



ICT - The efficient Way to modernize your Administration and to provide eServices to all

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Agenda

- > **eGovernment - Definition and Scope**
- > G2G as a Basis for all eGovernment Initiatives
- > Objectives of G2G – from Cost Reduction to Responsiveness
- > The magic Triangle : Organisation /Process /Tools
- > eGovernment in a Campus ICT Solution
- > Interconnecting Layers of Administrations
- > Innovative Middleware in G2G Architectures
- > The new Paradigm : Convergence
- > Back to Application Layer – what makes Sense?
- > Different Roles of Communities to build own Solutions
- > Status and Future of eGovernment Solutions worldwide
- > Recommendations and Lessons learnt

eSociety

eHealth

eInclusion

eBusiness

eLearning

eSecurity

eGovernment

BROADBAND

eSociety – a major Challenge for Government

> **What Government must do :**

- Establishing Political and Legislation Framework
- Facilitating Private–Public–Partnerships (PPPs)
- Boost eGovernment with G2G, G2B and G2C
- Define eCity/eRegion/eCountry Strategy
- Sponsorship for SME ICT Modernisation
- Enable Tele-working in Areas of high Unemployment
- Increase Market Flexibility /Competition
- Etc

> **Taking the Lead !**

e-Government User Segmentation & Interaction: G 2 G - G 2 B - G 2 C

Government

City



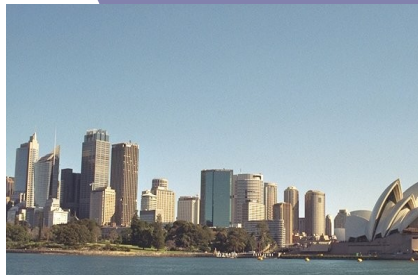
Communication services
Information services
Transaction services
Electronic Transfer of funds



Communication services
Information services
Transaction services
eProcurement
Electronic Transfer of Funds
One-Stop Shops

eGovernment Enabling Infrastructure

Communication services
Information services
Social services
Art and leisure services
Educational services
Environmental services
eDemocracy
eLiteracy



Business



Citizen/Residents

eGovernment – What to concentrate on ?

> G2G is

- Baseline to all other G2X Applications and Processes
- Experienced from past : best value for money
- Political signal : Administration Efficiency
- Processes best known – copy from Enterprise
- Enables Inter-working between different Administration layers

Disappointed ???

Would you construct a car by starting from the windscreen wipers??

> What needs to be considered

- Coherent eGovernment Strategy and Concept for all administration domains (City /Region /Country)
- Full Government Executive Support and Backing in each domain
- Process /Organisation Improvement Concept and Qualification Plan
- Basic Components : Middleware /Communication Platforms
- Useful Applications for all G2X areas
- Innovative Communication Infrastructure
- Adequate Financing /Budget
- Right Partner for overall Integration
- Sustainable Concept for next steps

> eGovernment - what is needed :

- Organisational /Mental Change to Service Orientation
- Qualifications of all participants (Gov internal/external)
- Legislation Adoptions for Telecommunications and Competition
- Broadband Access to Internet (‘multi-platform -concept’)
- ‘Design for all’ – User-friendly Access
- From pure Information Distribution to full Transaction
- Back-end Integration and Data Interchange Standards
- Security Concept and Architecture
- Interoperability across City /Region /Country /Europe (‘one-stop-Government’)

> **But main Prerequisite is :**

Before you start the Roof , think about the Basement first

- Smooth working administration processes defined and implemented
- Fully operating Back Office
- All Employees adequately connected
- Security Policy in place
- Interconnected Campus networks and to upper Admin Layers
- Supportive Office and Admin Applications
- Computer educated and motivated personal

e-Government Objectives

Cost Reduction

Time Savings

Quality Increase

Keep it Simple

Cooperative

Service-oriented

Stimulating

Developing / Supportive

Future-safe

e-Government Strategy

- > “e-Government” to raise efficiency of service delivery
- > For e-Government
 - G to C: Encouraging the delivery of on-line Public Services;
 - G to B: Promoting economic development growth via improved processes between City & Businesses using best practice in ICT utilization
 - G to G: Improving productivity in Administrations via on-line intergovernmental communications and
 - Creation of a secure information infrastructure (NII) that engenders confidence in e-transactions.

Governmental Objectives

> Efficiency

- Re-use must lead to cost benefits, cost-efficiency should not be detrimental to effectiveness

> Effectiveness.

- Provide services according with to target groups/population segments
- Segment population/business to tailor services
- Run Service analysis to identify best channel for service delivery
- Evaluate service delivery
- Target groups must be able to access the services, (e-)inclusion must be raised.

> Security

- Services and service delivery should be trustworthy and confidential both objectively and in the user's perception.

- source: EU Enterprise DG, Interchange of data between administrations data IDA,
- Multi channel delivery of e government services , June 2004

eGovernment Process Engineering

- > 1. Any bad Organisation with new ICT Tools will be **worse** !
 - > 2. Any Technology will **not** solve badly defined processes !
 - > 3. Any Process in an inadequate organisation will **collapse** !
-
- start with **reengineering** before using new technology
 - Start with **reorganising** (if needed) before using new processes
 - Start with the **existing** people - they are (often) the experts

> Architectural Model for eGovernment must contain

- Political/Commercial Viewpoint

Where to focus?

- Process Viewpoint

Which different workflow needed?

- Project Viewpoint

Which schedule /cost/integrator?

- Ownership viewpoint

Outsourcing or own network?

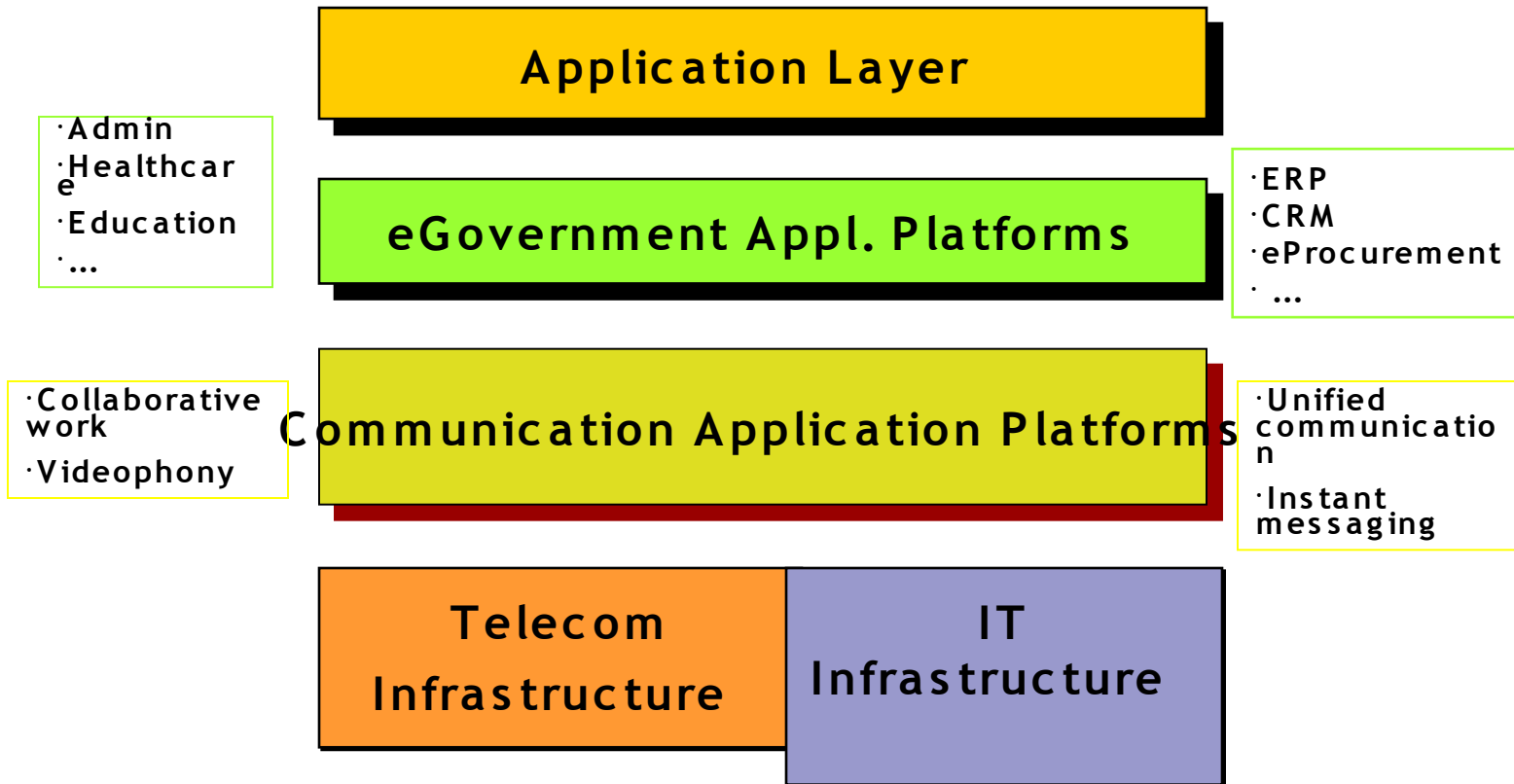
- Migration Viewpoint

Integrating existing partial solution?

