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Communications, Media & Technology

eSIM: HARBINGER OF DOOM OR BRINGER OF HOPE?

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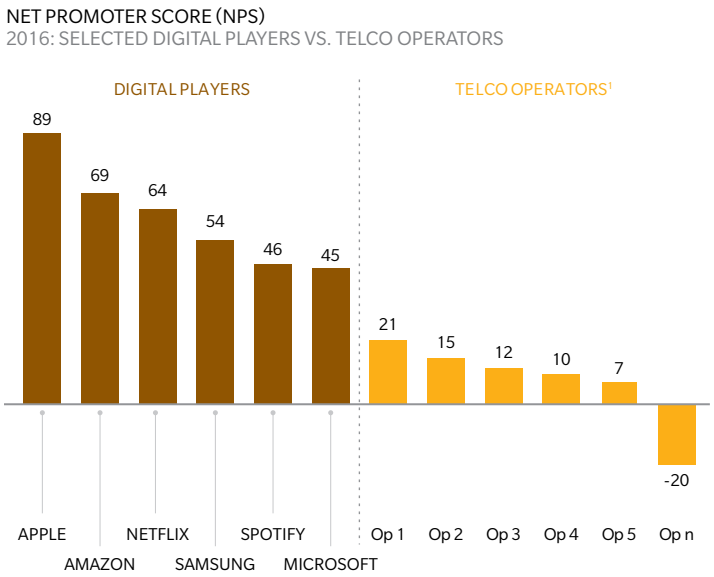
AN EVOLVING ECOSYSTEM

Mobile Network Operators (MNOs) have traditionally been the logical entities to sell telecommunications services to the consumer. After all they build and maintain the networks, and operate extensive retail and service operations under widely known and respected brands.

This logic is under threat by handset and device OS makers (e.g. Apple, Samsung, Google, etc.) as well as digitally native companies that can lay claim to precious phone screen real estate. For now these players still depend on telecom operators as distribution channels for their devices; however, with a general trend towards buying SIM only tariffs with devices sourced through alternative channels, this impediment is increasingly diminishing. The question then becomes when device manufactures will be ready to take the risk and disintermediate telecom operators. There are already some examples that point into that direction (e.g. Apple with their device subscription model).

As illustrated in Exhibit 1, handset and digital services players enjoy higher customer preference compared to telecoms operators. Moreover, in many cases connectivity services can be considered logical extensions of their businesses because mobile connectivity clearly qualifies as a digital good that is ideally suited to ecommerce and permits handset makers to complete an end-to-end mobile customer experience for their smartphones.

Exhibit 1: NPS score per digital player and telecom operator



Customer satisfaction surveys indicate that many telco operators suffer from low customer satisfaction.

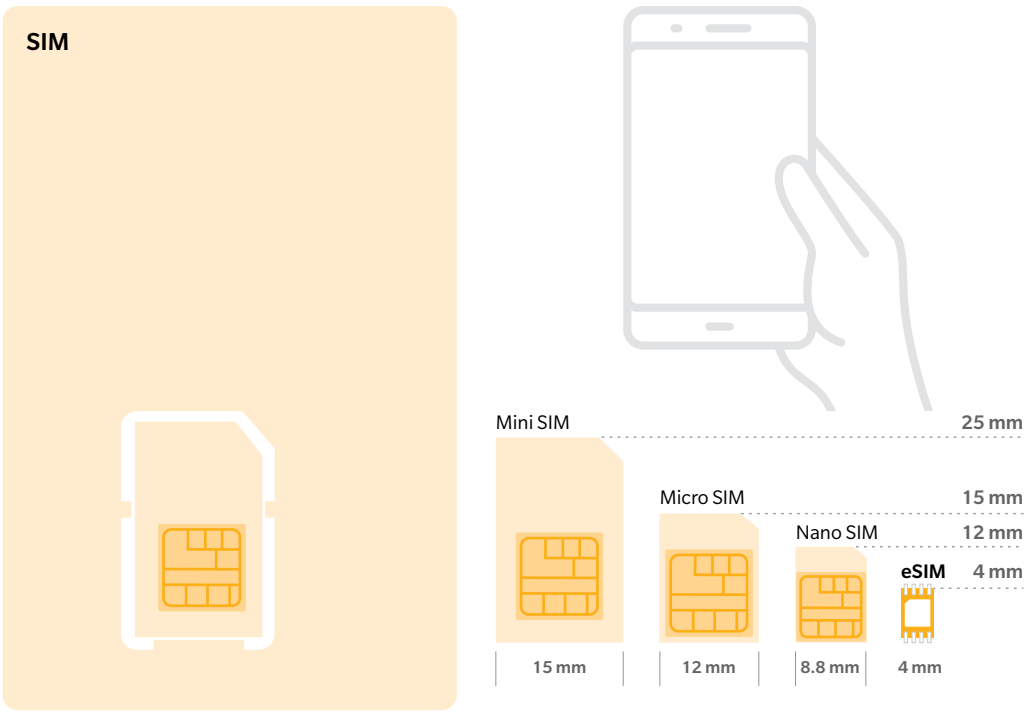
Source: NPS Benchmarks, Customer gauge, Oliver Wyman analysis

