



# HOW TO OPTIMALLY PRICE A2P SMS

Whitepaper Prepared for VOX Solutions

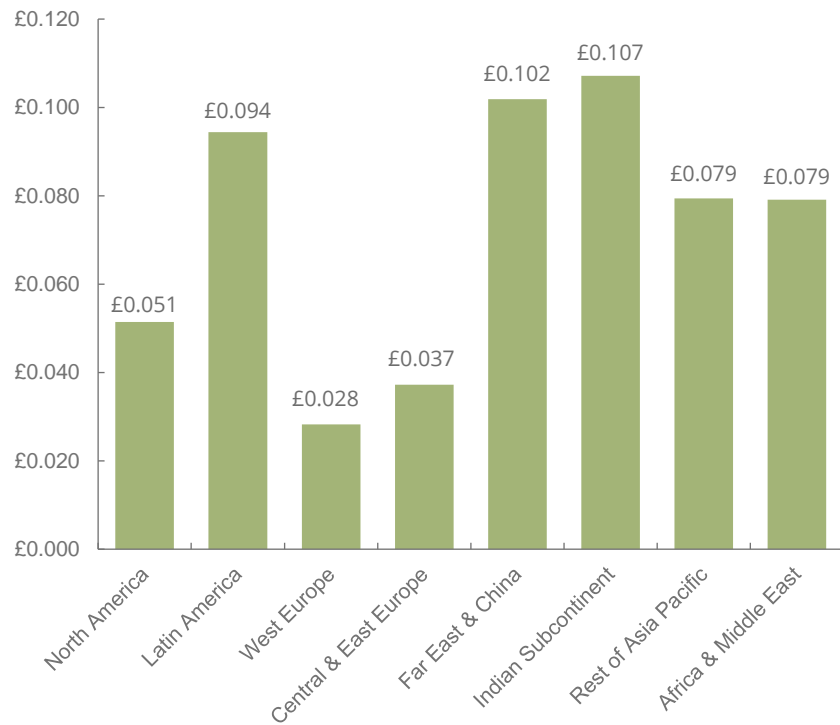




### 1.1 Determining SMS Pricing


Mobile network operators employ diverse commercial strategies globally, with respect to the field of A2P (Application-to-Person) SMS. To that end, pricing of SMS remains a contentious issue, with wholesale pricing being unpredictable. Shown in figure 1 below, there is variation in the average pricing per A2P SMS terminated across the various regions.

Figure 1: Price per Directly Connected A2P SMS Message in 2021 (\$), Split by 8 Key Regions



Source: Juniper Research

In that sense, there is a wide gap between mobile operators – certain operators maintained the same SMS rates, others increased them moderately, whereas others proceeded with high rate increases over the past year. Despite this, many operators have not implemented optimal pricing strategies to maximise revenue from business messaging traffic, nor do these operators invest in messaging networks to guarantee adequate quality.



## 3 Trillion

## Global Number of A2P Messages Delivered in 2022

In 2022, there were over 3 trillion A2P SMS messages delivered globally; this equates to 8.2 billion per day. Additionally, mobile messaging and CPaaS platforms, which act as the bridge between carrier networks and the enterprises who demand this traffic, must operate on wholesale agreements.

At present, A2P messaging traffic is dominated by SMS. Although this will continue to be the case over the next five years, the percentage of A2P traffic attributable to SMS will fall during the forecast period, but will continue to grow overall. As the market becomes very dynamic, we turn an eye to the factors that operators should take into account for devising optimal pricing strategies – strategies that drive positive topline impact, while assuring a sustainable future for their A2P SMS business.

#### 1.1.1 Analysis of SMS Price Factors

Despite the emergence of rich media messaging channels, SMS still remains an important element of communications for enterprises. The ubiquity and simplicity of SMS will continue to underpin the global traffic growth. While SMS is an important channel for enterprises and an important revenue stream for operators, most MNOs fail to optimise pricing to account for most factors, such as the following:



### i. Aligning to Regional Benchmarks

Within certain regions, there are high disparities between pricing levels across countries and operators. More so, even at country level, certain operators employ pricing strategies that fall far from regional benchmarks, either above or below. To that end, many operators would benefit from providing services not considered outliers by market players, as such strategies can have a disruptive impact.

