DUAL SIM - THE ROUTE TO NEW eSIM REVENUES FOR OPERATORS

How operators can harness dual SIM adoption so they don't miss out on eSIM opportunities

Executive Summary

Subscriber Identity Module (SIM) cards have existed since the inception of the mobile industry as the vital means to securely link users and their devices to consumption of services on the network. With the arrival of eSIM and the increasing popularity of dual SIM devices that enable users to have multiple subscriptions, operators' SIM strategies are going through rapid transformation. The good news is that substantial revenue is set to be gained for operators that provide eSIM and support the needs of dual SIM users.

Equally, operators who do not invest in the relevant technology are at risk of being unable to defend themselves against operators who do.

This paper outlines why the limitations of traditional SIMs mean a new approach is necessary. It also details what eSIM offers, how dual SIM demand is driving the change and the advantages for operators who embrace eSIM. It reveals the eSIM revenue opportunities and what those who don't adopt eSIMs will miss out on.

The problem with SIM cards today

Since the early 1990s, the SIM card has been an essential security component of devices connecting to mobile networks. SIM cards not only identify the customer for billing purposes but act as a secure authentication token enabling the device to connect to a particular operator's mobile network. The SIM card has played that role well but the mobile market has changed immensely since its introduction and this has highlighted many problems and limitations, with the result that the traditional SIM card is unfortunately no longer fit-for-purpose. Key disadvantages include:
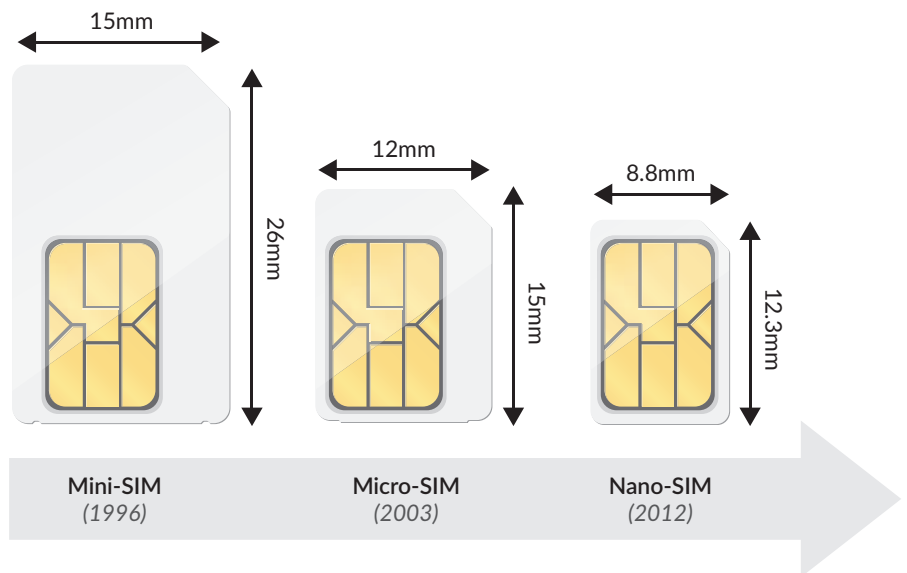
- Connecting a device onto a mobile network requires the consumer to go to a retail outlet to or wait for a SIM card to arrive in the post.

- Swapping from one device to another may require a different sized SIM card, and also an arduous 'SIM swap' process.

15mm
26mm
Mini-SIM
(1996)

12mm
15mm
Micro-SIM
(2003)

8.8mm
12.3mm
Nano-SIM
(2012)

- For some people the Nano-SIM and even the Micro-SIM are just too small to be managed.

- SIM cards, when not inside mobile devices, are extremely easy to lose.

- The SIM card tray presents a major problem for device waterproofing.

- The SIM card tray inside a smartphone is the same size as the main processor, yet its function is far less.

The advent of eSIM

In 2016, the GSMA released a technical specification for eSIM, removing the need for a physical SIM card in consumer devices. This specification has been implemented by many manufacturers including Apple, Samsung, Huawei and Microsoft and used across more than 100 operators worldwide.

eSIM brings many benefits to operators and other stakeholders from across the entire market. For consumers eSIM enables faster and easier connection of devices onto mobile networks and easy addition or change of mobile operators over time. All this paves the way for enabling new appealing mobile device categories such as watches and other wearables.