1. Telco operators include a subset of the most relevant operators globally

Fortunately for telco operators there are a number of barriers in place for digital players to enter into the telecommunications market. One of these barriers is the need for a physical SIM card. As without a SIM card, a GSM-based mobile phone doesn't work, the complex SIM card supply chain constitutes a barrier for any newcomer to the mobile connectivity market.

However this physical SIM ecosystem is evolving towards a virtual device-embedded SIM (called eSIM) that is reprogrammable and hence operator agnostic. There will be no longer a need to replace them when switching from one network to another. eSIMs are also significantly smaller and less energy hungry (one-seventh the power requirements of a nano-SIM). There are even smaller form factors available that further reduce the size of the eSIM.

Exhibit 2: eSIM form factor



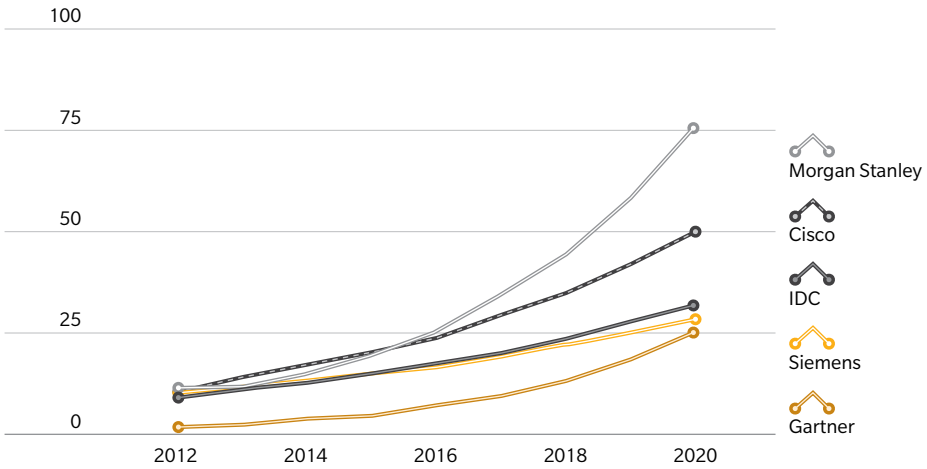
Not only do eSIMs permit more energy efficient and smaller mobile phones they also permit a whole range of different form factors for connected devices. This is a crucial component of the development of the Internet-of-Things (IoT). Without the smaller form factor and lower energy requirements of the eSIM it will be a challenge to design the variety of connected devices to make IoT a reality. In addition their over-the-air reprogrammable capability permits more flexible use cases. Clearly changing SIMs in an IoT module deployed in a 40-foot container in the middle of the ocean or in thousands of light poles is highly impractical. Hence the development of eSIM is a strategic enabler of IoT, and at the same time a significant threat to the status-quo of the mobile industry business model.

THE E-SIM ERA HAS ARRIVED TO STAY

eSIM is no longer a futuristic scenario. Operators and the GSMA are already working together with OS and device manufacturers in a coordinated manner to introduce eSIM. Dozens of operators and OEM's have already signed up.

The interest of the main industry stakeholders is supported by aggressive growth forecasts of the number of mobile devices. As illustrated in Exhibit 2 forecasts range anywhere from 25 billion to 75 billion connected devices by 2020. Our own estimates point to the lower end of this range but this still implies a high growth in the number of the devices and clearly implies a bewildering variety of form factors.

Exhibit 3: Forecasts of number of connected objects (BN)



Source: Cartner, Cisco, Morgan Stanley, IDC, Siemens, CrunchBase, techCrunch, 451 Research, Montague Institute

To support this growth, the GSMA has recently (Feb 2016) released eSIM specifications for M2M devices such as smart watches, fitness bands etc. and is in the process of finalizing specifications for the remote provisioning of any mobile device.

