
Vodacom (Pty) Ltd's Written Submission in Response to the Draft End-user and Subscriber Service Charter Amendment Regulations, 2022

(Notice 1958, Government Gazette 46153 of 31 March 2022)

A. INTRODUCTION

Vodacom (Pty) Ltd ("Vodacom") welcomes the opportunity to comment on the Draft End-user and Subscriber Service Charter Amendment Regulations, 2022 published in terms of Notice 1958, in Government Gazette No. 46153 on 31 March 2022 ("the Draft Regulations/the Regulations"). Given the importance of ensuring that the Regulations, once finalized, reflect more appropriately the importance of mobile operators being able to price services in a way which meets the wide range of needs that mobile customers have, Vodacom confirms its willingness to participate in any further consultative process which the Authority may undertake in this matter. We set out our comments below.

B. EXECUTIVE SUMMARY

Vodacom supports the objectives of Government and ICASA to ensure that mobile services, and mobile data services in particular, are accessible and affordable to as many South African consumers and businesses as possible. The growth in the usage of mobile data services has, in an economy where access to reliable fixed internet services is unfortunately still limited, had a transformative effect on people's lives. It has improved their ability to communicate, and afforded them better access to the range of services and information available online. Indeed, this has become even more evident as a result of the increased demand for mobile data services during the pandemic, in which Vodacom and all mobile operators, worked proactively with the Government and ICASA to ensure that connectivity was available.

Delivering against the Government's objectives requires Vodacom, and all other mobile providers, to be able both to invest in expanding and deepening mobile data coverage and also to be able to design products and services that are accessible to as many different consumers as possible, thus enabling networks to be used efficiently and ensuring consumers benefit from the significant economies of scale available. Following the recent successful completion of ICASA's first auction for High Demand Spectrum, operators are now in a position to invest even more in their networks, to the direct benefit of consumers. For example, Vodacom is committed, over the next three years, to investing significant amounts to expand and deepen its network. However, this investment also relies on ICASA's providing a stable regulatory framework in which Vodacom and all mobile providers, can operate and for it to not introduce any measures which are likely to negatively affect demand for services. For the reasons set out in this response, Vodacom has significant concerns that ICASA's Draft Regulations will not provide this stability, whilst also impacting negatively on the usage of mobile services.

This is even more concerning because Vodacom and other mobile network operators ("MNOs") have, over the last five years, made significant progress in making data services affordable to as many South African consumers as possible. Given the inequalities still present in South Africa today, and hence the diverse range of consumer needs, this has required operators to apply innovative pricing strategies, alongside more general reductions in data prices. For example, short validity bundles (i.e., data bundles with a validity of less than 30 days), which allow consumers to access lower rates for a given quantity of data, now account for around two-thirds of Vodacom's revenues from mobile data services in poorer areas, whilst consumers are also able to access a range of other lower priced data bundles, such as URL specific bundles, bundles which allow mobile data usage at certain times of the day (e.g., Vodacom's "Night Owl" portfolio) and personalized offers.

As a result of this diverse portfolio, and since 2020 Vodacom's mobile data prices have declined by 43% benefitting South African consumers, with the average rate paid by poorer customers declining even more rapidly[1].

In particular in recent years, Vodacom has:

- significantly reduced out of bundle rates for mobile data, by up to 70%, meaning that out of bundle revenues account for only [redacted]
- extended, through its "Just 4 Your Town" scheme, personalized discounts to prepaid customers in more than 2000 localities where most of the population have income levels below the upper bound food poverty line;
- extended its practice of zero-rating certain forms of content such as educational and health services, such that the proportion of data consumed on Vodacom's network free of charge has increased by about [redacted] and
- also contributing, with these changes, to the [redacted] amongst South Africa's poorest consumers.

Against this backdrop, Vodacom has a number of very significant concerns about ICASA's proposed amendments to the Regulations. Vodacom is very concerned that ICASA's proposals related to the minimum required validity period for all data, voice and SMS services, together also with its proposed data transfer rules, will reduce, substantially, the ability of all and any mobile operator to serve effectively, consumers, with the poorest consumers likely to face the greatest loss. The proposed

[1] Poorer customers defined based on 2011 Census data on low-income areas.

changes to the validity rules mean that mobile operators will no longer be able to offer to consumers those very products (i.e. short validity bundles) which have played the greatest role in bringing mobile data services within reach of the vast majority of South African consumers. Instead, mobile operators will have to introduce new, and inevitably higher priced bundles with validity of more than six months, despite there being no evidence that consumers would value such bundles.

Furthermore, the negative impact on consumers will be compounded by ICASA's proposed regulations on data transfer. These proposals will place all mobile operators, given their diverse existing service offers, at significant risk of arbitrage, as they will allow consumers to buy a lower priced large bundle (such as a mobile broadband bundle, for instance) and then transfer parts of this data bundle to other consumers. In this circumstance, rational customers would no longer purchase smaller bundles from mobile operators, but rather purchase them from other consumers in the market, even if they have to pay them a margin. This will result in mobile operators having no choice but to remove all existing bundles from the market and move instead to offering a single, uniform price for mobile data services. As explained in Section 3.1 of the Frontier report, this would negatively impact consumers by restricting choice for all, and raising price for many consumers. This, in effect, amounts to irrational price regulation and will completely remove the benefits of price differentiation for customers and ultimately, impact negatively all users.

It is important to stress that these proposals are not only sufficiently irrational and unreasonable to render them unlawful (they entail a form of curtailment of competition with respect to product differentiation that is unique among regulators internationally in the degree to which they upend basic economic principles relating to product differentiation in meeting customer demand, and undermine the objectives they ostensibly serve). They also entail product specification and price control that extend beyond the powers conferred on ICASA by section 69. They cannot reasonably be regarded as "minimum standards" such as empowered by the section; they are, instead, an ultra vires form of uniform product specification and effective price regulation. They also entail a form of invasive information monitoring of communication-related information on an ongoing basis that violates the provisions of the Regulation of Interception of Communications and Provision of Communication-Related Information Act of 2002 and potentially those of the Protection of Personal Information Act of 2013.

Vodacom, therefore, strongly urges ICASA to rethink its proposals. For the reasons set out in more detail in this response and in the accompanying expert report prepared by Frontier Economics Limited

("the Frontier report"), ICASA's draft proposals have no grounding in economic theory or in practice elsewhere, are irrational, would be harmful to consumers and are ultra vires the empowering legislation.

In the rest of this submission Vodacom details its concerns. In so doing, Vodacom starts by describing the importance of all mobile operators in South Africa being able to offer a range of tariffs. Vodacom then presents a summary of its own tariff strategy and how that has been designed specifically to widen and improve access to mobile services. Vodacom then describes the impact of ICASA's proposed amendments.

Following this, Vodacom also comments on other aspects of the Draft Regulations.

C. ICASA'S PROPOSED AMENDMENTS TO REGULATIONS 8A AND 8B

In this section Vodacom provides its detailed response to ICASA's proposals concerning minimum validity periods for voice, data and SMS services, and the transfer of data between SIMs. It considers these together given that both measures, if implemented, will reduce significantly the pricing flexibility that operators have, amounting to unjustified and unlawful interference in the business and pricing strategies of the mobile operators.

The Frontier report explains how the highly differentiated service offering (and the variety of price-points associated with that offering) observed in the South African mobile market is the result of market forces – the interaction of supply and demand. On the demand side, consumers of mobile services have diverse needs and preferences. To respond to these wide-ranging needs, mobile network operators must adapt their offers so that consumers can identify which services best suit their individual needs. If one operator differentiates its offering to cater to a consumer need which is not being catered for by other operators, it will profit because consumers with that particular need will be attracted to that operator's services.

On the supply side, mobile operators make significant investments in their networks, in particular in network capacity, in order to provide high quality services to their customers at any time, including in peak hours (i.e. time of the day when demand is particularly high). In order to ensure that the quality is consistently high, operators actively manage their networks and encourage users to 'smooth' their consumption by offering them discounts at times when demand is low (e.g. the Night Owl tariff). Demand smoothing is a particularly useful tool for smaller operators, whose lower level of investment

in their networks means they are less well-equipped than larger operators to handle surges and peaks in demand.

Therefore a differentiated set of services, with a variety of prices and other characteristics, is the likely outcome of well-functioning competition in the market for mobile services. In fact, as explained in Section 2.1 of the Frontier report, having a differentiated range of services (with different terms and conditions) further allows operators to compete on price, because it allows them to optimize their network efficiency.

The rest of this section sets out that:

- customers have diverse needs that mobile operators must cater for;
- Vodacom, and other MNOs, have responded to these diverse needs through offering consumers a comprehensive set of tariff options, with consumers clearly being attracted to a number of the innovative pricing propositions in the market; and
- consequently, ICASA's proposed restrictions are irrational, unreasonable and would have significantly negative effects.

Customers have diverse needs that mobile operators must cater for

As described in the Frontier report (Section 2.1), customer demand for services varies significantly. Some customers require services on an ad-hoc basis, some on a short term, others on a long term basis. Some require small quantities, while others large quantities. Some customers need mobile data for use on their handset, others need data for wi-fi at home. Critically important in South Africa is also the fact that customers are also not equal with regard to their disposable income, to a degree that is most extreme in the world. This means customers differ according to their ability to pay for mobile services: one customer might be prepared to pay more than another, because of both the different requirements they have for services and their differing circumstances. For example:

- First time voice, SMS or data users may require usage on an ad-hoc basis. This is because these customers are often hesitant and unsure, given their limited experience and knowledge, as to how to use these services, particularly data and access to the internet.
- Customers may require small quantities of voice or data, on an ad-hoc/infrequent basis, for example if they need additional data for a short journey, or their personal circumstances change suddenly.
- Customers may require large quantities of data on an ad-hoc basis, with this often being over and above their normal requirements. For example, this could be the case to set up or

configure a new smartphone or other device, explore the internet, attend to a short term need to obtain specific content e.g. watch a HD video, download new or updates of applications or device software.

