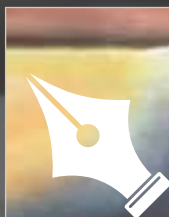


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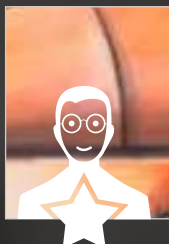
MESSAGING

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FROM DESHBANDHU BANSAL'S DESK



EXPERT SPEAK

AI & Machine Learning Thwarts Threat
to Enterprise Messaging Ecosystems

Deshbandhu Bansal
Chief Operating Officer
Messaging Solutions, Comviva

The Progressive Marketing
Campaigns of the New Age

Santosh Hungundmath,
Head, Product Management
Messaging Solutions, Comviva

Network Functions Virtualization:
Adding Value to the Business

Piyush Jaiswal
Solution Architect,
Messaging Solutions, Comviva

Enterprise Messaging
is the New Black

Ronald Van Loon
Global Top 10 Artificial Intelligence
and the Internet of Things Influencer



VIDEOS

How the Messaging Space has evolved
over the Last Two Decades

Deshbandhu Bansal Chief Operating Officer, Messaging Solutions, Comviva

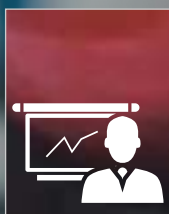
How Communication and Network Providers are
Transforming to Digital Players to stay in the Game

Santosh Hungundmath Head, Product Management, Messaging Solutions, Comviva



CUSTOMER STORIES

- Bringing in Efficiency with USSD Deployment
in Public Cloud for an Operator in Mexico
- Unified Enterprise Messaging Platform
To Amp Up Customer Engagement
- Driving Revenues via Innovative,
Affordable Services to Subscribers



ANALYST MENTIONS

FROM THE DESK OF
DESHBANDHU
BANSAL



Chief Operating Officer
Messaging Solutions, Comviva

The journey and experience of consolidating our presence in Latin America has been eventful-to say the least. From the expansion plan in 2016 (following the acquisition of ATS), we currently stand strong at over 14 deployments handling 8,000 transactions per second.

Of course, the scale that exists today wasn't achieved overnight. It was a long-drawn process, shaped by the ever-evolving market and customer demands. Sustained, needless to say, by strong partnerships. After all, inking partnerships that leverage the strength of each entity is the name of the game. At the end of the day, I strongly believe that success comes with leveraging each stakeholder's expertise to the fullest.

This is, of course, just the beginning. With the certainty that the global messaging space is poised to witness many interesting (albeit, sometimes strange and unexpected) twists and turns, strengthening our expertise and partnerships is the next obvious step. The idea, at the end of the day, is to ensure these partnerships can weather the many, many disruptions and challenges the industry is bound to throw our way.

Here's looking forward to the messaging space keeping us on our toes in the time to come!

EXPERTS SPEAK

AI & MACHINE LEARNING THWARTS THREAT TO ENTERPRISE MESSAGING ECOSYSTEMS

Deshbandhu Bansal

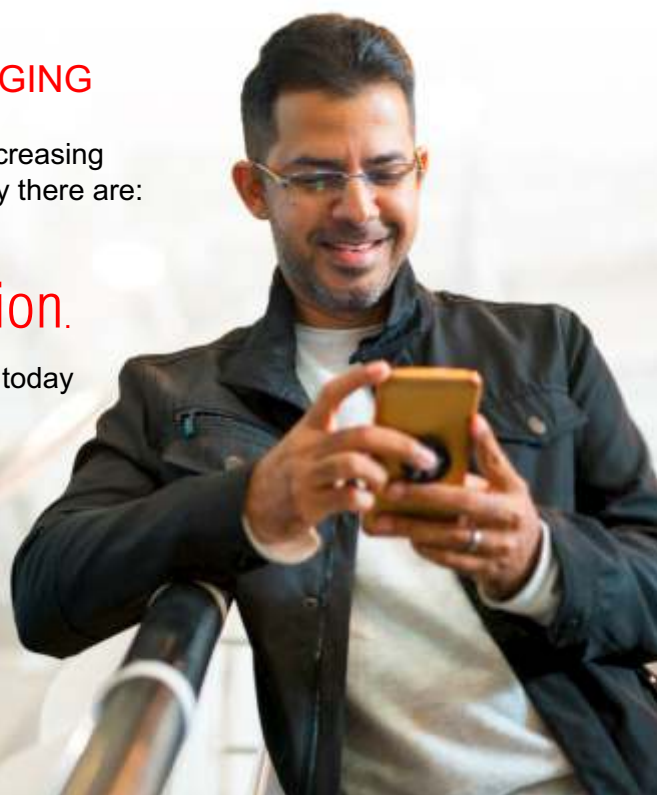
Chief Operating Officer
Messaging Solutions, Comviva

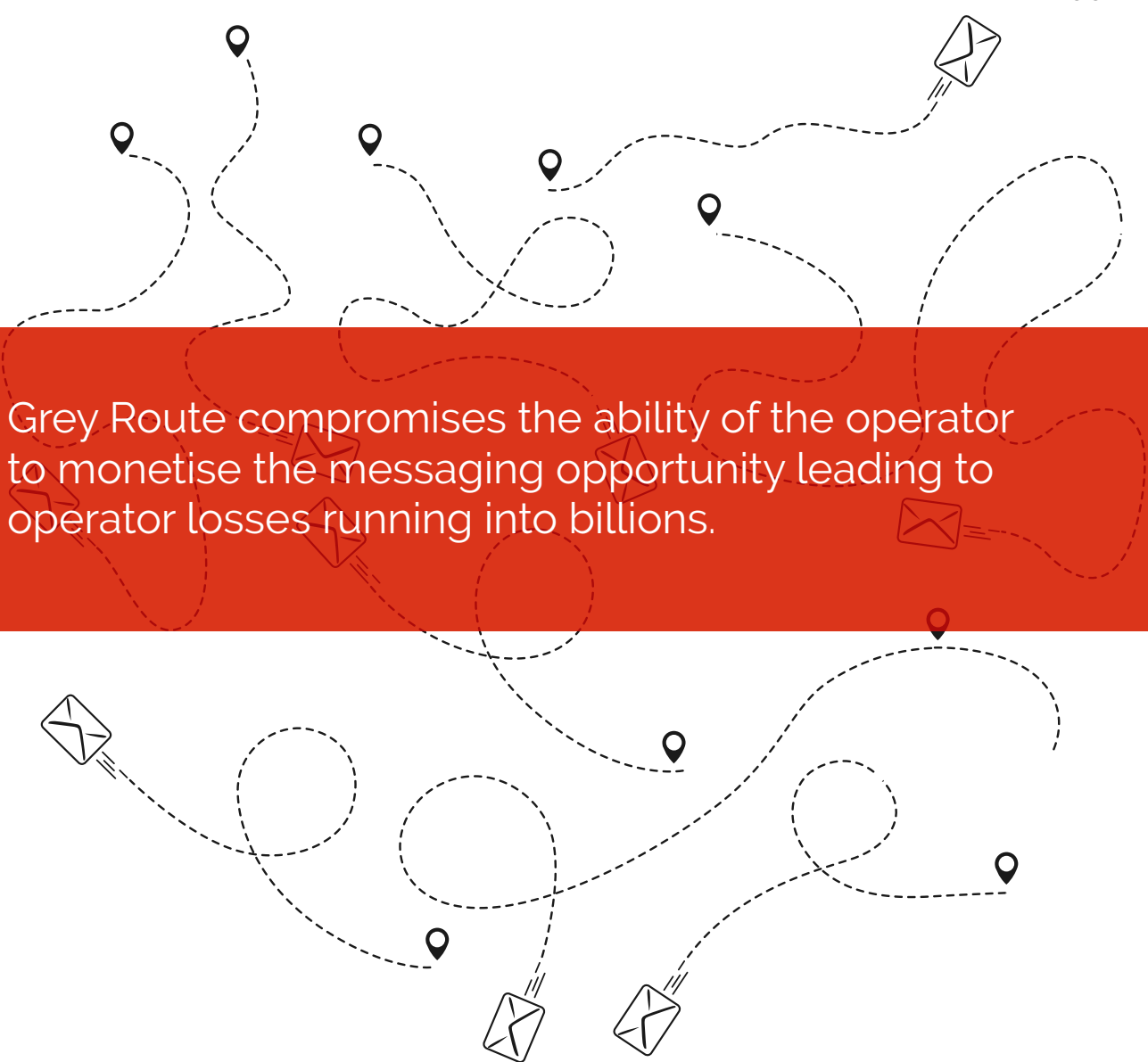
Enterprise loves messaging; it allows them to engage their customers in the most cost-effective manner, moreover, in today's highly competitive markets messaging provide businesses with a channel to drive customer lifetime value with highly interactive and engaging communications, designed to cater to each individual's unique persona and requirements. Similarly, the growth of messaging has allowed operators to create new sources of revenue besides rising up the value chain in the messaging economy. Since the messaging opportunity is so critical for operators, as well as the enterprise segment, there is a growing interest in AI & Machine Learning to ensure the continued growth and health of the overall messaging ecosystem.

