



Capacity
Building

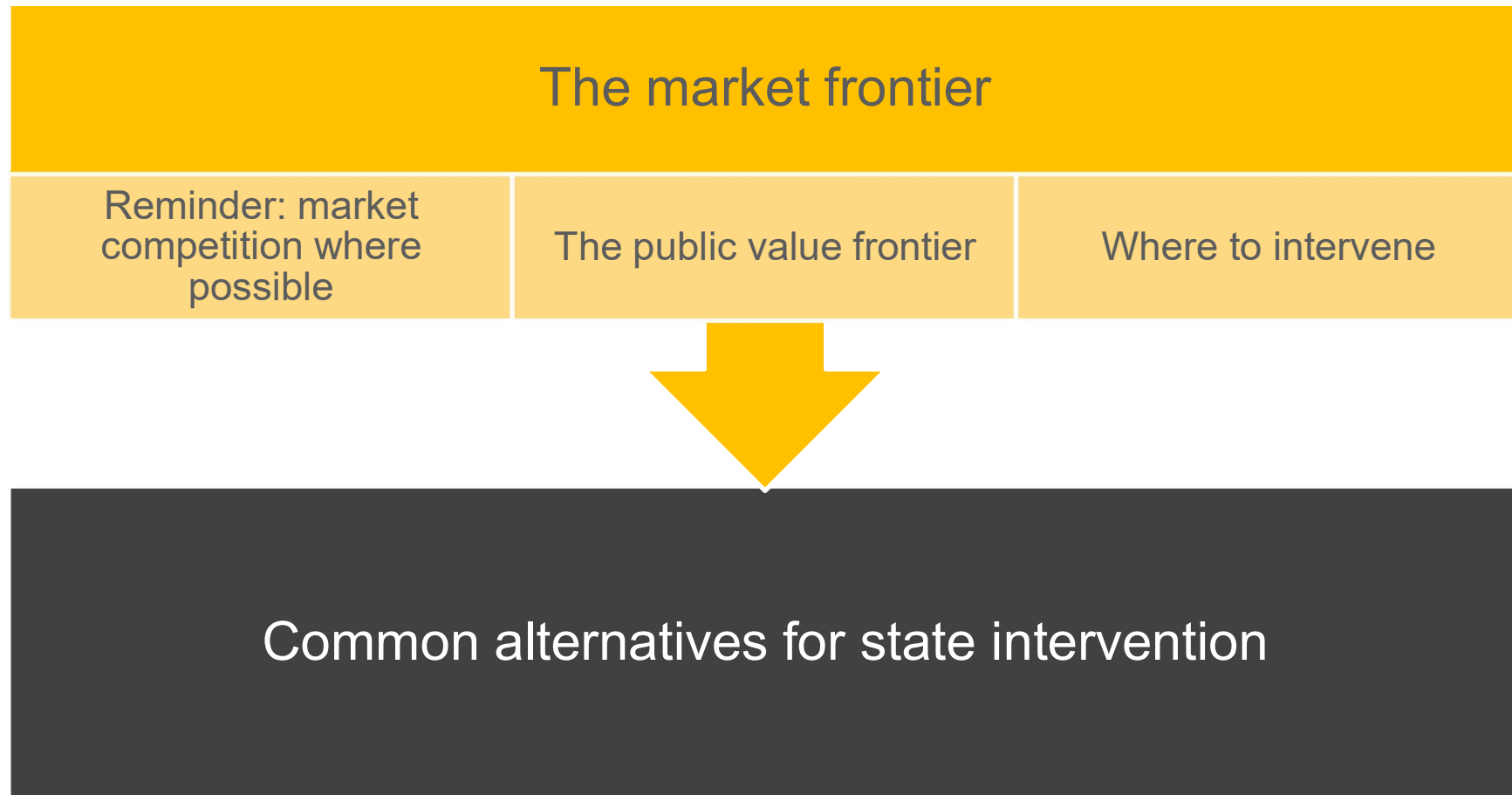


SESSION 5

Extending coverage beyond the market frontier



Role of the government



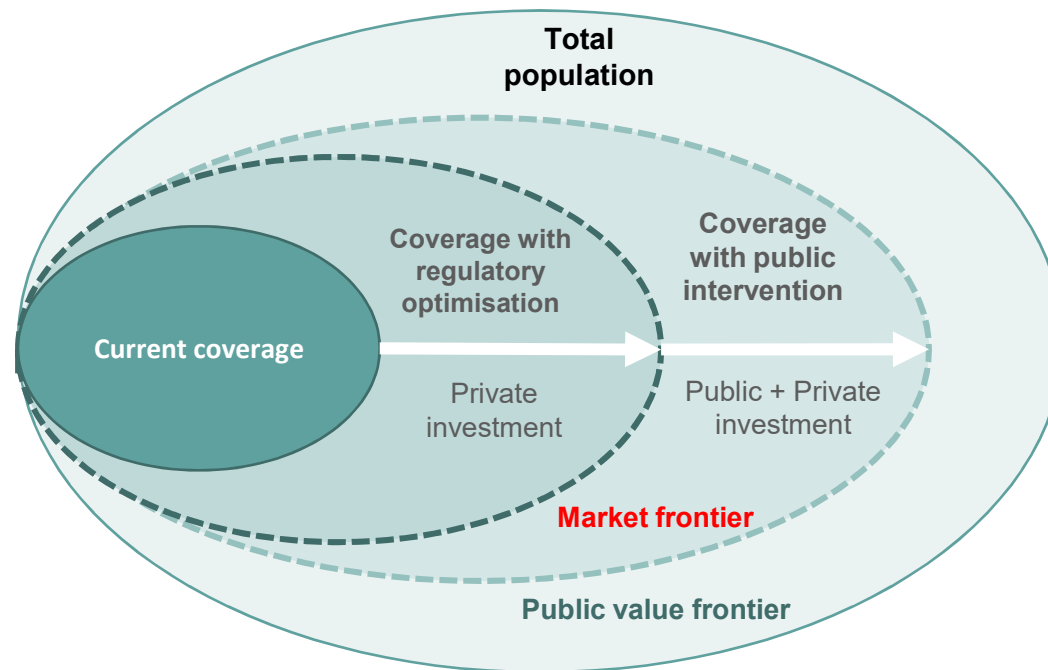
The positive externalities of mobile services justify public investment in mobile infrastructure



- Examples of positive externalities:
 - Increased productivity
 - Health services
 - Education services
- The public value of mobile services will always be higher than the commercial value, due to these positive externalities
- Externalities justify state intervention to increase coverage further than the market, but:
 - Every intervention has a cost, either direct or indirect
 - These costs should not exceed the public value

Markets where possible, intervention where necessary

- Limiting market intervention to areas that actually need it avoids unnecessary costs in public expenditure or market distortions
