

Elisa Communications Capital Market Days

Elisa Kommunikation GmbH

February 7-8, 2001

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The Elisa Opportunity

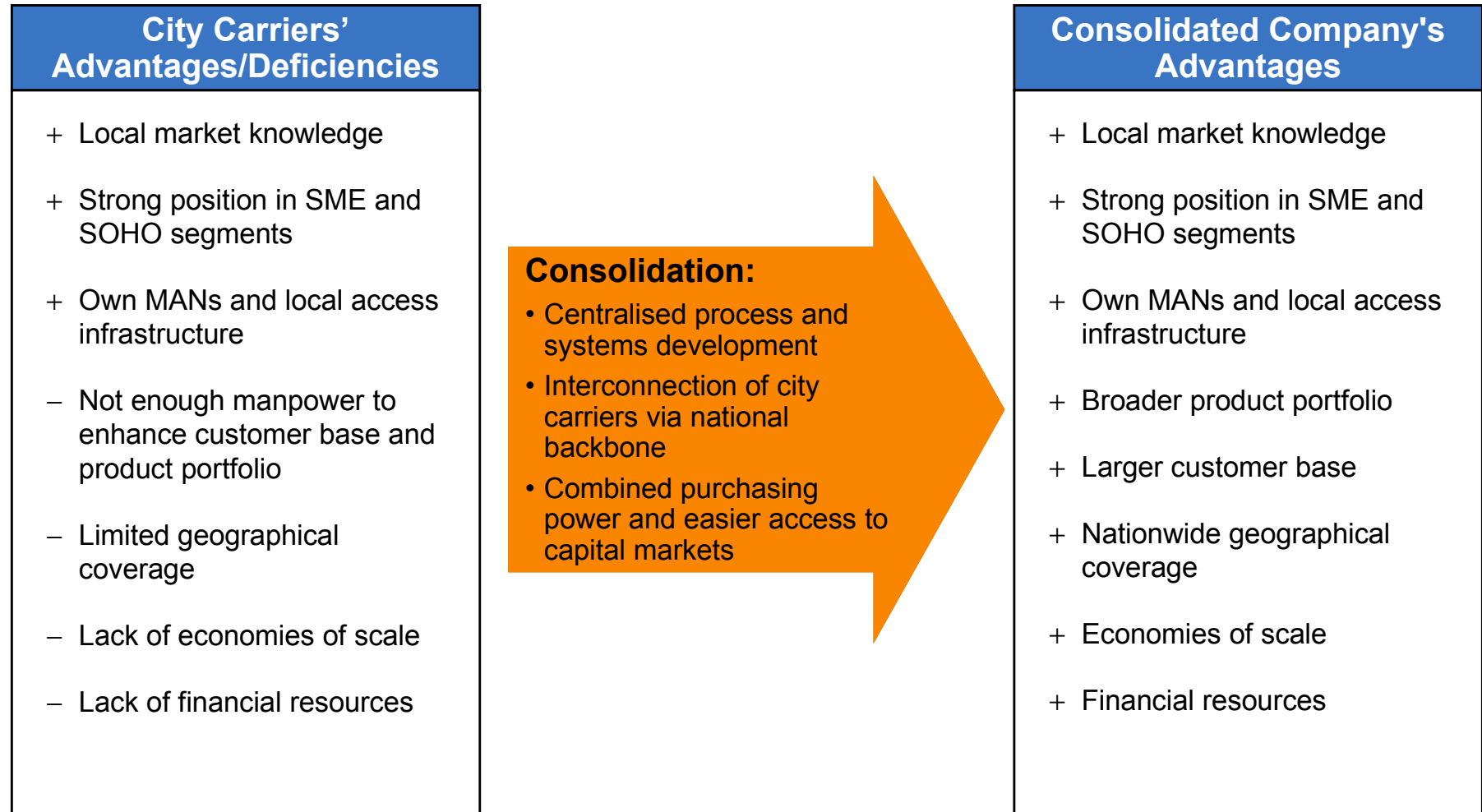


Elisa's ambition is to use the city carrier consolidation opportunity to build a leading facilities-based telecommunication carrier in Germany – but with focus on chosen several regions and certain customer segments

		Facility-based	(Switch-based) Reseller
Incumbent		<ul style="list-style-type: none"> • Deutsche Telekom 	
Full-Service Challengers (full product line, national coverage, all customer segments)		<ul style="list-style-type: none"> • Arcor • Viag 	<ul style="list-style-type: none"> • mobilcom • debitel • Talkline
Focussed Challengers	Product or Customer Focus	<div style="border: 1px solid black; background-color: yellow; padding: 2px; display: inline-block;">Elisa 2003</div> <ul style="list-style-type: none"> • E-Plus (Mobile) • Colt • QSC (xDSL) • Star Telecom (WLL) • MFS Worldcom (LE) 	<ul style="list-style-type: none"> • Drillisch (Mobile)
	Regional Focus	<div style="border: 1px solid black; background-color: yellow; padding: 2px; display: inline-block;">Elisa 2000</div> <ul style="list-style-type: none"> • Versatel (NRW) • NetCologne (NRW) • Berlikomm (B) • Completel (Tier2 cities) 	<ul style="list-style-type: none"> • Regiocom (SA, MCI Worldcom) • R-Com (BAY, Viag) • Ruhrnet (NRW, Versatel)



The consolidation opportunity is to integrate city carriers to overcome their scale deficiencies while maintaining their inherent strengths

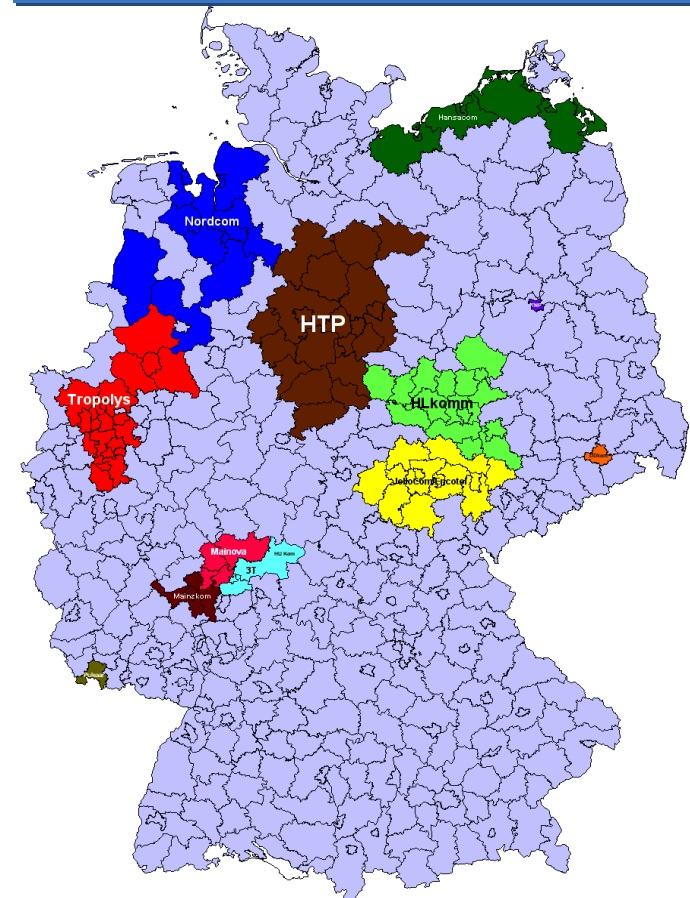


Elisa is well positioned to capture this consolidation opportunity and has already established itself as the leading consolidator in Germany

Elisa Advantage

- The local carriers give Elisa a strong position in the attractive local access market
- Elisa is well positioned in the SME, municipal and SOHO segments
- Elisa can draw on a full line of innovative services from its Finnish parent company
- Elisa operates with an attractive cost structure
- Elisa combines local responsiveness with national scope
- Elisa replicates a proven business model from Finland to a very similar environment in Germany

Elisa Position





With support from Elisa it is possible for city carriers to overcome their scale deficiencies and regional limitations

City Carrier
<ul style="list-style-type: none">- Limited product portfolio- Limited geographical coverage- Customer base restricted to own area- Lack of economies of scale- Lack of financial resources