RIISING DEMAND FOR ENTERPRISE MESSAGING

One of the biggest factors for messaging popularity is the increasing penetration of mobile. According to GSMA Intelligence, today there are:

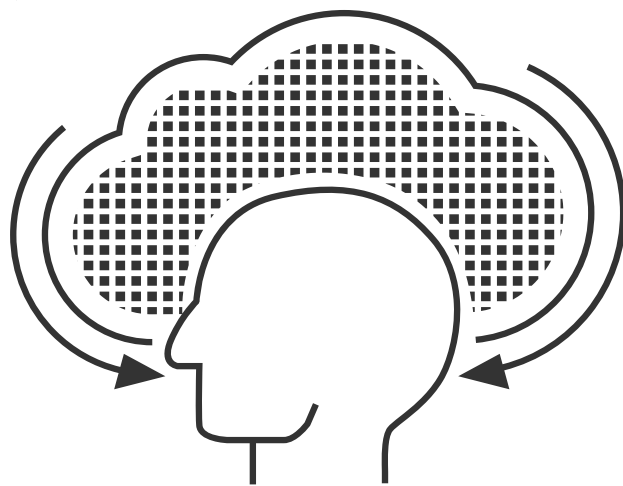
more than **8.97 billion** mobile connections,
surpassing the world population by more than **a billion**.
Similarly, there are **2.71 billion** smart-phone users today
constituting almost **35 per cent**
of the global population.





Grey Route compromises the ability of the operator to monetise the messaging opportunity leading to operator losses running into billions.

Secondly, SMS has made B2C communications easier. Businesses can reach out to anybody with a mobile phone with short messaging services. SMS is also a high ROI messaging channel, where SMS open rates are measured in seconds. Studies have shown that four out of five customers will read an SMS within 30 seconds, which is a higher rate than any other medium. Now, if we compared this number to email open rates, it will become easy to understand why SMS has become so critical for enterprise communications today. Thirdly, the growth of analytics, combined with the customer's willingness to share their data if it leads to better service, have made it easier for enterprises to understand the impact and ROI of each messaging platform, and fine-tune it to different customer personas and requirements.



OPERATOR OPPORTUNITY

With the operator's voice and SMS business declining rapidly, there is a growing need for operators to generate fresh revenue streams. In this context, A2P is critical for operators, as it guarantees consistent revenues for them in the near future, especially with the app ecosystem growing by leaps and bounds. However, in order to fully monetise the A2P opportunity, the operator will have first have to tackle the problem of Grey Routes.

In order to understand the Grey Route problem, we will have to distinguish between a P2P message, which is the transfer of SMS messages between two individuals, and A2P message, which is the transfer of SMS between an application and an individual. The problem arises when the A2P message is masked as a P2P message, with the objective of saving A2P termination charges, or if the message sender wants to hide his identity for the purpose of spamming. There are several ways to mask an A2P message, such as GT spoofing, SIM farms. In GT faking: the message's global title is altered, hiding its identity. In SIM farms, hoards of SIMS are collected and used for sending out A2P messages in the guise of P2P messages.

When enterprises or aggregators try to send commercial messages via illegitimate or zero-rated routes, it is known as grey routes. Grey Route compromises the ability of the operator to monetise the messaging opportunity leading to operator losses running into billions.

Besides revenues losses, Grey Routes have an impact on the operator's ability to drive quality traffic on its networks. Also, without the means to distinguish between good and bad traffic, the operator is unable to prioritise message delivery. The resulting traffic congestion may eventually lead to slower message delivery in critical industries such as banking, where a customer wants to be notified immediately for every withdrawal, for example, at the ATM. In the event of this happening, it is the enterprise that has to bear the brunt of the irate customer. Similarly, if the sender is using the system for spamming, it puts the operator's credibility under the sword.

THE WAY FORWARD

Traditionally, operators have been using rules-based SMS firewalls for safeguarding the network from misuse. Rules-based firewalls use a combination of blacklisted numbers, keyword search, URL destinations for categorising messages. However, sophisticated scammers are easily able to overcome traditional detection and prevention techniques based on deterministic rules, limited pattern search and blacklists. Another problem with these deterministic platforms is that they are not 100 per cent accurate, which means that legal traffic may also be blocked if they meet the criteria set by the platform. On the customer experience front, it may lead to a poor experience, as they miss out on promotions. Therefore, in the interest of the overall messaging ecosystem, it is time to take a more nuanced approach to the problem.

In this context, AI capabilities take a more comprehensive view. Using new advances in the field of natural language processing, the AI-based SMS firewall auto classifies a message into different categories. Unlike conventional platforms which provide limited pattern search, AI platform leverages the past training with millions of similar messages and it analyses words using pattern matching techniques and the context in which the words are used to predict the category to which a given message belongs. Once the messages are categorised, the operator can enforce policy control on a much granular level, which will help to protect the subscribers from spam and fraud, arrest revenue leakages and reduce the operational effort of the operators ensuring low subscriber churn from their network.

