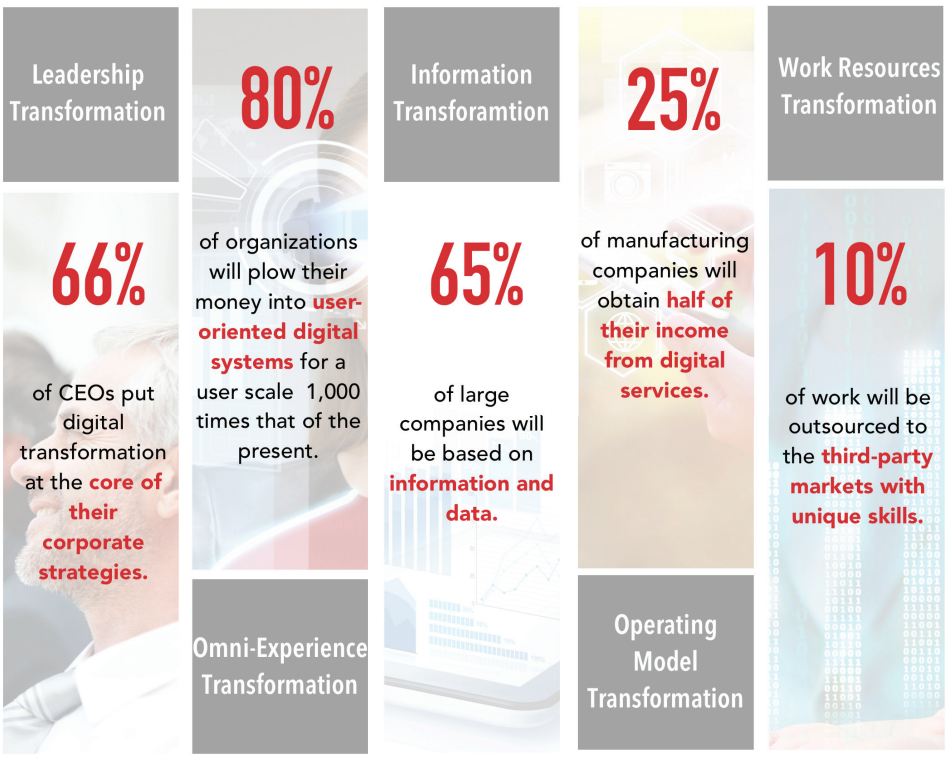
Cloud Enterprise Communications

Serving Digital Enterprises

Enterprise Communications Enables Digital Enterprises

Today, digital technologies such as cloud computing, Big Data, mobility, and social business are continuously changing the way we work and live. While making everything more convenient for consumers, ever-emerging digital services such as smart manufacturing (manufacturing industry), Smart City (government sector), online healthcare (medical industry), mobile payment (finance), and e-commerce platforms (retail) are also creating new-generation digital products, reshaping the traditional industry value chain and establishing an all-new digital economy.

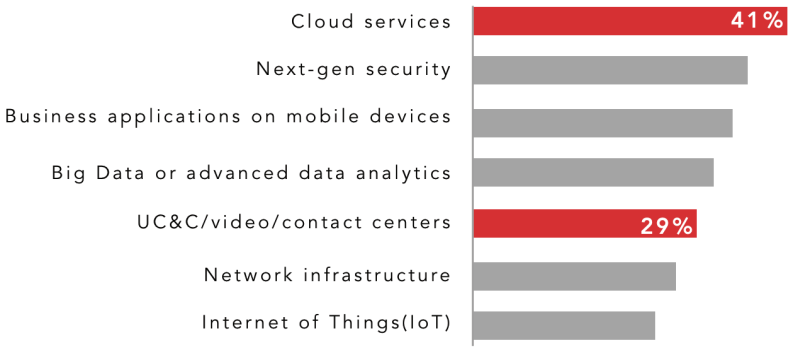


Source: IDC's Enterprise Digital Transformation Survey, 2016

In this new tide of digitalization, only those who adapt will thrive. With the rise of the digital economy, as the main entities of economic activities, enterprises must embark on a digital transformation journeys as soon as possible. The key for enterprises to survive in the digital economy is to continuously improve their digital abilities, achieve digital operations, and transform into digital enterprises to better serve consumers in this digital age.

IDC's survey among more than 1,000 enterprises worldwide shows that in the next three years, enterprises' IT investment will clearly tilt toward digital technologies, including cloud services, next-generation security, mobile applications, and Big Data. Among surveyed enterprises, 29% will focus their investments on enterprise communications.

To become digital, enterprises should effectively integrate digital technologies with their businesses; undertake a digital transformation of business processes, products, and services; adopt digital technologies to expand the business scope; and explore new growth opportunities.



Source: IDC's Worldwide Enterprise Communications Survey, 2016

Enterprise communications technology as the primary tool for information connection and real-time decision making is one of the important supporting technologies for enterprises to achieve digital transformation. The new generation of enterprise communications will have to deal with the new demands and obstacles in communication and collaboration while facing the challenges and opportunities brought by digital transformation.

