

MVNO Business Fundamentals

MVNO BUSINESS FUNDAMENTALS

MVNO OPERATIONAL MODELS

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Market environment for MVNOs

A market that is approaching maturity and a favorable regulatory framework constitute the keys to the entry of Mobile Virtual Network Operators (**MVNOs**)...

Threats due to market maturity

- In markets that reach maturity, differentiating from competitors is an increasingly difficult task because mobile services are becoming an undifferentiated service (commodity).
- The stagnation of market growth causes the competitive game to have as its primary objective increasing market share, but necessarily at the expense of competitors (“zero sum” game).

Strategies of the Mobile Network Operators (“MNOs”)

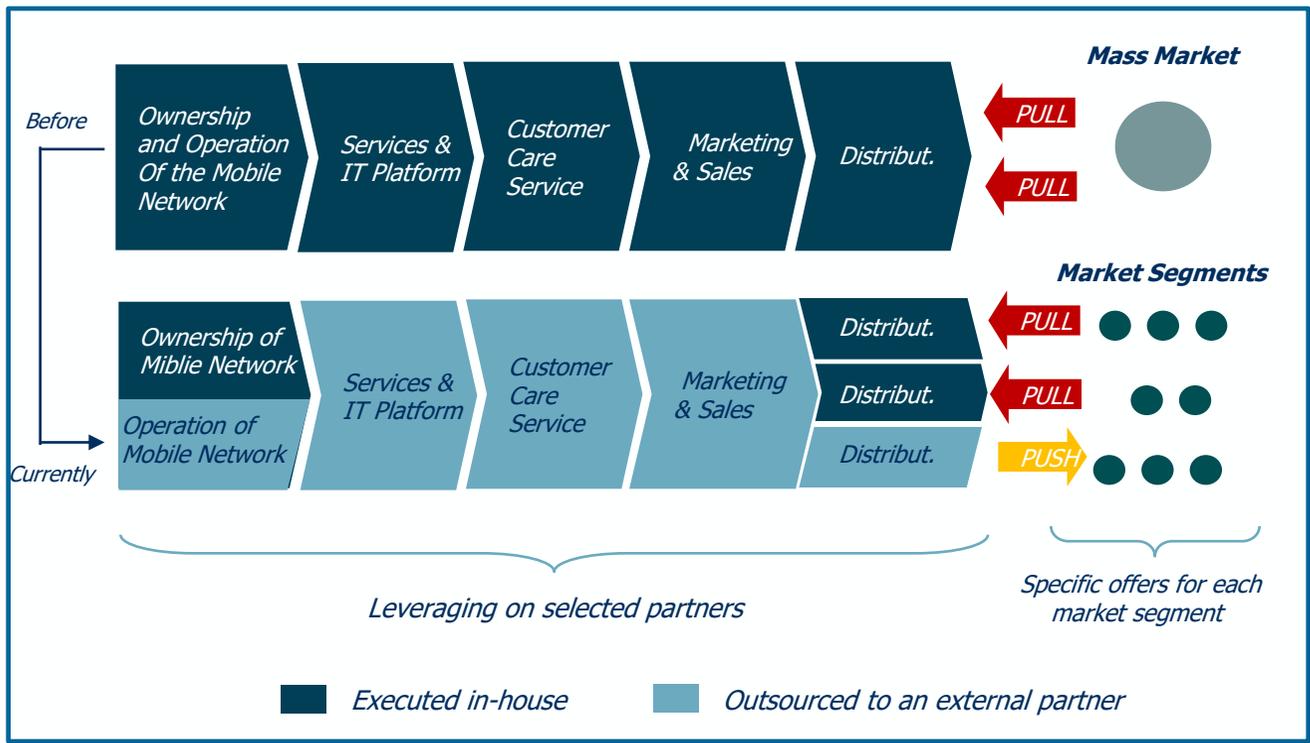
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- To face this threat derived from the saturation of the retail market, Mobile Network Operators (**MNOs**) have adopted the strategy of developing the WHOLESALE MARKET.
 - The development of the wholesale market has meant bringing in new agents, the MVNOs, under a specific regulatory framework that has enabled this figure, establishing the rights and obligations of the parties.

MNOs can address the risks of market maturation by establishing appropriate wholesale agreements with new partners.

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The Wholesale Business (I)

The new challenges associated with market saturation are the reason why MNOs have sought ways to address them, mainly by reaching MVNO agreements with qualified agents to target specific market segments...