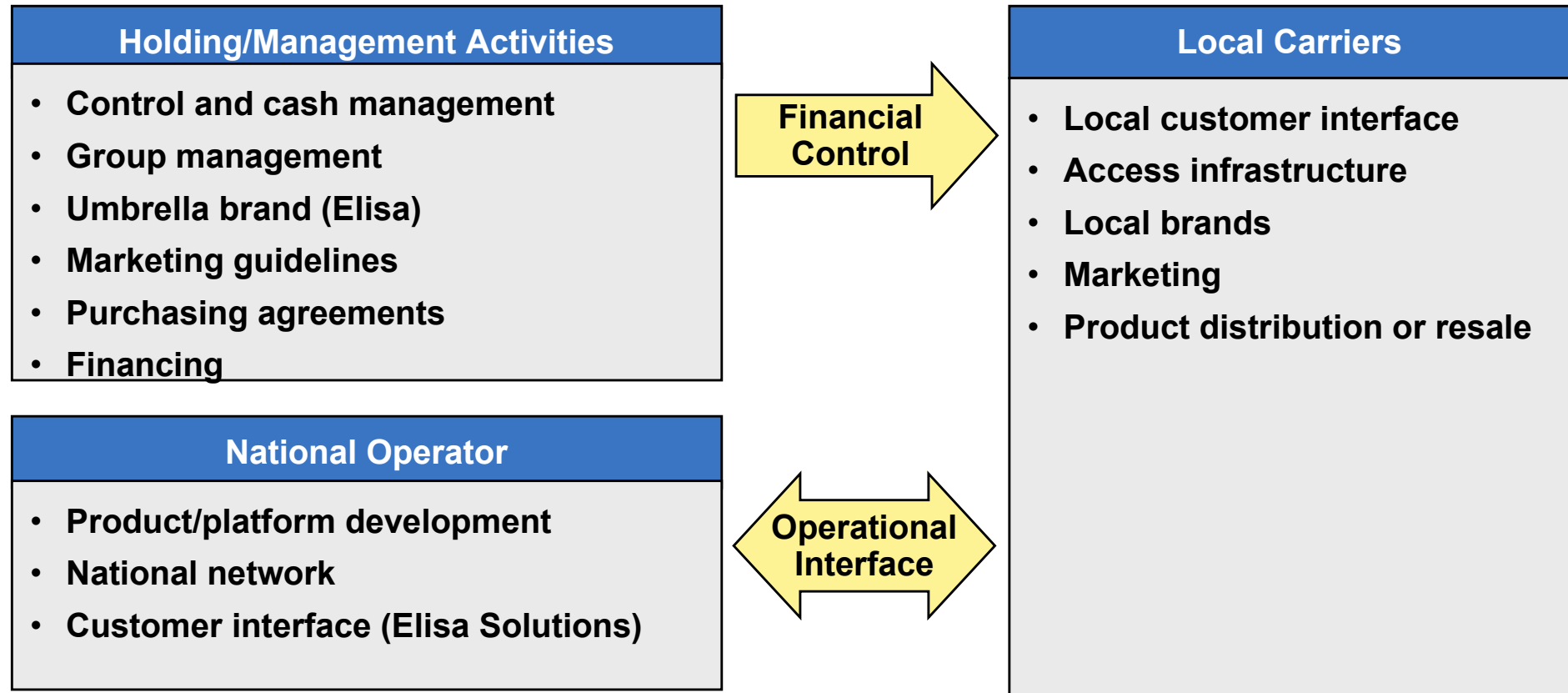


Elisa City Carrier
<ul style="list-style-type: none">+ Full line service and product portfolio+ Linked to a network with nationwide coverage+ Can serve his local customers outside his own area+ Improved cost position

Elisa's Strategy



For the operational consolidation, Elisa is creating a two-tier structure in which local carriers are backed by a national operator



➔ Elisa can draw on experience from a similar strategy executed successfully in its home market, Finland

Elisa's strategy is to build value through financial consolidation as well as alignment and operational consolidation of its carriers

Financial Consolidation

- Economic value: Saves transaction costs
 - Create simpler financial structures
 - Create larger units
 - Increase transparency for shareholders / investors

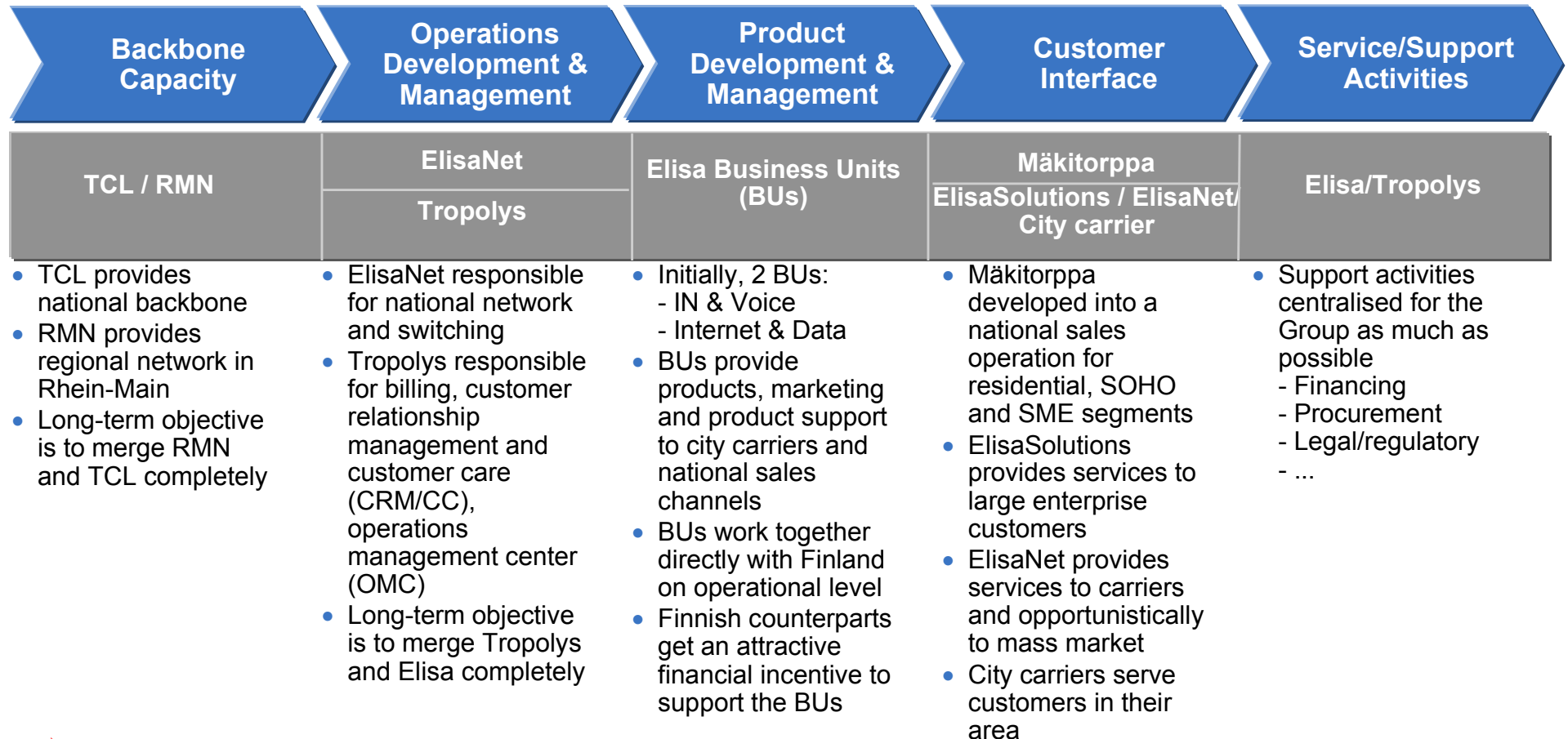


Carrier Alignment and Operational Integration

- Economic value: Improves efficiency
 - Align strategies
 - Realize operational synergies
 - Combine resource power



The national operator provides key central services, such as product and operations management



- All national operator activities are managed as one integrated organisation**
- Some units may be subsidiaries**

The city carriers provide local network infrastructure and the customer interface



- Provide local / regional MANs
- Includes selling capacity on these MANs to other carriers

- Responsible for local access infrastructure

- Objective is to centralize all product development and management at Elisa
- Some activities remain at carrier level short-term

- Provide local customer interface in sales
- Service level support for local problems
- Product distribution or resale
- Local brand, always supported by Elisa umbrella brand
- Local marketing within Elisa's guidelines

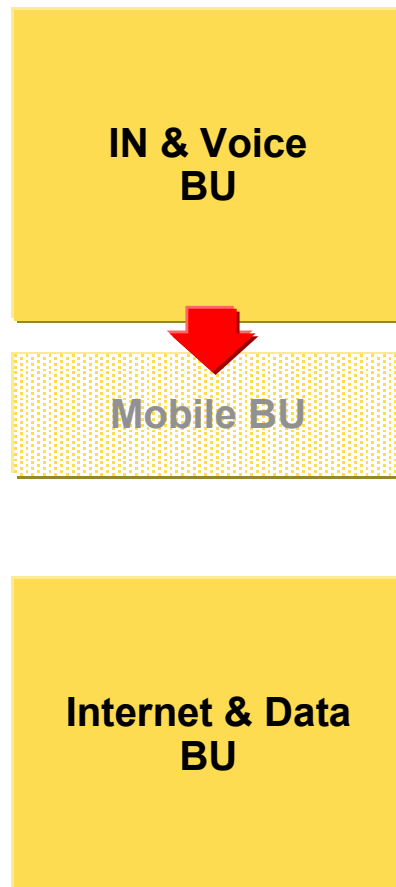
- Procurement of equipment using Elisa's frame contracts
- Local staffing activities
- Local administration



- **By default, carriers act as sales agents**
- **Carriers may act as resellers for specific products or due to local competitive situation**

Business Units

Currently, there are two business units: IN & Voice and Internet & Data



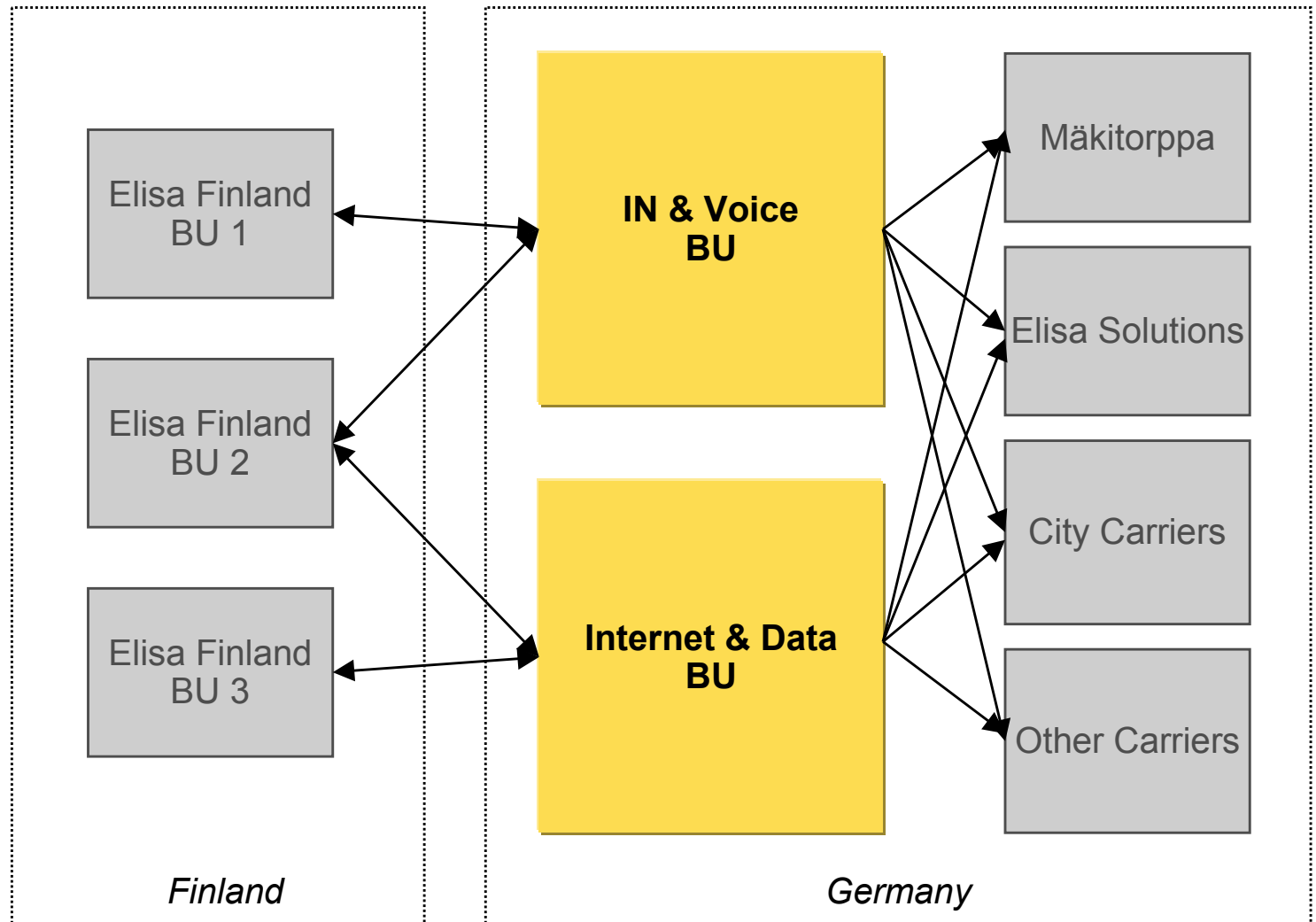
- Responsible for value-added (IN) and basic voice products
- Also develops the initial fixed-mobile convergence services
- Future separate mobile BU to expand role into value-added services and further to for instance Elisa brand MVNO utilising bulk airtime as it becomes available
- Responsible for value-added and basic Internet and data products
- Initially combines connectivity and hosting type of activities
- Separate BUs for connectivity and hosting / data center / ASP activities may be established later