- Before intervening, let markets reach their maximum potential coverage

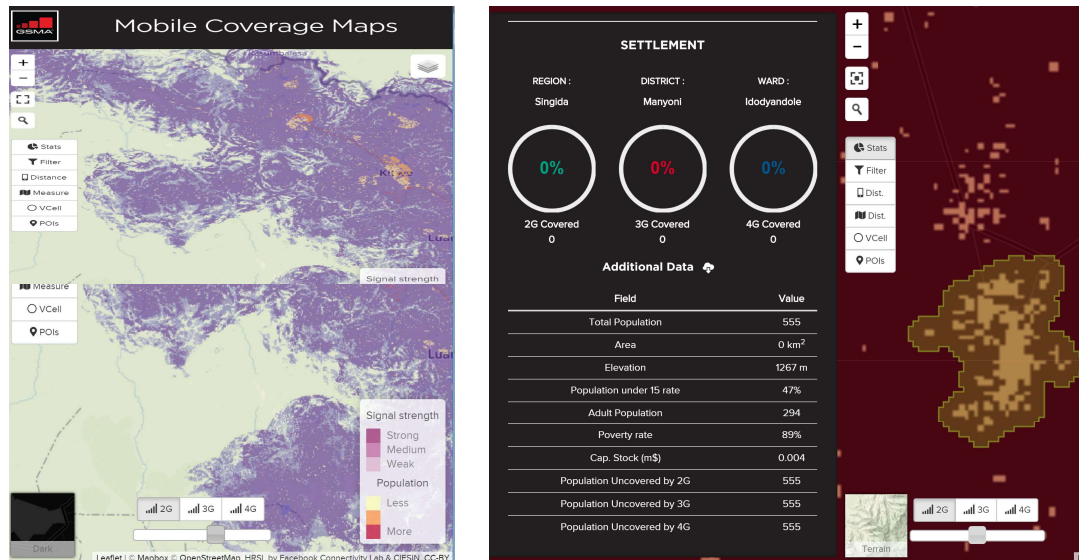


Two questions before deciding on any public intervention

Which areas are underserved by the market and require public intervention?

What type of intervention will yield the best results at the lowest cost?

Mobile Coverage Maps



www.MobileCoverageMaps.com

Principles

- MNOs business case depends on population geographical distribution.
- Underinvestment in rural areas due to lack of good data
- GSMA created an online mapping tool to address this issue
- The tool overlays population and merged coverage to identify uncovered settlements by network technology (2G, 3G, 4G)
- Expected decrease in duplication of investment and optimized placement of rural infrastructure
- Other than MNOs, the tools can be useful for digital companies, investors, NGOs and local governments.