... Creating offers tailored to the different existing segments

... Disaggregating the value chain and giving entry to new selected agents, to:

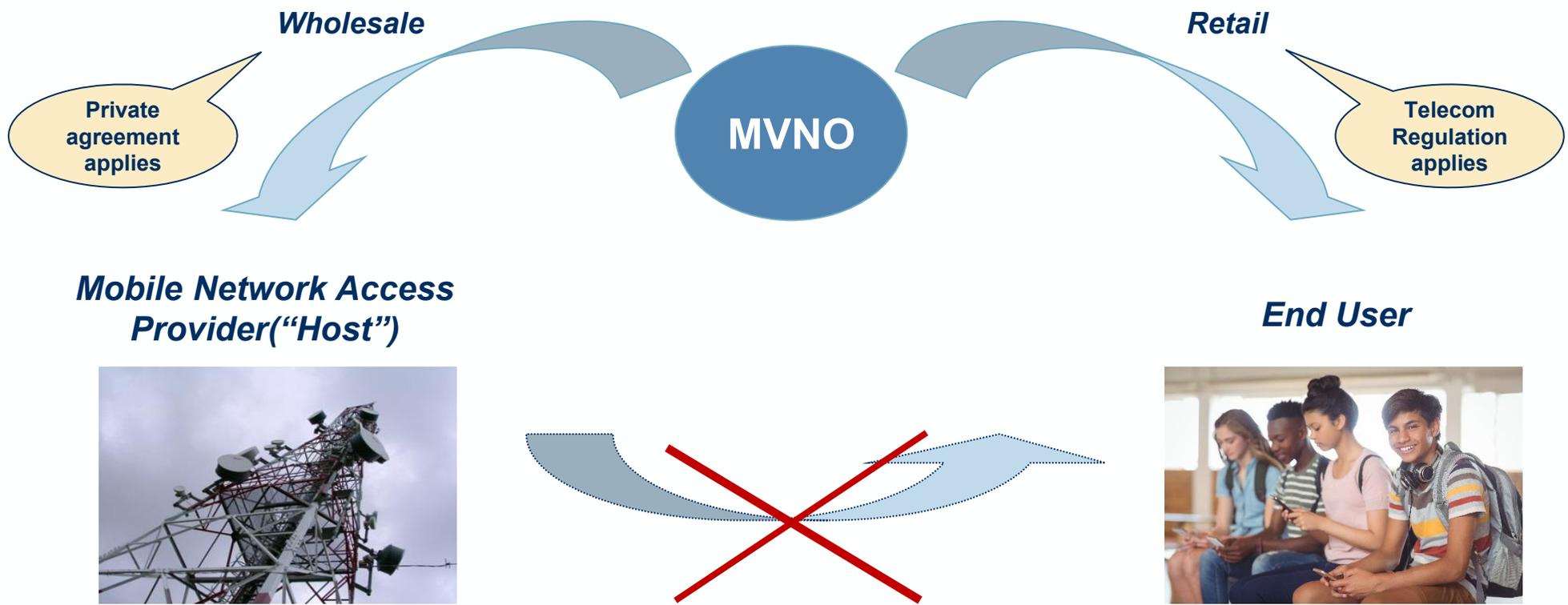
- Radically reduce operating costs (OPEX)
- Reach new segments of end customers

MVNOs must allow access to specific market segments while significantly reducing customer acquisition costs (Subscriber Acquisition Cost "SAC")

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The Wholesale Business (II)

Therefore, the MVNO business is based on two key relationships that must be established...