MVNO = Mobile Virtual Network Operator



Business units interface directly with counterparts in Finland

- BUs interface directly with counterparts in Finland on operational level
- Finnish counterparts get an attractive financial incentive to support the German BUs



Market Situation



Compared to Finland, telephone usage in Germany is lower and adoption of new services, like mobile and internet, is slower

	Fixed Voice		Mobile			Internet			
	Germany	Finland	Germany	Finland ¹	Germany	Finland			
Penetration	Total Lines	48.7 mio	2.9 mio	Total Lines	23.4 mio	3.6 mio	Total Users	19.5 mio	1.98 mio
	% of Population	57 %	55 %	% of Population	28 %	70%	% of Population	24 %	38 %
	% ISDN	22 %	11 %	% Digital	99 %	95 %	% Broadband	<1 %	<1 %
	CATV Subscribers	17.9 mio	1.0 mio				% of HH with PC	44 %	60%
	% of Population	21.7 %	19.2 %				Hosts/Capita ('000)	34	121
						E-Commerce Penetration	14 %	N.A.	
Usage	Total Minutes	177 bln	16 bln	Total Minutes	38.7 bln	5.3 bln	Total Minutes	29 bln	N.A.
	Minutes/Capita/Yr	2,153	3,076	Monthly MOU	137	135	Traffic/Capita/Yr.	N.A.	N.A.
	Minutes/Line/Mth	319	463	% Prepaid	23 %	3%	Monthly MOU	328	N.A.
	% International	3 %	2 %	SMS	2.165 bn	0.9 bn			
	% National	33 %	12 %	SMS/Line/Month	7.8	25			
	% Local	64 %	86 %						
Prices (Euro)	Monthly ARPU	44.2		Monthly ARPU	83.1	40	Monthly ARPU ³	7.82	N.A.
	Monthly Line Fee	11.1	10.4	Handset Price	180	256	Price/Month ²	9.58	6.95
	National Tariff	0.28	0.19	Monthly Line Fee	12-33	3.4-10			
	Local Tariff	0.08	0.13	Peak Tariff	0.15-0.50	0.07-0.29			
	National/Local	3.5	1.5	Off-Peak Tariff	0.08-0.20	0.07-0.18			

Source: OECD, Deutsche Telekom Half-Year Report 2000, Int. Telecom Statistic

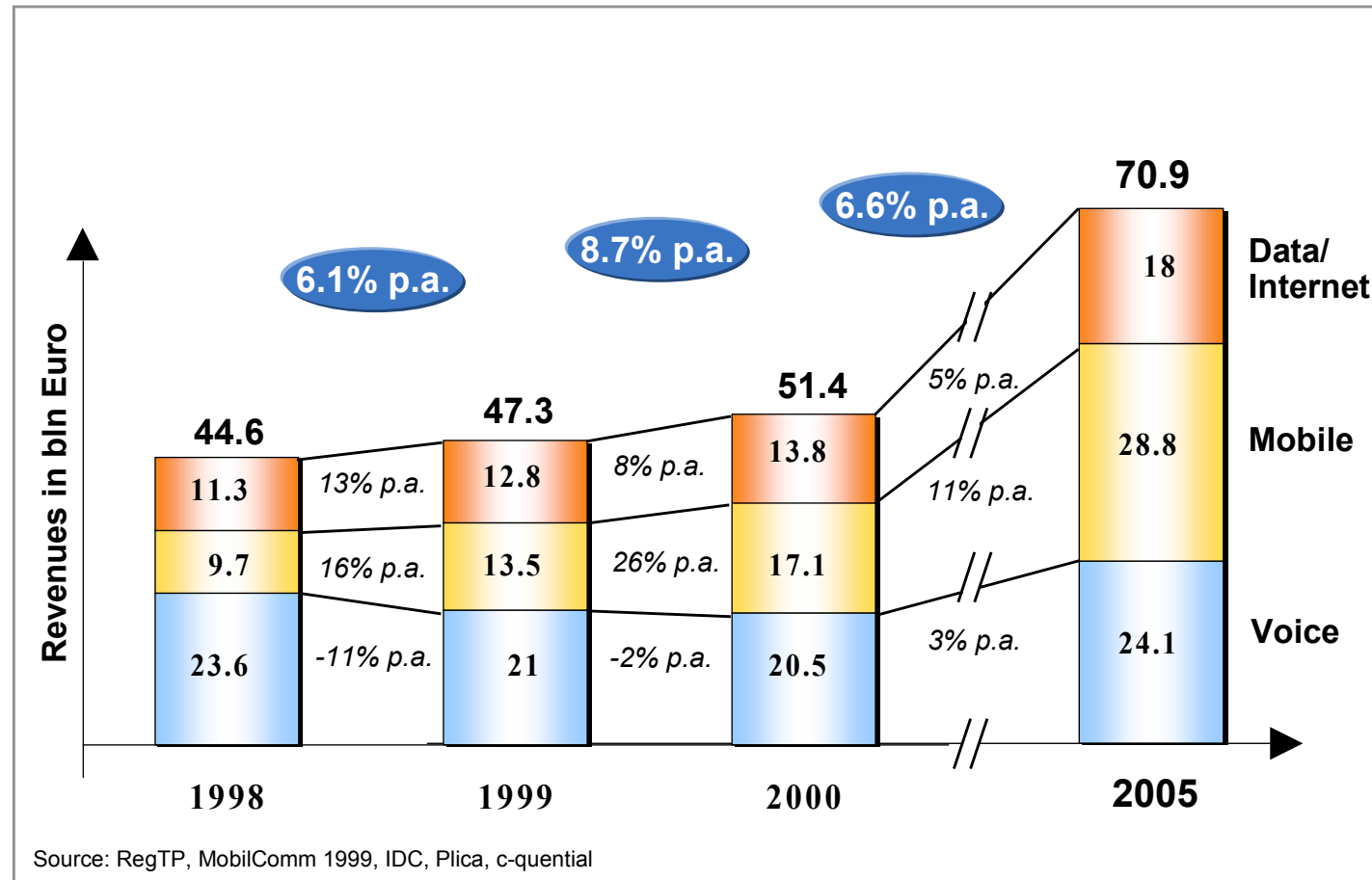
Note: all data 1999, except indicated otherwise

¹ 3Q/2000

² Purchasing power parity, US\$, 40 hrs usage, OECD

³ T-Online half-year report 2000

The German telecom market is growing at an attractive rate, driven by mobile and data/internet growth

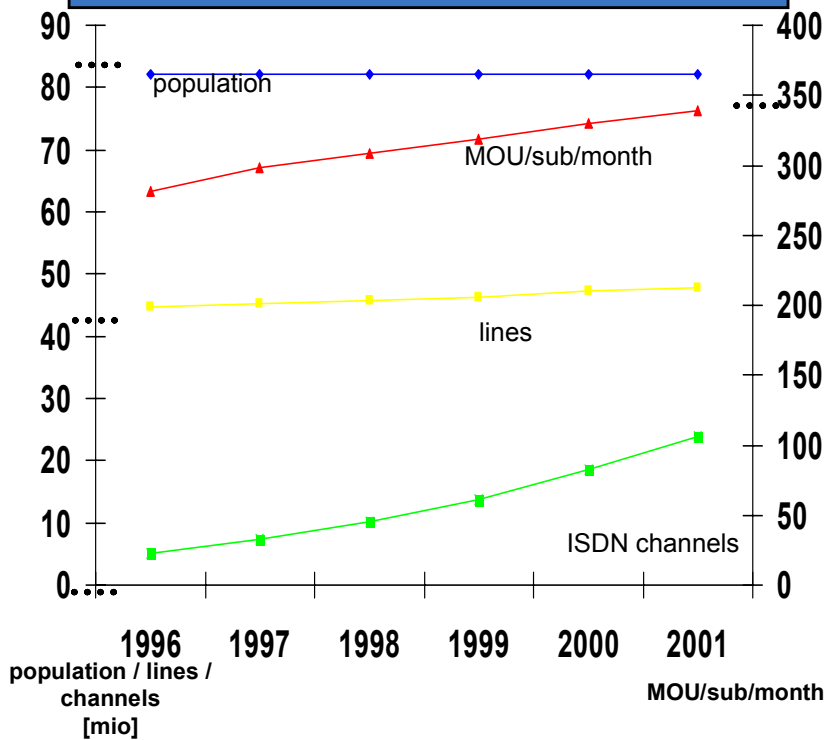


- Telecoms services in Germany account for about 51 bln Euro in 2000
- Mobile is the fastest growing segment in the German telecom service market
- Growth in fixed voice is slower; most of the additional revenues result from Internet dial-up services while the portion of traditional voice telephony went down due to large price cuts



