Local Authorities, Bridging the Digital Divide & Boosting economic development

Nicole Hill,Local Authorities & Governments Vertical Market Director, June 2006

Agenda

What is at stake: understanding local authorities objectives & challenges

Local Authorities e agenda: drivers, needs & applications

Role of Private Sector : Public Private Partnerships & Alcatel solutions

Examples

Conclusion

Modernization

Efficiency & Cost Reduction
Productivity & Transparency
Quality of Service

e Services

Acting against Digital Divide of certain Social Groups and Regions

Raising Attractiveness of Local Environment, Improving quality of life

Local Authorities: What is at stake ?

Accelerated adoption of Internet :

- 1 Billion users WW in 2005
- 211 Millions BB users to double by 2009

Local Authorities in the front line of action

- 50 % of WW population lives in cities, 75 % in Europe
- Urban, Suburban, Rural & Underserved areas
- Proximity to people enables to implement adapted services for all, general public & business :
  - Economic development, jobs creation, education, health, safety,transportation, entertainment...

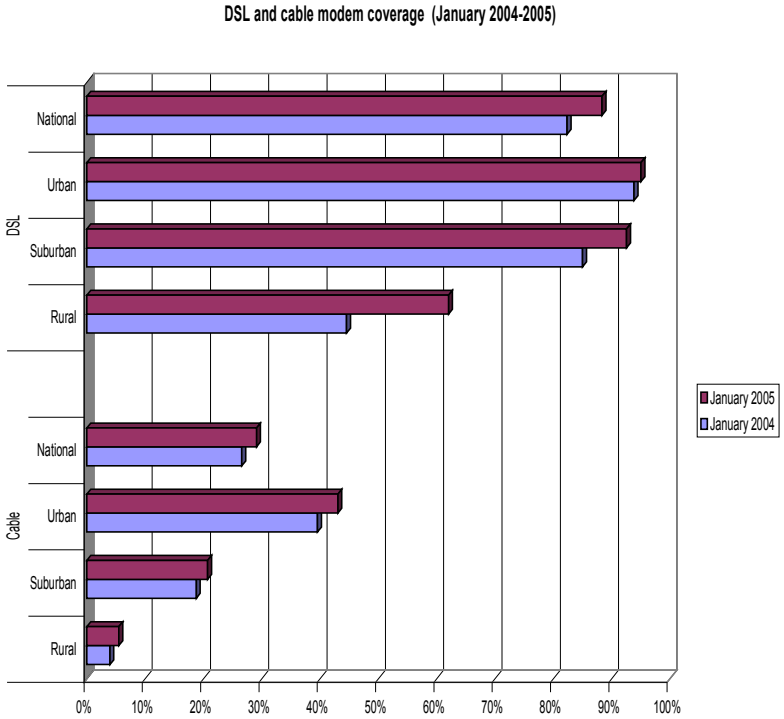
Understanding Key issues & challenges

A Given: Broadband services should be available for everybody

Digital divide is still a reality worldwide

- Remote & rural regions underserved , Coverage progressing fast yet unevenly
  - North – South;
  - Urban, sub-urban rural

Europe 25



Local Authorities roles is acknowledged, action is next step

ICT agenda becomes a key priority in Local Authorities agendas :

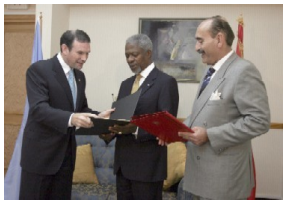
- To improve their own efficiency & decrease cost of operation
- To deliver better services: e government, e education ,e health, elderly…

Initiatives coordinated at national level, yet implemented at local level:

- Importance of local needs makes public intervention best when carried out at the local level
- Need for integrated approaches
- Adequate Funding mechanism
- Private Public Partnerships
- Decentralised cooperation

Political Declaration Of The "II World Summit Of Cities And Local Authorities On The Information Society" Nov '05: ….. .At local and regional level

- … ICT as an instrument for sustainable development … .
- … e-local agenda (Digital Local Agenda)…
- … adequate and secure technological infrastructure…



Cities & Regions World

BILBAO2005

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Local Authorities e agenda : needs & drivers which "bridge" for which services ?

