# Mobile Internet:
# Business Necessity or Toys for Boys?

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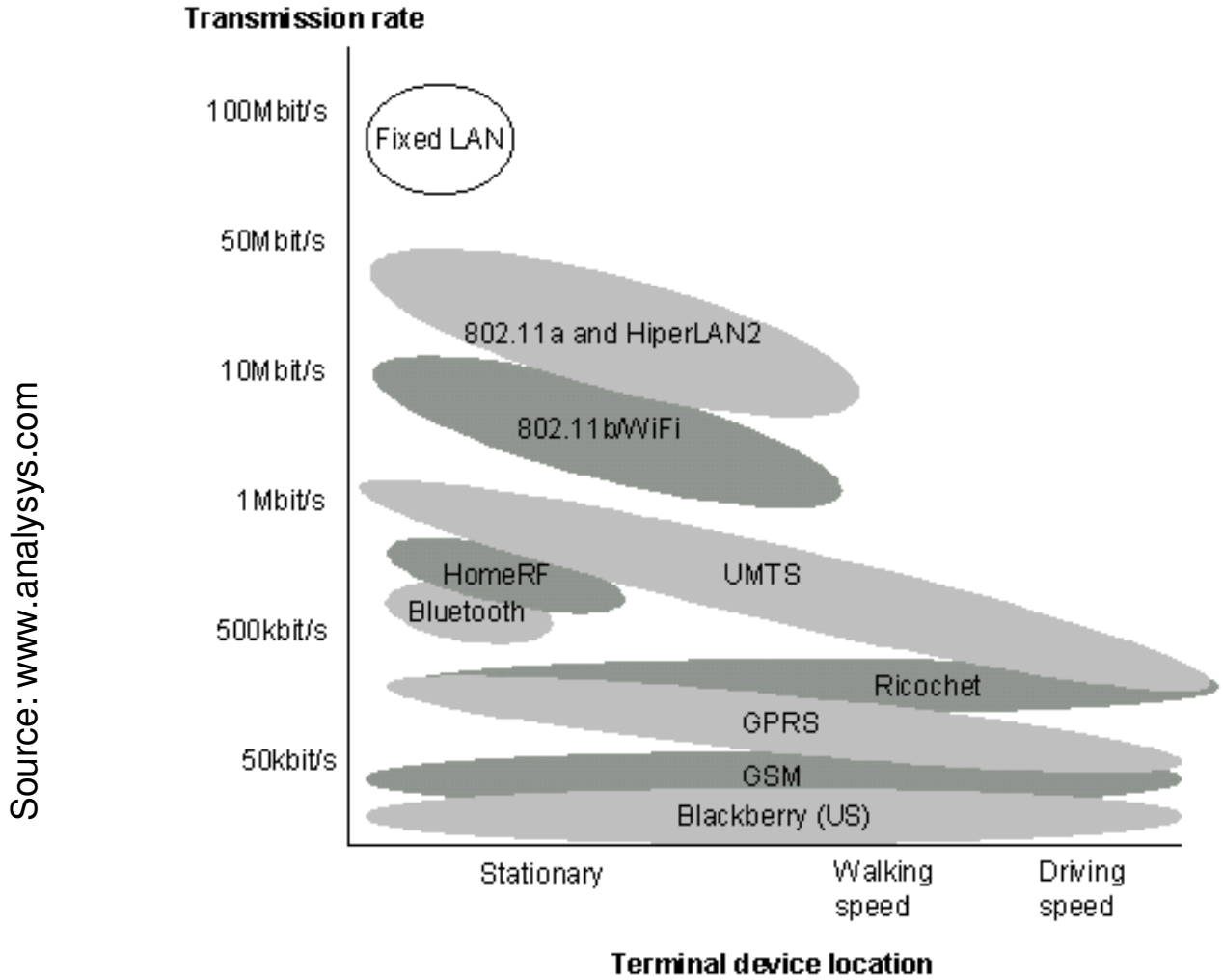
# Agenda