The market for fixed voice is characterized by high penetration and a full range of services, while prices are dropping and ARPUs are stable

Subscribers and Usage

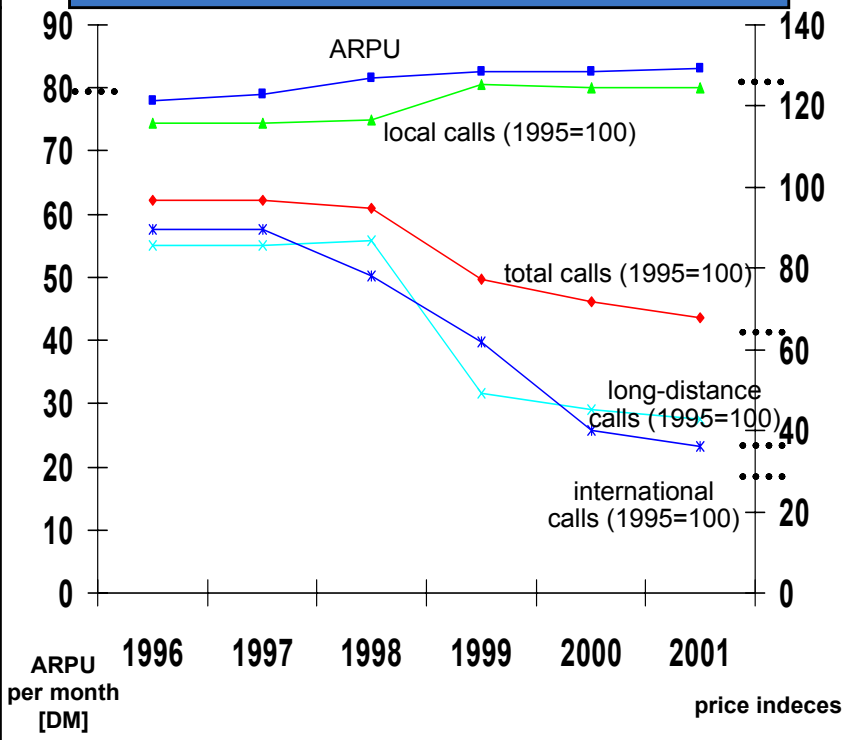


	Penetration 2000 (ISDN)	MOU/line/m 1999
Germany:	57.4% (22.5%)	Germany: 319
UK:	56.8% (9.6%)	UK: n.a.
France:	59.3% (6.1%)	France: n.a.

Competitive Service Availability

- call-by-call (open & closed) ✓
- preselection ✓
- direct access via unbundling ✓
- 0700 personal number ✓
- 0800 free-phone ✓
- 0180 shared cost ✓
- 0900/0190 premium rate ✓
- directory services ✓

ARPU and Pricing



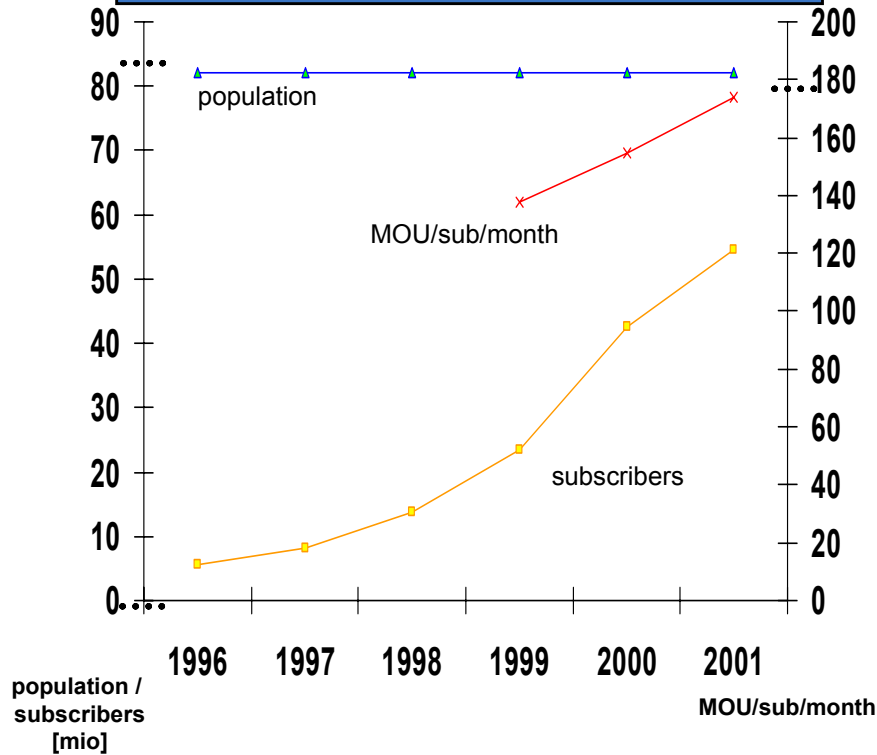
ARPU in DM 1999	
Germany:	82.5
UK:	72
France:	80.6

Source: IDC 1999, RegTP, HSBC, c-quantial
 Note: ARPU = Average Revenue per User; MOU = Minutes of use



The mobile segment is characterized by a strong increase in subscriber numbers, but decreasing ARPU and prices

Subscribers and Usage

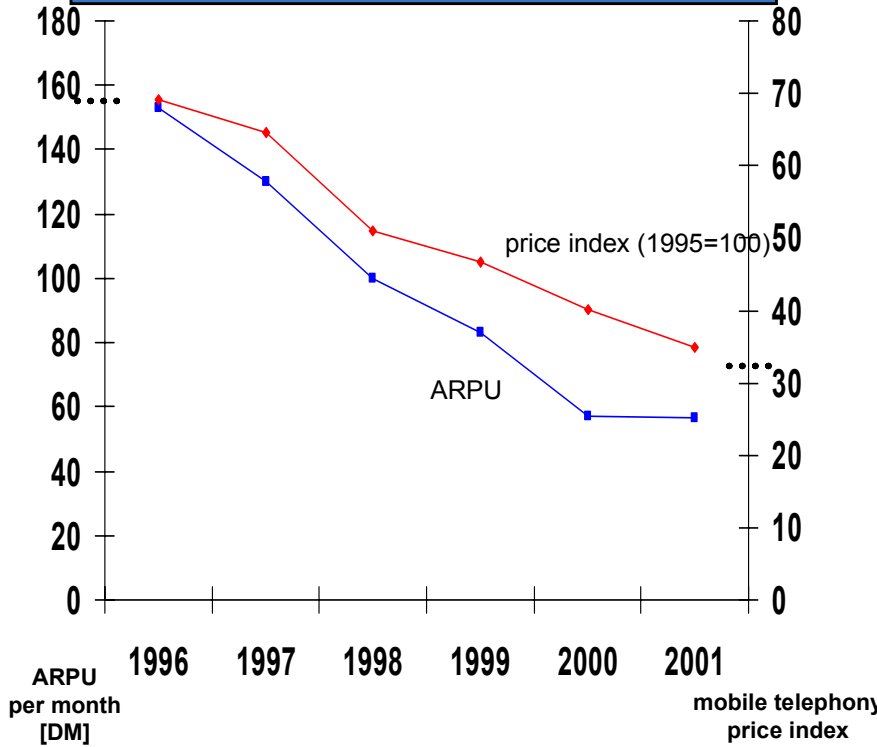


<u>Penetration 1999</u>		<u>MOU/sub/month 1999</u>	
Germany:	28%	Germany:	137
UK:	35.3%	UK:	116
France:	41.1%	France:	143

Competitive Service Availability

- Pre-paid ✓
- Contract ✓
- SMS ✓
- WAP ✓
- GPRS ✓
- HSCSD ✓
- City tariffs ✓

ARPU and Pricing



<u>ARPU in DM 1999</u>	
Germany:	83.1
UK:	68
France:	70.4

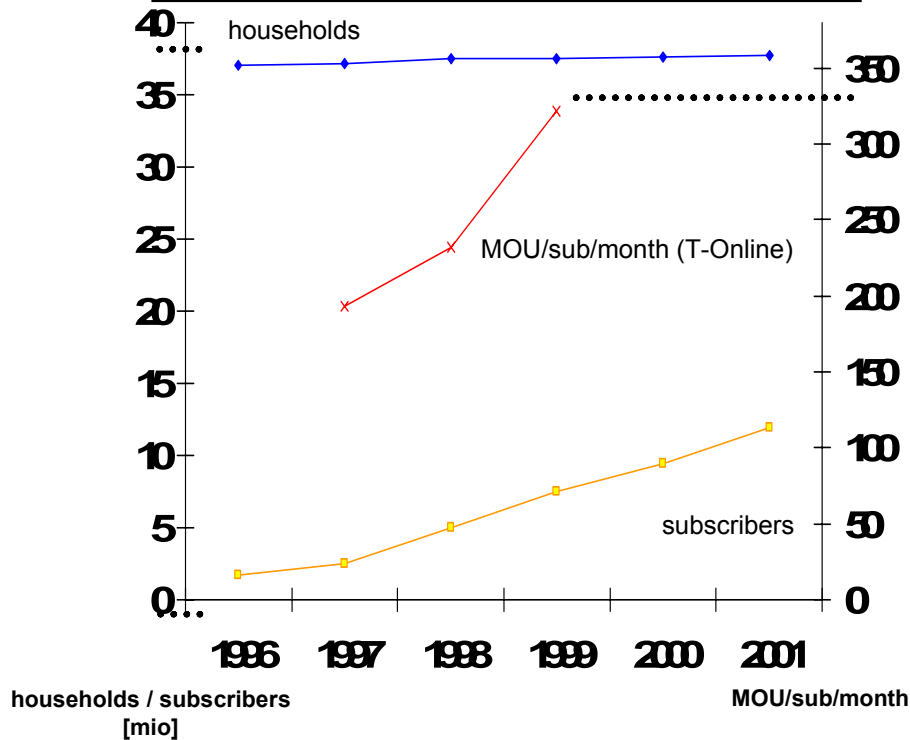
Source: Plica 1999, IDC 1999, RegTP, SchroederSalomonSmithBarney, c-quential