- Some customers may require services, at varying quantities, on a fixed recurring basis. These customers have certainty regarding their ongoing minimum requirement over the short, medium or long term (e.g. monthly for the next 12 or 24 months).
- Some customers require services at even more affordable rates without the requirement to commit by signing up for a long term contract. These customers do not typically have access to large disposable incomes, while some customers only have access to disposable income on certain days (e.g. can only find employment on a temporary basis).

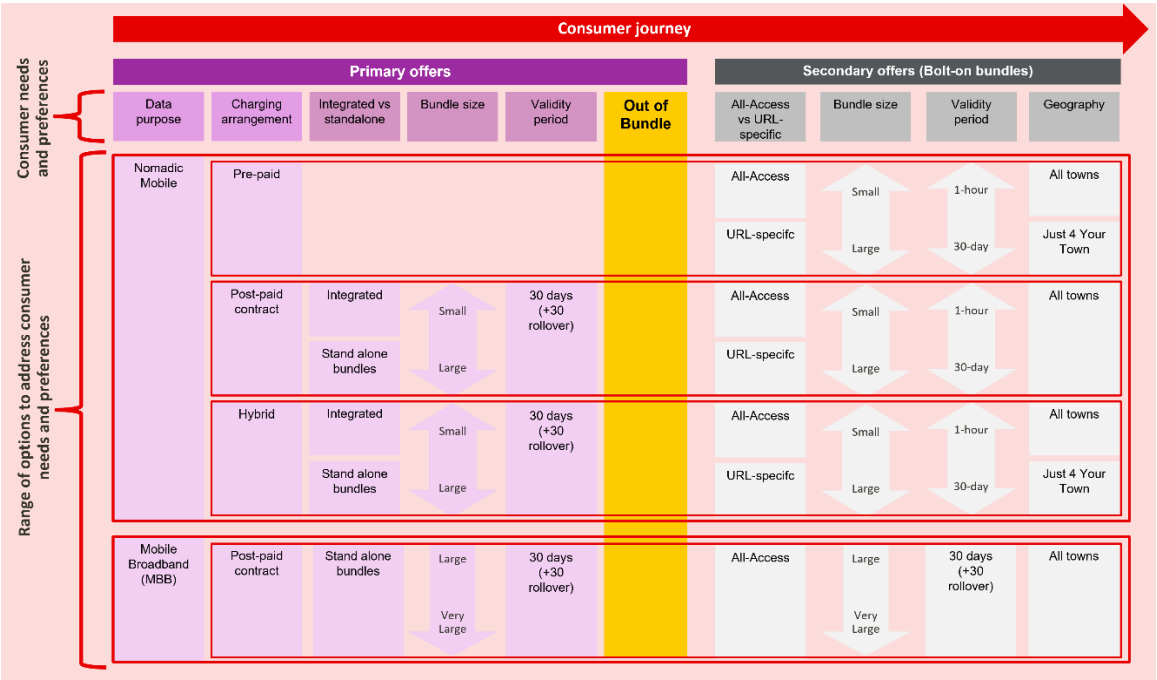
Reflecting these differences in demand, and as set out in more detail below, Vodacom has a diverse and segmented service portfolio which currently comprises offers: with short and with long validity periods, with and without commitment, bundled services and non-bundled services, small and large bundles, and so on. Vodacom has introduced these different dimensions into its tariff offers including pricing in order to enable as many customers as possible to be able to buy mobile services in the way that suits their needs and reflects their particular circumstances, including their financial circumstances. Indeed, this is not only the case for Vodacom – all mobile operators in South Africa offer a diverse range of tariffs. This is a world-wide phenomenon in the industry.

Vodacom, and other MNOs, have responded to these diverse needs through offering consumers a comprehensive and popular set of tariff options

The Frontier report (see Section 2) sets out the drivers of mobile operators' diverse tariff offers including pricing, and how operators' prices must reflect consumers' various needs and preferences. It also explains how, in the case of South Africa, where very high levels of income inequality are prevalent, a differentiated service offering is an important tool for making mobile services more accessible.

In what follows, we set out how Vodacom has applied the principles described above. We show how Vodacom, as well as the other MNOs, have created multiple tariff options at different price points, allowing consumers to select the most appropriate option for them, given their needs and their willingness to pay. And indeed, as shown at the end of this section, consumer take-up of these products shows, quite clearly, their popularity among consumers.

This demonstrates how, over time, competition between operators to win and retain consumers with diverse preferences and willingness to pay has resulted in the range of services currently offered in the South African market. These new service offers have evolved from the less differentiated offering, and more uniform pricing structure, of the past, which would not satisfy the range of consumer needs and preferences seen today. The diagram below sets out Vodacom's diverse mobile data bundle offering at a high level.



Vodacom's primary tariffs

Prepaid

Prepaid tariffs do not require a customer to make a contractual commitment. Once a prepaid recharge voucher is activated, the recharge airtime will remain available for use until it is consumed – either on a service unit-by-unit usage basis or it is used to purchase service bundles that can be bolted onto the customer's primary tariff plan. These service bundles have their own expiry rules.[2]

Postpaid

Vodacom offers integrated contract tariff plans which require a consumer to commit to the service for a fixed duration (typically 24 to 36 months). These plans typically include a device and services units. In terms of Vodacom's integrated contract tariff plans, customers are given a set number of service

[2] Prepaid recharge airtime will expire if there is complete subscriber inactivity for a period of more than six months.

units (minutes, messages and megabytes) on a monthly subscription basis. These service units will remain valid until the end of the calendar month that follows the month of allocation. Vodacom also offers data-only postpaid contract tariff plans.

Hybrid

Hybrid contracts are categorized into tariff offers that include airtime and tariff offers that include service units (i.e. minutes, messages and megabytes). In the case of inclusive airtime, hybrid customers are allocated airtime on a monthly subscription basis. In the case of inclusive service units, customers are given a set number of service units (minutes, messages and megabytes) on a monthly subscription basis. Like prepaid customers, all hybrid customers can also recharge their accounts with airtime as and when needed.

Vodacom's secondary tariffs (bundles)

Prepaid, hybrid and postpaid customers also have the option to purchase voice, data or SMS bundles in various sizes with pre-specified time limits. These bundles are bolted onto the primary tariff plan.

Vodacom offers a wide range of data bundles, with different prices to reflect the different consumer needs that these aim to satisfy. Different data allowances and validity periods are offered for each type of bundle, which is reflected in the price of the bundle. But even for a given allowance and validity period, Vodacom's diverse selection of data bundles offers customers a range of price terms, so allowing the user to self-select the most appropriate option. This is explained in more detail below.

Vodacom's standard retail data bundles are available to anyone at any time on a once-off or recurring basis. With once-off bundles the customer only commits to buying one bundle and has the freedom to elect a different bundle or no bundle thereafter. With recurring bundles, the customer opts to automatically re-purchase the bundle each period, but can change the bundle or de-activate the bundle as they please.

Bundles are offered with a broad range of validities, all the way down to an hour. Bundles with a short validity period are primarily targeted at users with sporadic needs and lower income users, for whom the availability at a given time and affordability associated with a short validity bundle is a priority. Importantly, users who purchase shorter-validity bundles pay less, while users who purchase longer-validity bundles essentially pay a premium for extra flexibility. For example, a user purchasing a 1GB all-access, anytime data bundle would currently pay:

- R85 for a 30-day validity period bundle;
- R69 for a 7-day validity period bundle;
- R29 for a 1-day validity period bundle; and
- R12 for a 1-hour validity period bundle[3].

However, for data users, their needs do not only vary by data volume (MB allowance), flexibility, validity period, and price. Some users in South Africa only require data bundles that provide for usage on a single URL or specified URLs. Therefore Vodacom offers URL-specific bundles known as Vodacom Ticket bundles. URL-specific bundles differ from standard, "all access", bundles in that they provide access to one specific website or service (e.g. WhatsApp for the WhatsApp Ticket) or specified websites or services (e.g. Facebook, Instagram, Pinterest, Twitter, Tinder and Tik Tok for the Social Ticket). Again, this allows the relevant users to get access to a specific application (or group of applications) they need at a lower price than an all access bundle price. So, similar to longer-validity bundles, users who purchase 'all access' bundles essentially pay a premium for greater flexibility in their data usage. For example a user purchasing a 1GB 30-day, anytime data bundle would currently pay:

- R85 for an all-access bundle; and
- R35 for an URL-specific bundle.

Beyond the standard offering, Vodacom offers all customers a selection of personalized bundles on a once-off basis (i.e. non-recurring), which are available alongside its standard bundles, via its "Just 4 You" platform. The customer then selects a bundle from the options presented and has the freedom to select a different bundle or no bundle thereafter. Offering personalized bundles is a key channel for Vodacom to cater to low-income customers, or those with very specific needs. Crucially, personalizing its Just 4 You and "Just 4 Your Town" offers allows Vodacom to reduce its prices for low-income customers. For example, a user purchasing a 1GB URL-specific, 30-day, anytime data bundle would currently pay:

- R35 for an all access bundle; and
- R25 for a Just 4 You bundle.

