Stimulating Competition on Local Telecom Markets

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Current Situation: Partly Competitive Markets

- After nearly three years of liberalized national telecom markets competition has prevailed in most EU member states:
  - Market entry by numerous carriers
  - Decreasing prices for telecom services
  - Decreasing market share of incumbents
- <u>However</u>: Hardly any competition on local telecom markets so far
- Incumbents are upgrading their PSTN-networks in order to offer broadband services via ADSL
- <u>Questions</u>:
- How to overcome the bottleneck in local telecom networks?
- How to make sure that competitors can offer the full range of telecom services, including broadband services?

There are two approaches to implement competition on local telecom markets

Parallel Networks Competition

- *Fostering competition through encouraging the construction of alternative networks*

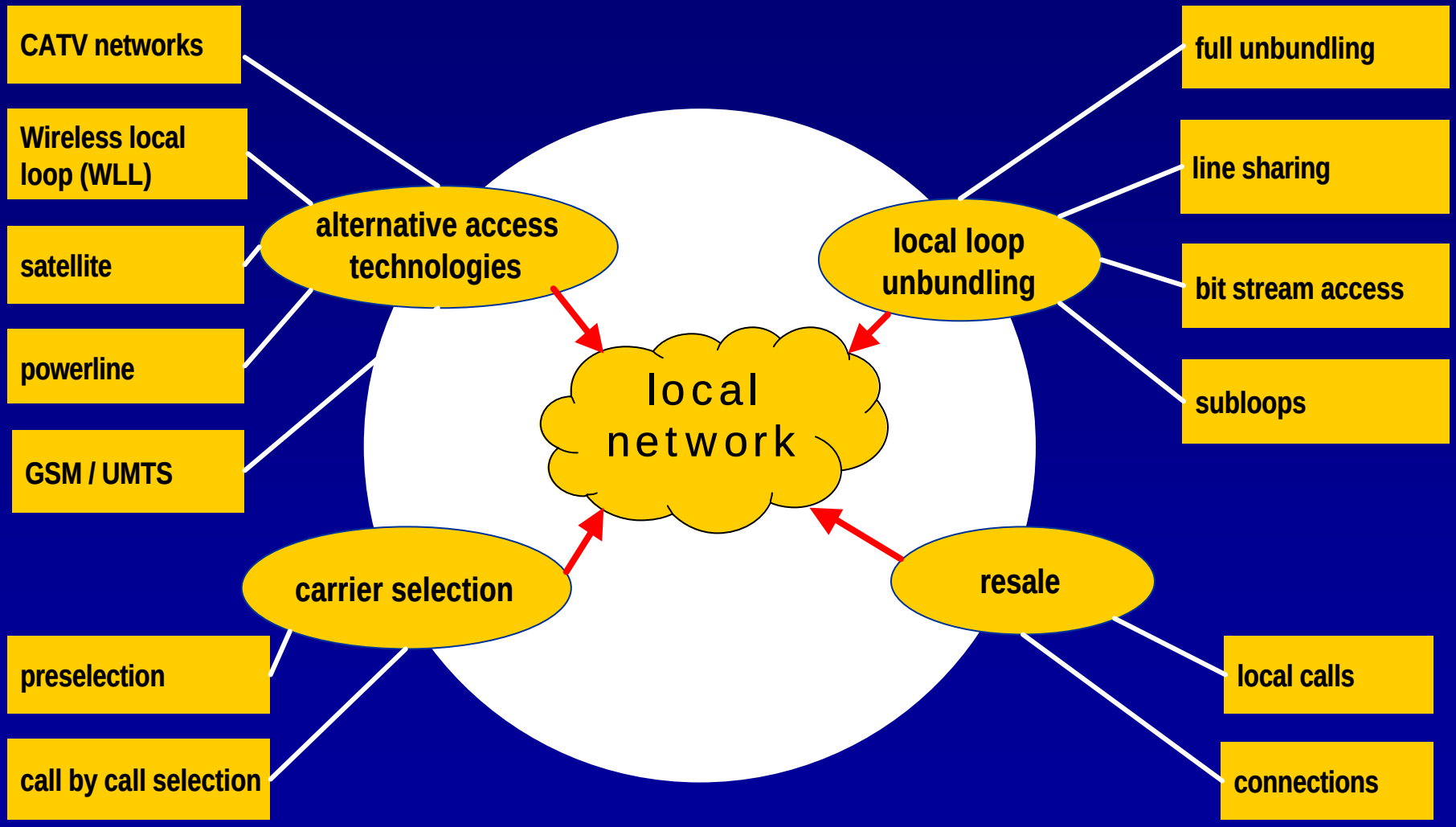
Access-based Competition

- *The requirement of all dominant operators to provide access to other operators to their networks and facilities*

Access-based competition creates faster and more intensive competitive pressure and reduces waste of resources.