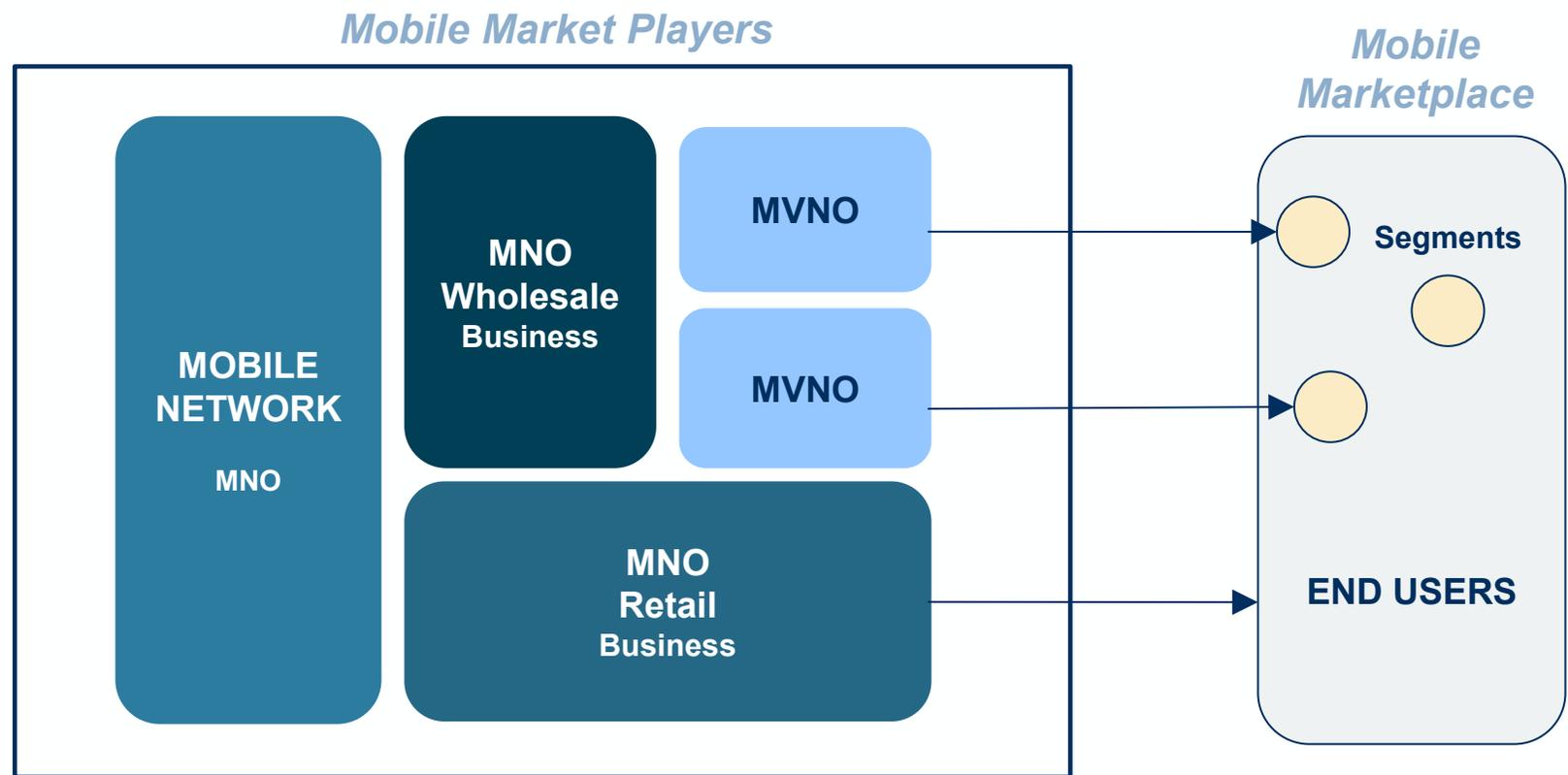


At its core, the MVNO business is about managing two key relationships:
With a Mobile Network Access Provider ("Host") and with the end user

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The Wholesale Business (III)

... the wholesale offer must be understood as a reinforcement of the retail offer that allows attacking market niches not yet developed by established MNOs.



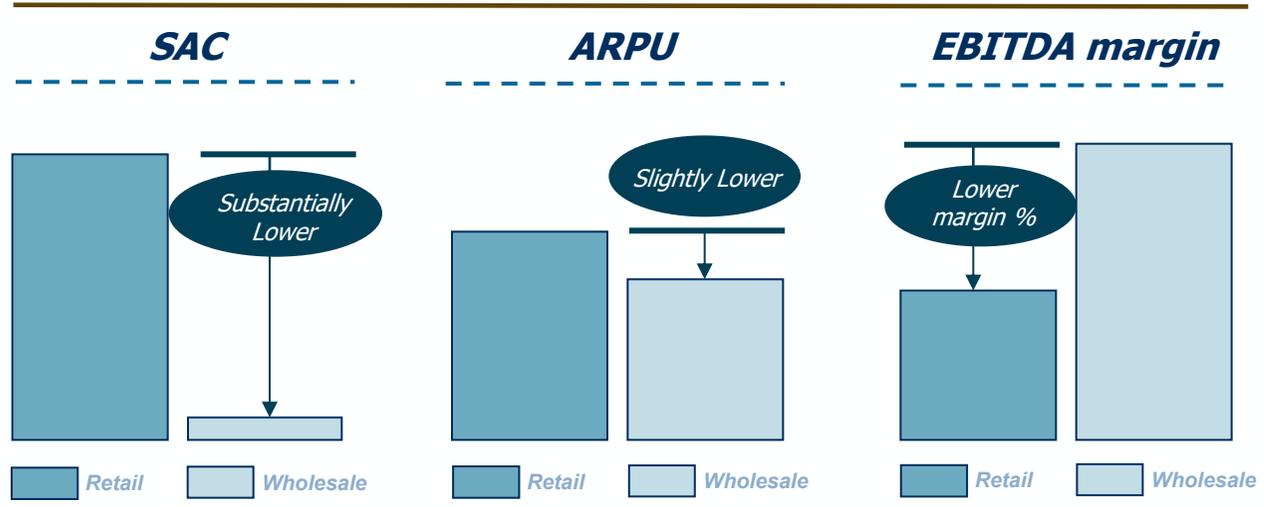
For MNOs, the strategy is combined, maintaining their current retail business while accessing specific market segments through MVNO partners.

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How MVNOs create value for MNOs

Thus, in addition to representing a source of growth for the customer base, MVNOs provide significant advantages to MNOs in terms of value creation. ...

IMPACT OF THE MVNOS BUSINESS ON MNO FINANCIALS



- The Subscriber Acquisition Cost (SAC) in the wholesale business for an MNO is zero, since it falls on the MVNO.

- The Average Revenue per User (ARPU) in the wholesale business is slightly lower than the ARPU of the MNOs' retail business.

- Thus, the EBITDA margin (%) of the wholesale business turns out to be significantly higher than that of the retail business for MNOs.