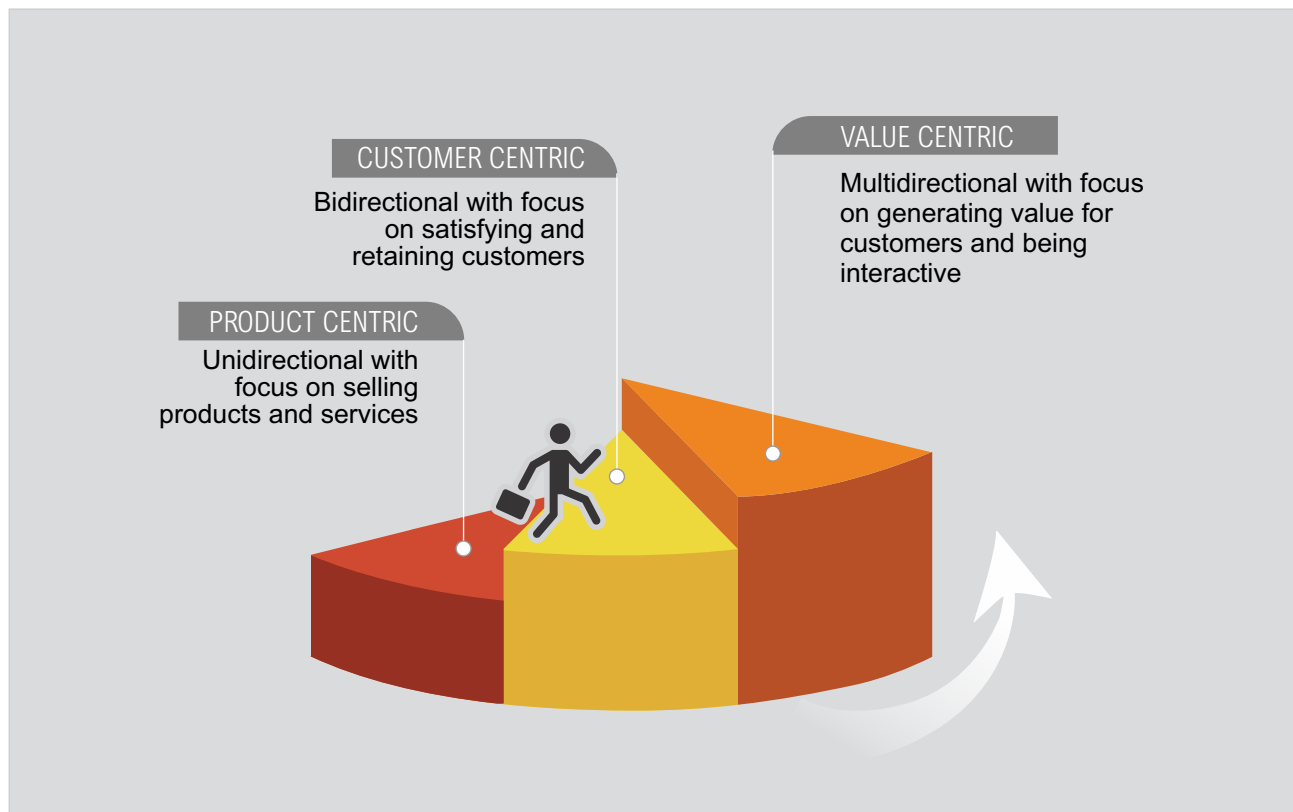


The progressive MARKETING CAMPAIGNS of the NEW AGE

Santosh Hungundmath

Head, Product Management
Messaging Solutions, Comviva

The golden rule of marketing – “Know Your Customer”. The marketing campaigns, over the years have evolved based on this premise of the golden rule of marketing. First came product centric followed by consumer centric and now value centric across the above the line (ATL), below the line (BTL) and through the line (TTL) segments.

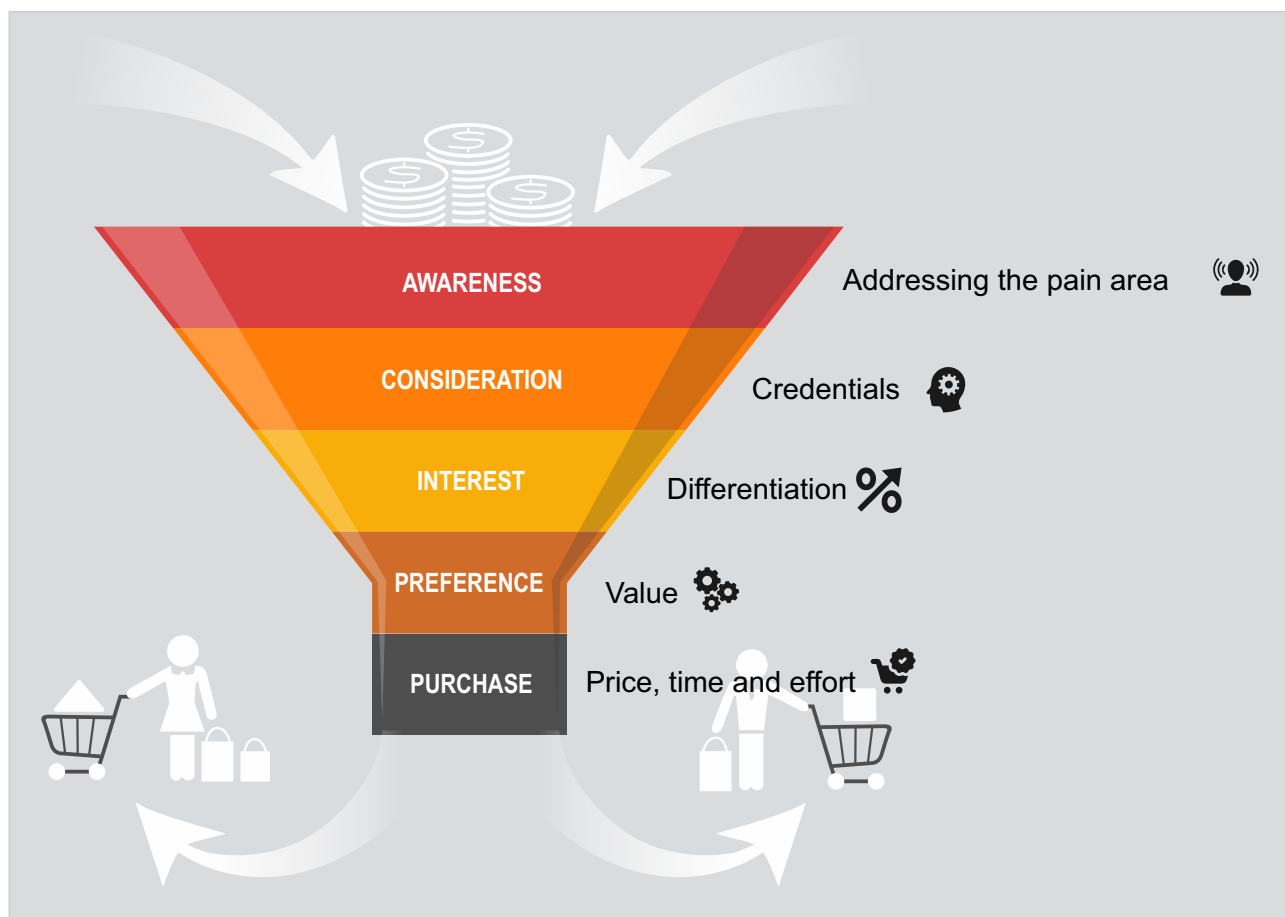


However, with evolution came in complexities of delivering experiences while also meeting the campaign objectives without letting down the returns on marketing spends. These complexities are sometimes a nightmare for the marketers.