While standard all access and Just 4 You data bundles aim to cater to diverse needs among customers who use mobile data on their handsets (i.e. on-the-go), Vodacom also offers separate bundles for

[3] All data bundle prices including VAT

customers who use mobile data for wi-fi in their homes (i.e. fixed wireless access (FWA) customers using Vodacom's Mobile Broadband (MBB) offering). This is particularly beneficial to consumers without access to fixed network infrastructure – a significant proportion of the population, given the very major gaps in fixed DSL and fibre broadband coverage in South Africa. MBB users are usually stationary within a home or business (unlike handset users who demand mobile services on-the-go), exclusively require data services, and often require a separate device to their mobile handset for using MBB services (e.g. a router or tethered dongle). Similarly, MBB customers have different (usually greater) data needs than regular mobile data customers. By differentiating its MBB and regular mobile data tariffs, Vodacom is able to address the needs of South Africans wanting to use mobile data as a home broadband service. Specifically, Vodacom is able to offer MBB users a lower in-bundle rate to reflect that these users are only able to access Vodacom's network from one location. For example, a user purchasing a 10GB all-access, 30-day, anytime data bundle would currently pay:

- R469 for a standard all access data bundle; and
- R149 for an MBB data bundle.

Bundles offered by other MNOs

Vodacom is not the only operator in South Africa that offers a diverse portfolio of products to cater to a diverse set of consumer needs and preferences. MTN, Cell C and Telkom all offer similar variations in their data bundles, with pricing differences that reflect these variations.

Telkom

Telkom offers consumers both all access and Social bundles (where data is exclusively offered for social media[4] usage)[5]. As with Vodacom's URL-specific bundles, Telkom's Social bundles have lower rates than their all access data bundles. For example, Vodacom understands that Telkom customers purchasing a 500MB monthly data bundle will pay:

- R69 for an all access data bundle[6]; and

[4] WhatsApp, Facebook, Messenger, Instagram, Twitter, LinkedIn, Snapchat, Pinterest and TikTok. Further information available at: https://apps.telkom.co.za/today/shop/plan/Monthly-social-bundles/#!plan-detail-63326 [last accessed 13th May 2022]

[5] Further information available at: https://secure.telkom.co.za/today/shop/personal/plans/ [last accessed 13th May 2022]

[6] Note that Telkom's 500MB All Access monthly data bundle includes an additional 500MB allowance for night-time usage. Further information available at: https://secure.telkom.co.za/today/shop/personal/plan/monthly-data-bundle-500mb/ [last accessed 13th May 2022]

- R25 for a Social data bundle.

As well as choosing between all access and Social bundles, and different sized data allowances, Telkom's customers can choose different validity periods (with differing prices). For example, Vodacom understands that Telkom customers purchasing a 500MB Social data bundle will pay:

- R25 for a monthly bundle; and
- R18 for a weekly bundle.

Cell C

Cell C also offers consumers the option to pay less for a shorter-validity data bundle, or for URL-specific data bundles, as well as different sized bundles[7]. As with Telkom and Vodacom's customers, Cell C's customers are charged less for shorter validity periods. For example, Vodacom understands that Cell C customers purchasing a 1GB data bundle will pay:

- R85 for a 30-day validity period bundle;
- R69 for a 7-day validity period bundle; and
- R25 for a 1-day validity period bundle.

Consumers who would prefer to pay less for a data bundle, but only use their mobile data for using WhatsApp, can choose Cell C's WhatsApp bundles. Similarly to Vodacom's WhatsApp bundle, rates are lower for Cell C's WhatsApp bundles than for its all access bundles. For example, Vodacom understands that Cell C customers purchasing a 1GB, 30-day data bundle will pay:

- R85 for an all access bundle; and
- R29 for a WhatsApp bundle.

MTN

Similarly to Vodacom, Cell C and Telkom, MTN offers consumers the choice between different validity periods, with lower rates for shorter validity periods. For example, for a 1GB data bundle, MTN customers will pay:

- R85 for a 30-day validity period;
- R70 for a 7-day validity period; and

[7] Further information available at: https://www.cellc.co.za/cellc/bundle-contracts [last accessed 13th May 2022]

- R29 for a 1-day validity period[8].

Vodacom's short validity bundles are popular

The range of tariff options offered by Vodacom (and other MNOs), beyond "standard" 30 day bundles, is not just there as theoretical options. Indeed, in the case of short-validity bundles in particular, the inclusion of these products in MNOs' offerings is clearly addressing consumer demand. The uptake of short-validity bundles i.e. hourly, daily, three-day, and weekly bundles over the past year has been substantial. Currently, [redacted] As set out later in this submission, the proposed amendments would impact negatively on all those purchasing those bundles or MBB services. Indeed, to illustrate this point further, it should be noted that the vast majority of bundles ([redacted] had an expiry date of one day or less.

Vodacom's pricing has had a positive impact on the uptake of mobile services

For the reasons summarized below and set out in more detail in the Frontier report, Vodacom's pricing portfolio enables many consumers to access and use mobile data services, who otherwise may not be able to do so either at all or to the same degree as they find possible today.

As explained above, Vodacom's approach to mobile pricing (and that of the other MNOs in the market) is a common feature of markets. Indeed, as Frontier explains, differentiated pricing such as this, combining different levels of usage and different validity periods is also common in other sectors with high fixed costs and where consumer demand varies. Without limitation, this includes, for example, the transport sector and the health and fitness sector. The Annex of this response provides some examples from these other sectors.

This practice of price differentiation allows a firm to offer lower prices to consumers with a lower willingness to pay, with those prices being lower than they would otherwise be if operators were instead to adopt uniform prices for all consumers. These lower prices will induce a response from these consumers in the form of higher levels of consumption, either because they purchase a product or service which they would not otherwise have purchased or because they purchase a greater volume of it at a price they are willing to pay. Therefore, this form of price differentiation is considered to be more

[8] MTN's 1-day validity period data bundles are offered via their EverydayGigs platform, and are only available for prepaid numbers.
[9] Excluding Mobile Broadband, Home Internet, and 5G bundles

efficient than uniform pricing (i.e. no differentiation), as it expands the size of the market. This may involve allowing a consumer to pay different prices depending upon how much of the product or service is purchased or it might mean varying the use by date by which a particular service can be consumed. For example, shorter validity bundles are typically chosen by consumers on low incomes who are paid daily or weekly. These are consumers with low willingness to pay and therefore these products are priced significantly lower than similar bundles with longer validity. Customers with high incomes typically have higher willingness to pay and therefore tend to purchase more expensive bundles with longer validity periods, as these bundles give them more flexibility concerning when they can use the services. Similarly, lower income consumers are able to purchase personalized Just 4 You offers, offers restricted by time of day or URL-specific bundles, all of which enable them to access services at a lower effective rate.

Price differentiation is progressive in terms of distributional outcomes. In other words, with price differentiation, low income consumers are generally likely to be offered lower prices which better match their willingness to pay, whilst high income customers find themselves paying more. This is the case in the South African mobile market, where low income consumers have been able to obtain bundles with lower unit prices than those paid by high income consumers. This is not surprising since price differentiation often favours those with a lower willingness to pay and low income consumers often have stronger incentives than high income consumers to seek out the best deal and to manage their consumption carefully so as to get maximum value for money. For example, in the past year, non-poor areas had an average revenue per user ([redacted]) As set out in more detail below and in the Frontier report, ICASA's proposals to impose a minimum six-month validity period for bundles, and transfer of data between users, would strip operators of their ability to price differentiate. This will result in all the above benefits to consumers being lost.

ICASA's proposed restrictions are irrational and would have significantly negative effects

As explained in more detail in Section 3.1 of the Frontier report, ICASA's proposed amendments will reduce, drastically, the ability of mobile operators to set a diverse range of tariffs. Indeed, at the extreme, they will force mobile operators to offer only a single unit price for all data services, with that unit pricing very likely to be above the lowest prices available in the market today.

Given the importance of mobile operators having the flexibility to offer a range of diverse service offers including differentiated prices to meet the diverse range of needs their customers have, it should be no surprise to ICASA that its proposals, if not amended, will have a significantly deleterious effect on, in particular (but without limitation), lower income users. This will undermine, at a stroke, the progress that the sector has made in recent years to make services more accessible and affordable.

As set out below, the restriction on validity periods will cause all mobile operators to remove all their bundles from the market, whilst the proposed rules on transfers will lead to all (non-promotional) low priced offers, such as Vodacom's Just 4 You, Just 4 Your Town, URL-specific bundles and MBB services, being removed permanently. Both proposals, if implemented individually, would have essentially the same negative effect. But together, the restriction on validity periods and proposed rules on data transfer will have an even stronger negative effect. This would create, in turn, a situation unparalleled in other advanced mobile markets, whereby operators are only able to offer a single tariff offer. Drawing on Frontier's expert report, Vodacom now explains these implications in more detail.

Implications of the proposed restriction on validity periods

As set out above, Vodacom interprets the proposed insertion of Regulation 8A(4) and 8B(3) to mean that no mobile operator may sell voice, SMS or data services (including bundles) with a validity period of less than six months, unless it was done so as a promotion.

The negative impact on consumers

ICASA's proposals would, in effect, require providers to stop differentiating by validity periods and to sell only six month validity bundles[10]. Customers presently buying cheaper short-duration bundles would not have that option, and would have to pay more or not buy at all, reducing the usage of mobile services.

In an industry with significant fixed costs for mobile telephony, this will lead to higher unit costs, putting further upward pressure on prices for all consumers in the long term, and in turn impacting negatively on the ability of the sector to drive the South African economy. As set out in the Frontier report (see Section 2), such price increases are clearly predictable from basic economic theory, which explains why uniform prices (prices without price differentiation) would be set higher than the prices that would be

[10] While, in theory, bundles with longer than 6 month validity are allowed, we do not expect these bundles to be offered. Indeed, currently there are no bundles with validity above 1 month, which suggests that there is no demand for very long validity bundles.

charged to consumers with a low willingness to pay, in a scenario where price differentiation is enabled. Yet despite this, ICASA appears to have given no consideration to these outcomes.

