




CISCO



Cisco Intelligent Information Network Foundation for Metropolitan Data Network

- Building Next-Generation Networks
- Developing Innovative Services
- Driving Knowledge-Based Communities for a Sustainable Future and a Good Quality of Life

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Agenda

- **Broadband For All**
 - **Drivers, Challenges & Benefits**
 - **From Vision To Implementation**
 - **Choosing The Right Business Model**
 - **Creating The Vision**

Broadband For All



What is Broadband?

European Commission Definition:

Broadband refers to a wide range of technologies that have been developed to support the delivery of innovative interactive services, equipped with an **always-on functionality**, providing local bandwidth and capacity that evolves over time, and allowing the **simultaneous use of both voice, video and data services.**

Source: eEurope 2005

Broadband Scenarios: Urban, Regional, and Rural

Greater Choice in Deployment Network to Different Population Areas



Metropolitan/Urban Areas: Metro Ethernet and Wireless



Regional Areas: Fibre in Backhaul and Wireless/DSL Access



Rural Areas: Wireless Wi-Fi, Wi-MAX and Satellite Access

Why Broadband?

**i2010: A European
Information Society for
Growth and Employment**



Broadband Manifesto



Broadband Manifesto

Ten building blocks Broadband Manifesto EuroCities

- **No knowledge society without broadband services**
- **No broadband services without fibre optics**
- **Independent fibre optics networks**
- **A fibre optic infrastructure monopoly**
- **A market system**
- **Local initiatives**
- **Interconnected open broadband network throughout the European Union**
- **Platform for public services**
- **The voice of cities; Consulting partner**
- **Collaboration: A call for support**

What is the Market Outlook?

- **June 2005: 2.51 million FTTH homes/buildings passed (over 28 percent higher than June 2004) with a global penetration rate of 25.7 percent => 2.51 million homes passed**
- **June 2005: 646,570 FTTH subscribers in EU (over 18 percent higher than in June 2004) => 646,570 homes activated**

Players involved in FTTH Segmentation

June 2005

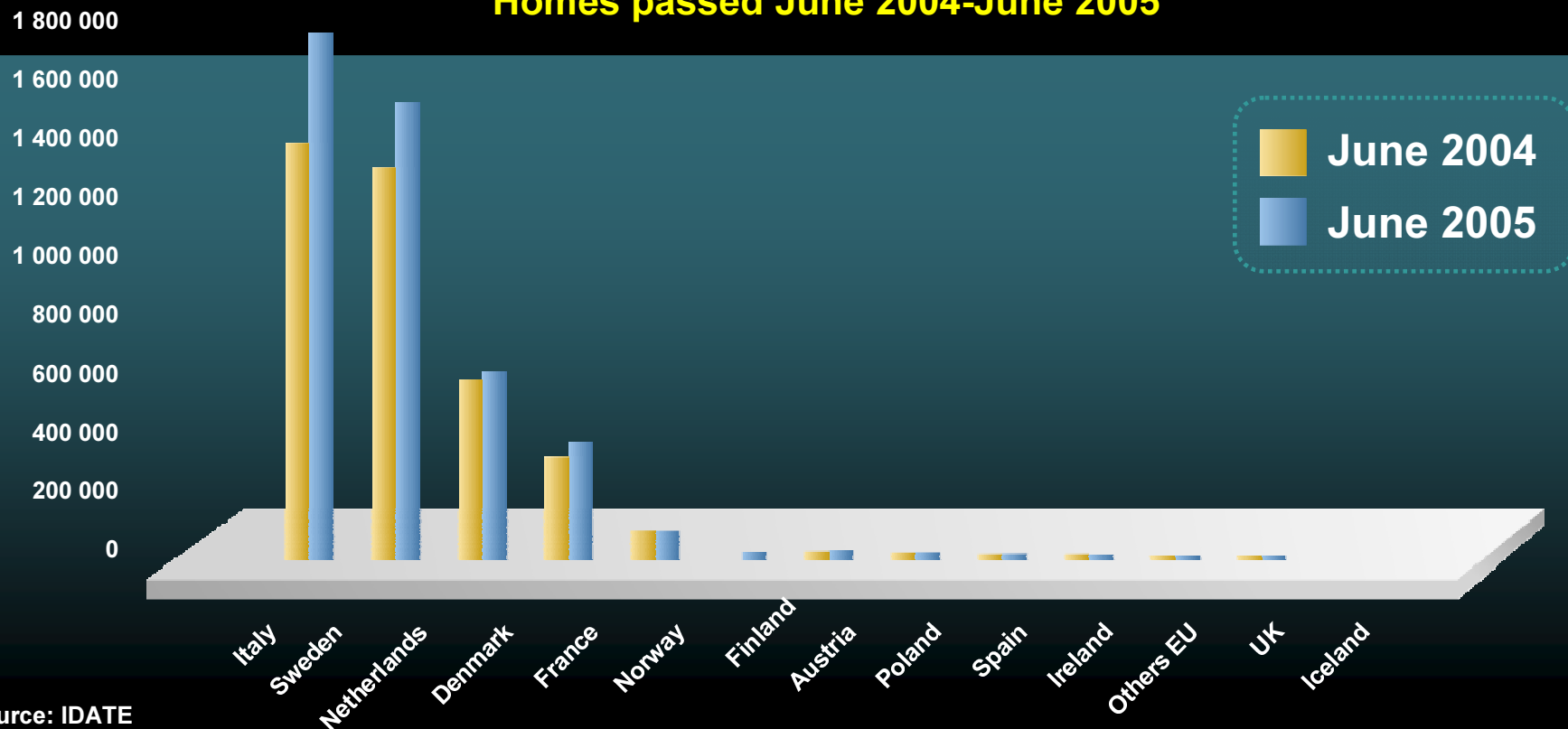
Incumbents	9	7.8%
Municipalities / Power Utilities		
Alternative operators / ISPs	13	11.2%
Housing companies & Other		

What is the Market Outlook?