It is pertinent to note that the marketing function in many enterprises has started diversifying from being solely driven by corporate marketing and channel mix to a complex organization which involves product thinking, automation and digitization. The one word that substitutes all the three is MarTech Platform. Will the MarTech platform impact the reach of the campaigns and the influence the buyer's journey while also addressing the surrounding complexities? The answer is a resounding affirmative. The new age campaigns launched through a MarTech platform holds such promise of things that are bigger, more amplified, and certainly better edibility under the sword.

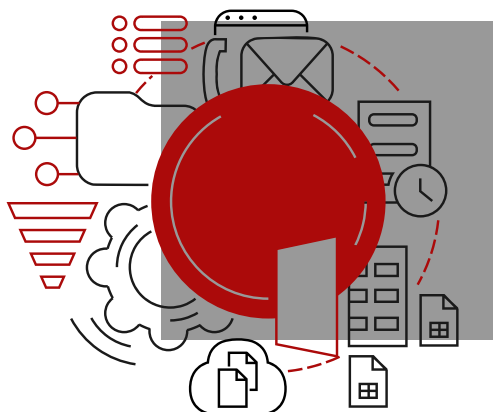
Marketing function in many enterprises has started diversifying from being solely driven by corporate marketing and channel mix to a complex organization which involves product thinking, automation and digitization.

Picture this buyers' journey through the demand funnel:



It is assumed that the prospects can be taken through a funnel in a linear fashion but the fact experienced by many successful marketers says it's never ever linear. Each step in the funnel involves moving back and forth, weeding out the uninterested and engaging with the interested prospects and scoring them for their every interaction in the process. This scoring helps in moving the prospects through the funnel in a non-linear way to ready them as marketing qualified leads for sales acceptance and sales qualified leads for conversion.

Wondering what are the key elements that underlie the best in class MarTech platform of new age? Here are some of the prominent ones to take note –



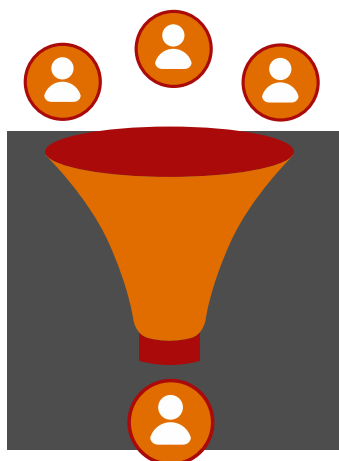
CRM integration

Marketing automation only targets the top of the funnel prospects and readies them in the journey through the funnel. Integrations with the brand's CRM system that interfaces not just with marketing but sales and services creating a unified data platform converting warm leads into paying and repeat customers.



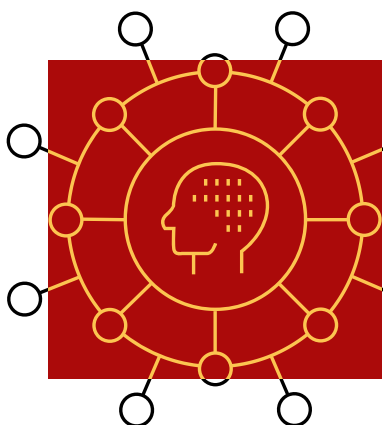
Content play through cross channel

Leverage cross channels to engage with the prospects and feed them with hyper-personalized, contextually relevant content generated dynamically at the point of need for consumption. As per a study by Braze, when customers are reached through two or more channels, the levels of engagement rate were 166% higher than a single-channel rate and 642% higher than for customers who received no messages whatsoever. As prospects are continually connected through various channels like SMS, Email, Social media, Mobile apps, Push notifications, Websites, Ad displays, Chatbots, RCS so on and so forth, the per dollar return will be much higher when the required information reaches the prospect aligning with their behavior at the right point of time. Using the MarTech platform, the cross channel workflow could be configured for higher reach, engagement and conversion tracking.



Lead management:

According to a Forrester¹, top performing brands convert 1.54% of marketing qualified leads to revenue. This means almost 98% people who start the customer journey are lost. The difference between make or break in successful lead management for customer acquisition is enriching customer experience. Behavioral lead scores help align the marketing and sales outreach efforts to provide best engagement experience to nurture, append missing data on leads and convert them to customers.



AI and Predictive analytics:

Data existing in silos are profiled to know your customer thoroughly. For example, telecom operators are sitting on customer data (MSISDN, services used, spending pattern), usage data (CDR, VAS, and average revenue), location data (frequented location, current location, location services used). On such big data system, apply Artificial Intelligence and Machine learning techniques, perform segmentation analysis and generate meaningful insights for the campaigns. Leverage the marketing transactions to present dashboards showing accelerating indications of Return of marketing investments

In summary, all said and done, brands are spending good chunk of their marketing budgets on technology but customers don't only buy products or services but enjoy the experience that comes with it. Such digital experiences can be provided by adopting and deploying a good tech stack of MarTech platform aligning with the overall marketing strategy to deliver progressive campaigns. However, caution to be exercised before impulsively replacing existing platforms systems with new age MarTech platform as that will bring higher operational expenses than marketing efficiencies

Source:
Forrester US and Europe B2B Marketing
activities and Benchmarks Online Survey



Network Functions Virtualization: Adding Value to the Business

Piyush Jaiswal

Solution Architect,
Messaging Solutions, Comviva

Telecoms networks contain an increasing variety of proprietary hardware appliances. To launch a new network service often requires yet another appliance and finding the space and power to accommodate these boxes is becoming increasingly difficult, in addition to the complexity of integrating and deploying these appliances in a network. Moreover, hardware-based appliances rapidly reach end of life: technology lifecycles are becoming shorter as innovation accelerates, reducing the return on investment of deploying new services and constraining innovation in an increasingly network-centric world.

Network Functions Virtualization (NFV) aims to address these problems by evolving standard IT virtualization technology to consolidate many network equipment types onto industry standard high volume servers, switches and storage. It involves implementing network functions in software that can run on a range of industry standard server hardware, and that can be moved to, or instantiated in, various locations in the network as required, without the need to install new equipment.

