

# Networks – Gearing up for new opportunities

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## Mobile Minds

**NOKIA**

# Outline



- **Market outlook**
- Service and network convergence in the core
- Network related services
- Changing industry dynamics
- Conclusions

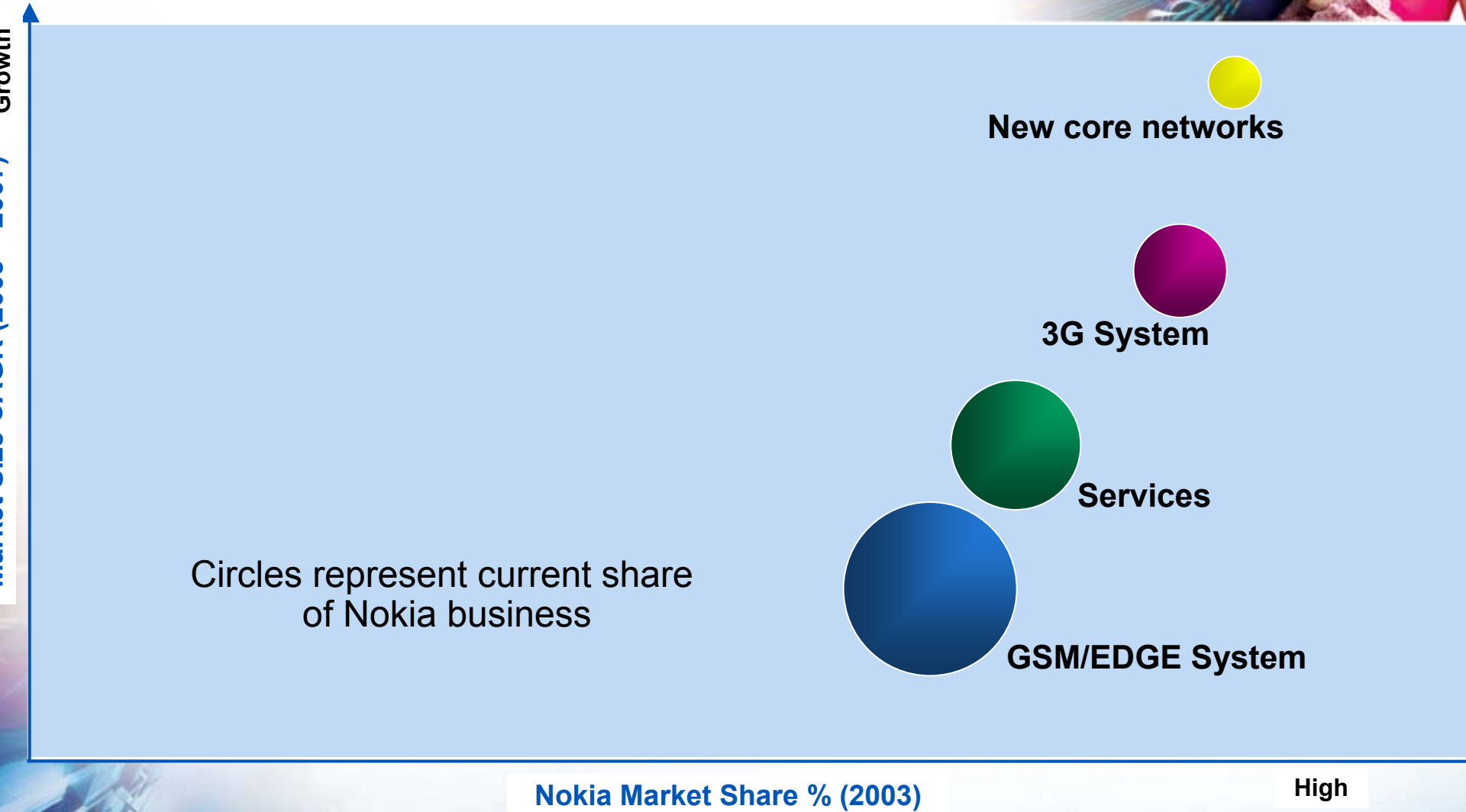
# Market outlook for 2004



- Market conditions are improving, overall market in 2004 flat to slightly up from 2003 (in Euro)
- New growth markets bring increasing share of new subscribers
- Non-voice service competition intensifies in variety, usage experience and service branding
- 3GSM family of technologies will strengthen its role as the dominant service delivery platform globally
- 2004 will be the year of volume WCDMA 3G network launches

