as-a-Service) and UCaaS (Unified Communications-as-a-Service).

Nearly half (44.9%) of organizations reduce their overall PSTN access spend, by an average of 16.1% via adopting SIP trunking. (Please see Figure 4.) In addition, overall operational costs of unified communications platforms drop by an average of 39%.

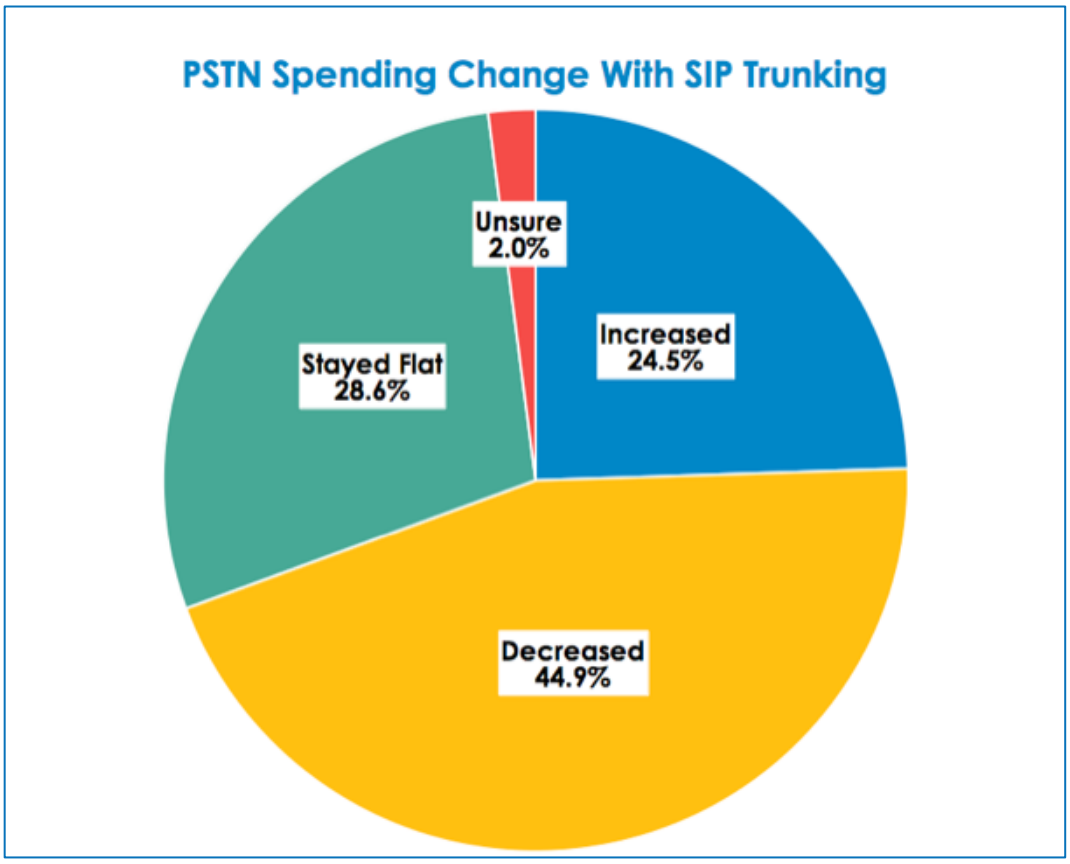


**Figure 3: PSTN Spending Change With SIP Trunking (Nemertes "*Unified Communications and Collaboration: 2018-19 Research Study")***

## SIP Trunking and Cloud Communications

Buyers of cloud communications services have a myriad of options including:

- **Hosted** services that are typically custom built for a single customer's need, and are generally the most expensive option, but are best suited for large enterprises with complex needs.
- **Unified Communications-as-a-Service (UCaaS)** that provide a multi-tenant offering, enabling customers to easily purchase licenses, but that often limit the ability for buyers to customize the service to fit their specific needs. UCaaS services have typically had the most appeal to the small-medium segment of the communications market.
- **Communications Platform-as-a-Service (CPaaS)** that enables buyers to obtain the specific features that they need to support digital transformation initiatives. Examples include virtual phone numbers, SMS, SIP trunks, and emergency call routing services.

