INNOVATING IN VOICE. TRANSFORMING THE FUTURE.

Maximising the value of international voice in service provider and enterprise businesses.

Expert insights into the future of the international voice industry
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COMMUNICATIONS

INNOVATING IN VOICE. TRANSFORMING THE FUTURE.

CONTENTS

Interview - Deliver New Innovation via Digital Platforms

CREATING THE NEXT ERA IN INTERNATIONAL VOICE

While the traditional wholesale voice market shrinks, opportunities to innovate in voice-centric solutions are growing.

It is a time of massive change in international voice. The market now demands new business models, processes, and platforms. As pricing and volumes continue to decline in traditional international wholesale, new opportunities are emerging for service providers and enterprises to maximise the value of voice in their organisations. **As an industry, we're seeing voice service presented out via communications as a service (CPaaS) platforms and accelerating demand for global numbers driven by surges in remote working. Voice is a market that can change rapidly, as we've seen during the pandemic.** Businesses that are not able to change will see this disruption as a barrier, while others will explore opportunities for innovation and transformation in voice.

Traditional wholesale is giving way to an international voice market that is more solution and platform centric. International voice isn't just about terminating traffic but instead finding ways to solve specific communication challenges and deliver business outcomes. That's a massive mindset shift but one that will define the next era in voice.

> " **Accelerating demand for global numbers driven by surges in remote working. Voice is a market that can change rapidly, as we've seen during the pandemic.** "

Giving You a New Voice

Voice needs to be repositioned in the ICT ecosystem. It should be thought of as a business application that can increase productivity and create new value within an organisation if it is delivered with efficiency, quality, and an optimised user experience. Far from being a service in decline, it is an application that is evolving and adapting to new use cases and consumption models. The A to B wholesale world had a finite number of routes and minutes that could be offered or traded, but when you think of voice driving business outcomes then there are new possibilities and potential.

The challenge for most enterprises and service providers is to find a partner that has deep roots in voice but is also thinking about future use cases and developing new solutions. There are still opportunities to drive profitability and grow in a changing market.

Lockdowns and quarantines associated with COVID-19 have accelerated the switch to flexible and remote working across multiple sectors. **At the same time, in the international whole voice on the retail side has seen declines driven by the continual**

growth of over-the-top (OTT) services and VoIP based calling. This is inspiring service providers and enterprises to re-evaluate their voice strategies. There's a new appetite for exploration and innovation within organisations and how they stay connected is more important than ever. Voice remains a critical component of almost every enterprise, but the pace of change is unlike we've seen in several decades.

Voice is becoming a more dynamic market with new challenges. This is driving the need for experts that can help both service providers and enterprises navigate these new opportunities and deliver for users.

Changing the Game

The drivers for change are directly related to new user behaviours and changing expectations. Voice is part of a larger ecosystem that research firm IDC refers to as "engagement applications". It is increasingly seen as part of a suite of solutions rather than a standalone service.

Growth in adoption of CPaaS and Unified Communications as a Service (UCaaS) by enterprises has changed how voice is consumed. **The CPaaS market is expected to have a total value of $25 billion in 2025, rising from $7 billion in 2020, according to Juniper Research**. There's an opportunity for service providers to enable and optimise these platforms for enterprise customers while sharing their expertise and insights in voice. **They can use their expertise in connecting across global destinations and simplifying complex processes to play a critical role in an "as a service" world.** As in the traditional wholesale space, what matters most is quality of service, experience, and cost.

At the same time, service providers and enterprises are looking at new consumption models where they can access voice capabilities and embed them into existing systems via APIs and make use of SDKs. APIs enable voice capabilities to be shaped to specific use cases and embedded in platforms, mobile applications, and a range of new and existing solutions. Voice becomes fluid, flexible and programmable, using modular platforms. It creates opportunities for voice to be integrated into solutions and the voice network used in new ways.

The Carrier's Role

The carrier's role in this new era in international voice is to provide a foundation for innovation. International carriers can offer the insights and expertise to make voice simple and seamless to incorporate into new solutions and ensure that both service providers and enterprises are delivering quality experiences for users.

The right carrier can offer end-to-end consistency with owned and managed infrastructure that spans the globe. It will have decades of experience in voice with the ability to bridge the gap between traditional wholesale and innovative solutions. Most importantly, it will be listening, collaborating, and co-creating solutions with service providers and enterprises. Carriers that are successful will be ecosystem orchestrators that understand how to partner and develop solutions that meet business objectives.

Today, the business of voice is about enabling business success.

$25BN
2025

$7BN
2020

CPaaS Market expectations according to Juniper Research

REACHING A TIPPING POINT IN INTERNATIONAL WHOLESALE

Declining revenues and pricing are driving service providers to explore new ways forward in international voice.