Segments of good growth opportunity exist for Networks

# Nokia Networks Businesses

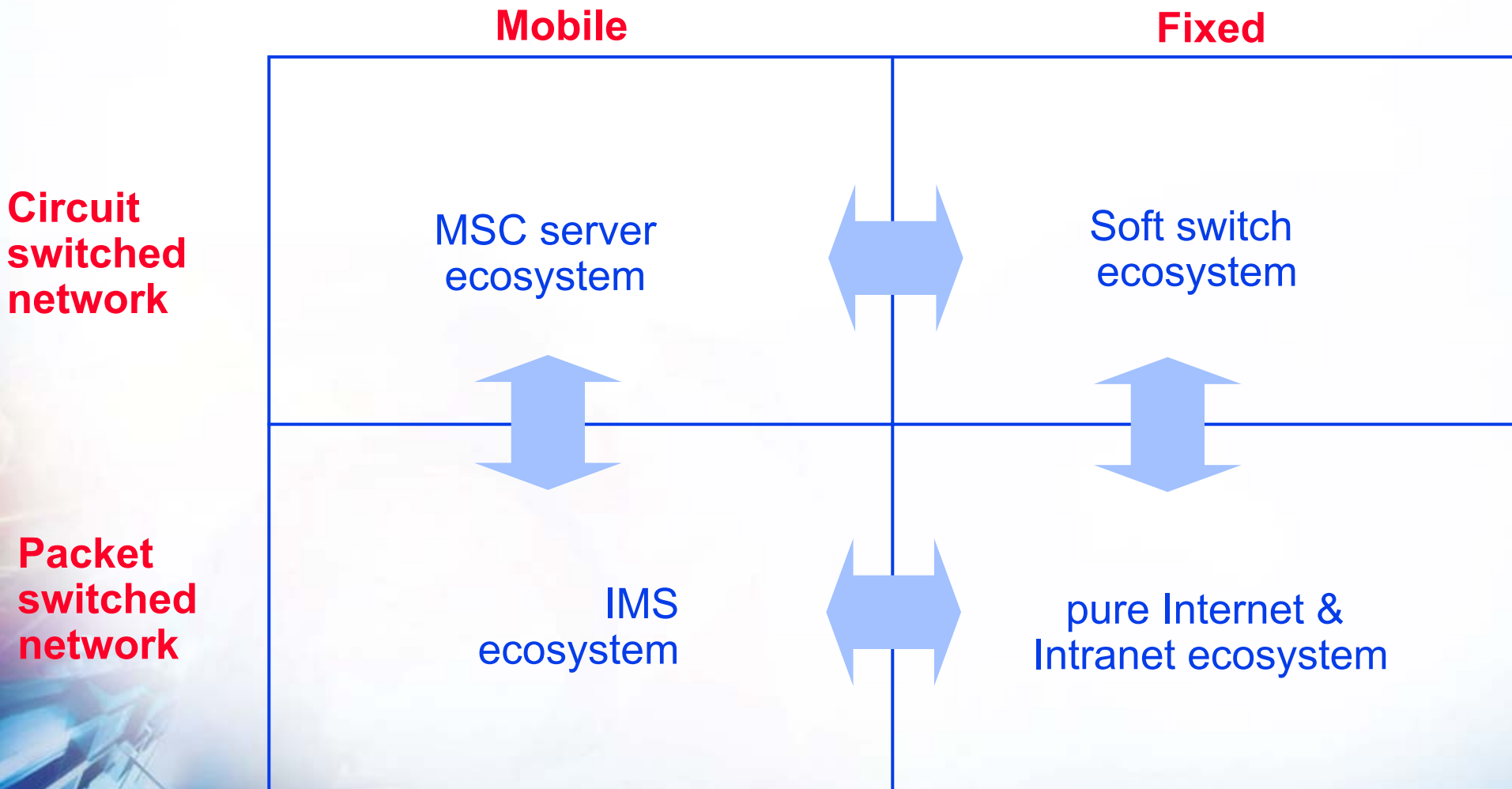