- ICT Viewpoint

Which Network /Application /Server?

eGovernment Layer Model



eGovernment – in a Distributed Environment

> There are 3 Viewpoints:

- Each Campus with its own internal ICT and Process/Organisation
 - Each building and adjacent buildings with their ICT environment
 - Containing Voice/Data connections and Access to Applications on local servers
 - Decentralised Services and Applications
- Forming a Cooperation between Multi-Campus Organisations
 - Interconnecting the different Campi and local institutions to a coherent ICT community network
 - Providing centralised Services in Server farms
- Getting connected to the external World
 - Providing Connection to Internet and Data/Voice Network
 - Uplink/Downlink via VPN to upper/lower Layers of the Administration structure (Community/City/Region/Country..)

> Required ICT Components

- Terminals (fixed and mobile /data /voice /multimedia)
- Access Network with adequate Bandwidth for all Participants
- Standard Office Communication Environment (UMS)
- eGovernment Platform , Middleware , Basic Comp., Applications
- Data Centre /Archives /Application Server farms
- Security Architecture
- Adequate Backbone for Central Gov /Regions /Communities

> Basic Components

- Standard Office automation
- X500 Directory Service
- Unified Messaging and voice /data /multimedia Services
- Workflow system
- Standard SW for ERP
- Procurement platform
- Form Server
- Payment server
- Electronic signature suite
- etc
- **All integrated in a coherent eGovernment Platform**

Key idea: Build a stable, secure, reliable platform

Intranet portal zone

- Intranet Web Servers
- E-mail Web Servers
- Personal Computers

Restricted zone

- Database / Exchange Servers
- Application Servers
- Document & Content Management Servers
- FTP Servers

Internet public zone

- Internet Gateway
- Web Servers

Overview of Services - Moving up from Connectivity Services

APPLICATIONS & PROCESSES

Horizontal applications	Customer Relationship Management	Admin Force Automation	Field Force Automation	Enterprise Resource Management	...	Vertical applications	Vertical sectors
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MANAGED SERVICES

Managed Communication Services			
Customer Interactions	Contact centers	Self-service, IVR	Routing & Charging
Employee Interactions	Conferencing & Collaboration	Messaging (vmail, mobile email, UM,..)	Rich presence services
Business Communications	Voice VPN (IP, TDM, Mobile)	Fixed-Mobile Converged services	Wireless PBX services
		Managed IP-PBX, remotely or hosted	IP Centrex

Managed IT Services	
Data center hosting (SAN, Data back-up)	Application hosting
Business Continuity (disaster rec,..)	Web hosting
Specialized security services (Firewalls, Intrusion detection, Denial of service prevention,...)	

Managed Networking Services				
Managed FR/ATM	Managed IP VPN	Managed Ethernet WAN: VPLS	Managed Optical services	...

CONNECTIVITY SERVICES

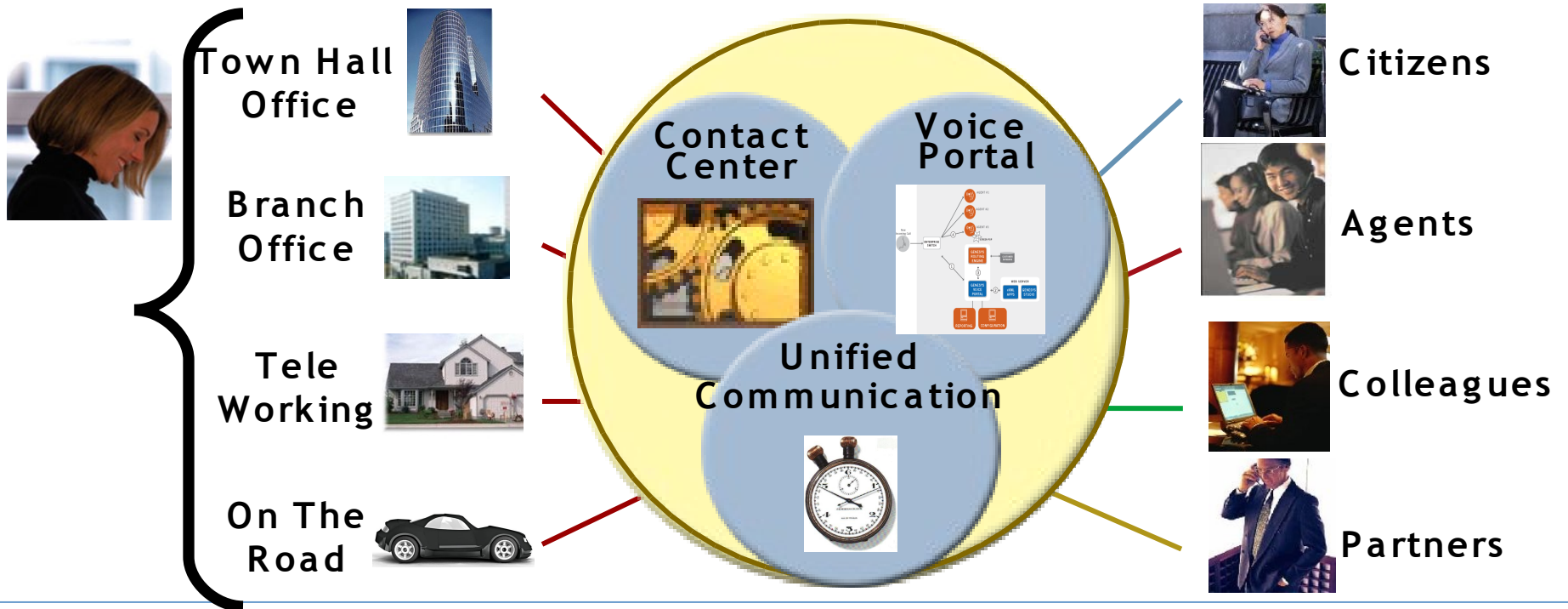
Fixed access (xDSL, LL, ISDN, PSTN,...)	Backbone services (Private lines, FR, ATM, optical, ...)	Fixed voice traffic	Mobile voice services (GSM, CDMA,..)	Mobile data (GPRS, EVDO, 3G, WiFi,...)
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Source: Analysis of Advanced Service Providers services offering Business Development AREA's



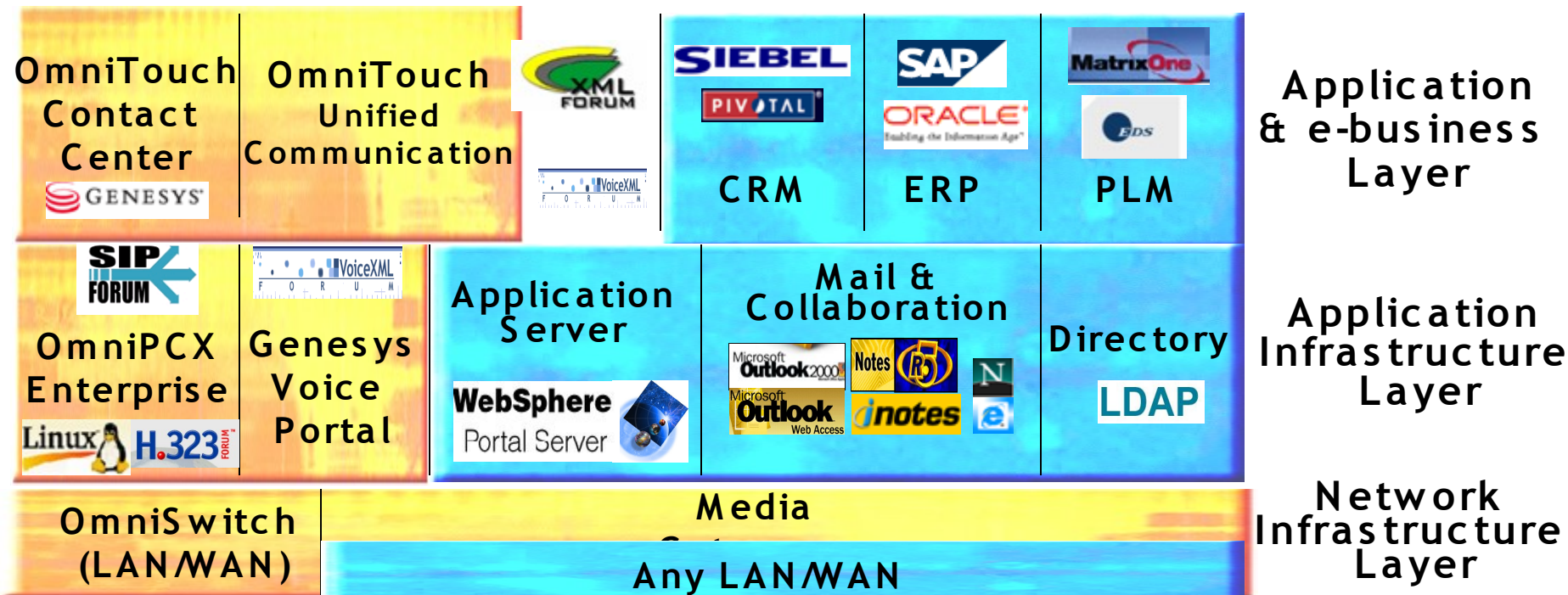
Alcatel Vision and Strategy for eGovernment *and* Enhancing Citizen and Employee Interactions