<u>But</u>: Sustainable competition in all telecom markets will only emerge if infrastructure competition is encouraged also in the local loop

Approaches to Local Competition



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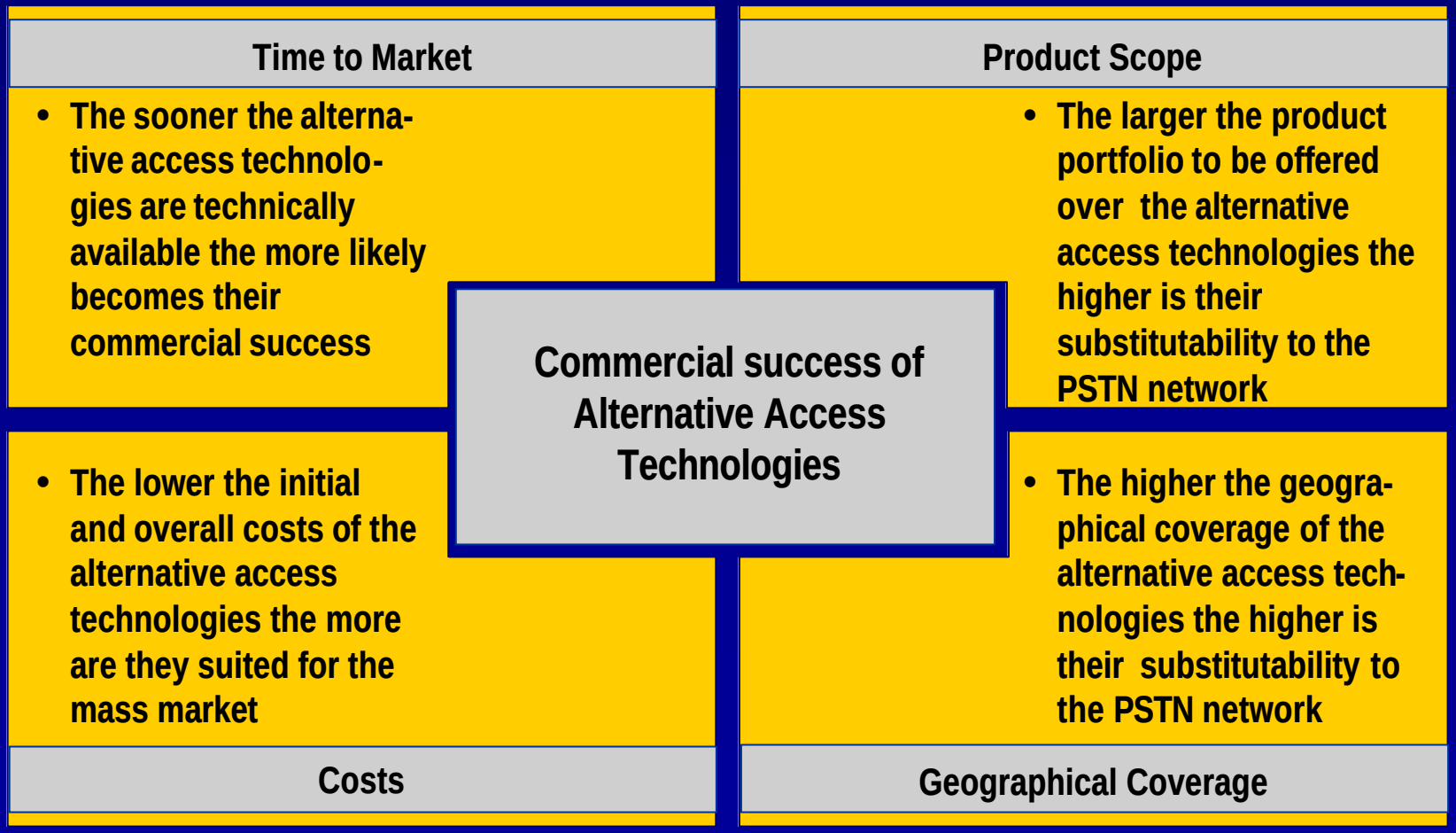
Criteria for the Competition Potential of Alternative Access Technologies



