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COMPETITION POLICY QUESTIONS IN MOBILE NETWORK SHARING

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Roadmap

- Mobile network sharing agreements (NSAs): a brief introduction
  - What are they?
  - Why is there a need for a „competitive assessment”?
  - How can they be usefully classified?
- Affected markets and our analytical framework
  - What does a useful framework for analysing NSAs look like?
- The Bad:
  - How may NSAs adversely affect competition and harm consumers?
  - How can these concerns be mitigated?
- The Good:
  - How may NSAs benefit consumers?
- The Balance:
  - Some conclusions

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Mobile network sharing agreements (NSAs)

A type of cooperation between mobile network operators to jointly use, maintain, and/or build some of the network inputs required for their operations.

We look at **active NSAs**: where at least part of the RAN is shared.

From the consumers' point of view:

+ **Potential benefits to consumers:** Operators can economise on the costs associated with providing networks – savings may be passed on to consumers in various forms.
– **Potential harm to consumers:** Operators are direct competitors – these agreements could potentially lead to a restriction of competition.

Because of the potential restriction of competition, **competition authorities** become involved.

An NSA is a **production agreement – between direct competitors**: **assessed under Article 101 TFEU**

Not all NSAs are created equal! The assessment of the balance of harm and benefits to customers is complex.

We present a **framework for the competitive assessment** of NSAs:

- possible concerns, and the main factors that influence their seriousness,
- ways to mitigate the concerns, and
- the principles of assessing efficiency benefits.

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A classification of NSAs in Europe

Geographic Scope	1	2	3
Whole country	**SE** 2002 3G | 4 | 1+2 |* **RO** 2016 4G | 4 | 1+3	**UK** 2007 4G/3G | 5 | 4+5 **SE** 2011 4G/2G | 4 | 2+3 |* **CY** 2016 4G/3G | 3 | 2+3	**PL** 2011 4G/3G/2G | 4 | 1+3|* **DK** 2012 4G/3G/2G | 4 | 2+3|* **UK** 2012 4G/3G/2G | 4 | 2+3 **IT** 2017 4G/3G/2G | 4 | 1+4
Part of the country	**SE** 2002 3G | 4 | 3+4 **HU** 2015 4G(800)| 3 | 1+2|*		**CZ** 2011 4G/3G/2G | 3 | 1+2
Only rural	**FR** 2015 3G | 4 | 1+2+3+4	**ES** 2009 3G/2G | 4 | 2+3 **GR** 2013 3G/2G | 3 | 2+3	**FR** 2014 4G/3G/2G | 4 | 2+3 **FI** 2014 4G/3G/2G | 3 | 2+3 |*
Number of technologies			

key: **Country** #Start date #Technology generation | #No of MNOs | #Rank of the parties |*MOCN or both