Traditional phone-SIMs are not expected to disappear, but to coexist with embedded SIMs in lower end or outdated mobile handset devices for some years. However in a few years we expect that eSIM will become the standard for all mobile devices.

EXPECTED DISRUPTION IN THE TRADITIONAL TELECOM BUSINESS

Of course the GSMA has recognized the potential for telecom business model disruption and has split up the introduction of eSIM into two phases: The first phase will focus on M2M devices such as smart watches, fitness bands etc., and the second phase will define the remote provisioning standards for any mobile device (not released to date).

In addition the GSMA has defined policies and safeguards to protect the operators in two ways:

- Obligation to inform current operator before switching to another operator to avoid the accumulation of bad debt amounts
- One eSIM operator profile can be active at one time

However it remains to be seen how much effective control the operators will have on the remote provisioning process. At least one major handset vendor in the past has already pressed ahead with eSIM specifications bypassing all standard setting bodies or operators. As device makers are currently producing multi-SIM mobile phones it doesn't take a major leap of faith to expect the same to happen for eSIM devices.

We expect that eSIM will change the competitive dynamics of the telco market. We see changes occur along the following three dimensions:

DISINTERMEDIATION OF TRADITIONAL RETAIL BUSINESS:

- Operator strategic control on the telco business model will be further weakened. This will lead to lower barriers to entry in the retail markets, potentially making way for 3rd parties (such as device makers or ecommerce players) to offer telecom services
- Significant simplification of supply chains and downsizing of operator retail presence

PRICING ARBITRATION:

- Customers are likely to be able to choose any local network without hassle, threatening revenues, especially when roaming. Potential for additional pricing pressure due to growth of "roam like at home" offers that can import lower prices from other markets
- New third party agents could emerge in the form of online resellers or spot-price platforms. These "multi-network MVNO's" could then dynamically auction off customers between different bidding operators

IOT / M2M:

- Significant stimulus of adoption and variety of IoT devices. Key enabler for the current growth forecasts to come true. A portion of these revenues can be captured by telecom operators through wholesale agreements

WHAT SHOULD OPERATORS DO?

eSIM lowers market entry barriers for new competitors and increases the fragility of the customer relationship. In light of the gradual disappearance of technical, contractual and procedural barriers to churn, the only way operators can retain their primacy in the connectivity market is to double down on the customer relationship. Hygiene factors such as service quality and consistency are table stakes. On-line and real-time service management capabilities will close the gap in customer satisfaction with digital players. At the same time operators need to position for the IoT opportunity and prepare their businesses for the resulting growth in number and variety of IoT devices and business models. They should do so by:

ADAPTING POSITIONING AND VALUE PROPOSITION:

- New breed "digital telecoms" strategies improve customer relationships by providing real time activation and disconnection of services, freedom of choice at any point in time and minimal or null need for agent support
- Smart service and content bundling to strengthen the customer relationship and reduce churn; especially when bundles are shared by multiple people
- Proactive churn prediction and next-best action strategies to actively and passively retain customers; machine learning has driven significant improvements in accuracy

TRANSITIONING TO A LEANER AND SIMPLER COMMERCIAL ENGINE:

- Remote provisioning reduces requirement for physical shops and accelerates own shops footprint reduction. Some operators have reduced their footprint by 50 percent over the past two years and will continue to do so in the near future
- Supply chain simplification due to reduction in SIM volumes

GRABBING THE IOT OPPORTUNITY:

- eSIM drives increasing variety of IoT form factors and constitutes a key driver of IoT adoption. Operators need to reach out and strike partnerships with IoT device manufacturers and other service providers to ensure participation in the IoT value chain beyond connectivity
- Close coordination between strategic partnerships and wholesale to ensure maximum value extraction from the IoT opportunity

PUSHING THE REGULATORY AGENDA:

- eSIM could open up the telecom market to new providers. Obligations around customer registration will be able to offset some of the effects of eSIM and still require physical presence of customers at the point of sale

CONCLUSION

The emergence of eSIM offers both opportunities and challenges to operators.

On the one hand, there is the upside of IoT and the requirement of servicing billions of devices provide a significant boost in the demand for connectivity services.

On the other hand, operators should adapt to the upcoming changes by simplifying their operating model, evolving the way they interact digitally with customers, developing a successful wholesale strategy that ensures value maximization, and engaging with regulatory authorities to offset the virtualization of the sales process.

ABOUT OLIVERWYMAN

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