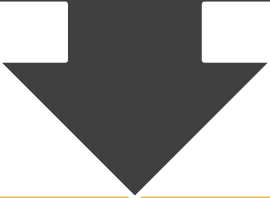
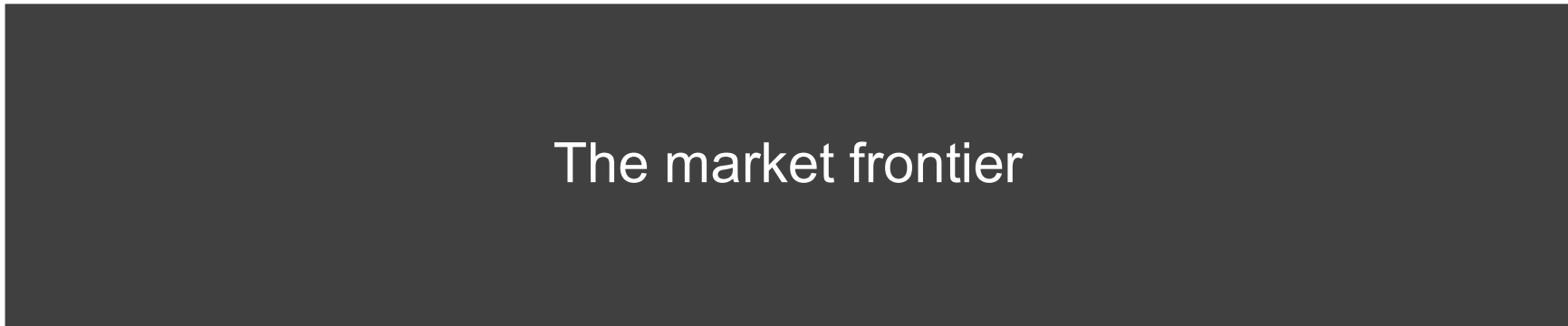


Discussion

- Which policies might governments consider to extend coverage beyond the market frontier?
- What experiences do you have in your own countries and what were the results?



Common alternatives for state intervention



Common state interventions for increasing coverage



Single Wholesale Networks (SWNs)



Universal Service Funds (USFs)



Coverage obligations

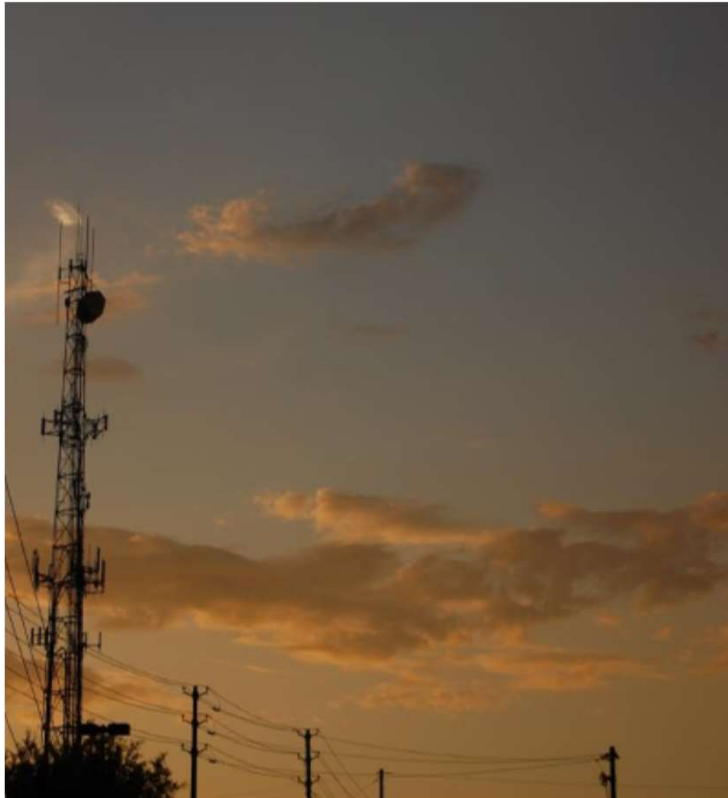


Subsidies

- Each of these alternatives has its advantages and disadvantages.
- Their chances of success depends greatly on the quality of implementation.