Social Development

Economic Development

Healthcare

Trans parent Market Place

Education

Needs for e services

Job creation

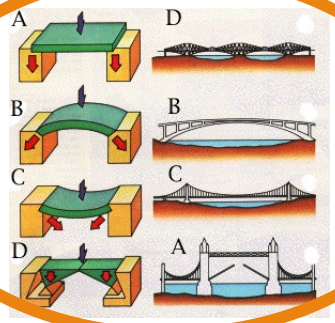
Public Funding

Private Funding

Government

Broadband Infrastructure

Inclusion



eBusiness

Needs to fulfill

Internal or "Private" communications, for :

- Every public site within the community area (hospital, schools..)
- Local Authority operation & maintenance, security, monitoring (s), safety,

External or Public Communications or Telecommunications, for :

- All citizens,
- Visitors ,
- Business, shop, hotels, restaurant and entertainment organization

Added value Communication Services , Content Services, Applications

- E government, Tele-care, Intelligent transport system , triple play services ...

Redefining Local Authorities Boundaries

End-to-end solution is required to enhance the role of local authorities vs. public services

Extending services to the whole community

Broadband Infrastructure & services for Civil Servants

Allow public sector to use a network Faster better cheaper That will provide more efficient Corporate services

Better communications at a lower cost
Align available budgets

To provide an infrastructure that the public sector will use to deliver more advanced services to citizens & business

Better services at a lower cost

Strategic Compact

Converged infrastructure
Affordable BB access
&
Network serving aggregated needs,
Multi service,
Multi tenants

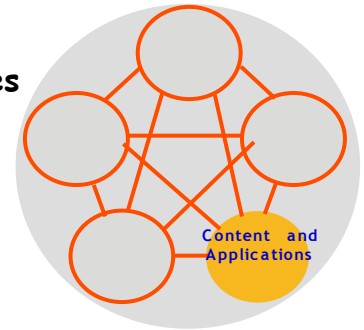
Broadband Infrastructure & services for the Whole Community

Stimulate economic growth & social development thru BB services availability for Business & general public

Increase competition
Attract business
Retain population & local business
Accelerate broadband deployment
Provide an open infra for everyone
Decommission Analog TV
Local content
Mutualize digging

Content & applications needs

Basic internet access
Distance learning
Lease line replacement
Communications services



Financial transactions
Procurement
Information Management
Lease line replacement
Interoperability
Automated meter reading
Public Safety/Mobility
Security /surveillance
Decommission Analog TV

Radio image Transmission
Real time consultation
Patient Monitoring
Training

Local Content access
Communication services
Affordable Broadband
Internet Access
Digital Broadcast TV

