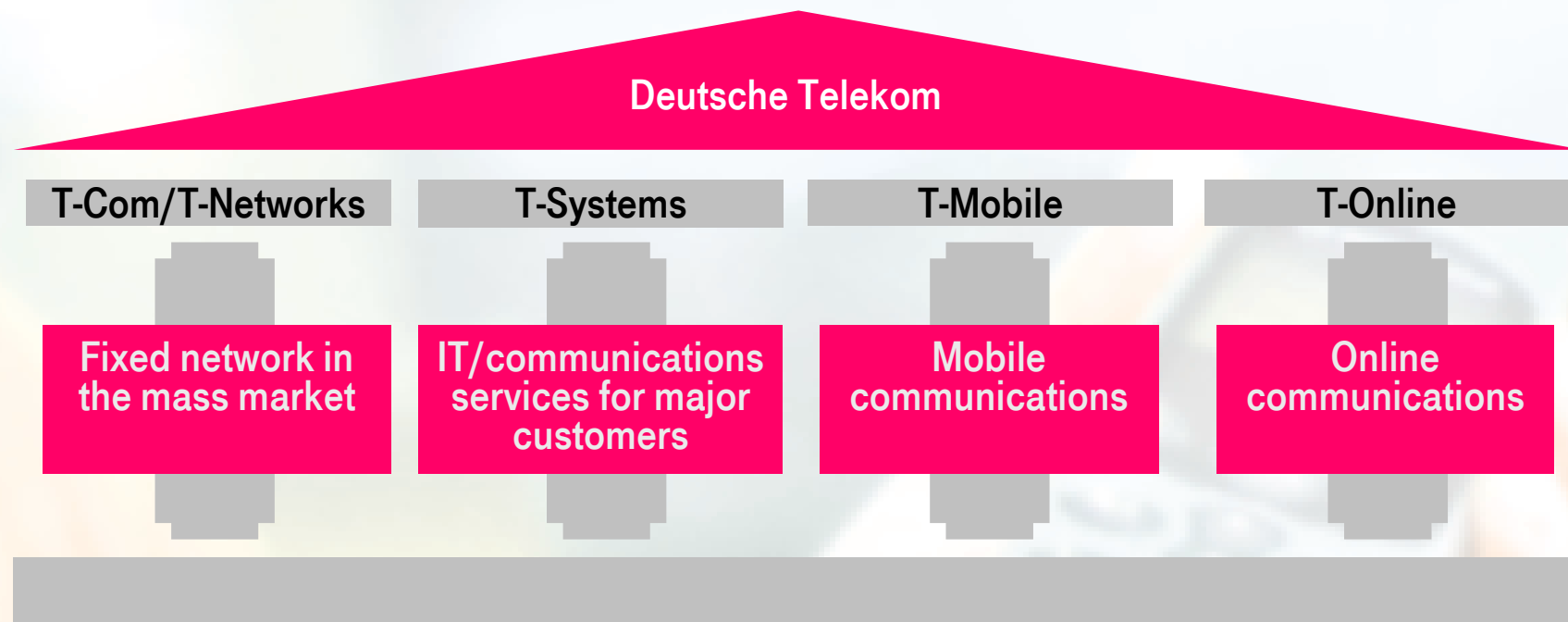


# Towards 3G\_Experiences from Europe - Communications in a mobile world

Dr. Ing. Hans-Peter Quadt, Central Unit Innovation

Our company

# Deutsche Telekom AG: Corporate Structures

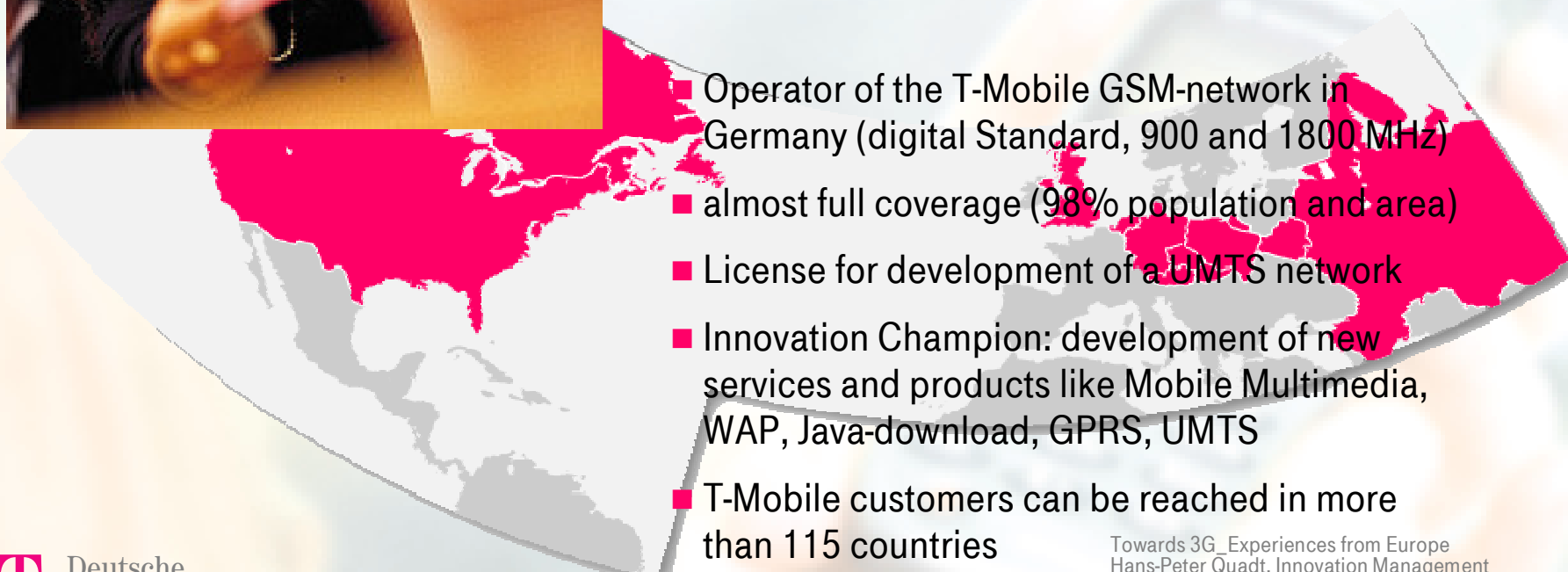


Our company

## T-Mobile

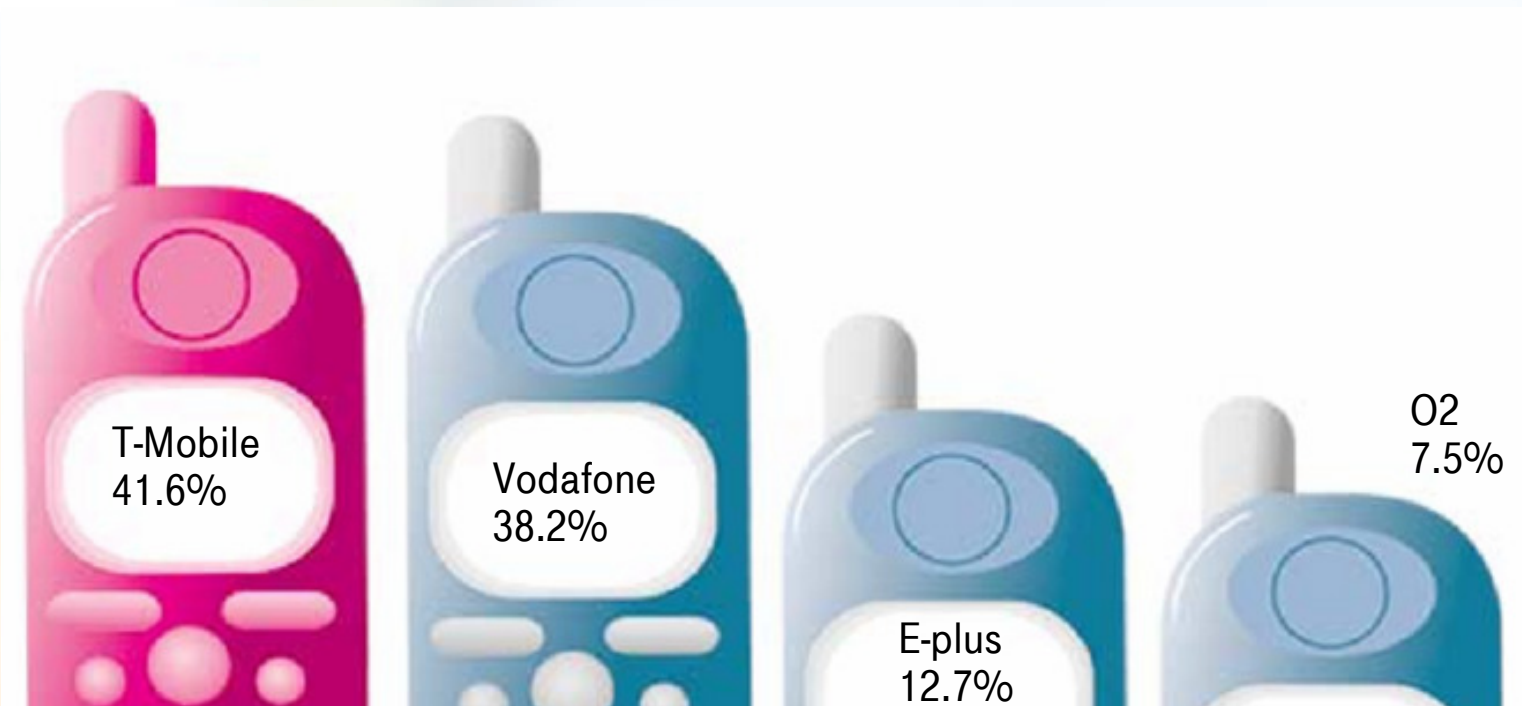


- Established on July 1, 1993
- 100% subsidiary of the T-Mobile International AG
- About 9,000 employees (status: end of 2002)
- About 24 million customers (status: end of 2002)
- Market leader in Germany
- More than 3.7 billion Euro turnover in the first half of 2002 (last year 3.4 billion Euro)

- 
- Operator of the T-Mobile GSM-network in Germany (digital Standard, 900 and 1800 MHz)
  - almost full coverage (98% population and area)
  - License for development of a UMTS network
  - Innovation Champion: development of new services and products like Mobile Multimedia, WAP, Java-download, GPRS, UMTS
  - T-Mobile customers can be reached in more than 115 countries