- > Unified Communication **empowers** mobile/resident employees with knowledge
- > Voice Portal supports next generation **self-service**
- > Contact Centre enables better business via **better interactions**



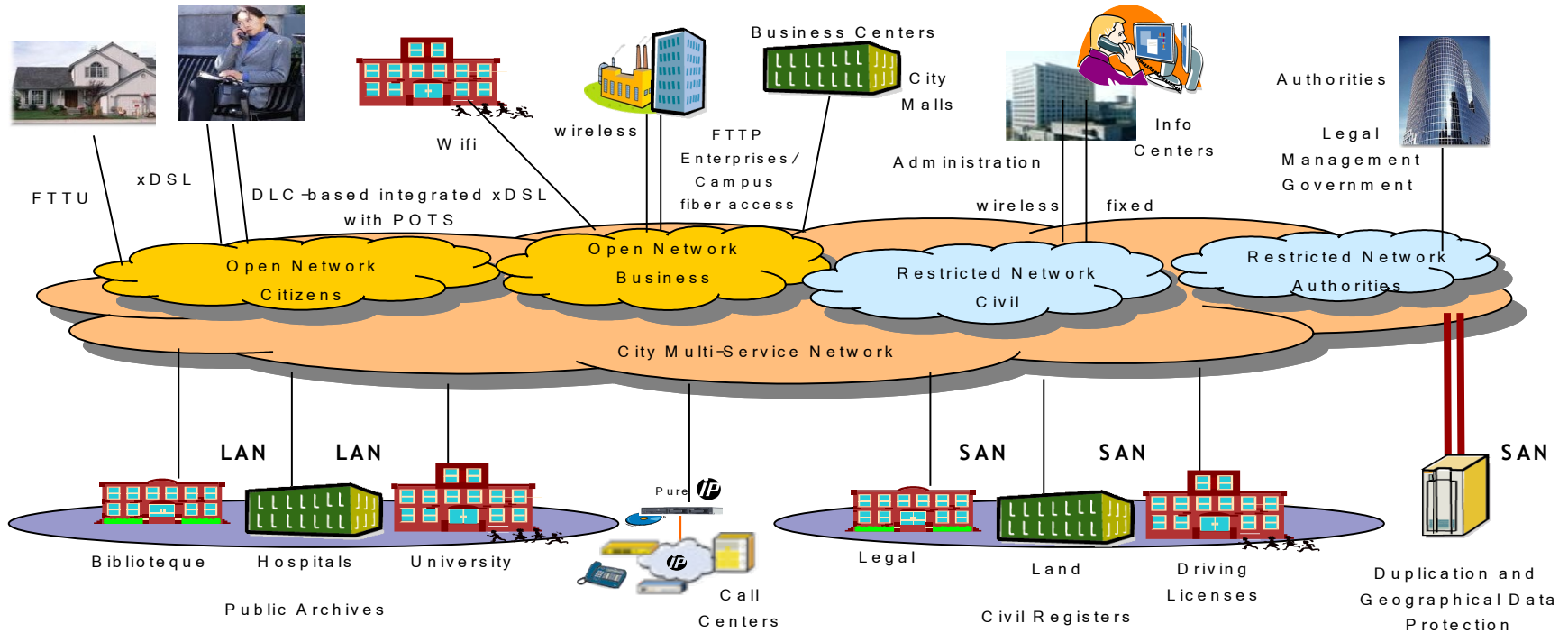
A possible Solution – eGovernment Campus

- > Standards enable the flexibility
 - Simplified integration **reduces** capital expenditures
 - User defined communication makes people more productive and **lowers** operating expenses



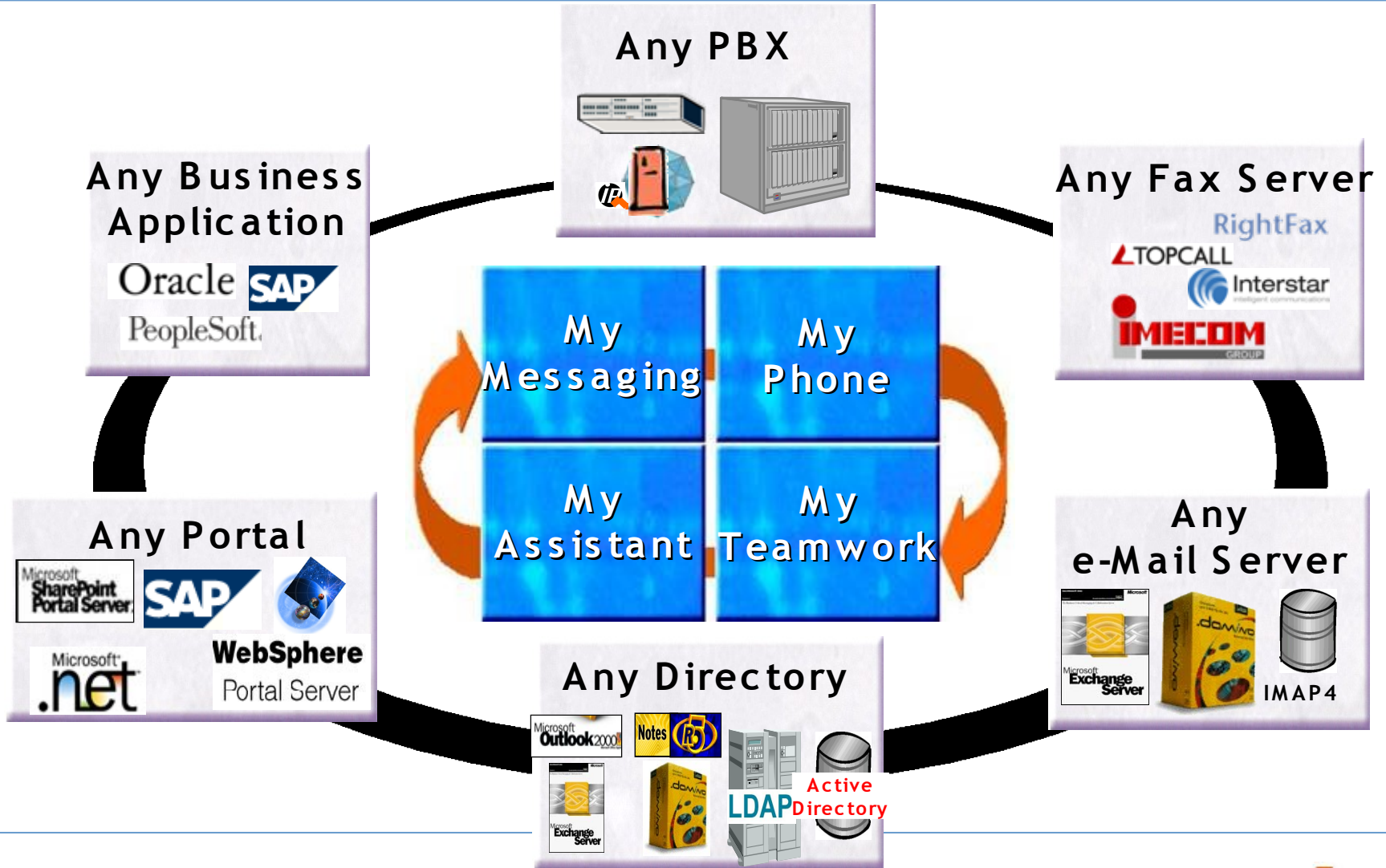
A possible Solution – eGovernment City Network