FTTH Homes/Buildings passed in Europe by country

Netherlands : More than 150 percent homes passed compared to June 2004

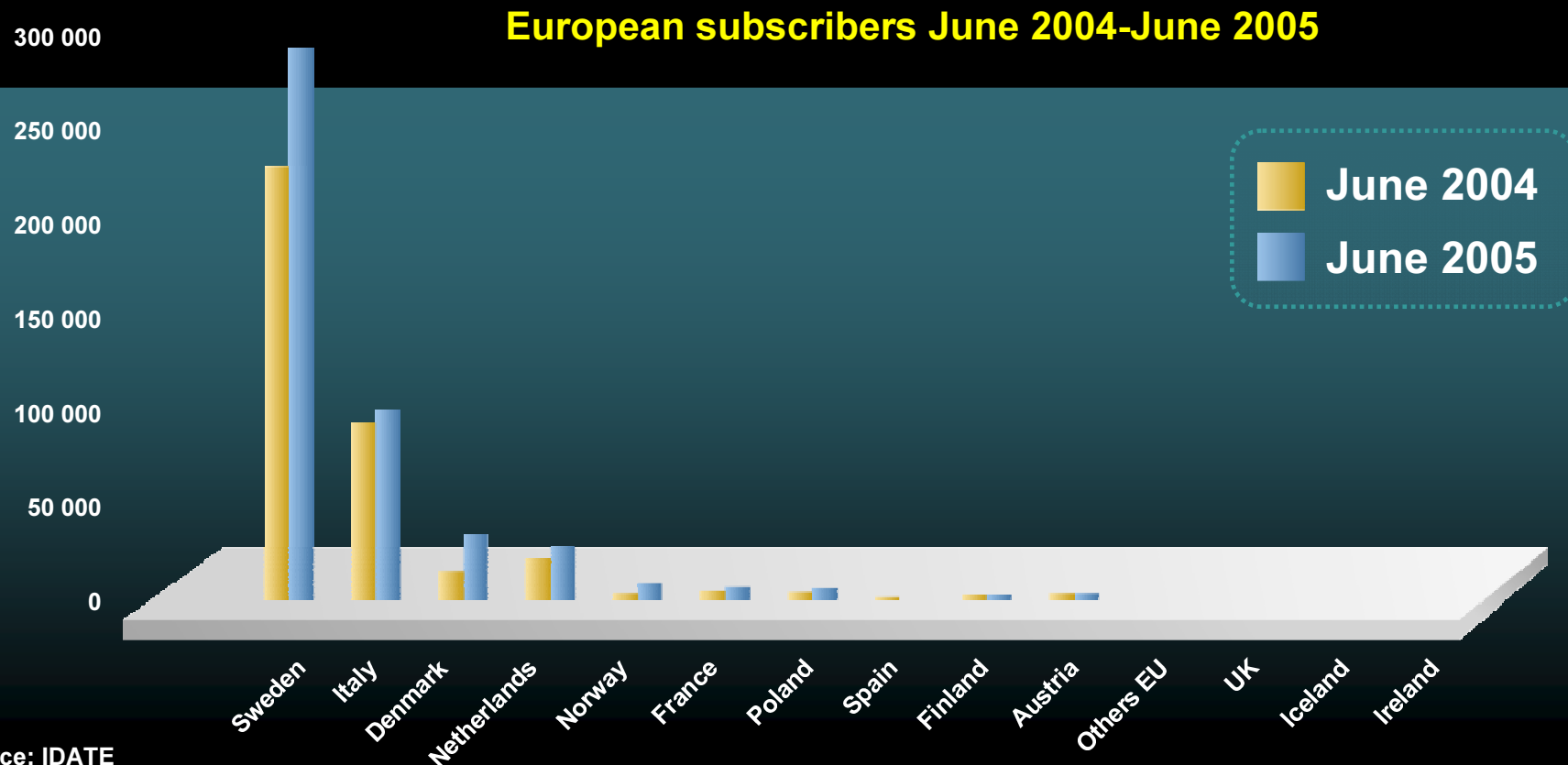
Homes passed June 2004-June 2005



Source: IDATE

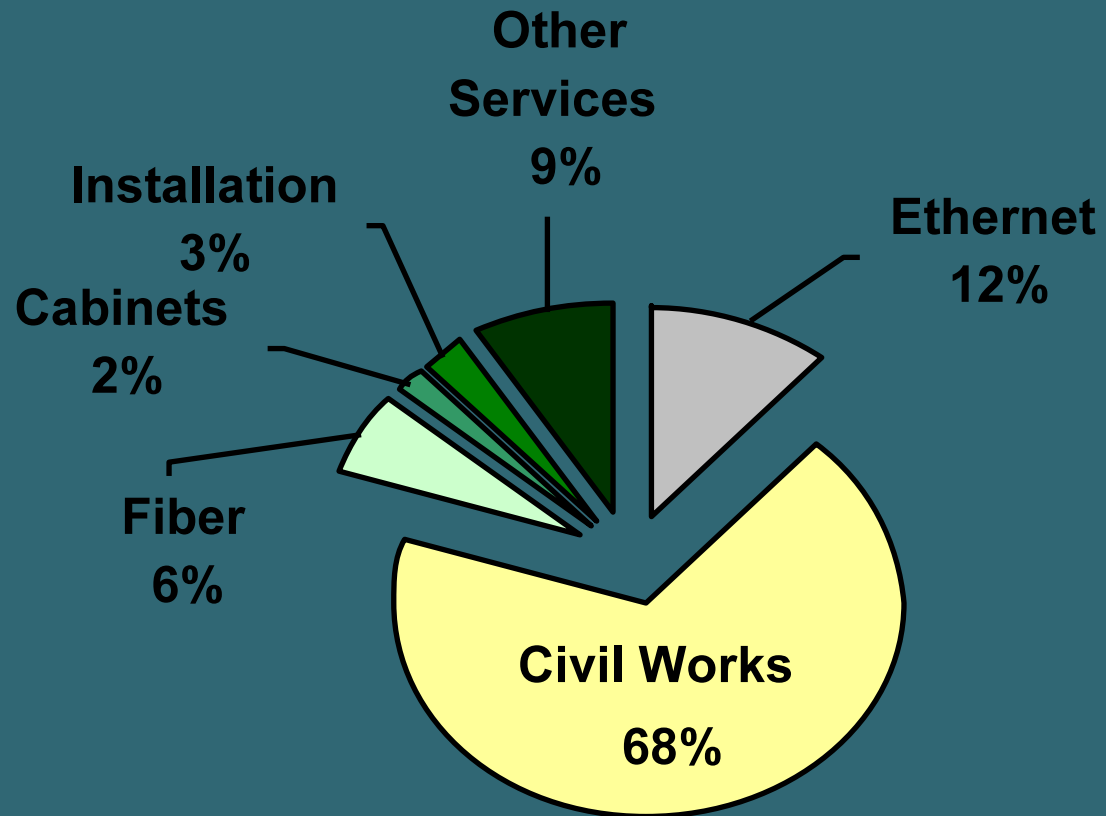
What is the Market Outlook?