# Outline



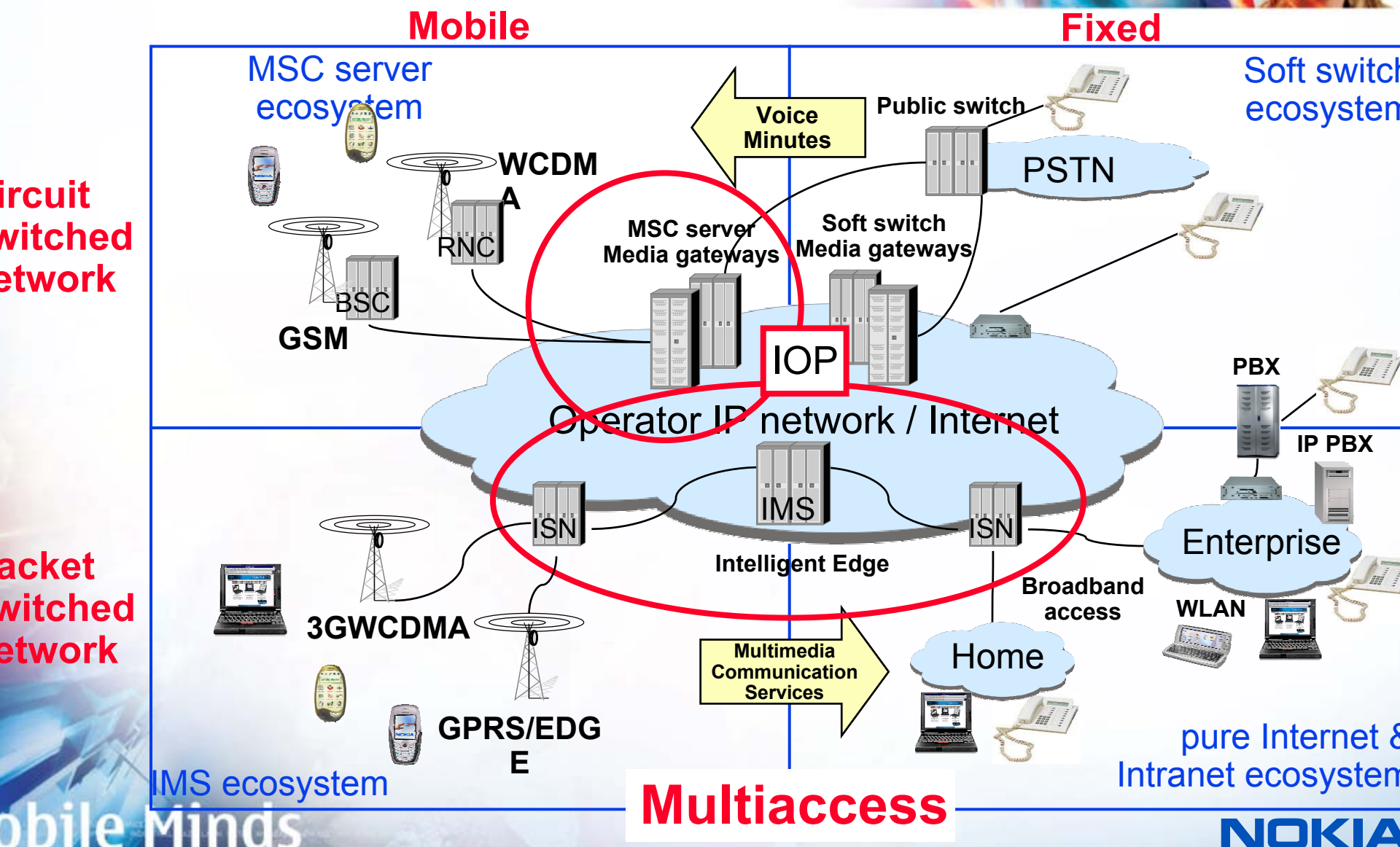
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# New core networks: IP communication Convergence