For operators eSIM means less costly logistics when compared to traditional SIM cards. In addition, there is an improved customer journey and new customer acquisition and retention capabilities. For example, poster campaigns with QR codes can be used to acquire new customers while for retention, users can tap their smartphone onto new devices to add them to their existing account. There is also less impact on the environment given a huge reduction of plastic SIM cards over time.

For device makers, eSIM allows for , smaller form factor devices. Even in larger devices, more internal space is freed up for other capabilities. Importantly, device makers can be assured that devices such as tablets will be connected on the move, enabling customers with the full feature set of the device and therefore greater satisfaction. Cost is also attractive since eSIM enables a reduced bill of materials (BOM) as the SIM tray and related circuitry are no longer required. The lack of a SIM tray also means devices are more easily waterproofed.

It may seem counter-intuitive but SIM card vendors will also benefit because eSIM provides new products and service channels for them to exploit. These include embedded universal integrated circuit cards (eUICC), subscriber manager-data preparation platforms (SM-DP+) and eSIM profiles. For these, eSIM creates additional customers in the form of mobile device manufacturers.

Because most mainstream mobile devices such as smartphones can only accommodate a single SIM card, a customer will tend to have a long-term relationship with just one operator whilst owning the device. Even if the customer changes mobile service provider, the SIM card is replaced and a new long-term relationship between customer, device and operator begins.

Customer **Mobile Device** **Operator**
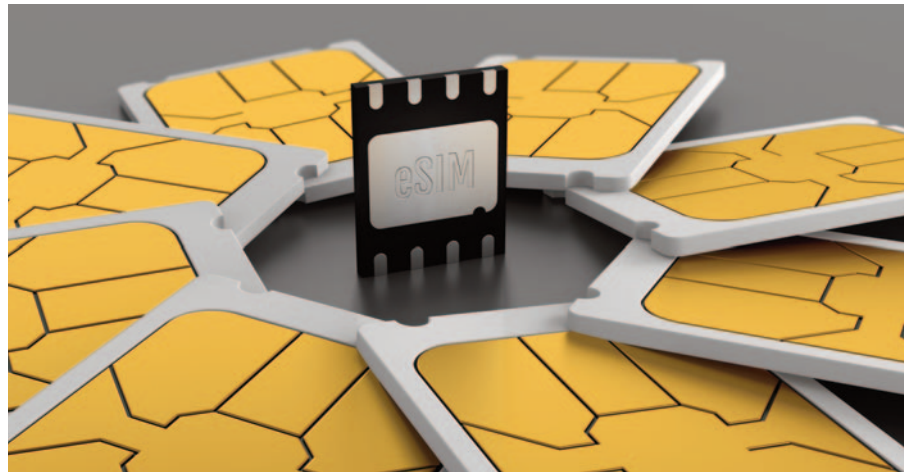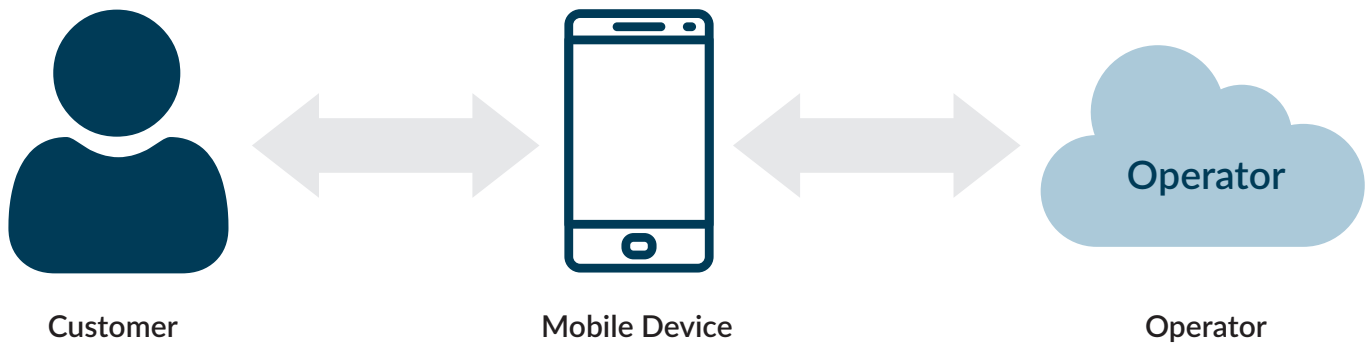
This single SIM card slot means any customer – for example, a business traveller looking to manage their mobile data costs – who wishes to manage more than one subscription, would have to carry other SIM cards in their wallet or purse. Swapping between these SIM cards over time quickly becomes tedious and loose SIM cards are easily lost.