Reduced operator CAPEX and OPEX through reduced equipment costs and reduced power consumption

Improved return on investment from deploying new services

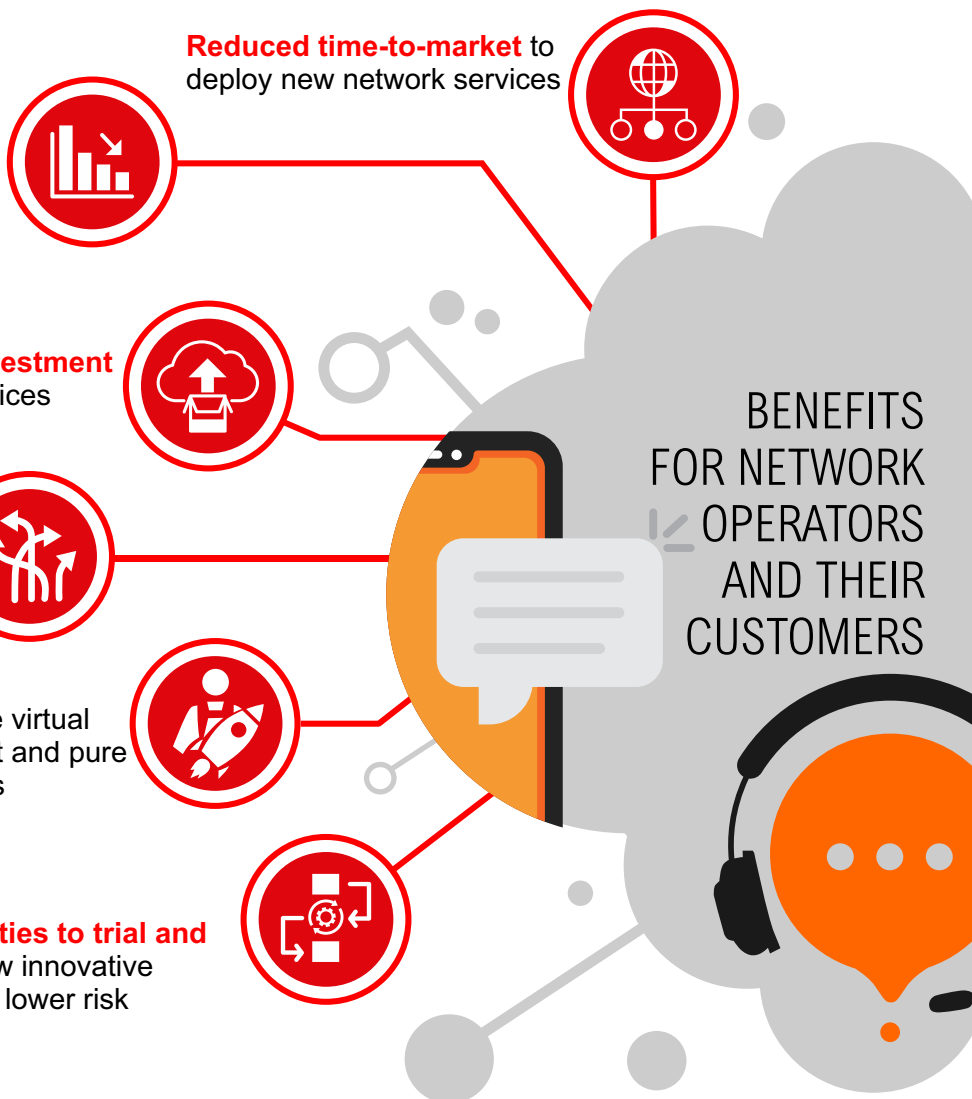
Greater flexibility to scale up, scale down or evolve services

Openness to the virtual appliance market and pure software entrants

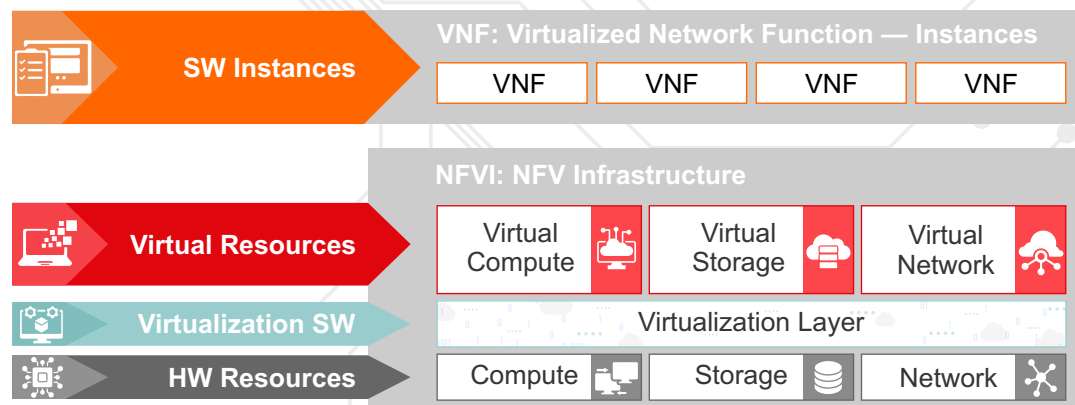
Opportunities to trial and deploy new innovative services at lower risk

Reduced time-to-market to deploy new network services

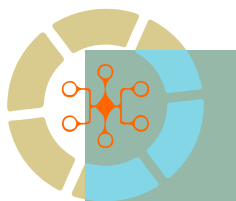
BENEFITS
FOR NETWORK
OPERATORS
AND THEIR
CUSTOMERS



Network Function Virtualization Components



NFV Key Features for 5G



Network Slicing

From a network operator viewpoint, Network Slicing is a service-oriented network construct providing network-on-demand to concurrent applications. In other words, Network Slicing can be seen as an implementation of the "Network as a Service" paradigm, where a common network is able to provide and expose concurrent, partitioned and self-contained "slices" to support different services in an efficient way and provide the required Quality of Service (QoS).

From a standards definition view point, domain-specific standards bodies and open source communities are using "slicing" in contextually different ways. This is a barrier to convergence of requirements, potentially leading to increased complexity to implement network slicing in a converged (i.e. common) core infrastructure supporting 5G and other evolved network services.



Cloud-native Network Functions

Cloud-native network functions are network functions implemented using generic IT cloud techniques beyond virtualisation (e.g. functions composed from re-usable components rather than monolithic implementations of functions).



End-to-end Service Management

Such a framework should exploit and leverage NFV features together with additional automated network capabilities for guaranteeing reliability and service assurance. Coordination among a) resource-oriented management tasks performed by MANO, and b) FCAPS management of network application is needed.



NFV License Management

The NFV ISG has initiated a study on the features needed within the NFV Architectural Framework to support NFV License Management functionality implemented in higher layer systems. The intent is to enable any service provider commercial licensing arrangement to be supported by standardised mechanisms.



Edge Computing

Support of services with ultra-low latency requirements is one of the key differentiators for 5G over previous technologies. This implies deploying 5G networks as highly distributed systems, where network functions that are the most sensitive to latency run on servers located as close as possible to end-user devices or even within such devices.



Security

Network operators and developers of the 5G network functions have been considering the security implications of deployments on virtualised infrastructures. The core goal of ensuring security for 5G deployments using NFV will be extendibility of identity management, attestation, authentication, and encryption solutions across all aspects of 5G



RAN Cloudification

RAN cloudification is expected to provide operators with unprecedented capability in terms of flexibility, agility, resource/service management and orchestration, etc. Due to unique characteristics of radio signal processing, including the strict latency requirements of the order of 1ms or less for new 5G air interfaces, and high-volume computation, RAN cloudification is more challenging than other features of the wireless networks.



Multi-site/ domain Services

Within the 5G context, scenarios where the NS supporting a network slice is itself a composition of nested or concatenated NSs, each provided by different operators, may become more common than with today's mainstream NFV use cases. Thus, NFVO hierarchies may need to be deployed where a top-level NFVO responsible for a parent NS would delegate to lower-level NFVOs the management of nested NSs





Enterprises love messaging. There is no evidence in this world that can deny the obviousness of the fact that enterprises just love reaching out to their customers. Be it regarding new deals, a new promotion, or just to remind people about them, enterprises cannot stop themselves from reaching out to who they serve. These messages are expertly crafted for the end audience in mind, and they have a high rate of reaction. Gone are the days when email marketing would get you the laurels. Organizations have recognized enterprise marketing as a good source of reaching out to customers, and they don't seem to be moving back to the traditional methods.