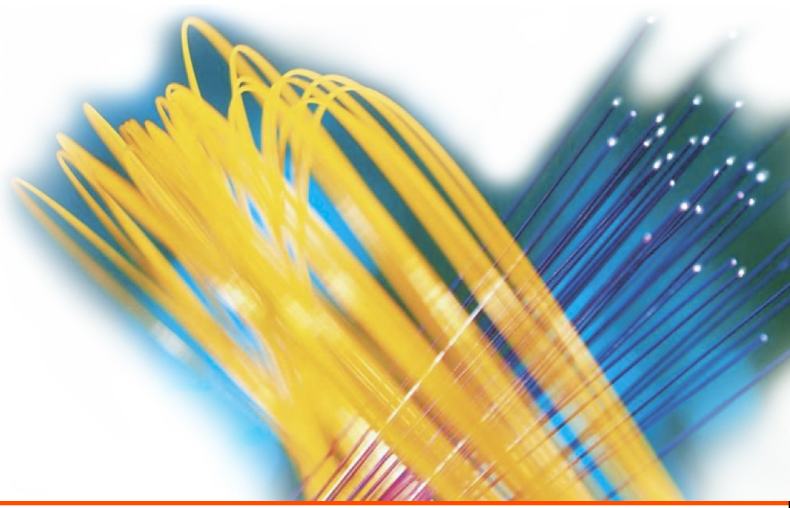
Impact on applications & network

APPLICATIONS

- End-User Centric – Put "civil servants and citizens first"
- Service delivery – Increase network value through differentiated services (voice, intrenet, video, collaborative)
- Filling the Digital Divide Gap – Intelligent network solutions to facilitate new service deployment

NETWORK

- Ubiquitous Access – Broadband everywhere from dense to rural areas
- Wireline/Wireless Integration – To access anything from anywhere
- Best-of-Breed Technology – Ready for services evolution



Impact on Network Transformation

NETWOR

Local authorities are changing from traditional voice and basic interoffice communications to high-bandwidth services with extensive use of video and data

Unprecedented amounts of bandwidth are required to support this new scenario

Existing networks are built on legacy technologies that are **difficult to scale or adapt** to changing needs

Changing Business & Consumer Needs Foster Network Transformation

Increase Network Value

APPLICATIONS

ACCESS

SERVICE

TRANSPORT

Possible roles for Local Authorities

Public–Private Partnership with Telecom operator

Investors: funding of

- Passive Infrastructure within the whole area (Ducts, holes, fiber and/or copper cables)
- Passive infrastructure for the buildings
- Active Telecommunication Network (transport and/or access equipment)
- Private Communication Equipment
- Real time collaborative tools
- Applications Platform (Entertainment, TV, Storage, Contact Centre,ITS, Tele care…)

"Neutral operator ":to build operate and maintain private communication networks and/or public telecommunication network(s)

- Wholesale capacity operator
- Sell dark fiber to Local Content & Service Providers (Telco)

Service provider

- Wholesale and retail
- ISP, ASP

Redefining the Business Boundaries

Communication solution fosters business evolution

Conservative Model

Lease/Buy Network Access for:

- Internal Use

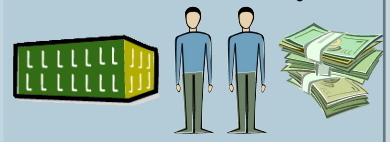
Tactical Model

Deploy a network for:

- Citizen Serv.
- Internal Use

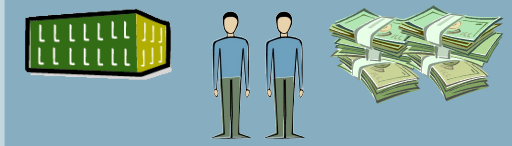
Strategic Model

Deploy a network for:



- Affiliate*
- Citizen Serv.

Deploy a network for:



- Telco-Wholesale
- Affiliate*
- Citizen Serv.
- Internal Use

(*) Utilities

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Service provider model

Local Authority

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Concession contract for the telecom rights

Service Contract for availability of network

(SPV) Wholesale Capacity Operator)

ISP

ASP

Rental Contract for Connection link

Operator

Neutral wholesale operator model

Local Authority

Concession contract for the telecom rights

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(SPV) Wholesale Capacity

Contract for triple play services

B

ISP ASP

+

Rental Contract for Connection link

Operator

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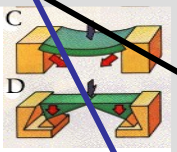
Hybrid model