The scale of communications is growing massively. The development of mobile broadband Internet brings an end to the sole dependence on fixed dedicated networks for enterprise communications connections. Such development also enables customers, partners, suppliers, and other external resources to be part of communication. Furthermore, as the Internet of Things (IoT) becomes more popular and commercialized, main users of enterprise communications applications will no longer be limited between people. Because of this, future enterprise communications connections will multiply.

A greater variety in communications. With the ongoing innovation of information media and communications tools, there has been an increase in the volume of information and information exchange speed. The traditional mail, text message, and telephone used in enterprise communications are losing ground to social media, high-definition (HD) video, augmented reality/virtual reality (AR/VR), and other technologies. In the end, enterprise communications must tailor differentiated and personalized services to various application scenarios and user terminals.

The demand for communications is gradually evolving. The main role of traditional enterprise communications is to address the basic communications needs within an enterprise. However, in an age of digital transformation, enterprise communications is no longer merely facilitating tools. It is becoming a catalyst for change, engendering user experience improvement, product and service innovation, and business model transformations in enterprises.

Cloud Enterprise Communications Emboldens Enterprises to Unleash Their Digital Potential

Cloud enterprise communications integrates enterprise communications technology with cloud computing and Internet technologies. While ensuring the traditional enterprise-level service standard, cloud communications features quick delivery, pay on demand, flexible deployment, self-service, and open application programming interfaces (APIs) and provides enterprises with cloud enterprise communications services of a fully-connected network, in-depth integration, and value innovation, helping enterprises unleash the technological dividend of digital transformation.

Cloud enterprise communications products have emerged to cope with the challenges of digital transformation, meet the enterprises' growing communications demand, and leverage their digital potential.

Full Connectivity

Agile communications platform. Leveraging the anytime, anywhere access capabilities of cloud enterprise communications, enterprises can achieve full connectivity between people, things, and people and things, linking their employees, customers, partners, suppliers, and assets together for information sharing and data exchange. Cloud enterprise communications will become a platform that connects people, businesses, and knowledge.

Ubiquitous connection coverage. Due to its quick delivery, cloud enterprise communications extends enterprises' communications service capacities to every corner of the world and meet the ubiquitous communications demand.

Flexible connection management. Thanks to the flexible deployment of cloud enterprise communications, enterprises can make their massive connectivity demand manageable and controllable, and effectively deal with the tidal effects of business fluctuations.

In-Depth Integration

Convergence of communications systems. The boundaries of traditional independent communications systems are blurred by unified cloud enterprise communications platforms. The communications resources of various existing systems can be integrated for unified scheduling, making it possible to modularize voice, messaging, video, presence status, file management, and other communications capacities while decoupling communications capacities from hardware equipment.

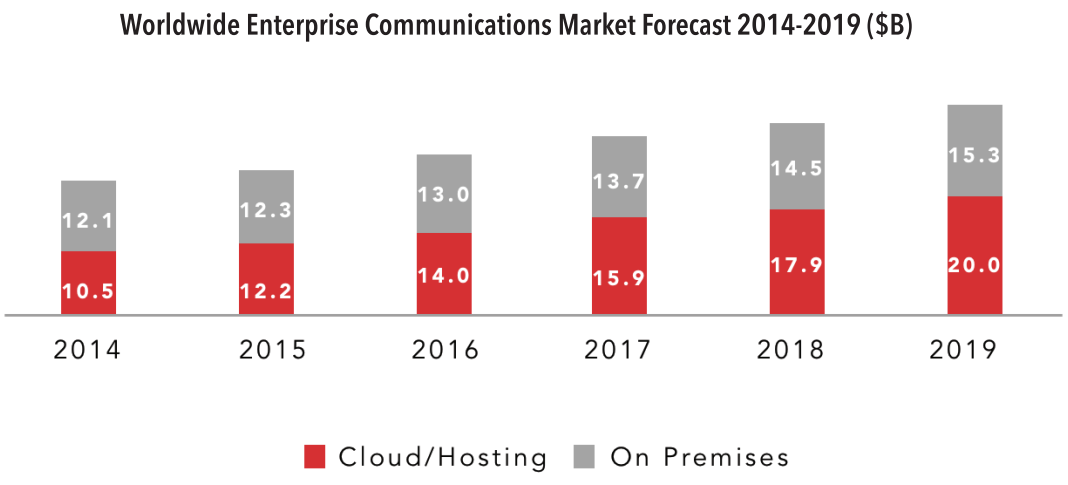
Communications system and business integration. The degree of integration between technology and business is a decisive factor in enterprises' digital transformation value. By integrating communications capacities into an open service platform (i.e., platform as a service [PaaS]) through friendly APIs and software development kits (SDKs), communications capacities can be invoked in real time to enable enterprises to make in-depth matching with business demand based on different application scenarios, help them to optimize their work processes, and enable their products and services.

New Values

Creating new business scenarios. Cloud enterprise communications-enabled products and services can help enterprises optimize their position in the existing markets and ensure that they are not marginalized. In the future, cloud enterprise communications will help enterprises open up additional markets by developing more new business scenarios. For example, while reducing enterprises' traditional call center operating cost and improving consumer experience, the multichannel contact centers created by cloud enterprise communications can boost interaction between enterprises and customers, help enterprises understand user behavior and develop new products and services.

