Cisco Expo 2007

Development of technology versus financial potential of local governments

Bartek Michalowski

Enable Your Network
Empower Your Business

Agenda

- Does technology real contribute to the change?
- What others are doing?
- What's in it for me?

“Everybody knows that something can not be done, until somebody comes who does not know it and does it.”

Albert Einstein

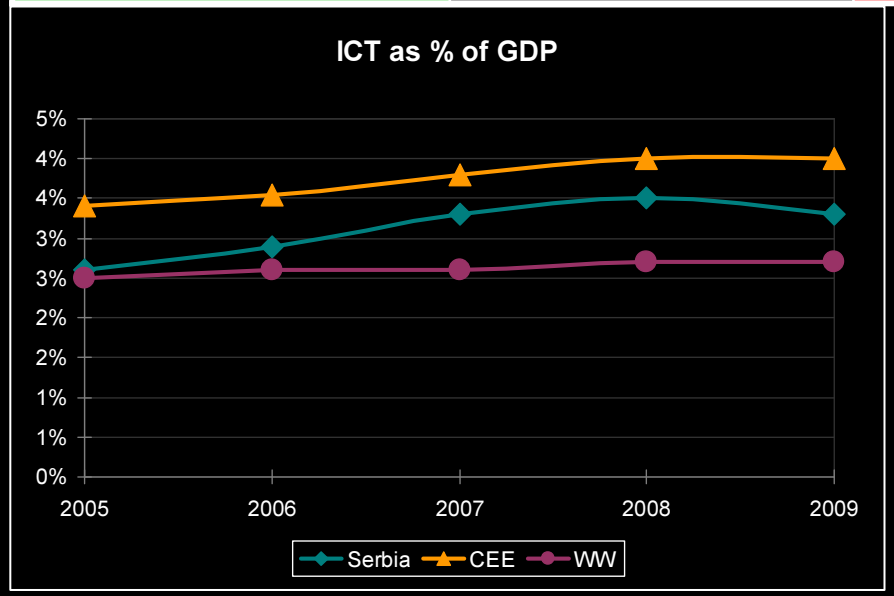
Central and Eastern Europe

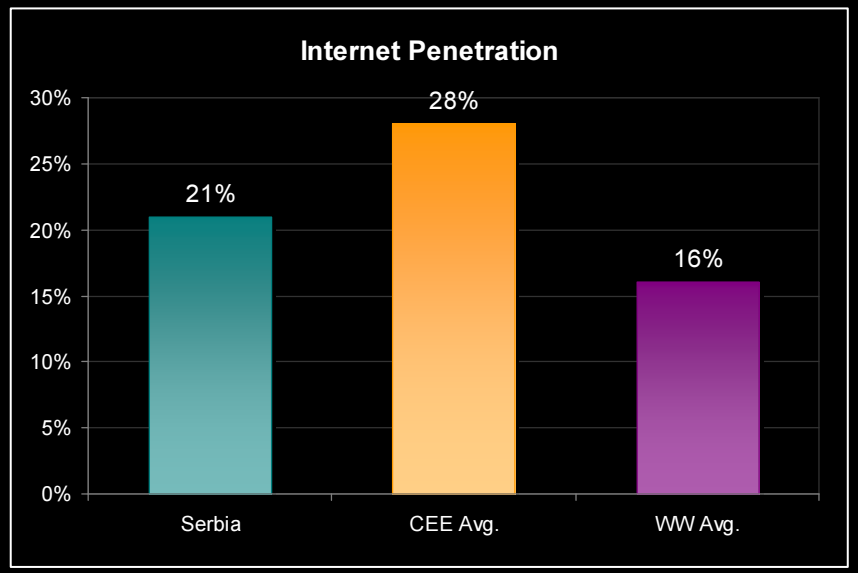
Country Dashboard
ICT/GDP Data

CEE Rank	Indicator	2005	2006	2007	2008	2009
9	GDP – Nominal (US $ bn)	26	31	39	42	43
5	GDP Real Growth %	4%	6%	7%	6%	6%
14	GDP PPP per Capita	6,359	7,012	7,579	8,181	8,829
8	ICT (US $ M)	1,225	1,510	1,879	2,125	2,145
6	ICT/GDP	3%	3%	3%	4%	3%

Top 30% within Region | Average Performance | Bottom 30% within Region

Internet Penetration (2006)	
Serbia	21%
CEE Average	28%
WW Average	16%

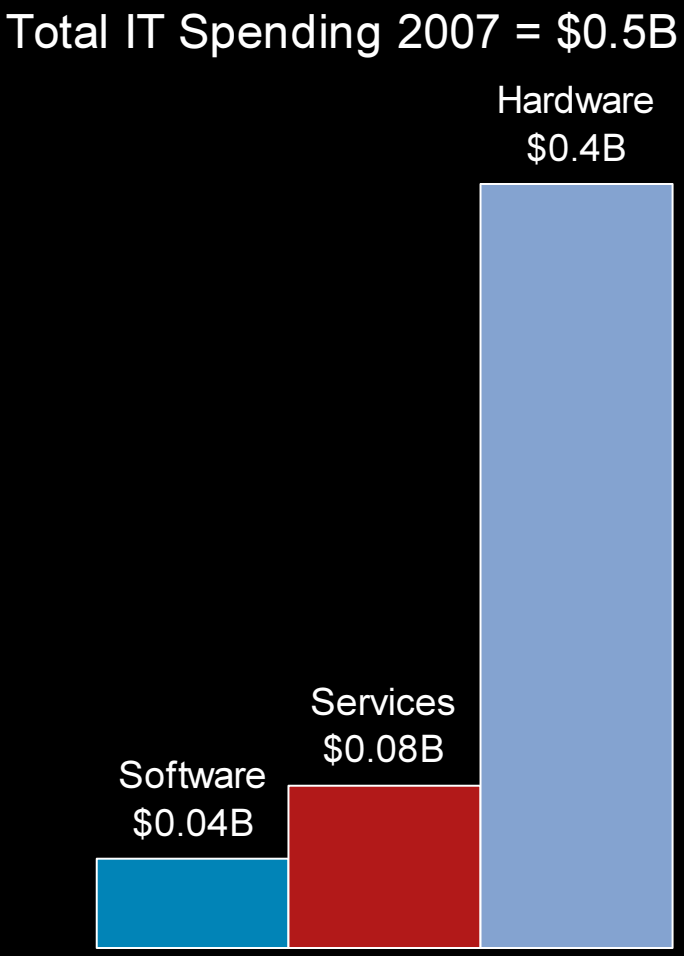




Source: EIU July 2007

IT Spending

- ***Telecom sector is in early stages, yet growing quickly, driven by the mobile market.***
- ***All the major international software companies are represented in Serbia and are using the services of product distributors/developers in order to sell their products.***
- ***By the end of decade, broadband penetration will be 2%.***



Source: BMI, EIU July 2007

Does technology real contribute to the change?