Services to Citizens



Civil Information Services

Unified Communication Suite



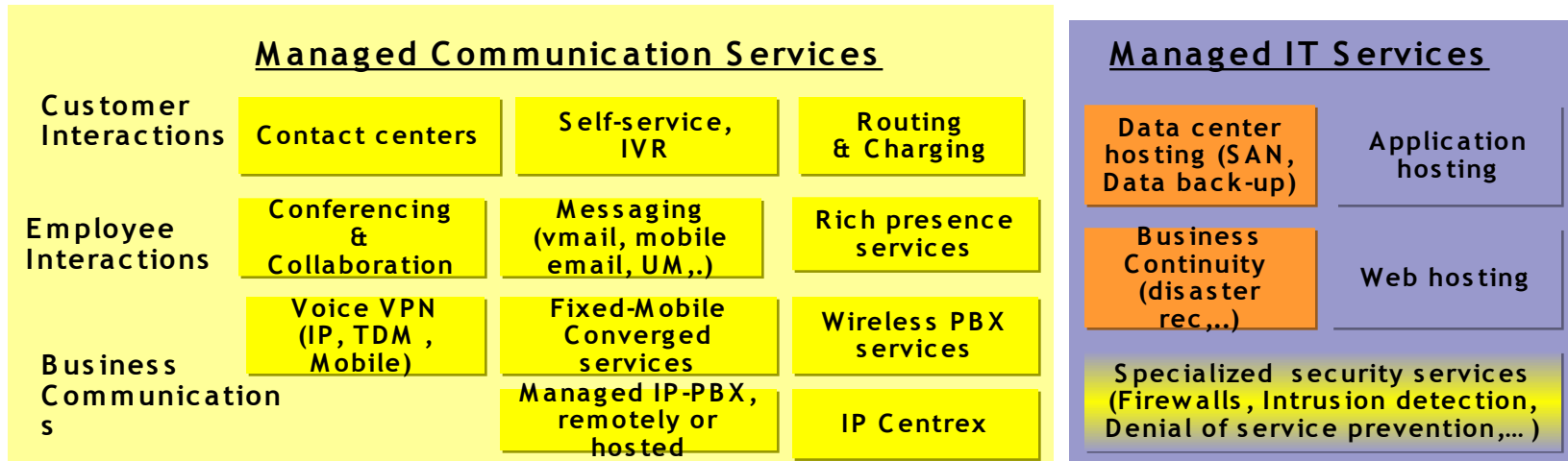
Overview of Managed Services

Moving up from connectivity services

APPLICATIONS & PROCESSES



MANAGED SERVICES



Managed Networking Services



CONNECTIVITY SERVICES



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Recap on Telecommunication Technologies

> Copper

- Legacy and proven for more than ½ a century
- Major application: Telephony.
- Evolution: Internet Access, 1 – 2 Movies on demand per household.

> Coax Cable

- Introduced in the 80's as preferred medium for Broadcast TV.
- Evolution: Internet Access, Telephony, 1 -2 Movies on demand per household.

> Fiber

- Introduced in the 90's and widely deployed with Telecom Operators.
- Advantage: No capacity limitations related to medium. (light)
 - Capacity determined by active equipment that drives the fiber.
- Capable to support Telephony, Internet Access, Broadcast TV and multiple movies on demand per household, including High definition Television.

Architecture Layers in Telecommunications Networks

> **Passive Infrastructure**

- Ducts and holes
- Copper lines (if needed)
- Optical Fibers

> **Access Networks**

- xDSL (if copper exists already)
- FTTPON
- Optical Active Ethernet
- Wireless : WiFi, WiMax