Building a new industry ecosystem. In the digital era, enterprises' advantages will come from not only their inherent advantages, but also their effective use of external resources. Cloud enterprise communications will become a link for establishing a benign cycle of the enterprise ecosystem and help enterprises improve their external resources integration capabilities, optimize collaboration efficiency, and achieve cross-over innovation, mutual development, and the use of complementary resources.

IDC's enterprise communications market survey shows that the cloud enterprise communications market overtook the on-premise deployed enterprise communications market in size in 2016. By 2019, cloud enterprise communications will make up 56.7% of the enterprise communications market, reaching a market size of $20 billion and a compound annual growth rate (CAGR) of 13.8% from 2014 to 2019, much higher than the 4.8% CAGR of the traditional enterprise communications market. New-generation cloud enterprise communications services will become mainstream in the market.



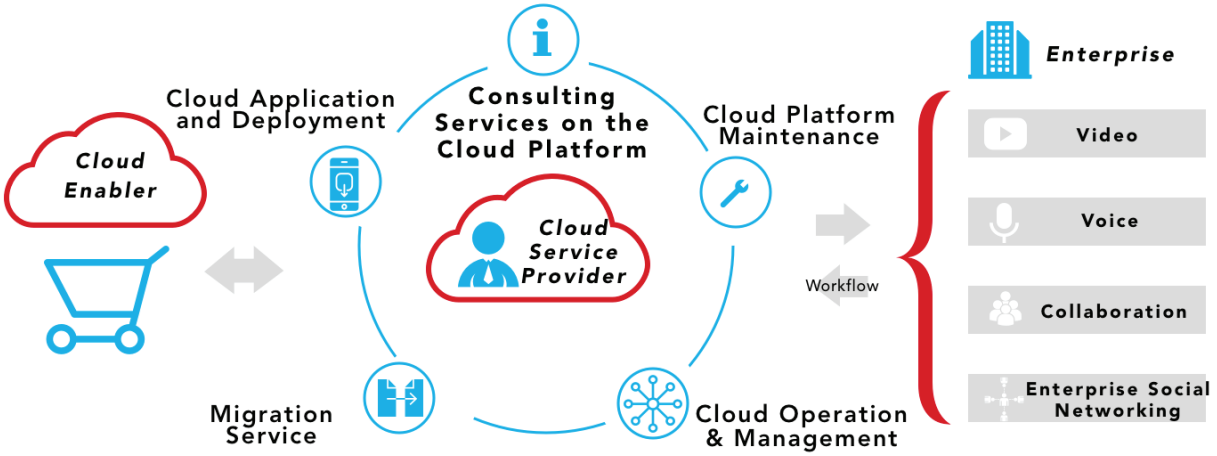
Source: Worldwide Unified Communications and Collaboration Forecast, 2015–2019
Global Enterprise Communications Market Forecast, 2014–2019 (Unit: $1 billion)

Cloud Enterprise Communications Service Providers Will Speed Up Enterprises' Digital Transformation

While acknowledging the huge growth potential of the cloud enterprise communications market, we should also realize that enterprises are paying more attention to the benefits brought by cloud enterprise communications. No industry can achieve digital transformation in one stroke. In addition to a vision and determination for digital transformation, enterprises must also select suitable partners in order to speed up their digital transformation.

Cloud Service Providers Will Play a More Important Role in the Cloud Era

Cloud service providers will no longer provide enterprise users with hardware integration, but instead will provide digital technology integration. For example, a new cloud enterprise communications system must be deployed at the cloud end first to meet enterprises' of asset-light, high reliability, and pay-on-demand operational demands . Second, it must also provide omni-media communications capabilities such as phone, mail, social media, and video communications to meet enterprises' business demands. In addition, it also needs to provide voice recognition, image recognition, and other artificial intelligence (AI) technologies to meet the needs of self-service applications. Finally, it may even need to provide user behavior analysis, user profiling, and other Big Data functions to meet the business expansion demand. Future cloud service providers need to possess the ability to gather, integrate, manage, and customize cloud services; help enterprises screen out the best cloud vendor; and speed up enterprises' digital transformation processes.



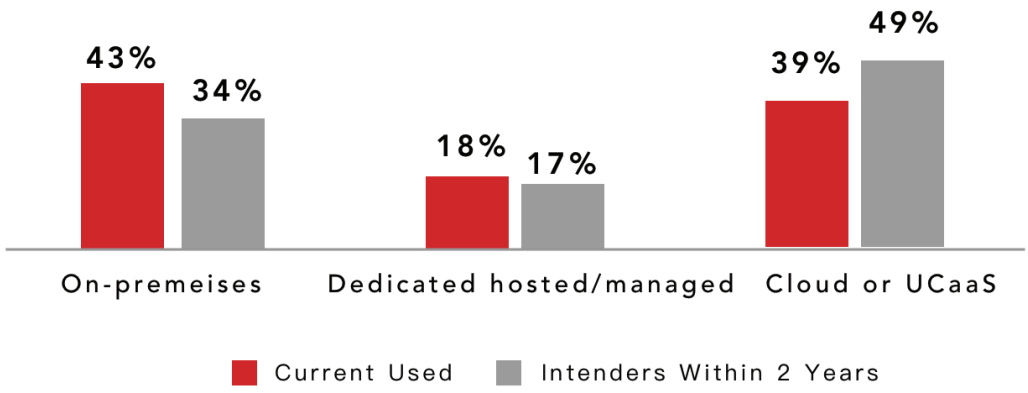
Cloud Enterprise Communications Achieves Win-Win Results for Service Providers and Enterprise Users