Some devices have more than one SIM slot, but this challenges device form factor and cost. As we will see, it is the combination of eSIM and a physical SIM card slot that will bring about a revolution in the relationship between customer and operator.
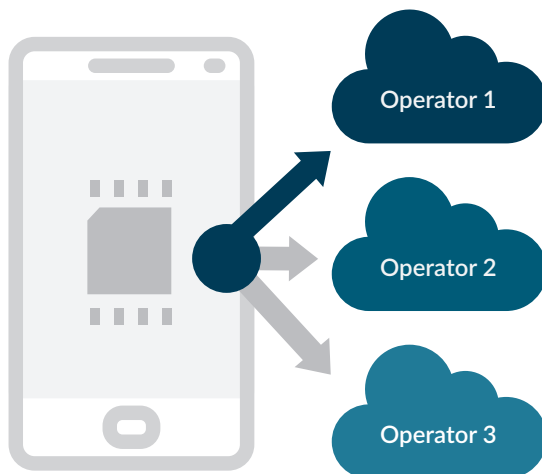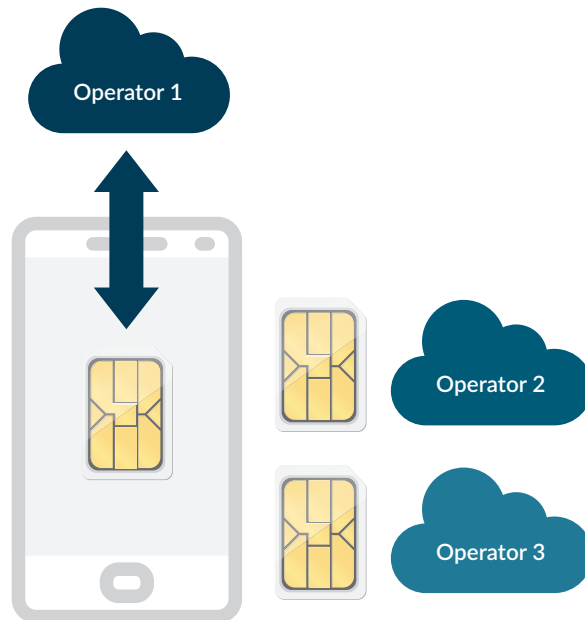
eSIM technology is far more convenient as it allows the customer to install many eSIM profiles in their device and select between these subscriptions at will via a software menu (although only one profile can be active at any given time). This changes the relationship between the customer and operator in that they may no longer have a long term relationship with just one mobile provider.

Dual SIM – a key driver for eSIM

What is Dual SIM?

A Dual SIM device, having two SIM card slots, can support two mobile network connections at once. The costs of these devices has reduced in recent years with the introduction of Dual SIM / Dual Standby (DSDS) radios. Rather than having two radios in the device, a single radio is able to listen to two networks simultaneously, rapidly switching between each.

A key driver for eSIM over the next few years will be Dual SIM devices.

But why?

Although dual SIM technology has been available for many years, it has never become mainstream in the USA and Europe where coverage is good and roaming frictionless. Instead it has only been popular in countries like India, where conditions required customers to maintain two or more subscriptions in their device to ensure adequate connectivity. Furthermore, popular devices, such as iPhones, have not offered dual SIM capability until the advent of eSIM.

This is borne out by research firm IDC's Q2 2018 Mobile Phone tracker which reported that in the US, just 4% of smartphones sold had dual SIM capability. This contrasts with markets such as India and The Philippines in which the

IDC tracker reported that 98% and 92% of phones shipped were dual SIM smartphones.