FTTH subscribers in Europe by country



Source: IDATE

Fiber to the Home Deployment Costs Initial Year



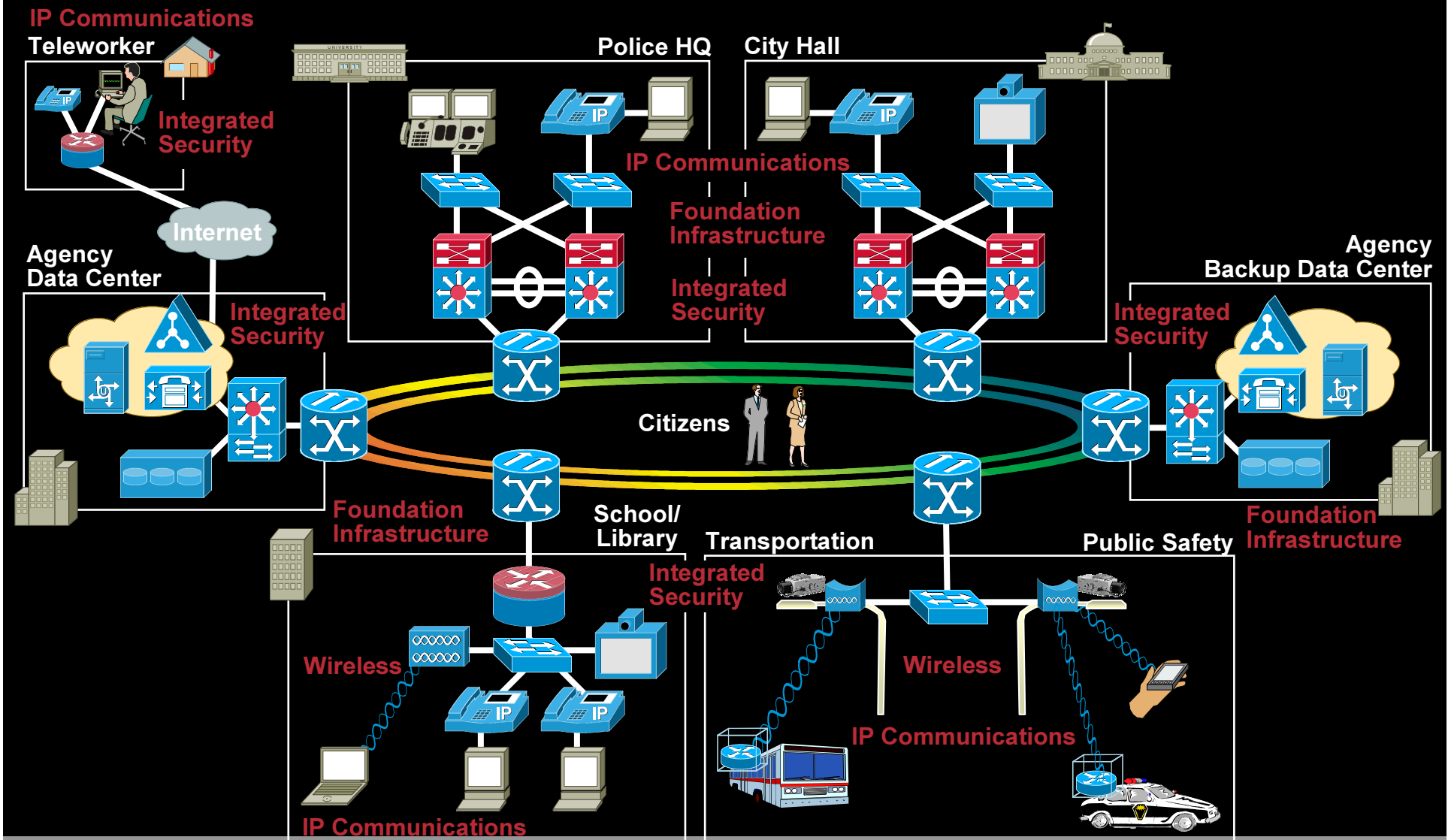
Source: Corning & FTTH Council Europe



Building Connected Communities



Connected Community



Drivers, Challenges and Benefits



Policy Drivers

Better Educated Communities

Healthier Communities

Prosperous Communities

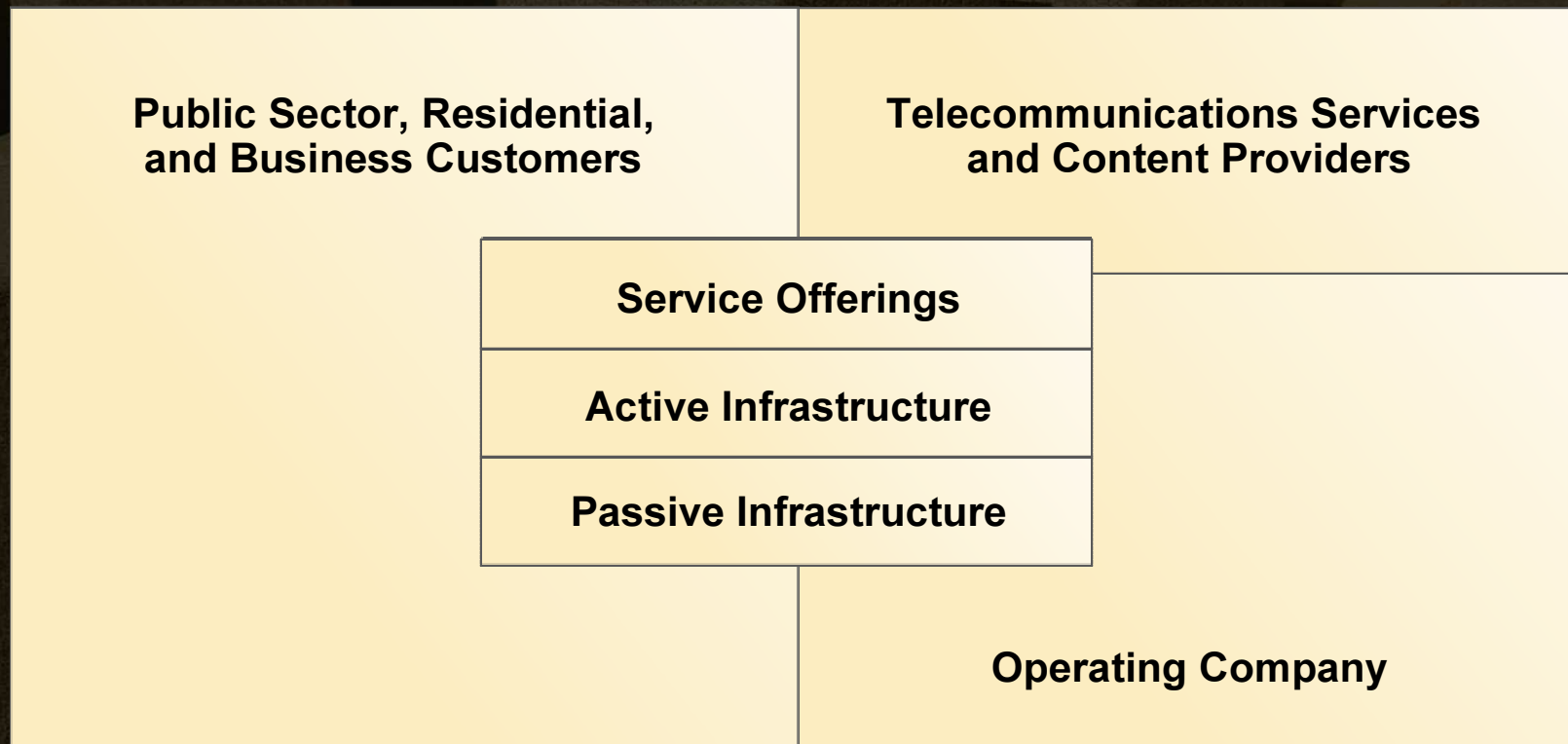
Safer Communities

Choosing The Right Business Model



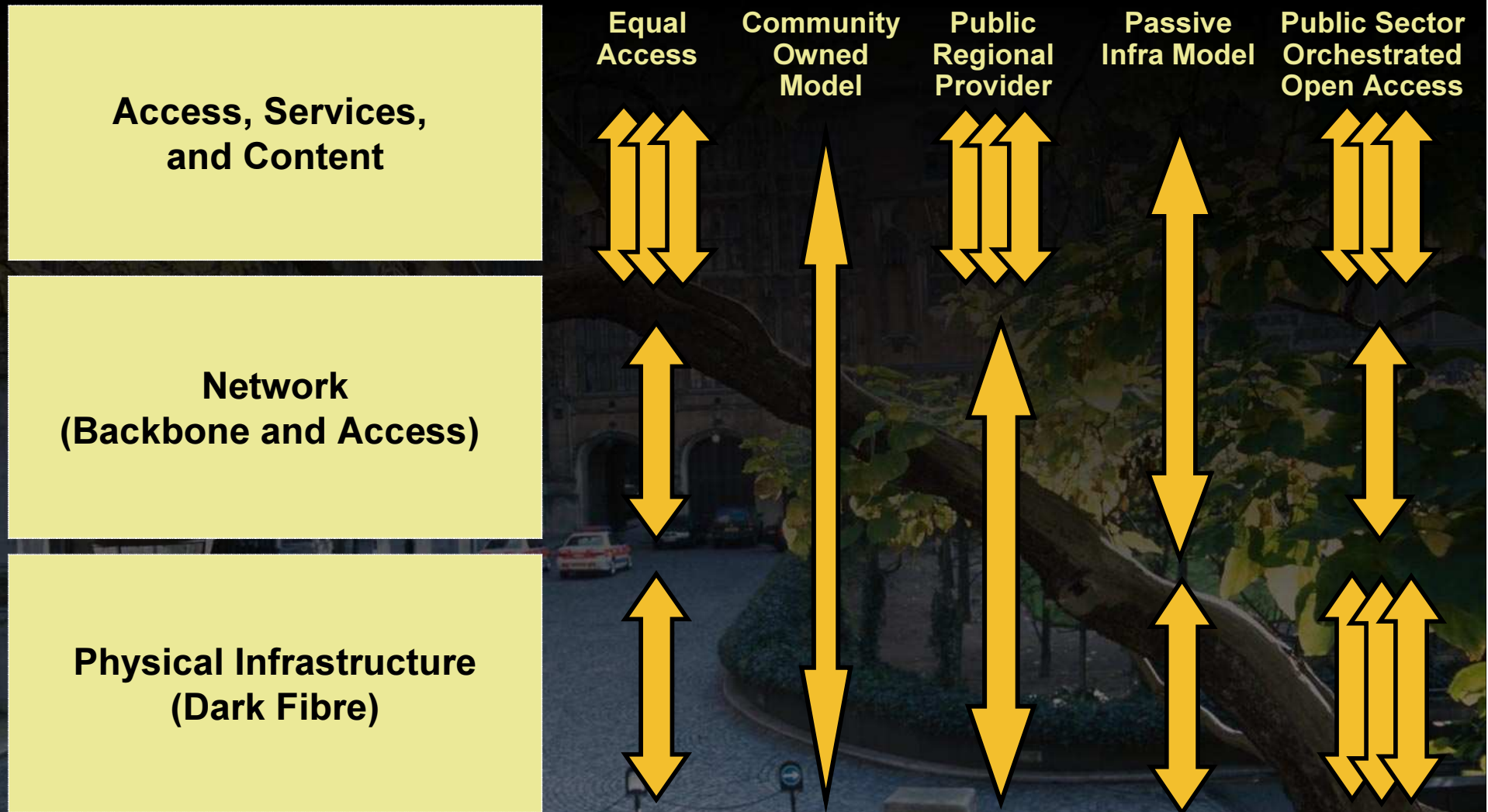
Generic Broadband Business Model

Building Blocks to a Broadband Vision



Source: The Broadband City Roadmap for Local Government Executives, Cisco Systems, Internet Business Solutions Group, Jan 2005

Public Private Partnership Model



Source: Cisco IBSG

Citynet City of Amsterdam

Roadmap

- **2002: Study of a Next Generation Broadband Network**
 - Study of future proof network: Value & Benefits**
 - Interviews with incumbents
- **2003/04: Study of a Public Private Partnership**
 - Study of public private partnership (passive layer) with a minority position of the Municipality: Possibilities & Opportunities**
- **2004: European tenders**
 - One party for building the physical infrastructure**
 - One party for operating the network**
- **2005: Bringing it all together**
