



# Ευρυζωνικότητα: "Ο καταλύτης" για Νέες Υπηρεσίες

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Περιφέρεια Δυτικής Ελλάδος  
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Αγρίνιο  
<http://ru6.cti.gr/broadband>

# Ευρυζωνικότητα

**“Ευρυζωνικότητα ορίζεται με ευρεία έννοια ως το προηγμένο, εφικτό και καινοτόμο από πολιτική, κοινωνική, οικονομική και τεχνολογική άποψη περιβάλλον αποτελούμενο από:**

- την παροχή γρήγορων συνδέσεων στο Διαδύκτιο . . .
- την κατάλληλη δικτυακή υποδομή . . .
- την δυνατότητα του πολίτη να επιλέγει . . .
- το κατάλληλο ρυθμιστικό πλαίσιο . . .”

Πηγή: [www.broad-band.gr](http://www.broad-band.gr)

... ΜΕΡΙΚΑ ΟΜΩΣ ΕΙΝΑΙ ΠΟΛΥ  
ΕΝΟΧΛΗΤΙΚΑ, ΟΠΩΣ ΑΥΤΗ Η ΚΟΤΑ  
ΠΟΥ ΕΡΧΕΤΑΙ ΤΩΡΑ ...



ΚΟΚΟ-ΚΟ-ΚΟΚΟΚΟ-ΚΟ-ΚΟΚΟ,  
ΔΕΝ ΞΕΡΩ!.. ΣΟΥ ΕΧΩ ΠΕΙ  
ΕΝΑ ΕΚΑΤΟΜΜΥΡΙΟ ΦΟΡΕΣ ΟΤΙ  
ΔΕΝ ΞΕΡΩ!.. ΠΑΡΑΤΑ ΜΕ ΠΙΑ!



ΜΑ ΤΙ ΣΟΥ ΛΕΕΙ;

ΜΕ ΡΩΤΑΕΙ ΣΥΝΕΧΟΣ  
ΑΝ ΑΥΤΗ ΕΚΑΝΕ ΤΟ ΑΥΓΟ  
· Η ΤΟ ΑΥΓΟ ΑΥΤΗΝ!

Apkäs



“Ευρυζωνικότητα είναι ο **ENABLER**, ‘ο καταλύτης’, για την μελέτη, σχεδίαση, υλοποίηση και χρήση νέων σύγχρονων υπηρεσιών”



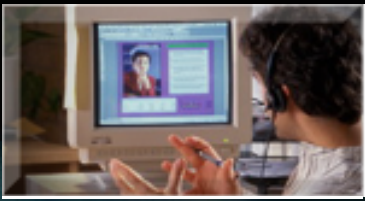
# Trend: Convergence and Triple Play Services

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**Voice**



**Video**



**Data**



**Storage**



**Telephone Network**

**Broadcast Network**

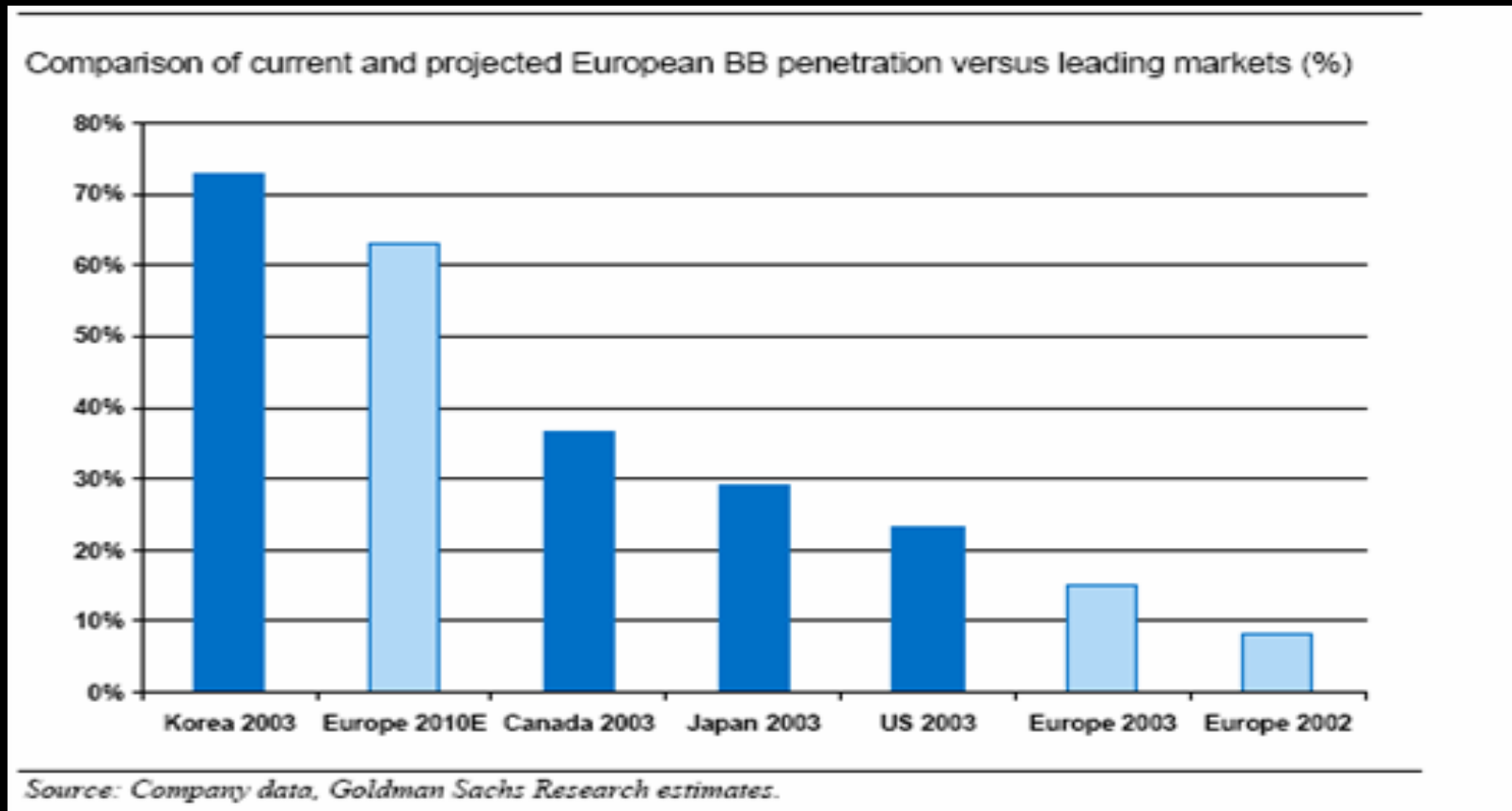
**Broadband IP Network**

**Storage Area Network**

# Trend: Competition and Broadband penetration

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- Forecast suggest European BB penetration can increase more than 60% by 2010 driven by competition.



