Remedies for Telecom Recovery: One Year Later
- Some Observations in Europe/Germany –
Columbia University, NY
October 29, 2004

Arnold Picot
Konrad Adenauer Visiting Professor
BMW Center for German and European Studies
Georgetown University, Washington DC

and

Institute for Information, Organization and Management
Ludwig-Maximilians-University
Munich - Germany
Agenda

• Reactions
• Markets
• Strategic Trends
Established Carriers’ major actions to cope with the crisis

- Streamlining and focusing the portfolio
- Trimming the organization (staff reduction)
- Reducing debt burden – improving cash flow
- Reorganization: modularization and customer orientation (examples: FT, DT)
- Gradually moving from time- and volume based pricing of single services to subscription- and flatrate-oriented pricing of bundled services (still ongoing)
  ➔ Pressure on new competitors; more predictable revenue streams; better alignment with cost structure; irritating the regulator
Agenda

• Reactions
• Markets
• Strategic Trends
Worldwide ICT Markets by Region, 2004

Market value 2004: 2160 Billion Euro

- USA: 32.0%
- Europe*: 30.2%
- Rest of the World: 25.8%
- Japan: 12.0%

*incl. Eastern Europe

Western European ICT Market by Country, 2004

Market value 2004: 611 Billion Euro

Western European ICT Market Structure, 2003

- Carrier services: 43.4%
- IT-services: 20.6%
- Computer hardware: 12.7%
- Datacom & network equipment: 6.5%
- Office equipment: 1.6%
- End-user communications equipment: 4.2%
- Software products: 10.9%

Market value 2004: 592 Billion Euro

Western European ICT Market Growth 1995-2005, in %

Market value 2004: 611 Billion Euro

Western Europe ICT Market Growth by Segment 2003-2005, in %

Market value 2004: 611 Billion Euro

Western European ICT Market Growth by Country 2004-2005, in %

Market value 2004: 294 Billion Euro

Worldwide TLC Market by Region, 2004

Market value 2004: 1,190 Billion Euro

Western European Telecom Market Growth by Country 2004-2005, in%

Market value 2004: 317 Billion Euro

Current Development on the German Telecommunication Market

**Market Volume 2001: 59,9 bn. Euro**
- Fixed-network customers, voice phone services: 35,1%
- Cable TV: 4,5%
- Carrier business: 10,5%
- Rental lines: 2,0%
- Miscellaneous: 15,9%
- Mobile phone services: 32,1%

**Market Volume 2002: 61,1 bn. Euro**
- Fixed-network customers, voice phone services: 36,0%
- Cable TV: 4,6%
- Carrier business: 10,0%
- Rental lines: 1,6%
- Miscellaneous: 15,2%
- Mobile phone services: 32,6%

**Market Volume 2003: 63,4 bn. Euro**
- Fixed-network customers, voice phone services: 38%
- Cable TV: 4%
- Carrier business: 10%
- Rental lines: 1%
- Miscellaneous: 13%
- Mobile phone services: 34%

Liberalization has led to Increased Competition in all Market Segments

German market (2004)

<table>
<thead>
<tr>
<th>Local calls</th>
<th>Long-distance international calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deutsche Telekom ↓</td>
<td>Deutsche Telekom ↓</td>
</tr>
<tr>
<td>Service providers ↑</td>
<td>national and international</td>
</tr>
<tr>
<td>city network operators (e.g.</td>
<td>operators of own networks↑</td>
</tr>
<tr>
<td>Netcologne)</td>
<td>service providers ↑</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease in market power</td>
<td>Increase in market power</td>
</tr>
</tbody>
</table>

edmund a. walsh  school of foreign service
Current Development on the German Wireline Market

Development of minutes of connection in fixed-telephony services (1997-2003)

Development of competitor`s shares of minutes in fixed-telephony services (1997-2003)

Source: RegTP (2003b)
Current Situation on the German Telecommunication Market

Market share of minutes of connection in fixed-telephony networks (1st quarter of 2003)

<table>
<thead>
<tr>
<th>Local Calls</th>
<th>Internet Access (broadband)</th>
<th>Long Distance Calls</th>
<th>Mobile Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.9%</td>
<td>94.2%</td>
<td>53%</td>
<td>58%</td>
</tr>
<tr>
<td>9,1%</td>
<td>5,8%</td>
<td>47%</td>
<td>42%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>International Calls</th>
<th>Internet Access (narrow band)</th>
<th>Miscellaneous</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>60%</td>
<td>66%</td>
<td>68%</td>
<td>56%</td>
</tr>
<tr>
<td>40%</td>
<td>34%</td>
<td>32%</td>
<td></td>
</tr>
</tbody>
</table>

Source: RegTP (2003b)
Development of the international tariffs to the 10 most important destination countries
(as from 28 January 2004)
Standard tariffs without discount – peak hours weekdays