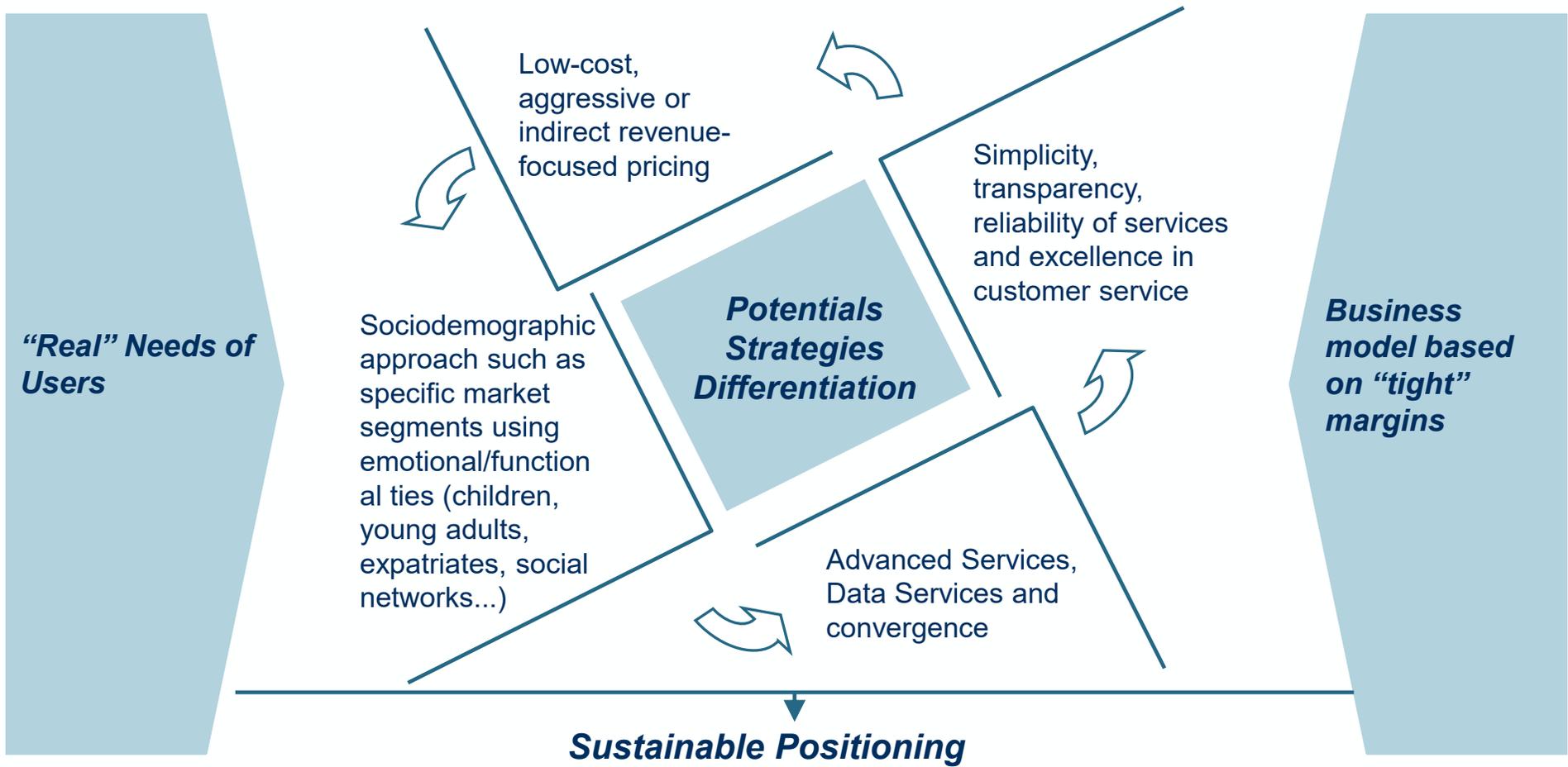
For the Host-MNOs, the EBITDA-margin coming from Wholesale customers is 3x greater than the one from retail clients

For MNOs, the strategy is combined, maintaining their current retail business while accessing specific market segments through MVNO partners.

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Alternative market entry strategies (I)

To be successful, MVNOs' strategies as newcomers must be based on differentiating attributes while achieving lower operating margins than MNOs....



MVNO BUSINESS FUNDAMENTALS

Alternative market entry strategies (II)

To be successful, MVNOs' strategies as newcomers must be based on differentiating attributes while achieving lower operating margins than MNOs...



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Elements for competitiveness