# Trend: Governments are getting involved in broadband ventures

## Players involved in FTTx initiatives in Europe (June 2004)

Incumbent operators	8	7,8%
Municipalities / Power Utilities	72	69,9%
Alternative operators / ISPs (1)	9	8,7%
Housing companies & Other	14	13,6%

(1) Here FastWeb Footprint (13 cities) and B2 Footprint (53 cities) count one for each

Source: IDATE study / FTTH Council Europe



**Broadband Manifesto**

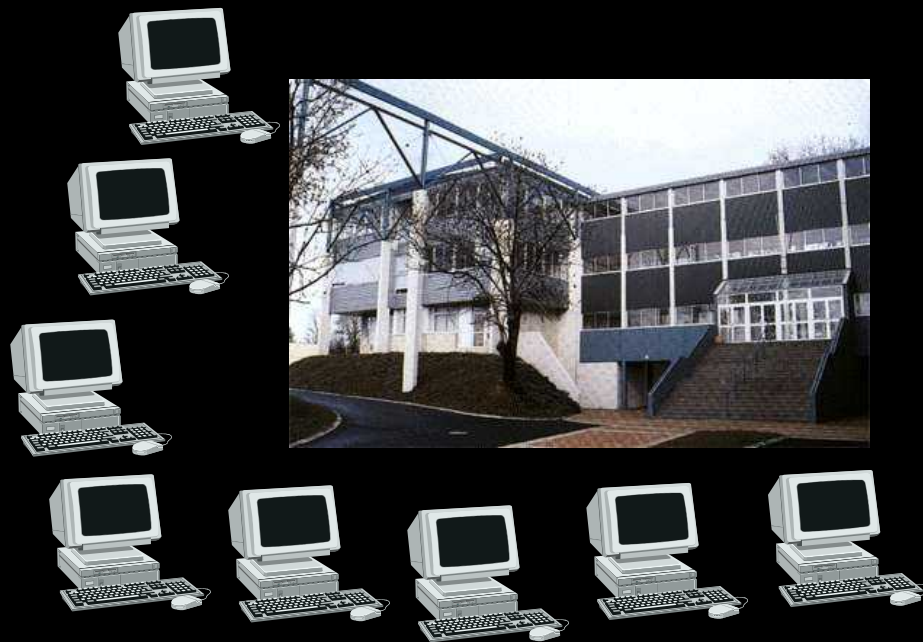
**... so what are the  
government's service  
drivers for Broadband  
adoption ?**



# First Rationale for Broadband Deployment

## A FAIR SOCIETY, REDUCTION OF THE DIGITAL DIVIDE

- INCREASE INTERNET LITERACY
- LOWER INCOME FAMILIES
- OLD PEOPLE
- IMMIGRANTS
- EDUCATIVE PROGRAMS
- IMPROVE CHANCES



- ELECTIVE PLATFORM
- RECOGNITION FROM PEERS (& STATISTICS...)
- GOAL OF CITY EXCELLENCE

# Healthcare

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## Comunita' Valle Canobbina (Italy)

4 alpine mountain villages over 11000 hectares, 6000 people

Population (and health services availability) decreasing and aging

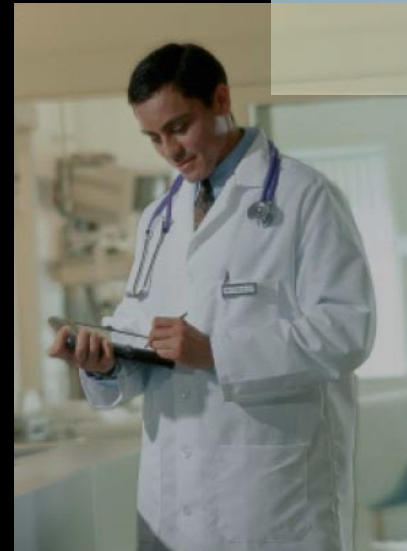
3 days needed for simple medical check and tests

9 Local health offices wireless enabled

Secure network infrastructure for communication and data transfers

Access to specialists via Videoconference

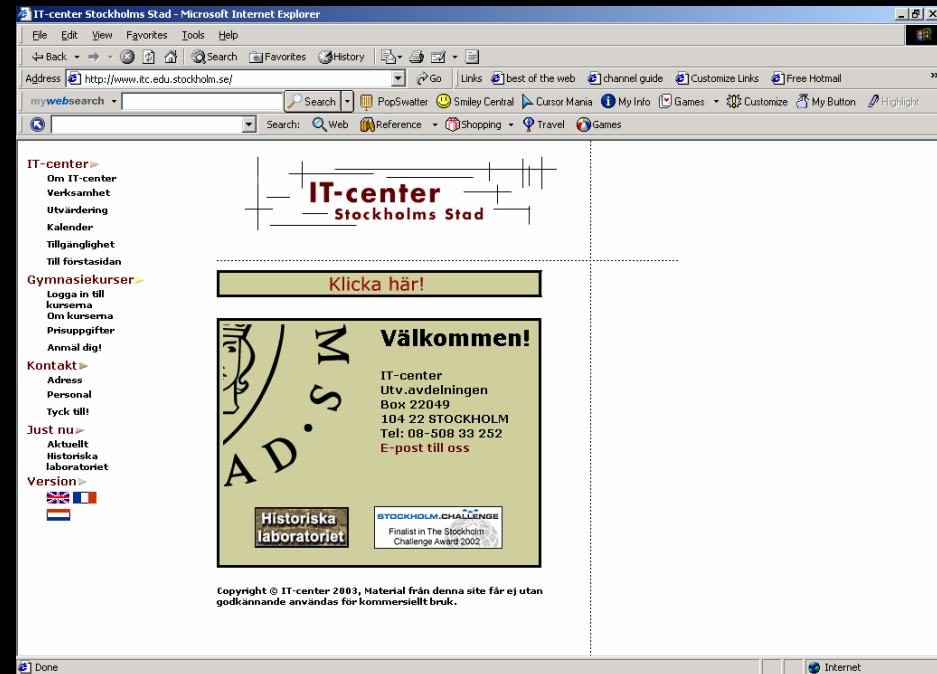
Next: Online prescriptions



# Broadband Education: Stockholm

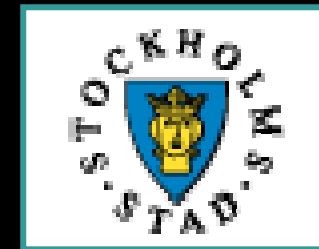
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- School portal
  - Communication
  - Planning
  - Virtual classroom
- 30 High School courses
  - web based - open for all
- 400 educational films streaming
- Personal e-mail address from age six
- ID through biometry for the youngest



**Size: 145 Compulsory Schools, 25 High Schools, 90.000 students, 8.000 teachers**

**Speed: 1 Gigabit Ethernet, 100 Megabit into every classroom**

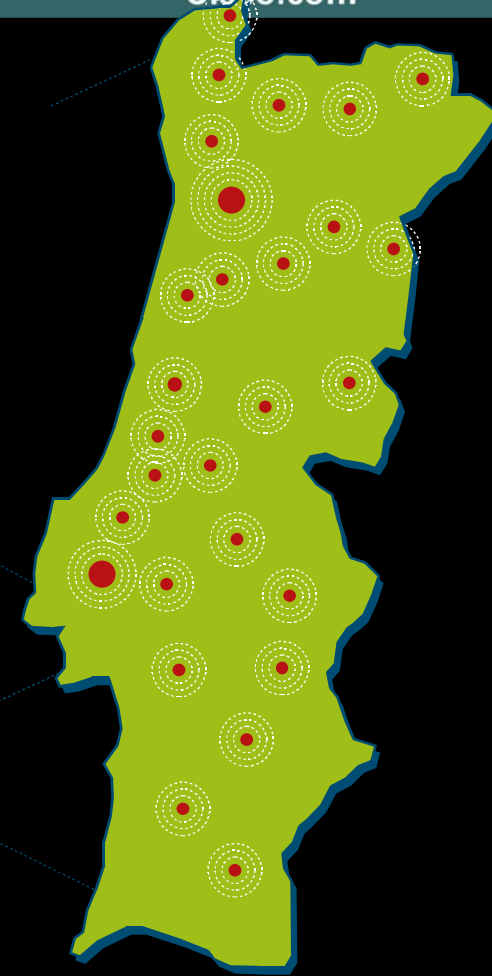


# Portuguese e-U Broadband

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## Creating the Wireless Broad Band Nation