Here, we list some facts related to enterprise messaging, show some of the challenges that telecoms currently face in providing a platform for enterprises to manage, and describe how these roadblocks can be averted. In short, by the end of this article, not only would we know why enterprise messaging is so popular, but also, we'll know of possible hindrances and how to get over them.

Before we get to understanding enterprise management and the A2P (Application-to-Person) messaging setup, we will first get some facts out into the open. These

facts clearly represent the ideal growth pattern of enterprise management, and how it is become the next big thing happening across this world:

What do organization and enterprises want through a marketing campaign? This is a no

brainer, since they need engagement. Well, enterprise management gives them just that in a very prolific manner. It is said to be a fact that almost 90 percent of all SMS texts are read within 30 minutes of them being received. Not only this, but we have a whopping 98 percent open rate. Compare this with other engagement tools and you'd blame yourself for not stepping unto this platform earlier.

A report published in 2017 has mentioned that enterprises are growing above the early phase of doubt regarding enterprise management, and are incorporating ways to make the procedure even better for everyone involved. Enterprises have gone beyond experiments and are now investing heavily into this new platform.

Total enterprise messages are expected to increase to over **2.8 trillion in 2022**

This is a whopping increase from the **1.7 trillion** messages that we had **in 2017**



What is Application to Person or A2P Messaging

Based on the facts mentioned above, one can agree that enterprise messaging is surely the new black. The method has come up with great potential which is only expected to increase. These messages are interactive, instantaneous and intuitive. But, let's not get carried away, there are certain things that are still required to make this the most amazing interaction point of the future. Organizations need interaction analysis, location services, and the right mix of Artificial Intelligence or AI to deliver the goods.

But before we talk about the market potential and the grey

areas, it is pertinent to know the definition of both enterprise messaging and A2P marketing; two terms that we have been using interchangeably. A2P SMS is the right term to define the process of enterprise messaging. In short, A2P means application to person SMS. Businesses use this technology for enterprise messaging and hence, communicate with customers. The communication is started from a business application, and not a mobile phone, as might have been the case in P2P SMS. Thus, A2P SMS is different, it is glittery and it is the future of enterprise engagement for the future.



How Hot is it for Telecom Operators?

The growth of A2P SMS marketing is going to open a lot of doors for telecom operators on the revenue front. With revenues decreasing and operators falling behind in finances, it is expected that A2P messaging will come as the savior that they needed. The revenues generating from enterprise messaging can also help fund other endeavors that telecom operators have in mind with the age of technology upon us.

It is expected that the average revenue increase per subscription will rise from \$0.13 currently, to over \$1.24 in 2022. This amazing increase will grow finances and ensure that the business gets what it wants from the endeavors in this regard. Moreover, since the number of subscriptions is



also projected to increase, one can expect a bigger revenue bump in the coming days. Telecom operators are in for a good time above, if enterprise messaging goes ahead and achieves the potential that is expected out of it.

White Route Messaging Surpasses Grey Route Messaging

Grey Route Messaging has for a large period of time posed a great threat to Telecom Operators. Unlike phone to phone messaging, application to phone messaging comes with a termination fee. Businesses often try to save this fee by circumventing the normal messaging route and taking to grey routes. This can cost a telecom operator millions of dollars in losses, and will leave them ruing the missed opportunity. Moreover, while organizations perceive

grey routes to be all fancy, there is a loss for them in the prospect as well. Spammers also use grey routes, which is why organizations can end up using the same route as spammers; endangering their reputation.

Hence, Telcos have taken concrete steps to block grey routes and ensure that every organization or enterprise gets to stay on the right ethical perspective. The following challenges currently impede the blocking process.

Loss of Revenue

There is still a lot of money being lost through grey routes. The situation might have improved, but the ground reality and the interest of enterprises in grey routes is still the same.

Network Protection from Spoofing and Flooding

Un-solicited messages can lead to network congestion, which not only deters the customer experience but also does harm than good. Customers who have not signed up for promotional messages end up getting them and hence, bear severe losses.

Subscriber Trust by Blocking Illegal Content

Scammers have started following methods of social engineering to get access to customer information. These scams ask customers to click on a certain link to get more information from a person. They use that information against them.



Role of Machine Learning in Averting These Scams

Operators have recognized the fact that they need to rely on automation for blocking grey area routes. As part of this quest, vendors have started creating solutions based on machine learning. These solutions classify traffic based on learned behavior, and is able to curb grey area routes.

As part of this solution, operators try to apply advanced algorithms related to machine learning. They also identify the content and origin of all

messages, and sort them into categories for deciding which one of them is the most important. This classification would help recognize the value a message holds for a customer, and how this value can be provided to them. By replacing the processes based on rules with algorithms running on machine learning, operators will be able to increase the scope of scam filtering within their organization.



How Can Telecom Operators Take this Opportunity?

Operators have to be really wise about how they take this opportunity and move into the future with it. There are three criteria that operators can consider while following the enterprise messaging opportunity:

Self-Onboarding of Enterprises:

Operators have to realize that extensive promotional activities should be planned for self-boarding enterprises into their max. It is on operators to make enterprises realize how much they can benefit from using the messaging medium for engaging with customers.

Incorporating Digital Channels:

Enterprises might have their reservations, and justifiably so, because SMS messages are not considered as the complete medium of engaging with a customer. A seamless offer needs to be prepared which engages both digital platforms and traditional messaging to develop an interest to action.

Revenue Increase:

Models need to be created that push enterprises towards what is being offered by the operator. These models should go beyond bulk SMS and termination fees, and should incorporate subscriptions that offer a perceived benefit to all operators.

Besides implementing these criteria, businesses will also have to be aligned with regulations, including GDPR. GDPR will have a huge impact on what businesses do with customer data, and both enterprises and operators are required to be on the right side of the law.



V I D E O S



How the messaging space has evolved over the last two decades

Deshbandhu Bansal
Chief Operating Officer,
Messaging Solutions, Comviva

How Communication and Network Providers are Transforming to Digital Providers to stay in the Game

Santosh Hungundmath
Head, Product Management,
Messaging Solutions, Comviva



CUSTOMER STORIES



CUSTOMER STORY

Bringing in Efficiency with USSD Deployment in Public Cloud

CUSTOMER PROFILE

Headquartered in Mexico, the client is the fastest-growing wireless provider, offering mobile services to people and businesses in Mexico and digital entertainment services throughout South America and the Caribbean. With 20 million + wireless subscribers, the operator enjoys a monopoly in the country.

BUSINESS CHALLENGE

USSD (Unstructured Supplementary Services Data) referred to as “Quick Codes” or “Feature codes” is an old yet popular technology in emerging economies like Latin America. It offers a simple yet efficient way to connect between the mobile operator’s network and the user’s feature or smartphones.