Device manufacturers looking to support eSIM changes things though: Device manufacturers looking to support eSIM in their products still need to retain a physical SIM card slot for those countries not ready for eSIM yet.

And it is the presence of both these items that allows these devices to support Dual SIM technology. There is no longer any need for a device to have two SIM card slots.

Because of eSIM then, Dual SIM has quickly become a mass-market feature of smartphones globally. And as customers experience the many benefits of Dual SIM technology, this will drive further adoption of eSIM in devices, creating a virtuous circle.

What is key here is that Dual SIM instils new behaviour in the mind of the customer – essentially the notion of a primary subscription, which is generally permanent, and one or more secondary subscriptions that can be easily changed by the customer depending on time and location.

Because eSIM allows only one eSIM subscription (called an eSIM profile) to be active at any time, in order to manage two active network connections, one must be via the physical SIM card. The customer should be aware though, that if they chose to convert their primary subscription from a physical SIM card to an eSIM, they will lose the flexibility of managing multiple secondary subscriptions. It is therefore better for them to keep the physical SIM card as their primary subscription.
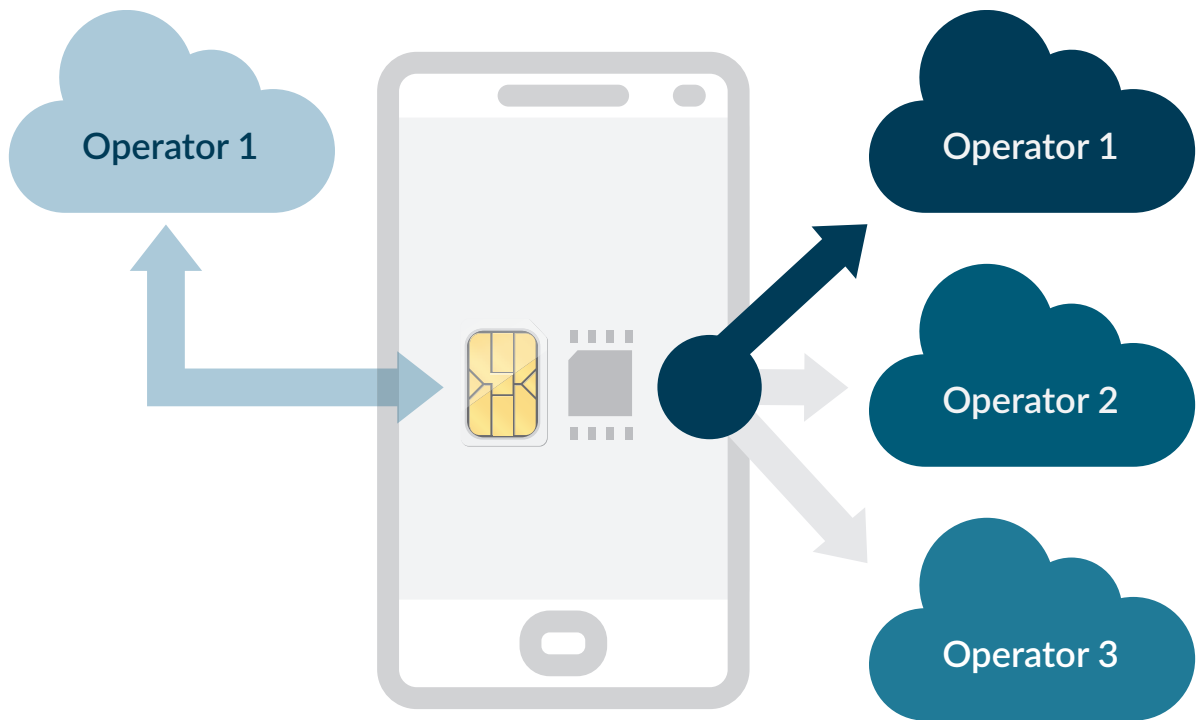
List of Dual (e)SIM Devices available today:

- iPhone 11
- iPhone 11 Pro
- iPhone 11 Pro Max
- iPhone XS

- iPhone XS Max
- iPhone XR
- Google Pixel 3 & 3XL
- Google Pixel 4

- Nuu Mobile X5
- Surface Pro LTE

Dual SIM devices therefore present an immediate challenge for operators who, up till the arrival of eSIM, saw themselves as the only subscription on the device. With eSIM, customers can have relationships with several operators concurrently.