Single wholesale networks

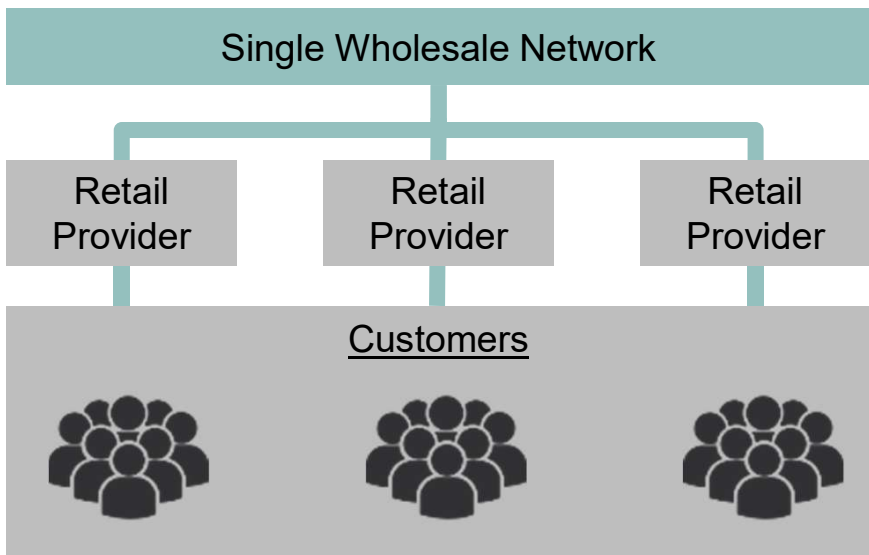


- Policymakers in a few countries are evaluating the creation of a single shared network, known as a Single Wholesale Network (SWN), to extend access to underserved areas.
- In this model, a single government-initiated network monopoly is created to deliver wholesale services to operators.
- The objective of the SWN is to deliver affordable, national mobile broadband coverage.

What is an SWN?

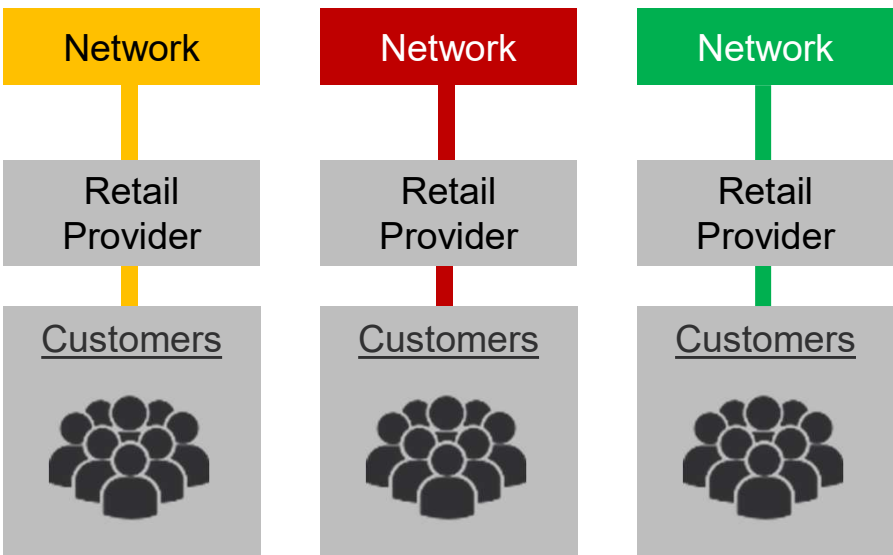
SWN

- One wholesale network is used to supply all retail providers
- The wholesale network is initiated by the government
- Normally accompanied by subsidies
- Requires regulation and targets



Network Competition

- Operators use their own networks to provide services to customers
- Operators compete on both network and services.
- Infrastructure is duplicated across networks



Arguments for and against SWNs

In favour of SWNs

- Lack of incentives among privately-owned operators to maximise coverage or investment
- More optimal use of radio spectrum in rural areas

