

Utility Telecom Business Models



Alcatel Forum 2006

21 February 2006

Presented by:

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- United Telecom Council (UTC) Europe
- Utility Telcoms Services
- The Changing Utility
 - Business Separation
 - Strategic Drivers
 - Changing The Service Delivery Model
 - Delivering New Telcom Services
- Creating A Utility Telco
- Summary

UTC Europe



United Telecom Council (UTC)

- Founded in 1948 to help utilities use new telecommunications technologies.
- Initially focused on radio, expanded into all communications systems built and/or used by electric, gas and water utilities and energy companies.
- Now, UTC stands as the premier telecoms advocate for and source of information and analysis to the critical infrastructure industry.
- Membership initially comprised of companies in United States, now has members from all parts of the world.
- International Division created in 1996.

UTC International

- Initial focus of International Division information sharing and Annual International Conference.
 - Dymitr Wajsman of Brazil – Division Chairman
 - International Conferences
 - » Manchester, Recife, Madrid, Iquzau Falls, Paris, Las Vegas
- 21st Century marked greater focus on local issues
 - APTEL established in Brazil
 - UTC Canada created
 - European Conference created.

Three European Telecom Conferences have been held, Madrid 2003,
Dublin 2004 and Vienna 2005

A European Beginning

- Feedback from the European conferences indicated there was an ongoing need for industry managers and engineers to network with people with similar problems
- Little knowledge in one country as to developments elsewhere in Europe
- No forum for sharing experiences and debating issues in respect of technology or service related solutions
- Lack of understanding of the working of European Commission in the areas of Telecom Regulation and impact it will have within member countries

UTC have responded by creating a European Board

2005 - European UTC

- The European Board will consist of :
 - A Chairman
 - A number of Chartered Members, representatives of utility companies that have shown a commitment in wanting to support the organisation in Europe
- Support for the Board will be provided through:
 - A Director of European Services
 - All the staff at UTC

UTC programmes in Europe will be created for Europeans by Europeans and be led by Europeans.

2006 – UTC Europe

- UTC Europe will:
 - Represent all European critical infrastructure communications operations – regardless of ownership
 - Provide networking opportunities for all members
 - Engage with the EC on matters relating to telecom needs of member organizations
 - Provide Regulatory updates on a regular basis
 - Engage with other European entities which represent utility/energy companies and services
 - » Cigre, Eurelectric, European Water Services, CIRED, European Gas Transportation and others.....
 - Develop associate memberships for technology partners and service organisations

**And develop other services in accordance with the wishes of the
European membership**



Utility Telcom Services



Telecommunications for Utility Companies – An Internal Business



- Telecommunications are fundamental to the safe, reliable operation of utility networks providing:
 - Workforce management of field operators
 - Control and efficient operation of the supply of electricity, gas and water services
 - Disconnection of plant in the event of equipment failure
 - Communications to provide best in class customer services
 - Improvements in Quality of Services in core network
 - Corporate communications throughout national and international enterprises

Telecommunications are fundamental to the efficient operation of utility businesses