### ii. Differentiation of National and International Services

Mobile operators fall today under two categories – those providing a single product to enterprise globally, and those who have translated A2P SMS into two separate services, namely one for global brands and for national brands. Notably a strategy catering better within developing markets, it is based upon one idea – the enterprises generating international A2P SMS demand are mostly large global players, utilising A2P SMS for 2FA purposes, requiring a higher level of quality and service security compared to national enterprises (mostly using A2P SMS for promotional traffic). As such, certain operators can invest in technology to eliminate fraud from their international A2P SMS channel, delivering a service with higher quality and value to global enterprises. To accommodate for the quality difference, such a service is further provided at a different rate.

### iii. Detecting the Use Case

With these continually shifting prices, operators are diminishing the value of their A2P SMS business. However, pricing of SMS may become more consistent if platforms are able to identify the use case for terminated messages. Outlined below are a few examples of key use cases which can be identified:

- **OTPs (One-time Passwords):** These messages comprise the bulk of global A2P SMS traffic. The ubiquity of SMS drives demand from this use case, as enterprises can essentially guarantee the termination of the message. This differs from other mediums, such as OTT messaging or RCS (Rich Communication Services), in which the channel is not certain to be supported on the end user's device. Juniper Research estimates that over 60% of global A2P SMS traffic will be attributable to authentication use cases this year. However, SMS pricing must remain above OTT

business messaging use cases, as SMS provides more value to enterprises through its ubiquity.

- **Notifications:** Vital and important information is often sent through SMS, which is again driven by the ubiquity of these services and the importance of messaging termination.
- **Marketing and Upselling:** Conversely, marketing and upselling opportunities are often limited by SMS as a technology. We expect marketing and upselling SMS traffic to be amongst the first use cases to make significant movements towards OTT messaging and RCS, owing to their rich media abilities.

As a result, operators will need to look to identify the source of demand for these messages, and price accordingly.



### 1.1.2 How to Detect Message Content

Operators have complete access to the various transport systems that carry SMS through their networks, including SS7, SMS servers, and SMTP (Single Mail Transfer Protocol). However, the vast number of messages that pass through the network require considerable efforts to measure and monitor. As can be seen from figure 2 overleaf, there is a vast number of SMS business messages being sent in 2022. The manual analysis of message content or even originating number is unlikely to provide any return on investment. Therefore, it is evident that AI or machine learning will be needed to immediately assess these messages to accurately determine message content.

Leveraging machine learning to assess traffic is certainly not a new concept. SMS and voice firewalls have been widely implemented to assess the prevalence of fraudulent traffic over operators' networks. However, these AI algorithms have been trained to assess message senders and whether they are for A2P or P2P (Person-to-Person) purposes.

#### Key SMS Pricing Factors

##### Immediate and Reliable Termination



The ubiquity of SMS will continue to drive the technology to be the first choice for many use cases for outbound communications. Additionally, SMS is known for a high-open rate amongst mobile subscribers.

##### Cost Effectiveness



Pricing for SMS is often cost-effective; providing enterprises with strong opportunities for a return on investment into communications. This is most notable for marketing communications where a return on ad spend is used as a metric to determine success.

##### Trackable Traffic



Platforms, such as VOX Solutions, enable enterprises to track and monitor their outbound A2P SMS traffic. This enables enterprises to further track the effectiveness of mobile messaging campaigns.

##### Established Ecosystem



A2P SMS already has an established ecosystem in which legislation, processes and billing procedures are already in place. As a result, heightened competition and an abundance of market information have key roles in determining A2P SMS prices.