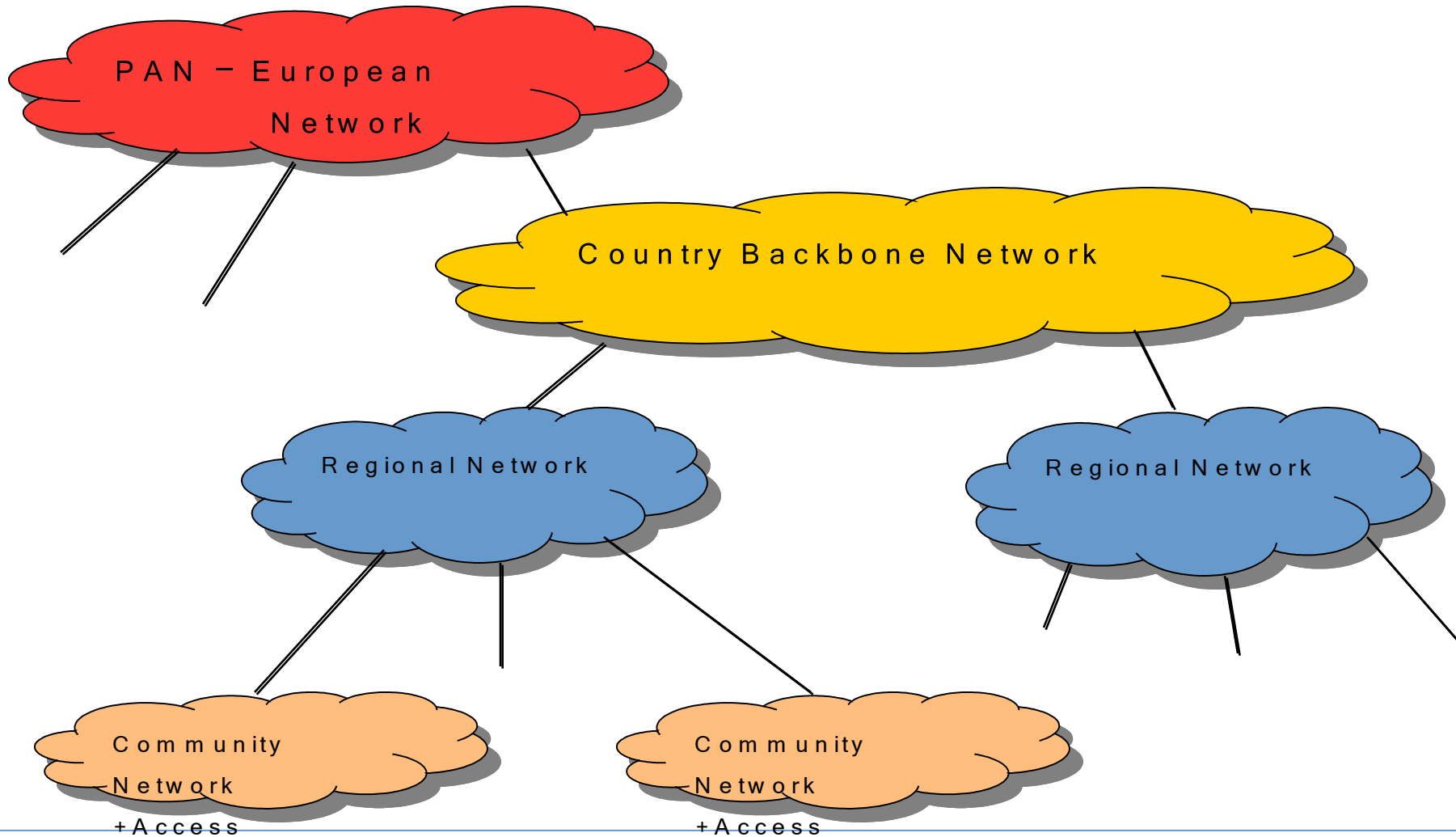
> **Edge Networks**

- Ethernet MAN

> **Core Network**

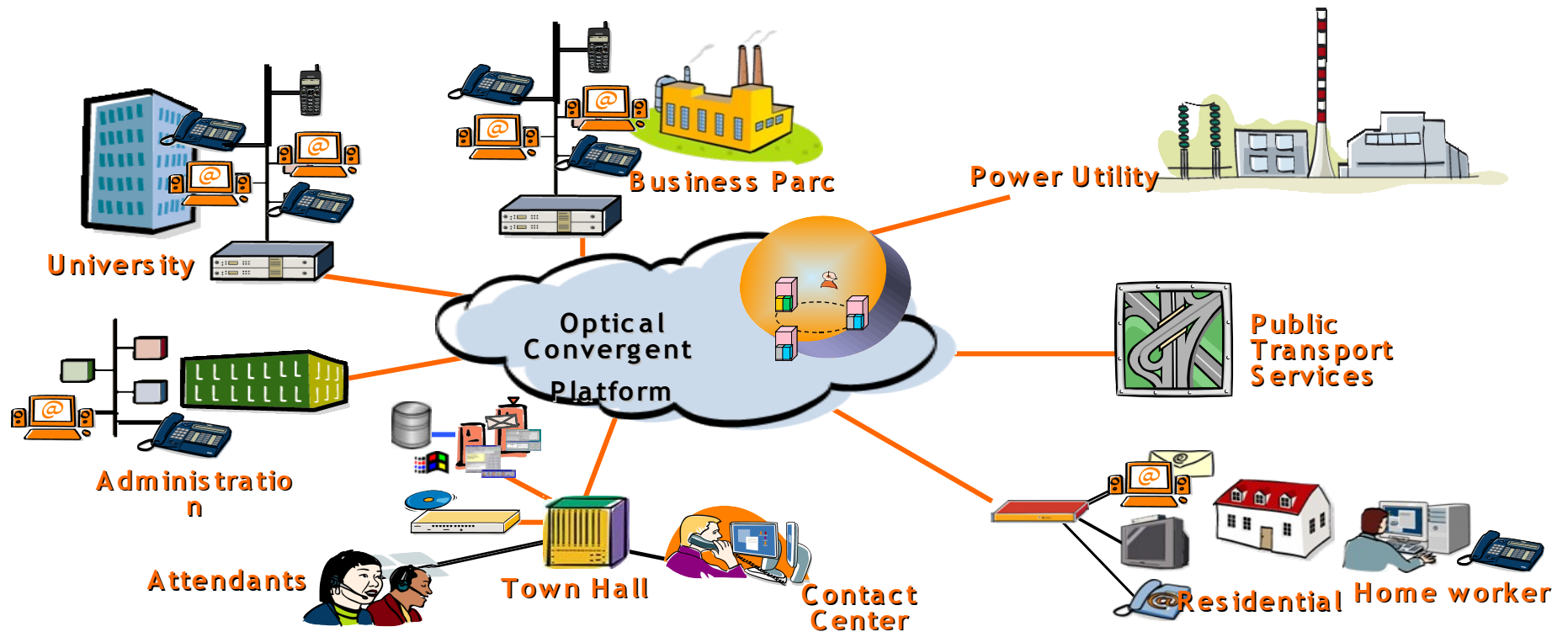
- WDM

Architecture Layers in eGovernment Networks



Efficient Communications for Cities

Design, Build and Run effective Communication Solutions



IT – Strategy

- > Technical Standards
 - With Frame Conditions and Target Definition
- > Area Data/Voice Network
 - Migration Strategy
- > Enterprise Resource Planning
 - Procurement
- > Terminal Policy
 - Project Mgmt
- > Server Structures
 - License and HW Mgmt
- > Workflow and Data management
- > eGovernment Applications
- > DB Management Systems
- > Security Architecture

e-Government IT Platform - Planning

- > Review of the current Data Center infrastructure need to be done:
 - Server Consolidation
 - Review all the servers that are currently in the Data Centers
 - E-Gov Storage
 - Consider storage needs for E-Gov Applications
 - E-Gov Backup
 - Implementing an eGov backup is the next logical step
 - E-Gov Applications & Services Continuity
 - Applications and service continuity is also a consideration, considering backup data centers
 - Network Connectivity
 - System Monitoring; E-mail, Stream line Government E-mail system for all departments

Example :eGovernment PORTAL Solution

- > Integration of (user-friendly) of Information + Application in one platform
- > Contains all administrative specific Processes and ERP solutions
- > Decision Support Data and evaluation of Data Warehouse
- > Unstructured Documents like text files /emails...
- > Plus Internet Content and Service
 - Context sensitive
 - Single sign-on
 - Drag and relate of objects
 - Workflow integrated
 - For different end system : intergrated on user-surface
 - Reduced navigation

Example :eGovernment Form Server

- > Stores and provides all available forms for citizen and internally (directory and search)
- > Facilitates the completion /filling in of forms
- > Customized Design and Integration for all parties
- > Integration of Backend Systems and Data Warehousing
- > Workflow integration for efficient processing
- > Integration in Security Policy
- > Online support by Avatars
- > Integration in overall documention mgmt /archiving system

Convergence – a new Hype ?

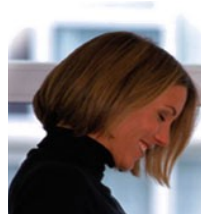
- > Fixed Networks and Mobile networks
- > Data Networks and Voice Networks
- > IT and Communication
- > Information and Entertainment
- > eBusiness and eGovernment
- > Insourcing and Outsourcing
- > Multi-Purpose Devices (PC /TV /Camera /Phone /PAD ..)

Possible through common IP Technology and Standards

Convergence – Consequences for eGovernment ?

- > One IP Network in Future
 - > For all Content (Voice / Data / Multimedia)
 - > For all Devices and Users
 - > Be Connected in all Location
-
- > Cheaper Solutions
 - > Less Operational Expenditure
 - > Higher Availability
 - > Guaranteed Interworking
 - > Better Reach of Users

Alcatel Vision and Strategy for eGovernment From Total Communication Chaos ...



Town Hall



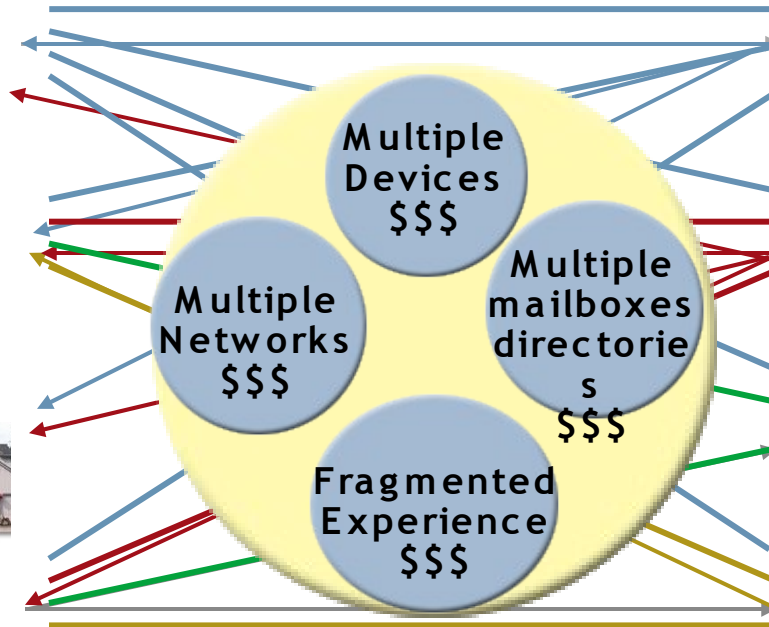
Branch Office



Tele Working



On The Road



Citizens



Agents



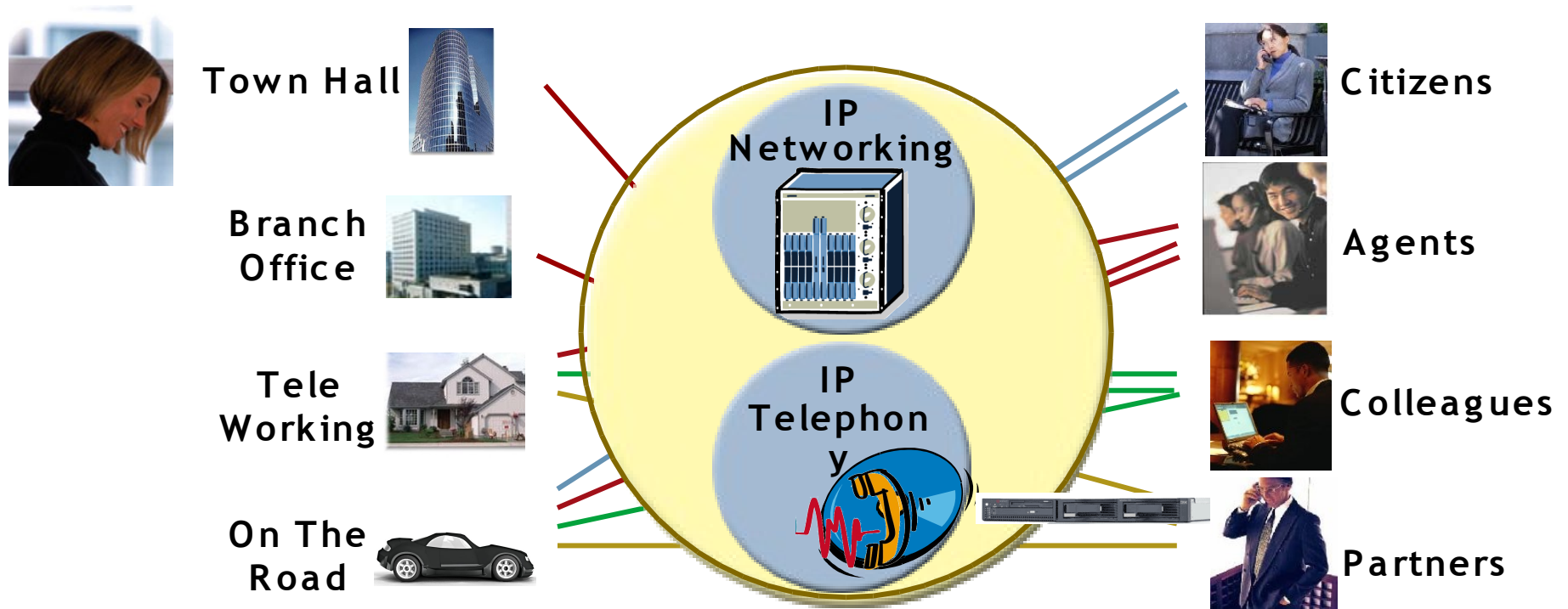
Colleagues



Partners

Alcatel Vision and Strategy for eGovernment To Bridging Locations and Technologies ...