Competition potential of different access technologies

	product portfolio	time to market	geographical availability	costs/ investment	overall
CATV	◔	◔	◑	◑	◔ ◑
Satellite	◑	◔	◑	◕	◑
Powerline	◕	○	●	◕	◕
WLL	◑	◔	◑	◑	◑
GSM	◑	●	●	◑	◔
UMTS	◔	◕	◕	○	◕

very high ● ◔ ◑ ◕ ○ very low

Results

GSM	• Highest substitutability as regards narrow band services, • But: not suited for bradband services
CATV	• Depending on the infrastructure in place - once upgraded - CATV networks may be a very high potential alternative for the mass market
WLL	• High speed of construction, flexible use, relatively low upfront-investment • But: due to rather high overall investments mainly suited for high volume users
Satellite	• provision of bidirectional services for the mass market induces high construction costs; system capacities limit the number of customers ➔ only supplement
UMTS	• Not yet available; high costs reduce substitutability
Powerline	• Due to technical difficulties the commercial breakthrough of PCL as an access technology for the mass market has not been achieved yet
Overall result	• **Different access technologies support different market entry strategies** • **So far, no AAT offers full substitutability to the incumbents PSTN networks** ➔ **DSL-Technology is the only viable bradband access for the mass market**

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Some kind of regulation remains necessary for the foreseeable future, but to what extent?

Time to Market / Geographical Coverage

- The faster competitors can enter the local market and the more customer they can reach, the higher the competitive pressure on the incumbent

Product Scope

- The larger the product portfolio that can be offered via different forms of access to the incumbent‘s network the higher the benefit for the customer

criteria for the regulation of access to the incumbents local network

- Because regulation induces inefficiencies (due to information lack) and generates transaction and administrative costs, the goal must be to avoid overregulation and to promote sustainable competition

Costs of Regulation

Pros and cons of local loop unbundling

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- avoids the duplication of sunk costs
- overcomes barriers for market entry (local network is a bottleneck facility which cannot be replicated by reasonable means
- allows competitors to built up their own broadband accesss
- gives new competitors a free choice as to the provision of services (product diversity)
- enables competitors the introduction of innovative technologies

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- risk that regulator does not set "correct" ULL price
- reduces the incentive of suppliers (new entrants and incumbent) to invest in new local infrastructure and access technologies
- generates additional costs:
  - transaction costs: new ordering and order handling procedures, purchasing and billing activities, equipment compliance checks
  - production costs: provision of additional network components (e.g.: transfer distribution frame), co-location facilities

Pros and cons of subloop unbundling

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- enables the distribution of higher bandwidth services
- enables competitors to rent the ULL even when optical fibre cable is used between the main distribution frame and the intermediate access point

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- leads to significant stranded costs as the wires between the main distribution frame and the intermediate access point will become useless

  ➔ pricing becomes more complicated

- generates even higher additional transaction and production costs than ULL
- hinders the incumbent to progressively modernise its local access network

Pros and cons of line sharing

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- **stimulates the roll-out of broadband services**
- **speeds up the introduction of high speed Internet access services**
- **gives customer the choice to retain the telephone service being provided by the incumbent, while seeking a fast internet service from an ISP**
- **ISP has full control of the commercial and technical conditions of the ADSL service**

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- **disincentive for new entrants to invest in own local infrastructure**
- **raises the problem of who is in charge of provision / maintenance**
  - ➔ increases the costs of processing
- **economies of scale can no longer be exploited when two carriers offer services over the same line, leading to inefficiencies**
- **hinders the incumbent to progressive-ly modernise its local access network**
- **pricing issues of line sharing are difficult to solve**
  - which price will apply when a carrier uses the high frequency band to provide broadband services and voice telephony

Pros and cons of carrier selection

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- allows the subscriber to choose voice telephony services from different service providers
- encourages the emergence of new types of distribution channels and innovative services (new billing terms, alternative rate structures)
- resellers may stimulate use of the incumbent/market dominant operators' network

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- limitation of the reseller's ability to offer new innovative services due to technical features and functions of the underlying carrier's network
  - ➔ only option of price differentiation
- technical realisation rather complex
- disincentive to invest for:
  - ULL-based network operators
  - operators with alternative access technologies