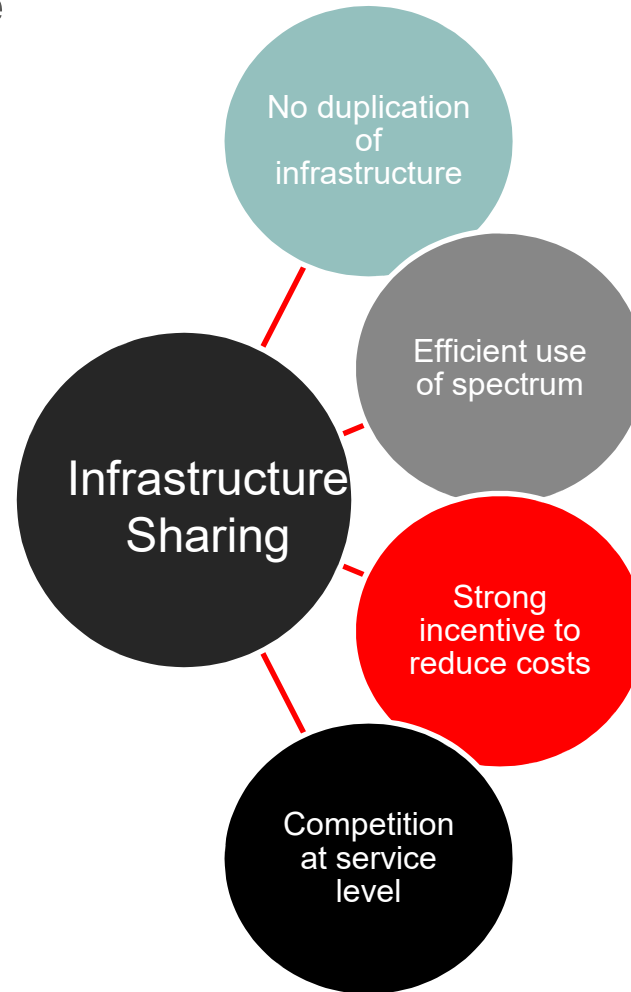
Against SWNs

- A SWN creates a monopoly:
 - Ⓜ Risk of abuse of monopolistic position
 - Ⓜ Lack of incentives to innovate
 - Ⓜ Inefficient use of resources
- SWNs can crowd out private investments in rural areas

Beyond theoretical considerations, SWNs are showing implementation challenges

	Russia	Rwanda	Mexico	South Africa
SWN Implemented	Quasi-SWN plan initiated and failed	Implemented in 2014	Delayed - in November 2016 it was announced that the Altan consortium will build the network	White paper proposing creation of WOAN – published Sept 2018; Bill withdrawn Feb 2019
Availability	Yota – the wholesale operator remained in urban areas only	4G coverage objectives not yet met, although progress has been made	Significant delays to roll out - should have begun in 2014	?
Affordability	No visibility on pricing	Low take up potentially due to high pricing - affordability objectives yet to be met	?	?
Retail competition	Retail competition never materialised as carriers were unable to reach agreement	No new MVNOs – competition in mobile remains unchanged at present	?	?
Efficiency	Failure of initiative meant operators rolled out their own overlapping 4G networks	There is little evidence to suggest that SWNs have had an impact on efficiency	?	?

Infrastructure sharing has the same advantages of a SWN but without the inconvenience





What is a Universal Service Fund?

Universal Service Funds (USF) have become an increasingly common strategy used by governments to try to extend coverage.

USFs are designed to offer financial incentives to operators to provide universal service

Typically they are financed by contributions from operators (e.g., fixed fee or percentage of gross revenues)

In some countries, the USF fee is a portion of overall regulatory or licensing fee

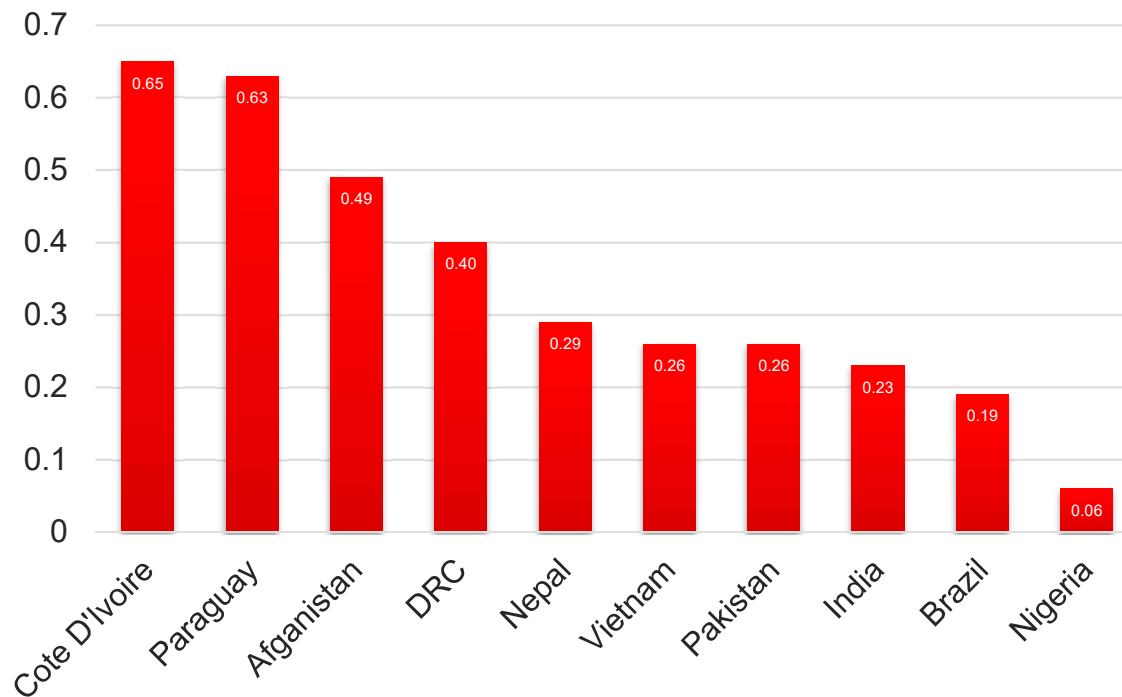
Fee may go directly to the USF or be collected by the regulatory authority and then transferred to fund manager or administrator