Enterprise communications such as ICT infrastructure and platform-based applications are very suitable for deployment (migration) to the cloud end. The application of cloud enterprise communications will enable enterprises to experience the value and advantages of cloud services and boost their confidence in such services. In addition, through cloud communications systems migration, cloud service providers can also improve their cloud service offering capability to enhance their understanding of enterprises' businesses, accumulate industry experience, and achieve their own breakthroughs and business transformation.

a) The Popularity of Cloud Communications Provides an Opportunity for Service Providers to Transform

IDC's enterprise user survey data shows that with cloud enterprise communications systems achieving remarkable acceptance among enterprise users, the deployment of enterprise communications is undergoing obvious changes. Cloud enterprise communications is becoming the preferred choice for the deployment of enterprise communications system. This lays a good foundation for the expansion of the cloud enterprise communications market.

Which of the following best describes your organization's current/planned UC implementation?



Source: IDC's Worldwide Enterprise Communications Survey, 2016

b) Lower Initial Investment Broadens the Application Scenarios of Enterprise Communications

Enterprise communications is essential for enterprises' business development. Traditional enterprise communications products are complex, closed, expensive, and have high network requirements. Cloud enterprise communications platforms can greatly reduce enterprises' construction costs and initial investment, facilitate deployment and help more enterprises improve productivity.

c) From Low Stickiness and Low Profit to High Stickiness and High Added Value

Traditional systems integrators mainly gain their revenue through equipment resale and integration services, resulting in low business differentiation. As equipment prices become more transparent and industry competition intensifies, price has become the primary means of competition, resulting in a continuous fall in integrators' profits.

In addition, the customer's need to reduce CAPEX is met under the cloud enterprise communications service, which turns the traditional "equipment-centered" buy and sell model into a "service-centered" operation one. On top of that, the continued and optimized service model will lead to a closer strategic partnership with the customers. Moreover, closer ties with the customers will help optimize products, accumulate industry experience, and shape independent industry solutions that can be replicated across the industry in the future.

d) The Operational Model of Cloud Enterprise Communications Improves Sustainable Operations

While it may reduce one-shot project revenues, the change from selling equipment to selling services avoids the previous financial pressure of excessively high project inputs, reducing service providers' operational risks. Moreover, foreseeable cash flow can boost the enterprises' operational sustainability.

In addition, with the establishment of the industry ecosystem, service providers can explore more new business models with partners in the ecosystem. In the future, a wider variety of business models will evolve such as revenue sharing, resource swapping, and even equity investment.

IDC believes that the cloud enterprise communications market has entered a period of fast growth as the technology is becoming mature and the products, services, and business models are in place. How to better understand the enterprises' demand and offer competitive cloud communications platforms and cloud services will be the key to achieving win-win results for both service providers and enterprise users.

Embrace Cloud and Serve Digital Enterprises

The cloud era has arrived whether traditional service providers and vendors are ready or not. More enterprises are turning to a "cloud as priority" strategy. IDC's 2016 CloudView Survey (n = 11,350 firms) shows that over 51% of the interviewed enterprises plan to migrate their IT systems to the cloud in the next two years. IDC predicts that 67% of enterprises' IT spending will be cloud-related by 2020. Though embracing cloud will not be a smooth journey, traditional service providers and vendors must devote themselves to it as soon as possible if they do not want to be left behind.

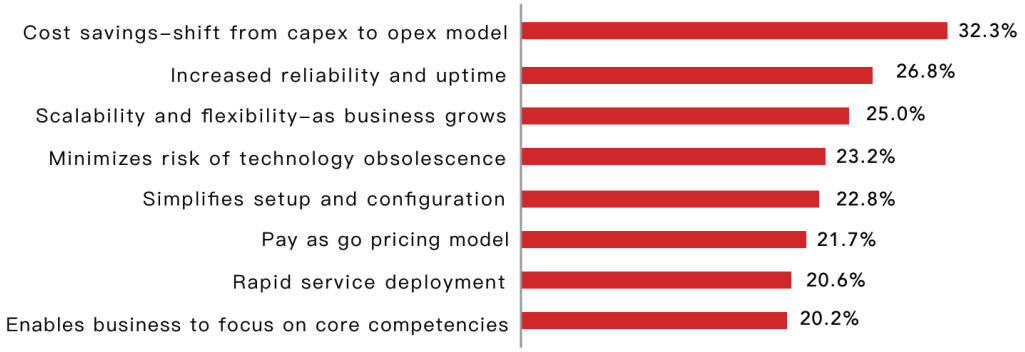
Many traditional service providers are concerned that the rise of cloud may lead to the elimination of traditional distributors and traditional service providers. IDC believes that with the popularization of cloud applications, enterprises will need more experienced and trusted cloud service providers to provide localized technical support. As digital transformation deepens, general-purpose cloud services will no longer be suitable for every enterprise. Enterprise users need more customized cloud services and cloud service providers will be the most fitting to address these problems. IDC predicts that with the digital transformation of traditional service providers and traditional distributors, over 70% of cloud vendors' revenues will come from cloud distributors and cloud service providers by 2020. Cloud service providers will play an equally important role in the cloud era.