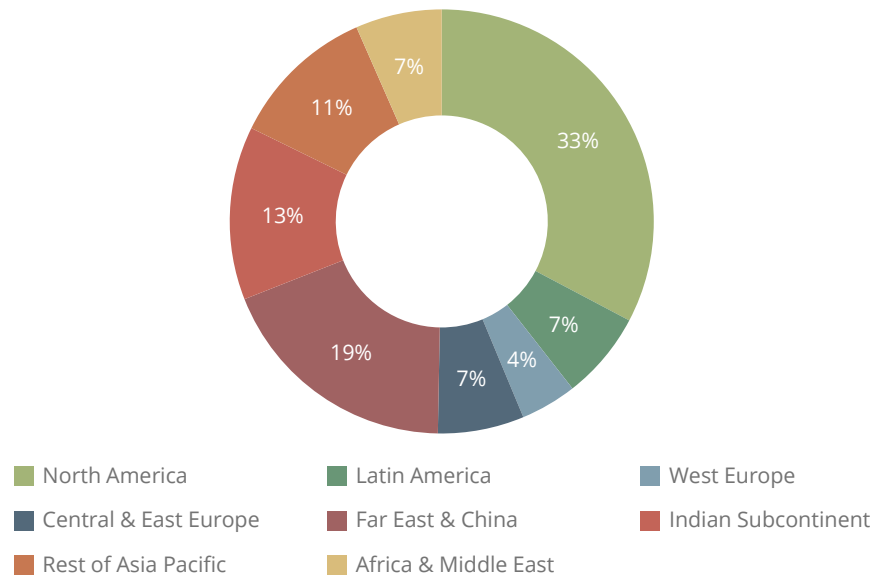
##### ... and Lastly, the Use Case



At present, it is in the best interest of the operators to implement solutions that can detect the use case of the message, and charge the enterprise accordingly.



Figure 2: Global Directly Connected A2P Traffic in 2022, Split by 8 Key Regions: 2.6 Trillion



Source: Juniper Research

In turn, these AI algorithms must now be retrained to assess message content, message intent and the originator.

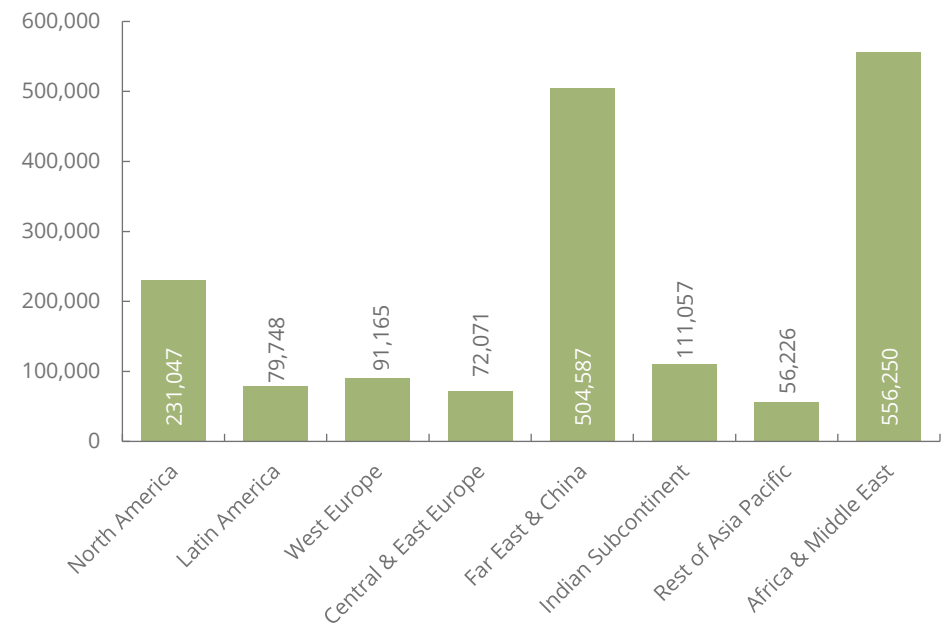
**i. One-time Passwords & Multi-factor Authentication**

SMS used for security is the most demanded use case for SMS. Typically, the user receives a one-time verification code delivered via SMS. SMS authentication is used due to the ubiquity of SMS across all types of mobile phones. As a result, if operators are able to identify this type of traffic, then they will be able to charge a premium knowing that brand and enterprises are willing to pay for it.

In developing markets, smartphones with richer capabilities are not as prevalent as in developed countries. As a result, SMS is ever more highly demanded in these regions. The mobile SIM card acts as an identity tool which enables legally binding authentication and transaction signing used for online banking, confirmation of payments, digital payments and content. User certificates are placed in the MNO's SIM card and are typically accessed by using a PIN code.

Shown below in figure 3 is the number of SMS messages that are attributable to authentication services for digital services.