- **2005: “On Track With Broadband” (“Goed op weg met breedband”)**
 - Dutch Government issues guidelines (non binding) for community broadband to local, regional government and housing corporations, partly based on the Citynet project**

Citynet Amsterdam

Fiber-to-the-Home is becoming a reality



Citynet Amsterdam

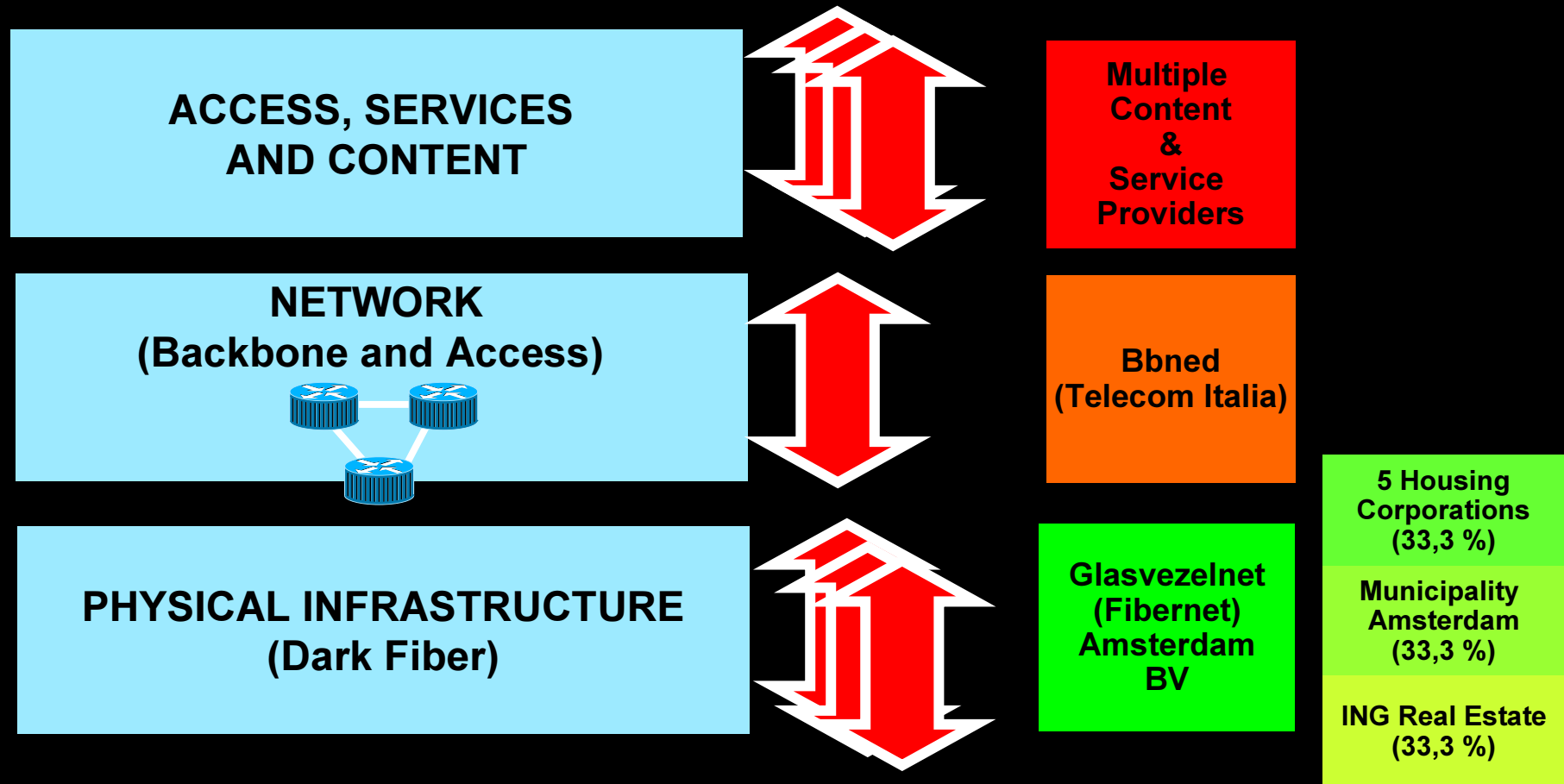
Fibre-to-the-Home is becoming a reality

- **FTTx reality in Europe (Source: Idate June 2005)**
 - 650.000 FTTx subscribers**
 - 2.5m homes passed**
- **CityNet: Major FTTH project in Europe**
 - 420.000 homes and businesses by 2013**
 - Cost: €300m (€714 per connection)**
- **Shift Market Order – Culture Clash**
 - From vertical integrated triple-play services to open-access network multi-play services**
- **Regulatory Problems Unlikely**
 - European Commissions focuses on stimulating competitiveness**
 - 32 European countries => deployment independent fiber-optic networks to boost economic development and social inclusion**

Citynet Amsterdam

- **Potentially the largest in Europe**
420.000 homes and businesses by 2013 at €300m
- **Open network principles**
- **Promoting services competition**
- **Fair and equal access to high-speed broadband for any service provider**
- **First phase: 40.000 homes by 2007 at €30m**