Local Authority

Service Contract

Concession contract for the telecom rights

SPV2 : Service Provider ISP ASP

SPV1: Wholesale Capacity operator

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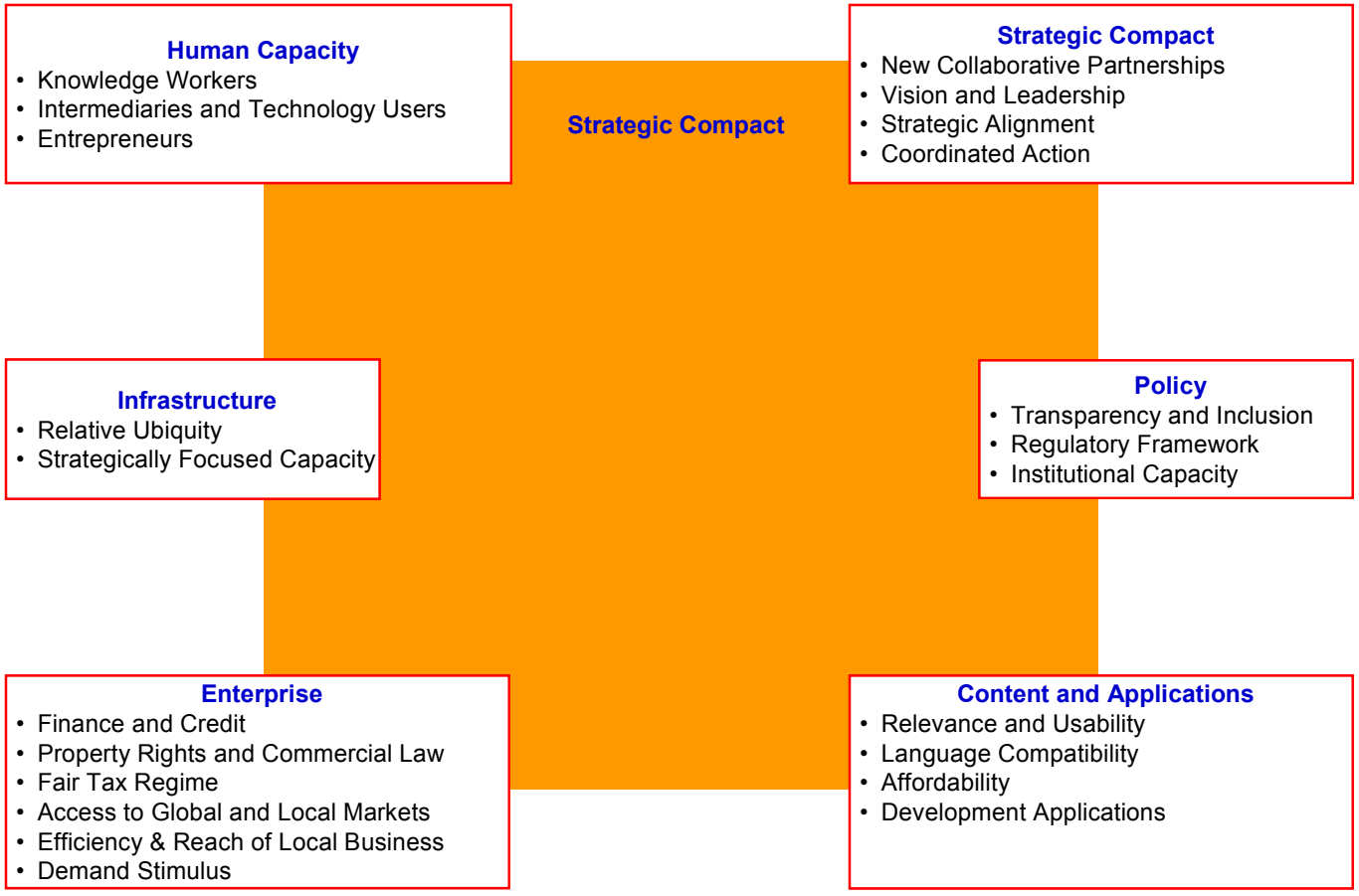
Operator