For example, if a customer wanted to purchase a data bundle with the same data allowance for a six month period as they would buy for a one week period, the six month version of that bundle would clearly be more expensive, given the additional flexibility it offers a user.[11] By way of illustration and as set out earlier, a Vodacom end-user can currently buy an open-market 1GB data bundle with a validity period of one month (30 days) for R85, or pay as little as R12 for a standard data bundle with a 1 hour validity. A bundle with a validity of six months or more would inevitably be priced above these levels.

As Vodacom has set out earlier in its submission, many consumers prefer to purchase short-validity bundles as these products are more aligned with their household budgeting (i.e. they prefer not to pay a premium for more flexible, longer-validity bundles). ICASA would now be denying consumers this option, despite having presented no evidence that mobile operators' current pricing strategies are problematic. Implementing such a regulatory measure, which would have a significantly chilling effect on operators' commercial freedom, and amount to the indirect regulation of service prices, without ICASA having conducted an impact assessment, is clearly irrational and unreasonable. This is sufficient to render it unlawful, as discussed later in the submission.

Indeed, ICASA's proposals fail to recognize the axiomatic truth that consumers prefer more variety to less. This is because the greater variety of tariff offers there are, the greater is the likelihood of meeting a given customer's preferences (which might of course be different at different times). Mobile operators are also responsive to demand – if there was demand from consumers for tariffs with six month validity, at least one operator would respond to this, with others then following if this proved successful. The fact that no operator has launched such a tariff offer, despite all the pricing innovation in the market, clearly shows that there is no such demand. And yet, ICASA now wants to replace all the tariff offers for which there is clear and proven demand, with such a tariff offer. This is clearly irrational and unreasonable.[12]

[11] Indeed, not only would low priced, short validity products be eliminated by ICASA's proposals, but the price of a minimum six month expiry product would likely be higher than the previous average price across the products. This is because mobile operators would likely expect that the average usage of data allowances within such bundles would now be higher, whilst consumers would also now have greater flexibility about how to use that bundle.

[12] For example, a less irrational approach would be for ICASA to require operators to introduce competitively priced tariffs with six month validity, without requiring them to withdraw other tariffs. A consumer could then select whether or not to purchase such a tariff.

The negative effect on competition

The threat of customer switching is a key driver of the potential pro-competitive effects of price differentiation, and the ease with which customers are able to switch is likely to determine the size of this effect (see Section 2.2 of the Frontier Report). In this regard, mobile operators in South Africa are strongly incentivized to reduce prices in response to a competitor given the low cost to customers of switching providers. The majority of customers in the market are prepaid customers who do not have a contractual obligation to remain with their operator and, with operators' tariff offers, including pricing publicly available to compare, are therefore readily able to switch to a more competitive tariff offer.

The proposed minimum six month expiry rule will lead to a radical decrease in the variation in bundle offers, reduce innovation in the market and lessen competition as licensees will be forced to offer the same minimum validity periods across all bundle ranges. In combination with the rules on data transfer (see below), it will also dampen price competition by limiting the ability and incentives of licensees to respond to competition by offering differentiated services (i.e. cheaper bundles with short validity). This means that operators will, in turn, put less competitive pressure on their rivals.

Implications of ICASA's proposals on the transfer of data

Vodacom already provides every subscriber on its network with several options to transfer data to other subscribers and to effectively administer and manage data transfers. For instance, Vodacom provides free roll-over of data on data-only packages and integrated tariff plans; roll-over of data on repeat bundle purchases; data sharing services for contract customers; and data transfer benefits through Red Family Share to up to six other Vodacom contract customers, with the original customer receiving an added benefit of double the subscription data back in Night Owl data.

However, it is important that these transfer options are properly managed, by allowing operators to place legitimate limitations on data transfers. To do otherwise would significantly undermine operators' ability to price differentiate and hence deprive consumers of the benefits of such price differentiation – see Section 2 of the Frontier report for a description of these benefits.

For example, Vodacom has imposed reasonable limitations in its terms and conditions for data transfer between its fixed wireless (MBB) services and its mobile data services. This reflects the fact that the reduced functionality and specific use-case of an MBB service (i.e., the fact that it is typically used at one location only, and MBB consumers are more likely to use data-intensive applications such as

streaming video content) means its consumers pay a lower unit cost for data than fully mobile data service end-users. Therefore Vodacom's reasonable limits on data transfer ensures that MBB is a viable option for consumers, while avoiding MBB cannibalizing regular mobile product sales (which would make offering MBB commercially unsustainable).

As set out in the Frontier report (see Sections 2.1 and 3.2), this ability to set differential tariff offers including prices is also critical for operators to maximize the use of their networks, while recovering their investment. But this ability to price differentiate between fixed and nomadic mobile internet services would be lost if ICASA's proposals are implemented. This is because, so long as there remained a price difference between any of an MNO's services, for example MBB services and nomadic mobile services, there would be opportunities for arbitrage and the creation of a secondary data market.[13] An end-user would be able to purchase large amounts of data via the MBB service at lower prices than an equivalent mobile internet data product and then, acting (illicitly and covertly) as a "wholesaler" or "reseller", sell and transfer portions of that bulk data to mobile data users, reducing Vodacom's mobile services direct sales.

MBB services are just one example of where Vodacom is able to differentiate its prices and service offering by effectively managing data transfer options. URL-specific bundles, personalized Just 4 You bundles, and various other offers in Vodacom's current portfolio also rely on some limitations on transfer of data to prevent arbitrage.

The proposed regulations would strip Vodacom (and other operators) of the ability to properly manage transfer options in order to prevent arbitrage between tariff offers. Consequently, many of the existing services on the market (MBB, URL-specific bundles, personalized bundles, etc.) would become unviable, as any differentiation in price between these services could lead to arbitrage. Put another way, ICASA's proposals on the transfer of data would force operators to withdraw many of the services they currently offer from the market.

The negative impact of the Draft Regulations on consumers

Such a scenario would very soon have a detrimental effect on end-users, particularly legitimate end-users of MBB services who currently benefit from the lower data prices. If such unrestricted transfers were allowed, the distinction between Vodacom's service types as articulated earlier in this report

[13] Section 3.1.2 of the Frontier report describes arbitrage and its impacts in more detail.

would be diluted almost immediately. Vodacom would be compelled to increase the price of MBB products because it would now no longer be able to rely on the MBB data being used from a fixed location – MBB product sales would otherwise cannibalize traditional nomadic mobile product sales. It would be required to price for such data as if it were mobile data service – first, to recover increased costs associated with mobile data service (such as national roaming costs) and second, to off-set or avoid losses incurred through arbitrage. Such an outcome would be severely detrimental to the majority, if not all, of the MBB end-users. MBB products would effectively be withdrawn from the market.

This effect is not however, detrimental only to MBB users. Rather, ICASA's proposal undermine completely Vodacom's ability to offer any lower priced packages, including the globally well-established practices of offering lower effective rates for larger bundles and for bundles consumed in off-peak times (such as Vodacom's Night Owl tariff). It will also mean Vodacom is no longer able to offer Just 4 You or Just 4 Your Town packages, as there will be nothing it can do in order to prevent users of those packages selling on some of their data to other users who would not otherwise have access to those personalized rates. Additionally, Vodacom would no longer be able to provide incentives for customers willing to commit to longer contracts, or larger bundles (in terms of megabytes). The result of this, as set out in Section 3.1 of the Frontier report, is that all mobile operators will have no choice, over the long run, but to reduce their number of tariff offerings down to the point where all tariff offers/data bundles are offered at a uniform effective rate, which will be higher than the effective rates currently paid by many consumers.[14]

Therefore, in the same way as the proposed regulations on validity periods, ICASA's proposed rules for data transfer would force MNOs to move to a single uniform price point. As set out in the Frontier report, this move to a single price point for all mobile data services will have serious negative impacts for consumers. These negative impacts were also summarized above, under the implications of ICASA's proposed regulation of validity periods. The proposals on data transfer would also have a negative impact on data usage and hence reduce (compared to the counterfactual of the Draft Regulations not being adopted) the contribution the sector makes to the overall economy of South Africa.

[14] Although operators can continue to sell different sizes of data bundle, those bundles will all have the same effective rate. This is because any differences in effective rate between large and small bundles would again create the opportunity for arbitrage.

Enabling unlimited data transfer will also present some technical challenges

As well as having a directly negative effect on consumers, ICASA's proposals if adopted, will also have other serious consequences. Most notably, mobile operators will no longer be able to use price differentiation to manage demand across their networks. For example, the ability to offer different prices at different times of the day (or possibly at different times of the week) is an essential instrument in assisting a mobile provider to optimize the use of its network. Inefficient network use results in higher unit costs, leading to higher prices for customers or to reduced returns on investments, or some combination of the two. ICASA's amendments risk promoting inefficient usage because Vodacom and other providers may not be able to offer cheap off-peak products to fill spare capacity. This is because it would be difficult to stop users from transferring data that was meant to be used during off-peak hours to other customers, who could then use it at peak times, which in effect will eliminate the purpose of such an off-peak tariff offer set at a lower data price.

In imposing such conditions, ICASA would be denying, therefore, mobile providers in South Africa an instrument for managing capacity that is used not only by mobile providers internationally, but by providers in many other industries that invest in capacity and therefore need to optimize use of that capacity. Critically, authorities do not object, as a matter of course, to such pricing. Instead, we understand such pricing to be inherent in the very ability of such services to be offered in a competitive and efficient manner.