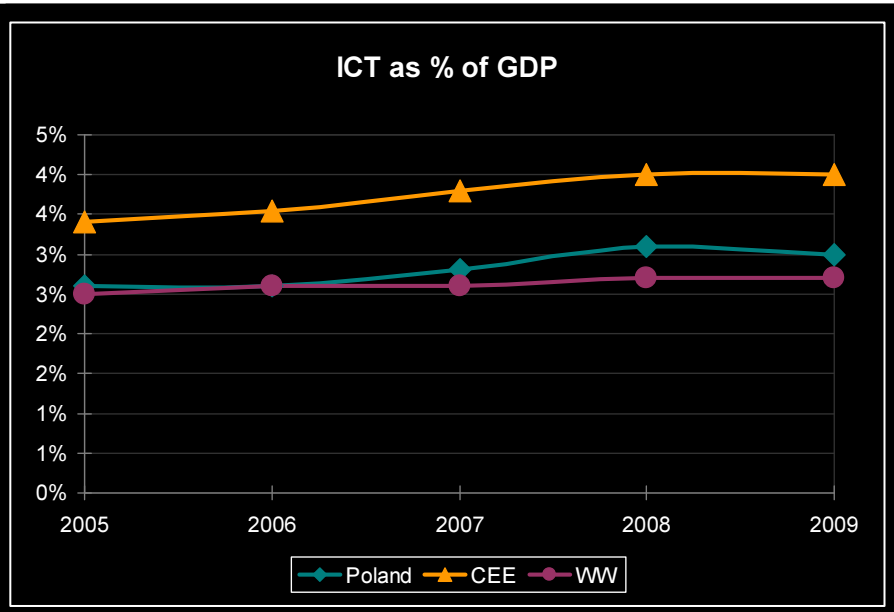
Central and Eastern Europe

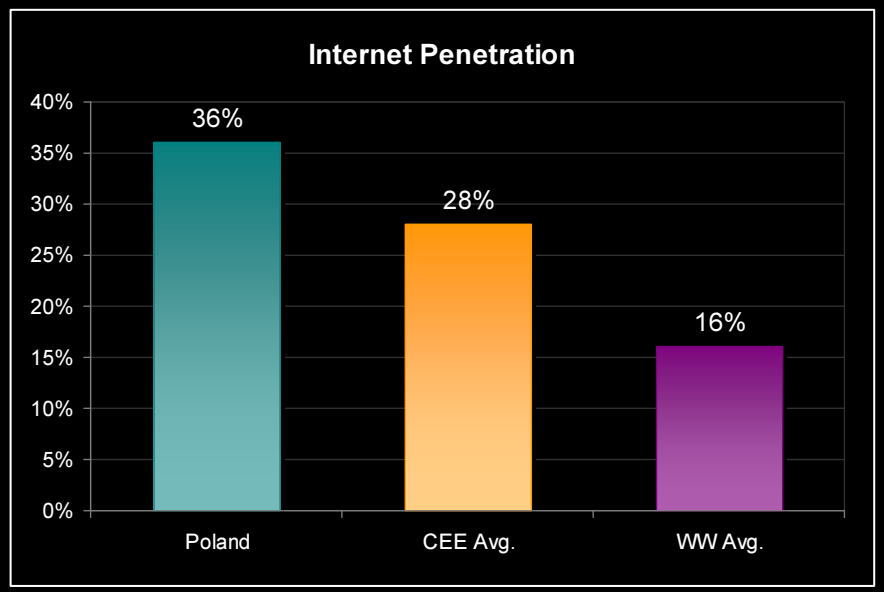
Country Dashboard
ICT/GDP Data

CEE Rank	Indicator	2005	2006	2007	2008	2009
2	GDP – Nominal (US $ bn)	304	341	410	446	459
8	GDP Real Growth %	4%	6%	6%	5%	4%
8	GDP PPP per Capita	12,960	14,160	15,402	16,603	17,795
2	ICT (US $ M)	12,619	14,068	16,667	19,341	20,098
11	ICT/GDP	3%	3%	3%	3%	3%

Top 30% within Region | Average Performance | Bottom 30% within Region

Internet Penetration (2006)	
Poland	36%
CEE Average	28%
WW Average	16%





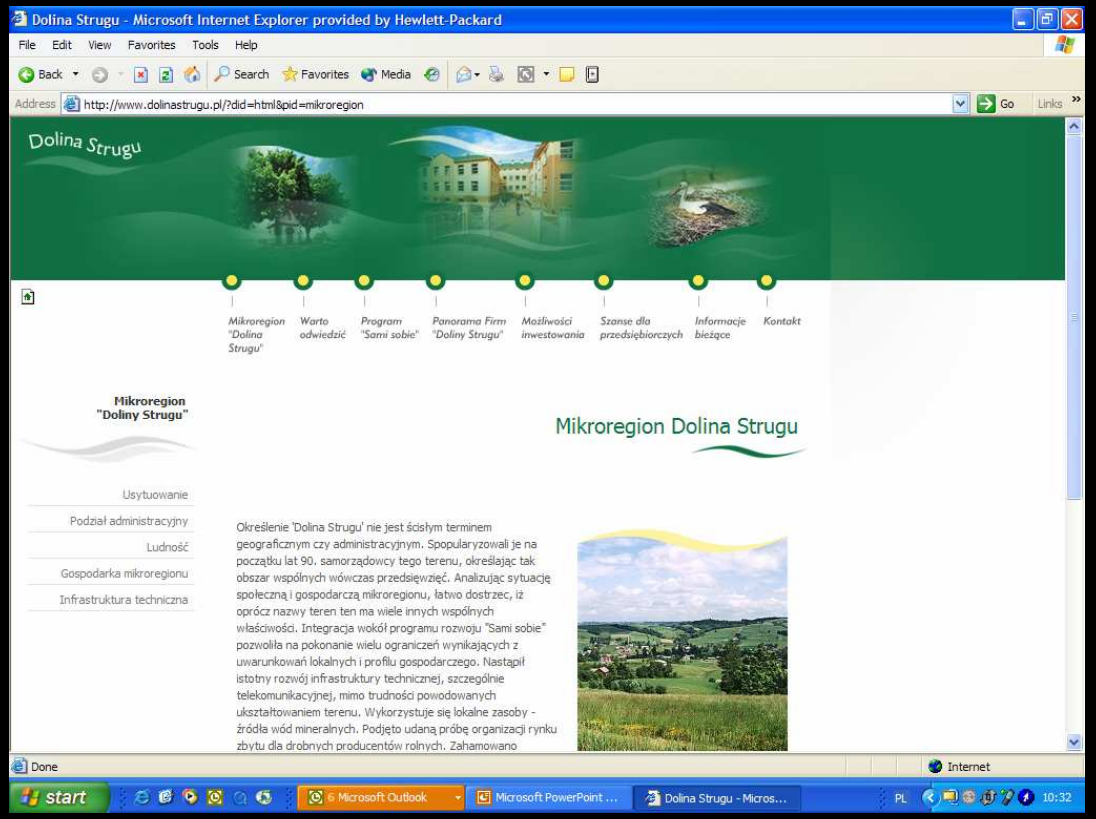
Source: EIU July 2007

Valley of Strug

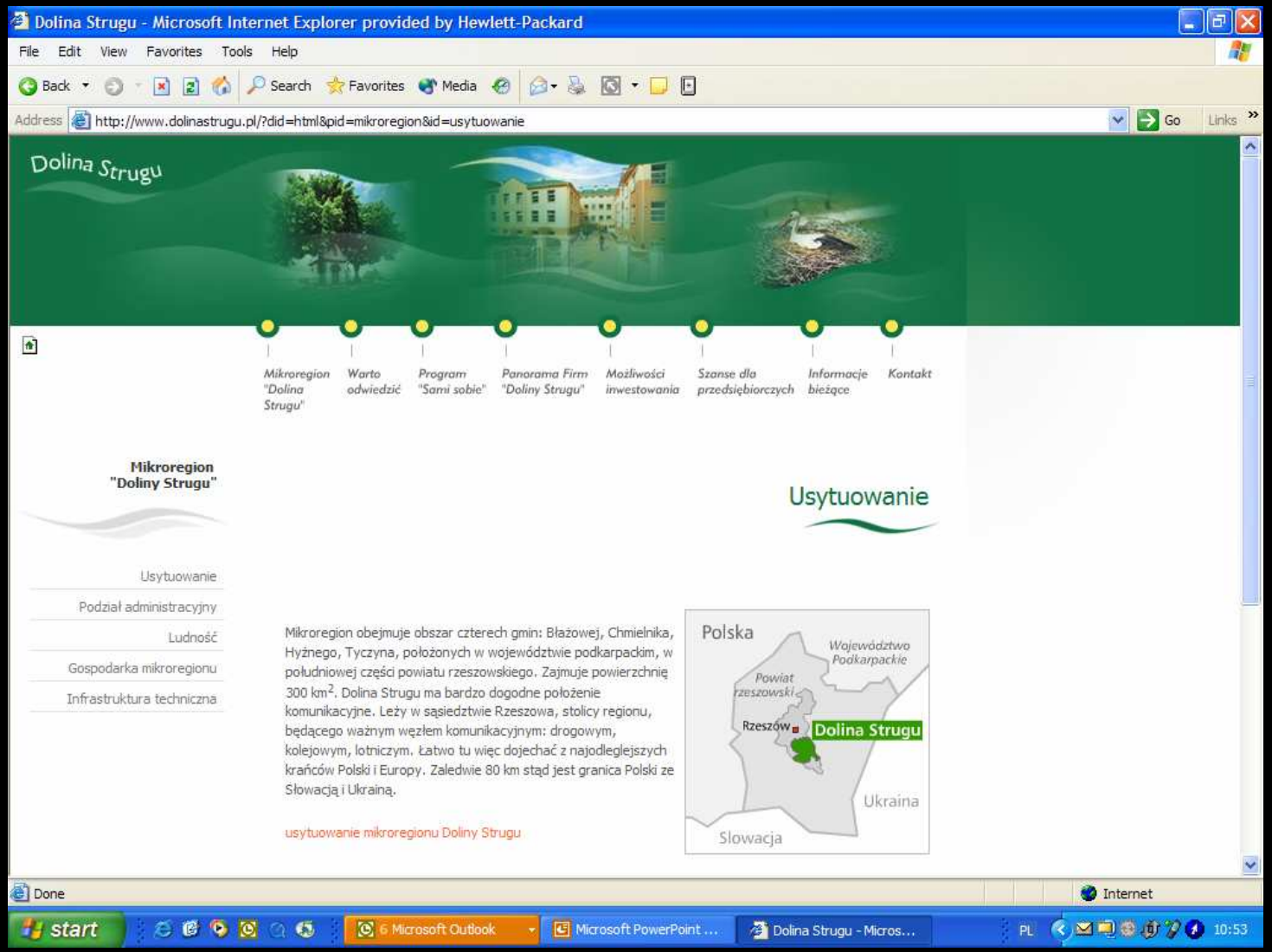
In 1989

30% below average Polish county

(pol. „gmina”)