<table>
<thead>
<tr>
<th>Country</th>
<th>Cents per minute DT</th>
<th>Cents per minute Competition 28.01.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>2.6</td>
<td>49.08</td>
</tr>
<tr>
<td>Great Britain</td>
<td>2.7</td>
<td>49.08</td>
</tr>
<tr>
<td>Italy</td>
<td>2.6</td>
<td>49.08</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2.7</td>
<td>49.08</td>
</tr>
<tr>
<td>Austria</td>
<td>2.5</td>
<td>49.08</td>
</tr>
<tr>
<td>Poland</td>
<td>3.5</td>
<td>49.08</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3</td>
<td>49.08</td>
</tr>
<tr>
<td>Spain</td>
<td>2.6</td>
<td>49.08</td>
</tr>
<tr>
<td>Turkey</td>
<td>12.2</td>
<td>67.49</td>
</tr>
<tr>
<td>USA</td>
<td>2.7</td>
<td>73.63</td>
</tr>
</tbody>
</table>

Sources: RegTP (2003a), p. 30
Development on the German Market for Wireless Communication

Number of subscribers (in.tsv.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of subscribers (in.tsv.)</th>
<th>Penetration Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>1,2% 953</td>
<td>1,2%</td>
</tr>
<tr>
<td>1993</td>
<td>2,2% 1,768</td>
<td>3,0%</td>
</tr>
<tr>
<td>1994</td>
<td>3,0% 2,482</td>
<td>3,764</td>
</tr>
<tr>
<td>1995</td>
<td>4,6% 3,764</td>
<td>5,528</td>
</tr>
<tr>
<td>1996</td>
<td>6,8% 5,528</td>
<td>8,276</td>
</tr>
<tr>
<td>1997</td>
<td>10,1% 8,276</td>
<td>13,913</td>
</tr>
<tr>
<td>1998</td>
<td>17,0% 13,913</td>
<td>23,446</td>
</tr>
<tr>
<td>1999</td>
<td>28,5% 23,446</td>
<td>48,202</td>
</tr>
<tr>
<td>2000</td>
<td>58,6% 48,202</td>
<td>56,126</td>
</tr>
<tr>
<td>2001</td>
<td>68,1% 56,126</td>
<td>60,043</td>
</tr>
<tr>
<td>2002</td>
<td>71,6% 60,043</td>
<td>71,6% 2,000</td>
</tr>
<tr>
<td>2003</td>
<td>78,3% 71,6% 2,000</td>
<td>68,1% 953</td>
</tr>
</tbody>
</table>

Sources: RegTP (2003), p. 31; RegTP (1999)
Broadband Access of Private Households (in %)

Source: Arthur D. Little (2003)
Market Shares for Broadband Access in Germany (End of 2003)

Total number of customers (by connection)
- Cable modem 60,000
- DSL competitors 400,000
- Satellite 45,000
- DTAG DSL 4.1 Mio

Market shares of competitors (DSL, cable modem, satellite, Powerline)

Source: Reg TP (2003a), p. 20; RegTP (2003b)
Growth and Competition

Breitband-Internet in Europa

*Alle Breitband-Anbieter neben dem Ex-Telkommsmonopolisten
Quelle: European Competitive Telecommunications Association (ECTA)

Source: FAZ (2004)
Broadband Penetration and Platform Competition

Source: DotEcon/Criterion Economics (2003)
Agenda

• Reactions
• Markets
• **Strategic Trends**
Strategic Trends I

• The new European regulatory framework will gradually shift the emphasis from
  – technology focus to market focus (due to its technological neutrality),
  – ex ante to ex post regulation,
  – sector specific Telco law to competition law
thereby opening new potentials for competition and growth

• Digitalization and technological dynamics will drive convergence and will incessantly overturn traditional Telco business models
Strategic Trends II

- Telecommunications companies will have to decide on their **strategic focus**, e.g.:
  - **Comprehensive service provider** with a high degree of vertical and horizontal integration (incumbents)
    - But: Too large a portfolio of necessary horizontal and vertical competences to be manageable? Efficiency problems due to lacking scale and synergy advantages?
  - Consumer oriented **sales & marketing specialist** with branding competence (e.g. MVNO)
    - But: Can a marketing & sales machine survive in telecom without a real product and production base?
  - **Platform provider**, i.e. design and operation of technologically advanced platforms (e.g. some cable companies)
    - But: Sustainable competitive advantage possible? Revenue sharing? Access regulation
  - Transportation services based on **infrastructure** ("bit pipe"; "big broadband" through FTTx; new forms of neutral ownership and financing of infrastructure; sharing of infrastructure)
    - But: Profitability? Revenue sharing? Monopoly and regulation?

- The strategic choice decides on the set of competences to be kept internally
Strategic Trends III

• Digitalization, convergence and sustained technological pace will require
  – more target group specific service **packages** and **bundling** of products
  – more **flexibility** and quicker reaction to technological and market changes
  – an experimental, market driven trial and error approach to the generation of new services rather than a comprehensive, long term planning approach
  – a dynamic network of partners that provides complementary products and services („**business webs“")
  – more business and revenue models based on **all inclusive tariffs** and **flat-rates** instead of unit prices (on both resale and wholesale levels)
  – more interconnection agreements based on „**bill and keep“-models"

• **Innovation** is key! **But**, seen the uncertainty of users’ behavior and the capital risks, innovation is more difficult to bring about than before

• In order to exploit economies of scale and to employ overcapacities **consolidation** of the industry will continue and international mergers and alliances as well as **international expansion** will be rediscovered.