In addition, Vodacom's charging system would be profoundly affected by ICASA's proposed regulations. If operators were required to allow transfer of data allowances across charging systems (i.e. pre-paid and post-paid), this would inevitably compromise one of those charging systems. Specifically, transfer of data between pre-paid and post-paid bundles would force operators to offer uniform prices across both types of service. This is because, for example, if operators continued to offer lower rates on postpaid services (where operators benefit from a greater commitment from the consumer), this would lead to arbitrage whereby post-paid customers could transfer their data to pre-paid customers (who would no longer need to purchase data from Vodacom directly at prepaid rates)[15]. This would leave operators with little choice but to allow only one unit rate across all bundles and would require only one charging system for consumers (as consumers would no longer have incentives to commit to post-pay bundles).

[15] Transferring data allowances from post-paid to pre-paid products would mainly pertain to the 'inclusive value' elements of post-paid products.

And even if operators did retain both pre-paid and post-paid bundles, ICASA's proposed regulations would require additional development to enable Vodacom to transfer data between end-users using different payment types (pre-paid to post-paid and vice versa) as Vodacom still has different billing, middleware and provisioning systems. Several functionalities would need to be built and tested.

The process of converting and synthesizing all of the relevant systems would require significant investment to fully enable the required functionality and making such changes would take Vodacom some months to achieve, at a significant cost. Similarly, tracking the remaining validity period of transferred data would be a substantial challenge for operators. And where customers receive multiple data transfers from different users and different bundles, with different remaining validities, accounting for this in operators' billing systems would become unfeasibly complex.

Vodacom concludes, therefore, that ICASA's Draft Regulations are irrational and ultra vires

Based on the inevitable consequences of the Draft Regulations, as set out above and in the Frontier report, Vodacom now turns to explain why neither of ICASA's proposals are lawful.

ICASA's proposals on minimum validity periods are irrational

Prescribing a minimum six month validity period is arbitrary (Vodacom is unable to relate it to anything), irrational, unreasonable and unsubstantiated by any evidence of market failure. While ICASA has linked the proposed minimum validity period to the 90-day minimum period during which a number is deemed to remain active, and the subsequent 90-day period applied by operators before recycling numbers[16], this is not a valid justification for its proposals.

As set out above, ICASA's prescription of a minimum six month validity period will also limit end-user choice, increasing prices for many consumers (who are currently benefiting from low unit prices on short-validity bundles).

As discussed in detail above, at present, operators in the South African market for mobile services are competing both on price and service specification (e.g. validity periods) to address a diverse set of consumer needs and preferences. Under ICASA's proposed regulations, operators using validity

[16] ICASA, 2022. Explanatory Memorandum on the Draft End-User and Subscriber Service Charter Amendment Regulations. Paragraph 4.1.2.2

periods, and/or the extension of validity periods to compete, will no longer be able to do so. Therefore consumers would likely suffer as a result of the proposed regulations, not benefit from them. Specifically, some consumers would be priced out of the market, while others would pay a higher price for their data, since operators would be forced to offer undifferentiated services with a more uniform pricing structure. Effectively, any benefits ICASA seeks to achieve with its proposed amendments would be outweighed by the welfare loss for consumers. This would be irrational.

ICASA's proposals on minimum validity periods are ultra vires

Through the Draft Regulations, the Authority is prescribing the nature of the product that may be offered by a licensee. This cannot be regarded as the setting of "minimum standards" – an essential characteristic of the empowerment conferred by section 69. Vodacom submits that the Authority is not empowered by the legislation to prescribe the products to be offered by licensees, and this would include validity periods for SMS, voice and data bundles.

As set out above, by specifying the minimum validity period for all services, ICASA's proposal removes the variety of prices available in the market, implicitly regulating how operators price their services, despite ICASA not having demonstrated a market failure and having not conducted a thorough market inquiry such as envisaged in Chapter 10. Such a direct intervention in the market without a review of the market dynamics, especially the effect this will have on competition, choice, and pricing of this uniform product offering, can only be arbitrary and accordingly unlawful. Indeed, the far-reaching negative consequences of the Draft Regulations explains why none of those countries included in the benchmarking study included in ICASA's Explanatory Memorandum have implemented such a restriction (see Section 3.3 of the Frontier report).

Therefore, the effect of ICASA's proposals would be to change, fundamentally, the service offerings that are made available by licensees – being access to the licensee's network. In particular, the prescription of services that may be offered by a licensee (or the time period over which access to the licensee's network must be allowed) does not fall within the concept of "minimum standards" to address "billing practices" or "charging practices" as contemplated in section 69(3) read with section 69(5) of the ECA and violates section 2(f) and (y) of the ECA. Furthermore, the proposed amendments cannot be said to further the expressly stated purposes of the regulations set out in Regulation 2, which is an independent basis for their unlawfulness.

ICASA's proposals on data transfer rules are irrational

As with the proposed validity restrictions, Frontier has set out, in its report (see Section 3.3) that it has not been able to find any examples of other telecommunications regulators imposing the kind of obligations on licensees that ICASA is proposing. That is, ICASA is proposing a regulation which is both unique and which would have far reaching negative consequences. This is irrational.

ICASA's proposals on data transfer rules are ultra vires

Indeed, the proposed data transfer rules fall foul of the law in much the same way as ICASA's proposed restrictions on the minimum validity periods. As illustrated, these rules inexorably determine uniform pricing for the affected services, something that falls beyond the powers conferred by section 69. Any such intervention would have to be embarked upon under the auspices of Chapter 10, and following the steps and criteria stipulated in that Chapter. The measure is also irrational, unreasonable, and contrary to the purposes of the Regulation, rendering it unlawful.

The combination of data transfer rules and minimum validity periods is irrational in and of itself

Furthermore, ICASA has also not considered the cumulative impact of its Draft Regulations. In particular, its proposal to extend validity periods to at least six months would in any event negate any "need" to allow the transfer of unused data, yet these measures are required in irrational combination.

D. ICASA's other proposed amendments to the Regulations

Vodacom now turns to considering the other amendments ICASA has proposed in the Draft Regulations.

AMENDMENT TO REGULATION 1

Vodacom notes that ICASA proposes to insert in the Regulations before the definition of "Act", various definitions linked to the parameters for which it proposes minimum Quality of Service (QoS) parameters in the Substitution of Regulation 9.

Vodacom comment

At present, Vodacom has no comments on the above insertions to the Regulation.

INSERTION OF REGULATION 8A(5) AND 8B(3A)

Vodacom notes that ICASA proposes to add, in the Drafts Regulation, the following clauses:

8A(5): *"A Licensee shall in the first instance apply Voice and SMS usage against the oldest of any unused Voice and SMS services, until such Voice and SMS services are depleted, and thereafter against the newly allocated Voice and SMS services."*

8B(3A): *"A Licensee shall in the first instance apply data usage against the oldest of any unused data, until that data is depleted, and thereafter against the newly allocated data."*

Vodacom interprets these amendments to mean that licensees must first allow consumption of voice, SMS and data services against the oldest bundles first, before allowing consumption/depletion against newly allocated bundles.

Vodacom comment

Our interpretation is that this will relate primarily to contract customers who have 30 day validity bundles with a further 30 day rollover related to their subscription contracted. In essence, this regulation should only apply to bundles with the same validity period which roll over. To explain this further, in the event where a customer chooses to purchase a shorter validity bundle on top of an active bundle of any other validity, then order of consumption should allow for the shorter validity bundle to be depleted first.

Based on this interpretation, Vodacom has no objections to the principle of the regulation (i.e. that older data should be depleted before newer data – all else being equal). However, where bundles vary in terms of their validity periods[17], Vodacom recommends that ICASA should reconsider in order to ensure that the regulation does not adversely impact consumers. Instead of applying data usage against the oldest of any unused data in all cases, licensees should apply data usage against whatever unused data is set to expire first (in most cases, this should also be oldest of any unused data). This would be a more logical process, which would be more intuitive for consumers.

INSERTION OF REGULATION 8A(6) AND 8B(7)

Vodacom notes that ICASA proposes to add, in the Amended Regulation, the following clauses:

[17] Vodacom notes that ICASA is proposing minimum validity periods of 6 months for all bundles. However, as is explained elsewhere in this submission, Vodacom is firmly opposed to these proposals.

8A(6): *"A Licensee, in instances where the end user is unable to utilize specific promotional voice/SMS products (such as promotional packages) due to a fault on the part of the Licensee (such as network outages or service breakdowns), must compensate the end user appropriately (such as by giving a rebate or by extending the validity period of the product concerned)."*

8B(7): *"A licensee in instances where the end user is unable to utilize specific promotional data packages or bundles due to a fault on the part of the Licensee (such as network outages or service breakdowns), must compensate the end user appropriately (such as by giving a rebate or by extending the validity period of the product concerned)."*

Vodacom interprets the proposed amendments to mean that where an end-user is unable to utilize their promotional voice, SMS or data bundles as a result of a fault on the licensee's network, the licensee must either refund the customer a pro-rated amount for the time that they were unable to utilize their bundle, or extend the validity of the bundle that the customer was unable to utilize.

Vodacom comment

Customers are affected to different extents by network outages, because outages vary in duration and users are only affected to the extent that they try to access the network during an outage. Where customers are affected by outages, Vodacom has an established process where all customer requests are dealt with.