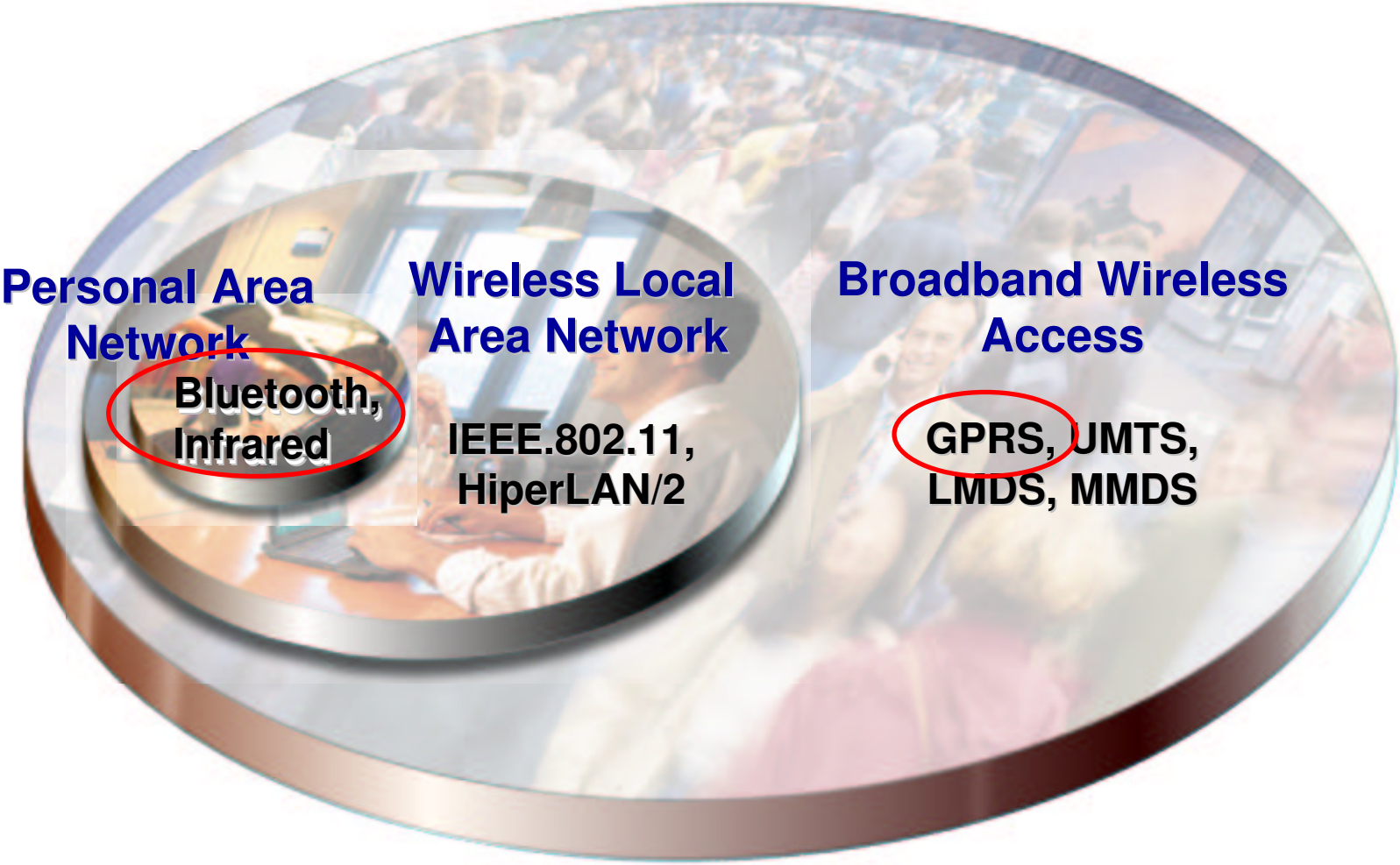
- Introduction
  - Understanding basics of mobile Internet
  - Wireless data technologies overview
- Mobile public Internet access
  - Live demo
  - Pros and cons of different mobile access methods
- Mobile corporate LAN access
  - Live demo
  - Comparison of Corporate Access and Private Dial-Up Access
- Conclusion
  - Overview of devices and Internet access methods
  - Recommended usage patterns

# Comparison of Wireless Internet Access Technologies




Source: www.analysys.com

# The Scope of Wireless Data Technologies



# Wireless Data Technologies Overview

## IrDA DATA

- Bi-directional communication
- Data packets are protected using a CRC
- Mobile phone handset link, PDA synchronization, link to PC (notebook)
- Data transmission from 9600 b/s up to 4 Mb/s
- Very short range ~ 1 m
- Requires line-of-sight