Rental Contract for Connection link

ISP ASP

Service Contract for availability of network Capacity

Digital Opportunity Initiative strategic framework for ICTs and development



Source: UNDP

Possible roles for Alcatel

To design & build the passive infrastructure

To design & build the network (access, core)

To handle technical operations & maintenance

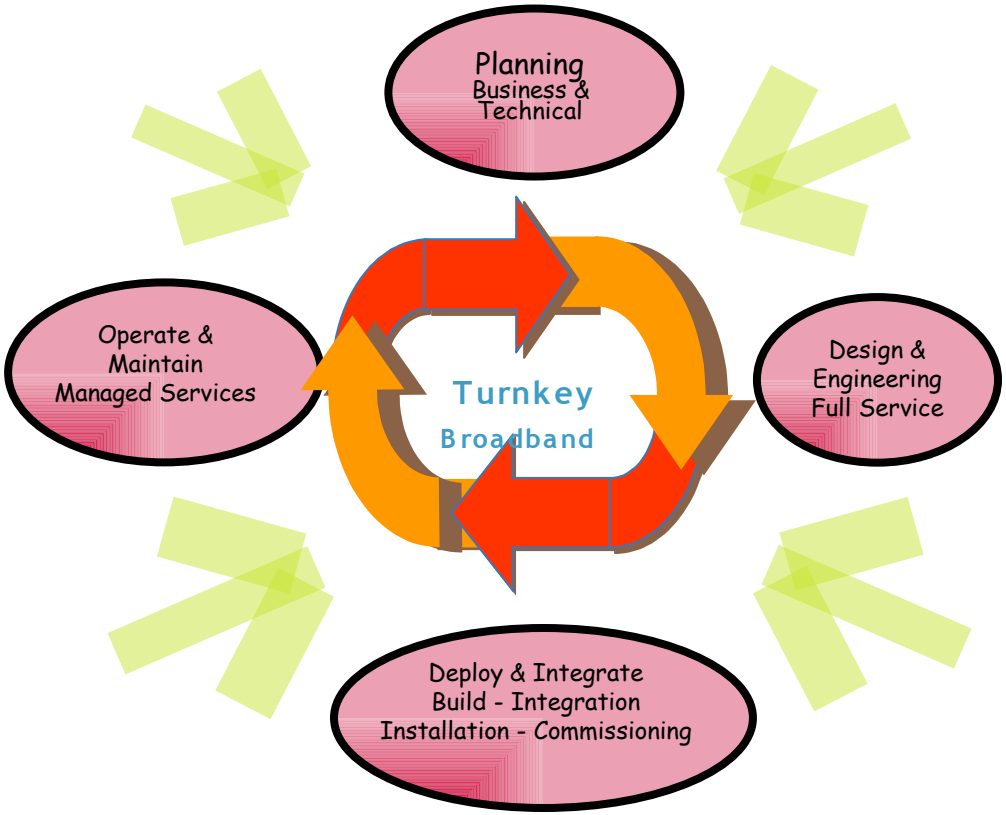
To handle a turnkey offering

To participate to a Public Private Partnership

Provide & operate applications solutions such as:

- Information & emergency call centers
- Intelligent Transport Systems
- Tele-care system
- Triple Play services
- Government communications efficiency tools (videoconferencing, unified messaging…)

Alcatel turnkey capabilities



Engineering

- Route planning
- Feasibility study

Rights of Way

- Permits
- Contract management

Civil works

- Excavation
- Ducts

Cabling

- Supply
- Installation and tests

Maintenance

Alcatel Solutions

Alcatel can be the best partner of local authorities:

- Full portfolio of technologies with which build the solution more suitable for the specific customer service mix, including the fiber.
- Best portfolio for the management of mission critical applications which are (XWDM, IP/MPLS, FTTx and xDSL, WIMAX/WIFI)
- Services :
  - Network Design
  - Project management
  - Training
  - Operations
- Civil works & IT Integrators partnership capabilities

