



**The 5G
flexibility
and creativity
driving BSS
modernisation**

THE 5G FLEXIBILITY AND CREATIVITY DRIVING BSS MODERNISATION

Executive summary

The advent of 5G networks represents a significant catalyst for change in the telecoms market. What sets 5G apart from earlier generations of mobile technology is its capability to be different things to different people at the same time. A 5G network can offer different levels of experience (for example, speed, latency, privacy, priority etc.) simultaneously to different consumers and enterprises within the same location.

However, standalone 5G networks with network slicing capabilities will offer far more than just service variety. In the enterprise space in particular, 5G networks will allow customers to work effectively with the service provider to co-create and specify an exact guaranteed service level agreement to meet their business needs. This could potentially be a service using a dedicated network slice to distribute cloud computing capabilities and take advantage of network edge processing power. In this scenario, the enterprise is co-creating a service tailored to its exact business requirements.

That degree of process change not only revolutionises the nature of the services available to customers, it also impacts the way service providers manage their business operations. In particular, it places new demands on what they require from their business support systems and solutions.

In the consumer sector of the market, offering a guaranteed service level to support, as an example, low-latency mobile video gaming, can probably be packaged into a simple option in a range of consumer tariffs. However, in the enterprise market, given the different needs of companies across industries and market sectors - and the myriad of service possibilities that 5G will make available - a standardised or packaged approach to service charging is neither appropriate nor practical.

This means that many service providers, both virtual and traditional, are looking at their BSS stack and are wondering whether, and how, it can be updated to cope with the variety of enterprise service options that can be created. This work is becoming increasingly urgent as only 25 per cent of service providers see retail consumer services as being the biggest driver of revenue growth. Enterprise from B2B to B2B2X are seen as the markets with the most potential.

This whitepaper considers the opportunity for taking a new approach to BSS. It looks at the benefits to operators of introducing dynamic, cloud-based

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options to support enterprise-led service co-creation and personalisation without disrupting existing legacy business services at the outset.

The impact of changing market dynamics

The evolution of mobile network technology has been accompanied by constant evolution in the make-up and business model of the market. Today we have fixed service providers operating as Mobile Virtual Network Operators (MVNOs), and mobile operators buying last-mile capacity to compete in the fixed market. There are MVNO services offered by consumer brands, and even strategic sub-brands from existing operators looking to create separation across different types of service and increase their routes to market.

Over the years, existing BSS stacks have been patched, upgraded, and added to in order to cope with these changing dynamics – often resulting in multiple overlays that add complexity to the deployment and increase the operator's dependency on its existing vendor.

5G networks will add another layer of complexity and further challenge the capability of existing BSS stacks to cope with the change. Traditional and virtual MNOs now recognise the need to undergo a significant transformation and modernisation of their business support systems to cope with the potential of a virtualised 5G network slicing world and the potential for many private networks. The challenge is to manage that transformation efficiently, without disrupting existing services.

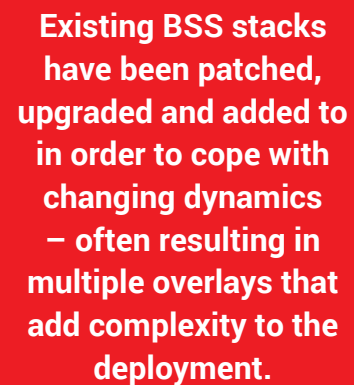
Some service providers today operate with multiple legacy BSS stacks; many of them have an ambition to consolidate these stacks as part of the business transformation process. In reality, the different needs of the various market sectors place a large question mark against both the practicality, and the wisdom, of undertaking such a change. Even a simple split between enterprise and consumer BSS stacks is unlikely to be sufficient in the 5G era.

The enterprise business market could itself be split into common services used across different market sectors - such as SMEs, MLEs, public sector and Industrial IoT, as well as a number of vertical market-aligned services for areas such as healthcare, logistics, smart cities and critical comms.

A standalone stack – fully integrated to the standalone network

You can't deliver this variety of 5G services economically using the same processes as current BSS stacks. There's a need to not only lower the costs of the operation itself, but also to lower the costs of all the associated processes in the customer engagement mechanisms. This often means cultural as well as technical change as it requires a great deal of automation to reduce the overall cost of sale.

A vital part of lowering the cost of customer engagement mechanisms is the ability to offer self-serve capabilities so that enterprise customers can manage their own accounts, for example, re-distributing allowances between end-users or purchasing additional allowances via an automated approval



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process. But these self-serve capabilities are not just about reduced costs; from the customers' perspective, the degree of self-service offered can make all the difference when selecting an operator.

This degree of automation for the enterprise market is further complicated by factors such as the co-creation and personalisation of services, by the need to guarantee service assurance levels, and by the multiple stakeholders involved in a B2B2X environment. It demands a whole new breed of BSS stack capable of allowing dynamic, self-service, customer configurations complete with matching, measurable SLAs.

Following the launch of standalone 5G networks, the service provider's BSS stack will therefore need to be just as capable, just as flexible, and just as dynamic as the network itself.