To seize market opportunities for digital transformation and ride the industry's growth wave, cloud communications service providers need to gain a better understanding of the value of cloud enterprise communications and acquire the ability to apply them. On the basis of meeting enterprises' basic communication needs, cloud communications service providers also need to gradually guide enterprises to improve their business enablement and application innovation while helping them plan new business scenarios and achieve the value of cloud enterprise communications.

Enterprises Need to Improve their Understanding of the Value of Cloud Enterprise Communications

IDC's enterprise communications survey data shows that the enterprises' first requirement for cloud communications is having an asset-light operation, followed by the improvement of the communications system reliability and continuity, business flexibility, and scalable deployment. Cloud service providers may take this as the entry point and help customers make their communications systems become cloud-based as soon as possible. Meanwhile, they also need to guide enterprises to achieve the value of cloud enterprise communications for business process optimization and application scenario innovation.

What are the most compelling benefits of a cloud-based UC/UCaaS solution?

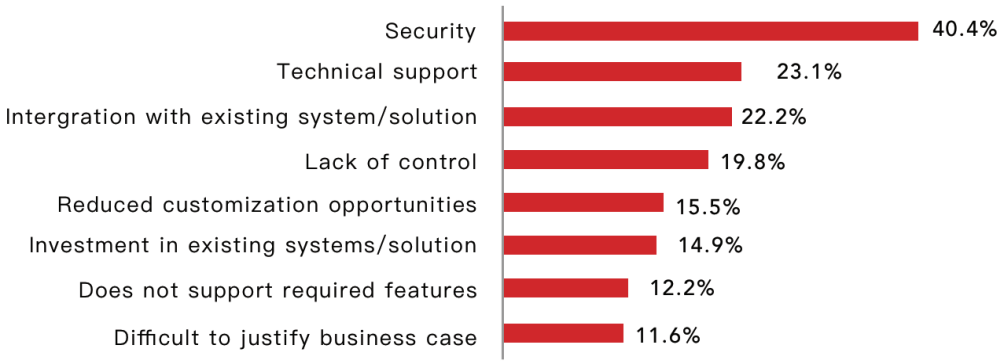


Source: IDC's Worldwide Enterprise Communications Survey, 2016

Enterprises' Concerns over Cloud Enterprise Communications Security Need to Be Dispelled

IDC's enterprise communications survey data shows that security, technical support ability, and compatibility with existing systems are the main concerns enterprise users have regarding cloud migration. Solving these problems can best demonstrate the value of cloud service providers. For example, is it possible to deploy cloud enterprise communications systems through multiple clouds (public cloud, hybrid cloud, and private cloud) and save data and business information locally to dispel enterprise concerns over security problems?

What are your top three concerns about deploying cloud-based UC/UCaaS?



Source: IDC's Worldwide Enterprise Communications Survey, 2016

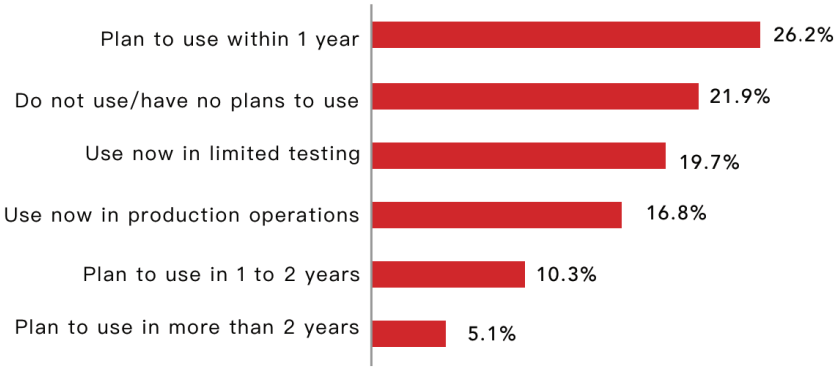
Enterprises' Demand for Embedded Cloud Enterprise Communications Grows Fast

With the deepening division of social labor and the establishment of an industry ecosystem, enterprises will focus more on core businesses while outsourcing general-purpose and specialized work, such as communications service capacities, to specialized partners.

Cloud service providers need to help enterprises integrate their businesses with cloud enterprise communications technology. In addition to providing open, standardized, and serialized communications APIs, service providers also need to reconstruct and streamline their APIs based on enterprises' business application scenarios and help them invoke high-quality communications capacities conveniently and efficiently based on their business needs, enabling their businesses and optimizing customer experience.