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



# Second Rationale for Broadband Deployment

## PUBLIC SECTOR: COST REDUCTION & GREATER EFFICIENCY



### – FORMS PROCESSING

Manual Cost: 3.5 €\*

On-line Cost: 0.5 €\*

### – CITIZEN “CUSTOMER SERVICE”

### – OVERALL ACCESSIBILITY 7/7 24/24

### – LESS BUREAUCRACY



### – INCREASED EFFICIENCY IN KEY SECTORS

### – EXCELLENT FIT FOR NEW DEMANDS OF SECURITY

### – ENHANCED QUALITY OF LIFE

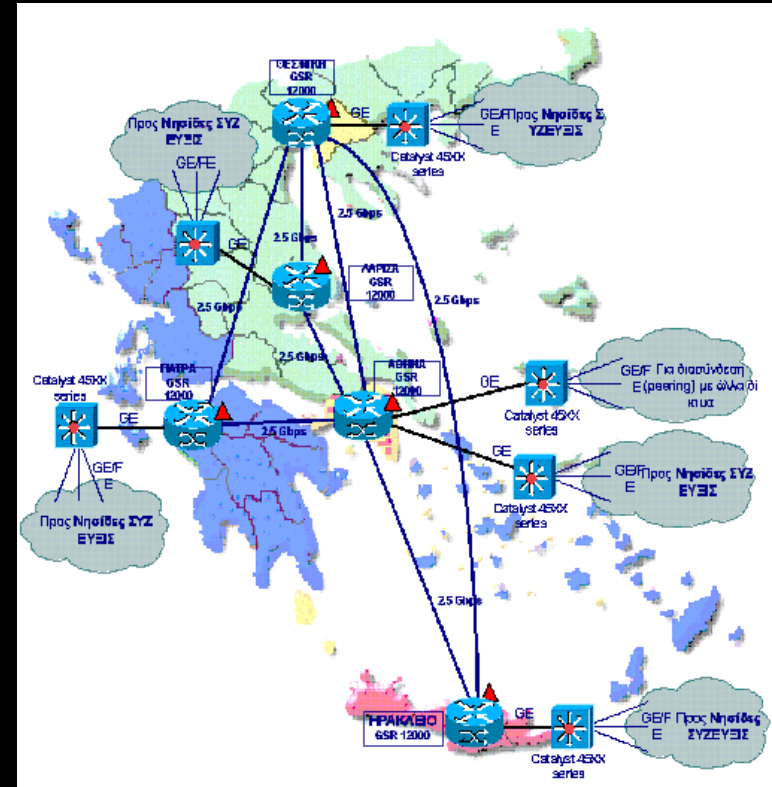
\*: E.g. Tax forms, source: Meridien Report, June 2002

- Reduction of telecommunication costs with **aggregation of demand**
- Increase of speed & security in communications
- Effective utilization of Public Sector Information Systems
- Improvement of citizen's service - one-stop shopping
- Management in Public Administration's data transport



## Services

- VPN service – IP MPLS VPNs
- Core network connectivity
- VoIP
- Internet Access
- E-Mail and Security
- Communications Security
- E-Learning
- PKI for Greek Public Sector
- Teleconference services



[www.syzefxis.gov.gr](http://www.syzefxis.gov.gr)



# Cost savings - Employee Services

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- Intranet (authorizations for employees, expenses paper, directories, E-learning, etc.)
- Mobile Communication (blackberry for executives, mobility solutions for employees)
- Digital Signature (for executives and external users)
- Video on Demand (internal/external)



**8,1M€ Net Present Value in 5 years**



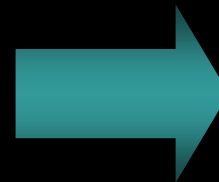
# Public Services - LocalRet Catalunya

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- Multimedia access to Public Services (www, phone, office)
- Single platform for eGovernment services
  - citizen identifier, e-signature, docs register, content manager, inter-admin exchange modules, warnings, payment, etc)
- Used by State, Region & Cities
- Citizen and Businesses centric, lifecycle-based
- Award winning initiative (EU, Stockholm Challenge, etc)



**A regional broadband infrastructure is the Key to success**



# Safety: Westminster Wireless City

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- Objectives:
  - Reduce crime
  - Streamline Parking
  - Regulate entertainment
  - Commercial waste
  - Better Housing services
- Metro Mobile Network
  - Cost reduction
  - Mobile access to field workers
  - Better productivity / move to multi functional staff
  - New services
- 150 WiFi Cameras on Light Lamps to monitor behaviour
- Invest-to-save model



# Third Rationale for Broadband Deployment

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## BOOSTING THE ECONOMY

– EMPLOYMENT



– TELEWORKING



– Web Cafés



– REGIONAL EXCELLENCE...  
and beyond!



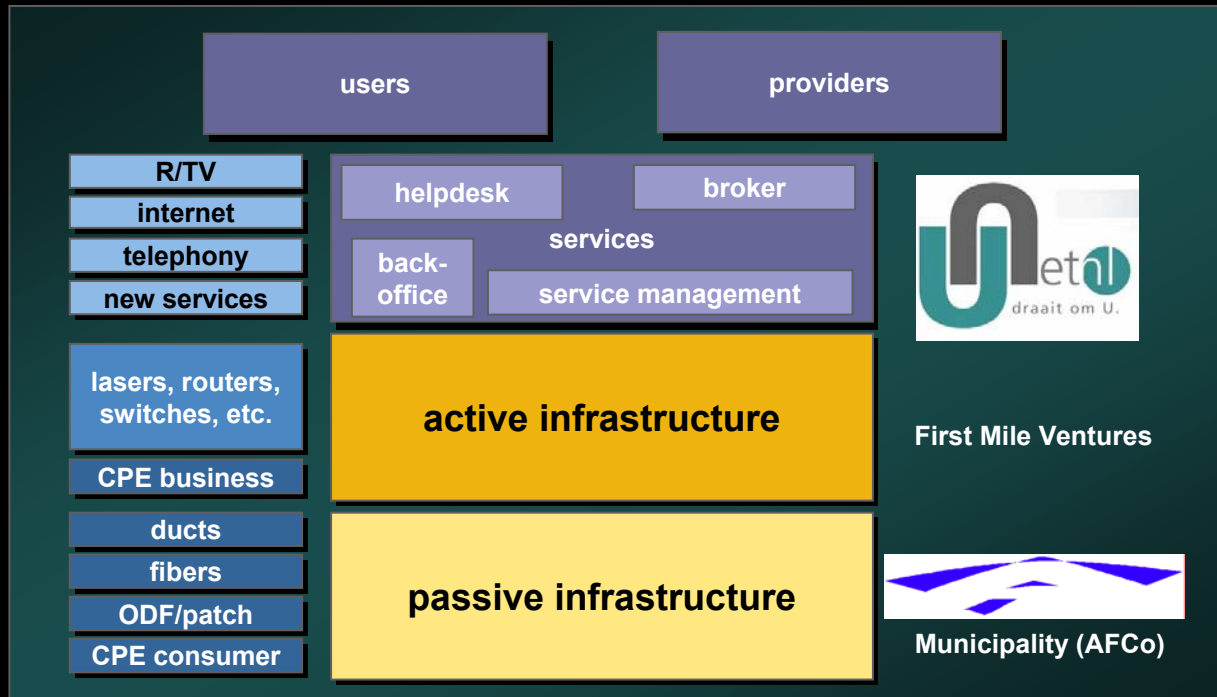
– ATTRACTING ENTERPRISES



– and private investment...