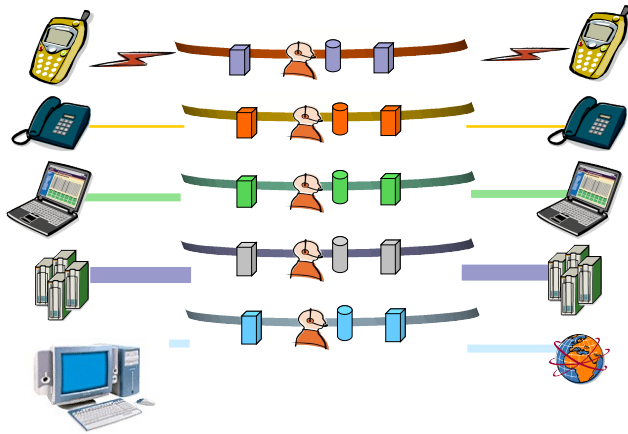
- > IP Networking supports innovation & growth, **lower TCO**
- > IP Telephony **reduces** your telecom bill, lowers your TCO, and provides consistent service across the organization



New Approach to Convergent Networking

FROM

Separated Service Networks

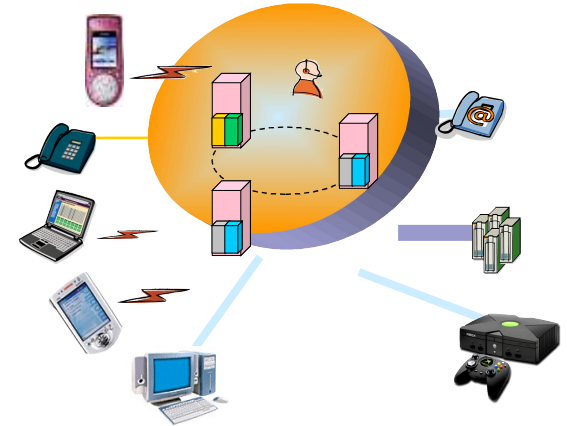


Each Service has its own Network

*Optimization
Simplification*

TO

Converged Service Network



All Services on One Network

- > Networks require reliability, robustness and security to deliver high capacity data applications through MAN and WAN
- > Alcatel has the proven products and solutions that provide for these essential requirements including end-to-end connectivity management

> Reminder

- One-way Information Distribution
 - Int: Mgmt Info System, Info + Knowledge Mgmt System
 - Ext: Directories for Admin, Citizen Information System
- Two-way Communication Enabling
 - Int: Resp. per email, Video conf, Admin Com Systems, Networked Admin
 - Ext: Resp. per email, Forms for downloading
- Full Interactive Transaction Handling
 - Int: Doc-, Workflow- and Groupware systems, Resource Mgmt System
 - Ext: Interactive Forms and Applications, Services

> **Basic Public Services** defined by EU

· For Citizen

- Income Tax
- Job Search
- Social Security benefits
- Personal Documents
- Car Registration
- Application to Building Perm .
- Declaration to Police
- Public Libraries
- Birth / Marriage Certificate
- Enrolment in Higher Education
- Announcement of Moving
- Health related Services

For Business

- Social Contribution for Empl.
- Corporate Tax
- VAT
- Registration for New Company
- Submission Data to Stat. Office
- Custom Declaration
- Environment-related Permits
- Public Procurement

eGovernment - Progress in Services

> Increase in Basic Public Services 2001-2003 ('Old EU-countries')

Full Availability	10/2001	10/2002	10/2003
> All Services	20%	35%	45%
> G2C	12%	23%	32%
> G2B	31%	52%	63%

Conclusion :

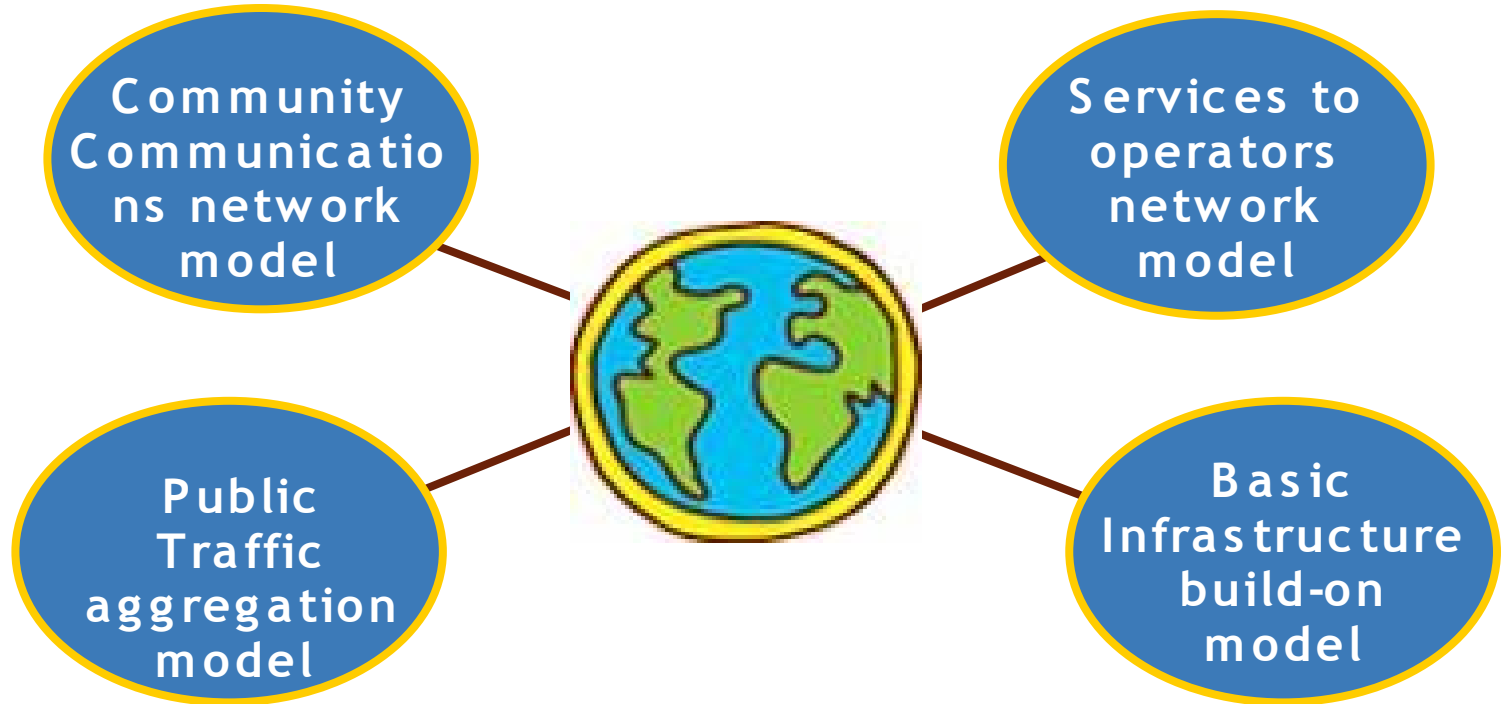
- High Penetration / Increase in Full Availability of G2B Services
- High Penetration in Income Generating / Cost Saving Services
- Growth rate >>10% per Year
- **But still a long way to go for full eGovernment**