# New core networks: IP communication Convergence



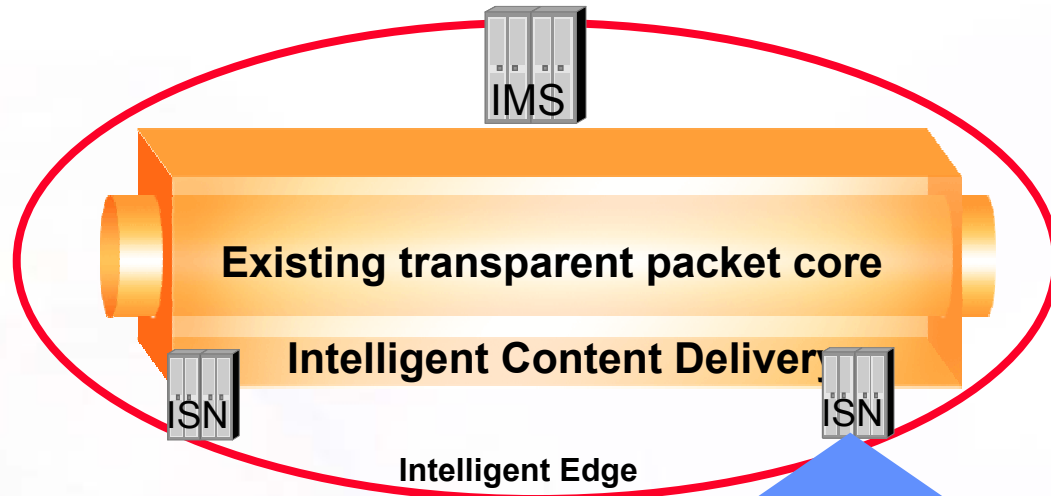
# Operator's business environment for mobile services