Our market

## Mobile communications operators and their market shares in Germany

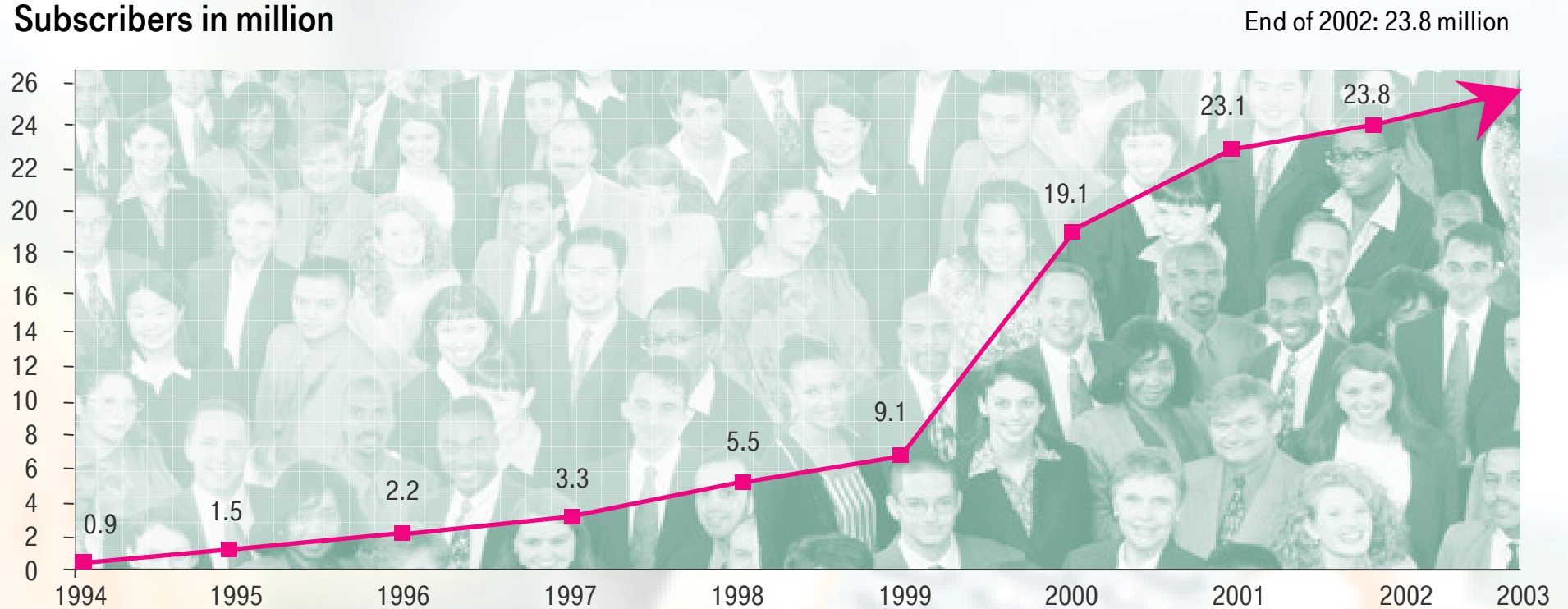


Source: Carrier statement/own estimate (June 30, 2002)

Our market

# Customer development: T-Mobile network

## Subscribers in million



T-Mobile products

## Tailored solutions for companies: T-D1 Company



- Different rates for individual requirements
- Innovative communications solution especially for company customers
- IT partnerships for joint development and sales
- New technologies for innovative applications: W@P, GPRS, UMTS

## Mobile Data Services: optimized applications for mobile offices



### Mobile Access Portal:

- T-Mobile enables access to existing corporate network via a handheld with GPRS-standard, for example mobile phone, PDA (Personal Digital Assistant), MDA (Mobile Digital Assistant) and notebook

### Mobile Service Portal:

- Additional full-service offer with additional applications
- User has access to infrastructure supplied by T-Mobile to most important office applications

## BlackBerry Solution: mobile efficient working



- E-mail and calendar functions
- Always-on connection with company server via GPRS-network
- Automatic synchronization of mailbox through push-functionality
- The End-to-End encryption offers highest security



## Lifestyle Mobility Services: t-zones

- T-Mobile offers as the first Pan-European provider Lifestyle Mobility Services under the brand t-zones
- T-Online account for T-Mobile customers without additional basic charge
- Update and important information from T-Online and other providers
- The new mobile web-portal offers under the categories t-info, t-news, t-finance, t-sports, t-music and t-games subject-specific services
- Various joint services, amongst them e-mail administration and personal calendar
- Optimized web-pages specially designed for T-Mobile MDA or other PDAs on the market with the Microsoft operating system Pocket PC 2002



## Pay per Event: up to date and individual

- T-Mobile Deutschland supplements the mobile web-portal “t-zones” through so called Pay per Event-services
- New offers especially in the categories finance, news and games

### The new offers:

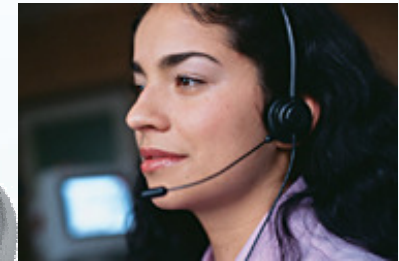
- **Mens Health:** fitness, nutrition, career, fashion- and travel trends
- **Connect:** telecommunications-tests and background-reports
- **Disney:** ring tones, pictures and filmtrailers by Walt Disney, contents of new films and famous figures