Communities must ensure *no one is too far*
from the Information Highway

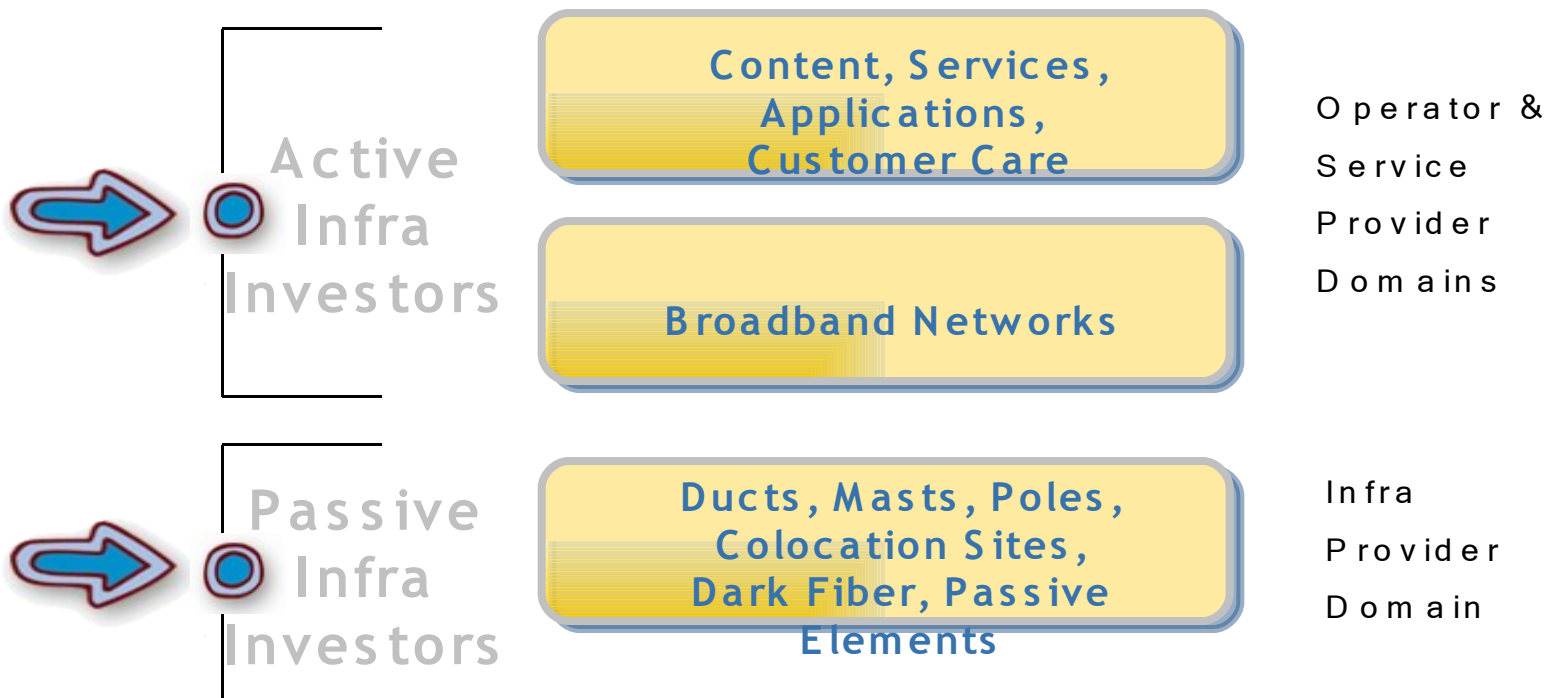
Small, *underserved Communities*
must compete for Jobs, Services and high
Quality of Life

Adequate *Communication*
Environment will attract
Business to settle

A number of different models are emerging

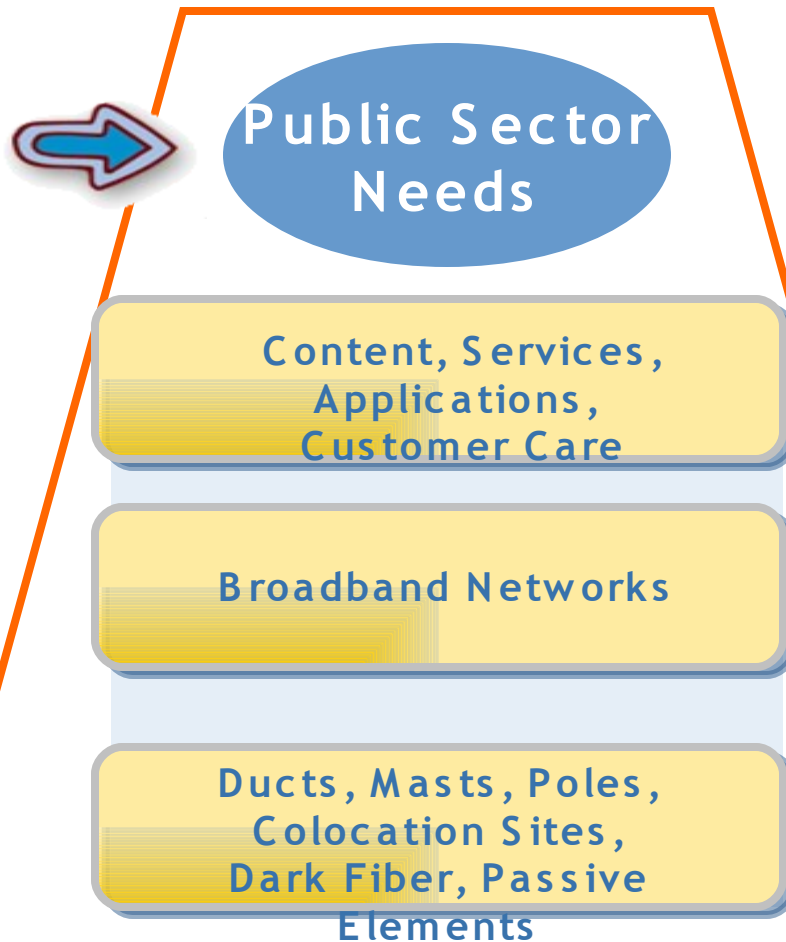


Economic models: risks and opportunities



Public Traffic aggregation model

The local community justifies the required investment with **“public demand”**



Benefits:

No financial risk for the public sector

No need for technical expertise within the public sector

Fastest way to meet new communication requirements

Consequences:

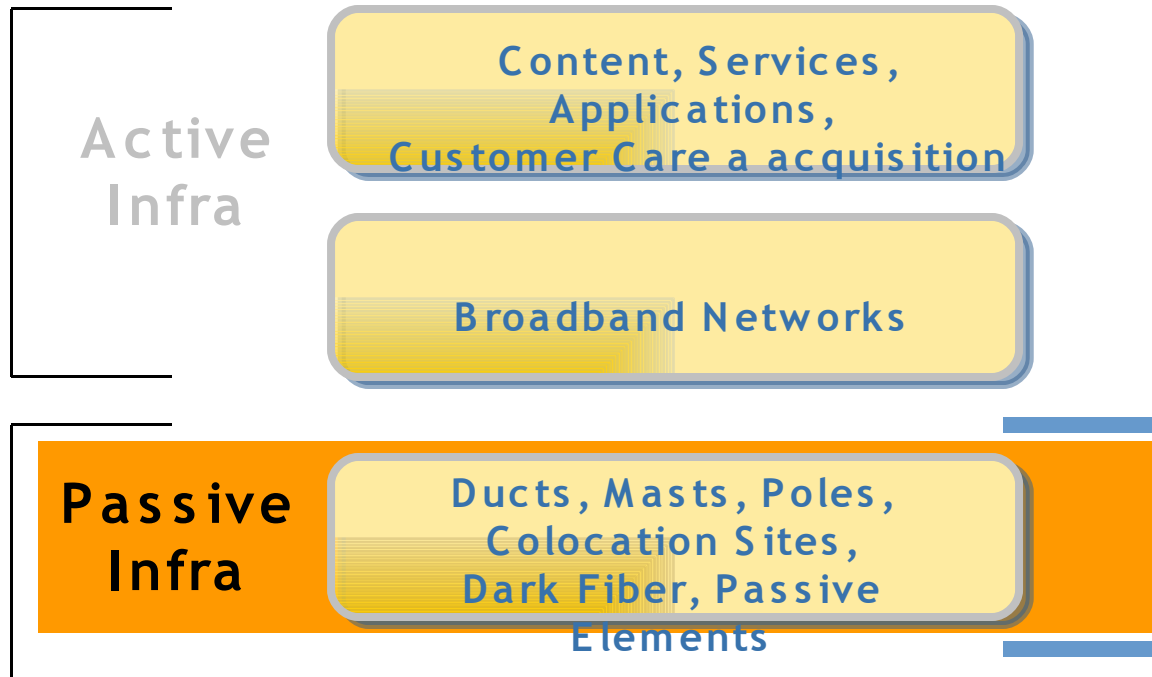
Will probably **affect competition** between operators (public sector = major customer), under anti-competition law scrutiny

Locks Community into a single supplier contract (usually for a long period)

MORE >

Basic Infrastructure build-on model

“Local community brings together **“Partners”** on its infrastructure



Benefits :

Alleviates private sector of major cost burden (>60/80% of total network costs)

Optimizes public sector management of utility infrastructures

Possible to attract new institutional investors

Consequences :