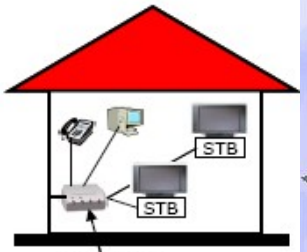
Redefining Local Authorities' Boundaries

Alcatel solution fills the gap and helps to:

- **Improve** the efficiency of civil servants & own sites
- **Enhance** services to citizens
- **Boost** economic development
- **Bridge** the digital divide
- **Open up** new business opportunities

An example : City-net Mode of operation: contain investment, maximize service delivery

Customer



Residents

Public (University, Government)

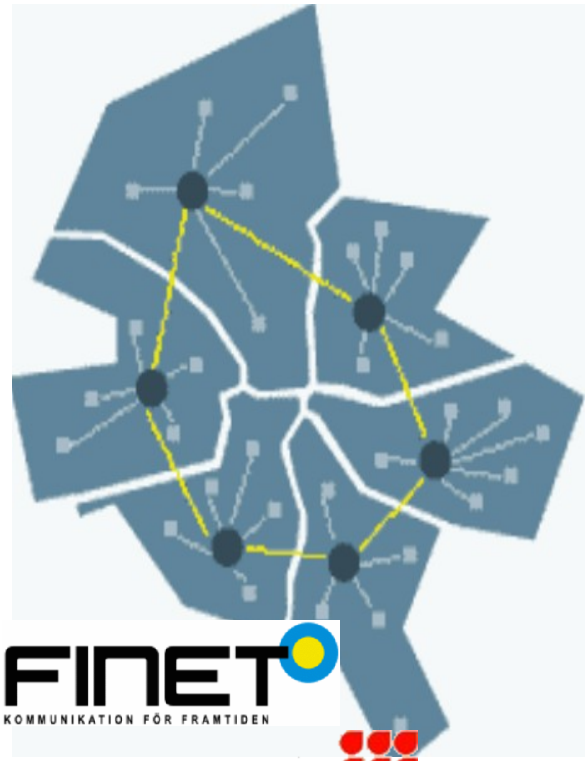
Business

Access

xDSL

FTTx

Network Operator



FINET
KOMMUNIKATION FÖR FRAMTIDEN

BORÅS ENERGI
för ett vettigare klimat

thalamus networks ab

Service Provider

VIASAT

Canal Digital

hospitality

UPC

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Swedish Model : City-net Mode of operation: contain investment, maximize service delivery

City will own fiber and network equipment

- Boosting local economy
- Retaining citizens within the community
- Replacement of Analog TV

City relies on local utility or network service companies to operate the network.

- Companies have experience to deal with residential and business customers

Local Partners/System integrators will build and install the network.

- Rely on existing expertise to design and built networks.

Open network for different service providers delivering content

- Providing a high level of autonomy to the consumer

City-net Mode of operation: contain investment, maximize service delivery

Overview of recent projects..

- Delivering services to…
  - Residents & Local Business
  - Universities & Public Administration

Community	Network Operator	Access Technology	Size of the Network
BORÅS STAD	BORÅS ENERGI för ett vettigare klimat	Alcatel DSL Alcatel Ethernet Switches	10.000 residents Business, Public
Karlsborgs	keab KARLSBORGS ENERGI AB	Alcatel DSL	4.000 residents
FINSPÅNGS KOMMUN	FINET KOMMUNIKATION FÖR FRAMTIDEN	Alcatel DSL Alcatel Ethernet Switches	10.000 residents
ÖREBRO	thalamus networks ab	Alcatel Ethernet Switches Alcatel DSL Alcatel B-PON	23.000 residents Business, Public

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Conclusion

Leverage **Alcatel's solid experience**
in carrier market to fill the business gap
for Local Authorities

Implement a **comprehensive**
communication solution
to meet changing business/citizen needs

Leverage network innovation
for a long-term **competitive**
and beneficial market position

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