# The City of Almere Broadband initiative

## Almere Fiber Pilot Initiative



- **Challenge:** Population growing at 8%, employment growing at 5%
- **Solution:** Increase Economic profile of the City by deploying a high speed fiber infrastructure
- **Result:** Companies relocating to Almere (IBM, ASM, etc)

# Oulu – Broadband and Economic Development

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## Objectives by 2006

**150 new businesses**

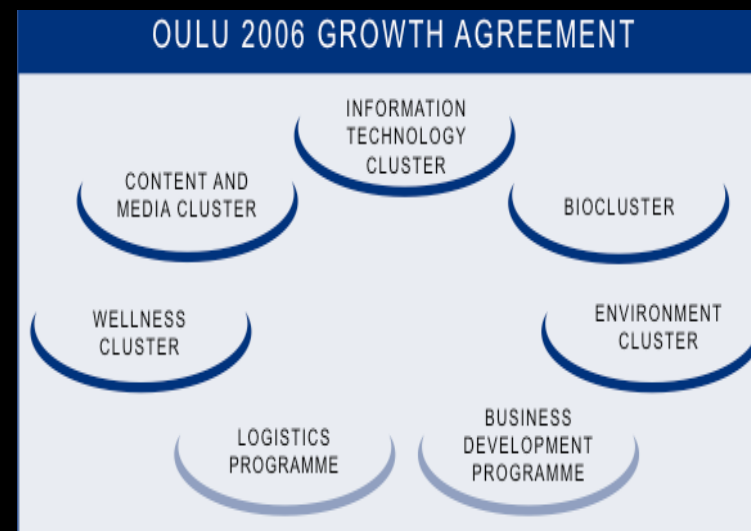
**6,000 new jobs**

**€ 1.5 billion of new turnover**

## Funding

**Public funding € 180 million**

**Private funding € 130 million**



**Broadband as enabler: Combination of Metro and Wireless**

# Reykjavik Energy

- ✓ Independent service company owned by 4 municipalities, including:
  - ✓ The City of Reykjavík
  - ✓ The Town of Akranes
- ✓ Multi Utility
  - ✓ Electricity
  - ✓ Hot Water
  - ✓ Cold Water/Drinking Water
  - ✓ Fiber Net
- ✓ Employees 560



- ✓ Customers: 80.000 companies and homes
- ✓ Area population: 190.000
  - ✓ Services 12 communities in Iceland
- ✓ First Nordic company to fulfill the requirements of ISO 9001
- ✓ Active business development

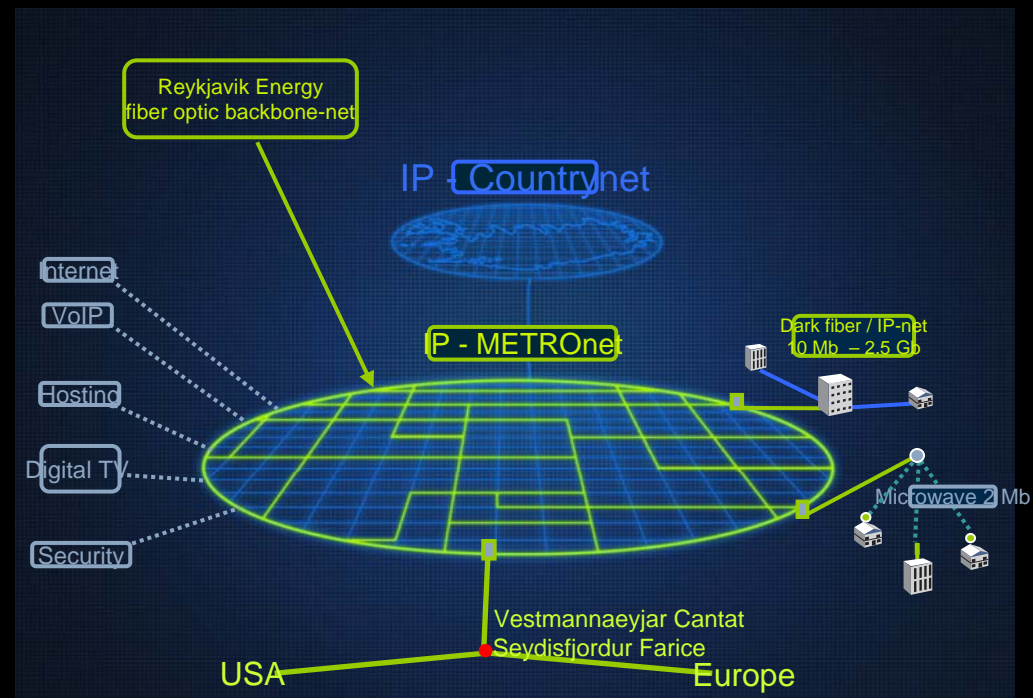
# The Scene



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- ✓1999 – Trials start with PLC. Backbone, fiber optical link between substations. (Fiber to the Curb). Norweb, Siemens, Ascom.
- ✓2000 – Fiber to businesses offered, new Telco created in Iceland based on RE fiber optic net
- ✓2001 – 2003 – Extended marketing of fiber to businesses, considerable market share.
- ✓2004 – 2011- Fiber to the Home, deployment

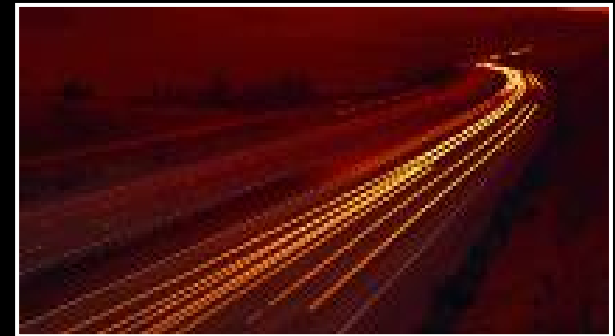
- ✓300 companies connected
- ✓400+ substations inter-connected
- ✓2.000 homes connected, to be Commissioned Autumn 2005
- ✓5.000 homes connected this year
- ✓70,000 -80.000 homes to be connected over the next few years (4-6 years)



# The 4th Utility

## PURPOSE

- ✓ Fiber backbone with IP layer serving businesses, extended to serve the homes
- ✓ To increase quality of life and competitiveness of the Icelandic community
- ✓ To connect every home and company with high speed interactive IP/fiber network
- ✓ To create a prosperous business environment for SP's on that platform.
- ✓ To attract vendors to cooperate and utilize this platform to develop new products and services. (Center of Excellence)