Let's now take a look at some of the more popular Dual SIM use cases and the resulting opportunities that arise for operators.

Dual SIM use cases

Use case 1: Travel

International travellers can avoid expensive roaming charges by purchasing and using a local SIM card in each country they visit. Although eSIM simplifies this as there's no need to physically swap SIM cards anymore, it is not possible to make and receive calls on your primary mobile number when another subscription is being used.

Dual SIM devices solve this as the primary subscription and travel subscription are active at the same time, meaning cost-effective data whilst still remaining in contact on the primary number.

Use Case 2: Separate subscriptions or identities

Many customers carry two phones with them, used for separate purposes. For example:

- One phone used for business whilst the other for personal use

- Both phones used for two separate businesses

- Each phone a separate personal identity, e.g. one for close friends and family, and the other for everybody else.

Dual SIM technology allows all of this on just one phone.

Use Case 3: Constant coverage

It is rare that a single operator will have 100% national geographic coverage, but for some customers, for example an expectant father, 100% coverage is vital.

A dual SIM phone provides the customer with far greater coverage than any single operator can provide, and also protects against operator service outage, which happens from time to time.

Challenges and opportunities for operators

Although many operators are embracing eSIM by launching products and services already, some are hesitant – perhaps worried that any change could have a negative impact on their business, for example, a perception of increased churn. The problem for these operators is that eSIM is coming regardless. Apple and Google have had eSIM-enabled devices available for some time and other major manufacturers including Samsung are expected to launch very soon.

And because of dual SIM technology, many customers will have both a primary and one or more secondary subscriptions, all from a variety of operators to fulfil the use cases above.

It is these additional secondary subscriptions that represent the new revenue opportunities for operators – and business risk for those operators that choose not to engage.

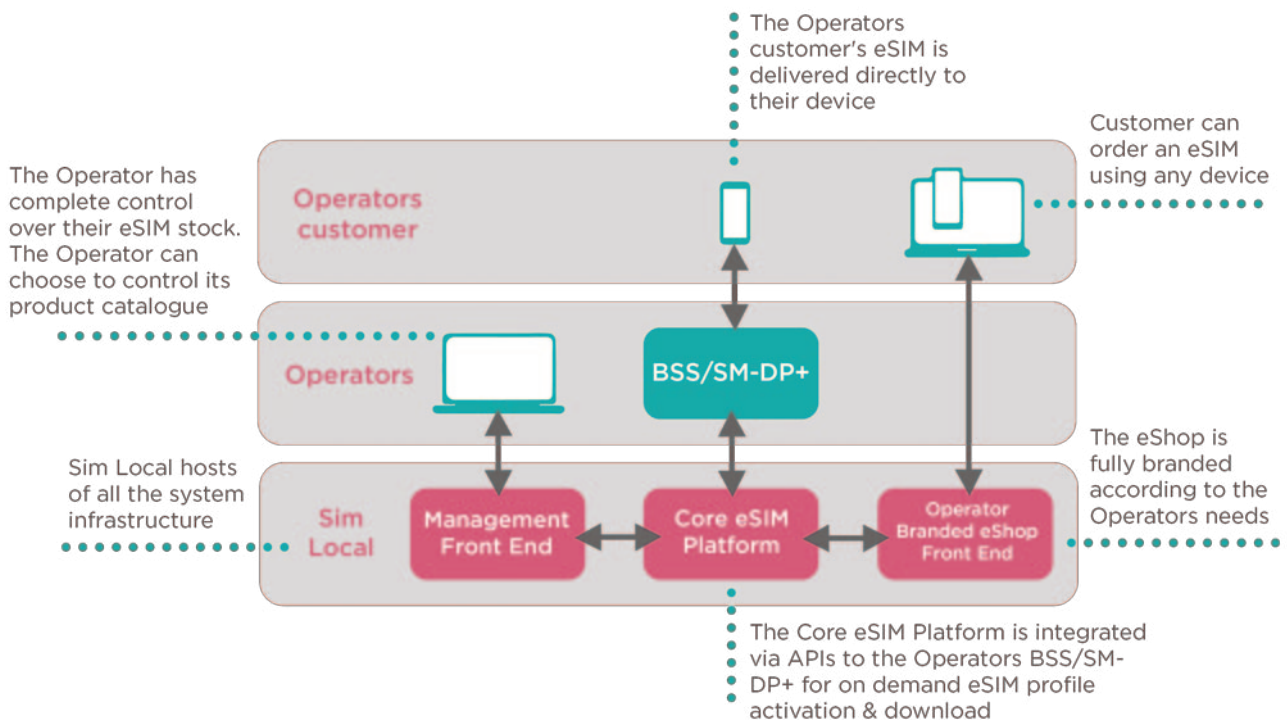Simply put, operators will need to get used to the fact that their subscription will be running alongside other subscriptions on customer devices.