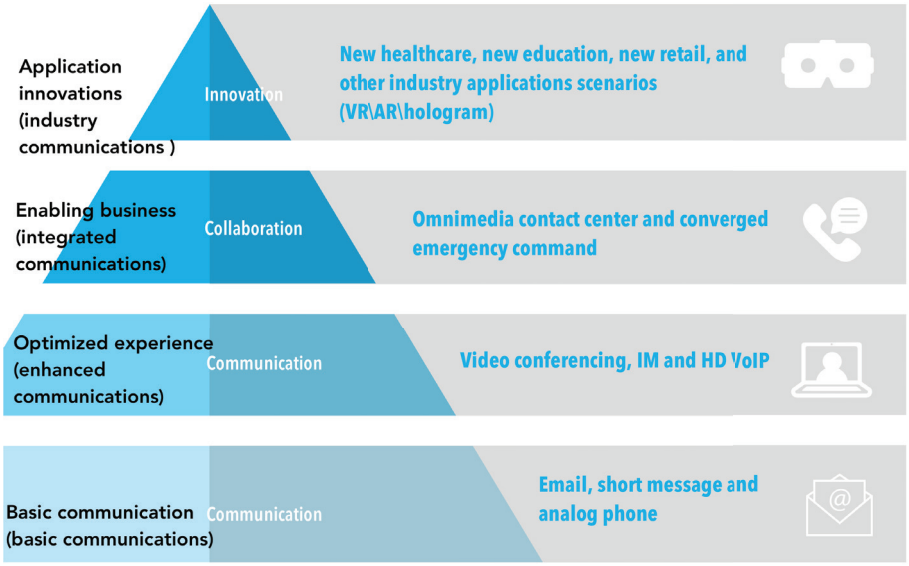
With the acceleration of digital transformation, there will be more business scenarios to be enabled by communications. Cloud enterprise communications will play a greater role and possess a greater value. IDC's enterprise communications survey data shows that the enterprises' demand for embedded communications capacities is growing fast.

What are your plans for embedding real-time communications in mobile or enterprise applications as an interface?



Source: IDC's Worldwide Enterprise Communications Survey, 2016

Scenarios and Industrialization Are Digital Enterprises' Fundamental Demand for Cloud Enterprise Communications



IDC has generalized the enterprises' demand for communications into four levels. Whenever a new stage is reached, new technologies and new products will emerge to meet the enterprises' higher communications demand. With this new demand, enterprises will pay more attention to how to use communications technology to expand their business scenarios and create new values.

Business scenarios will continue to expand in the future following the evolution of digital technology, the maturity of AR/VR and 3D hologram, and the popularity of H.265 coding, WebRTC, and CDN technologies. Customers in the financial, government, manufacturing, education, healthcare, energy, and transportation sectors will seek differentiation and diversification in their communications requirements. In the end, all these will pose a challenge to cloud enterprise communications technology and the uniformity of user experience while bringing opportunities to service providers focusing on different business fields and different industries.

As enterprise communications gradually evolves to cloud enterprise communications, there will be huge industry markets and innovation application scenarios awaiting cloud service providers to explore and practice in the future. How to help enterprises learn about, accept, and apply cloud as well as develop new business scenarios based on the cloud will be up to cloud service providers. It will also be the key for service providers and enterprise users to achieve win-win results.

Cases – Cloud Enterprise Communications Allows Win-Win Results for Service Providers and Enterprise Users

Case One

TRANSFORMATION – *Guangdong Telecom's One-Stop Enterprise Cloud Communications Services Reshape Carrier Business-to-Business Value*

Customer Overview

China Telecom, the largest fixed network carrier in China, has over 120 million wired broadband subscribers, out of which over 100 million are fiber broadband (FTTH) subscribers as of the end of 2016. Among its wholly-owned subsidiaries, Guangdong Telecom is the most profitable one. In 2014, Guangdong Telecom reported a corporate business revenue of more than RMB20 billion, providing over 50 basic communications services to 1.2 million enterprise users in Guangdong Province.

Business Background

Against the backdrop of a basically saturated traditional communications service market, China Telecom put forward a "Transformation 3.0" strategy in 2016, aspiring to transform into "a leading integrated intelligent information service carrier." How to transform its enterprise businesses and meet enterprise customers' new communications needs are the main challenges faced by Guangdong Telecom.

Despite all the difficulties, Guangdong Telecom has acquired certain technological strengths and industry experience following years of proactive efforts in understanding the industry. In particular, it possesses enormous cloud computing resources. How to turn these resources into economic returns is the main direction of transformation for Guangdong Telecom.

Disadvantages

High operating cost

Several business networks (PSTN, soft switch, IMS, etc.) pose heavy maintenance and high cost pressure.

Low customer stickiness

2014 saw net subscriber increase down by 240,000, churn rate of 5% & ARPU down by 3%.

Lack of growth points

IT applications made up for only 8% of total revenue in 2014 & inadequate capability of business innovation.

Slow launch of new businesses

Huge legacy equipment assets, difficult business superimposition & unable to put new businesses online quickly.

Advantages

Data center resources

The largest cloud infrastructure provider in China, with 400 data centers.

System integration capability

Powerful integrated service capability & system integration solution resources.

Excellent customer relationship

Customer resources accumulated over years & excellent customer loyalty.