Note: ARPU = Average Revenue per User; MOU = Minutes of use



The internet segment is characterised by a steadily growing penetration, increasing online time and slightly increasing ARPU

Subscribers and Usage

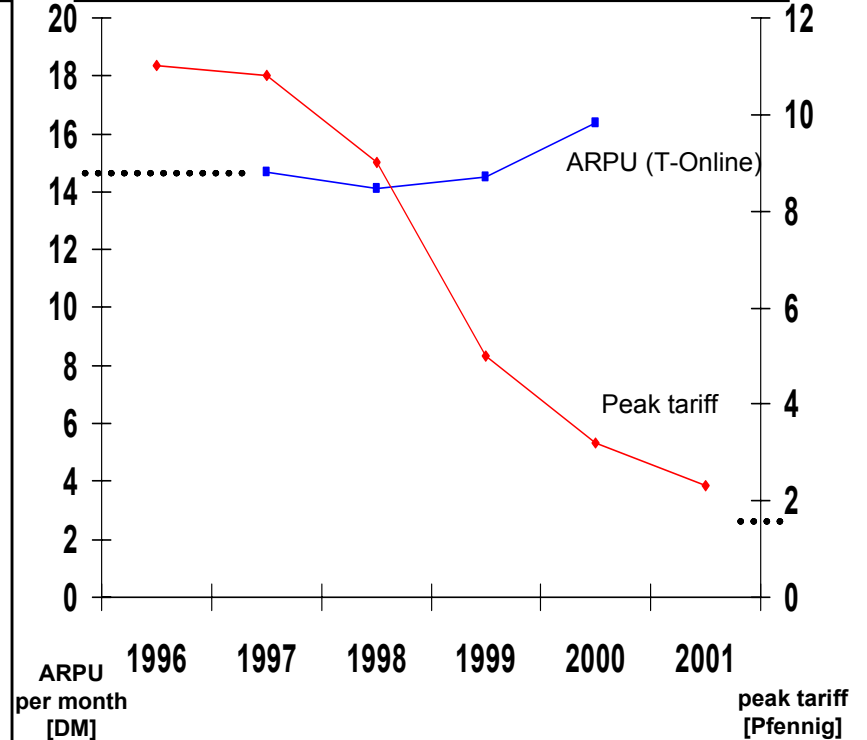


<u>Penetration 2000</u>		<u>MOU/sub/month 2000</u>	
Germany:	25%	Germany:	328
UK:	31%	UK:	334
France:	14%	France:	322

Competitive Service Availability

- Dial-up and permanent connectivity ✓
- Flat-fee and per-minute-all-inclusive tariff schemes ✓
- VPN ✓
- Hosting, Housing ✓
- ASP ✓
- ADSL, SDSL ✓
- Security ✓
- Online Banking ✓

ARPU and Pricing

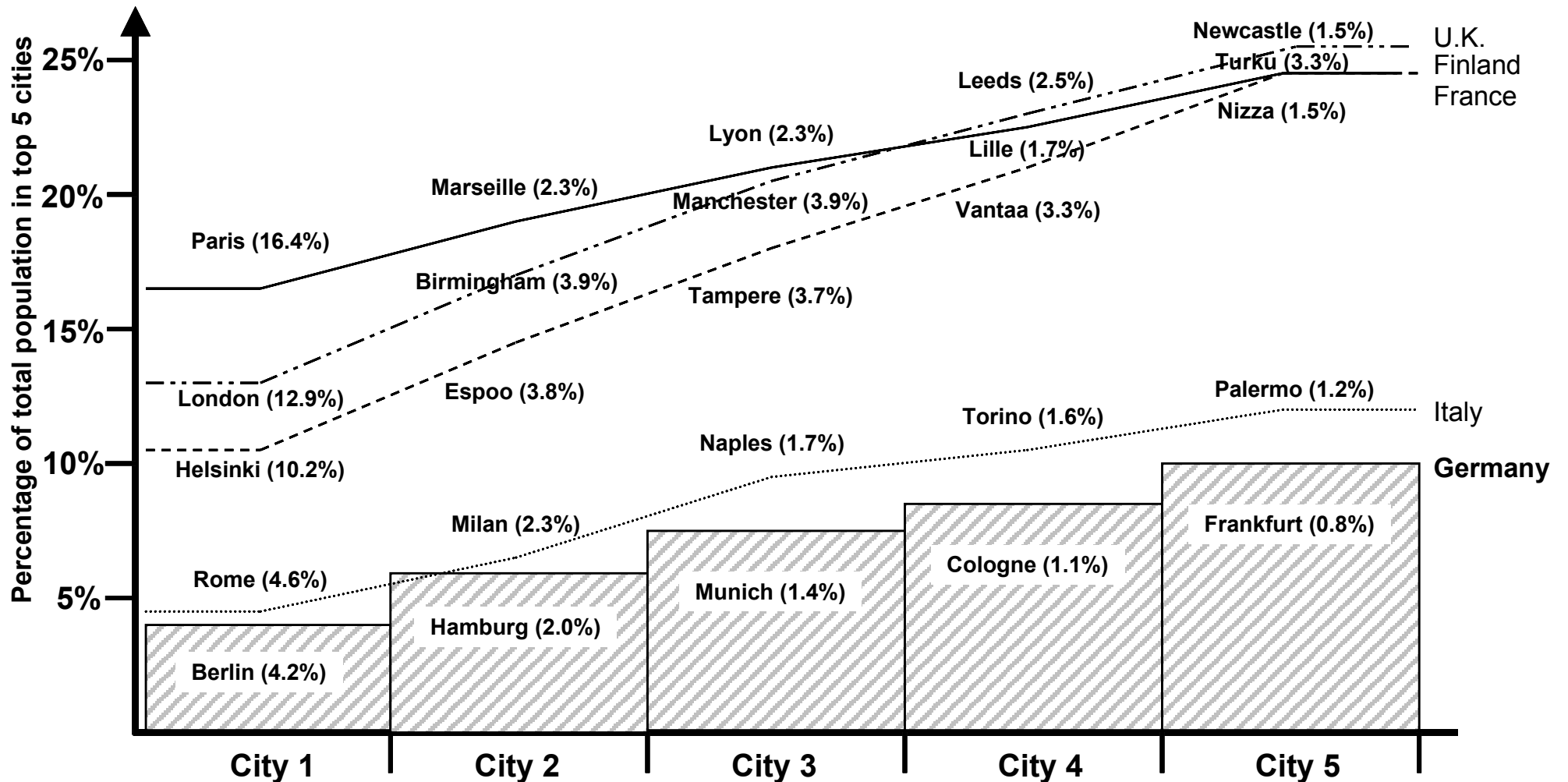


<u>ARPU in DM 2000</u>	
Germany	14.5
UK:	n.a.
France:	n.a.

Source: IDC 2000, Jupiter 2000, netvalue, HSBC, c-quential
 Note: ARPU = Average Access Revenue per User; MOU = Minutes of use
 MOU excludes access methods other than telephone circuit (e.g. DSL)

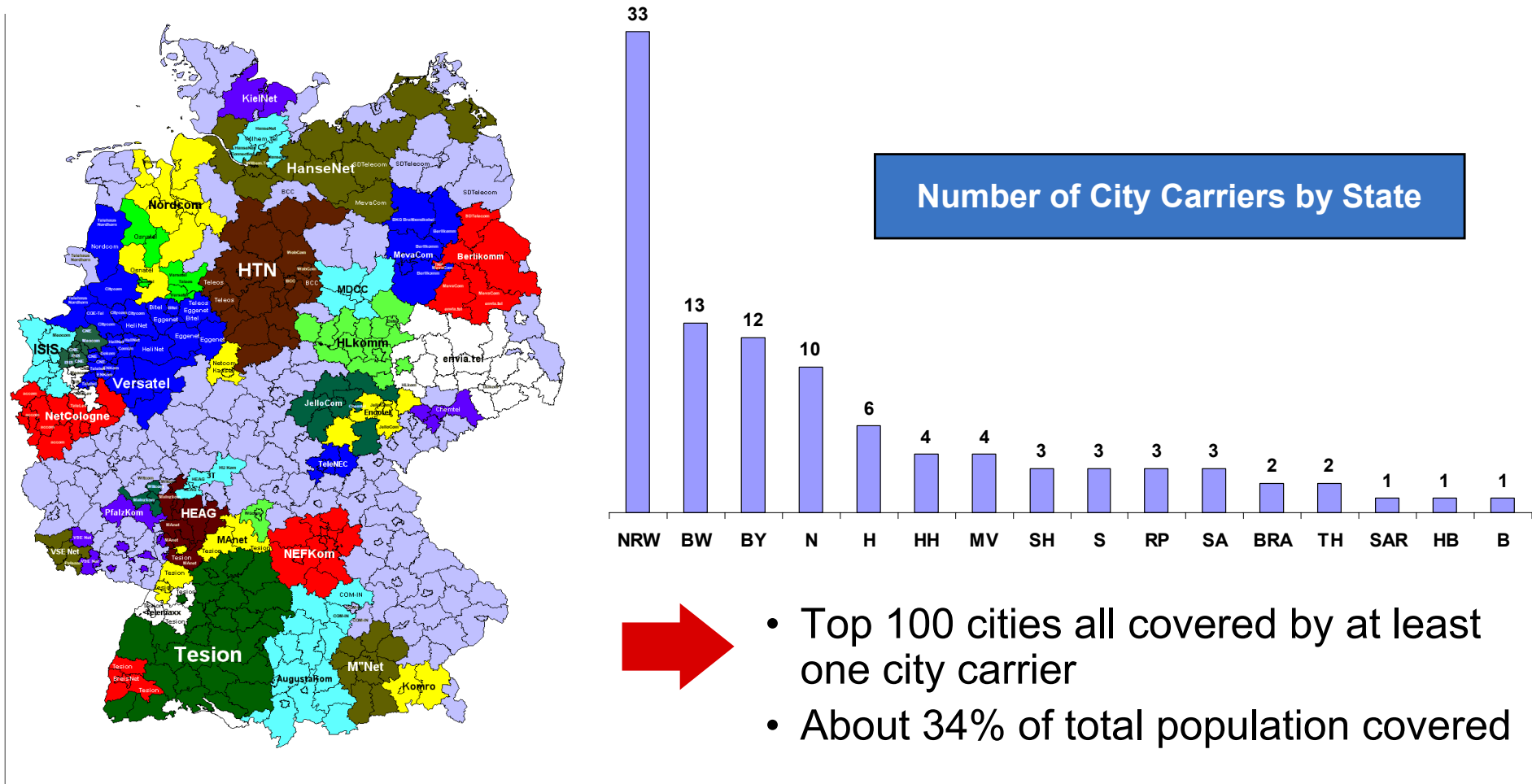


Demand in Germany is much more geographically spread compared to most European countries