Public Orchestrated Open Access Model Citynet

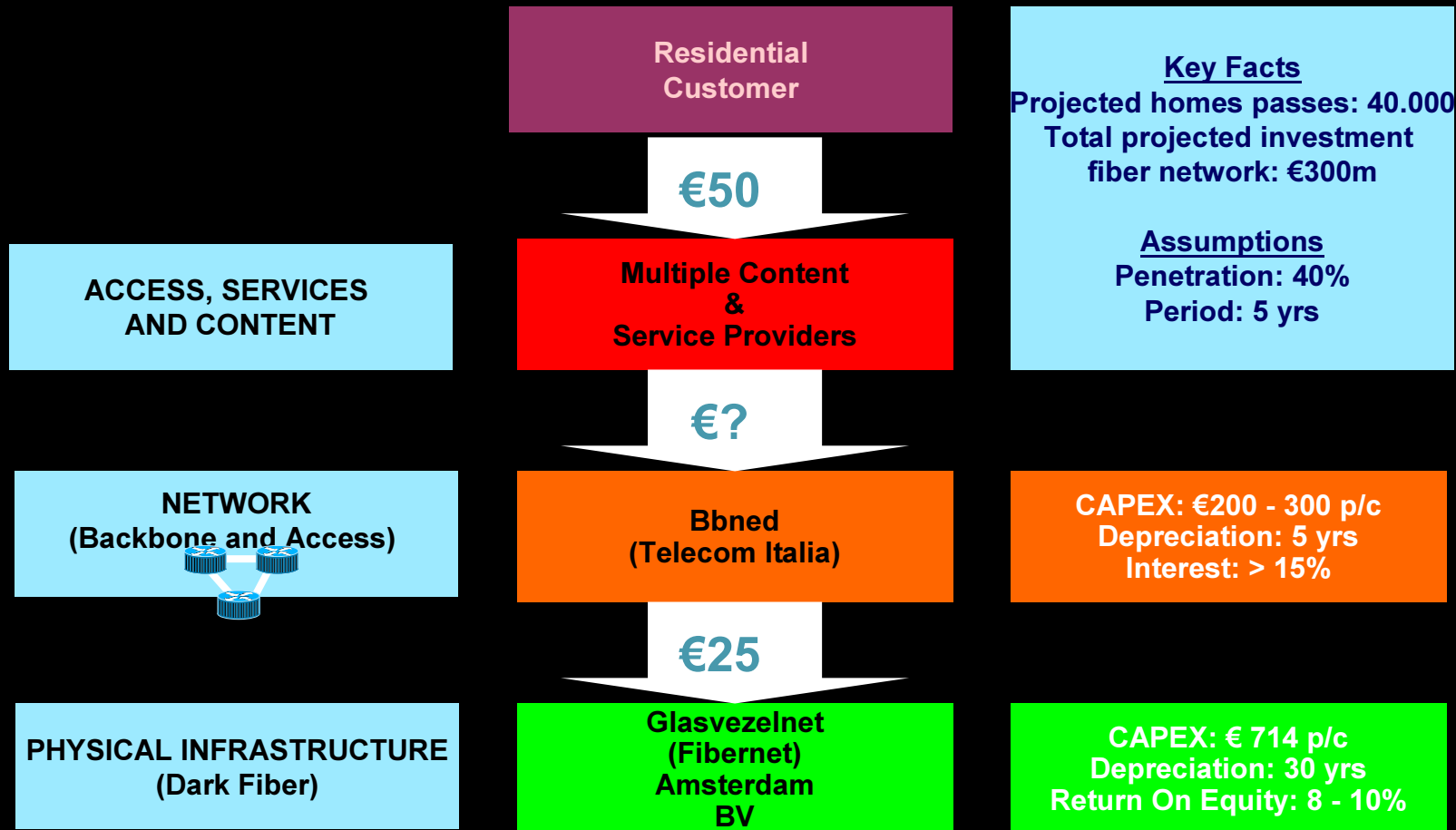


The Rationale Behind CityNet

- **Innovative and freely accessible infrastructure**
- **Support growth in demand next 30 years and beyond**
- **Open marketplace for innovative service providers**
- **Increase economic development**
- **Fast track for smarter & cheaper care, education and other public services**
- **Encourages content creation and more exchange of information**
- **Bypass of three major issues**
 - Continued demand for faster broadband connectivity**
 - The bottleneck in the local loop**
 - Overcoming short-term view of current infrastructure owners to invest in network upgrades**

Pricing & Investment Model

Citynet: Fiber-to-the-Home (residential)



Equal Access Model - Almere

Access, Services, and Content

**Equal Access for
Service Providers**

**Network
(Backbone and Access)**

Network Operator(s)

**Physical Infrastructure
(Dark Fibre)**

**Municipality or Public
Utility or Public Private
Partnership**

Key Cisco Solutions Making The Vision Possible



Cisco® Security Foundation Network

Provides future-proof broadband networks and protection against evolving threats

Cisco Unified Communications

Provides:

- * Unified Communications**
- * IP Telephony & Video/Audio Conferencing**
- * Customer Contact Center solutions**

Cisco Mobility and Wireless Solutions

Provides foundation of a connected community by allowing governments to deploy a secure, scalable future-proof broadband network

Cisco Data Centre Solutions

Provides secure data and application storage and back-up facilities and enables the next step to shared eGovernment services

Programovacie obdobie 2004-2006

- **Maximálna výška NFP na jeden projekt 20 mil. Sk**
- **Podpora informatizácie len pre samosprávy**
- **Vysoká administratívna náročnosť pri spracovaní žiadosti o NFP**
- **Vyžadovanie irelevantných príloh ku žiadosti o NFP (mapovanie hardvéru pripájaných inštitúcií, výdavky na internet...)**

Odporúčania 2007-2013

- **Zvýšiť limit na 1 projekt (aspoň 50mil)**
- **Zrušiť obmedzenie využitia siete len pre potreby samosprávy**
- **Zjednodušiť administratívu**
 - Menej príloh**
 - Nevyžadovať doklady nad rámec zákona**

Solution

• Video-surveillance

- **Wireless Cameras**, easy to install and move (no street work), using **IP protocol** to enable surveillance and management from anywhere on the IP secure network
- Helps fight crime, traffic offenses both by improving detection and providing proofs of evidence



• Noise, Pollution, Flood detection, Distant Meter reading

Wireless sensors provide constant measurement and can send automatic alerts. Wireless meters can be read remotely saving agent's time



Solution

- **PC or PDA with WI-Fi connectivity allowing agents to perform anywhere:**
 - access to agenda and email, fill and send forms, access office applications and data
 - check plans, existing networks, for example when digging a new hole in a street
 - update cases online, route them to colleagues, exchange information between agencies
- **Categories of Mobile workers and usages**
 - Managers (agenda, email)
 - Inspectors (forms, case management)
 - Street workers (case management and access to office data)
 - Municipal Police (alerts, quick exchange of information, take control of videosurveillance cameras,...)
 - parking attendants (forms, send picture of offender,..)
 - Social helpers (access to office applications)
 - ...



Solution

③ Hotspots, Tourists, Transports

- **Mobility for municipal transports**

- **Video surveillance in buses**

Passengers and driver's safety

- **Information screens in buses and at bus stops**

Delivers information about next bus arrival time, connections, traffic perturbations, and broadcasts news for passenger distraction ...

- **Bus position follow-up, load measurement**

Allows to have interactive information and statistics to optimise bus management



Solution

⑤ IP Telephony Usages

- **Enables agent mobility and virtual teams**

- ✓ Unlike traditional telephones, an IP telephony is not related to a telephone number, **any IP telephone can be used by anybody, association to a given telephone number is made on the telephone**. By entering his userid/password, a user personalises the IP Phone with its telephone number and all his setting (address book, call redirection, etc...)