Individual Service

## Value-Added-Services by T-Mobile

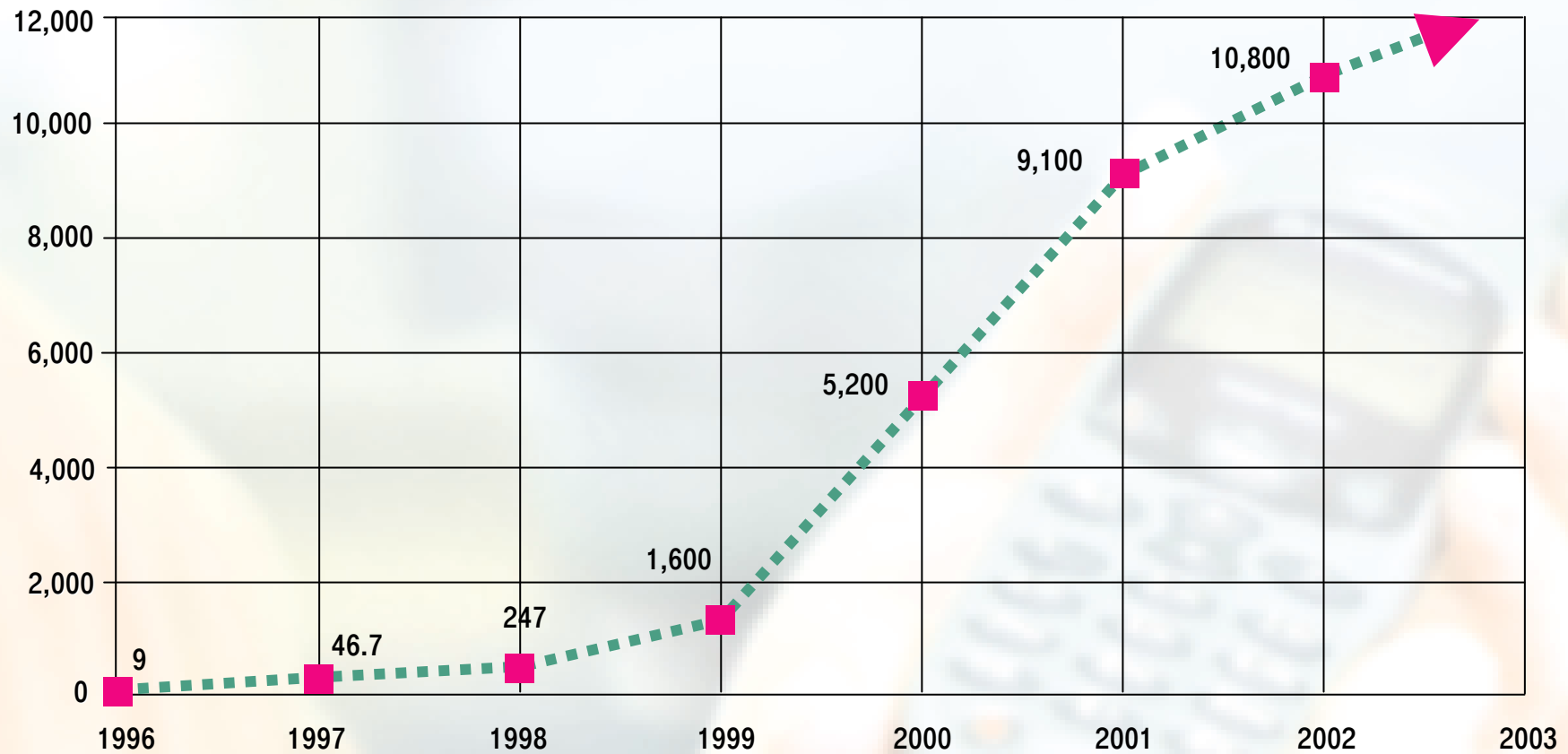
- T-Mobile enables dialogue via voice: quick dial 25 00
- Operator service
- Traffic information service
- Service Assistant
- Mobile Banking
- SMS Operator
- Fleurop Service by T-Mobile
- Travel Service
- Operator Service: Domestic, International, Time check
- TEGARON Info
- Facts&Fun by T-Mobile