Figure 3: Total SMS Traffic Used for Mobile Authentication in 2022 (m), Split by 8 Key Regions



Source: Juniper Research

Telecommunications providers have imposed stringent regulations on short codes in order to prevent misuse; resulting in short codes being much more expensive than



standard phone numbers. As a result, short codes tend to be solely used by legitimate companies.

In addition to authentication traffic, there are a multitude of industries that use SMS business messaging technologies. Some examples of how operators can differentiate by industry are listed below:

- **Banking:** This industry is heavily regulated. New technologies such as RCS and OTT messaging do not provide the necessary guarantees that are associated with SMS messaging. Use cases include notifying users of sending/receiving large sums of money, fund notification and overdraft limits. SMS has been used for notifications for several years and is likely to continue to be used owing to the guaranteed termination necessitated by the mission-critical message content.
- **Government Services:** The value of SMS to governments became evident during the COVID-19 pandemic, due to the ability to send out information to the masses in a short period of time. As a result, governments are likely to realise the benefits of SMS in the future. Operators must ensure that government services must be identified to capitalise on the need for these messages.
- **Healthcare:** In a similar fashion to banking, there are stringent regulations relating to the handling of content. However, the healthcare market is largely driven by need for cost savings in the industry. SMS is able to do this through automating customer contact that includes succinct information, such as appointment reminders.
- **Retail:** In a highly competitive market such as retail, providing superior customer service is essential to differentiate services from competitors. SMS will play a significant role in doing so by keeping consumers up to date. Despite the movement to 'mobile first', SMS must be used in conjunction with mobile apps to ensure that consumers remain updated on order statuses and deliveries.

#### iv. Considering Alternative Technologies

The recent past brought the rise of alternative channels within the A2P ecosystem, as the use of RCS and WhatsApp Business is growing in certain regions. With the later employing a use-case pricing model, perceived attractive for certain industries, it is advisable that operators take into account the pricing of alternative channels while

developing their A2P SMS pricing. Such a factor is notably important as high pricing gaps create incentives for enterprises to shift towards using alternative channels, speeding up penetration. Such a factor can be considered risky as in certain instances the traffic that migrates to certain channels might be harder to attract back to the network.

#### iv. SMS Service Quality

Whether operators create two products out of SMS or follow the traditional path, their pricing strategy must be linked to the quality of the service provided. Enterprises are willing to pay more for high-quality services, especially if they can be confident in their conversion rates. It is evident that enterprises will be willing to invest into more trustworthy delivery networks, if they can avoid problems such as AIT, message trashing and grey-routes.

As previously mentioned, operators struggle to optimise the price of A2P SMS services because many cannot guarantee high-quality messaging networks. To optimise pricing, operators need the right partners and technologies. While the cost of anti-fraud technology that can prevent emerging fraud types, including AIT, can be minimal, many operators are still using outdated fraud detection and mitigation technologies. By collaborating with industry players to eliminate fraud, including SMS trashing, operators can better monetise their A2P SMS traffic.

### 1.2 VOX Solutions – Enabling A2P SMS Monetisation for MNOs

Vox Solutions simplifies, improves, and optimises voice and SMS using the latest innovations in technology. Vox Solutions enables mobile operators to monetise their A2P SMS service in a sustainable way. The company utilises its multi-award-winning antifraud technology, VOX360, to offer a reliable, accurate and real-time view of operators' voice and SMS services. Vox Solutions further acts as a commercial partner for operators, taking upon itself the responsibility to providing quality SMS services to global enterprises.

As part of its features, the company's antifraud technology mitigates revenue leakage from grey route traffic and monetises the services at their maximum potential. VOX360 further tackles the latest fraud scenarios such as AIT (artificially inflated



traffic). Moreover, such technology is able to help operators differentiate A2P SMS by use cases, allowing MNOs to foster more competitive market products.

As part of its asset monetisation solutions, the company is able to monitor A2P voice and flash calling traffic over operator networks. If flash calling traffic seeks to cannibalise A2P messaging, then operators will need to ensure that they can differentiate between P2P voice traffic and the emerging use of A2P voice/flash calling for authentication procedures. VOX360 allows operators to identify and block such traffic, if utilised abusively. Alternatively, operators who desire to capitalise on their share of A2P Voice traffic, can utilise VOX360 to turn flash calling into an official, billable, end-to-end channel.s

For more information, please visit [VOX Solutions' website](#)