A customer would ordinarily submit a request via Vodacom's customer care and the request would be considered. If it is indeed found that the customer qualifies for some form of re-imbursement, Vodacom will offer the customer re-imbursement. These requests are dealt with on a case-by-case basis, to reflect each customer's individual circumstances, and to protect Vodacom's wider consumer base from paying for fraudulent or invalid claims. For large outages Vodacom will refund or reallocate bundles, but for very short outages, where the customer could still use the services after restoration, Vodacom does not consider it reasonable to be required to compensate customers.

There is a risk that if a compensation is required for short outages, the system may be gamed by some users demanding disproportional compensations (e.g. to roll over the whole bundle due to a short outage). Therefore, Vodacom proposes that ICASA should either withdraw the proposed amendment to the regulation, or at least specify a minimum threshold for re-imbursement/compensation to be given to customers.

AMENDMENT OF REGULATION 8C

Vodacom is concerned that ICASA proposes that licensees provide information to consumers on matters that do not affect them in their capacity as consumers of the licensed services at issue, but rather affects them as citizens or people generally.

The requirement for licensees to provide "public health warnings and public safety notifications, State of Disaster / State of Emergency notifications" is ultra vires section 69(3) read with section 69(5), Vodacom therefore recommends the removal of this requirement.

Communicating with our end-users on licensed services

In principle Vodacom takes no issue with communicating with its customers on matters that are related to the services that it is licensed to provide. Vodacom, however, requires clarity on the use-cases for the types of directives that ICASA may issue and that there should be consensus between licensees and ICASA on the use-cases that would warrant such alerts.

It is not enough to simply state that the requests will be based on "public emergencies and similar events, or guided by the number of complaints which the Authority has received from consumers." The Draft Regulations are very vague on what type of incidents would warrant such alerts to be triggered and what evidence would inform each directive. Vodacom considers that it cannot be required to communicate with its entire base when an issue affects a limited number of customers and therefore cannot be said to be of concern to its customers generally. In this regard, we are of the view that any issue that warrants a consumer alert must be supported by proper reasoning and justification from ICASA and must be a prevalent issue that affects Vodacom's customers nationally and not be on the basis of an individual complaint.

Vodacom wishes to point out that as part of its normal course of doing business it, in any event, communicates with its customers on matters that affect a broad range of its customers as consumers of Vodacom's licensed services.

Once there is agreement between licensees and ICASA on the use-cases, Vodacom recommends the following procedure to be followed:

- ICASA must develop the content for the messages and ensure that all messages are properly approved prior to directing operators to disseminate;
- Licensees must be given an opportunity to review and amend messages in order to align with each licensee's unique way of communicating with its customers, e.g. the greeting. The process therefore needs to provide for feedback by operators and consideration by ICASA;
- The content for all public health warnings, public safety notifications, state of disaster / state of emergency notifications (to the extent that these relate to and affect consumers of licensed services in their capacity as such consumers) must be duly approved by the appropriate Government department, e.g. the Department of Health. ICASA must take responsibility in this regard;
- Messages must be received well in advance of the expected dissemination date. Assuming zero messages in the queue for dissemination, Vodacom requires two weeks' notice prior to the start of dissemination;
- In instances of a national emergency, Vodacom considers a 24 hour lead time to be generally acceptable;
- Given the limited hours during which it is appropriate to send customers any alerts and platform limitations, Vodacom can send a maximum of [redacted]. Importantly, this is a maximum for both commercial and any other messages. Alerts must therefore be staggered over three days as there is a network limitation on the number of messages that can be sent to the entire customer base at any given point in time;
- In order to mitigate against losing the audience due to "spamming", Vodacom recommends no more than one alert per week be disseminated to customers;
- Licensees must have the right to determine the appropriate medium of communication;
- Only alerts with less than 161 characters, including spacing, URL links, greeting, ending and body of message should be sent to operators.

Vodacom also wishes to propose that only complete messages should be forwarded to operators. That is, an alert must contain:

- Date
- Greeting
- Body of message in English, i.e. the actual text;
- Who the message is from (which department);
- The requestor of the message (if different from who the message is from)

SUBSTITUTION OF REGULATION 9

Vodacom has noted the QoS measures that ICASA proposes to include in the Draft Regulations. It sets out below its views on ICASA's overall approach, as well as individual parameters. In general, Vodacom supports a number of the objectives / reasons set out by ICASA in its Explanatory Memorandum for the proposed amendment. In particular, Vodacom agrees that there should be a streamlined, concise list of practical and achievable KPIs. It also agrees that the chosen parameters should reflect local market dynamics and needs, rather than KPIs from elsewhere being imposed, whilst keeping pace with technology, market and business innovations.

However, consumers may be negatively impacted should parts of these regulations be strictly enforced without due consideration of the changes in the environment and technology conditions over the period of the regulations. KPIs which do not promote the growth of new, more efficient technologies can cause more harm than good.

In what follows, Vodacom sets out that ICASA's QoS parameters relating to 4G services conflict with existing spectrum obligations, and are overly stringent. It also explains that ICASA's QoS parameters for 3G services may hinder migration to 4G/5G, or necessitate inefficient investment. Therefore Vodacom proposes that ICASA's QoS regulations relate to combined 3G and 4G service levels – not setting technology-specific QoS parameters – and that minimum QoS levels specified by the regulations be set at a level which does not distort the market by incentivizing investment in legacy technologies (which would harm consumers in the long run). Vodacom requests that ICASA's End User Test Cases parameters should be more clearly defined. And, finally, Vodacom emphasizes the various challenges faced by MNOs in South Africa specifically, which ICASA must take into account when designing QoS regulations.

<u>ICASA's QoS parameters relating to 4G services conflict with existing spectrum obligations, and are overly stringent</u>

Vodacom believes that KPIs should not be linked to the technology over which a service is delivered. In other words, there should not be separate QoS parameters for 3G and 4G services. Notwithstanding this position, Vodacom has several concerns with ICASA's proposed 4G parameters, which are expressed below. These concerns relate to the following issues/parameters in ICASA's proposals:

- consistency of the proposed regulations and existing spectrum obligations;
- Average Speech Quality Mean Opinion Score (VoLTE); and
- sampling for performance testing.

Consistency of the proposed regulations and existing spectrum obligations

The recently completed spectrum award has placed uplink and throughput obligations on successful bidders[18]. Bidders in the auction then reflected these obligations in their license valuations and auction bidding strategies. This is because the capital expenditure required to meet these obligations would have impacted the amount that licensees were prepared to pay for the spectrum. It is completely inappropriate and unreasonable, therefore, for ICASA to now, just a few weeks later, set a different set of QoS parameters that licensees have to meet. In particular, a minimum average download speed of 10Mbit/s on 4G networks, which must be achieved overnight is not consistent with ICASA's spectrum obligation to achieve a minimum downlink single user throughput of 5Mbps at the edge of the cell within 5 years. To do so, serves only to add significant regulatory uncertainty to the environment, impacting adversely the ability of licensees to undertake the investment needed to achieve the Government's objectives. Clearly, ICASA imposed the obligations in the spectrum award to ensure that consumers benefit from that award through having access to high quality services. It is unclear why, less than three months later, and before the spectrum awarded through that process has been fully deployed, ICASA now appears to feel that the obligations included in the award are no longer sufficient.

By proposing QoS regulations that effectively overwrite the spectrum obligations accepted by MNOs at the latest spectrum award, ICASA may also be jeopardizing the outcome of future ITA processes. This is because imposing these regulations would give rise to concerns among MNOs that ICASA was not sincere regarding its ITA obligations. Uncertainty over the concreteness of ITA obligations would distort MNOs' bidding strategies at future auctions, likely leading to inefficient outcomes.

Average Speech Quality Mean Opinion Score (VoLTE)

VoLTE uses two predominant codecs i.e. EVS (Evolved Voice Services) and AMR (Adaptive MultiRate). EVS is capable of providing superior MOS with varying radio signal, and is designed to support packet services from inception. AMR was designed from 2G days and extended to 3G (that is, from AMR-Narrow Band to AMR-Wide Band). Taking this into account, and the interworking nature between EVS and AMR, a Mean Opinion Score (MOS) value of 4 or greater is a target that is not tenable everywhere. This is because, realistically, consistently strong radio signals and consistent power availability to all other network elements such as transmission equipment and others, are not achievable everywhere on an

[18] National wholesalers who were awarded radio frequency spectrum licences on spectrum band(s) IMT700 and/or IMT800 are obligated to achieve a minimum downlink single user throughput of 5Mbps at the edge of the cell within 5 years. (ICASA, 2021. ITA For The Licensing of IMT Radio Frequency Spectrum Bands - IMT700, IMT800, IMT2600 and IMT3500. Paragraph 12.1.1)

operator's network – this underpins Vodacom's proposal to set combined 3G/4G QoS parameters, as opposed to technology-specific targets. Also, a VoLTE device supporting EVS calling or being called by a VoLTE device supporting AMR will have a lower MOS value than another pair of VoLTE devices both supporting EVS. As such, Vodacom cannot guarantee that both devices, those of caller-A and caller-B, will always be on VoLTE at exceptionally good coverage points. As a result, an Average Speech Quality MOS of 4 or greater is not tenable.

Vodacom is therefore proposing that ICASA adopt a single MOS value of 2.5 which would apply to both 3G and 4G services – this is discussed further below. Notwithstanding this, if the Authority insists on separate MOS metrics for 4G and 3G (which we advise against), Vodacom notes that a more reasonable minimum QoS for a 4G Average Speech Quality MOS parameter would be 3.5 on average, which takes into account scenarios involving VoLTE EVS primary mode (side 1) calling VoLTE in EVS inter-operability (EVS-IO) Mode (AMR Family of codecs). Vodacom would propose this, first, because a MOS value of 3.5 falls into the acceptable voice quality as per ITU P.863 Recommendations (Polqa Score Code). Secondly, because ICASA's proposed QoS requirement for RSRP of -115dBm is equivalent to a pathloss of 133dB assuming an RS power of 18.2dBm - this translates to a MOS value of less than 4. Thirdly, a MOS of 3.5 would allow Vodacom and other operators to extend VoLTE coverage and meet the service coverage obligations, thus widening access to high-quality mobile services.