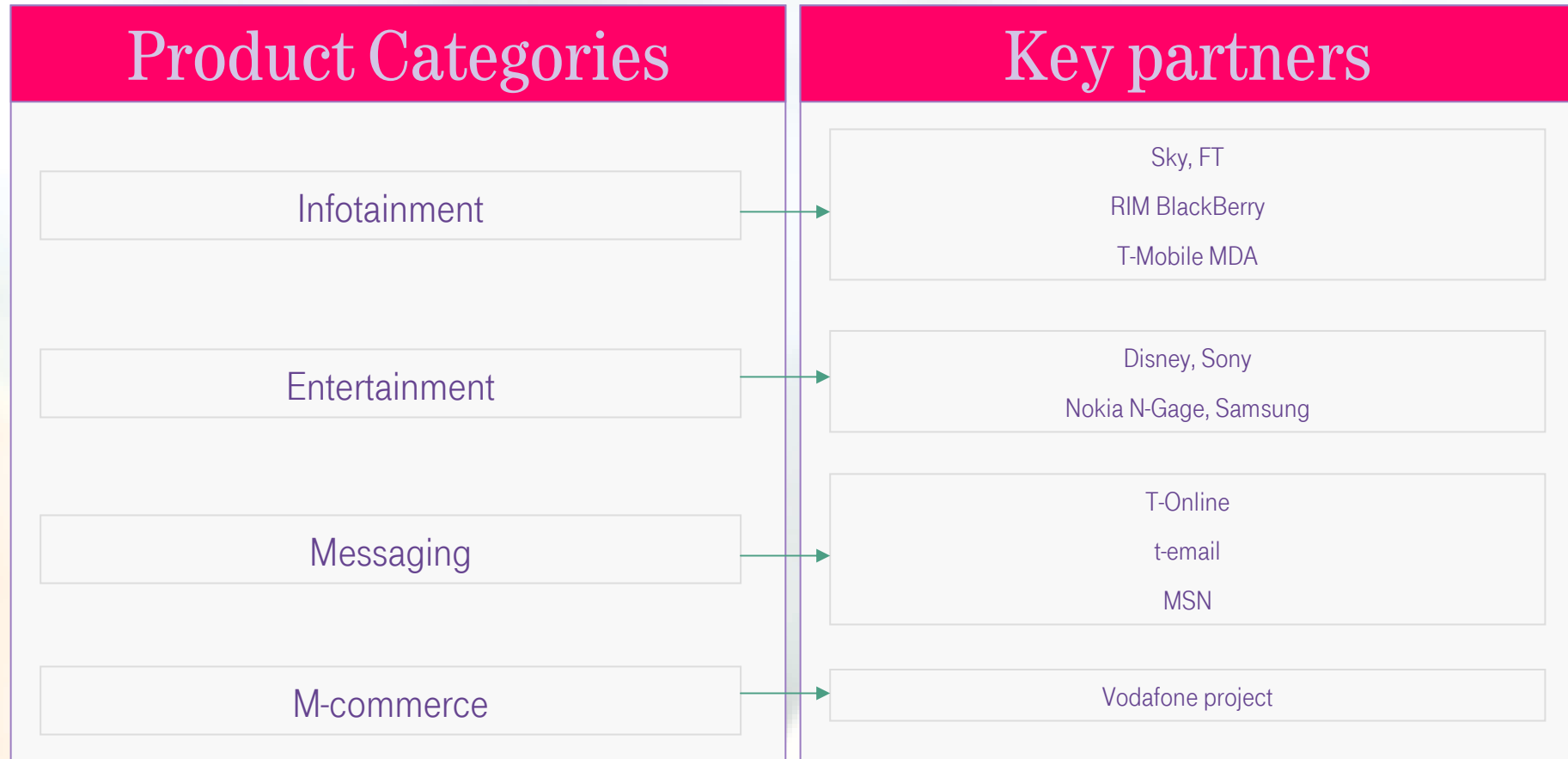
Individual service

## Unbroken SMS-boom

Annual amount in million



# Leading the industry in partnerships to make the mobile data market





Key to success to make and shape this market

3

t-zones: leading through partnerships

“Building an eco-system”