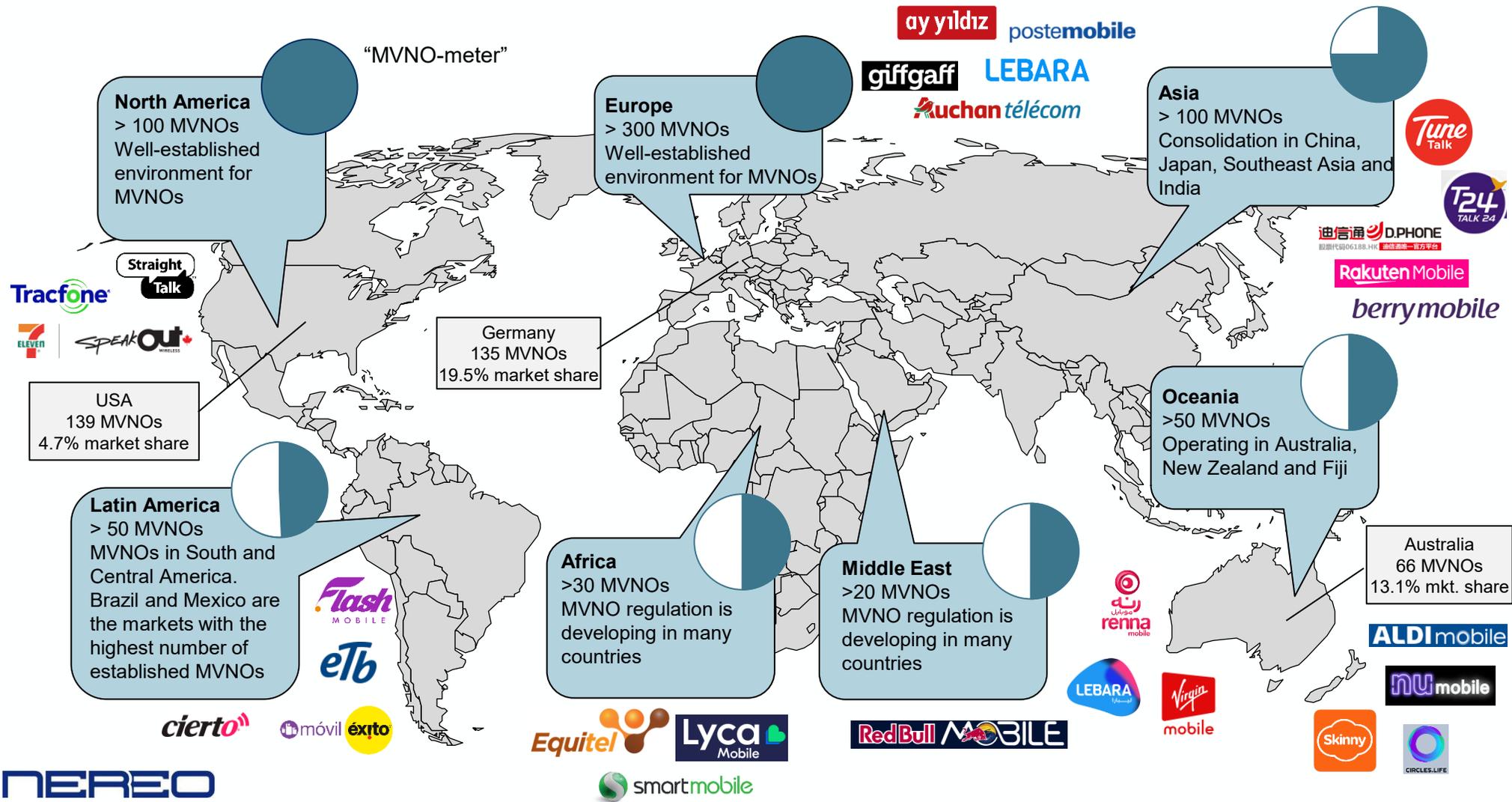
... which implies that MVNOs must have certain key assets on which to leverage and thus add efficiency to the value chain ...

Main asset	Description	Examples
Segmentation	<ul style="list-style-type: none"> Ability to serve specific market segments or within a specific region 	 
Distribution	<ul style="list-style-type: none"> Have a distribution network with capillarity and a large flow of customers 	 
Client Base	<ul style="list-style-type: none"> Have an existing customer base to which to offer services and loyalty programs 	 
Brand	<ul style="list-style-type: none"> Have a brand with recognized prestige or a high level of market recognition 	 
Operations efficiency	<ul style="list-style-type: none"> Be efficient and have an agile operational structure 	 
Applications / content	<ul style="list-style-type: none"> Have relevant audiovisual content or innovative mobile applications 	 
Customer service	<ul style="list-style-type: none"> Be able to offer excellence in customer service and management 	 

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Presence of MVNOs around the world

Currently, the development of MVNOs is consolidated in many parts of the world and is rapidly gaining ground in the Middle East, Latin America and Africa. ...



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Types of MVNOs

There are different Operating Models of MVNOs, which differ according to the functions that fall under their responsibility...