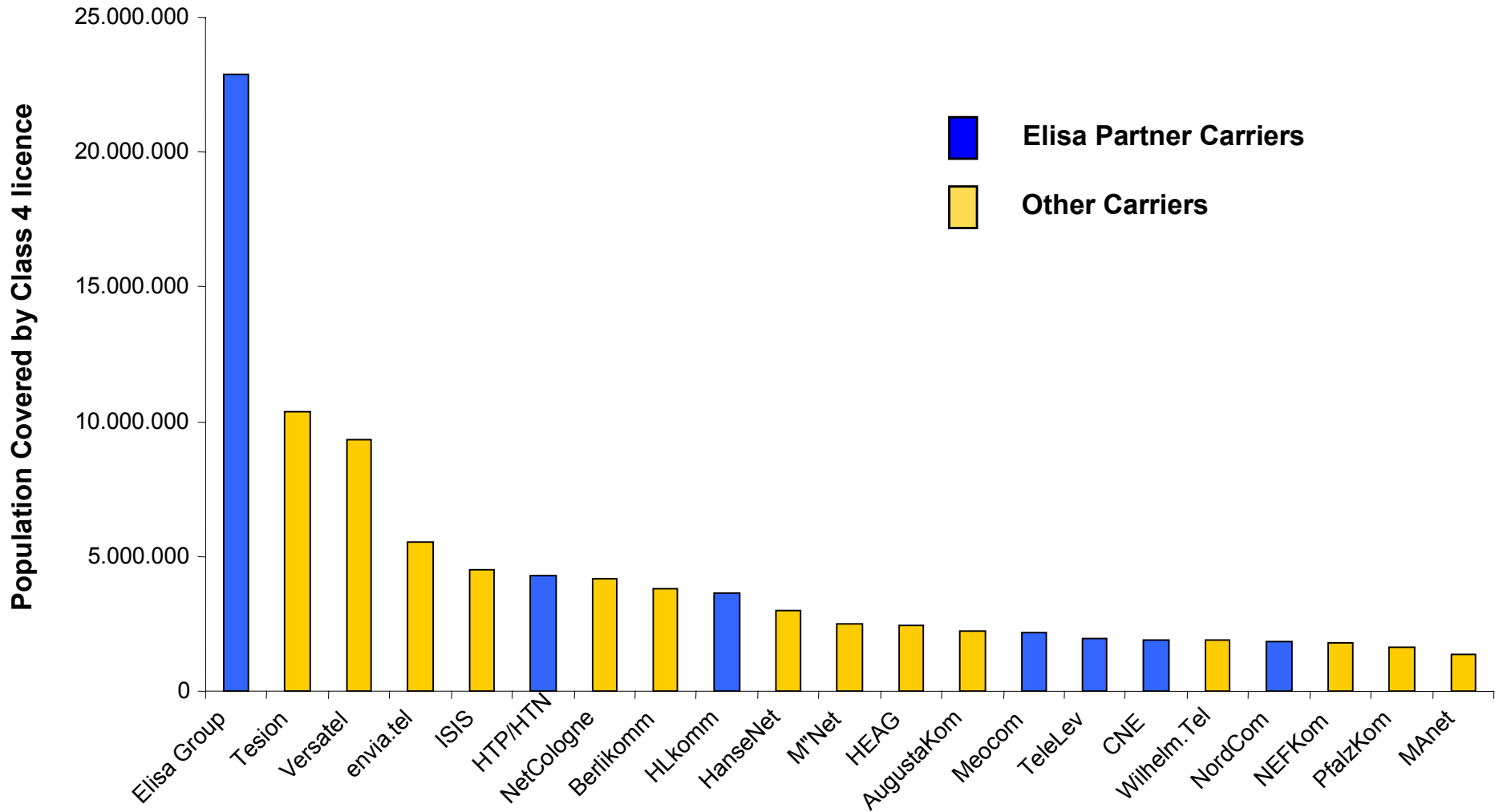
Source: c-quential analysis based on data from www.citypopulation.de

This is reflected in the large number of about 100 city and regional carriers which cover all major cities and about one third of the total population



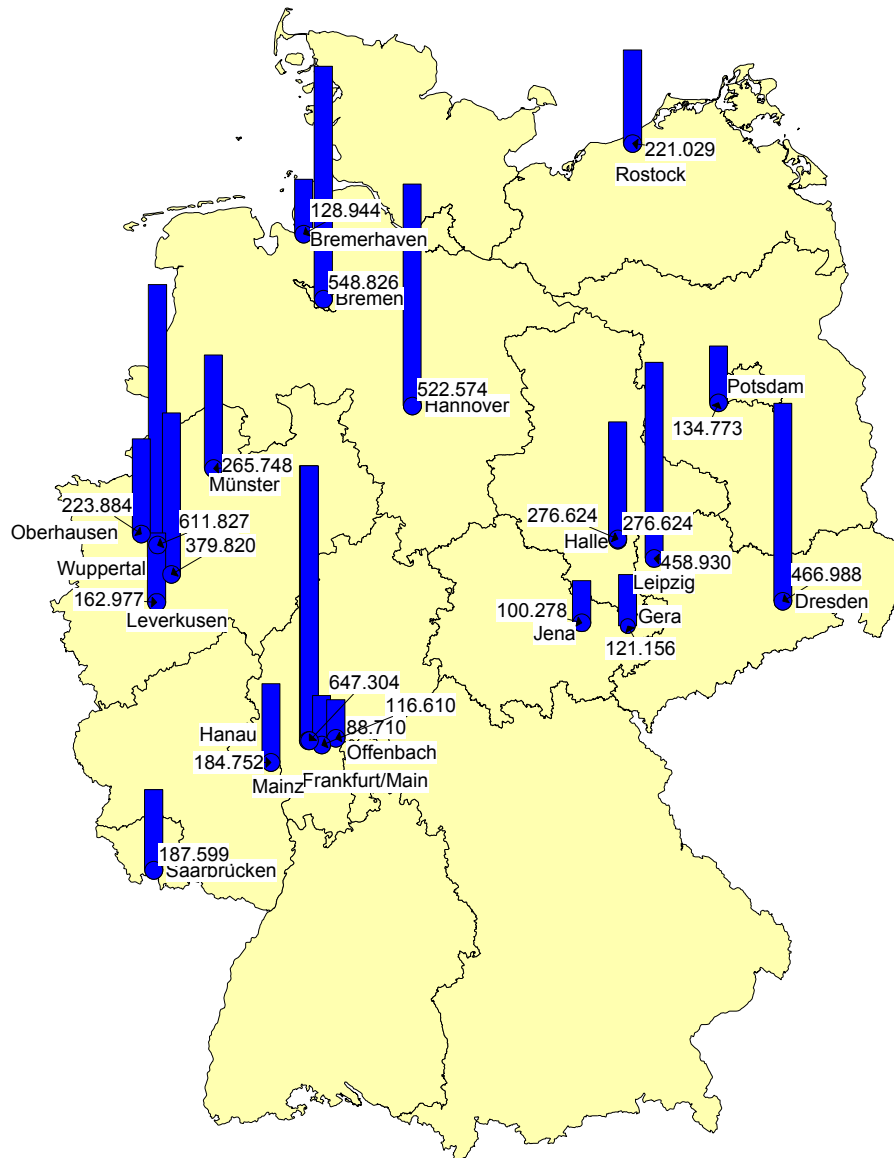


The largest of these city and regional carriers cover areas with a population of several million



Source: c-quential

Market Situation German City Carriers *Elisa City Carrier Population Coverage*



City Carrier	City	Quote (%)	City Inhabitants
nordCom	Bremerhaven		128.944
nordCom	Bremen		548.826
htp	Hannover		522.574
JelloCom	Jena		100.278
enco.tel	Gera		121.156
pulsaar	Saarbrücken		187.599
HLkomm	Halle		276.624
HLkomm	Leipzig		458.930
DDkom	Dresden		466.988
HU-KOM	Hanau		88.710
MAINZ-KOM	Mainz		184.752
3T	Offenbach		116.610
MAINOVA	Frankfurt/Main		647.304
RMN	Frankfurt/Main	See above	
Hansacom	Rostock		221.029
tnp	Potsdam		134.773
Citykom Münster	Münster		265.748
CNE	Essen		611.827
TeleBel	Wuppertal		379.820
TeleLev	Leverkusen		162.977
Meocom	Oberhausen		223.884
			5.625.469

