

Monetizing Network Capabilities with Huawei CaaS

Truly delivering value through enablement
and partner segmentation

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Executive Summary

In this whitepaper, we will introduce Huawei CaaS – Communication as a Service. As non-Telco companies encroach on the telecom industry, CSPs need to find a new way to counter the threat as well as capture the web-centric opportunities. In the first session, we will describe how Huawei CaaS can help CSPs to enable more users and better applications with the most valuable network assets as a strategic control point.

With Huawei global presence and CSPs' engagements in different regions, there are 3 key considerations which help Huawei CaaS customers get the most from the market while minimizing the impact on their existing network infrastructure, IT systems and organization structure. The first involves developing customers beyond persons in order to capture the smart device everywhere era. The second requires CSPs to explore new possibilities without significant impact on complex and siloed legacy systems. The last, but not the least, is to identify optimal value chain positioning with the aim to maximize the value derived from the valuable network assets. The details will be discussed in the KSF (Key Success Factor) sessions demonstrating the critical success factors which lead Huawei CaaS customers to success in markets with new challenges.

Introduction: A New Way

Huawei CaaS – Monetizing Your Network Capabilities

Huawei CaaS – Communication as a Service is about opening up CSP network capabilities to enable better applications and expand user bases. It is a new way for CSPs to leverage their existing network infrastructure in order to enable new services, open new markets and create new ecosystems.



Huawei CaaS – enable more users and better applications with SDK and API

Apart from voice capabilities, there are plenty and a wide variety of carrier-grade communication enablers, such as RCS for consumers and Unified Communications for enterprises in a CSP network. The figure above is high-level solution architecture of Huawei CaaS with all valuable and abundant communication capabilities as a strategic control point (in the middle of the figure). This has the potential and scope to allow CSPs to grow their business in multiple domains, such as enterprises, vertical market, M2M and so on, by building better communication-enabled applications with API exposure (Application Programming Interface) and more users with SDK (Software Development Kit).



API – Application Programming Interface: It is important to provide simple and intuitive environment to beckon and build partners' ecosystems. Huawei CaaS supports commonly used languages such as JavaScript, PHP, Ruby and more.

SDK – Software Development Kit: On top of the legacy upward openness through APIs that enable partners to build better applications with communication enablers, the Huawei differentiating approach is through a unique downward openness using an SDK to embed communication capabilities in any connected device. The SDK offers an adaptation layer for full range of device platforms using Android, iOS, Windows and Linux, therefore helping CSPs to turn any device (such as IP camera or door bell) into a subscriber. With comprehensive codec (G.711, G.729, H.263, H.264 & iLBC) and E2E QoS voice/video assurance embedded in the SDK which supports HD video, low latency – ~30% better than non-Telco services and FEC with 99% successful recovery, CSPs can deliver consistently their most valuable carrier-grade communication services not only for P2P but also M2M communication; communication enabled business processes and much more possibilities.

CSPs are eager to leverage their existing communication infrastructure, enabling new services, opening new markets, and creating new business models. Tier-1 operators in Europe and the United States, for instance, are fully utilizing their trusted communication infrastructure through innovative partnerships moving from smart phones to smart homes. Their digital life platforms are open, allowing hardware and application developers to build products for the home automation market.

KSF 1: Widen User Base by Shifting Beyond Persons

Challenge: Saturated market causing revenue stagnation

With voice and messaging revenue stagnating or even shrinking, and revenue growth from data, mainly driven by wide smart phones adoption, merely compensating for their core revenue losses, CSPs must look for new markets and new ways to grow their traditional network offerings focusing on sustainability and business success.

Worldwide there are over 250 million Android devices currently in use and users spend an average of 94 minutes per day using apps and 72 minutes browsing the mobile web. Some researchers estimate that there will be 1 billion smart phones (users only) by 2016. The trend of having smart devices everywhere definitely will develop further at a rapid pace which brings not only challenges to CSPs but also endless possibilities.



MARKET WATCH

ONE smartphone for every FIVE people in the world

"In 2016, two-thirds of the mobile workforce will own a smartphone, and 40 percent of the workforce will be mobile; 56% of smartphones purchased will be Android based." Gartner

FIVE smart devices for ONE people in the world

Technological advances that connect the digital and physical worlds will create the Year of Integration. It leads to the Internet of Things becoming the number one technological trend.

Case: Shifting from P2P (person to person) to M2M, focusing on the security surveillance market

As illustrated in the figure above, smart devices are to be found in all manner of "things" (such as cars, credit cards, CCTV cameras, elevators, door bells, etc.). Machine to Machine (M2M) communication is well under way.



In China, the connection revenue for the M2M market is expected to grow to almost US\$ 2.8 billion in 2016. One of the CSPs in China using Huawei CaaS SDK has made significant progress in the M2M market focusing on the surveillance industry; this is one of the industries with huge potential in China. The CSP enables local partners, which can maximize the value perceived by end users, to develop industry specific M2M applications helping industry partners (such as security surveillance firms and property management companies) enhance their offerings with carrier-grade communication and trusted relationship between CSPs and end users. In return the CSP can broaden its user base by shifting from P2P to M2M and tap into high potential industry.

KSF 2: New Services, New Markets & New Ecosystems with the Traditional Transactions Model

Challenge: Siloed legacy systems and complex processes hindering the time to market

For CSPs, a complex and painful process has to be gone through for a single carrier-grade service: requirement definition, vendor selection, product development, service implementation, proof of concept, acceptance testing, and trials. Normally it takes months to go through all these and get everyone from different business units to agree on a single service. These painful processes as well as siloed legacy systems directly enlarge the cost to fail for a CSP service which inhibits service innovation within the organization.