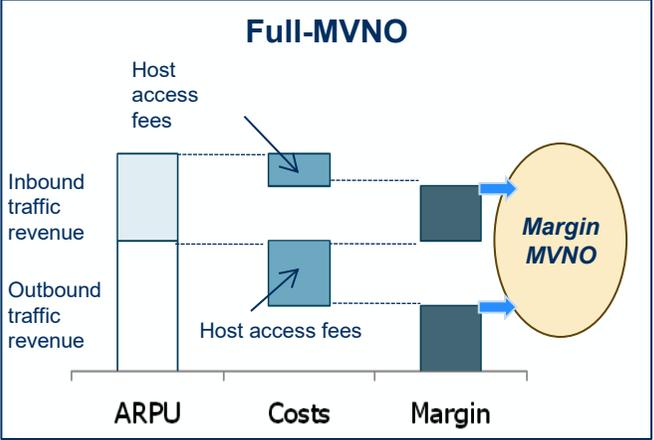
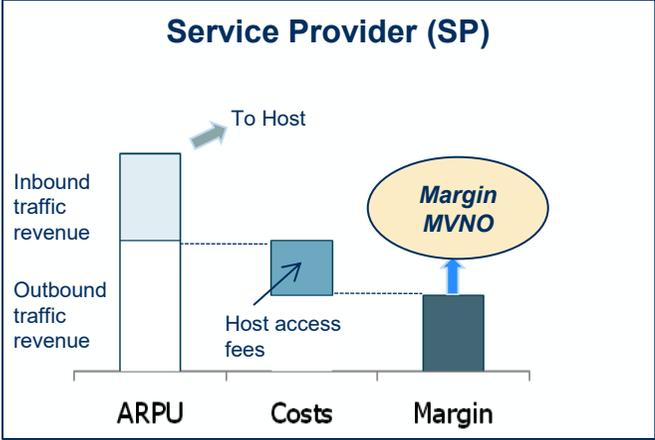
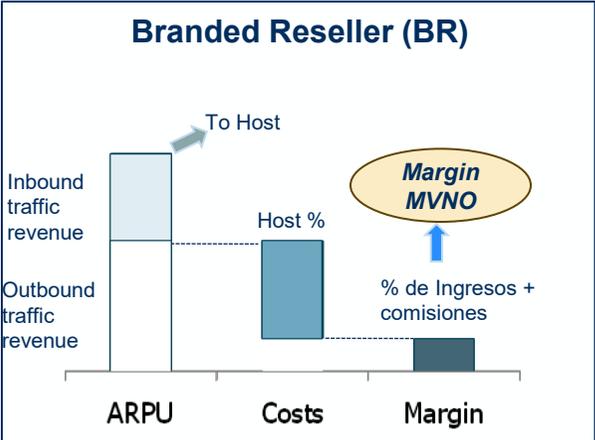
	Key Elements	Branded Reseller	Service Provider	Enhanced Service Provider	Full MVNO
<i>Network infrastructure</i>	Radio spectrum				
	Switching				
<i>Content and applications</i>	VAS				
	Service Platform				
<i>Operations</i>	SIM Card				
	Billing				
	Pricing				
	Provisioning				
	Customer service				
<i>Brand, sales and marketing</i>	Own brand				
	Distribution				

MVNO functionality
 Optional MVNO functionality
 Not a functionality of the MVNO

MVNO OPERATIONAL MODELS

Economic parameters

Each of the MVNO functional models has its specific economic implications.



- The agreement is signed with any Mobile Operator (Host-Operator).
- The SIM belongs to the Host-Operator.
- BR has NO control over retail prices and does not bill the subscriber directly for mobile services.
- BR DOES NOT bear regulatory obligations, since it is NOT the owner of the subscriber.
- BR negotiates a revenue share with the Host along with a commission per acquired customer (activation fee).
- Revenue from inbound/outbound traffic is collected by the Host-Operator at the retail/wholesale level, including International Roaming traffic.

- The agreement is signed with a Host-Operator (which must be an MNO or a Full-MVNO).
- The IMSI/MSISDN belongs to the Host-Operator. The SP obtains formally sub-assigned MSISDN ranges belonging to blocks owned by the Host.
- SP bears regulatory obligations, since it IS the owner of the subscriber.
- SP has partial control over production and full control over retail prices of mobile services (voice, sms, data, VAS) provided and bills directly to the subscriber.
- Revenue from outbound traffic is collected directly by the SP (retail traffic).
- Revenue from incoming traffic is collected by the Host at a wholesale level (interconnection traffic).
- The SP is obliged to carry International Roaming traffic through its Host-Operator.

- The agreement is necessarily signed with an MNO.
- Both the SIM and the IMSI/MSISDN belong to the MVNO. It has formally assigned blocks.
- MVNO bears regulatory obligations, since it IS the owner of the subscriber.
- MVNO has end-to-end control over the production of mobile services as it owns and operates the supporting technology platforms.
- MVNO has full control over the retail prices of the mobile services provided and bills the subscriber directly.
- Revenue from both incoming and outgoing traffic is collected by the MVNO (retail traffic & interconnection traffic).
- The MVNO is free to choose an International Roaming service provider independently of its Host-Operator.

MVNO OPERATIONAL MODELS

Implementation Considerations

MVNO MODELS

Implementation Considerations	Rationale	Full MVNO	Service Provider	Branded Reseller
Availability of own mobile numbering resources allocated	Specific numbering resources allocated in each country are needed to build the required IMSIs to be provided to subscribers.	✓	✗	✗
Right to sign its own International Roaming Agreements	Either negotiating directly or through intermediate providers. Necessary to prevent Hosts from becoming indispensable providers of international roaming agreements for the MVNO	✓	✗	✗
Full control over SIM card content – built-in intelligence	Allows the MVNO to create and provide new services to its subscribers	✓	✓	✗
Maintain ownership of the subscriber (SIM card)	Protect the investment made in attracting subscribers by the MVNO	✓	✓	✗
Maintain the freedom to change hosts with no impact on your running business	Increase the bargaining power of the MVNO with the Host	✓	✗	✗
Using multiple identity SIM cards (IMSI)	Valid local IMSIs required in each destination country to avoid international roaming charges at wholesale level	✓	✓	✗