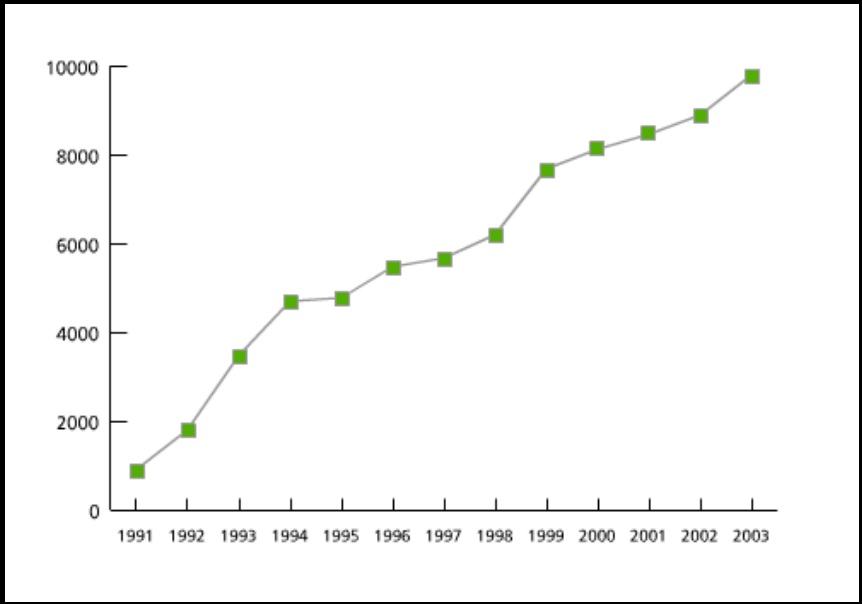


Valley of Strug

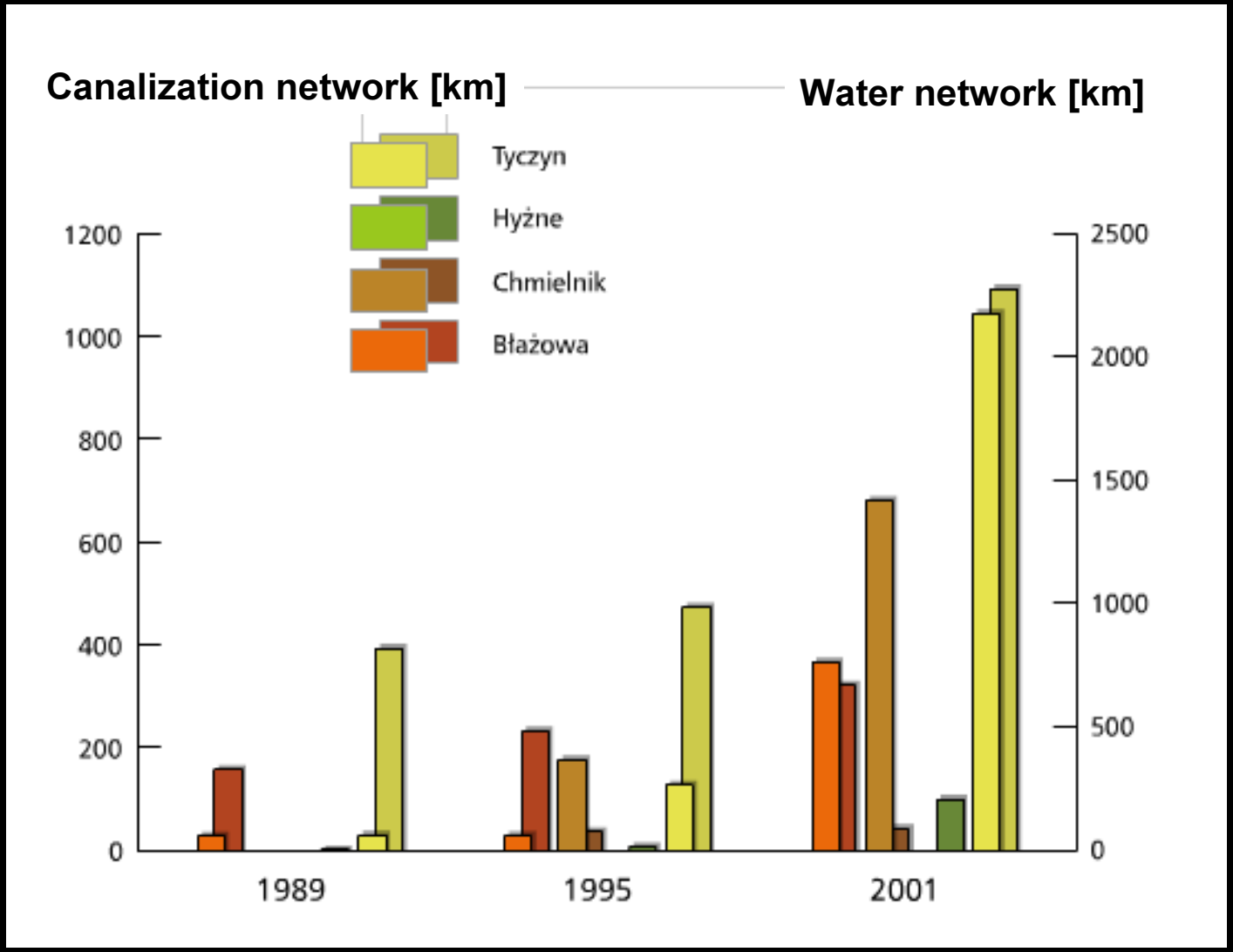


Valley of Strug

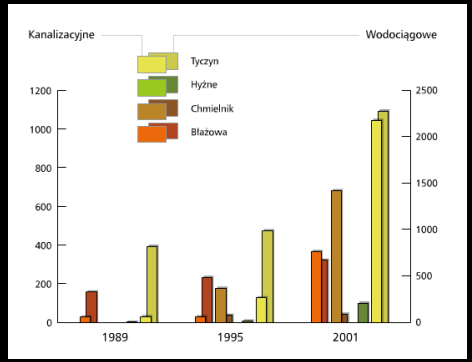
- Creation of local telecom co-operative
- Number of phone in 2003
  - +/- 10000
- Co-operative members
  - +/- 7000
- Fix price for in co-operative calls
- Number of average hours on phone
  - Tyczyn = New York
- Internet



Valley of Strug



Valley of Strug



- New companies moved in.
- New companies asked for new services.
- New services created new jobs.
- New jobs improved quality of life.
- Quality of life attracted new people.
- New people asked for new services.
- New services…..

- There are more people living in Valley of Strug today that it was in 1989 and it is a rural area.

Valley of Strug

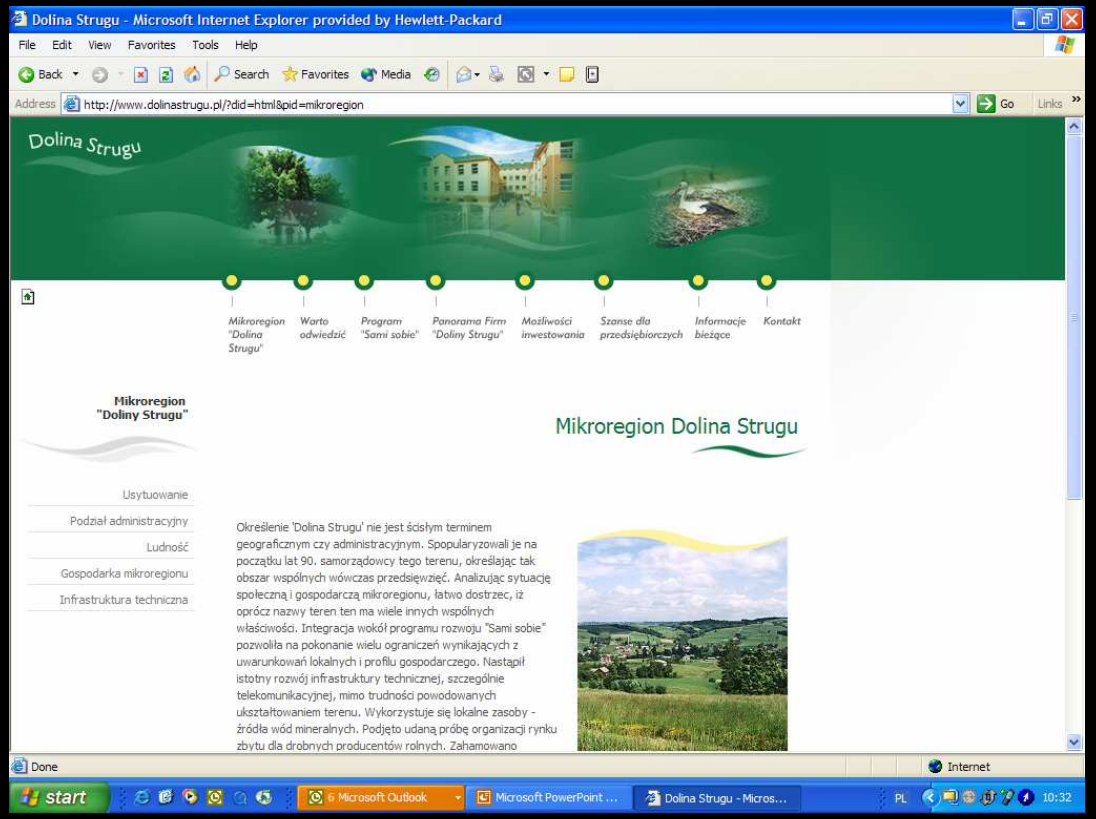
In 1989

30% below average Polish county

(pol. „gmina”)

In 2003

30% above



MOBILITY

VIDEO

VIRTUALIZATION

WEB 3.0

anywhere

any media

any device

WEB 2.0

XML

Wikis, Blogs, YouTube

WEB 1.0

Internet, Email

What others are doing?