Since its peak in 2014-2015, traditional wholesale voice volumes and pricing have been falling. International long distance (ILD) calling has seen revenues eaten up by Over the Top (OTT) players while business calling has moved to platforms like MS-Teams, Cisco Webex and Zoom. Declines in revenue and pricing have been widely recognised but the industry has reached a tipping point where many small and medium sized service providers have to decide their path forward in a challenging market.

Research firm Omdia estimates that global wholesale international voice revenues will continue to decline from $12.7 billion USD in 2019 to $7.4 billion USD in 2025 with a compound annual growth rate (CAGR) of -8.6%. It notes that the developed markets of Europe are declining fastest with a 2019–2025 CAGR of -12.2% because of the adoption of IP-based communication services including VoIP and messaging. Asia and Oceania will become the largest region by revenue because of slower traffic and revenue declines.

$**12.7**BN
2019

$**7.4**BN
2025

Wholesale international voice revenue 2019–25

Source: Omdia © 2020 Omdia
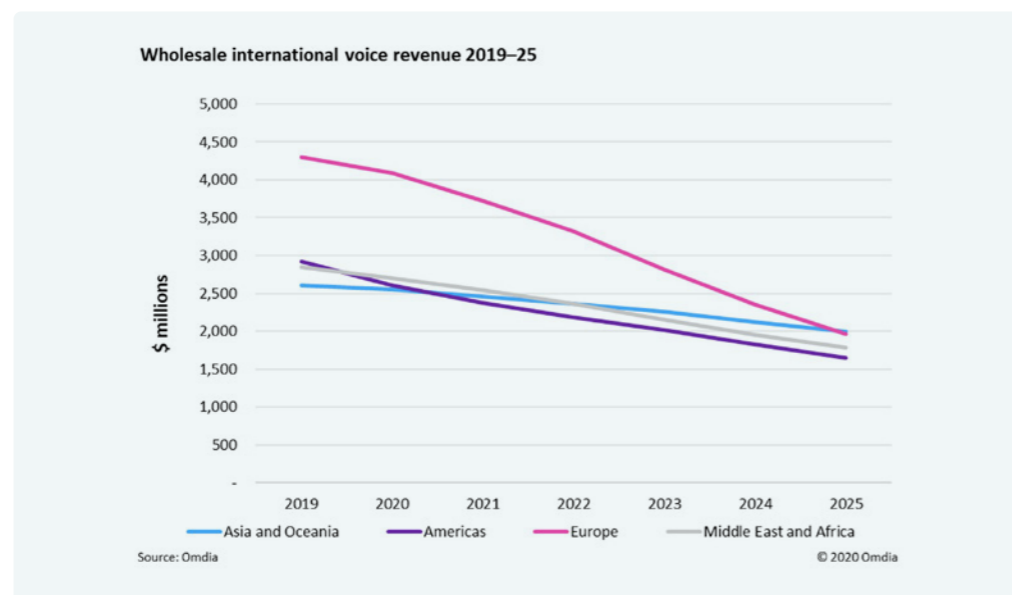
Overall, the outlook remains challenging across the globe. Pricing pressure is driving the middle and lower end of the market to look at outsourcing alternatives or look at what routes or regions they can hand off to a partner.

❝ The key is that service providers find a partner that has the scale, reach and expertise to ensure maximum value ❞

Pandemic Disruption

While quarantines and lockdowns associated with COVID-19 offered a glimmer of hope in traditional wholesale voice services, the bump in volumes did not continue throughout 2020. i3forum Insights, a database that aggregates voice data from some of the largest carriers in the world, showed a 20% increase in international voice traffic in March 2020, compared to the same month in 2019, while roaming traffic dropped by 30%.

The average length of calls increased by more than 30% in March and over 60% in April 2020 compared to 2019. These gains, however, were short lived when volumes quickly returned to normal levels, as users found other means to call and connect.

"It's been a race downhill ever since (2015), as the slump in voice traffic has turned into a rout. Carriers' traffic by 9% in 2017, 4% in 2018, and a further 6% in 2019. The COVID-19 pandemic spurred a short-term rally in international call volumes in early 2020, but things pretty much returned to the new normal. Traffic fell a further 7% in 2020, slightly faster than the two previous years," says research firm TeleGeography.

Interestingly, TeleGeography notes that the pandemic did impact how calls are placed. The mobile-originated share of traffic dropped for the first time ever in 2020. More users are apparently staying home and using video and audio conferencing as an alternative to mobile. In 2019, 62.4% calls originated on mobile while in 2020 it fell slightly to 62%.

The research firm added, "The upward trend seemed irreversible ever since mobile subs passed fixed subs in 2002, and then mobile-originated traffic surpassed fixed-originated traffic in 2013. Still, next year we anticipate that the upward trajectory of mobile-originated traffic share will return."

A New Path Forward

Despite the disruption in the market in 2020, the fundamentals remain the same. Small and medium sized service providers have to decide how they want to play in a market that favours scale, volume and reach. Many will be looking at either optimising how they manage

FIGURE 1
Still Goin' Down, Down, Down...

Notes: Data for 2021 are projections.