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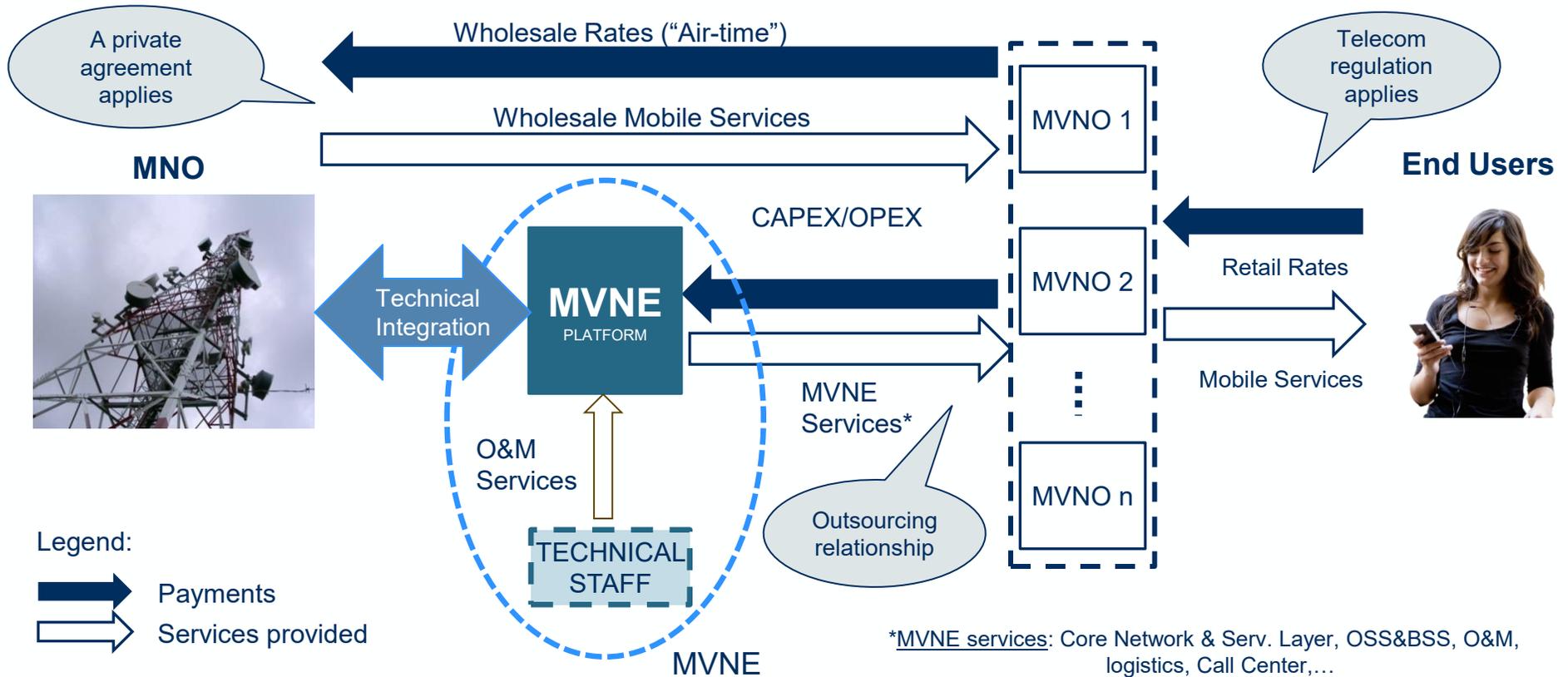
MVNO OPERATIONAL MODELS

THE ROLE OF THE MVNE / MVNA

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MVNEs in the Value Chain

MVNEs have emerged to act as an interface platform between a Full-MVNO and the MNO, bringing efficiency to the supply chain by optimizing MVNO launch (deployment costs and time to market) and subsequent operational processes.