## Bluetooth™

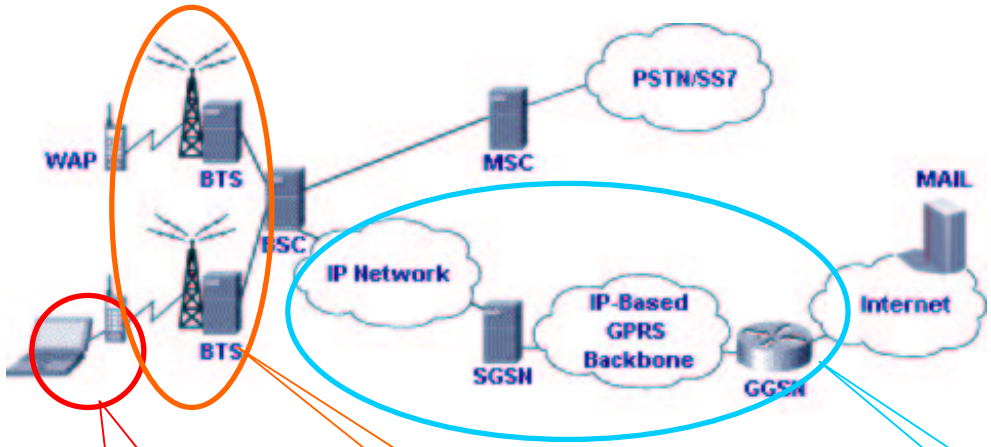
- Radio replacement for infrared, overcomes line-of-sight restriction
- Enables seamless personal data exchange
- Mobile phone handset link, PDA synchronization
- Bandwidth: up to 721 kbps
- Short range ~ 10 m
- Unlicensed frequency: 2.4 GHz ISM band

# Wireless Data Technologies Overview

VIP.gprs

- The General Packet Radio System (GPRS) is a new service that provides actual packet radio access for GSM users
- Range: nation-wide coverage
- Security based on GSM standard
- Bandwidth: in “time slots” from 9.600 b/s up to 38.400 b/s, (theoretical maximum speed 115 kbps)
- Actual bandwidth depend on radio quality and device used
- Longer round trip time than in fixed IP network (~800 ms in VIP)
- Always online

# Wireless Data Technologies Overview




Bluetooth, infrared (or plain cable)

GPRS radio network

GPRS IP network

# Mobile Access to E-mail

- SMS mail notification
- POP enabled mobile phones
- WAP mail over GSM or GPRS network
- Web mail using mobile Internet access
- POP/IMAP client on a PC using mobile Internet access

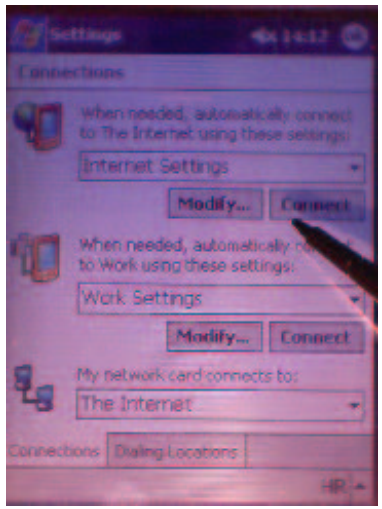
# Live Demo
# Mobile Internet Access

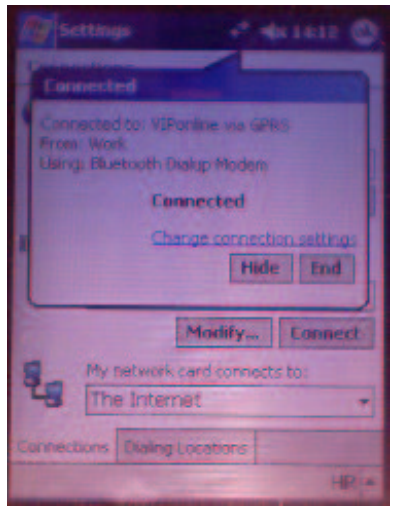

- reading e-mail on POP-enabled phone over GPRS
- web surfing over GRPS and Bluetooth
- dial-up using fixed line