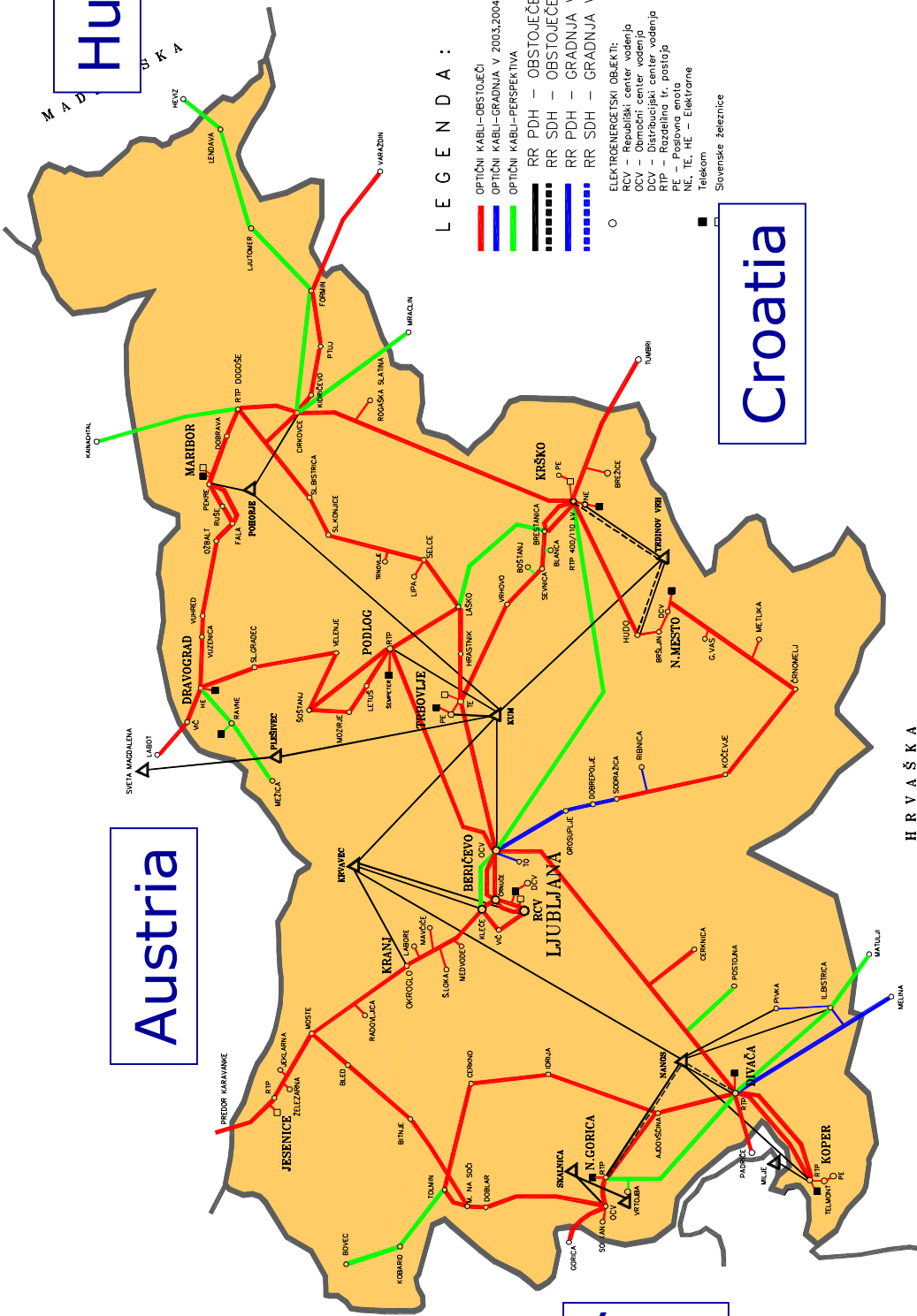
A Company Wide Telecom Network

Hungary

Austria

Italy

Croatia



LEGENDA:

- OPTIČNI KABLI-OBSTOJEČI
- OPTIČNI KABLI-PERSPEKTIVA
- RR PDH – OBSTOJEČE
- RR SDH – OBSTOJEČE
- RR SDH – GRADNJA V 2003, 2004
- RR SDH – GRADNJA V 2003, 2004
- ELEKTROENERGETSKI OBJEKTI:
- RCV – Republiški center vodenja
- OCV – Območni center vodenja
- DCV – Distribucijski center vodenja
- RT – Razdelilno tr. postaja
- PE – Pomožni center
- NE, TE, HE – Elektrarne
- Telekom
- Slovenske železnice

Networks and their Characteristics

- A High Capacity Private Network Featuring:
 - Optical and SDH network built in ring topology
 - Continuous Redundancy of Power Supplies
 - Telecontrol devices with control and monitor functions
 - Protection Systems
 - High Quality Synchronisation
 - 24 hour 365 days service personnel
- Private Mobile System
- Large User of GSM Services

Services to Support a Mission Critical Business

The Changing Utility



The Changing Utility Company

- Traditionally Electricity Companies were seen as Local or Central Government organisations
 - Providing a public service
- The last 15 years has seen that concept turned upside down in two major ways
 - Ownership of the Utility Company
 - The Regulatory Environment
 - » The effective working of competitive energy markets
 - » Regulation of monopoly businesses
 - » Security of Supply
 - » Social and environment responsibilities
 - » The development of efficient (profitable) businesses

At The Same Time We Have Seen Privatisation, Competition and an Explosion of New Digital Technologies In The Telecoms Sector

In The Electricity Sector – Business Separation

Different businesses will have different fundamental priorities for communications services

- Distribution & Transmission
- Monopoly Businesses
 - Corporate Voice Services and Data Applications
 - Mission Critical Mobile Solutions
 - SCADA/Telemetry
- Energy
- Competitive Businesses
 - Voice services fixed and mobile
 - Corporate data applications
 - Large Call/Contact Centres