**Existing transparent packet core**



# First step: build subscriber and service awareness



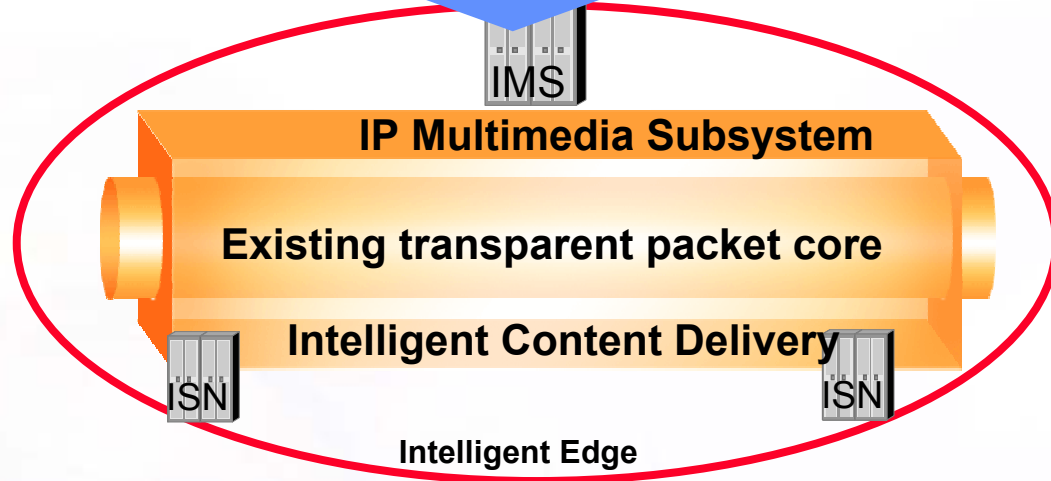
1) Know what services are used by whom

2) Manage charging, quality and business partner connections

# Next step: add capability for IP communication services

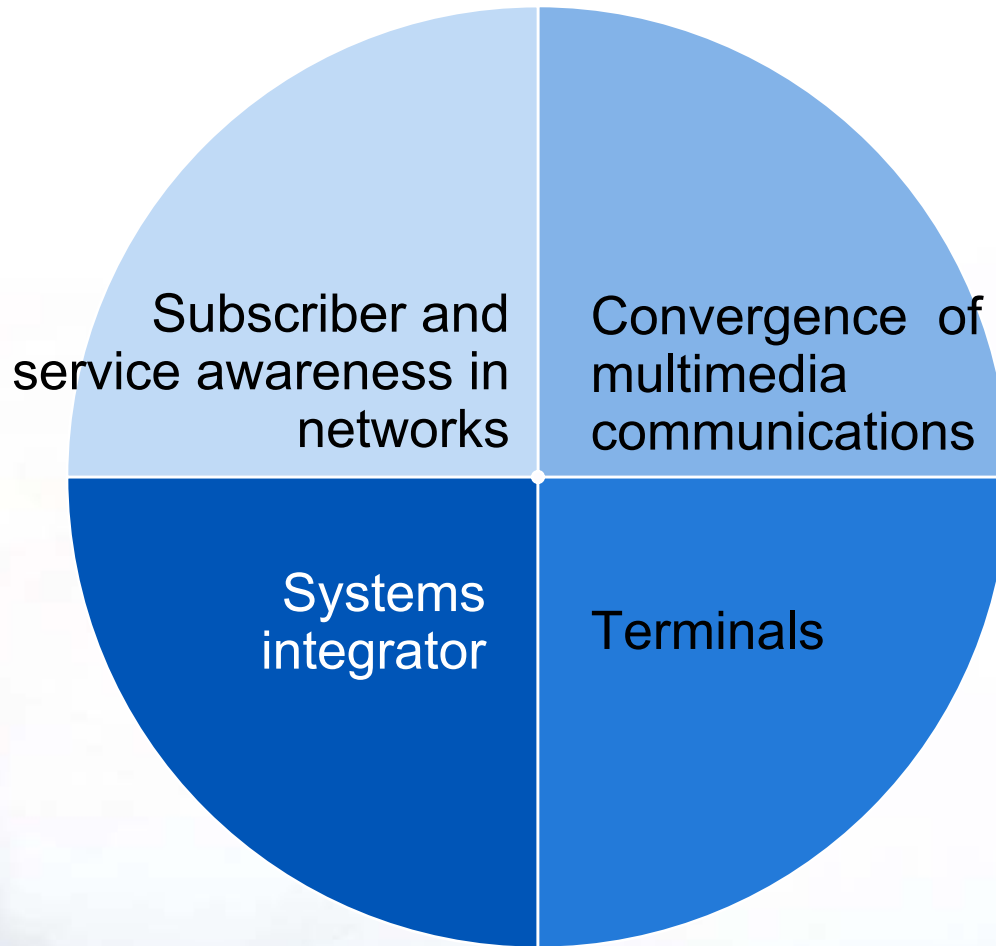


- 1) “Find & connect”: peer-to-peer IP communications between any device
- 2) Multiaccess interoperability and interworking



## Multiaccess

# Nokia strength: end-to-end understanding adding value to each individual solution



# Nokia with steady progress in new core networks



- Intelligent Content Delivery integrated by 15 Nokia customers worldwide
- Nokia IP Multimedia Subsystem (IMS), trialled globally, available 2Q/2004
- Nokia first with Push to Talk over Cellular
  - PoC trials with 30 customers globally
  - 3 commercial Push-to-Talk deals announced