## STRATEGY

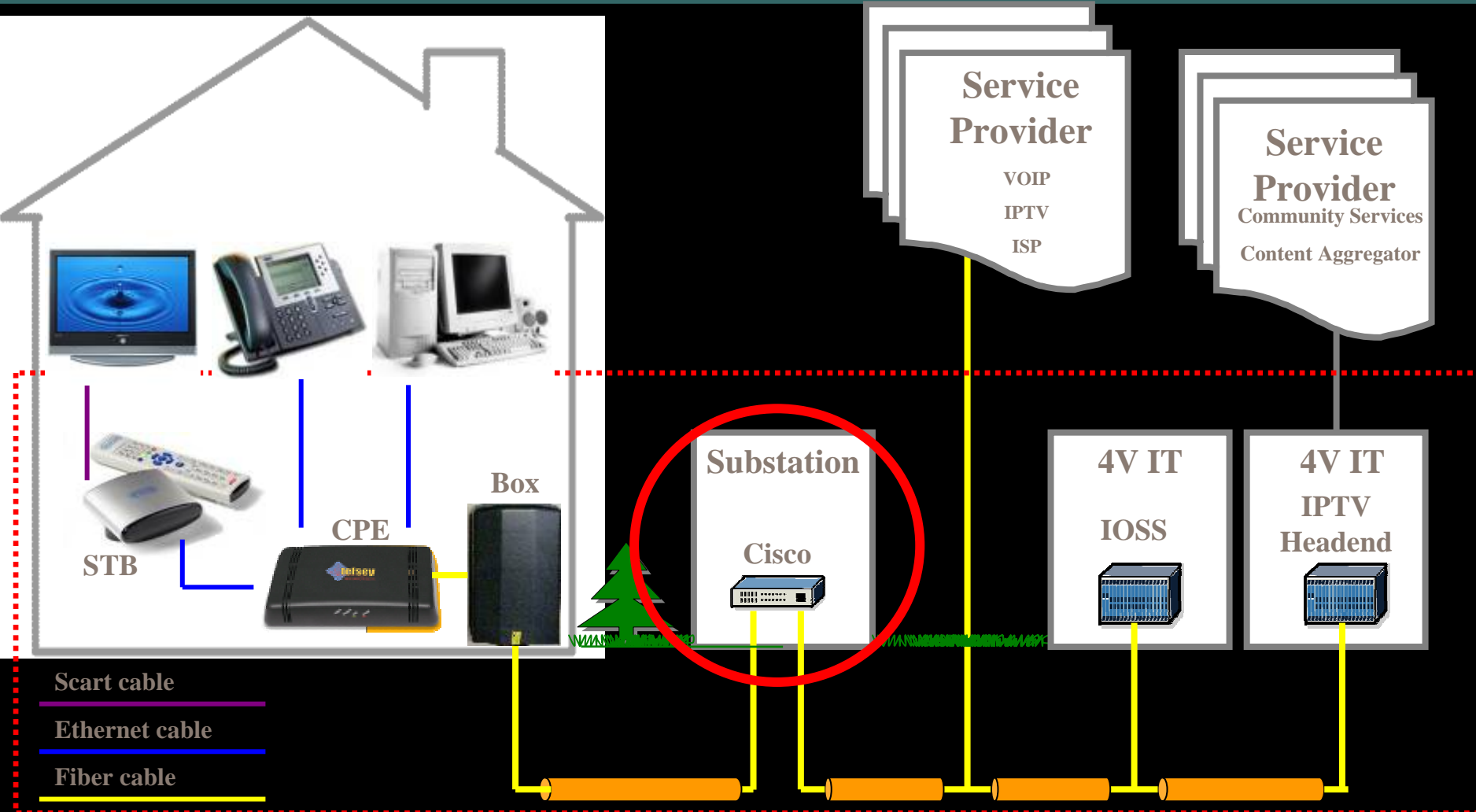
- ✓ Build and operate platform for Triple play\* services
- ✓ Equal access network, RE as an enabler – not service provider.
- ✓ Marketing and deployment in cooperation with local municipalities.
- ✓ Overbuild strategy, every apartment connected.
- ✓ Lowering thresholds by supplying connections to the TV set.
- ✓ Low connection fee, revenue sharing.
- ✓ Cooperation with stakeholders.



# The 4th Utility



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# Residential European Deployments

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## Fastweb



- **Founded in 1999, Fastweb provides voice, Internet connectivity, data transmission and video services to all customer segments**
- **full integrated IP architecture over dense fiber/copper networks**
- **417,000 customers at the end of June 2004**
- **Q1 2004 revenues of € 157 million (€ 78 million a year ago)**
- **Q1 2004 EBITDA of € 46 million (€ 10.5 million a year ago)**
- **most successful triple-play deployment worldwide**

# Fastweb - SOHO Services

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**FASTWEB**

## Easy Inclusive

- Unlimited Internet at 10 Mbit/s
- 1 e-mail address
- Unlimited « on-net » calls
- « off-net » calls: Local (5 h), National (5 h)



## Optional services

- Daily backup / Storage (500 MB)
- Video Surveillance (15'+45' recording + sms alert)
- Unlimited « off-net » calls (1 line)
- Web Services & Content creation



# Fastweb - Residential Services



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## FASTWEB

### Example of Residential Bundle

- Always on Internet at 10 Mbps
- 6 Mailboxes
- Unlimited calls (local/nat.l)
- TV Option (stb rental, 20+ broadcast channels, 5 hours PVR)
- E.Bismidia Channels + VOD
- VoD per movie rented
- Rai Click
- Digital TV broadcast (rev. sharing with Tele+/Stream)

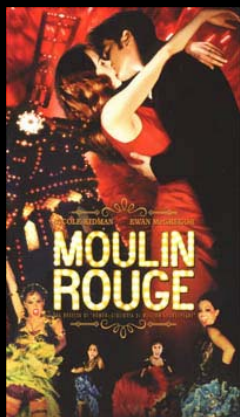


# Video Services + Television

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## Fastweb TV

- ✓ Unified Interface for all kinds of content:
  - ✓ Traditionnal channels: RAI, Mediaset, ...
  - ✓ Satellite channels: CNN, Bloomberg, ...
  - ✓ Pay-TV/Pay-per-View: Stream & TELE+
  - ✓ Video on Demand
- ✓ Integration with “VideoREC” and “Electronic Program Guide”
- ✓ Soccer matches broadcasting – free between August and December 2003



## Video on Demand

- ✓ 3,500+ titles (fiber or DSL)
- ✓ First agreements in Italy with the big American majors:
  - ✓ 20th Century Fox
  - ✓ Universal Studios
  - ✓ DreamWorks

# More innovation: Virtual PVR

Cisco.com

**FASTWEB**



The screenshot shows the FASTWEB Virtual PVR interface. At the top, there are tabs for 'PROGRAMMI REGISTRATI' and 'PROGRAMMI IN REGISTRAZIONE'. Below, there are filters for 'PAGINA ORARIA' (20:00-22:00) and 'CROCIATA' (15/06/2002 Mercoledì). The main area displays a grid of programs for various channels:

Channel	Start Time	End Time	Program Title
Canale 5	20:00	20:30	TGS - M..
Canale 5	20:30	21:00	Striscia ..
Canale 5	21:00	21:30	Carabinieri
Italia 1	19:55	21:00	Sarabanda
Italia 1	21:00	21:30	Saranno famosi
Rete 4	19:15	21:00	La forza del desiderio
Rete 4	21:00	21:30	One shot one k..
Rete 4	21:30	22:00	.. On..
Rai 1	20:05	20:40	Sette in co..
Rai 1	20:40	21:15	Incantesimo 5
Rai 2	20:00	20:35	Alle 20 c..
Rai 2	20:35	20:55	Zorro
Rai 2	20:55	21:30	Il 13° guerriero
Rai Tre	21:10	20:40	Blob Un posto ..
Rai Tre	20:40	21:10	Under 21. Italia - Francia

Below the grid, there are three buttons: 'REGISTRA UN PROGRAMMA' (with a red circle icon), 'PROGRAMMI REGISTRATI' (with a green play button icon), and 'HELP' (with a yellow question mark icon).