In order to maximise the potential of services for enterprise customers, these new stacks require more in-built, on-tap, capability than any other previous generation of BSS. As part of the fulfilment, assurance and charging process, BSS solutions will need to translate services, co-created with enterprise customers, into instructions that can be understood by an intelligent network operating system - and its associated components - that is designed to orchestrate virtualised 5G infrastructure and cloud-related services. To deliver, on demand, this level of market-led, customer-defined service will require the 5G enterprise BSS stack to have deeply embedded, real-time integration with the network in its entirety.

As 5G develops, traditional operators, MVNOs and emerging providers will also launch specialist services on dedicated or private 5G slices. These could include operator-branded healthcare services for the vulnerable, automated vehicle logging or guidance systems, or cloud-based mobile gaming networks. Services such as these now become part of the private network (not just over the top) and need to be reliably configured and accurately costed.

Making the transition

This level of service flexibility and dynamism calls for new, standalone, BSS stacks to provision specific enterprise solutions over isolated 5G network slices with SLAs that guarantee the speed, availability and latency of the service. Managing this transition involves an often complex purchasing process with numerous internal and external stakeholders, who might all have different priorities, requirements and timelines.

There are two main routes open to service providers. The first is to embark on an evolution of their current system – a project which can seem never-ending, certainly taking several years to complete, and is loaded with complexity and departmental conflict from day one. The better alternative is to run a new cloud-based BSS-as-a-Service operation, in parallel to the existing system, and reserved exclusively to support new 5G services.

In a recent whitepaper, analysts at Omdia¹ said that service providers should focus on enabling the capability of 5G with an emphasis on the B2B and B2B2X markets, and that enhanced enterprise services and dynamic partner ecosystems would present service providers with more lucrative opportunities to monetise 5G network capabilities.

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¹ 'Monetization in the Era of 5G', Omdia

With a separate cloud-based BSS, service providers would be able to immediately test their new market environment and quickly introduce new services without impacting existing customers. It also immediately speeds the transition to a digital operating model and makes it easier to launch sub-brand initiatives or expand into new or adjacent markets, such as those offered by IoT.

What's more, over time, those existing customers can be moved to the new system as it expands. This manages the transition at a pace that suits the requirements of both the service provider and its customer base. Importantly, current revenues can be protected, even as new revenues are introduced – which makes it a transition route that can win support from across the different stakeholder groups.

Targeting the B2B2X opportunity

The transition also benefits service providers by enabling their BSS stack to effectively become a marketing proposition for their business. The rise of 5G networks, network slices, and dedicated private services with guaranteed levels of service enables, indeed encourages, service discrimination. In many ways it marks the end of the concept of net neutrality and equality of service. With 5G, minimum standards of service are improved for everyone, but customers can also choose to pay for different standards of service.

Service providers able to quickly configure, price and fulfil these services economically put themselves in a prime position not just to supply them directly, but also to act as the network of choice as a B2B2X provider for companies looking to reach a targeted market.

In this way, a highly capable and dynamic B2B BSS stack becomes a revenue source for traditional operators and MVNOs. It monetises the provider's ability to deliver a dynamic range of services economically and targets that ability at a community of business curators innovating with new connected applications. Creating a BSS stack to service the co-creation and personalisation opportunity of the 5G B2B market provides a route to become the preferred network partner in a B2B2X market.

Summary

Full flavour 5G networks represent a genuine evolutionary change for the mobile industry and for all its existing and potential service providers. That change has far-reaching consequences across all aspects of the mobile business – key among them being the degree of service privatisation and the varying performance parameters demanded by services, industries, markets and customers.

That evolutionary change in the service provider's core network technology and its capability has to be matched by an evolutionary change in the supporting business systems technology and its capability. Without that matching change, the potential to create new services, new business models and new revenues is diminished.

A separate, cloud-based, BSS solution - designed specifically to serve the

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co-creation enterprise customer and the opportunities created by 5G technology - represents the quickest, most economic, and most profitable route to monetising 5G and recouping the network investment.

About MDS Global

MDS Global is a leading provider of cloud-based business support systems to a wide range of traditional and virtual service providers for enterprise, MVNO and IoT services. MDS Global supplies its cloud BSS 'as-a-Service' to meet all aspects of monetisation, assurance and customer steering for complex products and services.

Our cloud solution can replace existing BSS services as part of a digital transformation, or it can be introduced alongside current systems to support a particular service model or target customer base – such as IoT application enablement or new targeted enterprise solutions. MDS Global offers a digital operating model in a DevOps context, which enhances stakeholder experiences and provides unprecedented business agility.

Headquartered in the UK, MDS Global's customers include BT Enterprise (UK), eir (Ireland), iD Mobile from Dixons Carphone (UK), TalkTalk (UK), Telefónica (UK), VADSA (Mexico), Parlem (Catalonia), redONE (Malaysia), Vodafone (Germany, Greece and NL), Orange (Belgium), KPN (Netherlands) and Telia (Denmark).

MDS Global is part of the Volaris Group.

MDS Global
The Point
410 Birchwood Boulevard
Warrington WA3 7WD
United Kingdom

+44 (0) 1925 462 300
www.mdsglobal.com
Email: marketing@mdsglobal.com

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