- ✓ IP telephones allows advanced call redirection rules according to agenda and/or to caller:
 - If I am in a meeting then go to my mailbox
 - If my boss calls, IP phone rings first, then mobile phone, then home phone...

- ✓ A PC can become an IP Phone with Cisco IP Communicator software, allowing to call on Voice over IP anywhere you find an Internet access

- ✓ IP Phones can also be wireless



Solution

⑤ IP Telephony Usages

- **Supports productivity applications**

- ✓ Presence and Time management
- ✓ Information messages broadcast
- ✓ Display of caller contextual information (from a caller database)
- ✓ Teleconferences (Meeting Place) to enhance government employees training on new laws, regulations, processes and tools

Examples:

- ✓ Timestamp children entry and departure in a creche to automate bill production and have an up-to-date list of present children
- ✓ IP telephone in a building attendant home allowing better case and requests management



Solution

⑤ IP Telephony Usages

- **Solutions for Visually Impaired and Blind users**

- ✓ Tactile discernable keys
- ✓ Cisco Unity provides ability to listen to email via Text-to-Speech
- ✓ IP phone functions can be activated by voice rather than keys or screen menus



- **Solutions for Hearing Impaired and Deaf Users**

- ✓ Coupling of the handset to a Hearing Aid
- ✓ Text Telephone can be interface to Cisco IP Communication Solution using any analog gateway
- ✓ IP Phone can be associated to a web-cam allowing video conferencing



CONCLUSION

- **Network as a platform to build e-government projects to link central and local government departments to each other and save costs in the process.**
- **This same architecture can then be used to provide high bandwidth connections to schools, libraries and other public facilities.**
- **This same architecture and opening up the network to citizens can have an equally great impact, improving service.**
- **They are KEY ENABLERS for changing the way we Work, Live, Play and Learn**

Q & A





CISCO

Case Study: City of Almere (Holland)

Gemeente Almere



- **Challenge**

- Increase economic development and innovation

- Attract new businesses

- **Solution**

- Created new business and service models through innovative public private partnerships

- Deployed future-proof broadband network to homes, institutes and businesses

- **Benefits**

- Created 500 new jobs in the Almere Fibre Pilot area

- Preservation of SMB and 200 jobs

- € 5 million new investments in one year

- Established one of the most advanced Broadband Services Centers in the world

Case Study: Citynet (Amsterdam, Holland)



- **Challenge**

- Bridging the digital divide**

- Breaking through existing vertical integrated business model**

- Open access for all service providers**

- **Solution**

- Future-proof open broadband network**

- Connecting 420.000 homes and businesses by 2013**

- First phase starts in 2006: 40.000 homes and 3000 businesses**

- **Benefits**

- Empower innovation and knowledge economy**

- Enhance sustained economic and social benefits**

- Encourages content creation and more exchange of information**

- Fast track for smarter & cheaper care, education and other public services**

Best Practice Central Government Swedish Broadband National Program (2000- 2006)

- **Infrastructure funding of 5.25 billion SEK (564 million €):**

Backbone network € 43 million

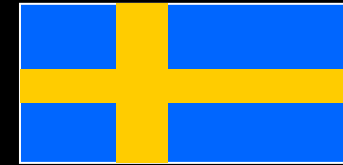
Regional network € 220 million

Local network € 129 million

Tax relief for connection € 118 million

Re-allocated funding to backbone, regional and local networks € 54 million

Structural funds and other regional grants 0.575 billion SEK (€ 62 million)



- **Operationally driven by Local Governments focusing on:**

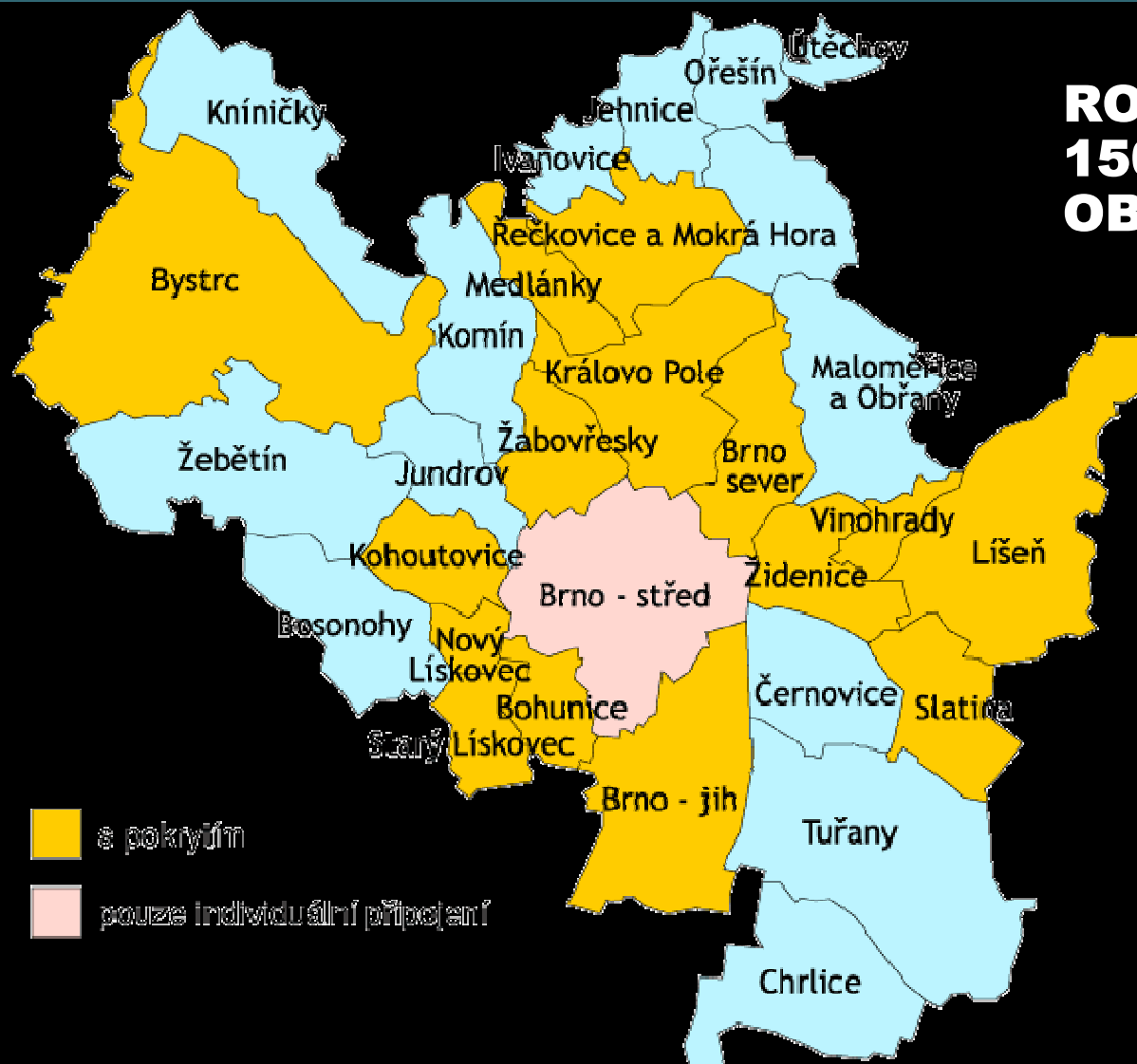
Passive infrastructure

Rural underserved areas

Open procurement procedure to engage market actors

Operator-neutral networks

Brno - pokrytí sítě NETBOX



ROK 2005
150 000
OBYVATELŮV

Projekt NETBOX v Brně 2005

- I. etapa Brno realizovaná na 85%
52tis. Připojených uživatelův
- II. etapa Brno +20tis. přípojek - 2006
- III. etapa Brno +15tis. Přípojek -2007
- celkové pokrytie Brna 70% do roku 2007