- 8 hours of programs recorded and stored 30 days
- 2 hr 30 min of programs recorded and stored 1 week

# Videocommunication... on TV!

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**FASTWEB**

## *The service*

- ✓ Videotelephony from TV
- ✓ TV quality
- ✓ Simple access and use



## *The innovation*

- ✓ First worldwide application
- ✓ Offer for the consumer market
- ✓ Low cost equipment

# Διεθνής Αερολιμένας Αθηνών

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- **Challenges**

Offer wireless broadband to all airport areas

Offer new type of services to their customers

Mobility for their employees

- **Solution**

Cisco Wireless Networking

(more than 100 Cisco 802.11b/g Wi-Fi stations)

- **Results**

Passenger satisfaction

Use wireless network for operational usage

Innovator to new type of services



Wireless  
Internet  
Zone



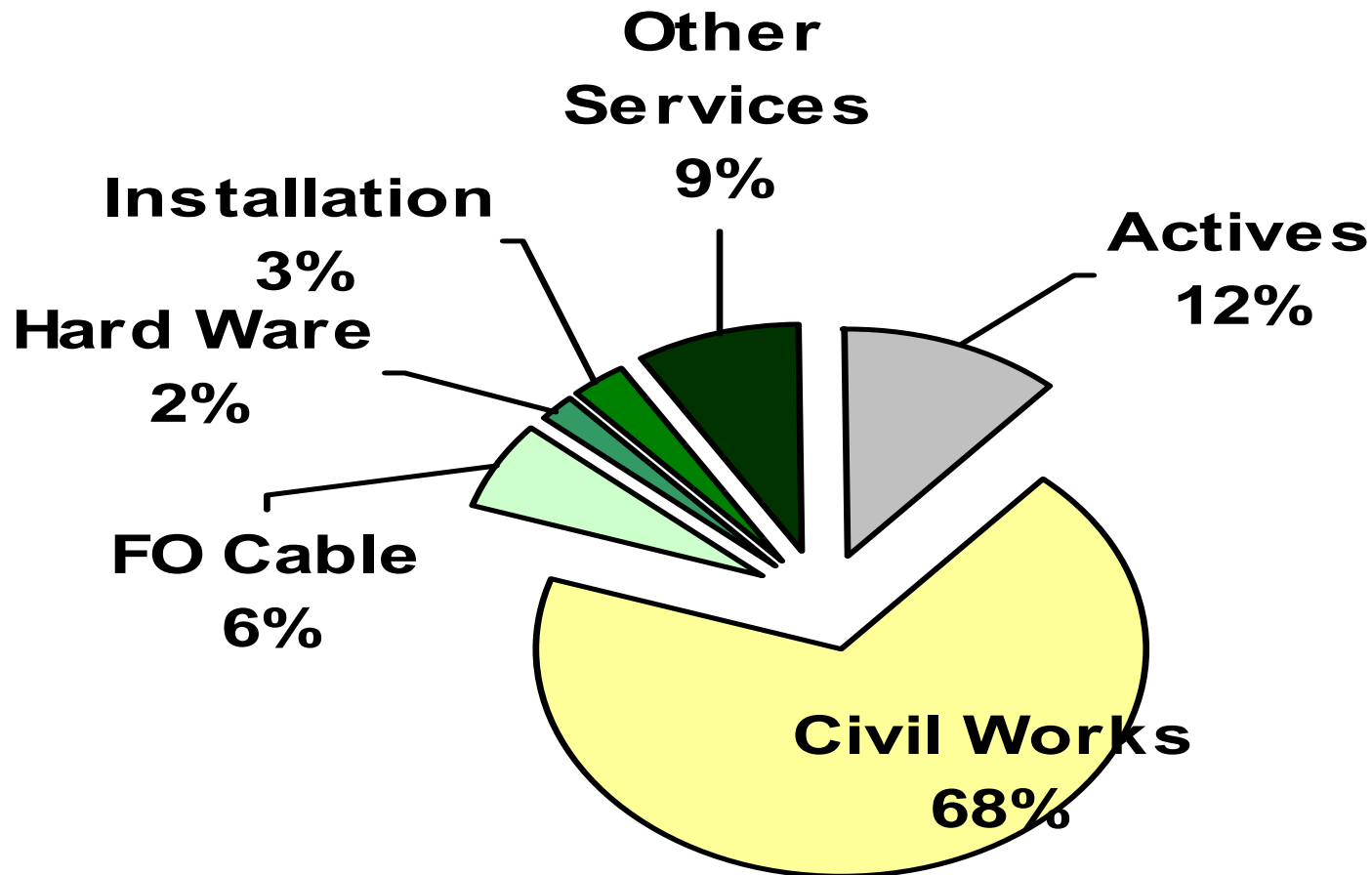


**...so which Private  
Public Partnership  
options do local  
governments have ?**

# Example: Fiber to the Premise implementation costs – First Year



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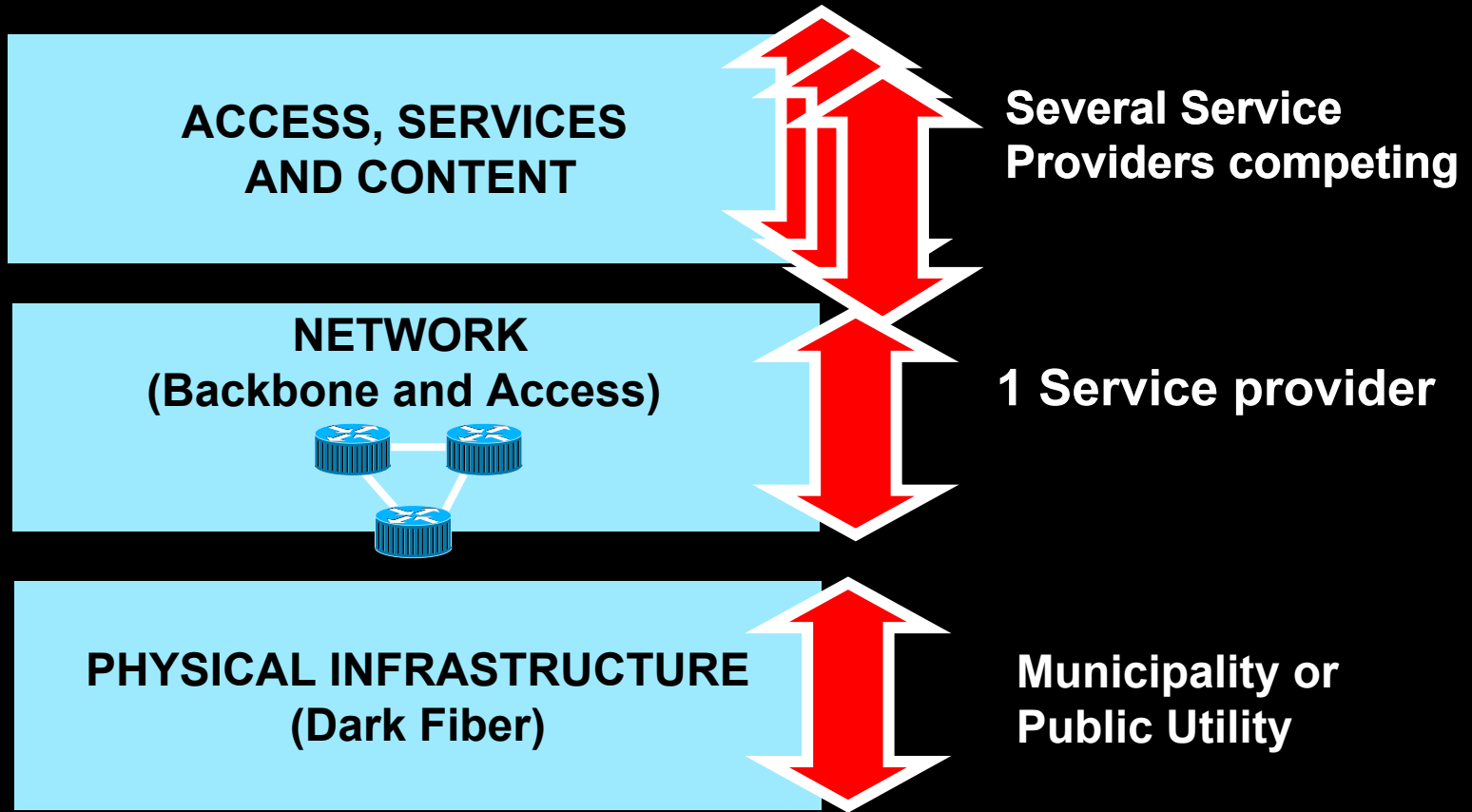