How can operators capitalise on dual SIM?

This can be achieved in many ways, including selling additional services to existing customers, and selling new services to customers who are already on competitor networks:

1. Operators could look to sell additional subscriptions to their existing customers in order to be the active secondary subscription on the device in addition to being the primary subscription. For example:

a. Operator customers with dual SIM phones who frequently travel to countries not covered by any international data plans, which would result in expensive roaming charges, are offered the opportunity to purchase secondary subscriptions from one of the operator's partners in various countries.

b. Operator customers with dual SIM phones, who wish to maintain two separate identities, which could be two business numbers, or one business and one personal, or even two personal identities, are offered the opportunity to purchase secondary subscriptions from one of the operator's partners in the home country.

2. Operators could challenge their competitors, by targeting customers who are already on other networks, by selling them new subscriptions in order to be the active secondary subscription on the device. For example:

a. Customers with dual SIM phones on other networks, but who need to be connected all the time, no matter where they are, even where their existing operator has black-spots or system outages, are offered the opportunity to purchase secondary subscriptions from this operator.

Capitalising on eSIM quickly and easily

The Operators customer's eSIM is delivered directly to their device

Customer can order an eSIM using any device

The Operator has complete control over their eSIM stock. The Operator can choose to control its product catalogue

Operators customer

Operators

BSS/SM-DP+

The eShop is fully branded according to the Operators needs

Sim Local hosts of all the system infrastructure

Sim Local

Management Front End

Core eSIM Platform

Operator Branded eShop Front End

The Core eSIM Platform is integrated via APIs to the Operators BSS/SM-DP+ for on demand eSIM profile activation & download

With dual SIM capability being a key driver for ever-growing customer demand for eSIM, how can an operator ready themselves to capitalise on the opportunities that are arising?

In addition to acquiring a system for delivering eSIM profiles (SM-DP+) they also need an eStore to sell and provision those eSIMs to their customers.

Sim Local is an example of a company that has such an eStore available today. The eStore can be quickly and easily integrated into any operator network around the world, then serve hundreds of thousands if not millions of eSIMs to customers at any time, no matter where they are.

There are many benefits to operators in taking such a route:

- Operators have a capex challenge and a fully managed service from Sim Local can mitigate this

- Sim Local can provide an immediate solution without operators having to incur long timelines for delivery

- The Sim Local offering can provide an interim solution while operators prepare their own bespoke solution

Looking to the future

In order for the device manufacturers to enjoy the real benefits of eSIM, the physical SIM card slot must disappear, and this can only happen when most countries are ready for eSIM, and the GSMA eSIM specification is changed to allow multiple active subscriptions – this is being worked on right now.

One other innovation in eSIM is that rather than having a separate eSIM chip in the mobile device, it will soon be integrated into an already-existing larger chip in the device (e.g. the baseband processor). This will drive down costs allowing almost any electronic device to be connected. All these new connected devices mean more eSIM opportunities for operators.