Before	Now	Soon
 <p>Already 150+ partners present on t-zones</p>	 <p>Recent partnerships and new t-channels</p>	<p>More to come</p>

- Partnership is the cornerstone of the t-zones strategy
- Committed to all partnerships which can enrich the consumer experience – including co-developing of industry initiatives (e.g. Payment)

■ Heavy focus on entertainment and messaging consumer services

# The power of messaging



## Mobile

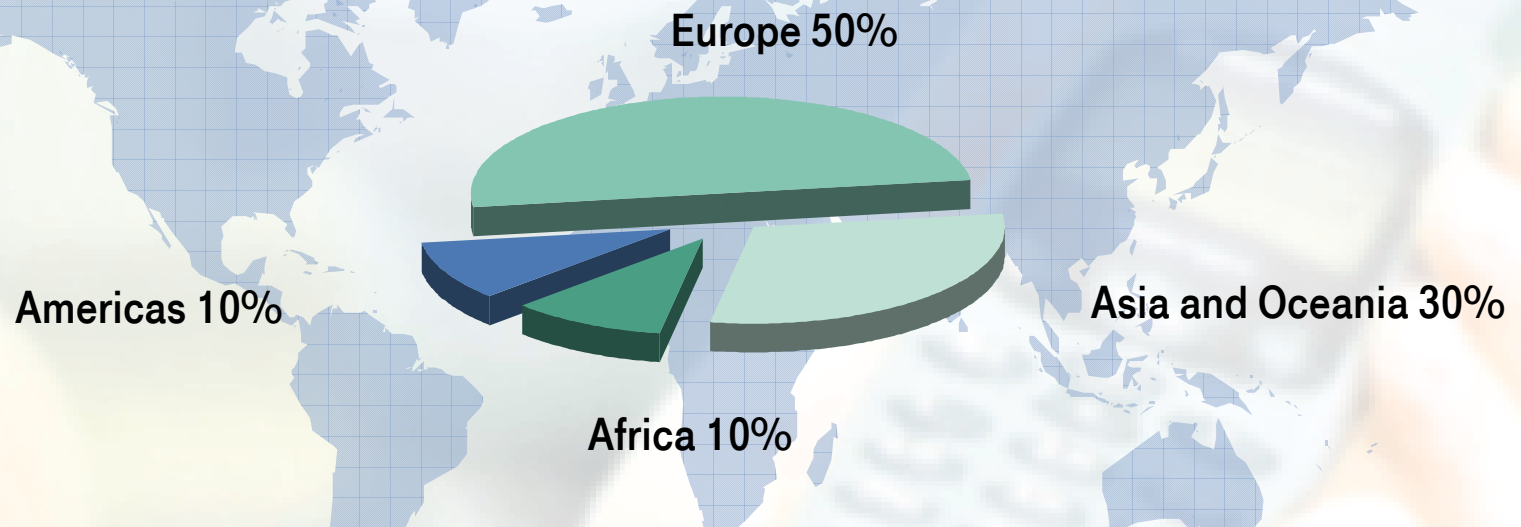
- 24bn SMS sent per month worldwide
- 52m SMS sent daily in the UK alone
- T-Mobile Germany: 2m MMS sent on the T-Mobile Germany network since launch
- T-Mobile has seen a 35 % increase in people using the Email service in the last quarter

The power of messaging lies in mobility coupled with real time presence

Mobile world-wide

## International Roaming: phoning abroad

T-Mobile has more than 220 roaming partners in over 115 countries.



Percentage of network operators with T-Mobile roaming contracts.