Source: Corning & FTTH Council Europe

# Relevant Business Model Scenario: Equal Access



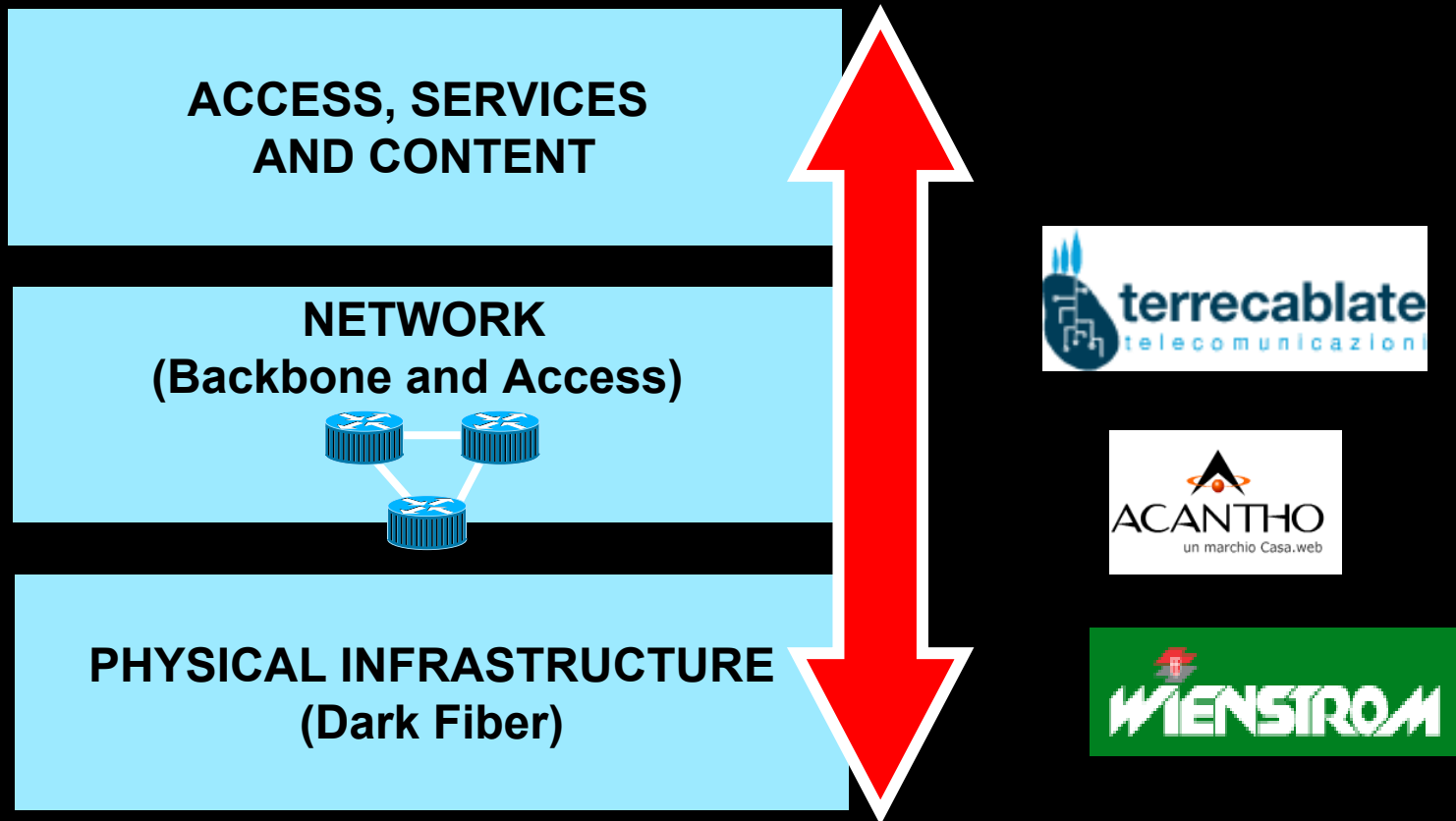
Cisco.com



# Relevant Business Model Scenario: Full Public control through PPPs



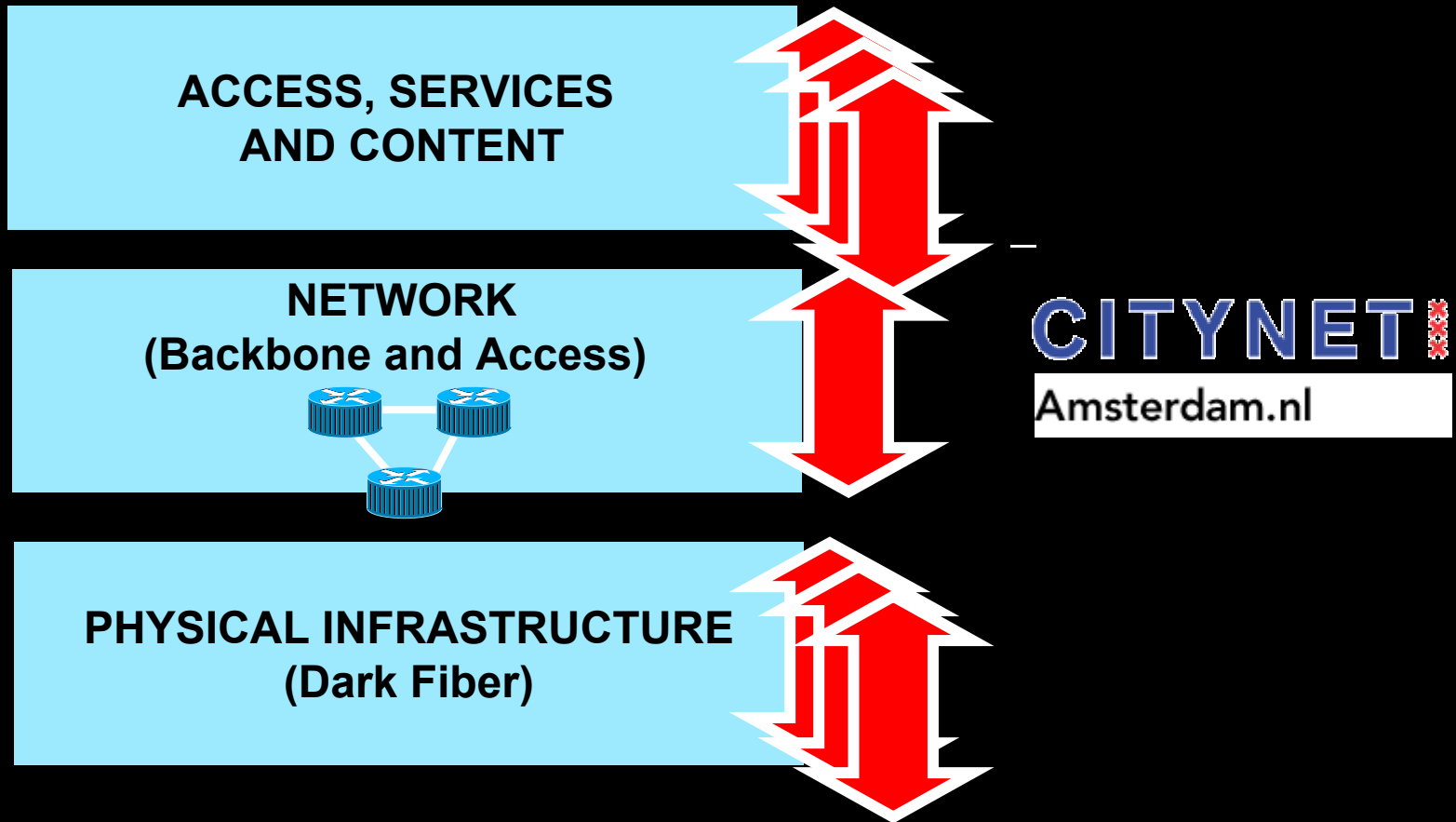
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# Relevant Business Model Scenario: PPP Orchestrated