PSTN access for these services is typically via SIP trunks, either offered by the provider, or in a 'bring your own' model in which the enterprise customer obtains its own SIP trunking services from a Communications-as-a-Service (CaaS) provider offering PSTN access, along with other services like SMS messaging and virtual phone numbers.

## The Evolution of SIP Trunking

SIP trunking services are expanding beyond simply providing PSTN access to meet the needs of digital transformation. Modern SIP trunking services are providing capabilities top support digital transformation including:

- Virtual phone numbers that can be easily provisioned to support marketing programs or to establish a local number dial-in presence in a remote country to reduce calling costs.
- Ensuring consistency of emergency call routing for all locations.
- Enabling texting to and from business numbers.
- Integration of business processes with messaging, enabling sending of appointment reminders, marketing campaign messages, or other alerts from business process applications directly to mobile devices.

The true beauty of CaaS comes from its flexibility. Customers can pick the features that they want, customize them as need be, and either integrate CaaS capabilities with existing platforms, or use them as the basis to build entirely new applications to meet a specific business need. For example, an organization that today uses a mix of regional PSTN access providers could move to a single global cloud communications provider that it can integrate with its customer management platform to enable the logging of all calls to and from the organization from anywhere the organization operates within. The possibilities are essentially endless.

Organizations adopting CPaaS and/or UCaaS can take advantage of a CaaS provider to reduce PSTN access and operational costs, while improving voice performance, resiliency, and reach. For example, the majority of our research participants adopting Microsoft Teams for calling, as part of Office 365, are doing so while managing their own SIP trunking services to ensure optimal call routing, to achieve global reach, and to minimize the high costs of PSTN access associated with Microsoft Calling Plan. A customer using a CPaaS service like Voximplant for customer engagement can use a CaaS to deliver high quality voice, or to extend calling presence into additional markets.

## Picking the Right Cloud Communications Provider

Choosing the right partner requires assessing a variety of criteria including:

- **Scope of offerings.** If all you need is SMS services, or PSTN access in limited markets, then your pool of available partners is fairly large. But, if you want SMS and virtual toll-free numbers in emerging markets, your choice of providers is more likely to be limited, and you are likely to benefit from partnering with a single CaaS

partner who can meet your global needs, versus using different vendors within individual markets.

- **What the partner can offer today, and tomorrow.** Evaluate not just what the provider offers today, but their roadmap for tomorrow.
- **Regulatory compliance.** Providers who can support regulations like emergency services call routing will have an advantage over those who do not natively provide such capabilities, and must instead work to integrate a variety of partners to deliver a broad service offering.
- **Reliability.** CaaS providers should be able to deliver highly reliable services, across their entire operating areas, with rapid failover times. They should deliver monitoring and reporting capabilities that allows customers to see exactly how services are performing, both in real-time and historically
- **Quality and Performance.** Providers with large numbers of interconnects to top-tier carriers around the world are better able to provide high quality, reliable services than those with limited interconnection points and Points of Presence (PoPs). They will reduce the number of hops that calls must take transverse networks, as well as potential delays from transcoding between networks.
- **Service and Support.** Providers will often differentiate themselves on factors like mean time to repair, scope and availability of support (e.g. 7x24x365 versus business hours only), as well as customer ratings such as net promoter score (a measure of the likelihood that a customer is willing to recommend a service).
- **Experience.** Providers with long track records of providing globally available services have an advantage of startups or those with minimal service reach. Newer providers may not yet have infrastructure and support operations in place to scale to meet the needs of global enterprises.

## Conclusions and Recommendations

The SIP market is evolving beyond simple regional PSTN access. Modern, cloud-based SIP services offer the platform for global reach, support for CPaaS and UCaaS, improved customer engagement, and the ability to craft custom communications services to meet enterprises' digital transformation needs.

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**About Nemertes:** Nemertes is a global research-based advisory and consulting firm that analyzes the business value of emerging technologies. Since 2002, we have provided strategic recommendations based on data-backed operational and business metrics to help enterprise organizations deliver successful technology transformation to employees and customers. Simply put: Nemertes' better data helps clients make better decisions.