Strategic Business Drivers



Strategic Drivers
<p data-bbox="499 1155 542 1777"><i>Improve Operational Effectiveness</i></p>
<p data-bbox="999 1298 1042 1632"><i>Reduce Cost Base</i></p>



Operational Needs
<ul data-bbox="385 125 835 879" style="list-style-type: none">• Consolidation of operations and control centres• Applications designed to support Quality of Supply initiatives• Deployment of mobility tools quickly and widely after pilot trials• More effective use of equipment, people and processes• Enabling local control of power network
<ul data-bbox="892 125 1235 879" style="list-style-type: none">• Empowerment of remote workers by enabling 'real time working'• Reduction of man-hour effort/ replication of operational data input/ retrieval• Reduction in property portfolio, closing local offices/depots• Asset management data gathering

Strategic Business Drivers

Strategic Drivers
<i>Competition in Energy Supply</i>
<i>Regulatory Issues</i>
<i>Asset Ownership/Investment Policy</i>



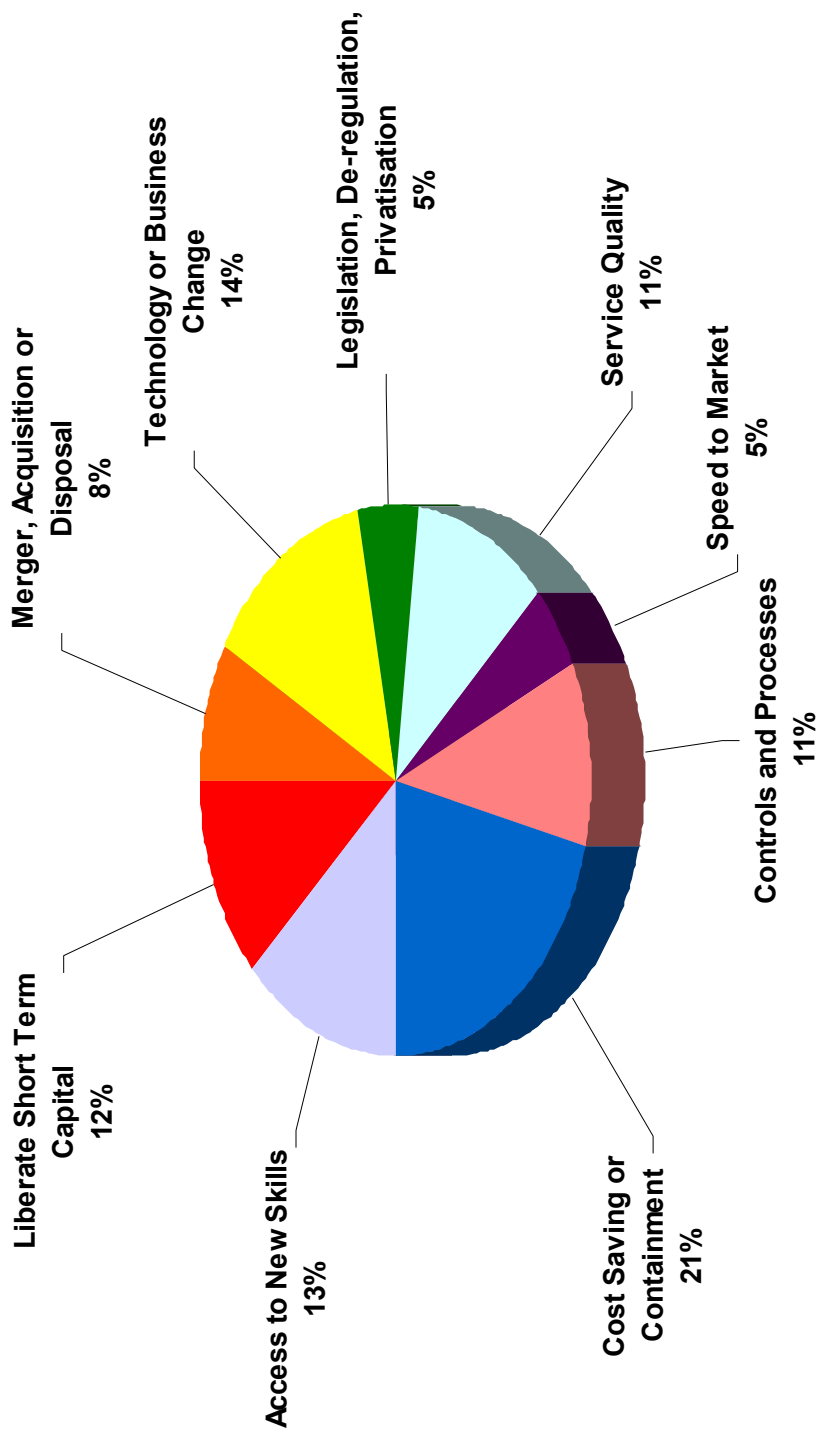
Operational Needs
<ul style="list-style-type: none"> • Workforce management in service sector • Meter Reading • Billing for Energy Usage • Billing of Services
<ul style="list-style-type: none"> • Improvements in Quality of Service Requirements • Market Pricing/Value for Money Services • Penalties imposed on monopoly businesses for poor performance
<ul style="list-style-type: none"> • Retain and leverage assets • Create vehicle for generating non-regulated revenue (can increase regulatory scrutiny) • Some businesses look to be revenue based