Investment and risks for public sector

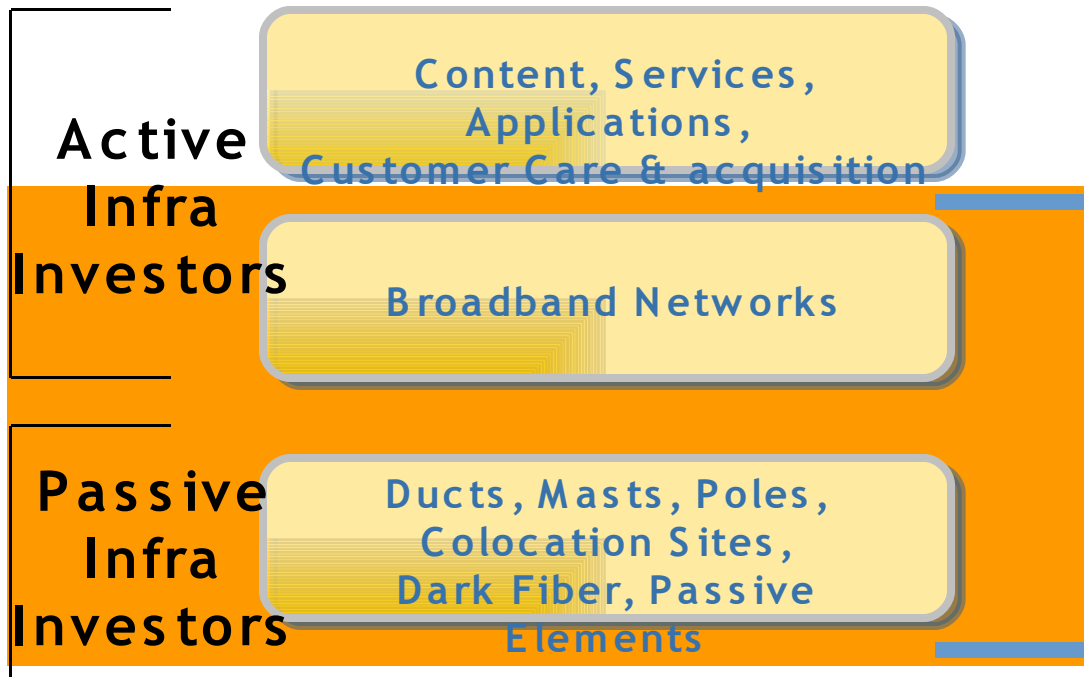
Need to establish a neutral infra manager

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[MORE →](#)

Services to Operators network model

Local community offers services to other service providers - **Wholesale**



Benefits :

Optimised local/regional infrastructure

Operators focus investment on services

Consequences :

All investment supported by public sector

Could reduce competition between different access technologies

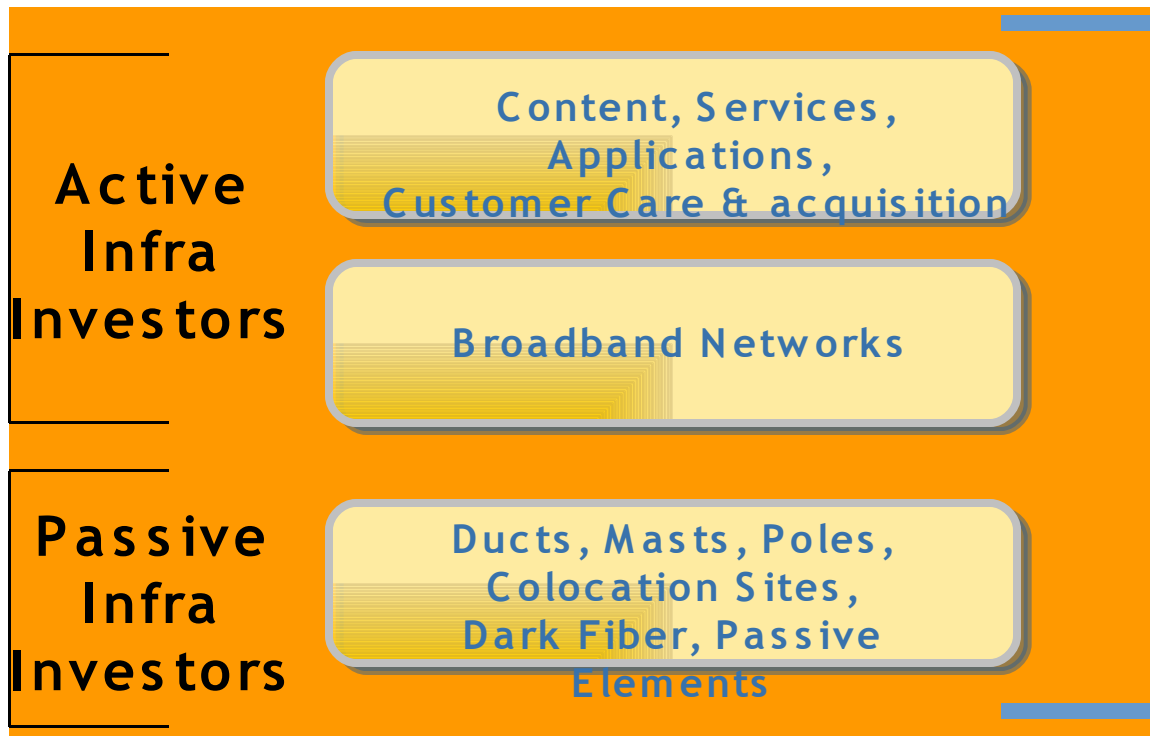
Need for technical & commercial expertise (partnership ?)

[← BACK](#)

[MORE →](#)

Community Communications network model

Local community becomes a service provider – **Retail Model.**



Benefits :

Customized to needs

Integrated (rapid) solution

Consequence :

All investment supported by public sector

High costs of customer acquisition and care

Need for technical & commercial expertise

Could stifle competition

Could discourage private sector investment

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[MORE →](#)

Communities and Regions and their Networks

- > Summary of experiences -> see next Presentation
- > Decision case per case
- > Long term arrangement vs short term flexibility
- > Possible PPP to build on

Communication : A Resource like Water/Energy

> Achievements in Other Countries

- eGovernment is a major Subject for the Top Political Leaders in each administration area (community/region/country)
- Many Applications and E-Gov Platforms do already exist and are currently being used and extended
- It is pushed by State Government/EU and UN
- It is being recognized as Medium to rationalize Administration, to increase responsiveness and to develop the attractiveness
- And to also increase to Business Attractiveness of Communities and Regions or Countries
- It is a MUST to compete in a Future World

> General Status in all Countries

- Most Countries are advancing with 10% increase of applications
- High priority on G2G and G2B , G2C will follow
- ‚Network‘ coverage determines Application coverage

> Main Obstacles

- Focus and commitment and right priorities
- A dedicated plan with a dedicated /empowered responsible
- Seperate facts from wishfull thinking

> General Directions

- There is no doubt on the direction but different experiences being made
- Use needed increase of efficiency as a driver for eGovernment
- Behavioural changes will impact also interaction with administrations

Recommendation (1)

> Increase eServices between Administration / Business and Citizens

- Implement eGovernment in all public administration sectors with emphasis on content, responsiveness and security of communication
- 'Informatisation' in those public administrations will significantly increase efficiency, lead to cost reductions and service-friendliness
- Prioritize on-line-services in those domains with high impact to revenue generation and /or cost savings
- Preparation of educational programme for all personnel of public administrations concerning the utilisation of ICT and its application
- Establish public access points to information systems of administration authorities, such as hospitals, libraries, etc.

Recommendation (2)

> **Modernise Administration internally**

- Increase Efficiency of internal Workflow with adequate ICT Tools and Processes
- Apply ERP methodology to internal functions
- Establish Documentation Management to all functions
- Provide transparency inside/outside
- Increase Quality of Service by internal Quality Management
- Measure Cost Reductions for further migration steps and priorities ...
- Measure Responsiveness and Service orientation towards your customers

Recommendation (3)

> **Raise Attractiveness of Local Environment for citizen and business entities + act against DIGITAL DIVIDE**

- Establish access to Broadband network for all citizen and Administrations
- Exploit PPP where ever feasible
- Take the lead to eSociety for all actors –if Government will lead , the others will follow
- Make use of ‘Best Practices’ in other countries (with customisation to your own needs)
- Use eGovernment in your region as a marketing weapon in favour for your readiness to new enterprises
- Do not wait – be pro-active !

Summary and Conclusions

- > **eGovernment** is the Key Component on the way to **eSociety**
- > Only a **Coordinated Approach** will show reasonable Results
- > An updated '**eGov Strategy**' must be visible to all Actors
- > An comprehensive **Action Plan** has to drive our contributions
- > Nominate one high-rank **Manager** for this Process

> **Do not wait - let us start together - now !**

> How ALCATEL is supporting eGovernment world-wide

- Perfect overall Solution Offering in nearly all Components
- High Experience as System /Solution Integrator with real References
- Acting as a Partner from Start to Completion (and beyond)
- Consulting in Process and Project and Technical Architecture
- Acting as Outsourcing Partner for Technical Network Operations
- Finance Engineering Support through EU and PPP
- With world-wide Experience in eGovernment-advanced Regions and Business Areas
- ALCATEL Partnership with UNITAR (UN Institute Training and Research) in eGovernment for Central Europe ,Central Asia

How can Alcatel work with you: A Comprehensive eGovernment Service Offer

We can accompany you throughout the life of your project