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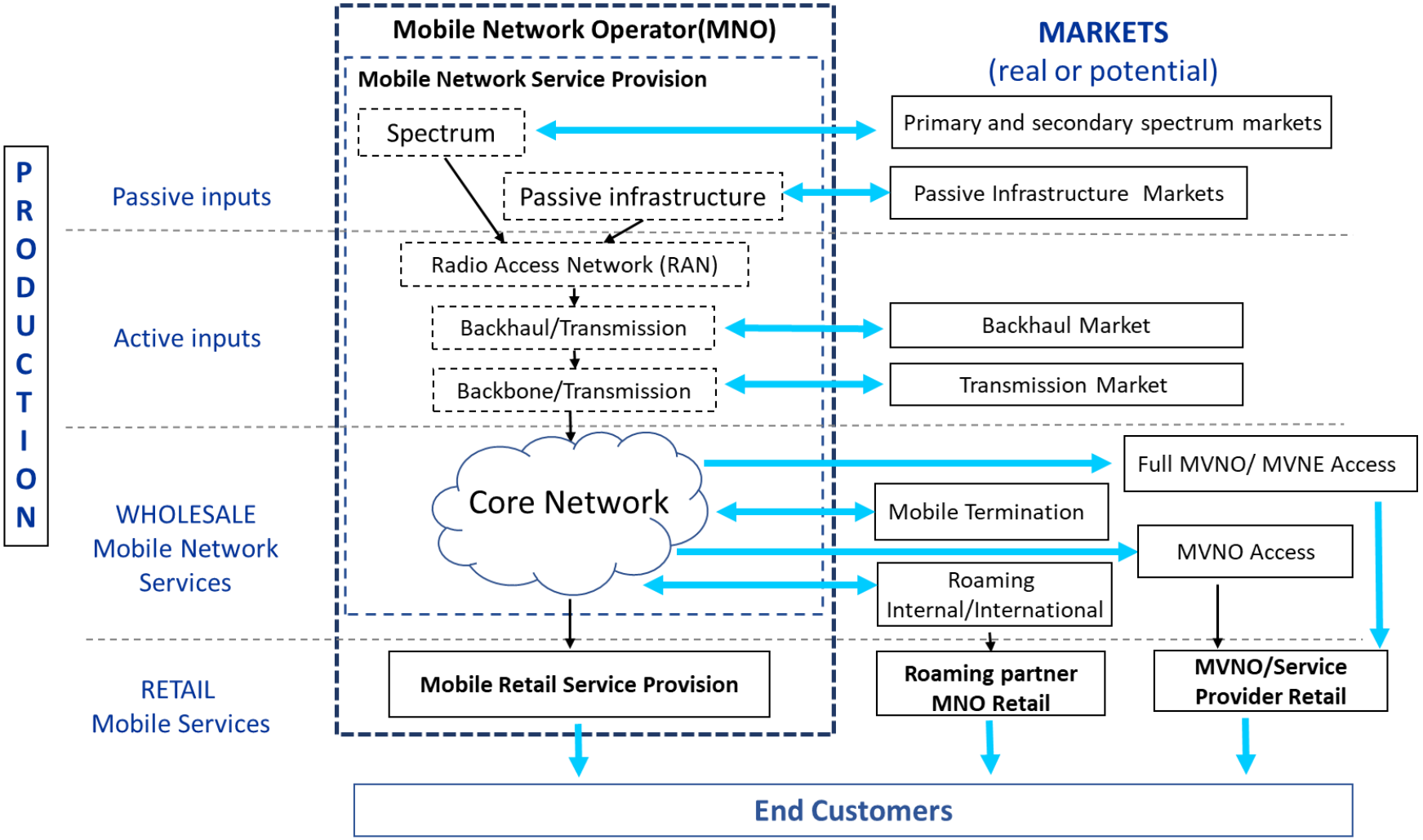
Mobile service production and related markets



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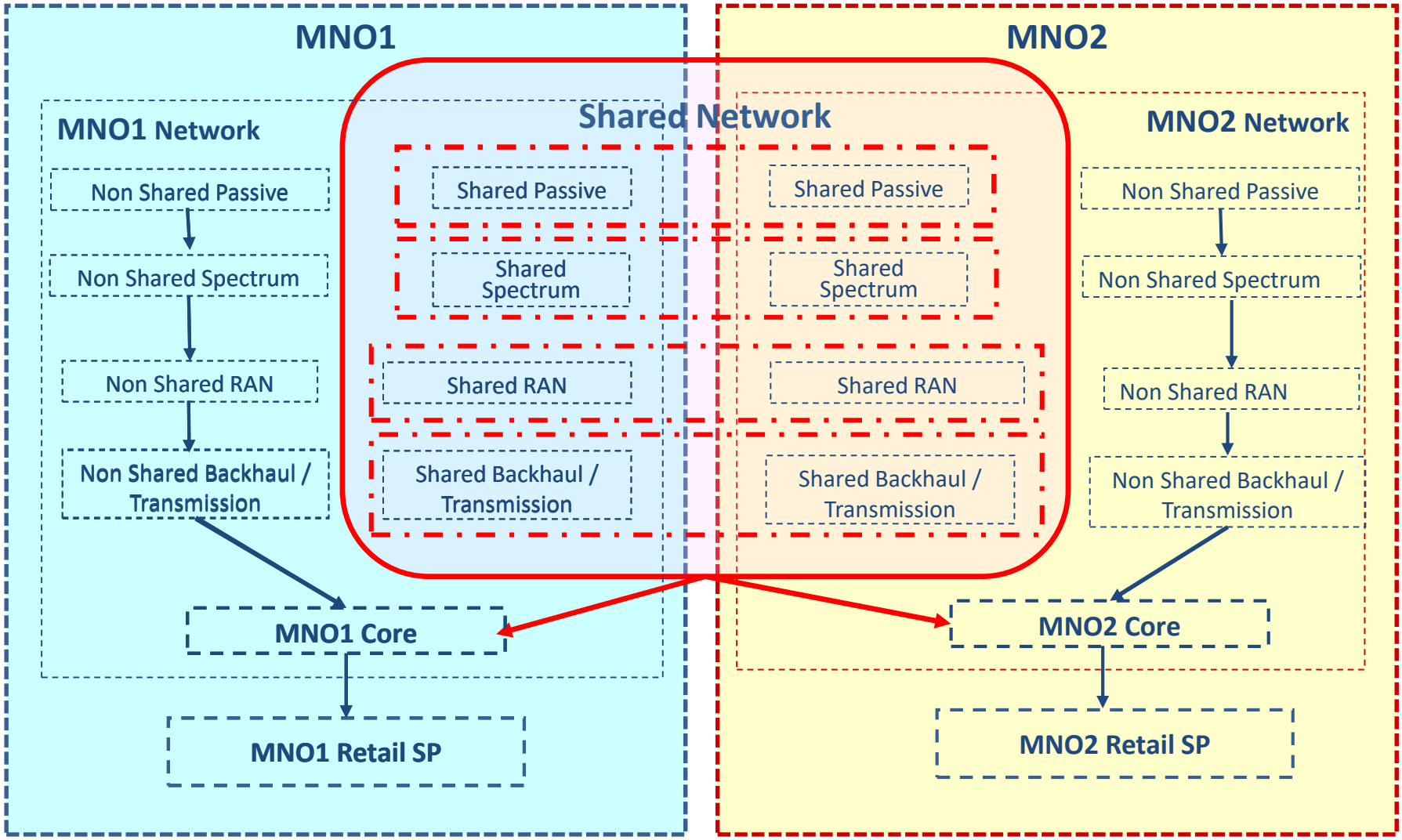
An example of network sharing