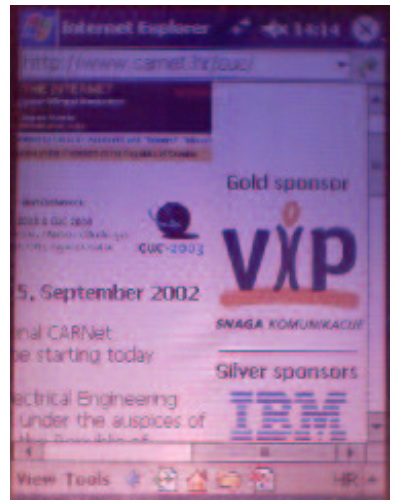
# Live Demo
## Reading E-mail on Pop-enabled Phone Over GPRS

# Live Demo

## Web Surfing Over GRPS and Bluetooth




# Comparison of Mobile and Fixed Access Technologies

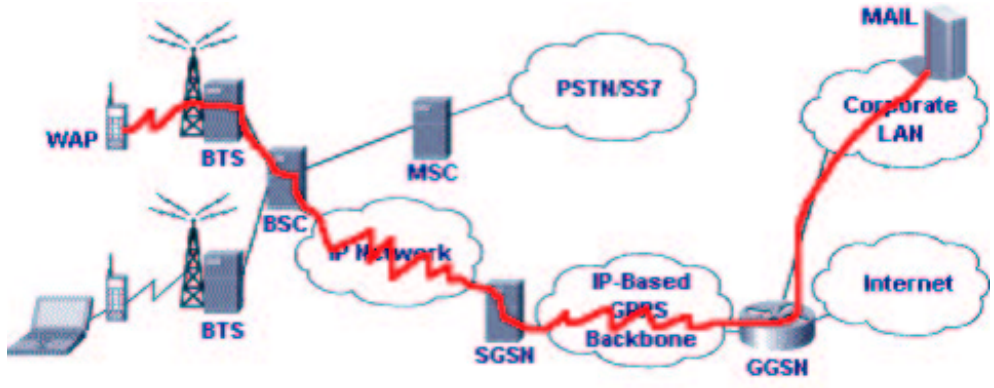
## GPRS

- Pros
  - mobile
  - accessibility (coverage)
  - pay by traffic
- Cons
  - long round trip time
  - bandwidth depends on radio signal

## PSTN

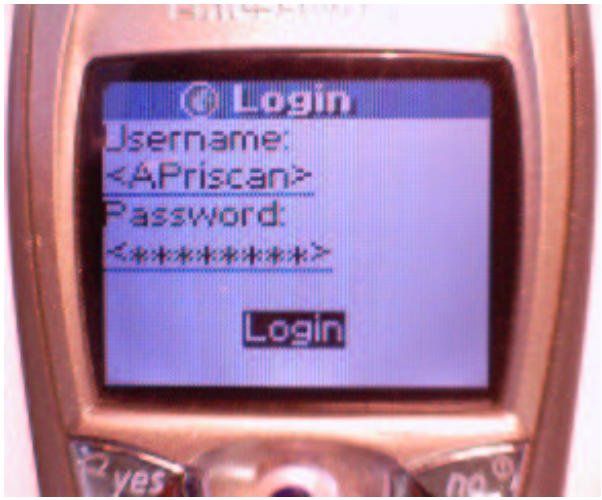
- Pros
  - short round trip time
  - fixed bandwidth
- Cons
  - not mobile
  - coverage (dependent on the outlet)
  - pay by time

# Live Demo
# Mobile Corporate LAN Access




- WAP mail through Corporate Access and Palm Office

# Live Demo
## Corporate Access and Palm Office





# Comparison of Corporate Access and Private Dial-Up Access

## Corporate Access

- Pros
  - pay by traffic
  - lower cost of implementation
  - integrated security (no need for VPN clients)
- Cons