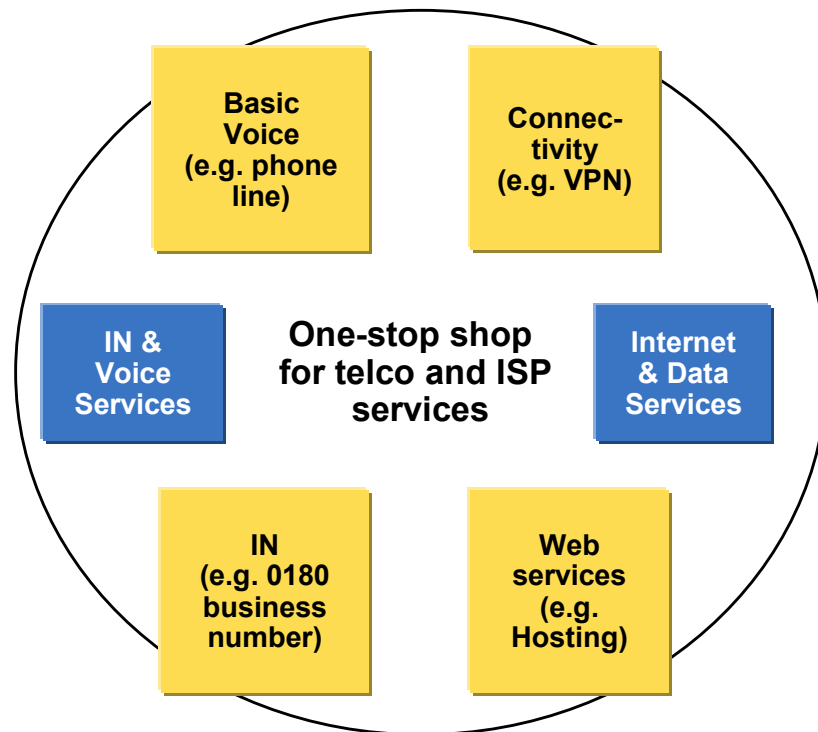
Source: dds data service 1997

The licence areas of the carriers actually cover a total population of approx. 23 Mio. inhabitants

Services, Marketing and Sales

Elisa's product strategy is to integrate and offer customer segment -tailored solutions as bundles of basic and value-added services produced by Elisa and partners

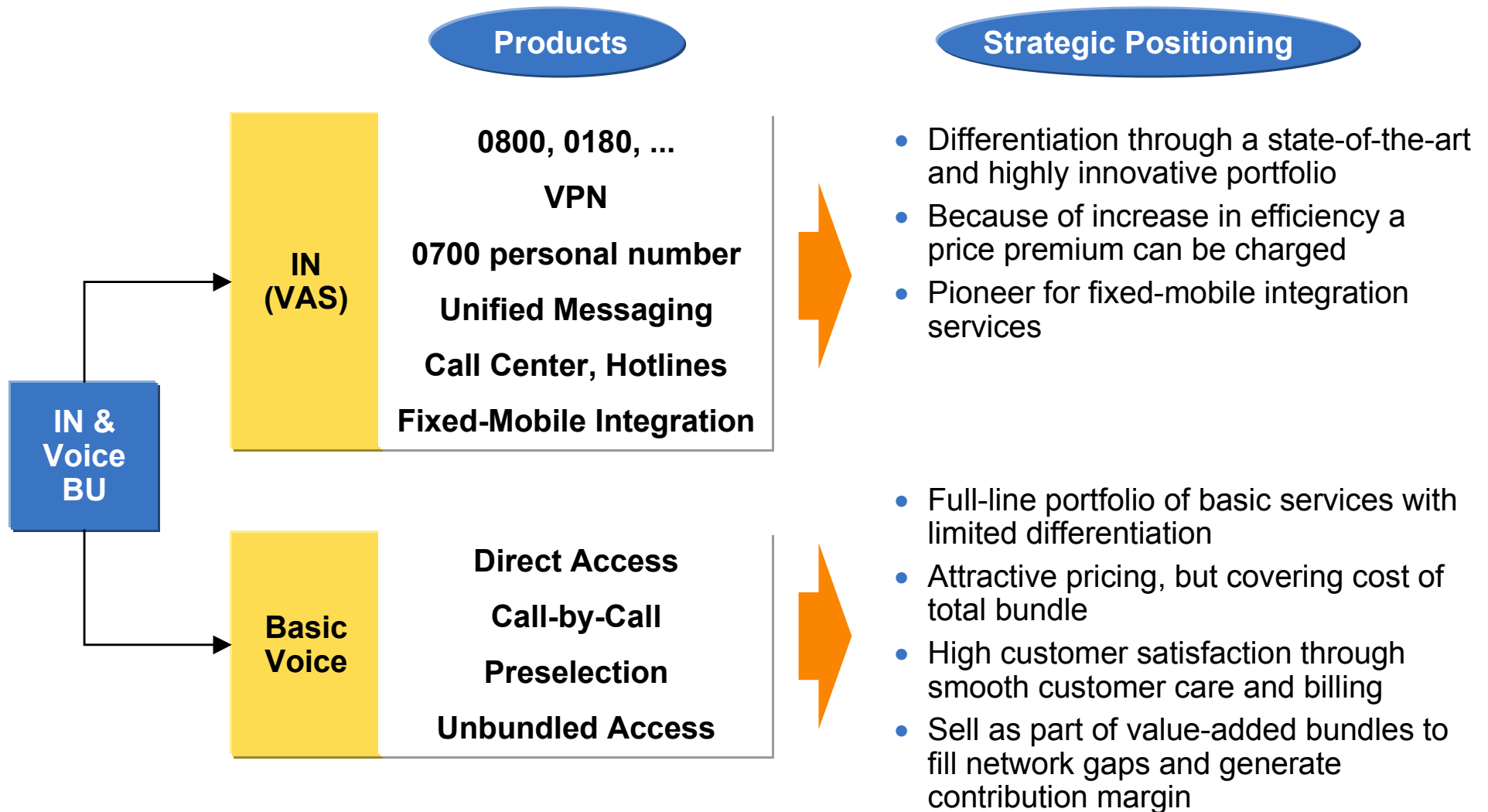
Portfolio Overview



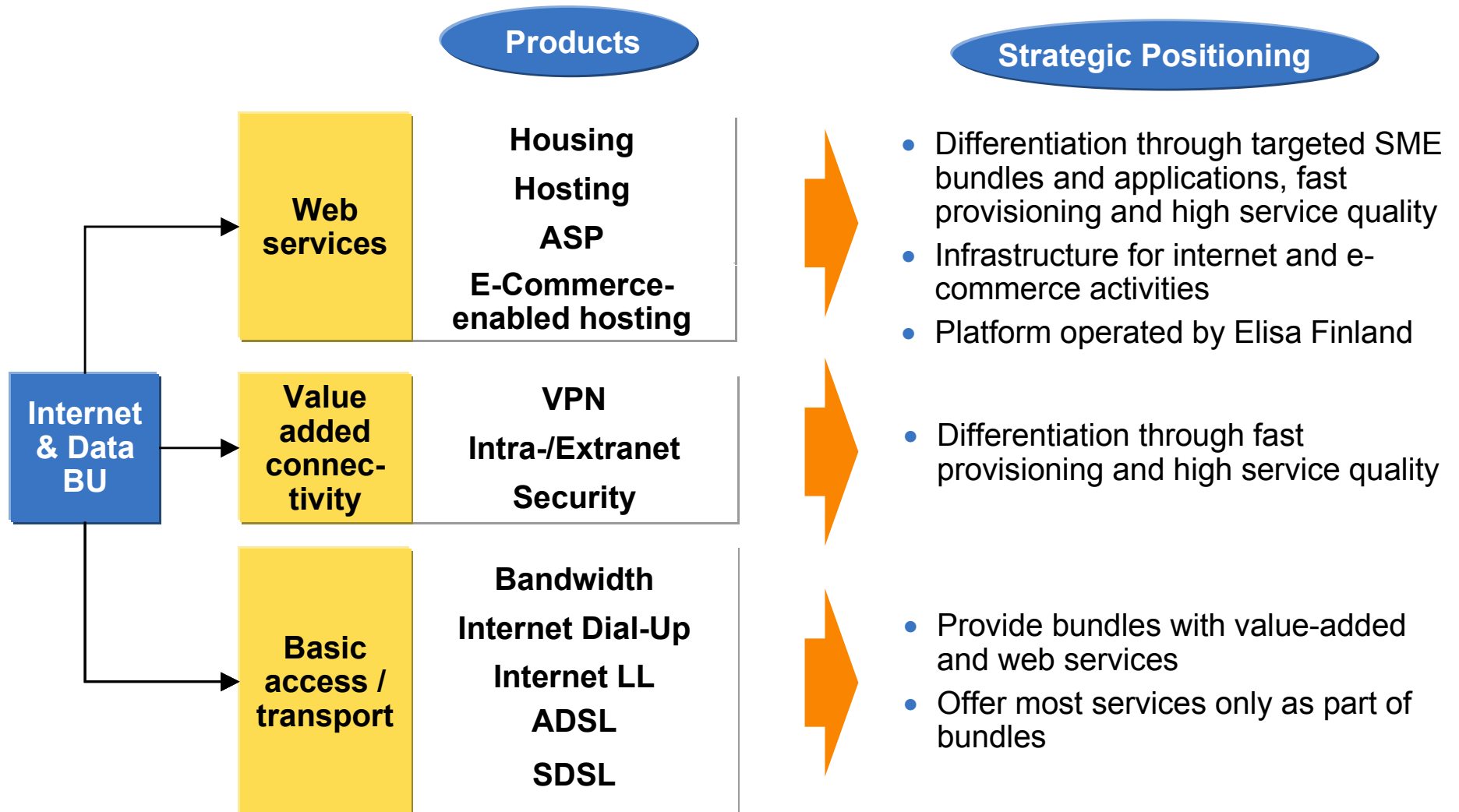
Basic Product Strategy

- Offer solutions as bundles for SME and SOHO segments and municipalities/municipal enterprises
- Offer only value-added products as stand-alone products
- Provide basic services only as components of bundles (or sometimes for contribution reasons)
- Make margins on value-added services
- Examples:
 - Voice: Call-by-call as a mobile access component of a total voice package for SME customers
 - Internet: Dial-up access as remote access component of a VPN bundle
- In the mid-term (starting 2001) Elisa will put much emphasis on developing innovative solutions tailored to the SME and SOHO segments









The IN & Voice business unit bundles basic voice services with state-of-the-art IN products from the Finnish parent company



The Internet & Data business unit offers a full-line portfolio through bundles of basic access, value-added connectivity and web services



Local city carrier brands are maintained but are supported by an Elisa umbrella brand; Mäkitorppa is an additional national brand