Operator 1

Operator 2

Operator 3

Operator 4
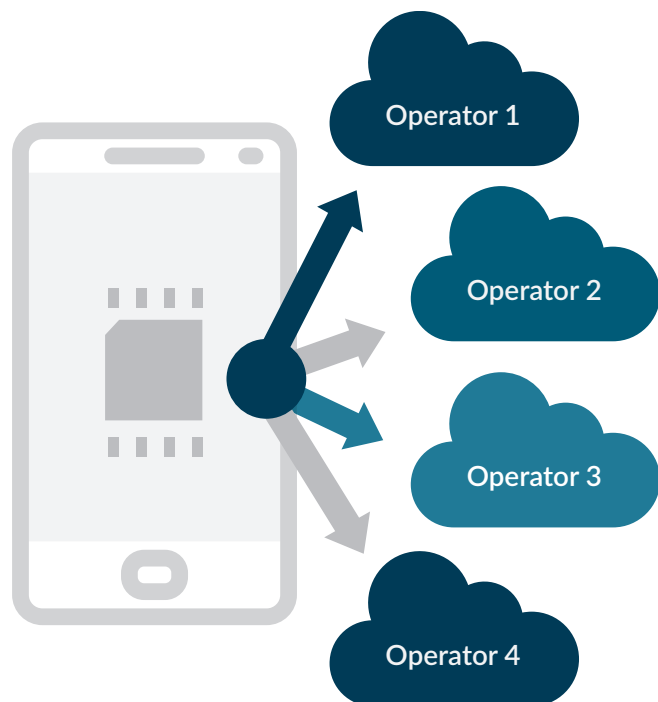
Conclusion

In terms of the future prospects for eSIM, a recent forecast paper from Counterpoint Research predicted that shipments of eSIM-based devices will reach almost two billion units by 2025. That's growth at a CAGR of 27%. This will be driven by the availability of dual SIM devices which are being embraced by the world's leading device makers. Put simply we are at a tipping point where the benefits of having multiple SIMs are relevant to a far larger proportion of the population.

This is no longer a market confined to developing markets where patchy coverage and fiercely competitive deals for different types of services have historically driven multiple SIM usage. Instead, the new market focuses on users' needs to have multiple profiles at work and play. Travel remains a core and significant driver as users look for the most efficient ways to roam at high quality.

The technology is maturing rapidly and many current devices are ready for eSIM. A significant part of the delay to wider adoption has been the challenges faced by operators in getting ready for this new technology. This has impacts in terms of transforming business models in relation to device subsidy, preparing back office systems, such as charging and provisioning, to manage eSIM and forming strategies to successfully market eSIM.

It is vital that operators stop looking at how to protect their old business and look to maximise their new business with eSIM. This paper has set out how eSIM presents an opportunity to make additional sales to existing customers, win part of new customers' business and, in fact, also protect their traditional business by offering their customers greater choice and flexibility. Don't forget customers will walk if they don't receive what they want from their primary operator and that is both a threat and an opportunity for eSIM enabling operators.

2020 is the year in which the pendulum swings and instead of asking if they can afford to make eSIM available, operators will understand that they can't afford not to. Sim Local, with its fully functioning eStore, has everything an operator needs to remove the barriers to entry, radically accelerate time to market and ensure it has a comprehensive eSIM offering in the countries its customers visit and for the use cases they prioritise. Waiting years to build your own capability isn't an option in this competitive market in which offering something early is a true differentiator and delivers real new revenues.

Learn how Sim Local can integrate its eStore with your business by visiting the Enterprise Ireland Stand Hall 7 - Stand No.7D71 at MWC2020 or contact Sim Local's Chief Commercial Officer at hakeel.zaman@simlocal.com or call +44(0)7748073527.

Sim Local was established in 2010 to help intercontinental travellers eliminate expensive roaming charges, by providing a choice of local mobile network bundles from a selection of trusted networks. It currently operates in over 50 locations with over 150 sales sites.

Sim Local has invested significantly to solve the problem of getting eSIM profiles the last mile to the customer in a seamless, fully digitalised manner.

The eSIM platform is built for scale, capable of multiplexing many remote SIM provisioning platforms to provide a single entry eSIM purchasing point for the Consumer. The platform provides integration to cloud infrastructure and a centralised API and can offer scalability on demand, whilst ensuring the highest level of network support.

Learn more at simlocal.com or contact Sim Local's Chief Commercial Officer at hakeel.zaman@simlocal.com or call +44(0)7748073527

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