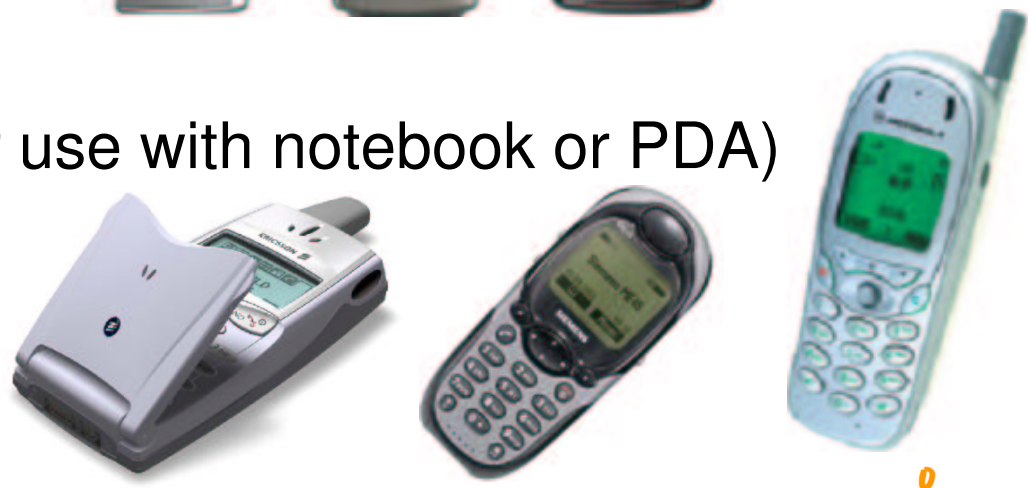
## Private Mobile Dial-up Access

- Pros
- Cons
  - pay by time
  - high dial-up tariff (GSM → fixed network)
  - high implementation costs and TCO (hardware, know-how, security, PRA link...)

# Devices for Mobile Internet Access (1)

- High-end mobile phones
  - POP clients, WAP
  - Infrared or Bluetooth
  - GPRS (not all)
  - Color screens, MMS


- Mid-range models (for use with notebook or PDA)
  - GPRS
  - Infrared or Bluetooth



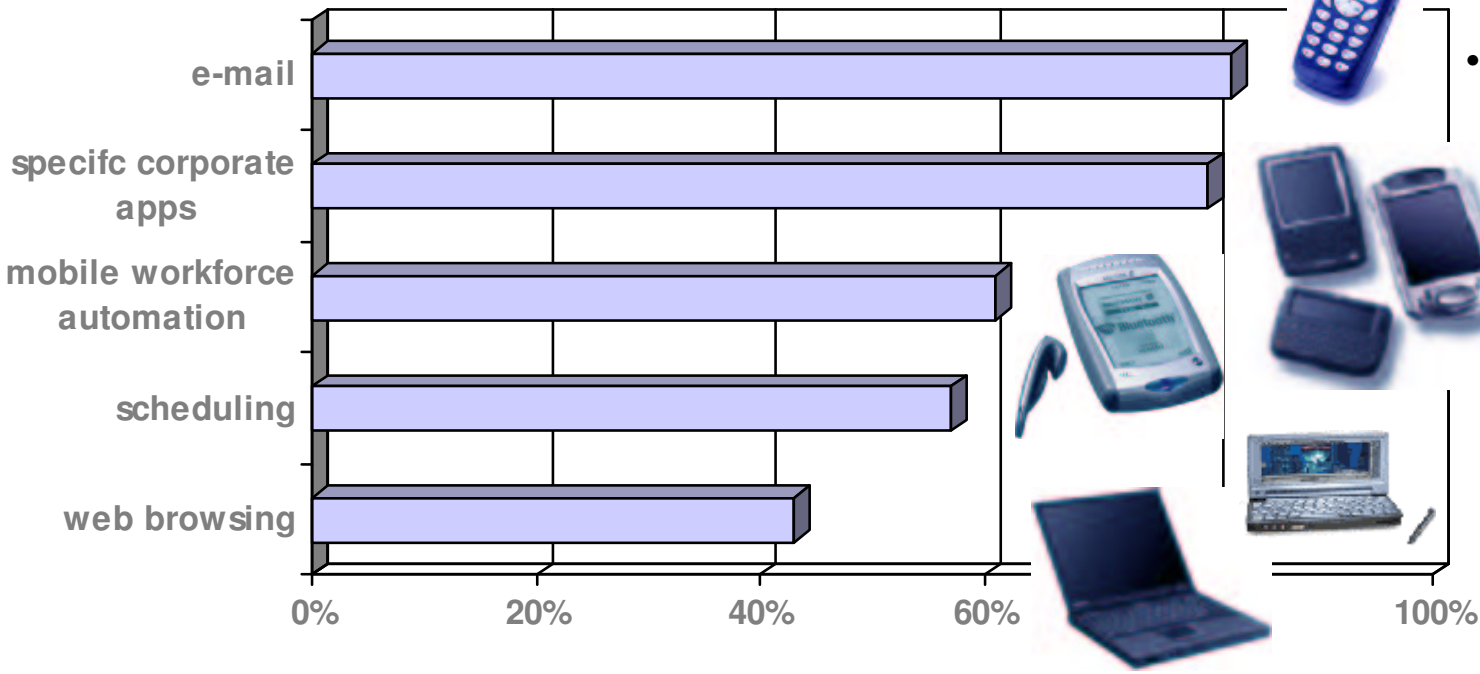
# Devices for Mobile Internet Access (2)