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Possible competition concerns

Type of effect	Potential concerns
Horizontal unilateral effects	1. ***Decrease in incentives to compete due to the decreased differentiation of services between parties*** 2. *Decrease in incentives to compete due to fixed costs becoming variable* 3. *Excessive concentration of spectrum*
Horizontal coordinative effects	4. ***Increased commonality of costs*** 5. ***Information exchange***
Vertical effects	6. *Access to MNOs to passive infrastructure* 7. *Wholesale access to MVNOs to the operators' network*
Uncategorised	8. *Potential exclusion of operators not party to the NSA*

Horizontal unilateral effects: differentiation

- The argument:
  - Certain aspects of the **operators' services will become more similar** to each other.
  - Their technical autonomy will decrease.
  - The possibility (and/or incentive) to differentiate will also decrease.
  - **The loss of differentiation implies a loss of competition.**
- The concern is **more serious for deeper agreements**:
  - *The more of the network is shared, the larger the geographic scope, the more technologies are involved, the more of the operators' spectrum bands are included.*
- There are strong counter-arguments:
  1. **Technical and commercial differentiation differ.** Many of the most important aspects of product differentiation are plainly commercial (pricing, bundling, marketing), and obviously unaffected. But even technical differentiation mainly takes place in the core.
  2. All NSAs so far leave **the core separate** – this is where most technical differentiation happens.
  3. **More similarity may mean better results for everyone** – e.g. increased, but identical coverage, better service quality.
- Overall, is **hard to substantiate**. But if it is, there is **no easy fix**.

Horizontal coordinative effects

Increased cost commonality

- The argument:
  - The **proportion of costs** that the parties **share will increase**.
  - It **may** reach a level which enables them to **collude**.
- The theory refers to **variable costs** only, but fixed costs may also be taken into account.
- The concern is more serious if the NSA is deeper.
- **No safe harbour** – but even when the full network is shared, we expect less than half of costs to be shared.
- Mitigation: no easy fix. **Difficult to substantiate** harm, but **difficult to remedy** if substantiated.

Information exchange

- The argument:
  - Parties must share some **sensitive information** with each other: they must maintain the shared network, and settle accounts with each other.
  - Sharing information **facilitates collusion** or makes it more stable, especially through increasing market transparency.
- The concern is more serious if the NSA is deeper.
- Mitigation: The **amount and scope** of information exchange should be **as small as possible**. This depends on the design of the NSA.