Bridging The Broadband Gap
Brescia (Italy) – The project

- Wireless infrastructure and Wifi Mesh
- Potential connectivity offer to 100% of the local government buildings, businesses and citizens in 79 municipalities
- Service available to other 41 municipalities
- Partnership with a local Service Provider based on tariffs differentiation for users
- Free access to the Public Sector websites
- The network supports the regional Shared Services Center strategy

Value Assessment

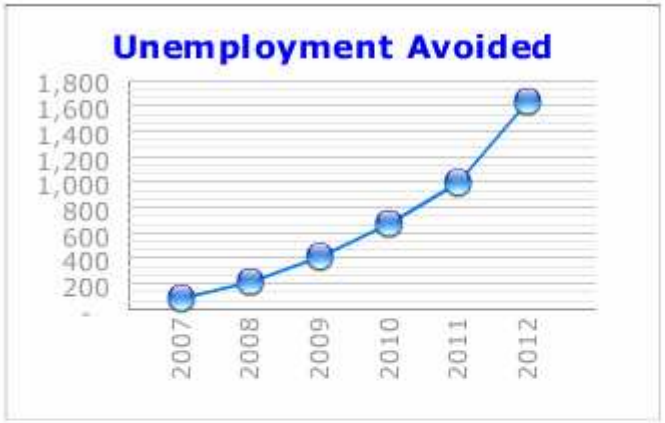
Model Inputs

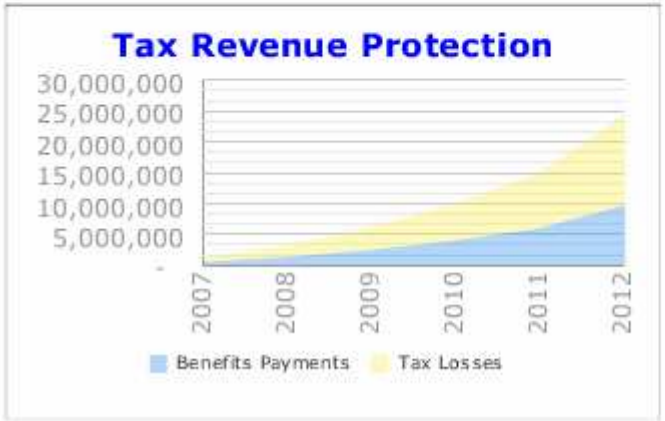
Number Employed	393,106
Unemployment Rate	3.5%
Benchmark Unemployment Rate	4.3%
Annual Benefits Payment	6,000
Annual Tax Loss	9,000
Year 6 Unemployment Impact	50%
Speed of Economic Impact	Slow

Navigation

- Ec Growth - Employment
- Ec Growth - SMB Productivity
- PA - IBS Value
- Education
- Health
- SP Costs and Revenues
- Summary

Economic Growth - Employment





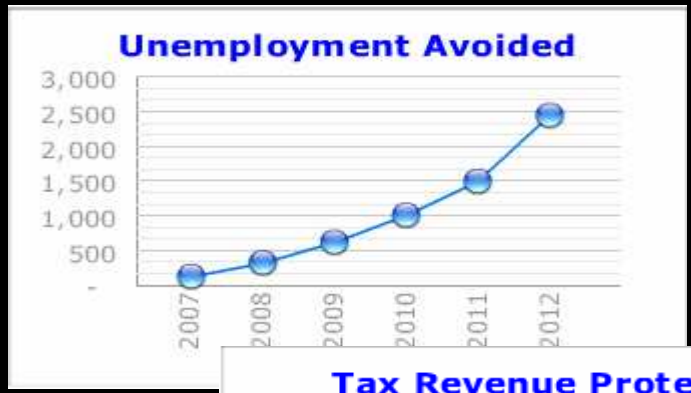
Brescia – The Project
Broadband and Economic Development

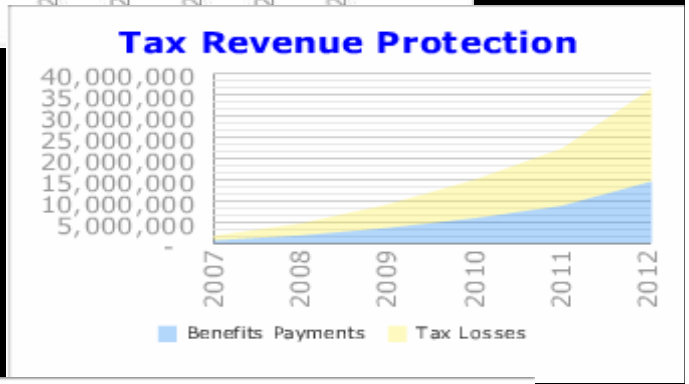
27,000,000 Euro: Cost avoidance - less unemployment benefits to pay.

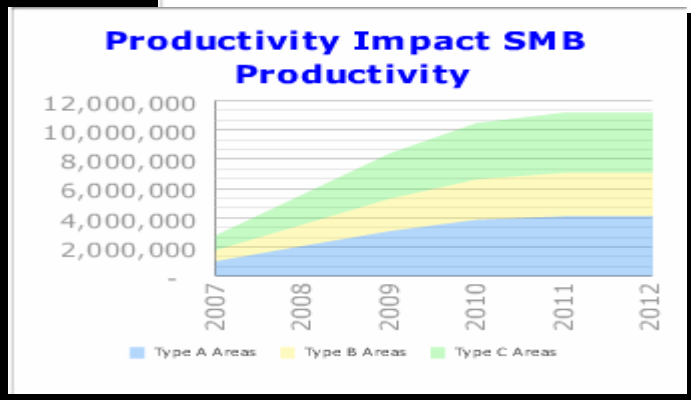
41,000,000 Euro: More tax revenue thanks to unemployment avoidance

39,000,000 Euro: GDP increase for SMBs in productivity benefits resulting from the implementation of broadband-based Internet Business Solutions

Source: NetImpact Study Italy and IBSG analysis





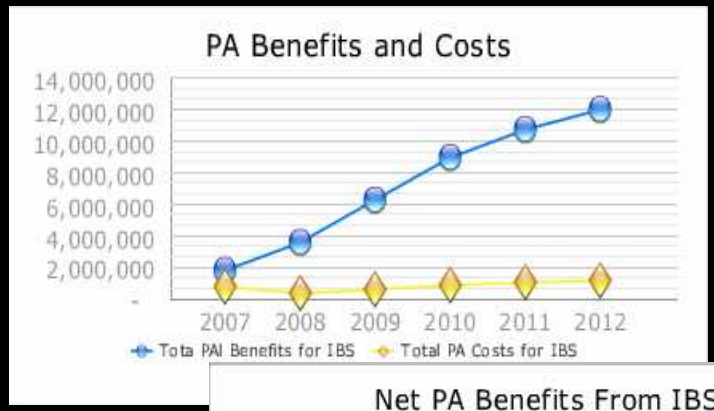


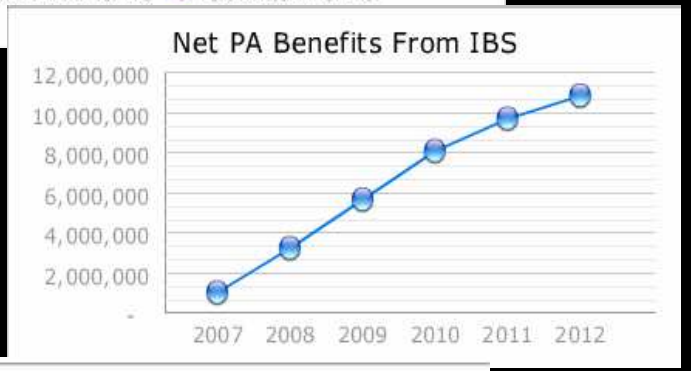
Brescia – The Project
Broadband and Public Sector Efficiency

30,000,000 Euro: Productivity increase and cost avoidance for the public administration, combining broadband and shared services (intranet, e-procurement, Broadband to schools and other services)

Source: Case Study Brescia Intranet, 2004

2,000,000 Euro: **Revenue sharing agreement with Service Provider**





WIRELESS in WESTMINSTER (UK)

- **Objectives:**
  - ✓ Reduce crime
  - ✓Streamline parking
  - ✓Regulate entertainment
  - ✓Manage commercial waste
  - ✓Better housing services
- **Solution: Metro Mobile Network**
  - ✓Cost reduction
  - ✓Mobile access to field workers (1400 street workers)
  - ✓Better productivity / move to multi functional staff
  - ✓New services
  - ✓80 Wi-Fi cameras on lamposts (of 400) + noise detectors

Traffic and Parking management

Mobile Workforce

Video-Surveillance

Noise/Pollution/Flood Monitoring

WIRELESS in WESTMINSTER (UK)

- Noise detectors + cameras enable infraction evidence gathering from central office
- Cameras help identify parking infraction, parking attendants are more efficient
- Cameras help detect trash, central office sends truck to clean it up. No more random checking

Advanced Technology Means Advancements in Safety

"The big thing about wi-fi is that it can make your workforce more mobile; they can use things such as personal digital assistants (PDAs) so (that) you can improve efficiency."

Graham Ellis, Westminster City, director of policy and communications

"With a wireless camera you don't have to put wires in the road so you can probably buy three or four for the price of one fixed camera. Crime moves when you start to focus on it, so the ability to be able to move cameras and chase crime out of your area is part of the attraction."