Pros and cons of resale

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- **entry vehicle for new entrants that may initially lack the necessary capital to build their own networks**
- **encourages the emergence of new types of distribution channels and innovative services (new billing terms, alternative rate structures)**
- **resellers may stimulate use of the incumbent/market dominant operators' network**
- **immediate nationwide geographical coverage of competitors**

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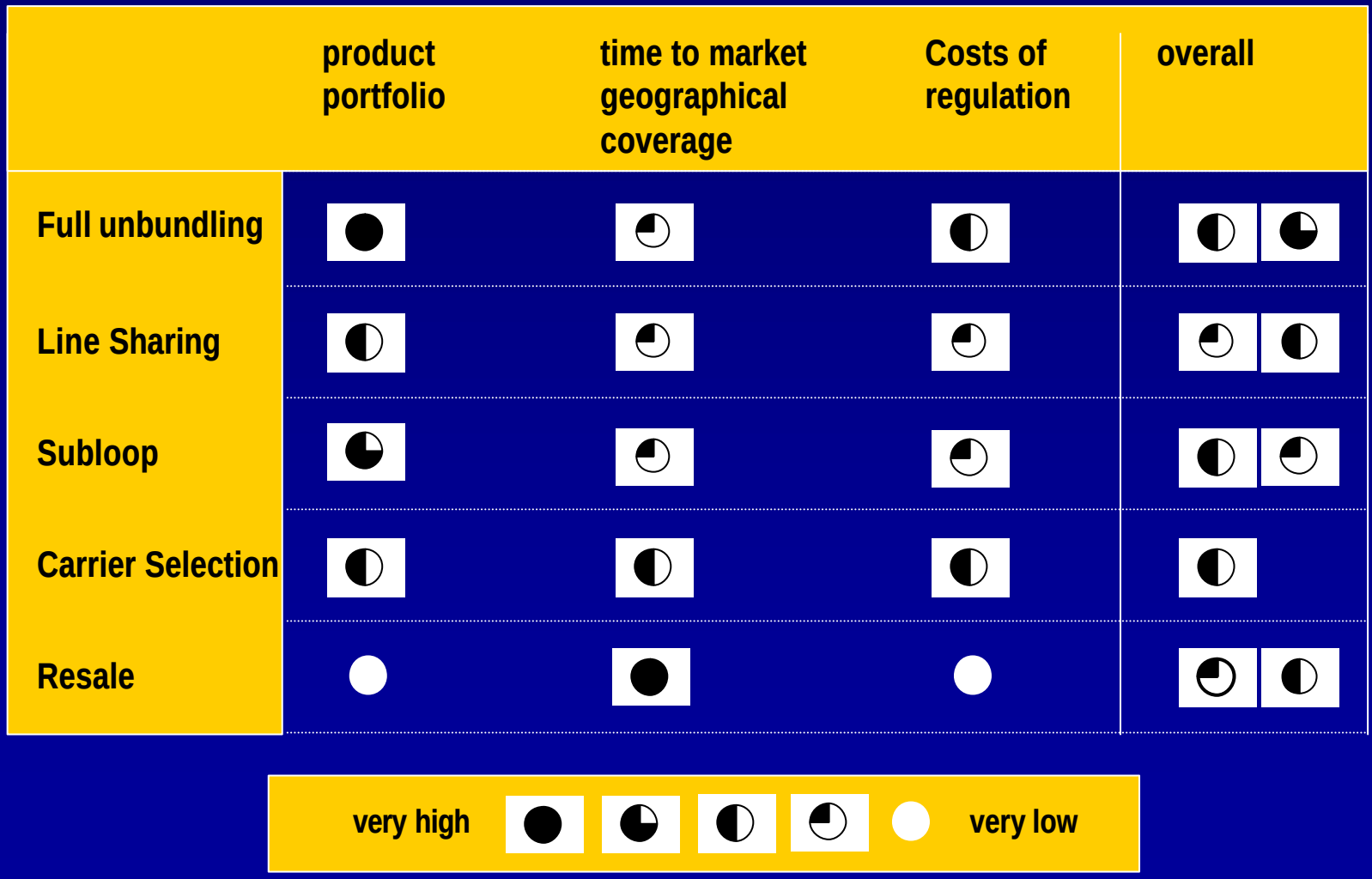
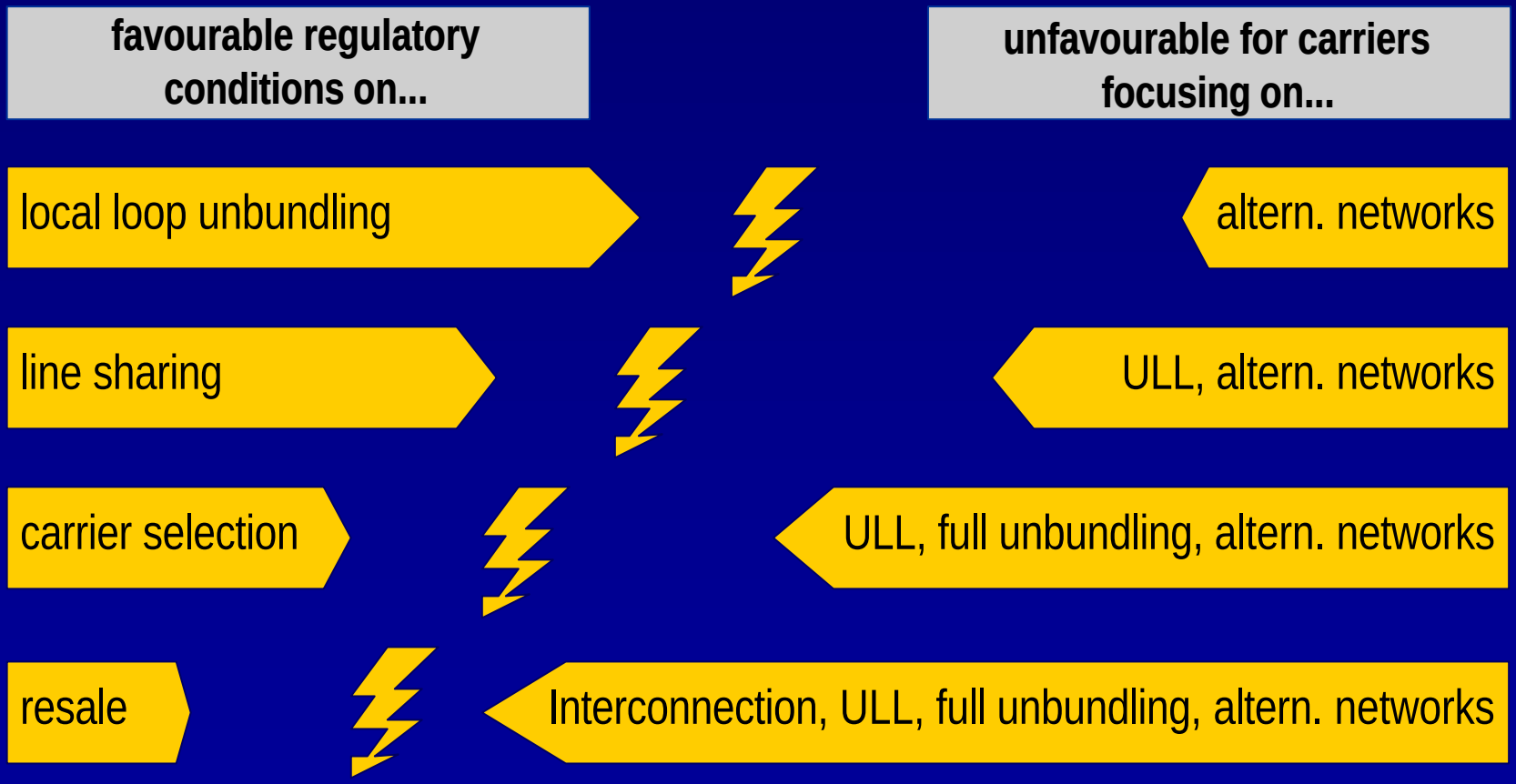
- **limitation of the reseller's ability to innovate due to technical features and functions of the underlying carrier's network**
- **resale alone does not put competitive pressure on wholesale rates and services**
- **disincentive to invest for network operators**