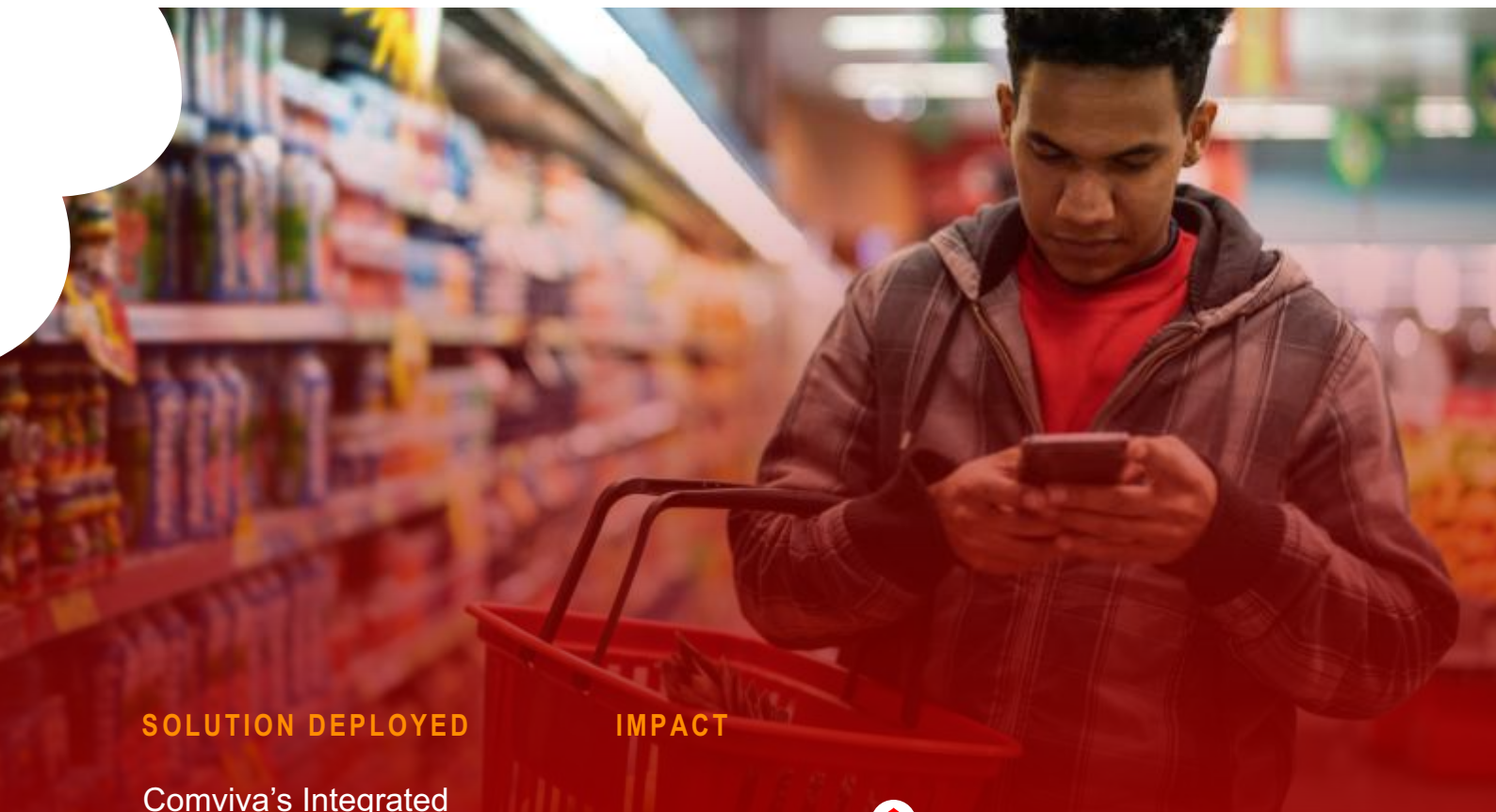
The existing USSD platform of the operator was deployed in a physical server environment and the hardware was reaching EOL (End of life). The overall application creation experience was also cumbersome; taking a significant amount of time to build the required logic.

The operator wanted to bring down the CAPEX cost associated with the deployment and launch new services at a faster pace to the subscribers.

KEY REQUIREMENTS

A quickly configurable platform for creating new USSD menus by integrating with multiple systems deployed in a virtual environment. Some of the requisites being:





SOLUTION DEPLOYED

Comviva's Integrated Messaging Platform- UNO deployed in AWS Pubic Cloud

Comviva deployed UNO platform, enabling the operator to trim overheads while efficiently planning and managing messaging infrastructure across messaging and voice channels.

The deployment consisted of USSD gateway, a robust and carrier-grade platform deployed in AWS Public Cloud to build real-time interactive experiences. The USSD Gateway is integrated with other network nodes deployed in the operator's private cloud.

IMPACT



Deployed UNO – USSD platform in AWS Public cloud with minimum resources, resulting in an estimated

~ 25% CAPEX
and OPEX reduction



Offered scalability

to manage increased traffic in the future



Quickly deployed services

across self-care, e-recharge, provisioning, infotainment, roaming, push-based services, utilities, etc.



Faster time to market,

with reduced menu creation and testing from days to hours.s

CUSTOMER STORY

Unified Enterprise Messaging Platform To Amp Up Customer Engagement

ABOUT THE CLIENT

With a subscriber base of **11.5 million**, the client is one of the leading mobile network operators in LATAM, operating in the Peruvian telecommunications sector since 2005.

NAVIGATING FRAGMENTED MESSAGING LANDSCAPE

Till 2018, the operator was using different channel-based messaging platforms to communicate with its customers, leading to communication fatigue, owing to the influx of mass messages across all available communication channels.

Operator lacked a mechanism to centrally register customers' choice of the channels, preferred time and day of receiving messages, maintain contact policies like DND, or have centralized control over notifications sent to its customers.

Disjointed customer experiences, due to lack of **360°** view of the customer, was further adding to the otherwise high customer churn in the region.

COMVIVA PROPOSED A UNIFIED OMNI CHANNEL CUSTOMER ENGAGEMENT PLATFORM TO ENABLE IMMERSIVE EXPERIENCE

Identifying the need to build conversational experiences with its subscribers, while adapting to the evolving customer behaviour, Comviva proposed Ngage, a next-generation enterprise messaging solution.

It allowed the operator to build meaningful customer engagement by gaining a deep understanding of relevant micro-moments across a customer lifecycle and nudge them via contextual messages at an appropriate time across the channel of their choice.

Customization capabilities make communication contextual and personalized, in sync with the brand's personality and individual preferences.