Sampling for performance testing

Vodacom recommends that the testing samples and conditions should be representative of the local markets, and should be large enough to provide a statistically representative sample. Essentially, Vodacom proposes that all drive-testing campaigns which are undertaken to measure performance must have enough samples to ensure data credibility. As such, Vodacom encourages ICASA to ensure that drive test sampling fulfils a minimum of two call attempts within a square kilometer. It is in the interest of both Vodacom and ICASA to guarantee credible sample size. Accordingly, it is also proposed that all drive test indicators shall be weighted by population figures. For example, Kimberley which has 230 000 habitants out of 3 748 436 Northern Cape population will have a weighting of 6% compared to other locations that could have a better representation of the province. The weighted population method seeks to guarantee fair aggregation independently of the relationship between sampled volumes and city size and avoids bias from a single unrepresentative observation. Typically, it is important to identify and weigh each test area (i.e. city or town) by population density against regional footprint to improve credibility.

Minimum QoS levels should not hinder migration to 4G/5G, or necessitate inefficient investment. With this in mind, ICASA should set QoS parameters relating to combined 3G and 4G service levels.

Setting QoS parameters specifically for 3G, which is effectively a legacy technology, will, if taken forward, thwart Vodacom's intention and ability to invest its efforts towards the future (4G and 5G technologies). Indeed, requiring operators to invest in 3G networks at a time when MNOs are aiming to transition customers to more advanced and more spectrum-efficient technologies does not appear sensible. This also contradicts the guidelines of this legislative objective, namely to impose QoS parameters where they are *"necessitated by changes in the market, and in the technology environment, where Internet access and services are increasingly central to the end-user experience and to consumer satisfaction"*[19].

Vodacom is therefore concerned that ICASA has not, in putting forward its proposed amendments, actually followed the principles it has outlined. This is because consumers care about the quality they receive, not about the technology over which a service is delivered, while handsets can also switch between technologies. Furthermore, as set out in the Frontier report (see Section 4), setting stringent technology-specific parameters could also negatively impact the transition to better, more efficient technologies.

Furthermore the Minister of Communications recently announced Government's intentions to prohibit the importation and distribution of 2G devices by March 2023. This is in recognition of mobile operators' plans to switch off their 2G and 3G networks and migrate to more modern and efficient technologies such as 4G and 5G – which also aligns with Government's SA Connect's objectives of modernizing networks. In this regard, the Minister announced that: "To enable this, we will shut down 2G and 3G networks over the same period and this financial year we will commence with the prohibition of the importation and distribution in South Africa of 2G devices."[20]

In view of these concerns, Vodacom proposes several amendments to ICASA's proposed parameters. Most importantly, to better align QoS regulations with the principles ICASA has outlined, QoS parameters should refer to combined 3G/4G service levels – not be technology-specific. This means setting minimum levels of QoS which apply to any consumer using either 3G or later technologies, that are still feasible to achieve with 3G technology. Setting standards in this way will safeguard consumers

[19] ICASA, 2022. Explanatory Memorandum on the Draft End-User and Subscriber Service Charter Amendment Regulations. Paragraph 8.3.

[20] https://techcentral.co.za/south-africa-to-ban-importation-of-2g-phones/212115/ [last accessed on 16 June 2022].

without distorting the market by forcing MNOs to invest in legacy technologies. As discussed above, imposing stretching targets for 4G parameters (as proposed by ICASA) is out-of-line with ICASA's own spectrum obligations, which were agreed and entered into by operators only weeks ago.

3G Voice Service and Packet-Switched Data Services parameters

In support of South Africa's national broadband or 4th Industrial Revolution ambitions, Vodacom proposes that the South African mobile market move away from technology-specific test methodologies to a combined 3G/4G approach. All operators are aggressively expanding their 4G networks, ensuring subscribers have access to the most efficient latest technologies, i.e. 4G and beyond. If a user happens to be served by 3G, Vodacom commits to deliver all proposed indicators, with the exception of:

- 3G Average Speech Quality MOS;
- 3G Application Throughput; and
- 3G File Transfer Protocol (FTP) Average Download Throughput.

Vodacom's concerns regarding these parameters are set out below. In light of its concerns, Vodacom proposes amended targets for each of these three parameters, which would result in 3G acceptable performance indicators being safeguarded for users (should they be served by 3G instead of 4G), without compromising on network quality in the short or long run.

3G Average Speech Quality MOS

3G as a technology is not capable of maintaining voice quality of 3 and above, especially during high utilization periods. Vodacom proposes that an Average Speech Quality MOS of 2.5 on 3G is sufficient to support Good customer experience on a feature phone device. Therefore the combined 3G/4G QoS level for Average Speech Quality MOS should be set at 2.5.

3G Application Throughput and FTP Average Download Throughput

ICASA's proposal of a minimum average download speed of 5Mbit/s for 3G (both for the 3G Application Throughput and the 3G File Transfer Protocol (FTP) Average Download Throughput parameters) is, in Vodacom's view, inappropriate. The proposal set out in the Draft Regulations of 5Mbit/s is untenable since any 3G target for data needs to consider voice as well as the fact that resources are shared between Packet-Switched (PS) and Circuit-Switched (CS) services in 3G. Considering that a fair share of Vodacom's voice traffic is still carried on 3G ([redacted] then a 5Mbit/s target would mean a cell would support very few voice users. This is because increasing the number of voice users served

means a decreasing 3G throughput, and vice versa. This relationship is particularly important for ICASA to consider, since typically in 3G, voice carries precedence over data. To support the required PS capacity ICASA is proposing, Vodacom would need more 3G sites. Investing now in additional 3G sites does not align with international trends of sunsetting legacy radio access technologies (RATs), as mentioned above, or the clearly stated ambitions of the South African Government. As the migration away from 3G will continue in any case, any such investments may also prove inefficient because these additional network assets would soon become obsolete.

In any case, meeting the 5Mbit/s target at a countrywide level will be a Herculean task requiring a lot of investment in an inefficient air interface (i.e. 3G). Indeed, the main reason that operators have moved to 4G and 5G technologies stems from the application Orthogonal Frequency Division Multiplex feature, which was introduced to improve data performance, increasing data transmission at the back of realized Multiple Inputs Multiple Outputs (MIMO) technology, which significantly improves the system capacity, unlike in 3G. Measurements for other operators[21], where drive tests indicate that 40% of the samples are below 5Mbit/s, support Vodacom's concern that ICASA's proposed minimum QoS for these parameters would require intensive and, critically, inefficient investment by operators.

In light of the above, Vodacom instead proposes a balance between heavy capex requirements and an adjusted end user experience target of 2.5Mbit/s (for combined 3G and 4G services). With this target, Vodacom will be able to support 720p video which requires a minimum of 1.5Mbit/s. With 2.5Mbit/s, buffering will be constrained to less than 10% of the subscribers, while supporting a substantial number of voice users.

Finally, Vodacom notes that re-planning 3G to achieve 5Mbit/s everywhere on its network would require extensive rollback on already re-farmed Universal Mobile Telecommunications Service (UMTS) bands and will therefore have a subsequent negative impact on LTE customer experience.

ICASA's End User Test Cases parameters should be more clearly defined

The "End User Test Cases" parameters proposed by ICASA are understood to be focused on mobile services only, and to be applicable to drive testing. Should ICASA's intention be different, and the means of testing and measurement require a different focus, then some further clarity would be required from ICASA. It is further recommended that end user test cases should be 4G-preferred. The methodology to be used, including payloads and routing conditions, should be further defined since this is not clearly set out in ICASA's proposals. ICASA would need to share more technical insights for

[21] According to Huawei HEDEX data

the operators. Misunderstanding of how to measure current performance against the proposed QoS requirements could result in investment risk and reputation damage for operators.

It is also critical to understand that some End user parameters are linked to network designs which are beyond an MNO's control. For example, mobile networks are capable of guaranteeing Web Page Access Success Rates of 98% – in particular, for over-the-air or radio interface. Beyond the air interface, web applications have end-to-end dependencies which requires some degree of tolerance. For instance, a web page which is not available, or under maintenance, or a URL that changed, will result in a failed test beyond the network operator's control. Therefore, taking into account the end-to-end nature of these types of applications, Vodacom proposes a target of 95%.

ICASA must take into account the challenges faced by South African operators in achieving any minimum QoS regulations

A number of factors, most notably national electricity availability, infrastructure and socio-societal challenges could all impact MNOs' ability to fulfil the majority of proposed QoS parameters. Based on network statistical data, Vodacom's electricity availability (i.e. from the national grid) is currently at a record low minimum of approximately 92%, with an average of 96%, and occasionally reaching 98%. This leaves Vodacom with an 8% electricity availability gap to manage (i.e. 92% to 100%). Vodacom, as any other local mobile network provider, has to continuously invest in power backup systems to ensure coverage and sustain its capacity in areas it serves. The impact of unstable national electricity supply results in loss of coverage, which in turn creates coverage gaps, degrades signal strength and quality, affecting Vodacom's capability to deliver acceptable data and voice experience. Secondly, vandalism and theft are rapidly increasing across the country. As a result, MNOs are incurring huge operational costs to protect power backup investments, and keep South Africa's communities connected. Thirdly, Vodacom must also grapple with poor road infrastructure which limits its 24/7 access in certain areas to maintain base stations – so making high-quality network performance more difficult to maintain.[22]

SUBSTITUTION OF REGULATION 10

Vodacom has noted ICASA's proposals to require that operators monitor their networks 24 hours per day, 7 days per week. Operators must also allow ICASA to monitor and audit QoS performance under

[22] These three examples represent just a handful of the challenges Vodacom faces in maintaining its high network performance. ICASA must bear such challenges in mind when considering how to design its QoS regulations.

the Draft Regulations. This includes operators allowing ICASA access to collect raw network performance data from their platforms.