Source: TeleGeography © 2021 PriMetrica, Inc.

their international traffic or evaluating ways of exiting the market with a trusted partner.

What is certain is that the traditional approach no longer matches the market dynamics and Managed Service Providers (MSPs), Mobile Network Operators (MNOs) and a range of other players will need to take action. The market has reached a tipping point where more of the same is not an option. These players need to consolidate their vendors, simplify their approach and refocus on where they can add value in the market.

There's an opportunity to build a business case for outsourcing with a trusted carrier partner. That can cover all international voice, niche routes or entire regions. Outsourcing can also apply to associated services including international voice fraud protection, sourcing, trading and billing. The key is that service providers find a partner that has the scale, reach and expertise to ensure maximum value for the service provider. Ideally, they will develop a long-term relationship that will track to changes in market dynamics and be mutually beneficial.

A lot of service providers are at a point where they must decide if they want to invest in updating and maintaining existing infrastructure while international voice delivers diminishing returns. Many will not want to make capital-intensive investments in voice, and that will drive the aggregation of traffic within larger and specialised providers.

❝ These players need to consolidate their vendors, simplify their approach and refocus on where they can add value in the market ❞

THE BUSINESS OF VOICE: APPS, APIs AND INNOVATION

Manoj Ghonge, Head of Global Sales, Usage Based Services at Tata Communications explains how innovation in international voice is being shaped by business demands, user experiences, and new models for co-creating solutions.

> " We're seeing enterprises do some serious thinking about their communications strategies and service providers are coming to us to discuss growth opportunities "

Manoj, you have more than two decades of experience in international voice. What can you say about the pace of change in international voice in over the last 12-18 months?

I think the pandemic has been a driver for changing user behaviours, but more importantly, innovation in voice platforms. If the pandemic happened in 2010 and not 2020, there would have been fewer options for remote working and the transition to remote working would have limited productivity quite considerably. The growth of CPaaS, UCaaS and a range of platform-based communications was ramping up pre-pandemic, and digital adoption has skyrocketed.

Innovation has been matched with a scenario that has driven rapid change in international voice. We're seeing enterprises do some serious thinking about their communications strategies and service providers are coming to us to discuss growth opportunities.

You mentioned skyrocketing digital adoption. We've certainly seen transformation in other industries, how is the international voice market transforming?

There is a greater appetite for exploration and trying new things than there was five years ago. Players like Twilio have shown that there are opportunities to put control in customers' hands and see how they shape their communication services. Even the growth in Public Cloud is pushing voice services to be more agile and to be offered more like a platform than the traditional A to B termination. That is being driven by changing user expectations.

Customers that can spin-up storage on Amazon Web Services, and have all the functionality they need from a single provider, are looking for voice to be that simple. They want to deliver traffic in one country, but they also want to optimise routing and reduce losses from voice fraud. They want a simple and seamless model. Voice is really catching up to other areas of the ICT ecosystem.

How is this reflected in conversations you're having with customers?

First off, pricing in the traditional wholesale arena may be falling, but voice is still a killer app in an enterprise. Digital transformation is critical to back-office processes and creating new agility, but picking up the phone and calling a customer or a colleague is still an essential part of our working days. I don't see that changing. What is changing is the platforms and how people are making calls. That changes the conversations that we have with enterprise customers. It isn't just about territory or routes. It is about listening to the customer and having a much more consultative approach. It is about talking through the comms strategy and helping them to develop solutions that meet users' needs. Users have more influence over ICT decision making than they probably realise.

If users are driving decision making, what kinds of questions are you getting from enterprises?

It always comes back to quality of experience. Users demand that their communication services deliver consistent quality. Like any other app, if their voice services don't work well, then they'll find another solution. That leads to shadow IT and unsecure platforms and services. It's a potential nightmare for IT teams.

We get asked about how to guarantee quality and consistency across multiple sites and geographies. The rise of Microsoft Teams and Zoom have created an opportunity to leverage our global footprint and expertise in Voice to optimise these services. The Bring Your Own Carrier or BYOC model enables Tata Communications to sit behind the platform and ensure that users are receiving the same quality of service and experience if they're in Manhattan, Mumbai or Moscow.

Why should an enterprise consider a BYOC model?

User experience across communications platforms drives productivity. If an enterprise has a global carrier with decades of experience in voice underpinning its platforms, users will be happy, and they'll get maximum value out of CPaaS.

At the same time, a carrier can support multiple platforms operating across different regions. An MNC might be on Zoom in North America, but Teams in Europe and Asia. They can use Tata Communications' global footprint to optimise experiences no matter the platform or the location. The MNC gains an expert partner who has deep infrastructure globally.

You mentioned a consultative approach, what does that mean for your service provider customers?

Listening is crucial. The voice market is more dynamic than it has ever been, so we have to understand where service providers are on their transformation journey. A big part of our role is aligning voice with business objectives. For Tata Communications, that might mean developing an outsourcing solution where an MNO trusts us to carry their international traffic. Together with the MNO, we'll build a business case for outsourcing and show the ROI over time.