Extra financing possible from spectrum auctions, license fees, direct contribution from governments or private industry

USFs have limited impact

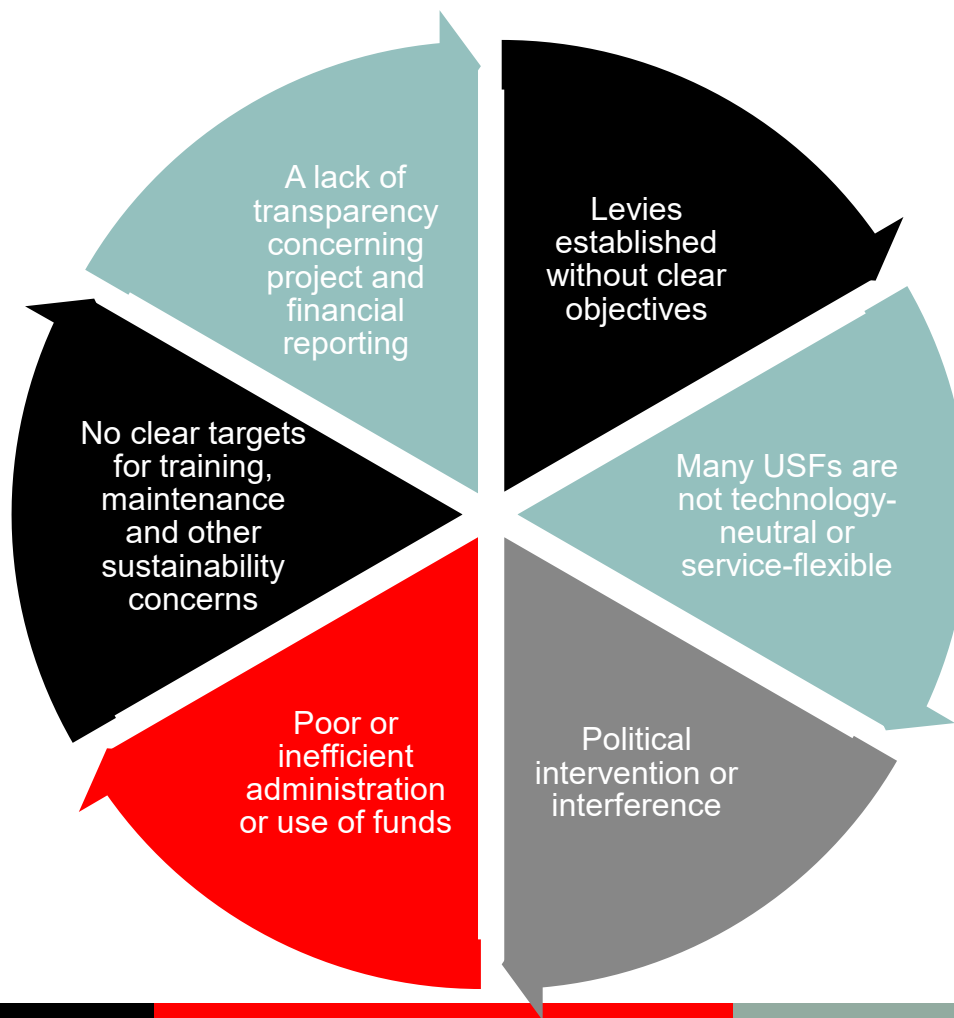
A 2013 report commissioned by the GSMA that surveyed 64 USFs found that most were inefficient and ineffective.