Graham Ellis, Westminster City, director of policy and communications

Wireless Trondheim

- Objectives
  - Contribute to the future of Norwegian trade and industry within wireless services and products
  - Create a world-class incubator laboratory for research and development
  - Make Trondheim and The Norwegian University of Science and Technology more attractive to students and technology based businesses.
- Wireless Trondheim's first phase costs about NOK 20 million (3.7 M USD).
- Fibre, ADSL2+ and radio.

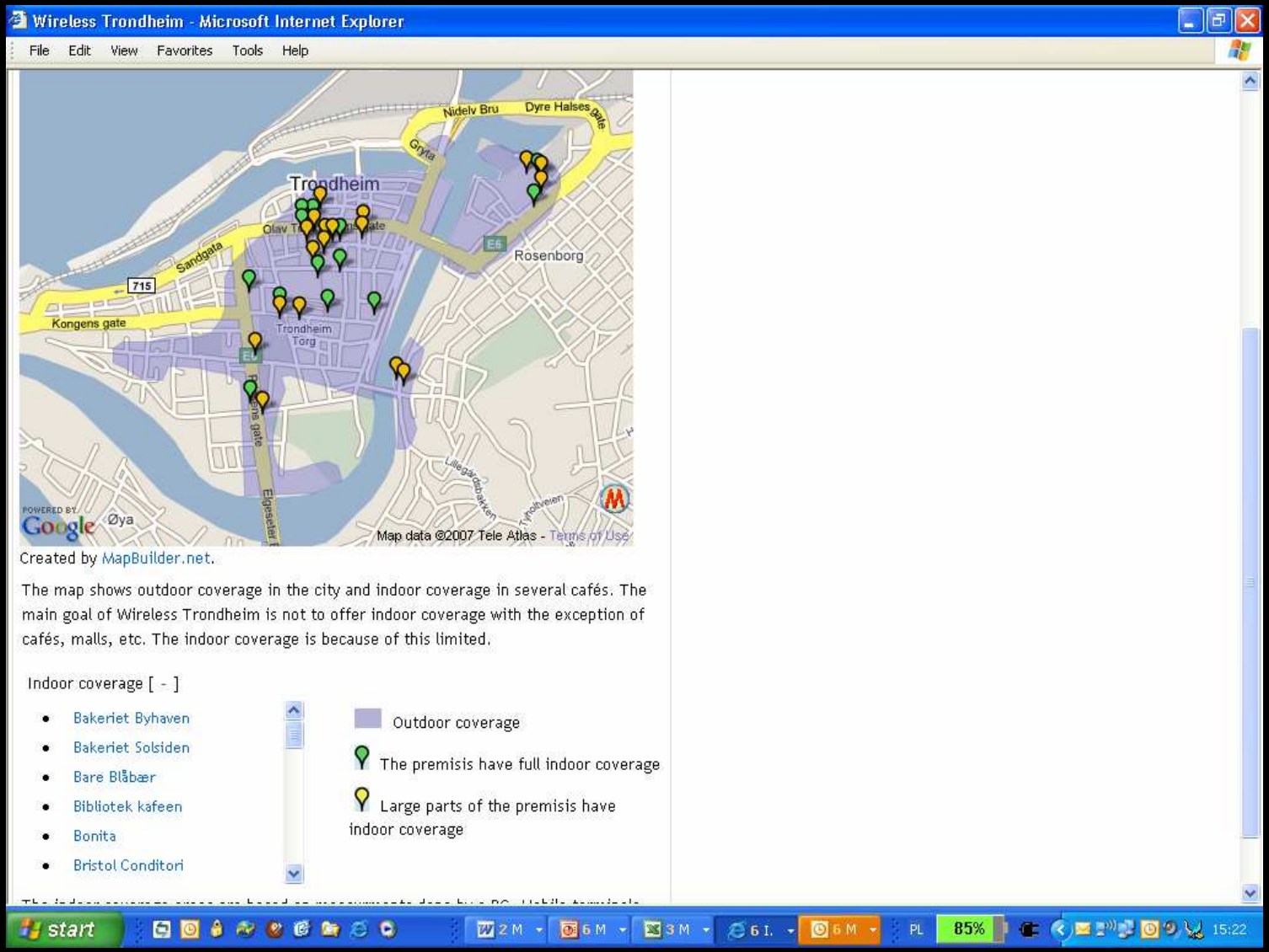
Wireless Trondheim

- Wireless Trondheim Ltd
  - Spun-off as a own company
  - 55% public owned – own the infrastructure
  - Sor-Trondelag County, The City of Trondheim and The Norwegian University of Science and Technology pay the access for their students and employees
  - Small fee for authentication - ~ 1.5 EURO

www.wirelesstrondheim.no

Arne Sølvberg (left) profesor and Chairman of the board and Managing director Thomas Jelle
Photo: Gorm Kallestad/NTNU Info.

Wireless Trondheim



Wireless Singapore

- Government project to provide free wireless broadband access to the community.
- The city was split into three sections and bids went out for each section (North, East, West). Each section was awarded to a different SP to install, own and operate under the city guidelines.
- **The only requirement from the government was free internet access (512k) and 100% coverage in the specified areas (Catchments**).
- Each section of the city had several catchments defined by the city. These catchments were then outlined for the expected coverage area. The coverage areas were public areas in those catchments.
- This project is not intended to cover residence or to compete directly with the SP other broadband business (where possible). Thus the areas were very clearly defined and managed.
- The three SP's that won the deal were **SingTel (100% Cisco), QMax** and iCell.

Wireless Singapore

- **The SingTel deployment is about 1500 AP's to date (80% indoor 20% outdoor).** This is about 55% of the entire project. One service: free internet paid by the government. SingTel is also using our location based advertising service (not defined as a service in phase one) to generate some additional revenue outside.
- The government pays each SP a fee based on the number of subscribers they sign up and that are using the network.
- The government had invested $3M in the project.
- The completion of phase one was September and phase two should started in November.

City of Prague

- Objectives
  - Access to city information and eServices
  - Improvement of ICT infrastructure
- Pilot: 1/3 of the City area
- 580 AP Mesh (171 distribution points and 409 hotspots)
  - until end of Nov 2007 - 200
- Financing: City budget

CEE Pilots

Ljubljana

- Internet access for visitors and tourists and PR for the city
- Pilot: 24 AP Mesh
- Financing: Lighting company – try and buy

Lodz

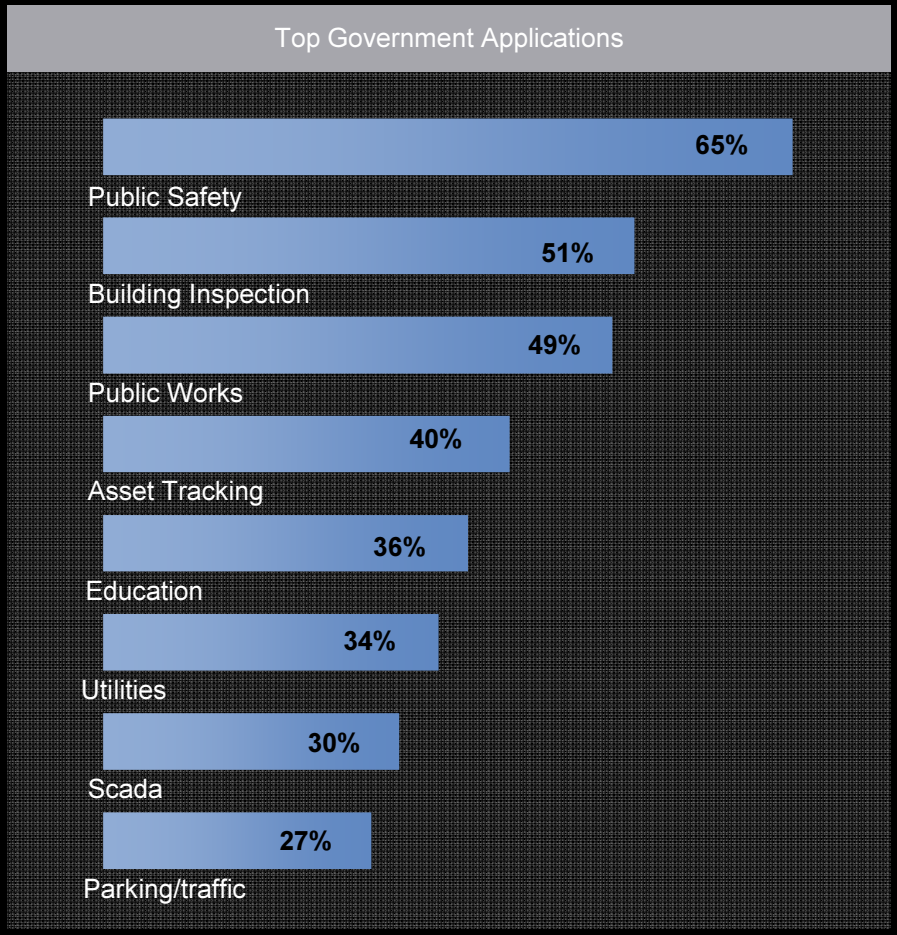
- Access to Internet from main shopping and walking street
- Pilot: 5 AP Mesh on the main trade street
- Financing: City budget - bought

Krakow

- Access to portals about Krakow and city services
- Pilot: 7 AP Mesh covering main historical square.
- Financing: City budget - bought

What's in it for me?