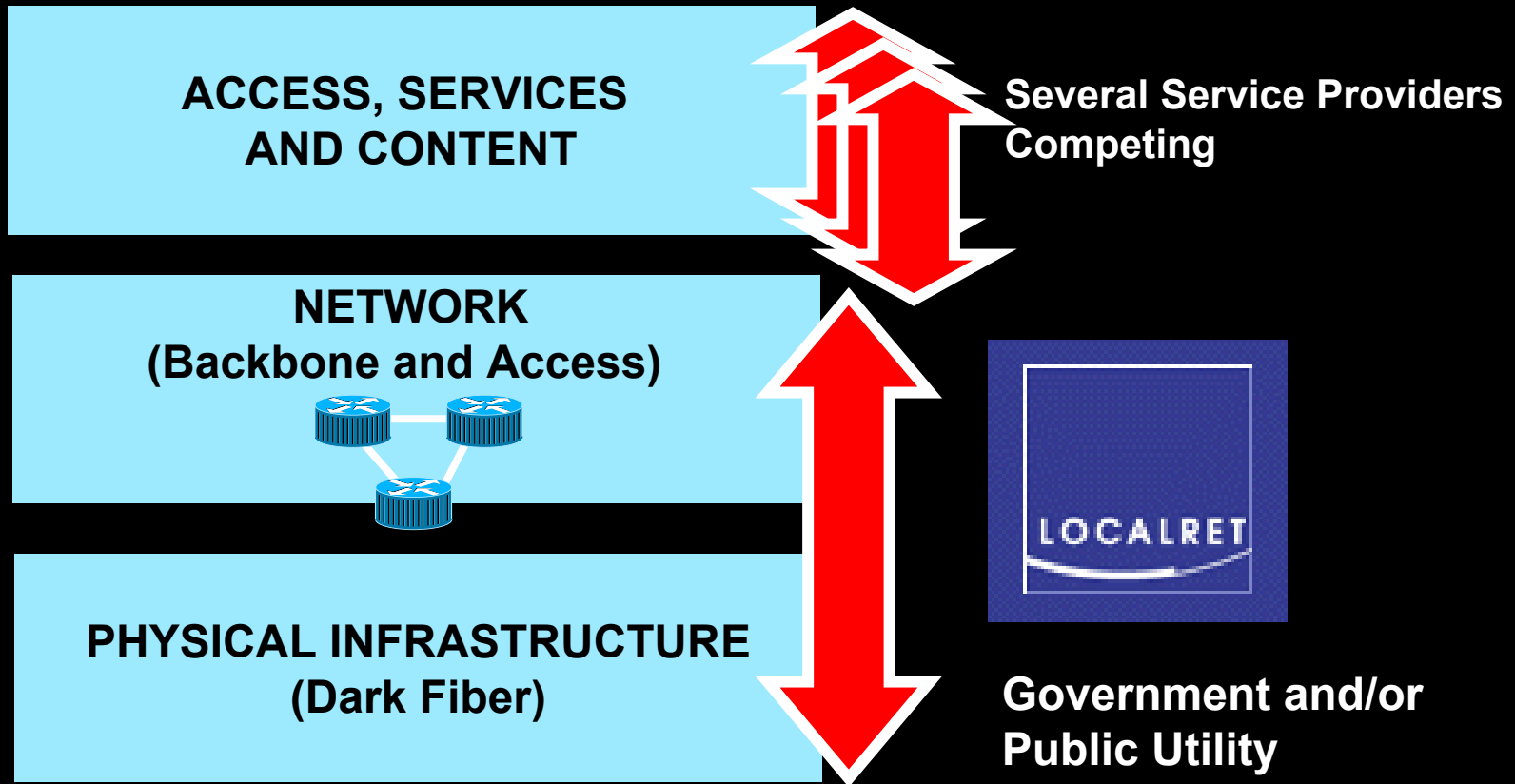
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# Relevant Business Model Scenario: Public Sector Telco



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# Ποιά είναι η Cisco Systems?

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- *Founded in 1984*
- *Market leader in networking for the Internet*
- *headquarters in San Jose, California*
- *Revenue +/- \$24 billion*
- *36,000 Employees in 67 countries*
- *\$3.2 billion R&D budget (#8 worldwide)*
- *100+ acquisitions*



# Τι μπορεί να προσφέρει η Cisco

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- Συμβουλευτικές υπηρεσίες
- Τεχνολογικές λύσεις
- Μεταφορά τεχνογνωσίας υλοποιημένων έργων
- Ολοκληρωμένες προτάσεις προμήθειας και υποστήριξης
- Πανελλαδικό δίκτυο εξειδικευμένων συνεργατών





# Cisco demo setup

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Cisco Wireless IP Phones 7920



Wireless clients



Cisco Call Manager



Cisco IP Phones 7960G



Cisco Color IP Phones 7970G

# Χρήσιμα links

- [www.cisco.com/go/government](http://www.cisco.com/go/government)
- [www.cisco.com/go/broadband](http://www.cisco.com/go/broadband)
- [www.cisco.com/go/metro](http://www.cisco.com/go/metro)
- [www.cisco.com/go/wireless](http://www.cisco.com/go/wireless)
- [www.cisco.gr](http://www.cisco.gr)
  
- **IDABC (EU eGovernment) :** [europa.eu.int/idabc/en/home](http://europa.eu.int/idabc/en/home)
- **Digital Government :** [www.centerdigitalgov.com/international/](http://www.centerdigitalgov.com/international/)



# Q and A



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**+30 210 6381300**

A large, illuminated Cisco Systems logo is displayed at night. The logo consists of the words "CISCO SYSTEMS" in large, dark, three-dimensional letters. Above the letters is a decorative structure of stacked, rectangular blocks of varying heights, some of which are illuminated from within, creating a glowing effect. The logo is set against a dark background with some trees and streetlights visible in the distance. In the foreground, there is a blurred fountain with several water jets.

**CISCO SYSTEMS**