CSP internal complex processes hindering the time to market



Case: Scaling the business by transforming from flat-rate to tiered pricing

A CSP is facing fundamental challenges, on the one hand, the increasing requirements on new investment in network infrastructure; and on the other hand, losing the ability to exercise pricing power with customers. The CSP looks to separate itself from the crowd with differentiated and personalized services when flat-rate pricing is proving unsustainable, especially with demanding requirements from enterprises and industry specific services. With flat tariffs, costs no longer match revenues for delivering ever-increasing amounts of data over a network designed to support narrowband voice, light-weight downloads, web surfing, and email.

To get the most from the market, a CSP should segment users especially for enterprise market according to services provided and service levels required. Different services provide different benefits to different user groups. CSPs should charge based on the quality of service the user wants.

To address this challenge, Huawei CaaS provides a new way for the CSP to uplift their traditional enterprise toll free number offerings. Through Huawei CaaS a number of premium enablers are included on top of the toll free number service in order to address specific demanding requirements of enterprises and industry specific services. For instance, quality assured communication, call priority, and so on. With these premium enablers, the CSP can boost up existing revenue source with premium services addressing carrier-grade requirements from enterprises and minimize the impact on their existing IT systems (billing, contact center, etc.) with tiered toll free number offerings.

KSF 3: Maximize the Potential by Targeting the Right Partners in the Value Chain

Challenge: Becoming irrelevant due to paradigm shift of global value to new value chain

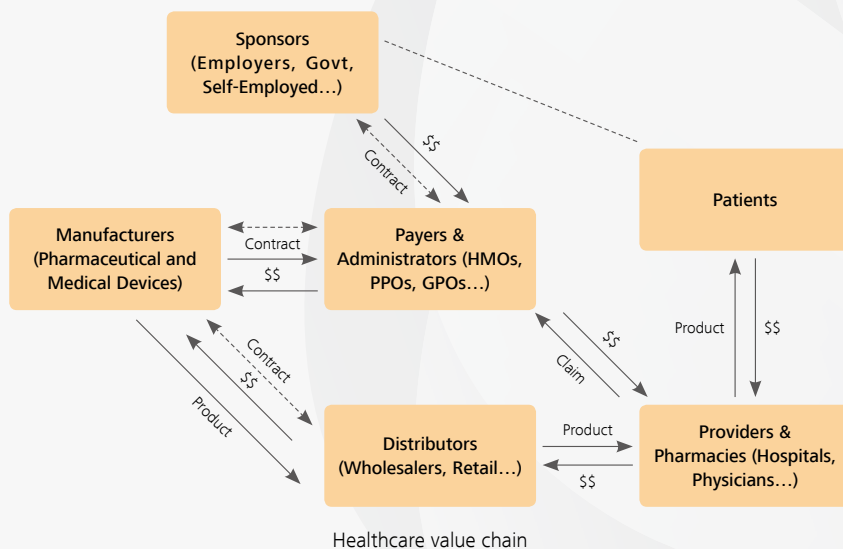
Consumers are segmenting and further segmenting their communication behaviors mainly driven by non-Telco services. Nowadays, over 700K "non-critical" text messages are sent through FB every minute; over 340 million tweets daily through an online social networking service, Twitter; over 100 million active users using photos to

communicate with friends through a photo-sharing platform, Instagram. It drives the ever evolving customer behaviors and disrupting the value chain. Most CSPs, including incumbents in the United States and Europe, have been struggling to locate optimal and favorable position on the new value chain especially when CSPs would like to enable new services, open up new markets, and create new ecosystems.



Case: Identify a right industry partner which unleashes the full value potential in healthcare industry

There is a full range of value-creating activities by different entities comprising the value chain which is different from industry to industry and from region to region. It is important to have full understanding of the value chain in order to optimize the position in the marketplace and maximize the market potential. For instance, in the figure below showing the healthcare industry value chain, it has many complex interactions. The holistic approach of Huawei CaaS Consulting and Operations Services helps one of the incumbent CSPs to unleash the full value potential by identifying a right partner in the value chain.



For the healthcare industry that has value chain with complex interactions, it is critical for CSPs, who would like to go for eHealth initiative, to identify the sponsor which provides major funding to the industry. In the United States, around 65% of healthcare provision and spending comes from programs such as Medicare and TRICARE. Moreover health insurance for public sector employees and elderly are primarily provided by the government.

With Huawei CaaS, the CSP works together with the health insurance firm which is the major fund raiser for the eHealth initiative in the region. Embedding carrier-grade communication capabilities into healthcare business processes can streamline the interactions between patients, doctors, hospitals, and all other stakeholders in the industry, and provide reliable and timely medical services to customers of the insurance company.

Summary

Decades of carrier-grade network development and trusted relationships with customers make CSPs different; make CSPs ready for new challenges; and make CSPs equipped to explore endless possibilities as long as a new way is adopted to maximize the strengths in CSP business by fully leveraging valuable network capabilities while minimizing and managing the weaknesses and the impact on existing infrastructure.

Huawei CaaS – Communication as a Service is the new way. It is about opening up CSP network capabilities to enable better applications and expand user bases (e.g., shifting from P2P to M2M communication), by fully leveraging their existing network infrastructure to build partners' ecosystems and by enabling new services, opening new markets, and creating new ecosystems, especially for enterprises and vertical industries that have demanding communication requirements, all the while minimizing the impact on existing business operations.




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