## Services by T-Mobile



- Stock exchange ticker: regular information on the stock development of certain shares – for example the private depot or fixed lists
- W@P Chat & Dating: virtual contact ads or live-chat via mobile phone
- Various online-games, for example Fight Arena for two or more players
- The mobile phone as an info-terminal, for example giving directions and information about traffic jams for car journeys, providing location based services and daily horoscopes

## HotSpot: fast surfing at selected public areas

- New offer by T-Mobile based on public W-LAN (Wireless Local Area Network)
- Local wireless network with access points that provide wireless phone calls up to 100 meters
- Wireless highspeed access, either to the Internet or the company owned Intranet
- Available at so called Hotspots, for example airports, hotels and conference centers
- Especially benefits business people in Germany
- Broad band transmission rates with several times the speed of ISDN



## Mobile communications of the future



### Universal Mobile Telecommunications System (UMTS):

- European variant of the mobile communication systems of the third generation (3G)
- 3G enables a harmonization of different international wireless standards
- High data transmission rate with up to 384 kBit per second
- UMTS uses, as well as GPRS, packet switching techniques: data is divided for transmission into several data packets, then transmitted and reassembled as complete information for receiver

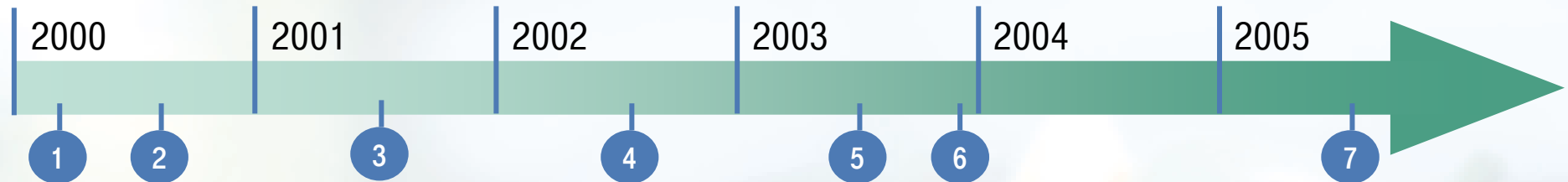
## MMS: Multimedia Messaging Services



### New ways with MMS:

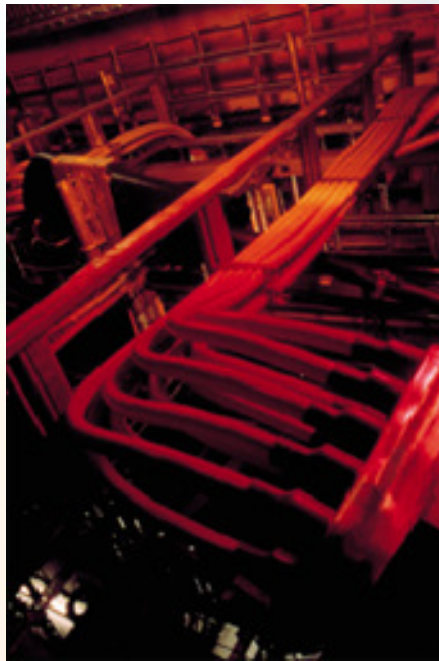
- **Picture Messaging:** take, send and get color pictures
- **Video Messaging:** send movies from mobile phone to mobile phone
- **MMS-News:** mobile information, for example about weather and cinema programmes
- **M-Cards:** send electronic cards via mobile phone (by SMS, WAP or Internet)

## UMTS: time frame



1. Spring 2000: first trial successfully completed
2. August 17, 2000: T-Mobile successfully bids for two frequency blocks
3. First voice and data calls in June resp. November 2001
4. Test and trial operation for the new network will take place in 2002
5. Commercial start in 2003
6. Requirement of the Regulatory Body for Telecommunications and Post (RegTP):  
by the end of 2003, already 25 percent of the population can use UMTS
7. By the end of 2005, a population coverage of 50 percent should be reached

# Research for mobile communications of tomorrow



## **T-Mobile's commitment to research and development**

- is based on existing market and customer requirements
- is already aimed at the customer requirements of tomorrow
- supports the achievement of formulated corporate objectives
- uses synergies created within the corporate group
- is characterised by active co-operation with system and terminal-device manufacturers
- is characterized by active participation in international research and development projects

THANK YOU

Mobile