About us » [Key data](#)

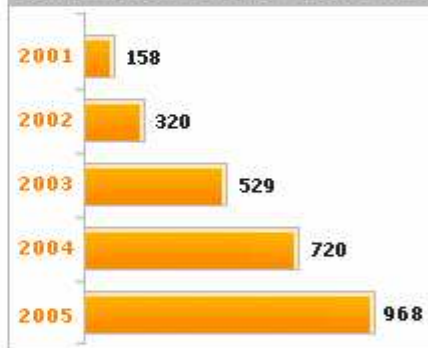
Key data

FASTWEB's financial and operating highlights.
For further details, see also [Annual Financial Data](#) or [Latest Results](#)

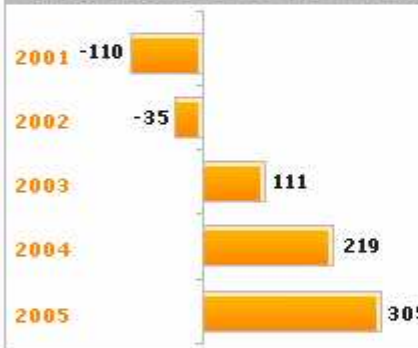


Latest update: March 27th, 2006

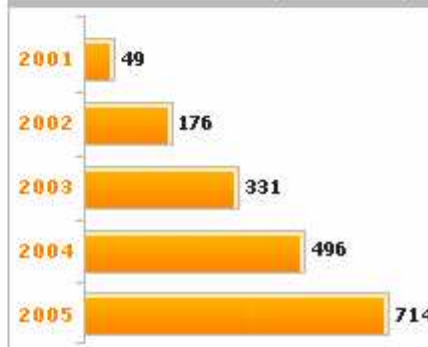
Consolidated Revenues (EURO mln)



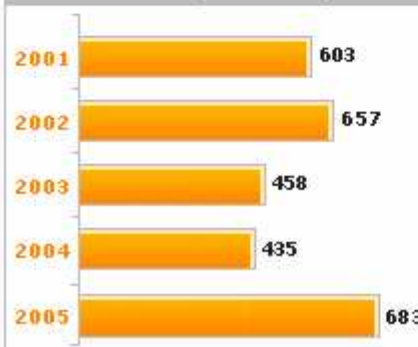
Consolidated EBITDA (EURO mln)



Italian customers (thousands)



CAPEX (Euro mln)



INTERACTIVE PLANNER

November 2006						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

SEARCH THE SITE

FIND IT FAST

STOCK



Last **37.75 (-1.41%)**
 Time **09:34**
 Open **37.95**
 Previous **38.29**
 Min/Max **37.6 / 38.15**

Detailed info

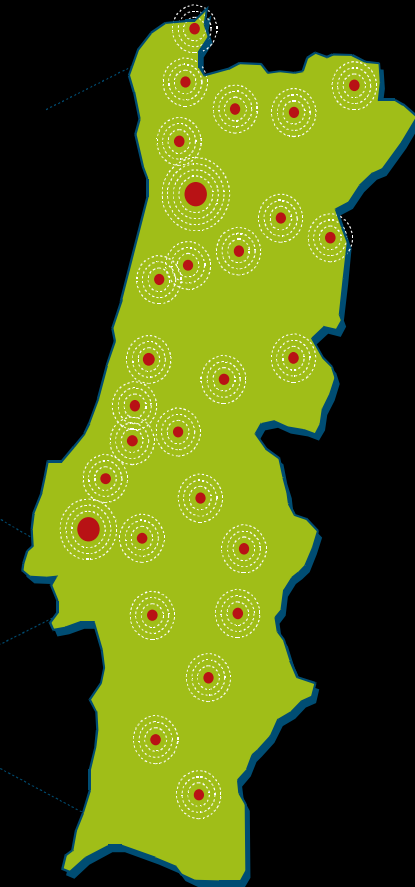
LATEST FROM FINANCIAL MARKETS

[Il Sole 24 ORE - Radiocor Breaking news](#)

Best Practice Central Government Portuguese e-U Broadband

“Creating the Wireless Broadband Nation”

- **Biggest University WIFI Telecom Network Worldwide**
- **National e-Learning Platform**
- **400.000 users**
- **5.000 Access Points**
- **170 Hot Spots**
- **100% Portuguese Private and Public Universities**



The national backbone is now being open to equal access

Wienstrom – Austria

blizznet

WIENSTROM

Fakty:

Rozbehnutie projektu : odbor informatiky Wien

- Pôvodne pre 400 škôl
- Pilot pre 500 zákazníkov,
- Potenciál 60'000 zákazníkov,

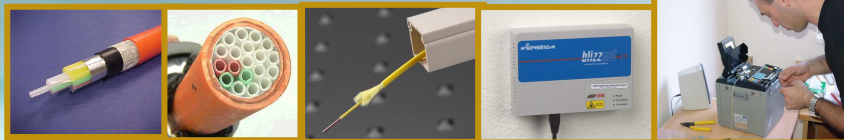
Ďalší rozvoj:

- Založenie prevádzkovateľa spoločnosti s Wienerstrom
- Aliancia s tvorcami obsahu : Video, TV, Uni atd.

WIENSTROM 660 km

FERNWÄRME 210 km

WIENER LINIEN 135 km



Website







CISCO

Cisco—The Technology Innovator

- **\$4 billion R&D investment, annually**
- **Over 16,000 engineers working in more than 1110 labs worldwide**
- **110+ acquisitions to quickly enter new markets and add talent**
- **More than 2000 patents have been issued to Cisco inventors**

Recent Innovations

- **AON—Application-Oriented Networking**
- **CRS-1 Carrier Routing System**
- **IOS XR—self-defending, self-healing operating system software**