# Outline



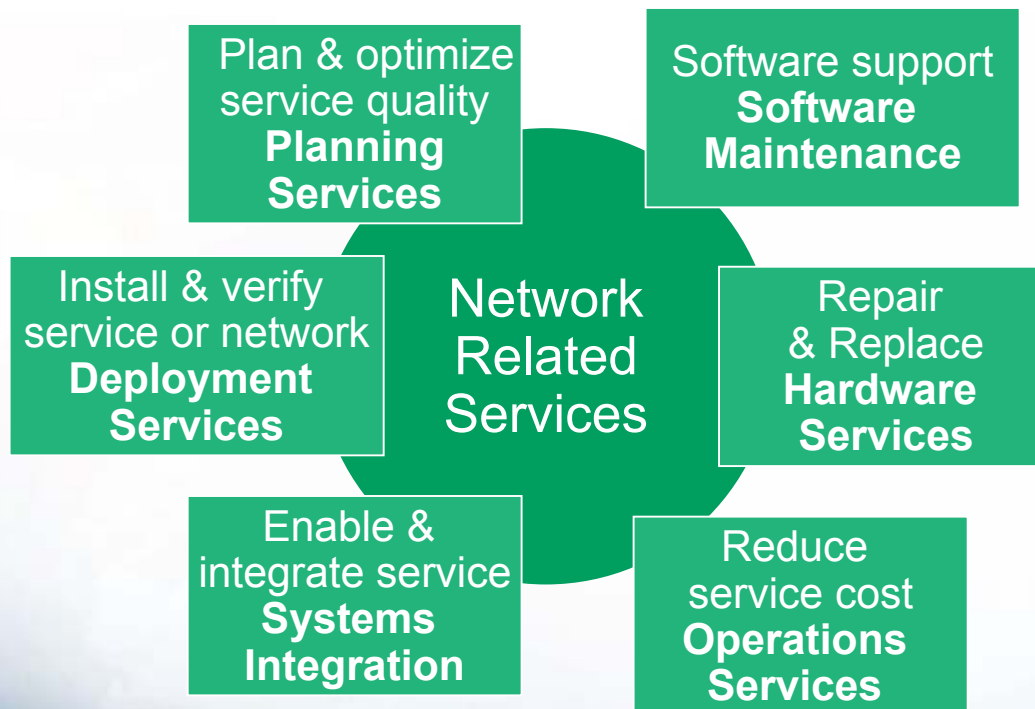
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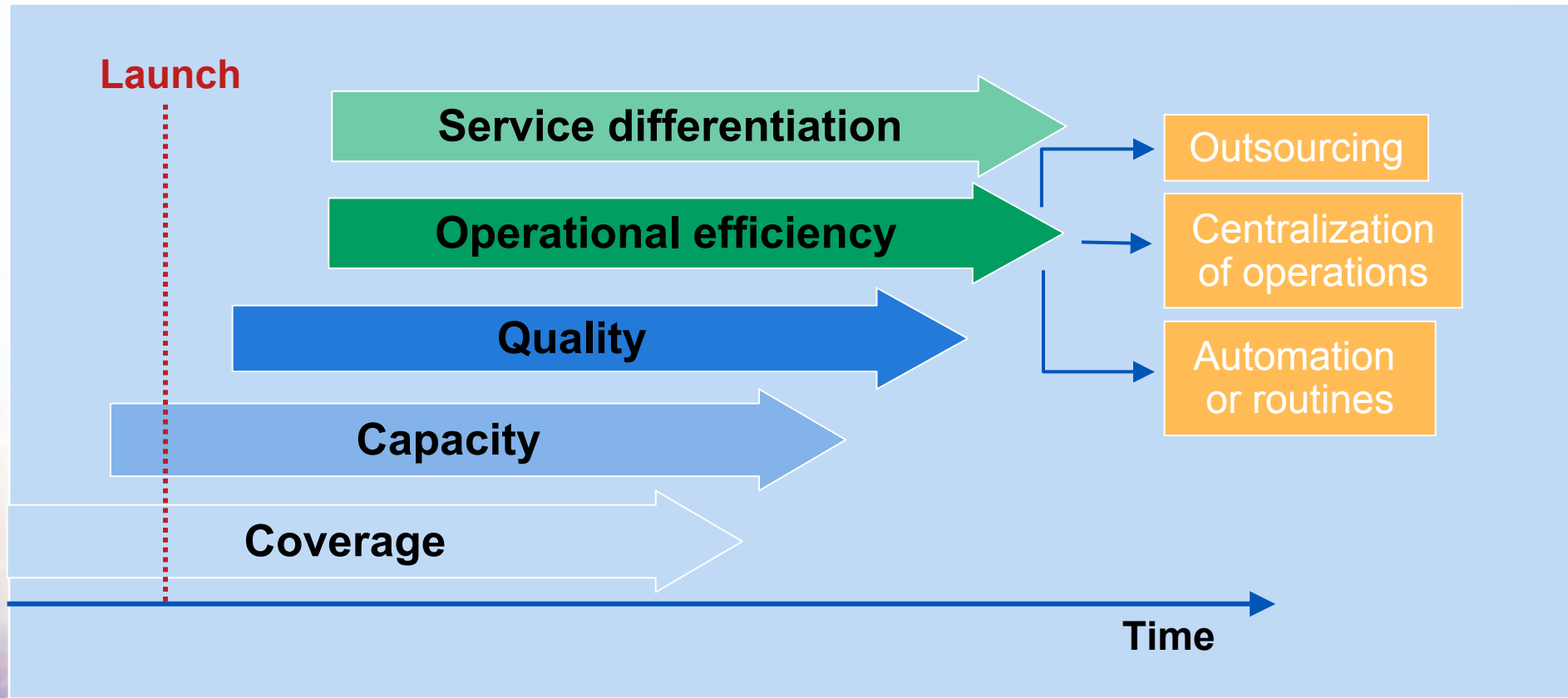
# Network related services