For other players, it might be combining value-added services like anti-fraud solutions with OBR mitigation and routing optimisation to increase profitability. Another service provider might only want help with niche or challenging routes.

From our perspective, it is all about delivering solutions that make business sense and help service providers to maximise the value of their voice business.

So, what is Tata Communication's overall strategy in international voice?

We are focused on developing and delivering voice solutions that deliver business outcomes for enterprises and service providers. That really ties together the innovation that we're delivering in value-added services and some new models for supporting voice.

Notice that I haven't talked about minutes? The voice minute and the bilateral table will probably always be relevant, but the action and excitement in voice is in creating and co-creating solutions.

Where is voice going to go from here? What does the future hold for international voice?

I think collaboration across the entire ecosystem is going to deliver another wave of innovation in voice. International carriers will provide the foundation because we can guarantee quality and deliver optimised experiences. CPaaS, UCaaS and OTTs will continue to offer new ways to consume voice services and embed them into other applications.

Programmable Voice is a really exciting area. We're co-creating solutions with enterprises and finding new ways to use voice to solve business challenges. Ride sharing and food delivery services rely largely on mobile-centric applications that can benefit from voice being incorporated into their experience. We can present out APIs that different apps can integrate and use to consume voice. APIs mean a growing number of capabilities can be deployed and laced into new services seamlessly.

That goes far beyond traditional wholesale voice, but we have the underlying technology and expertise that these kinds of applications require.

> " I think collaboration across the entire ecosystem is going to deliver another wave of innovation in voice "

Is anything else you'd like to add about the international voice market?

Yes. Definitely. In today's market, Voice matters more than ever and we're really only at the beginning of this next wave of innovation in apps, APIs and platforms. As an expert in voice, it is our job to provide a foundation for exploring these new opportunities and finding ways to collaborate and grow together with our ecosystem partners.

DELIVER NEW INNOVATION VIA DIGITAL PLATFORMS

Budi Satria Dharma Purba, Chief Executive Officer at Telekomunikasi Indonesia International (Telin), shares his insights into changing market dynamics in international voice, and growing opportunities in digitalisation.

> " You have to accept that change happens, and that should drive carrier businesses to evolve and change as well "

Budi, Telin has been doing a lot of new and different things in the international voice market. **What are the biggest drivers for change in the international voice market?**

Obviously, declining minutes volumes and the rise of the OTTs are creating a challenging operational and business environment. I think everyone recognises that, but it is important to remember that international voice is still a huge market. It is a multi-billion-dollar industry, despite pricing and volume challenges.

What matters is how you play in the market. You have to accept that change happens, and that should drive carrier businesses to evolve and change as well. If you operate your business the same way you did 10 or 15 years ago, you aren't going to be successful.

At the same time, we're seeing increasing fraudulent and grey traffic in international voice and that is driving carriers to look at how they can combat it.

There are new dynamics but that doesn't mean there aren't opportunities.

So where do you see new opportunities in international voice? What are some of the big opportunities for carriers?

There is a drive towards network or vendor consolidation and increasing cost-efficiency. If you look at how carriers and Mobile Network Operators (MNOs) operated 10 or 15 years ago, they had multiple interconnects and they used that as a competitive advantage. I don't think that's the case anymore.

Managing multiple interconnects requires increased resource, and that adds cost to a carrier's operations. I see carriers and MNOs reducing the number of interconnects they

manage and looking at new partners or models for delivering traffic internationally. It is also important for all the MNOs and carriers to simplify their operations. They have to think about digitalising their processes to get the operational efficiency they need.

Large carrier relations teams at small, mid-sized carriers, and even large MNOs, are a thing of the past.

Will this also lead to consolidation of these kinds of carriers and MNOs?

I think it will. A growing number of carriers will look for synergies with players that complement their existing operations. The consolidation of resources is critical. If I'm a CFO, I'm looking at where costs are coming from and how we can maximise the potential of our business while finding efficiencies. I definitely think mergers, as well as outsourcing of international voice, will increase in the coming years.

What will be the result of carriers consolidating interconnects?

The result is a more efficient approach to the market and an optimised cost base. You have to relieve margin pressure and rethink your business model. Carriers have to react to margin pressure, and it isn't just a cost-cutting exercise.

You have to explore new models and digital platforms that enable you to build long-term sustainable international voice businesses. Once you cut all the cost out of our business, you have nothing left to cut. It takes a bit of vision, but it is better to look at ways to create efficiencies and innovate to maintain or grow margins.

You mentioned digital platforms. How can digital platforms support carriers as they look to innovate?

Digitisation is shaping almost every industry in the world, and international voice is no different. Telin has developed an online marketplace that enables wholesale carriers and enterprises to connect and do business in a digital environment. NeuTrafiX is about digitising processes and making buying and selling voice services seamless.