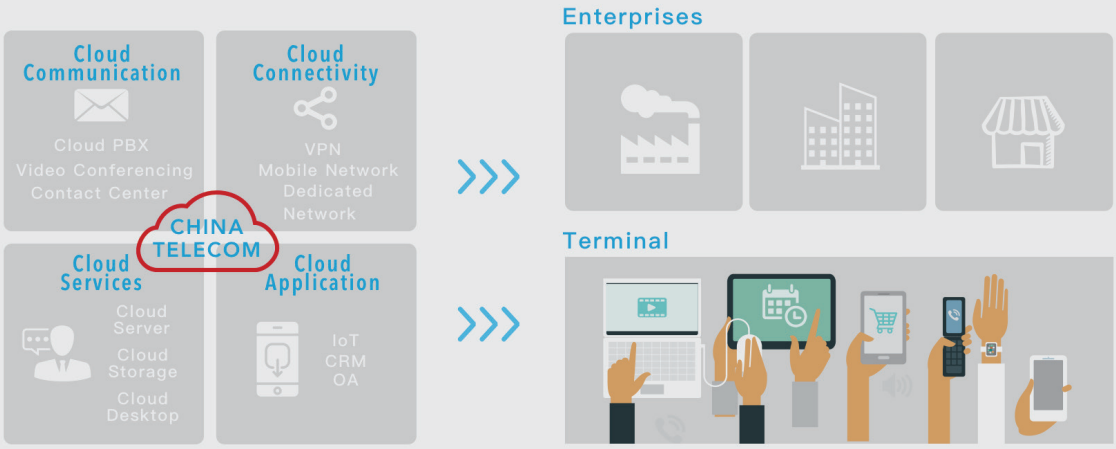
Leadership support

As pilot for corporate customer business transformation with strong resources & policy support.

Solution

With the arrival of the digital economic era, more enterprises are willing to try cloud services to reduce CAPEX and achieve high flexibility. However, what workloads can be migrated to the cloud? How to make a smooth migration? What are the benefits in migrating to the cloud? What are the risks? All these cloud services' questions have long troubled enterprises.

Known as a major province for manufacturing, Guangdong is home to many enterprises that have a strong need to communicate with customers and suppliers outside their province or even overseas. To address such a strong requirement, Guangdong Telecom launched a one-stop cloud enterprise communications service solution pitching on the most adopted communications services as the entry point. The solution features Cloud PBX, Cloud Meeting, Cloud Call Center, and Cloud Communications API service modules. On the one hand, the solution can reduce the total cost of ownership (TCO) for enterprises through a package of cloud communications services and traditional fiber dedicated line services. On the other hand, it offers lease service of end devices to greatly reduce the initial investment and minimize the risk of outdated technologies, achieving win-win collaboration between enterprises and the telecom carrier.



iv Benefit Analysis

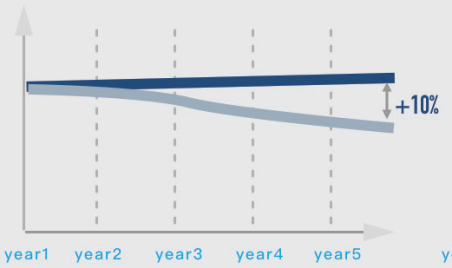
By adopting Huawei's cloud enterprise communications platform and solution, Guangdong Telecom quickly launched its cloud communications services developed more than 16,000 enterprise users within three months after service release.

While meeting enterprises' communications needs, the cloud enterprise communications services also provides enterprise users with self-services to improve customer experience and lower the carrier's operating costs.

In addition to meeting its internal business transformation needs, the "one-stop cloud enterprise communications" services are also geared toward enabling enterprises in Guangdong to experience the increased value brought about by cloud services to boost their confidence to migrate to the cloud, drive the sale of other cloud services and industry solutions of Guangdong Telecom, and support China Telecom to achieve the strategic goal of transforming itself into a leading integrated intelligent information service provider.

A net increase of 300,000 customers

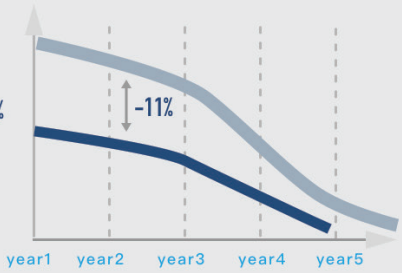
Increase ARPU by 1%



Five-Year Trend for Government and Enterprise Voice Business Revenue

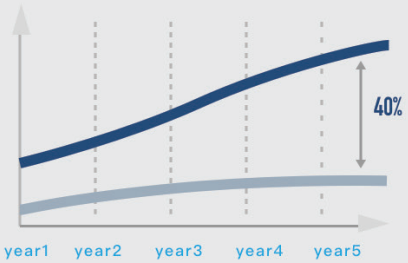
Replacement of old TDM PBX

Reduce OPEX by 75%



Five-Year Trend for Government and Enterprise Voice Business Cost

Increase user stickiness through service bundle and lower the customer churn rate by 1.5%



Five-Year Trend for Government and Enterprise Voice Business Profit

Cloud communications have helped drive the sales of cloud connectivity, cloud services, cloud applications and other value-added businesses, making **Guangdong Telecom a customer-trusted digital partner.**

Case Two

INNOVATION – *Australia's PDK Expands Extra Business Space*

i Customer Overview

Founded in 2012, Professional Data Kinetics Pty Ltd (PDK) is the largest ICT service provider operating outside of Wagga Wagga, New South Wales.