- More than 25% of Networks revenues from network related services in 2003
- Importance growing as mobile operators shift focus to creating new services



# Emerging trend for mobile operators: operations outsourcing



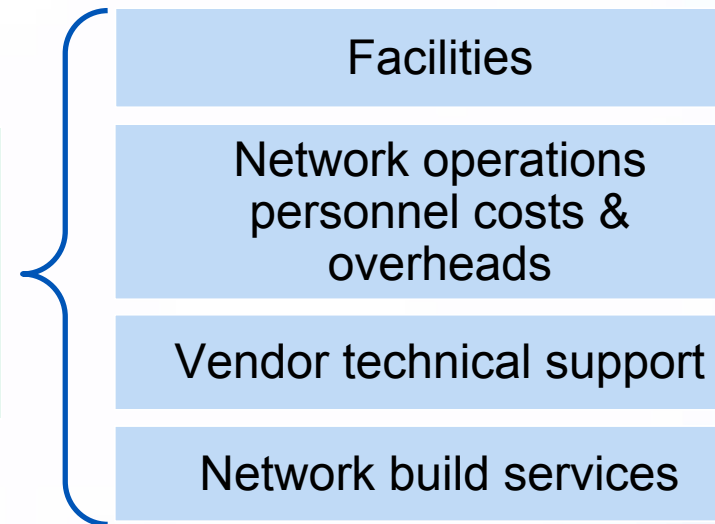
Every operator should evaluate the benefits of operations outsourcing

# Operator benefits from outsourcing



- Utilization of the best expertise and tools
- Savings of around 20% of technical operations OPEX
- Positive impact on return on investment
- Sharpened management focus on new services

Savings from  
economies of  
scale and process  
optimisation



# Why Nokia as outsourcing partner



- Full service portfolio
  - Plan, Build, Operate, Optimize
  - Nokia NetAct™, multi-vendor operating support system across 2G and 3G
  - Nokia's complete system, terminal and performance know-how
- Experience and expertise
  - Turnkey deliveries for 24 customers in 20 countries
  - Network operations for 15 operators in 14 countries
  - Global service organisation and execution capability

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# Industry dynamics are changing – increased focus on software



Network capacity and capability increasingly software driven

Cost of entering new technologies for the operators has to be low

Elements of IT industry model can benefit telecom industry

- Paying for capacity in steps
- Term-based licensing
- Lower cost for basic functionality
- Software maintenance service

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# Gearing up for new opportunities



Selected market segments will offer growth opportunities

Nokia in strong end-to-end position to address those growth segments

- New core networks with Intelligent Content Delivery and IMS
- GSM new growth markets and modernization with EDGE and MSC Servers
- 3G WCDMA radio network
- Network related services including outsourcing

Industry dynamics are changing – increased focus on software





# NOKIA

## CONNECTING PEOPLE

Mobile Minds

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