	Region with no city carrier	Region with city carrier
Carriers, Service Provider and ISPs		ElisaNet in cooperation with local carrier
Very large multis		Elisa Solutions in cooperation with local carrier
Large Corporates		
Medium enterprises	 Elisa Solutions 	 }   Local city carrier brands supported by Elisa brand
Small enterprises		
SO		
HO + HEC		
Mass Market		



The branding strategy follows the customer split

Network, Technology and Systems

Elisa operates a low-cost national backbone network as well as local access MANs in areas covered by its city carriers



National backbone network

- 3,500 km of fibre optic cable
- Bandwidth of 16 * STM-64 nationwide by year end 2000
- Interconnected with 23 carriers
- SDH equipment of Siemens
- DWDM equipment of Siemens
- Peering agreements with DICIX and Telia

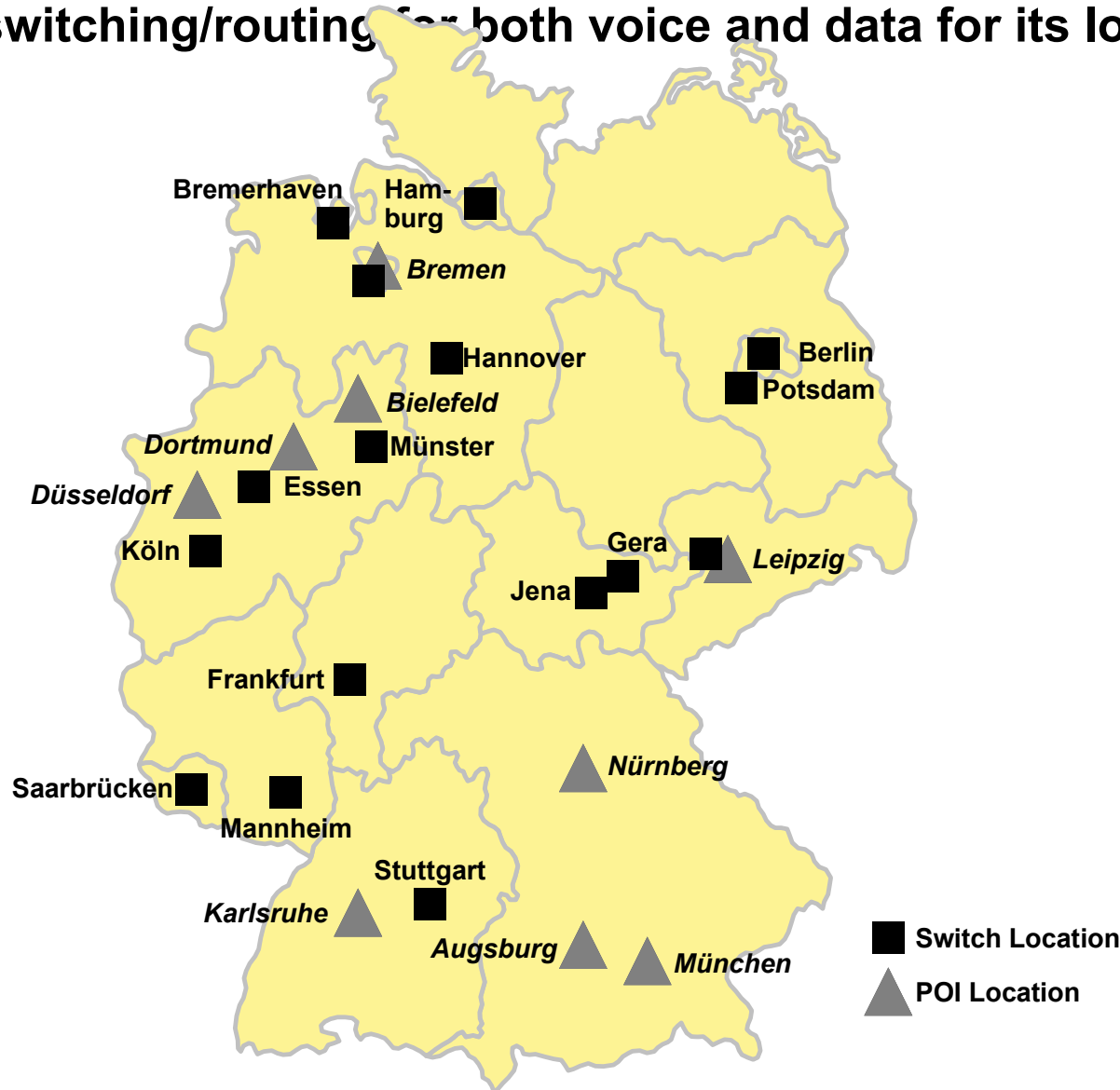
Local access MANs

- 2,664 km of fibre optic cables
- 4,235 km of copper cables
- SDH equipment of Bosch-Marconi, Siemens, Nortel, ECI
- Bandwidth capacity from 64 kbit/s up to STM-64
- MANs are located in 25 cities



The national network is being interconnected with the local city carrier networks

On this network, Elisa provides national network management and switching/routing for both voice and data for its local carriers



Voice

- 22 switches
 Thereof: 13 Nokia switches
 8 Siemens switches
 1 Alcatel switch
- Systems/Versions:
 Nokia DX 220
 Siemens EWSD V12 and V13
 Alcatel S12
- Around 630 ICAs (incl. city carriers and ElisaNet)

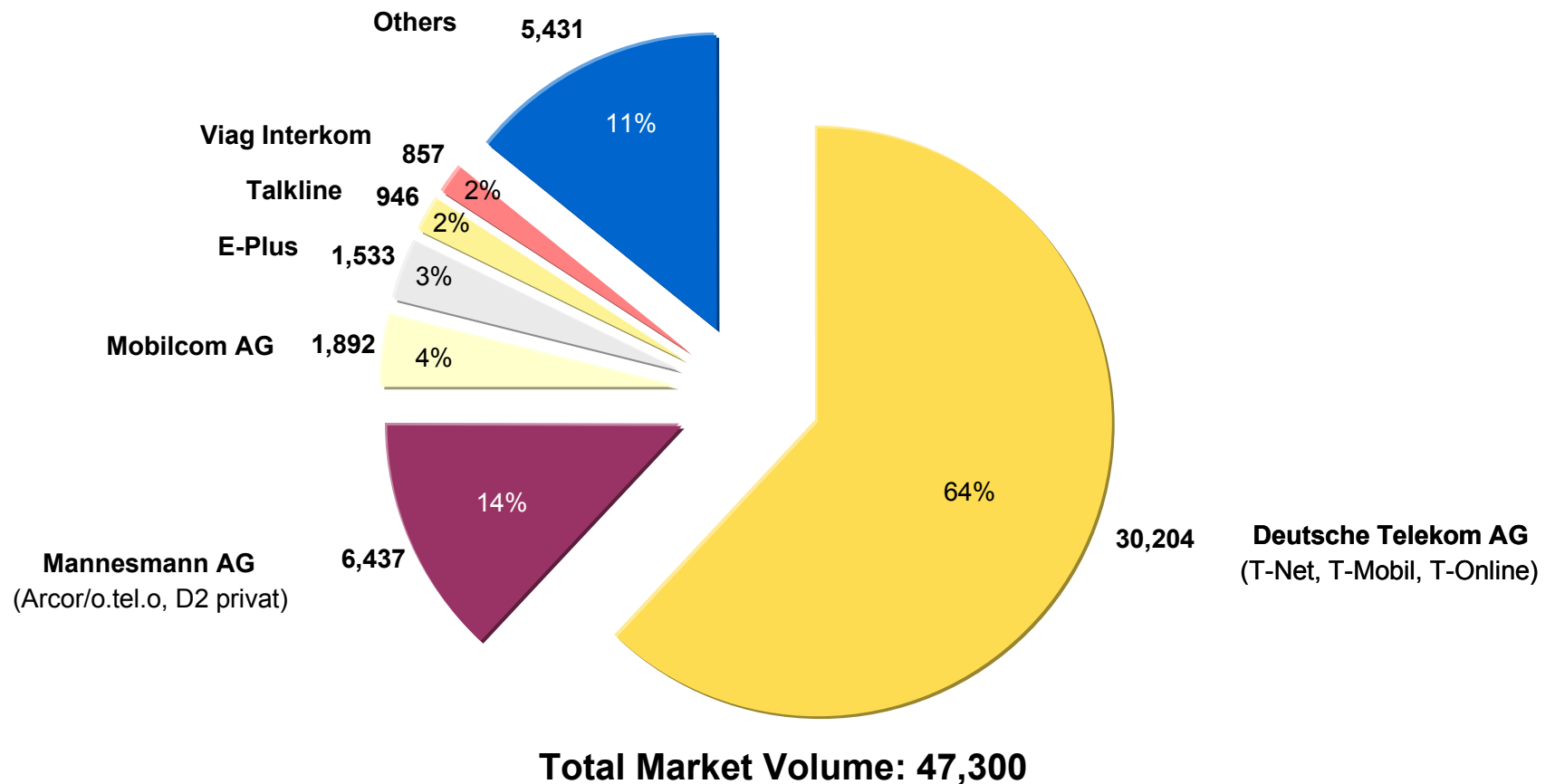
Data

- One hop internet strategy with 1 core router in Frankfurt (equipment: Juniper Networks M10)
- >70 access routers at city carriers (equipment: mainly CISCO C800/C2500/C7200)
- E3 to STM-1 connections from city carriers to PoP in Frankfurt

Competitive Advantage

After three years of deregulation new entrants have managed to capture one third of the market

Market Shares in the German Telecommunication Market 1999
(in million Euro)





Compared with the largest players, Elisa is positioned competitively along the value chain

	Access	Backbone	Switches	Products	Channels
Elisa	Strong	Strong	Strong	Medium	Strong
DTAG	Strong	Strong	Strong	Strong	Strong
Arcor	Medium	Strong	Strong	Strong	Medium
Mobilcom	Medium	Strong	Strong	Medium	Strong
Talkline	Weak	Strong	Strong	Medium	Weak
Viag Interkom	Medium	Strong	Strong	Strong	Medium