Some of the key USPs of the platform are as follows:

- **Single Platform** with conventional & digital channels
- **Micro Service Architecture** with independent channel scaling
- **Highly Interoperable:** via API-fication
- **Automation** of Business Flows
- Applicability across **Enterprise industries**
- **Flexible Hosting Options:** Cloud & On Premise
- **Flexible Business Models**

HOW OPERATOR LEVERAGES NGAGE

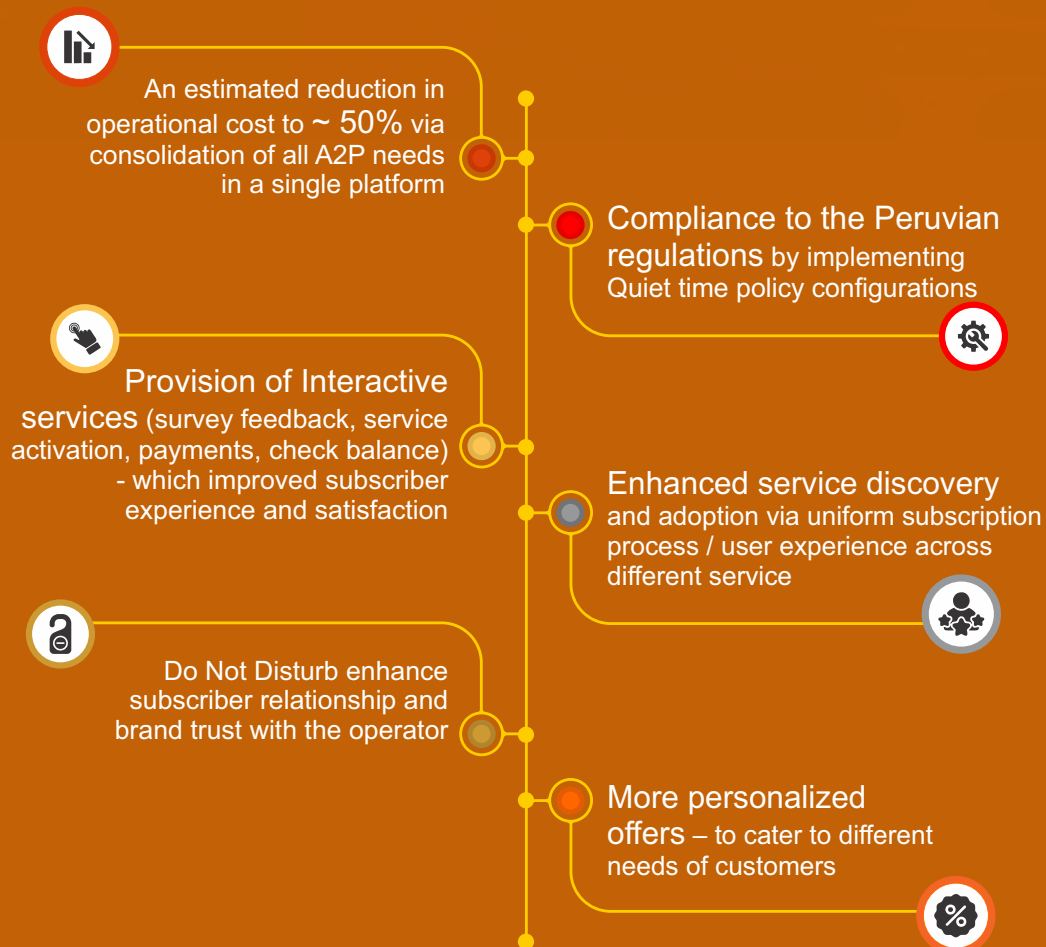
The Operator is extensively using Ngage platform since 2018. Some of the use cases being promotional messages for its voice, data services, packages, etc. Others being personalized campaigns, regulatory communication, and transactional notifications.

A recent case in point being the launch of "Psychological Support Campaign" every Sunday, as per a directive from the Peruvian government for its subscribers.

The operator implemented new communication policies leveraging the platform in no time & is further exploring our solution with enhanced capabilities through the addition of new channels and policy configurations.



IMPACT



CUSTOMER STORY

Driving Revenues via Innovative, Affordable Services to Subscribers

ABOUT THE CLIENT

Owned by an international telecommunication and media company, the client is present in 8 countries across LATAM. With 35+ million subscribers, the operator is the fastest growing network in the region and enjoys a market share of more than 50% across the countries of operation.

BUSINESS CHALLENGE

Delivering value to its customers, by enabling innovative USSD-based financial & other value-based services.

KEY REQUIREMENTS

The operator needed a highly reliable and redundant USSD platform that could offer safe, convenient, uninterrupted financial services, with zero transaction failures to the subscribers, seam-lessly on feature-phones as well as smartphones.

Some of the requisites being:

- User-friendly and flexible USSD platform which can create new USSD menus with ease and launch new (distinctive) services at a faster pace.
- Ability to run different USSD services independently, to avoid single point of failure.
- High availability and multi-site deployments support.
- Flexibility to handle free flow call flows where the USSD menu can come from external enterprises for specific short codes.
- Ability to support virtual environment deployment.

SOLUTION DEPLOYED

Comviva's Integrated Messaging Platform - UNO with USSD Channel

Comviva's UNO – USSD platform, a robust and carrier-grade platform has been deployed across the OPCOs with geo-redundancy for handling financial services and a range of other value-generating USSD services like Self-care, lifestyle, etc.

Multiple USSD engines are deployed to handle different USSD services independently, avoiding a single point of failure. Even if one engine goes down, the services that are running on the other engines will not be impacted and would be taken care by the geo-redundant site, ensuring no disruption & high availability of services.

Multiple financial applications are integrated with the USSD platform, enabling the operator to extend different financial services to the subscribers. Several applications are also developed and installed in the USSD platform using which the operator is able to provide varied USSD services to the subscribers.

IMPACT



Deployed UNO - USSD platform in a virtual environment resulting in an approximate 25% reduction in overall CAPEX and OPEX cost



80+ USSD Applications running across sites in Geo-Redundancy mode with relentless service availability



USSD as a revenue generator for the operator, with multiple USSD services like Financial, Self-care, lifestyle etc. offered on the channel



Faster time to market, with inbuilt USSD Menu Simulator, enabling quick roll out of new services.

ANALYST MENTIONS

Comviva has been Featured as a Tier 1 Vendor in the Rocco SMS Firewall Vendor Performance Report 2020

The leading analyst house surveyed **131** MNOs, across **92** countries to obtain their views about SMS firewall vendors in the industry. Multiple parameters were considered, such as reliability; customer service; technical expertise; reputation; value for money; value-added services; quality of service; transparency and flexibility. With a cumulative score of **4.02** out of an overall rating of **5**, we have been placed in the "Tier A" category.

Comviva Featured in Markets and Markets' SMS Firewall Market Report

Comviva has been recognized as amongst the "visionary leaders" in the SMS firewall market.

Comviva Featured as a Leading vendor in Rocco Research's A2P SMS Messaging Vendor Benchmarking Report 2020

This report contains a detailed comparison of **16** vendors in the market. Over **35** key performance indicators were considered, including, Leadership, General Performance, and Performance on key aspects, etc. Comviva has been mentioned as a leading vendor.

Rocco Research's The Innovators Report 2020 Features Comviva

Comviva is proud to be rated as amongst the top innovators in an independent study conducted by Rocco Research. The criteria considered include Incremental Innovation, Breakthrough Innovation and Transformational Innovation.





About Comviva

Comviva is the global leader of mobile solutions catering to The Business of Tomorrows. The company is a subsidiary of Tech Mahindra and a part of the \$21 billion Mahindra Group. Its extensive portfolio of solutions spans digital financial services, customer value management, messaging and broadband solution and digital lifestyle services. It enables service providers to enhance customer experience, rationalize costs and accelerate revenue growth. Comviva's solutions are deployed by over 130 mobile service providers and financial institutions in over 95 countries and enrich the lives of over two billion people to deliver a better future.

For more information, please visit www.comviva.com

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