Due to limited local population and enterprise numbers, PDK must develop more new businesses to meet the local demand for communications services. In addition, with the gradual maturity of its business operations, PDK plans to slowly expand its business from the Wagga Wagga area to other parts of Australia to support its own business growth.

ii Business Background

Most local enterprises in the Wagga Wagga area are small and medium-sized businesses that cannot afford the high-construction-cost enterprise communications infrastructure, long construction cycle, and high operation and maintenance costs. These companies have high expectations on service providers to offer relevant services.

PDK also hopes to retain its existing customers, recruit new customers, and increase revenue by providing enterprises with communications services. Cloud enterprise communications products can meet both sides' needs perfectly.

In the early stages of its business development, PDK had less than 50 employees. At this time, the company faced challenges such as improving service quality, reducing service costs, and increasing revenue while serving customers through diversified services. Moreover, before expanding its business scope, PDK must reasonably control system construction investment and conduct flexible deployment according to the business size.

Business Needs

Low initial investment

Gradually procure products & services based on business usage

Flexible service tariff

Modularized business functions, tariff can be dynamically adjusted

Easy to maintain & manage

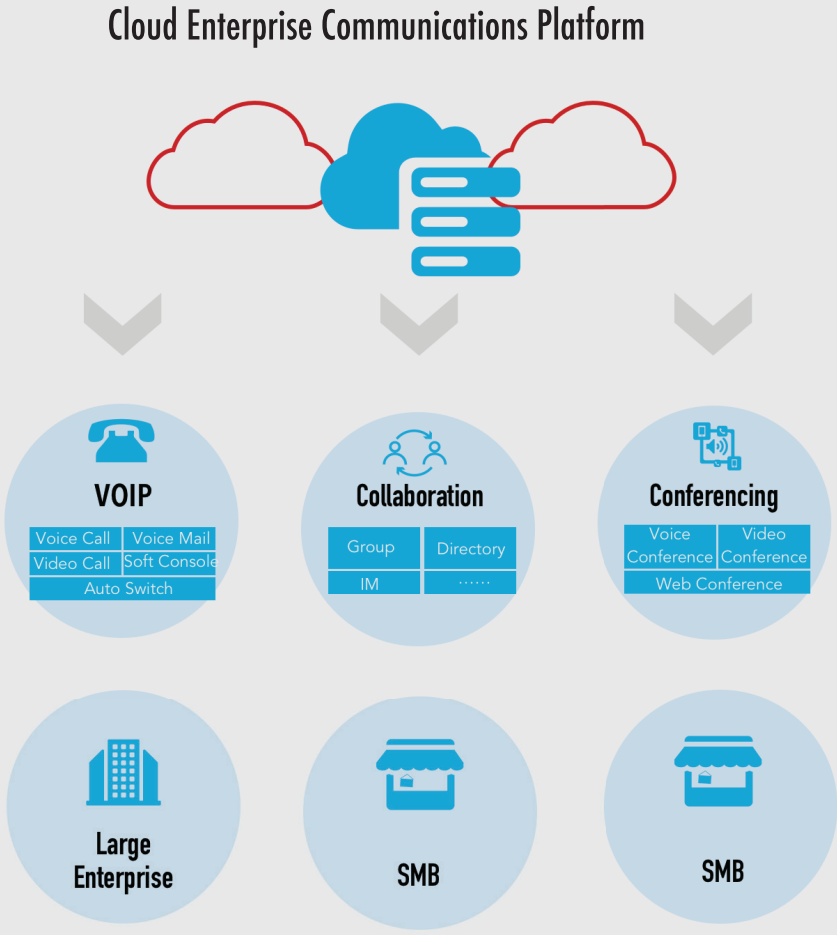
The simple & easy-to-use unified management platform supports tiered authentication and customer self-service

Meet needs of future business expansion

Meet PDK's future needs to expand to personal & home businesses

Solution

PDK adopts Huawei's total solution that includes a cloud enterprise communications platform, an operation and maintenance management system, and terminals. The cloud enterprise communications platform supports quick delivery, on-demand subscription, and flexible deployment, and its capacity can be adjusted at any time based on business scale. It provides small and medium-sized enterprises with one-stop cloud enterprise communications services, covering VoIP, collaboration, conferencing, and other functions. Depending on the market situation, PDK can make flexible service bundles and formulate flexible price packages tailored for enterprise customers. The management platform provides a web portal of tiered management. Based on their different authorizations, PDK and enterprise users can carry out self-services, speed up service provisioning, and lower operation and maintenance costs.



iv Benefit Analysis

The implementation of the enterprise cloud communications business has increased PDK's business revenue, attracted new enterprise users, improved user experience, and raised customer retention without the need for large-scale investment.

The Huawei cloud communications platform adopted by PDK is based on a standard IMS architecture design and supports VoLTE business capabilities. It also supports PDK's development plan to gradually expand its business to personal mobile communications and establish a presence in other parts of Australia.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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