It is helping carriers to be more efficient in terms of how they manage interconnects, contracts, billing settlement and end-to-end processes. It is also enabling carriers to reach out to new segments. The API-centric CPaaS, UCaaS, and other digital players, want to procure services in this way. Digital-native enterprises also don't want to procure voice with a traditional offline model.

The key is to present out services in a way that is familiar to these new and high-growth segments. We, as carriers, have to offer new experiences that look more like other ICT services that the digital players are used to procuring. You don't want voice to be old school or traditional when the rest of the ICT ecosystem has moved on.

What has the response been like to NeuTrafiX?

The industry needed it, and people were ready for it. After it started getting attention and recognition in the market, we've seen a lot of momentum. Today, we have more than 200 carriers and digital players onboarding, and we're showing the platform's value in terms of efficiency.

For carriers, it is a no-brainer to join the platform and tap into the ecosystem. They can present out their services and rapidly connect to new partners via API.

How are partners like Tata Communications supporting you and helping you achieve your vision?

Despite all of the digitalisation and transformation happening in international voice, trusted partners are still the foundation. You have to believe in your partners and have a great working relationship with them.

Tata Communications has always been a great partner and it is committed to delivering mutual benefit for both sides. The support is always great and they're flexible. The team finds solutions to challenges and creates win-win situations. That's how we've always worked with Tata Communications.

I believe that is really the essence of the wholesale market, and no matter the technological changes, that will always be important.

What are you most excited about for the future of international voice?

We remain bullish on the market. We're building new solutions and our platform is creating value in the market. That's all that really matters. If you're creating value for customers and partners, then opportunities fall into place.

It is going to be exciting to see how the carrier ecosystem evolves and what other new innovations pop-up to solve challenges. It is that innovation that I'm most excited about.

THE BUSINESS CASE FOR OUTSOURCING INTERNATIONAL VOICE

A Quick Guide to Maximising Value in Voice with Outsourcing

> " It is about setting a strategy that improves an MNO's or service provider's cost-base and streamlines its operations. "

With an increasing squeeze on revenue and margins, there's an opportunity for Mobile Network Operators (MNOs) and other service providers to outsource some or all their international voice services. The challenge is to make a business case for outsourcing, identifying the right partner, and maximising the value of the partner relationship.

MNOs and service providers are transforming other parts of their operations and it is time they evaluate how they are going to serve the international voice needs of their customers. They face having to invest in upgrading legacy equipment as they see volumes and margins fall. International voice often shows diminishing returns for these players.

For many players, international voice is not core to their business, but adds cost and complexity without differentiating their offering. They can decide what routes or

markets they want to serve directly and choose a partner to manage and optimise the rest of their international voice traffic.

MNOs and service providers can work with an expert partner to identify what routes or markets they want to outsource first and make a gradual migration to a fully outsourced model over time. They can start with non-core destinations and prove the value of their outsourcing model. It is about setting a strategy that improves an MNO's or service provider's cost-base and streamlines its operations.

The result is an MNO or service provider that can focus on its core business, deliver new levels of performance for end users, reduce costs, and take a minimum risk approach to serving international demand. They can maximise their return on investment (ROI) and optimised their approach to international voice.

Enhancing Capabilities to Serve Demand

Both internal demands and end user behaviours are driving the need for outsourcing in international voice. According to research firm TeleGeography, international over the top (OTT) voice traffic reached 1 trillion minutes in 2019, which is more than double international carrier voice traffic. OTTs like WhatsApp, Facebook Messenger, WeChat, QQ, Viber, Line, and KakaoTalk have more than 5 billion users and are driving down retail revenues from international voice.

MNOs and service providers need the flexibility and agility to pivot to serve new demand as disruption to user behaviour can happen anytime and they need to be able to rapidly scale-up or turn-up new markets.

The traditional model of investing in large teams and doing everything in-house cannot match the efficiency and agility of an expert in international voice. The key to outsourcing is identifying the right partner and ensuring that partnership will be successful, when keeping in mind the core elements that will enable an MNO or service provider to maximise the value of the relationship.

> " The traditional model of investing in large teams and doing everything in-house cannot match the efficiency and agility of an expert in international voice "

Benefits of Outsourcing International Voice

Cost re-engineering
Service providers can drive down internal costs, consolidate vendor relationships and shift from CAPEX to OPEX based accounting.

Freedom to Grow Anywhere
Service providers gain a global footprint and have the freedom to serve increasing demand across markets globally with a risk-free model.

Flexibility and Scalability
Service providers can scale operations up or down based on subscriber demand without being locked into complex and long-term contracts. The flexibility to change and adapt to new user behaviours is an important factor.

Maximising Margins
Service providers gain access to world-leading managed services and capabilities that enable them to benefit from predictable margins while maximising profitability.

Fighting Fraud
Service providers can manage risk while benefiting from dedicated fraud prevention teams. This especially useful on routes to non-core or high-risk destinations.

Expert Partner
Service providers benefit from the expertise of their partner in international voice who can advise them on outsourcing strategy, and how to migrate away from a traditional approach to serving international voice demand.