- Personal Digital Assistants (for use with mobile phones)
  - POP clients
  - Infrared or Bluetooth
  - bigger screens

- PDA with integrated wireless module
  - GPRS or GSM or WLAN

# Business Mobile Internet
# Recommended Usage Patterns

- Corporate Applications




- SMS, WAP, POP



- thin clients,
- web-based device-sensitive applications,
- synchronization





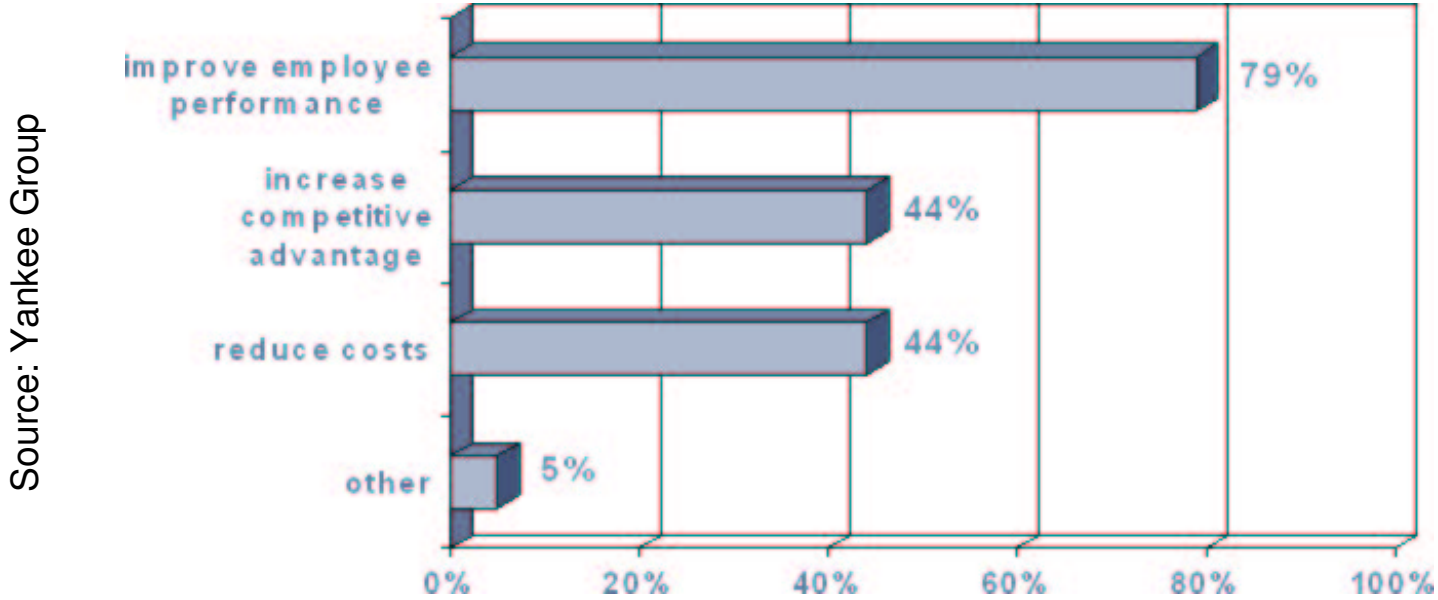


- web mail,
- web applications
- corporate access

# Conclusion

- Q: “Mobile Internet: Business necessity or toys for boys?”
- A: “<u>A necessity</u>, if you reach these goals by using it!”

## Drivers for Wireless Access




Source: Yankee Group