Money held by top 10 USFs as a percentage of GDP

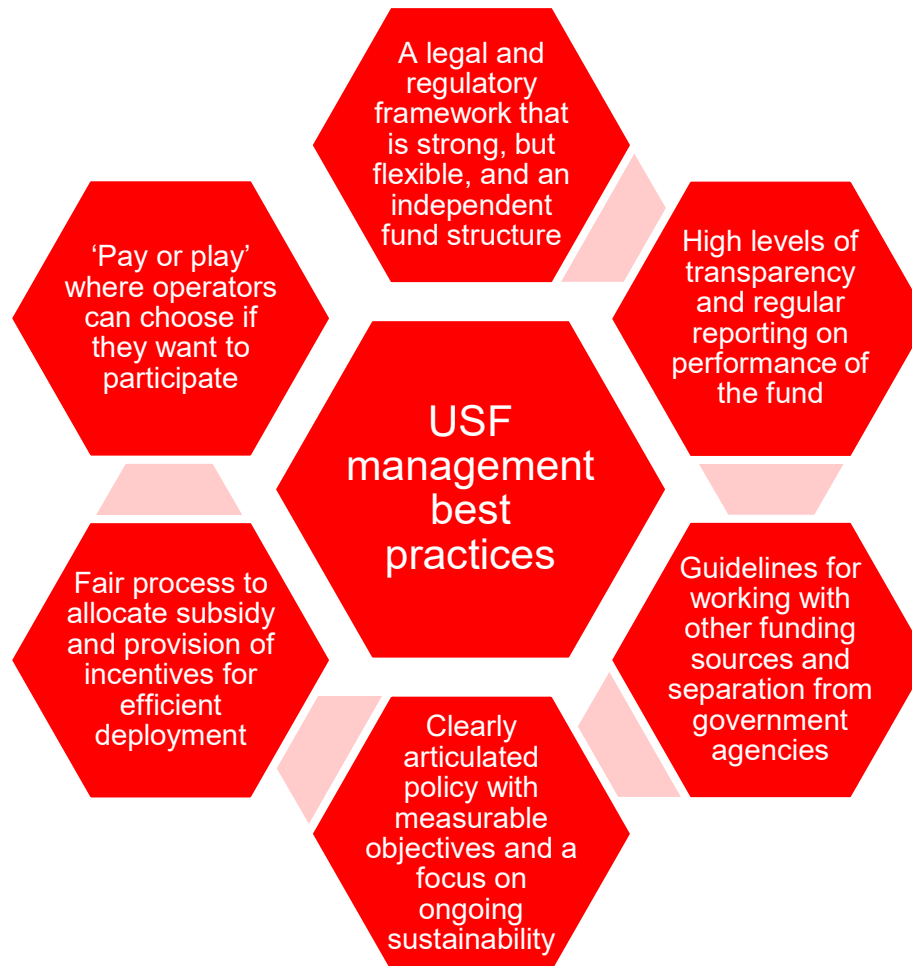


- The USFs in the survey had more than \$11 billion waiting to be disbursed
- More than a third of USFs had not distributed the levies collected
- Money held represented a lost opportunity for countries seeking to stimulate economic growth

Reasons why USF fail



Best practices for managing existing USF policies

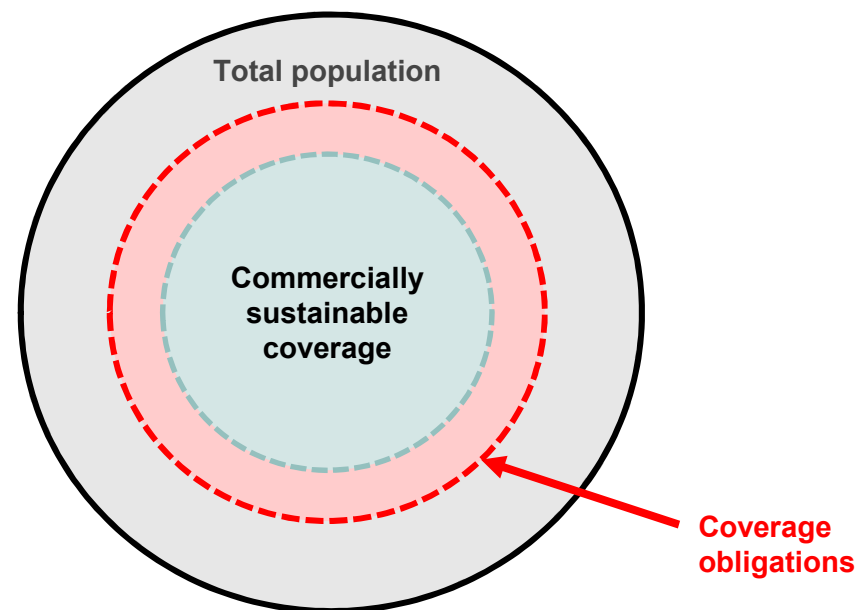


- It is difficult to point to funds that adopt all of the best practices for implementing a successful USF