Future-Proofing
Service providers can future-proof their international voice business and optimise it to respond to whatever market conditions arise. They have the flexibility to choose what they want to outsource and when, with the long-term support of an expert partner.

Accelerating Innovation for the Future

Outsourcing international voice creates competitive advantages. It enables MNOs and service providers to efficiently serve the needs of their customers without the burden of continuing to invest in a non-core business. What is needed is a trusted partner that can be a guide on this journey and help to transform their approach to international voice.

The first step is to engage a partner and assess what parts of their international voice business can be outsourced, then create a short- and long-term strategy. What matters is that the MNO or service provider is aligning its international voice services with its business objectives and is ready to serve the long-term needs of its own customers.
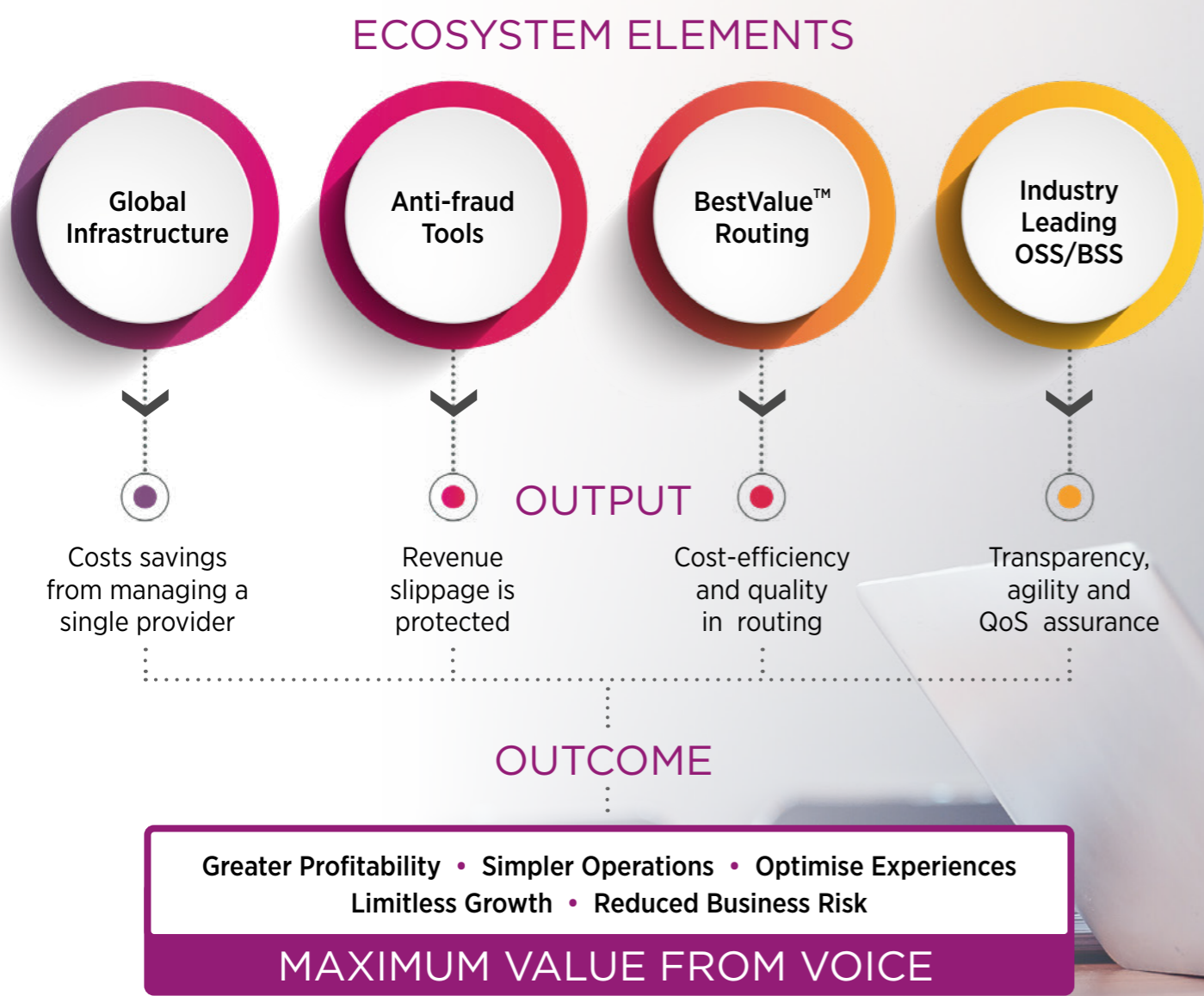
DOWNLOAD OUR LATEST WHITEPAPER

'Partnering to Capture New Profitability in International Voice: A Guide to Choosing the Right Voice Outsourcing Partner'

A COMPREHENSIVE ECOSYSTEM

Minimise business risk while delivering new levels of user experience with a simple and seamless model