Public Safety



Local governments needs

Public Safety and Security

Empowers first responders with critical information and resources at the point of need

Service Effectiveness

Increases employee productivity allowing them to be connected when they are on the move

Citizen Empowerment

Provides citizens with easier access to services from government

Economic Development

Differentiates [illegible] allows business and visitors to get access on the move

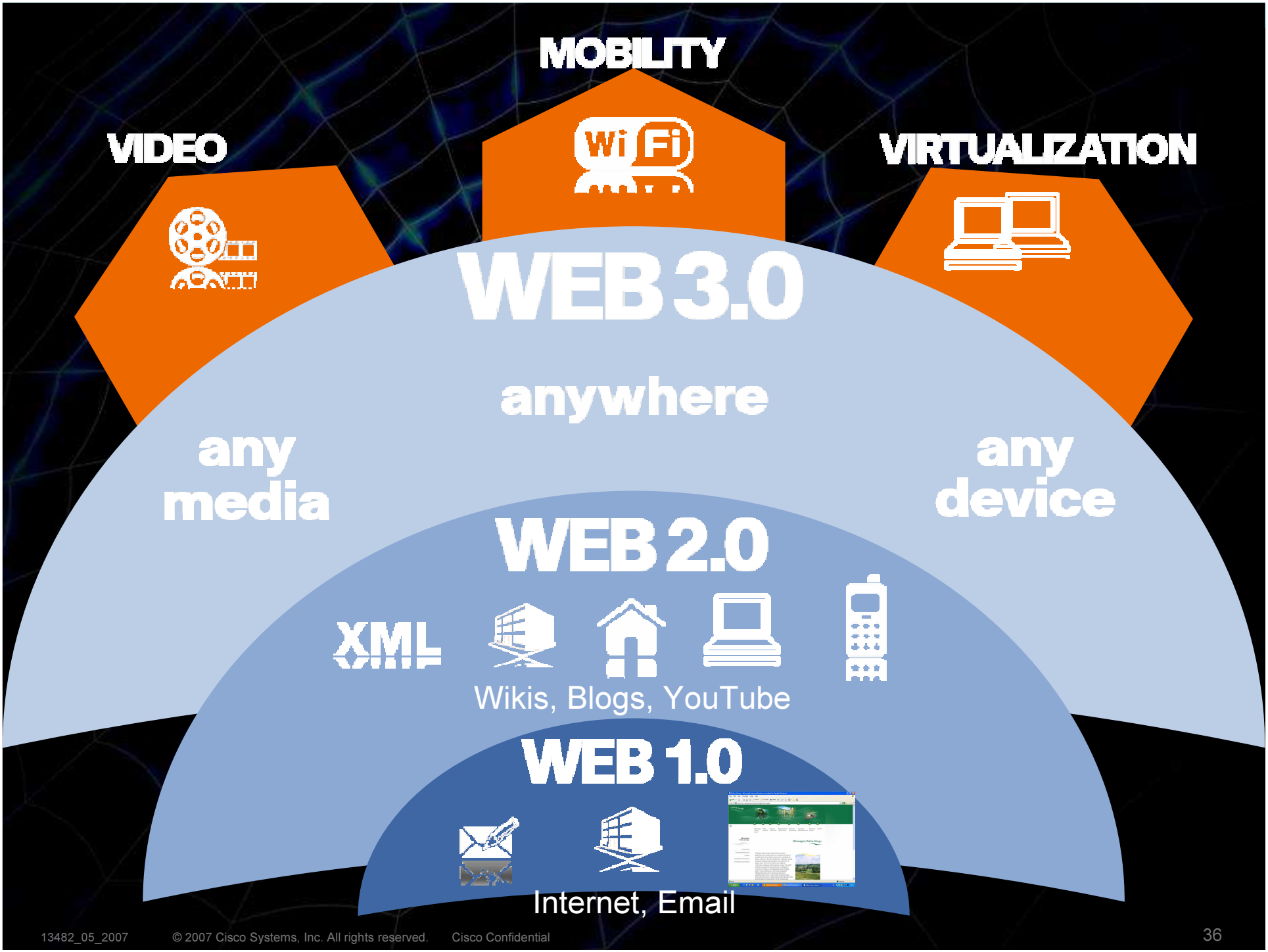
Social Inclusion

Allows more citizens to have broadband and be connected to the community

Local governments needs

Citizen satisfaction

Win next elections !



Web 2.0 Explosion

57 Million Blogs…100,000 more added daily …1.3 million postings daily

YouTube: 100 million videos watched daily—60% of all videos watched online

MySpace: 100 Million+ accounts

Flickr: Established Feb 2004—4 Million users

iTunes – x00'000 titles

Characteristics: Web 2.0

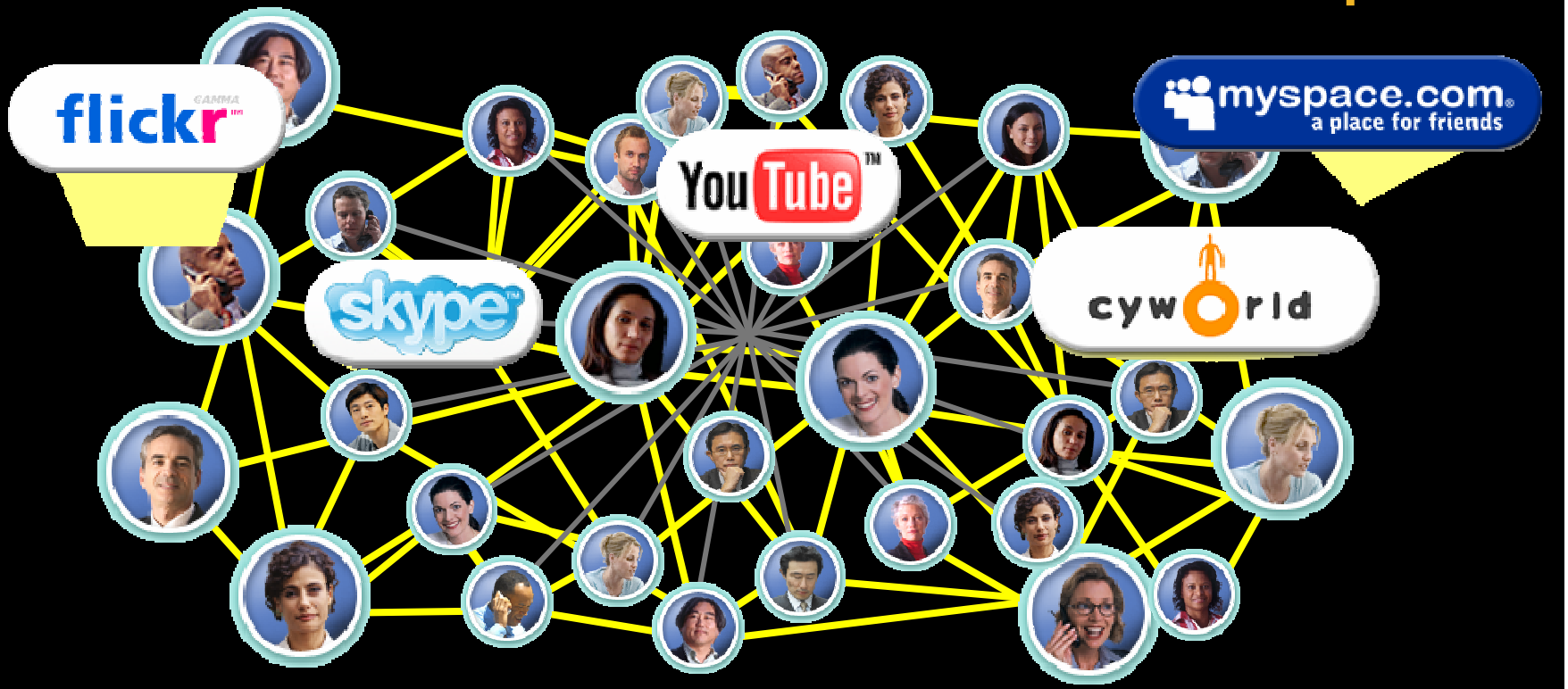
Virtual Collaborative Personalized Anytime, Anywhere

Source: Technorati (leading blog search engine), October 2006; YouTube.com; Wikipedia; BBC News

Welcome to the Human Network

The Internet Is Not a Network of Computers,

it is a Network of People.



Empowered Citizens are co-creating, collaborating and communicating.