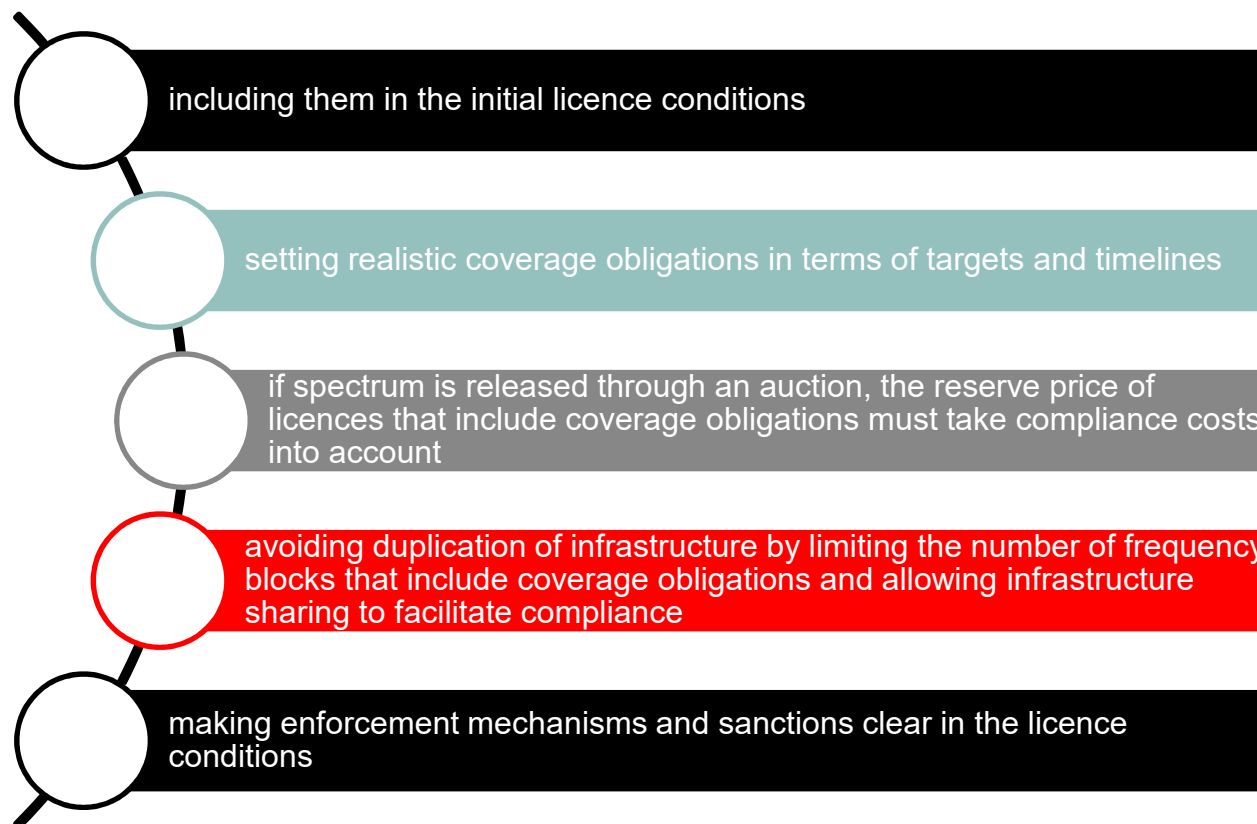
Coverage obligations

- Coverage obligations can be an effective mechanism to ensure coverage.
- However, the main challenge resides in setting the adequate level of coverage.
- Coverage obligations that are too ambitious and disregard the realities of the market will be impossible to attain.
- Covering commercially unviable areas imposes a financial burden on operators. Increasing the margins and the reach of the sustainable coverage helps operators comply with coverage obligations.



Considerations when setting coverage obligations

When setting coverage obligations, regulators should consider:





Subsidies

- Subsidies can be direct (e.g., monetary grants) or indirect (e.g., tax rebates).
- For subsidies to work, they must align the economic incentives of mobile operators and the regulator.
- This requires a scheme that is:

Targeted

- There needs to be a strong link between the incentives of MNOs to obtain the funds and the roll-out of sites in the areas of interest.

Transparent

- Clarity in the allocation process is essential.
- This allows MNOs to incorporate these funds in their business plans.

Efficient

- The overhead costs of administering the allocation scheme should be as low as possible. A design too complex to administer or monitor will result in inflated costs and delays that can offset its benefits.

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SESSION 5

Group Discussion

- What types of public interventions and initiatives should be considered in your country to drive rural coverage beyond the market frontier?





Capacity
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**You have reached the end of this
course**





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Thank you!