Vodacom's network is monitored continuously around the clock, every day of the year via its African Service Operations Centre (ASOC). This performs alarm monitoring and incident management, thereby ensuring network outages are detected and resolved within the shortest timeframes, with the aim of reducing the disruption to the customer experience for related services.

The new aspects of the Regulation, such as considering testing methods including crowdsourcing and statistical performance base assessments, are novel and ICASA should seek further consultation with operators before finalizing these Regulations. At present, ICASA's Draft Regulations do not provide clarity on monitoring requirements. For example, crowdsource KPIs are not defined. As such, Vodacom proposes further consultation with regard to monitoring through crowdsource data, probing systems, and any form of network performance monitoring systems. This is because these new proposed methodologies, untried in South Africa, may carry some additional risks when compared to drive testing.

Vodacom has also identified several risks related to the implementation of a network performance monitoring system. These include risks to information security, compliance with the Regulation of Interception of Communications and Provision of Communication-Related Information Act (RICA) and the Protection of Personal Information Act[23] and costs associated with data hosting. The proposed invasion of networks by a network performance monitoring system cannot be regarded as the setting of minimum standards as required by s69(3) read with s69(5) of the ECA, and would be ultra vires these empowering provisions. Furthermore, much of the information to which ICASA proposes to be offered access on an ongoing basis would comprise "communication-related information" as defined in RICA, meaning the access envisaged would violate sections 12 and 15 of RICA. ICASA should further consider all of these matters as it finalizes the Regulation. The use of probing capabilities is another concern due to its intrusive nature and practical considerations.

Notwithstanding the unlawful nature of ICASA's proposals, Vodacom would request ICASA to clarify in greater detail the governance and technical conditions around these new test methods to ensure transparency in the proposed application of these methods for the purpose of this Regulation. Insights from other markets that have used similar methodologies for monitoring and testing QoS performance

[23] Compliance with the Protection of Personal Information Act would be put at risk if Vodacom was forced to give ICASA access to systems which contain customers' personal information.

should also be taken into account by ICASA – Appendix A of the Explanatory Memorandum to the Draft Regulations only lists how QoS is monitored in other markets, without indicating any investigation of the efficacy of these systems. Vodacom also notes that ICASA will apply its discretion with regard to the frequency of the audits and reporting periods, etc. However Vodacom considers it appropriate for ICASA to give due notice for operators prior to conducting such audits.

SUBSTITUTION OF REGULATION 11

Vodacom notes that ICASA proposes that:

"A Licensee must notify affected end-users via SMS, Social Media platforms, and its own website, 7 days before, and a day before, of any planned service interruptions due to service or system upgrades.

Vodacom supports the requirement to inform its end-users of any planned service interruptions on its network however it should be the discretion of licensees to determine the most appropriate means of communicating a planned service interruption. As stated in our response to Regulation 8C, given the limited hours during which it is appropriate to send customers any alerts and platform limitations, Vodacom can send a maximum of 10 million SMSes per day. Notifications would therefore have to be staggered over three days as there is a network limitation on the number of messages that can be sent to the entire customer base at any given point in time. It may therefore not always be possible to send notifications to the entire base on the same day i.e. 7 days before and the day before due to these limitations. Vodacom therefore recommends the following:

"A licensee must notify end-users via SMS, or Social Media platforms, or its website, or any other means at least 7 days before any planned service interruptions due to service or system upgrades."

Vodacom notes that ICASA also proposes that:

"A Licensee must notify the Authority and its customers, via Social Media platforms, SMS and its website, of any major network outage that results in poor quality of service as soon as it occurs."

It is not clear what the Authority considers to be a "major network outage", in this regard, Vodacom requests the Authority to provide clarification. Vodacom also notes that it becomes unpractical to respond to customers on minor events of service interruption. This is especially true in environments such as South Africa, with regular load shedding. As such, events of short duration with low impact should be excluded from this requirement.

Given that a major network outage may affect the provision of certain services, once again, Vodacom believes that licensees should have the discretion to decide on the most appropriate means of communication with affected end-users. For example, a major outage that affects the provision of data services would mean that Vodacom customers would not have access to social media and it may be more appropriate to inform them via SMS. Where an outage affects the provision of SMS services, Vodacom would not be able to deliver SMSes to affected customers and it may be more appropriate to communicate the outage via social media. In addition, sending millions of SMSes to the customer base may exacerbate the problem.

Obligating a licensee to notify consumers of service interruptions and major outages via social media could damage consumers' perceptions (even those unlikely to be affected by the outage) of the overall reliability of that licensee. Similarly, where a major outage is not the fault of an operator (e.g. due to a failure in the energy supply), broadcasting the major outage on social media may lead consumers to mistakenly attribute blame to the operator for the outage. As such, it is not clear that ICASA has fully considered whether this part of its proposals could create undue reputational damage for operators complying with the proposed Regulation. Numerous factors beyond the control of a licensee could lead to a network outage such power failure, a natural disaster – with varying frequency. Vodacom considers it to be unreasonable to expect licensees to communicate every occurrence of these outages with the Authority.

Vodacom recommends the following:

"A Licensee must notify the Authority and its customers, via Social Media platforms, or SMS, or its website, or any other means of any major network outage (excluding events that are beyond the licensee's control) that results in poor quality of service as soon as it occurs."

SHORT TITLE AND COMMENCEMENT

In the event that the Authority wishes to promulgate the proposed amendments, licensees should be given sufficient time (at least 6 months, though some licensees may require more time in line with their annual budgeting processes) to develop systems in order to be able to comply with the regulations from the date of publication. Vodacom would not be in a position to comply immediately with the requirements of the proposed amendments from the date of publication.

ANNEXURE A: PRICING PRACTICES IN OTHER SECTORS WHICH EMPLOY DIFFERING VALIDITY PERIODS

Bundles with expiry periods are not unique to Vodacom. It is also prevalent in other utility industries where similar dynamics (efficient utilisation of infrastructure and volume incentives) apply.

Gyms

Using https://www.hussle.com/ as example, customers are offered flexible gym access to suit modern day life. Customer can elect between:

- Day Passes, offering 1 visit during a 30 day period, typically at a 10% discount on standard non-member rates
- Gym Membership, offering standard access to a single gym during a monthly subscription period
- Monthly+, offering unlimited visits to multiple gyms and locations during the monthly subscription period, and includes fitness apps

Transport - Gautrain

Using https://www.gautrain.co.za/commuter/farecalc as example, tariffs are segmented according to the type of commuter.

- For the occasional travel, then the Pay-As-You-Go offer is recommended. (This is comparable with Vodacom's unit-by-unit no commitment charging model)
- If you are a commuter who travels daily between the same two stations, Gautrain offers four types of "Train Product":
    - A Single Trip Product offers one train trip between two pre-selected stations. The product caters for a one-way journey and is based on peak fares. The product must be used within three years from date of purchase, thereafter it will expire. Expired Products are non-refundable.
    - A Return Trip Product provides a return train journey between two pre-selected stations and is based on peak fares. The product must be activated (first used) within 7 days of purchase. Once activated the trips must be used within 31 days, thereafter the remaining trip will expire and become non-refundable.
    - A Weekly Product offers 10 single train trips between two pre-selected stations. The Product must be activated (first used) within 7 days of purchase. Once activated all trips

must be used within 10 days, thereafter any remaining trips will expire. Unused trips will not be refunded.

- A Monthly Product offers 44 single train trips between two pre-selected stations. The Product must be activated (first used) within 7 days of purchase. Once activated all trips must be used within 44 days, thereafter any remaining trips will expire. Unused trips will not be refunded.

Transport – Swisspass

Using http://www.swisspasses.com/railpass/ as example, tariffs are segmented according to the type of commuter and need.

- Swiss Transfer Ticket - The Swiss Transfer Ticket is a return Rail ticket from the Swiss border, or one of Switzerland's airports, to the customer's destination. Customers can fly into one airport and back from another - ticket is valid for 1 month.
- Swiss Card (Transfer Ticket with Half-Fare Card) - Offers the same advantages as the Swiss Transfer Ticket - ticket is valid for one month, but each journey must be completed in one day and on the most direct (shortest) route. Plus customers can travel by train, bus, boat and many privately owned mountain railways for half the normal price for up to a month.
- Swiss Travel Pass Flex - The Travel Pass Flex offers the same advantages as the Swiss Pass but lets customers choose the days on which they travel (valid one month). Valid for 3, 4, 6, 8 or 15 days within 1 month. This pass also covers scenic routes and local trams and buses in around 75 towns and cities.
- Swiss Travel Pass –Unlimited travel throughout the train, bus and boat Swiss Travel System network, including trams and buses. This rail/train pass also offers discounts on many mountain railways and cable cars. Valid for 3, 4, 6, 8 or 15 consecutive days. This pass also covers scenic routes and local trams and buses in around 75 towns and cities.
- Swiss Half Fare Card - Half Price for customers' Swiss Rail Travels, plus up to 50% off on most mountain railways and local public transport in 75 towns and cities. Available as a pdf ticket or a screen version for use with a smart phone. Valid for 1 month.