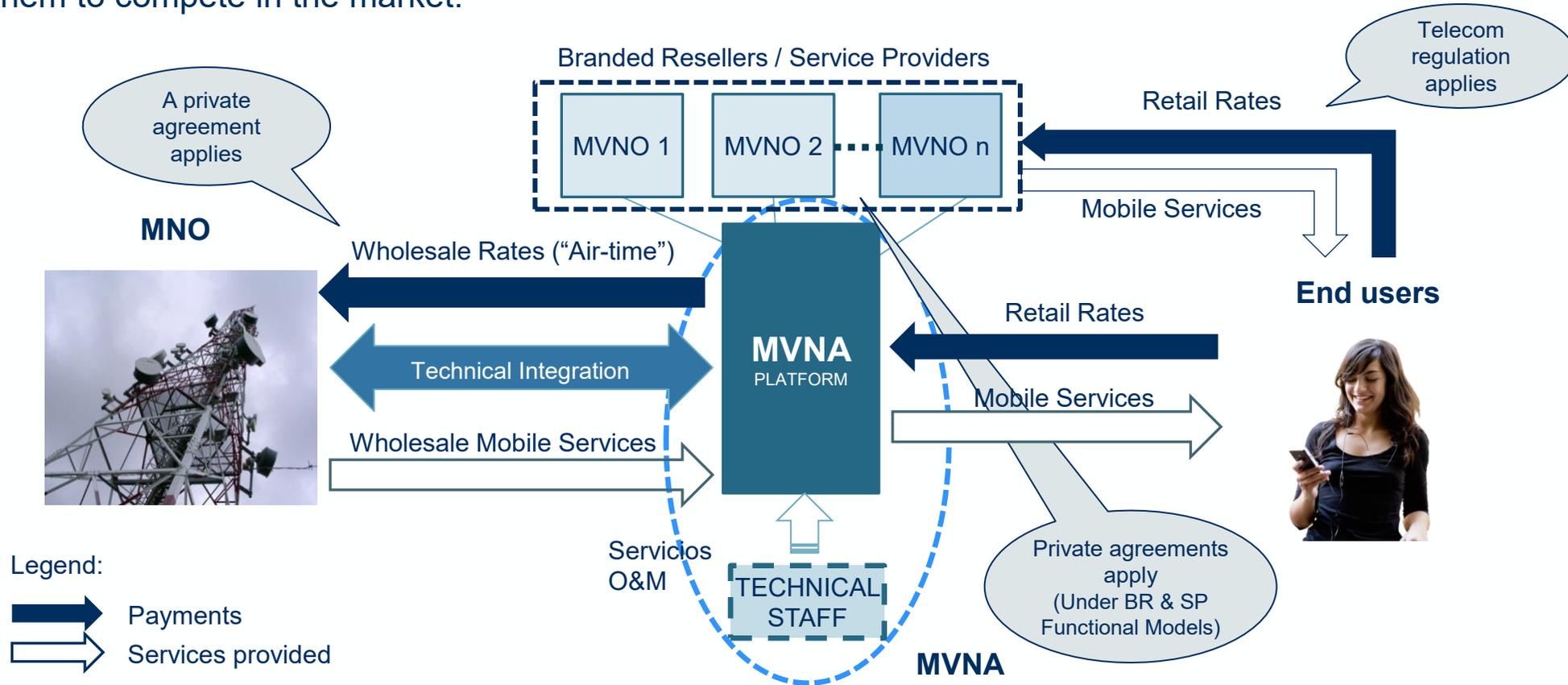


MVNE business depends on OPERATIONAL OUTSOURCING services, which is NOT subject to specific telecommunications regulation and does NOT require reaching an MVNO agreement with an MNO

THE ROLE OF THE MVNE / MVNA

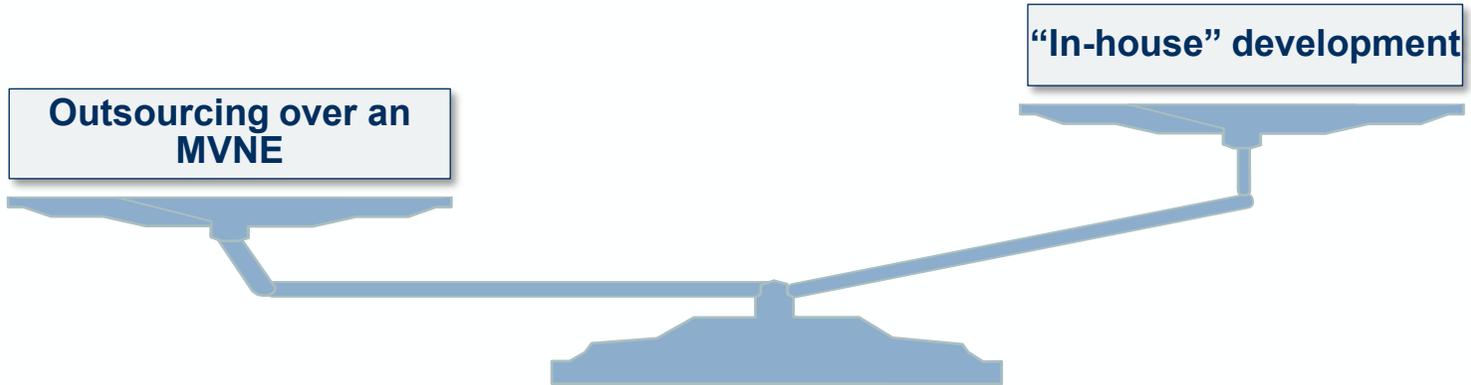
MVNAs in the Value Chain

MVNAs allow some market players to enter the mobile business without sufficient scale to become Full-MVNOs, providing them with the necessary operational support and economies of scale to allow them to compete in the market.



The MVNA business necessarily requires implementing a FULL-MVNO model, while retaining the right to resell its access agreement with the MNO to third parties.

IMPLEMENTATION ALTERNATIVES FOR THE Full-MVNO PLATFORM: “In-house” vs MVNE



✓ Advantages of the MVNE

1. Reduces “Time-to-market” for MVNO business
 - Builds on previous vendor's experience in integrating with a variety of Host-MNO networks
2. Reduces the Technological Risk of the Project
 - It is based on existing well-tested solutions: nothing that is developed ad-hoc for this business
3. Reduces Project Financial Risk
 - Avoid significant CAPEX for launch
 - Allows payment models based on scale (“Pay-as-you-grow”)

✗ Drawbacks of the MVNE



Using an MVNE involves outsourcing an essential element for the business: the MVNO platform

- ✓ It is possible to opt for a “Build-Operate-Transfer” agreement with an MVNE solutions provider in order to have a proprietary technological platform, without incurring a disbursement of the entire CAPEX associated from startup, reducing financial and operational risk

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