ECOSYSTEM ELEMENTS

Global Infrastructure	Anti-fraud Tools	BestValue™ Routing	Industry Leading OSS/BSS

OUTPUT

Costs savings from managing a single provider	Revenue slippage is protected	Cost-efficiency and quality in routing	Transparency, agility and QoS assurance

OUTCOME

Greater Profitability • Simpler Operations • Optimise Experiences Limitless Growth • Reduced Business Risk

MAXIMUM VALUE FROM VOICE

PROGRAMMABLE VOICE

Integrating caller anonymisation into Logistics and Delivery applications

Enterprises are seeing benefits from integrating voice capabilities into applications and services. They are using a trusted communication service to connect with customers and deliver better experiences using the original "real-time" application. This is being driven by the advantages that voice offers, and the way users want to be communicated with in specific scenarios.

According to eMarketer, online retail sales will account for more than 20% of all retail sales in 2022. By 2024, the market will be worth $6.39 trillion, with eCommerce reaching 21.8% of total retail sales. It is a massive portion of the retail market and enterprises are looking for competitive advantages that will differentiate their services and ensure that shoppers get what they want when they want it.

For many eCommerce businesses, ensuring timely and seamless delivery has become a differentiator and a competitive advantage. They want to work with delivery and logistics businesses that can ensure customers have the best possible experience. The last-mile is often their biggest challenge.

While A2P messaging has been deployed by delivery companies, increasingly they are looking for efficient ways to enable drivers to call and ask questions about an address or delivery location if needed.

Programmable voice solutions can be a way to add voice capabilities into an existing app while remaining compliant with data processing regulations and enabling drivers to quickly access services. Tools like number anonymisation and call recording can overcome common challenges with integrating voice into new applications and services, and help these businesses increase customer satisfaction and loyalty.

What is Programmable Voice?

Programmable voice enables enterprises to control, manage, and adapt voice services with a software-centric model. It is increasingly a key feature of CPaaS, where developers can shape voice services to meet their specific business needs while benefiting from a cloud-based approach.

Programmable voice makes it simple to collaborate and co-create solutions for unique enterprise use cases. It goes beyond the basic API strategy to explore opportunities to use voice in new ways and innovate across the entire ecosystem, from operators through to end users.

>> THE CHALLENGE

With these communications becoming more widespread across the globe as online shopping continues to grow, privacy must be protected. Delivery and logistics businesses need an operator with programmable voice capabilities that will step back, understand the operational environment, and provide advice and recommendations for optimising or enhancing voice services.

However, older, traditional approaches to voice and messaging are too slow for the fast-paced environment in which delivery and logistics enterprises are operating in. It is no longer about connecting the drivers to the customers via a connecting call. The rise of communication platform as a service (CPaaS) and new mobile application-centric business models are demanding innovation in the voice market and the need for greater flexibility and adaptability in these services.

>> THE SOLUTION

Programmable voice makes it simple to collaborate and co-create solutions for unique enterprise use cases. It goes beyond the basic API strategy to explore opportunities to use voice in new ways and innovate across the entire ecosystem, from operators through to end users.

With a virtual calling number and number masking solution, delivery drivers can connect to customers to share timely information about upcoming deliveries and other services, without needing to worry about giving away their personal number, or the customer needing to give away theirs.

The communications can also go both ways to enable the customer to provide details such as a safe place, or trusted neighbour, to leave parcels if they are not home. This can help delivery and logistics enterprises offer an enhanced CX end-to-end and gain the trust of customers, without communications complexities.

> " older, traditional approaches to voice and messaging are too slow for the fast-paced environment in which delivery and logistics enterprises are operating in. "

>> BENEFITS

IMPROVED CUSTOMER EXPERIENCE
Personalised experience makes customers feel seen and heard

PRIVACY COMPLIANT
Programmable voice users number masking and call anonymisation to maintain compliance with GDPR and other privacy regulations

FULLY INTEGRATED
Programmable voice and messaging services seamlessly integrated to provide a solution at speed

The Future

Enterprises cannot overlook the opportunity in programmable voice. Omni-channel experiences must include voice services that match the changing needs of users.

There are a multitude of opportunities for voice to grow and evolve within delivery and logistics in the upcoming years, with personalised, targeted communications to appeal to different demographics across different channels.

As customer demands around privacy, experience and personalisation continue to develop, and expectations continue to rise, programmable voice is enabling enterprises to develop new strategies for seamless digital journeys and take their communications with customers to new levels.