Efficiencies: the potential benefits to consumers

Two main types of efficiencies may arise in NSAs:

- Cost efficiencies:
  - Cost savings resulting from the agreement which translate into lower prices (or similar benefits) to consumers.
  - These **can and should be quantified**.
    - Usually parties can easily quantify their own cost savings.
    - They also need to show how much are passed on to consumers.
- Qualitative efficiencies:
  - The quality of services (such as coverage, speed or reliability) improve for some or all consumers.
  - Certain improvements (such as new technologies and thereby, services) may reach consumers sooner than they would have absent the agreement.
  - **Often not quantifiable, or their quantitative assessment is not trivial.**
  - **Taken together may be larger and more important than those passed through in the form of price decreases.**

On balance: some conclusions

There is a solid business rationale for active network sharing, so we expect their number to continue increasing, especially with the coming of 5G.

Many effects are not anticompetitive.

- Competition authorities must keep this in mind when assessing NSAs.

Many potential concerns can be easily addressed.

- Parties must keep this in mind when designing NSAs.

Some important issues remain, the arguments must be allowed to play out: the „hard to substantiate, hard to mitigate"-type.

- Further precedents can help establish safe harbours (see cost commonality).
- Some consensus should emerge regarding the assessment of certain concerns (for example, differentiation).

Thank you for your attention!

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Additional slides

Affected markets

Any **competitive assessment** begins with defining **relevant markets**: markets that are affected by the behaviour in question, in this case: the network sharing agreement.

Each relevant market has a **geographical** and a **product** scope:

- All mobile markets have always been found to be national.
- Products (here typically services) are more complex.

Competition policy always takes the point of view of the consumer, so we first look at **retail**, the „closest" market to the consumer.

- The definition we will use is: the **retail market for mobile telecommunication services**.
- This could potentially be subdivided along many dimensions, but the exact definition can often be left open.
  - *Some possible segmentations: LS, SS, voice, M2M; residential/business; prepaid/postpaid; speed; and there may also be some competitive pressure coming from fixed services*

Building up from retail, there are many other markets to consider; see the slide showing the entire **vertical spectrum**.

Competitive assessment

A **production agreement – between direct competitors**: assessed under Article 101 TFEU. There are „**Horizontal Guidelines**" to aid assessment.

A two-step process:

1. **Is competition restricted**? Burden of proof on the competition authority.
2. If yes, then: **are there efficiency gains that outweigh the harm**? Burden of proof on the parties.

Some general observations:

- All concerns are assessed **separately in all affected** product and geographic **markets**. The methods used are very similar in each case, but the results could differ.
- The **market power** of the parties to the NSA is key and can substantially affect whether a concern arises.
- **Change** is very important: markets may be more or less competitive at the outset, but what counts is the change **due to the NSA,** compared to the appropriate **counterfactual**: the expected (future) situation on the market without the NSA.

Horizontal unilateral effects

Fixed costs becoming variable

- The argument:
  - **Some fixed network costs become shared.**
  - These need to be split between parties.
  - One approach is to split them according to usage – but then they **become variable** costs.
  - **Variable costs affect pricing**, and therefore, competition.
  - Specifically, parties' **incentives to compete for more usage decreases**.
- Mitigation: **fixed costs must remain fixed** – this depends on the design of the NSA.

Concentration of spectrum (when spectrum is shared at all: MOCN)

- The argument:
  - The amount of available spectrum affects network capacity and speed.
  - If the **parties** to the NSA have a significantly **larger amount of spectrum at their disposal than their competitors**, the competitors may be unable to offer services of comparable quality.
- A **faulty argument** in many respects!
- Mitigation: **joint future participation at spectrum auctions** – but this creates further problems.

Vertical effects and uncategorised

Access to passive infrastructure

- The argument:
  - NSA parties will consolidate their networks and abandon facilities their competitors also use.
  - This may (temporarily) adversely affect competitors' consumers.
- The effect is mostly small, if any. Easy fix: parties can commit to offering access or similar.

Wholesale access

- The argument: three concerns may arise:
  - Parties may limit or overprice MVNOs access to wholesale services.
  - MVNOs will have fewer distinct networks to choose from.
  - NSA parties may optimise their networks in a way that there remains less free capacity for MVNOs.
- Mitigation: if concerns are substantiated, they can be remedied by commitments to offer access.

Exclusion of competitors

- The argument: the parties may gain a non-replicable cost advantage that created such a large competitive advantage that a competitor is forced to leave the market.
- Unrealistic, but may be raised by competitors.