  ➔ ongoing regulatory intervention
- **requires decision on numerous regulatory issues**

Competition potential as a result of access regulation



Access Regulation: Conflicting Interests



Results

Full Unbundling	• requires sound regulatory framework; takes some time to achieve full coverage
Line Sharing	• no prerequisite for the provision of bradband services if access to the ULL exists already. Yet it may foster the diffusion of broadband services
Subloop	• only reasonable if access at MDF is not possible
Carrier Selection	• at most a complementary form of access regulation
Resale	• quick means of introducing competition on local telecom markets with negative impact on potential investors; for customers there is hardly any additional value

- Full unbundling of the local loop ist the most reasonable form of access regulation
- All other forms of access regulation are at most complementary to ULL
- The legislator has to decide about the type of competition on local telecom markets

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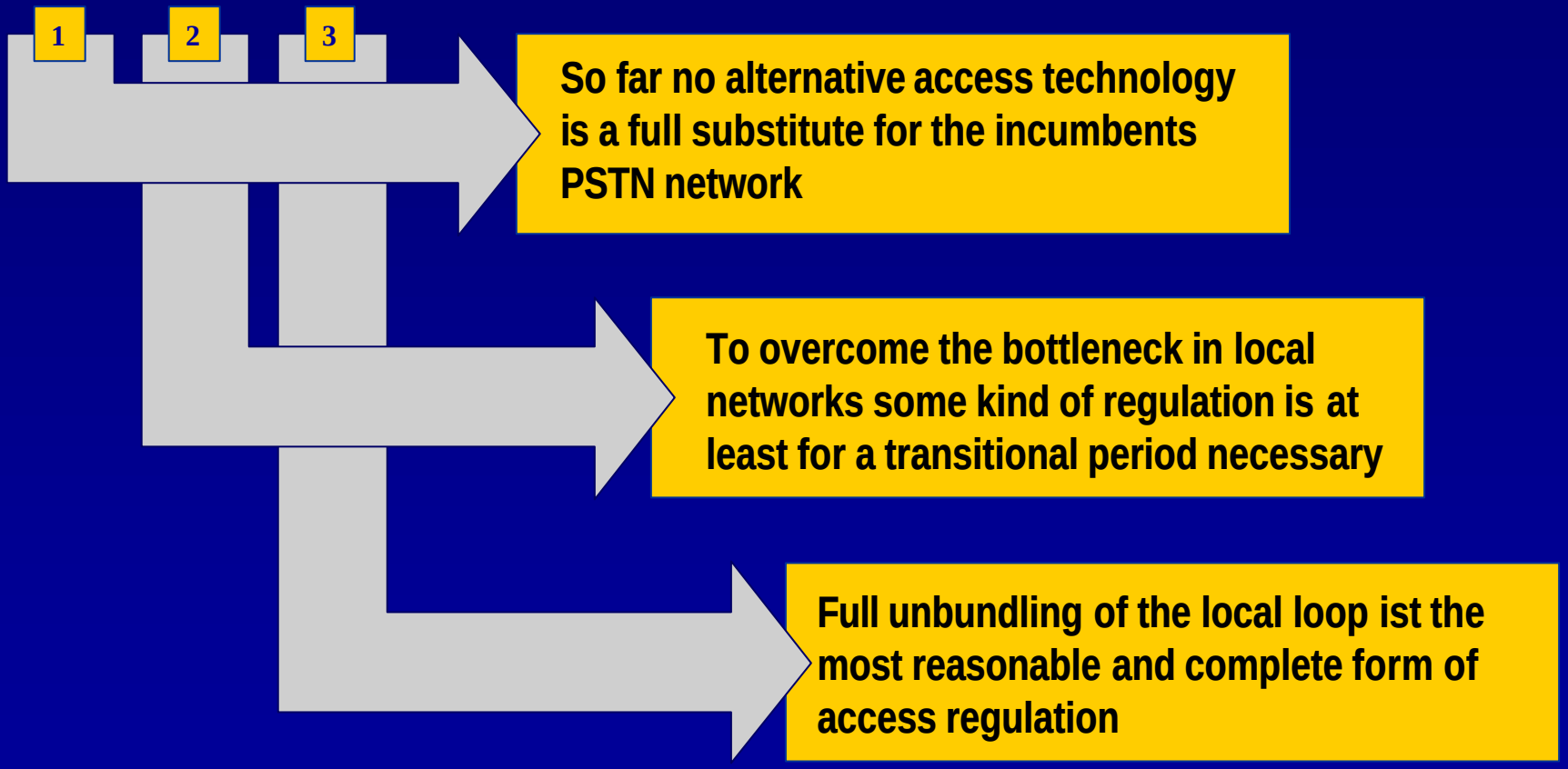
Conclusion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So far no alternative access technology is a full substitute for the incumbents PSTN network
To overcome the bottleneck in local networks some kind of regulation is at least for a transitional period necessary
Full unbundling of the local loop ist the most reasonable and complete form of access regulation