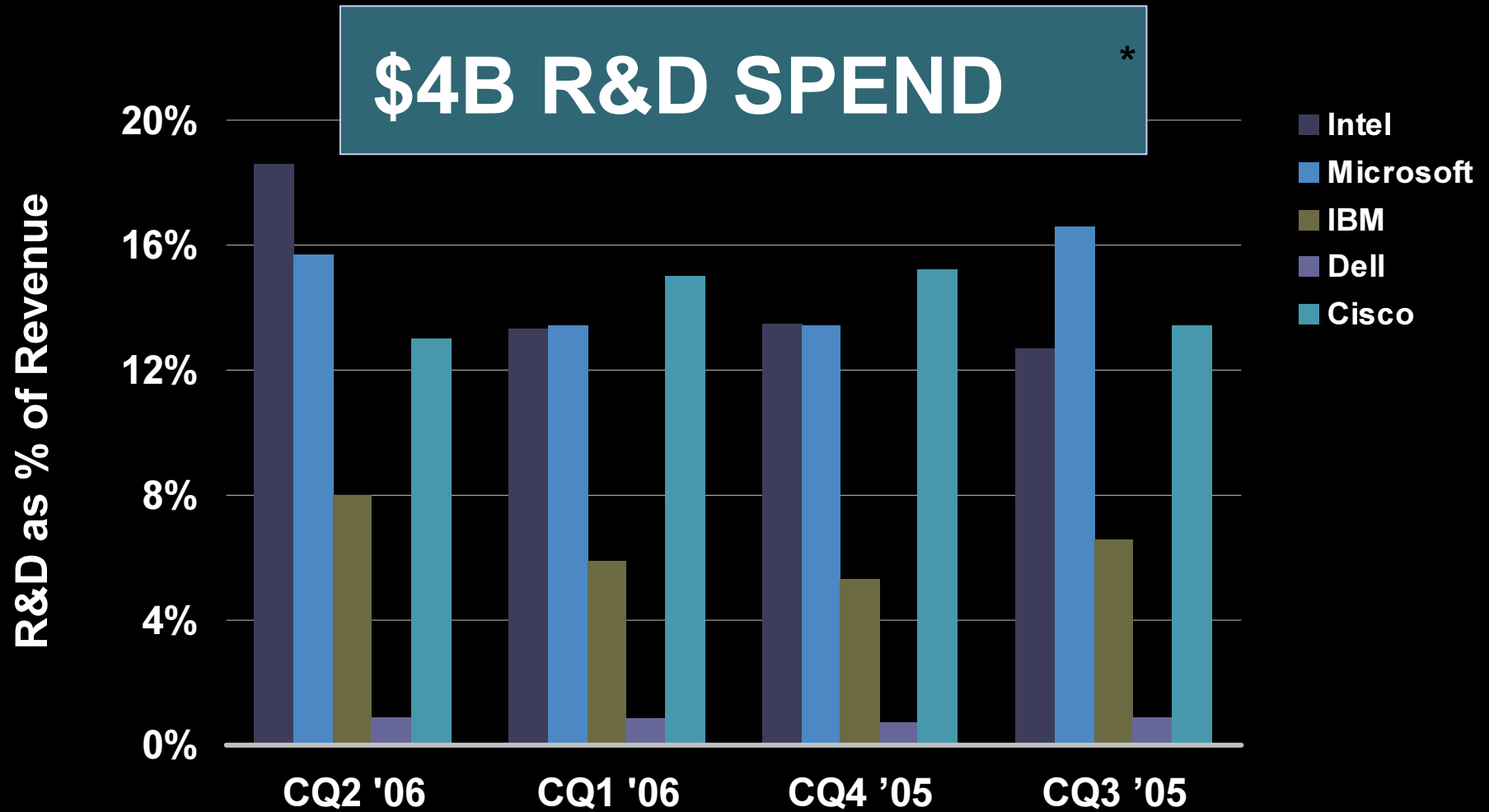
Development



Acquisitions



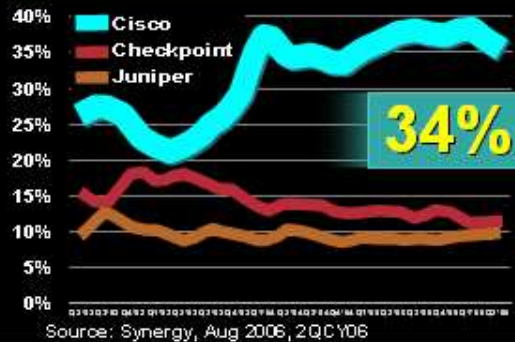
R&D Commitment



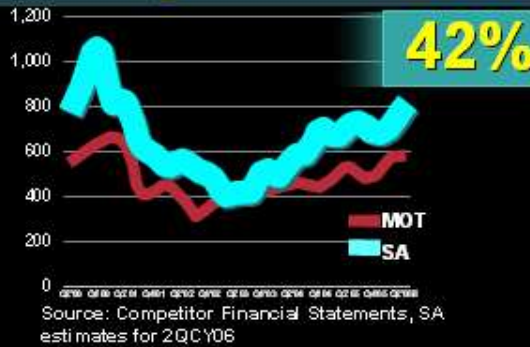
Source: Yahoo Finance, Company Financial Statements

*Total four quarters ending 7/29/06

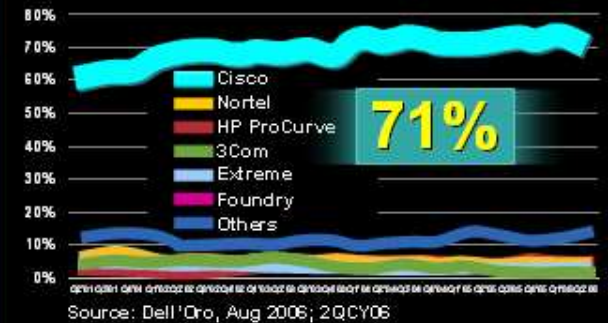
Security



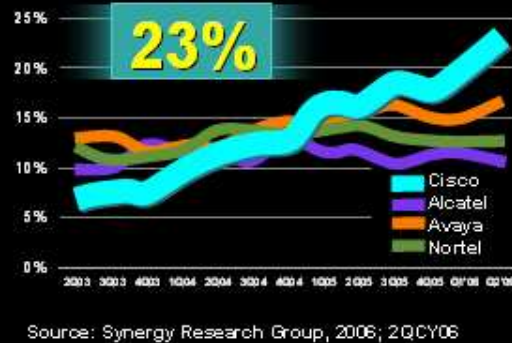
Digital Video



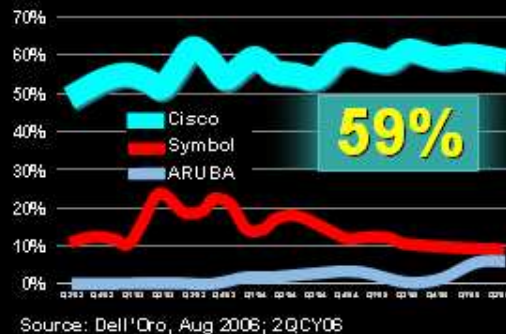
Switching... Modular / Fixed



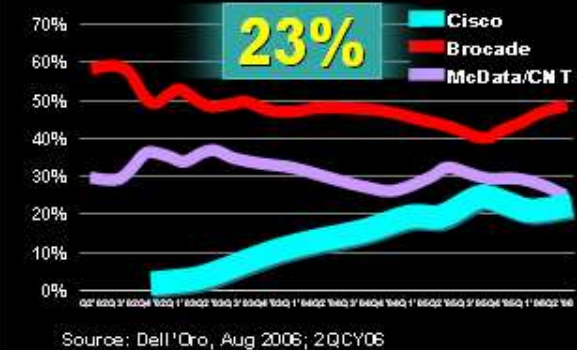
Enterprise Voice



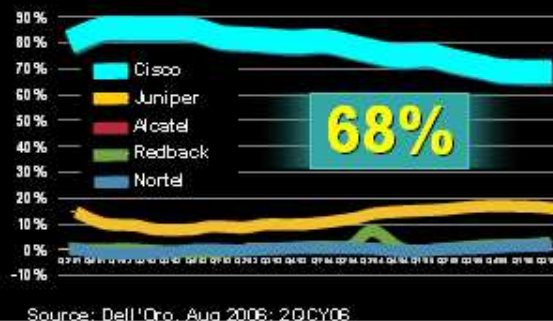
Wireless... Local Area Networks



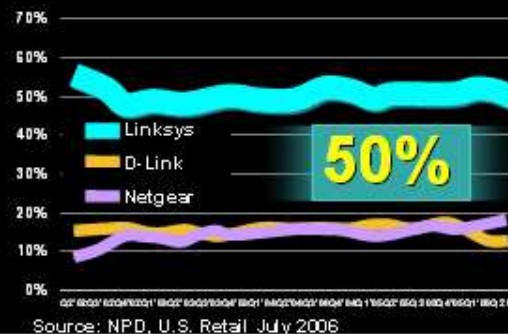
Storage... Area Networks



Routing... Edge / Core / Access



Networked Home



Market Share

“And”

Share of Wallet