Solutions for the cities

- eGovernment
- Citizen Services
- SMB Services
- Healthcare
- Education
- Public Safety





eGovernment Services

- E-government portal
- Government Reporting
- Government Employees Services
- Government Job Portals
- Shared functions/ processes
- Citizen Grievance Reporting Systems
- On-line RFPs and Bid Collections
- Online purchasing
- Departmental and inter-departmental workflow management
- Integrated services
- National Parks & Forests Services
- Tourism & Travel Portals
- Health Advisories
- Transportation Advisories
- Automated Utilities Meters Reading
- Automation of City Mobile Workforce

Citizen & Visitor Services

- Birth & Death registrations
- Marriage registrations
- On-line Healthcare / Vaccination Information
- Job Portals
- Land Registration
- Vehicle & Drivers' License Registration & Renewals
- Income Tax Filings
- Parking Enforcement
- Life & Health Insurance Applications, Renewals, Payments
- Utilities Billing, Account Transactions
- Non-resident Citizen Services
- Unemployment Portals
- Social Security Services
- Building Permits
- Tourism Information Portals
- City Guides / City Maps

SMB Services

- Business directories
- Potential partner finder
- Workforce optimization
- Productivity tools
- E-mail
- Workflow management
- E-commerce
- Integrated logistics and supply management
- E-procurement
- Workforce Training
- Videoconferencing
- VPN services
- Unified communications
- Mobile workforce Management
- On-line Data storage & Archiving
- New business set-up
- Office Access, Safety and security
- Automated Tax filing

Healthcare Services

- Patient education
- Home health monitoring
- Telemedicine
- Health calculators
- Online health communities
- Virtual consultations
- Health record storage/access
- High-value asset tracking
- Patient Tracking / Safety
- Personal health organizer
- Appointment scheduling
- Appointment reminders
- Prescriptions service
- Test result tracking
- Best practice exchange
- Electronic medical certificates
- Doctor / Nurse paging
- Automated Transcriptions

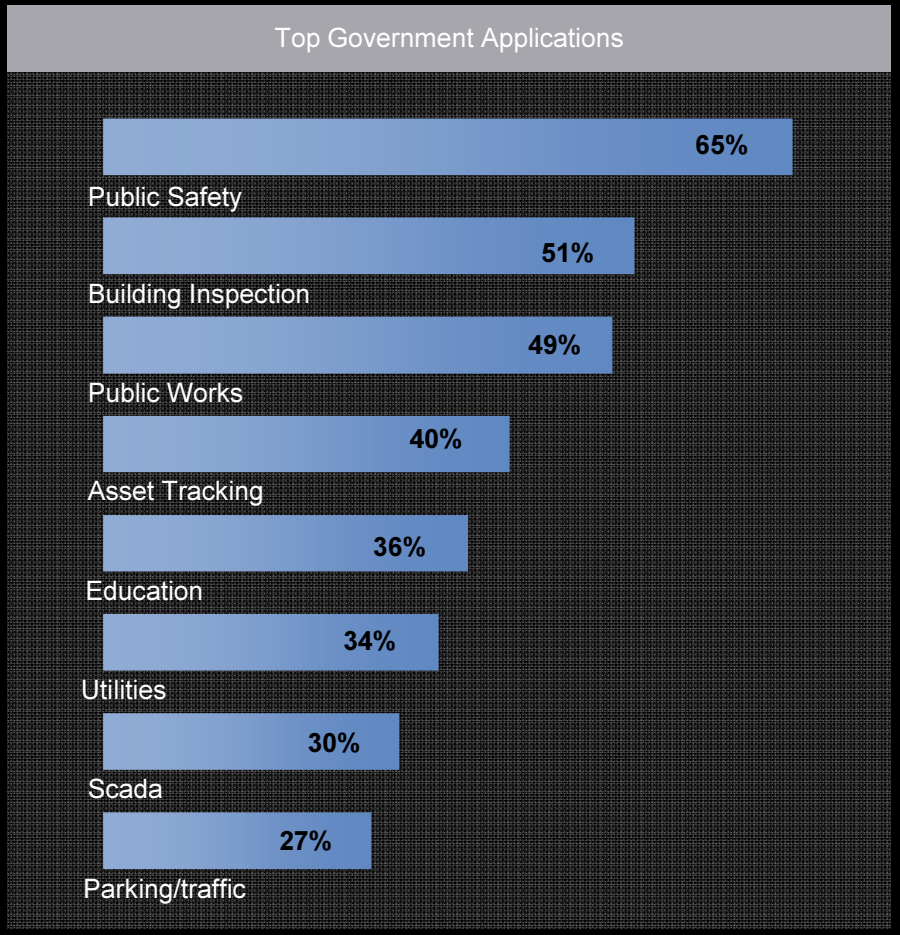
Education Services

- E-learning
- On-line textbooks & study material
- Curriculum management
- Remote tutoring
- Teacher training
- Interactive blended digital courses
- Multi-class projects
- Location-free schoolwork
- Virtual collaboration tools
- Assignment tracking
- Student performance management
- Teacher productivity tools
- Parent Communications
- School portals
- Paging
- Automated attendance

Public Safety Services

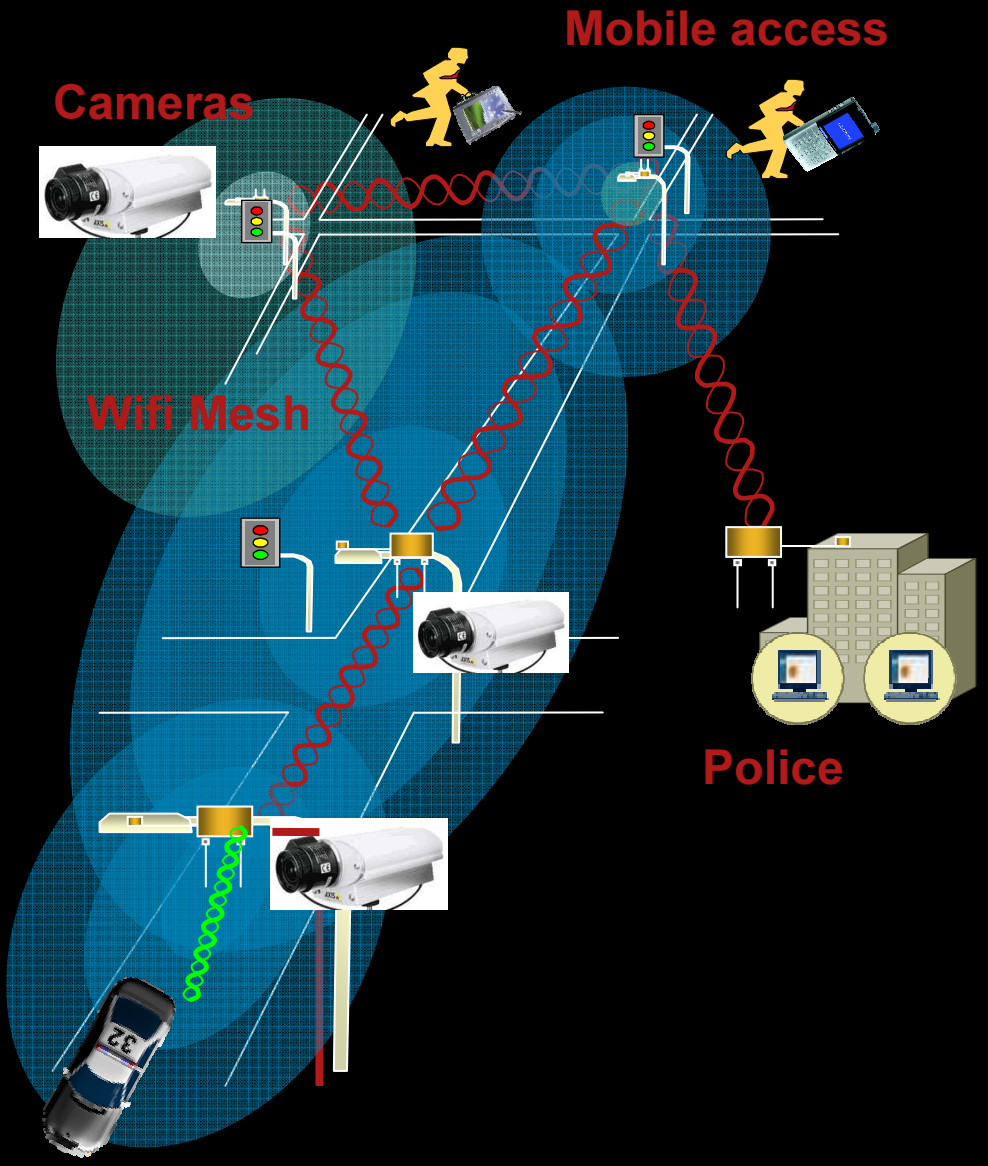
- Video surveillance
- Border entry/exit systems
- Port security & management
- Cargo & Container Management
- Traffic management
- Street maintenance
- Street lighting
- Emergency Response management
- Noise monitoring
- Pollution monitoring
- Parking management

Public Safety



Collaborate and share information for better health.

Monitoring for more security



Integrate different systems for faster reaction.