If you'd like to learn more about Tata Communications' programmable voice services,

READ OUR WHITEPAPER

"Programmable Voice: The Future of Voice is Flexible, Fluid and Programmable"

$108BN
Tata group Revenues

190+
Countries and territories around the world

Our customers can reach
99.7%
Of the global gdp using our network and services

Serves over
7K
customers globally that represent over 300 of the Fortune 500

$1.5BN
invested in our wholly-owned network

+2K
service provider relationship

+18BN
minutes carried per annum

10%
of all international voice traffic runs on our voice network

Connects
4 OUT OF 5
mobile subscribers worldwide

1 IN 10
International calls are on our network

+85MN
Voice transactions handled every day

Connects businesses to
80%
80% of the world's cloud giants

CAPTURING THE OPPORTUNITY IN VOICE

Defining an international voice strategy in an increasingly dynamic and diverse market

Change in the international voice market continues to accelerate. The platforms and players that are delivering solutions today will only become more diverse and dynamic. What matters is that service providers and enterprises have a flexible foundation for optimising operations, creating new efficiencies and delivering the best possible experiences. No one can predict the future of the market, but the fundamentals remain the same. Organisations of all kinds still need to connect voice calls and do it efficiently, with minimal risk and maximum quality

The organisations that will be successful will recognise that a comprehensive voice strategy will deliver long-term ROI. Rethinking voice means happier users, a better cost base and the flexibility to grow and change in an uncertain world. Organisations who move now to develop a voice strategy with the help of an expert partner will benefit immediately and see lasting returns over time. Otherwise, both service providers and enterprises will miss the growing opportunities in voice and fail to see how the market has moved on from traditional services.

Over the next five years, the international voice market will see continued declines in traditional revenue while more platforms, applications and solutions will have voice capabilities integrated into them. For MNOs and other service providers that means they will need to decide if they want to continue to engage in the international voice space

or else partner with a specialist carrier with a comprehensive portfolio of value-added services and experience. For some service providers, international voice will become unsustainable for their business and the ones that take action now are going to create a new competitive advantage with quality and cost-efficiency. For enterprises, it is all about shaping internal user experiences via optimising platforms like MS Teams, Cisco Webex and Zoom while looking at how they can better serve customers with voice capabilities. New concepts, including Bring Your Own Carrier (BYOC) and programmable voice are emerging as valuable tools for enterprises, with which to deliver new user experiences.

Organisations that recognise these trends and then explore how they can benefit from voice will be better positioned than competitors.

> **" Organisations that recognise these trends and then explore how they can benefit from voice will be better positioned than competitors. "**

An Expert Partner

The key is to identify and collaborate with a partner that can support an organisation no matter where it is on its transformation journey in voice. Organisations need to step back, evaluate the role of voice in their business and understand what the options are for moving forward. At Tata Communications we are focused on listening, understanding, and gaining insights into our customers' requirements, then helping them to create a business case for evolving their approach to international voice services. We bring our decades of experience in the voice market, assets built over time, and proven use cases to help service providers and enterprises develop an effective voice strategy and execute on it.

Tata Communications matches global infrastructure with in-depth insights to enable organisations to turn voice solutions into business outcomes. We have a proven-track record of collaborating with more than 1,600 Service Providers, carriers and MNOs globally, while co-creating solutions with enterprises of all sizes.

Over more than three decades, our customers have seen what we can do when we combine global reach with a dedication to innovation. Our team helps organisations to navigate a changing market and maximise the value of voice in their businesses.

We work with over

1600

Service Providers, carriers and MNOs globally,

Tata Communications delivers:

- **International Voice Outsourcing**
  We help service providers to develop a business case for outsourcing some or all international voice requirements and provide comprehensive voice outsourcing solutions.

- **Voice Access**
  Supporting customers with local number services, international toll free services, audio-conferencing services and Voice API.

- **Value-Added Services**
  We optimise the management of international voice traffic with a comprehensive suite of value-added services that include strategic sourcing, fraud protection, optimised routing, Origin-Based Rating (OBR) mitigation and costing, quality assurance and a range of other solutions.

- **Programmable Voice**
  We provide flexible, fluid, and programmable voice solutions that are developed in collaboration with enterprises to embed voice into new applications and services.

> **" Our team helps organisations to navigate a changing market and maximise the value of voice in their businesses "**

Next Steps

Any organisation that wants to explore these opportunities should meet with our expert team and understand how we can enable their success in a new era of voice. We can provide insights and advice that help you to create an international voice strategy that meets your business objectives. Whether it is terminating calls in difficult to reach markets, adding voice capabilities to a mobile app or transforming an entire voice operation, we have the skills, expertise and experience to help any organisation capture new opportunities in voice.

For more information about our international voice services, please visit **www.tatacommunications.com**

TATA COMMUNICATIONS

About Tata Communications

A part of the Tata Group, Tata Communications (NSE: TATACOMM; BSE: 500483) is a global digital ecosystem enabler powering today's fast-growing digital economy in more than 190 coun-tries and territories. Leading with trust, it enables digital transformation of enterprises globally with collaboration and connected solutions, core and next gen connectivity, cloud hosting and security solutions and media services.

300 of the Fortune 500 companies are its customers and the company connects businesses to 80% of the world's cloud giants. Its Tier-1 IP network, wholly-owned subsea fibre backbone and consortium cables' global network carries ~30% of the world's internet routes.

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