Devices/Networks

PTT Radios | Mobile Phones | IP Phones | Nextel Phones | PC Clients

Locations

Departments | Head-quarters | Branch Offices

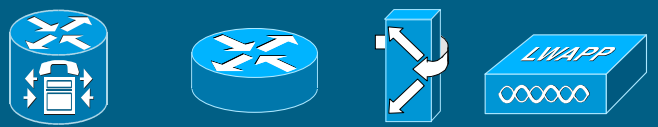
Organizations

Police Dept. | Fire Dept. | Enterprises

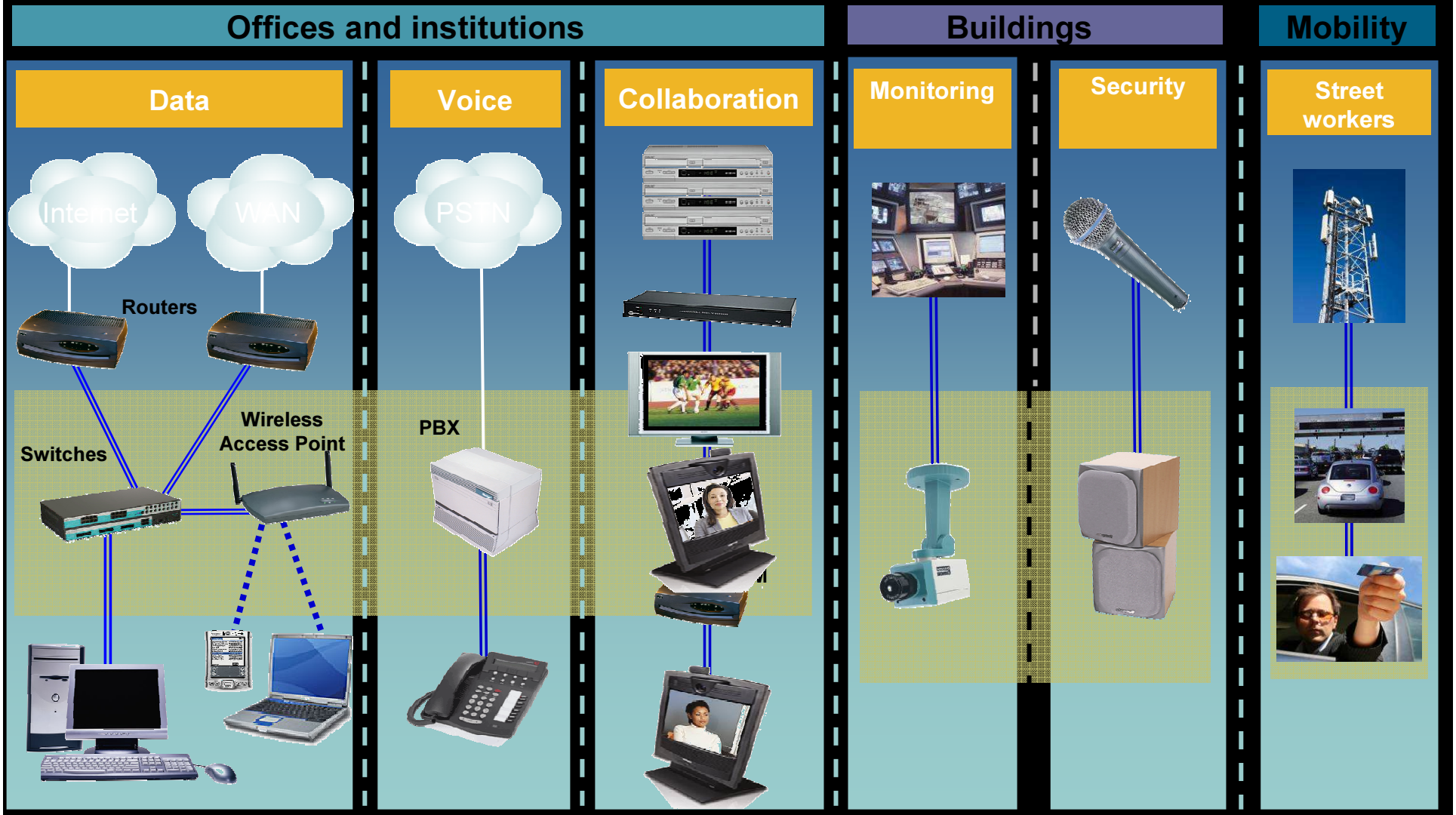
Cisco IPICS
Intelligent Platform—Controls Media and Information

Applications

Unified Communications | ISR | Video Surveillance | Access Point



Integrate many technologies for better service



Digital City – 2013


Welcome to
the Human Network.

Can you afford not doing it?

- Can local government stop thinking about local development and future of next generation?
- Can local government stop looking after public safety?
- Can local government pay high bills for telecommunication services?
- Can local government allow the increase of digital exclusion?
- Can we stay in the XX century when others are running into XXI?

Where is the money

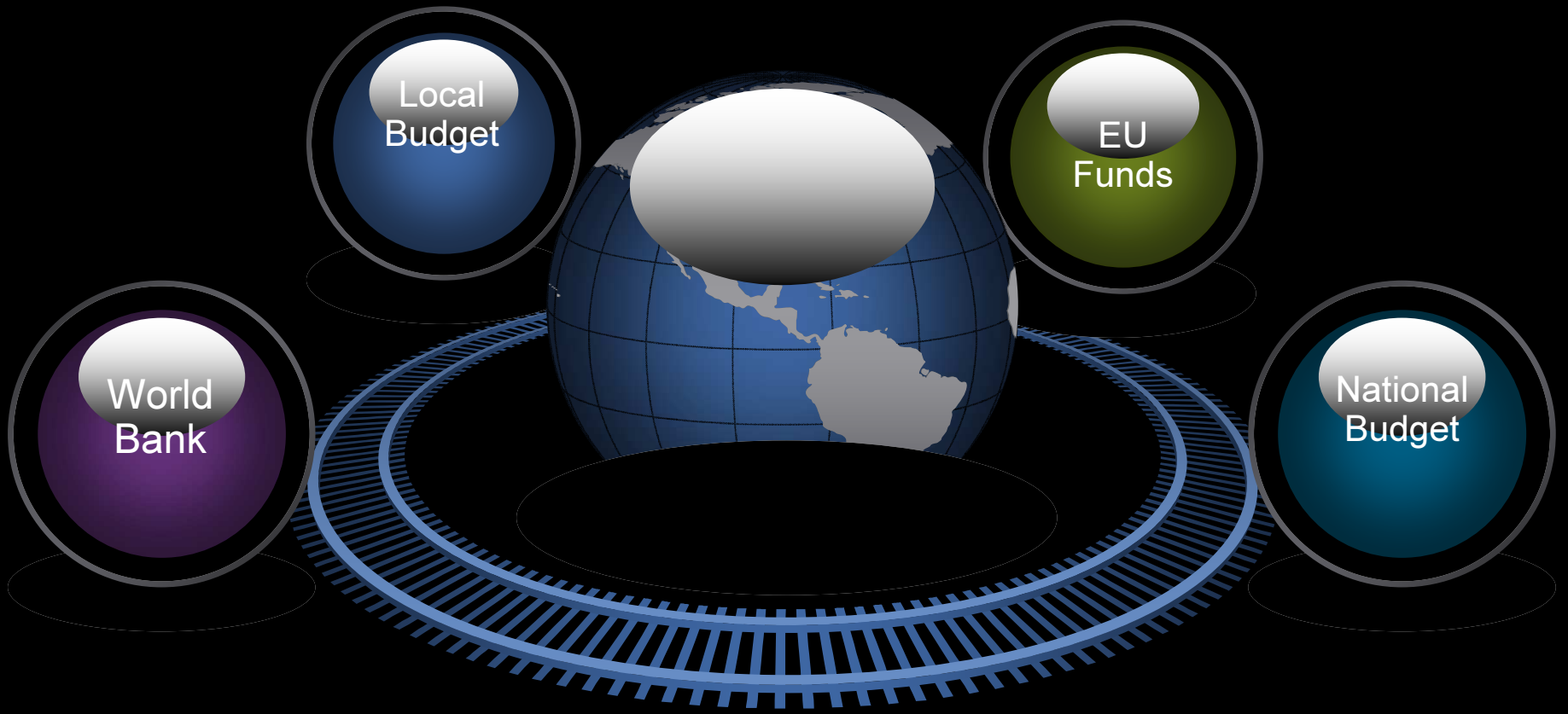
- 1 km of road construction 2-4 M Euro
- 1 km of water network +/-2 M Euro
- 1 km of fiber optic - +/- 30 k Euro (if you do it together with road or water investment)
- Optimize your telecommunication cost.
- Share the same applications and services by many organizations.
- Improve the security to attract new businesses.
- New businesses – more taxes.

Connecting citizens

- The Human Network is about connecting people, communities, cities and societies. Government Broadband is about **connecting citizens**, businesses and services for economic development and innovation, social inclusion, public safety and improved public services.

Fiber to Home Council - http://www.ftthcouncil.eu/

The authorities have to influence the development of broadband.



IPA

The main objective of the Instrument for Pre-Accession Assistance (IPA) is to help Serbia face the challenges of European integration, to implement the reforms needed to fulfil EU requirements, progress in the Stabilisation and Association Process and to lay the foundations for fulfilling the Copenhagen criteria for EU membership.

http://www.europa.org.yu/code/navigate.php?Id=195

IPA for Serbia

	2007	2008	2009	2007-2009
Transition assistance and Institution Building	*178.5*	*179.4*	*182.6*	*540.5*
Cross-Border Cooperation	*8.2*	*11.5*	*12.2*	*31.9*
Total	*186.7*	*190.9*	*194.8*	*572.4*

Public Sector 2.0

Virtual Collaborative Personalized Anytime, Anywhere

Conclusions

- Start With The End In Mind - High value services with a sustainable political, economic and social business case
- Focus On Stimulation And Orchestration - Do not invest alone
- Build On Public Private Partnerships – Better procurement and customer focus by inherent private culture
- Collaborate with Service Providers & Understand The Business Model Of Service Providers - Ensure services quality for success
- Consider & Include Public Administration Services – Look forward 3-5 years and frame into the Service Agreements
- Leverage on Provincial and City assets

Drive Core & Out-task Context

Q and A

Ne zaboravite da se prijavite na Cisco Networkers 2008!

http://www.cisco.com/web/europe/cisco-networkers/2008/index.html