The Changing Utility – Changing The Service Delivery Model

- Transfer Services to Outsourcer
 - » Small Team to Manage Outsource Contract
 - » Transfer of operational staff
 - » Revenue based costing
 - » Reduction in Capital Expenditure
 - » Company focuses on core business
- Concerns
 - » Control of costs
 - » Control of Strategic Direction
 - » Realistic Service Level Agreements
 - » Real Partnership – Win/Win relationship

Why do Organisations Outsource?

Reasons for Outsourcing



Source: Computer Weekly/Morgan Chambers

Network Outsourcing Drivers

- Better cost management
- Single network supplier
- Network upgrade – IP enablement
- Guaranteed service levels
- Future proofing
- Access to skilled resource
- Ability to flex resources up and down according to demand
- Better career prospects for telecoms staff

Service Delivery Models – The Changing Market

Buying Technology

- In-house DIY ICT services
- Multiple components
- Multiple suppliers
- Multiple, non-standardise services
- High complexity
- High management overhe
- Low added value
- Technical skill base
- Technology focus
- Internal “SLA” with no guarantees

Buying Service

- Outsourced ICT services
- Services not components
- Few suppliers
- Standard service portfolio
- Lower complexity
- Low management overhead
- High added value
- Contract management skill base
- Commercial/Service focus
- Contracts backed with service level guarantees

Buying Relationships

- Outsourced whole office services
- Service and products
- Potentially fewer suppliers
- Wide range of services via Partnership
- Increased Complexity
- Shared management overhead
- Shared Equity , Adding Value based on ‘Cost+’ approach
- Mature contract management skill base
- Innovative Commercial/Service focus
- Contracts backed with revised service level guarantees

Time



The Changing Utility – Delivering New Telecom Services

- Converged Voice & Data Services
 - IP Telephony
 - » Cost Reduction
 - » Improved Network Utilisation
 - » IP Services to the Desk Top
- Rural Automation/Control schemes
 - Additional Level of Core Network Control
 - » Improve Network Outage Times
 - » Many Thousands of Control Devices
 - » Challenge to Provide Low Cost Telecom Services
 - » Integration with existing SCADA Control Systems

The Changing Utility – Delivering New Telecoms Services

- Asset Condition Monitoring:
 - Predicting Failure in Core Elements of Plant
 - Prolonging Life of Assets
 - Large Scale Implementation of Broadband Services
- RFID – An Asset Management Tool
 - Utilities have very large number of assets
 - RFID tagging can improve tracking and management of assets
 - Improved Control of Partner Organisations
 - Reduced Asset Loss and Therefore Reduction in Costs

The Changing Utility – Delivering New Telecoms Services

- Workforce Mobility:
 - Job Dispatching
 - Workforce Management
 - Remote Access Facilities to Corporate Applications
- At All Staff Levels in the Business
 - Management Team
 - Sales Force
 - Emergency Crews
 - Metering
 - Billing

Creating A Utility Telco



The Utelco Opportunity - Why Become a Utelco?

There are several reasons:

- Improve return on current investments
- Extend the economic life of existing assets/infrastructure
- Maximise value of existing channels to market to access customer base
- Access new revenue streams that are not constrained by the industry regulator
- 'Self provide' in-house service requirements at a lower price than the prevailing market.

Utelco Has to be Competitive

- They are owners of major assets, such as power lines and are able to install many thousands of KMs of optical fibre
- Knowledgeable workforce skilled in technologies and service delivery
- Must be able to undercut incumbent telco operators
- Successful Utelco companies
 - Are operating in all Western European Countries
 - Provide internal utility telecom services
 - They can compete in Business to Business and Business to Consumer markets
 - UTelcos support new and innovative technologies

Utility Telco Services Generate Revenue from Utility Assets that Support the Utility Business

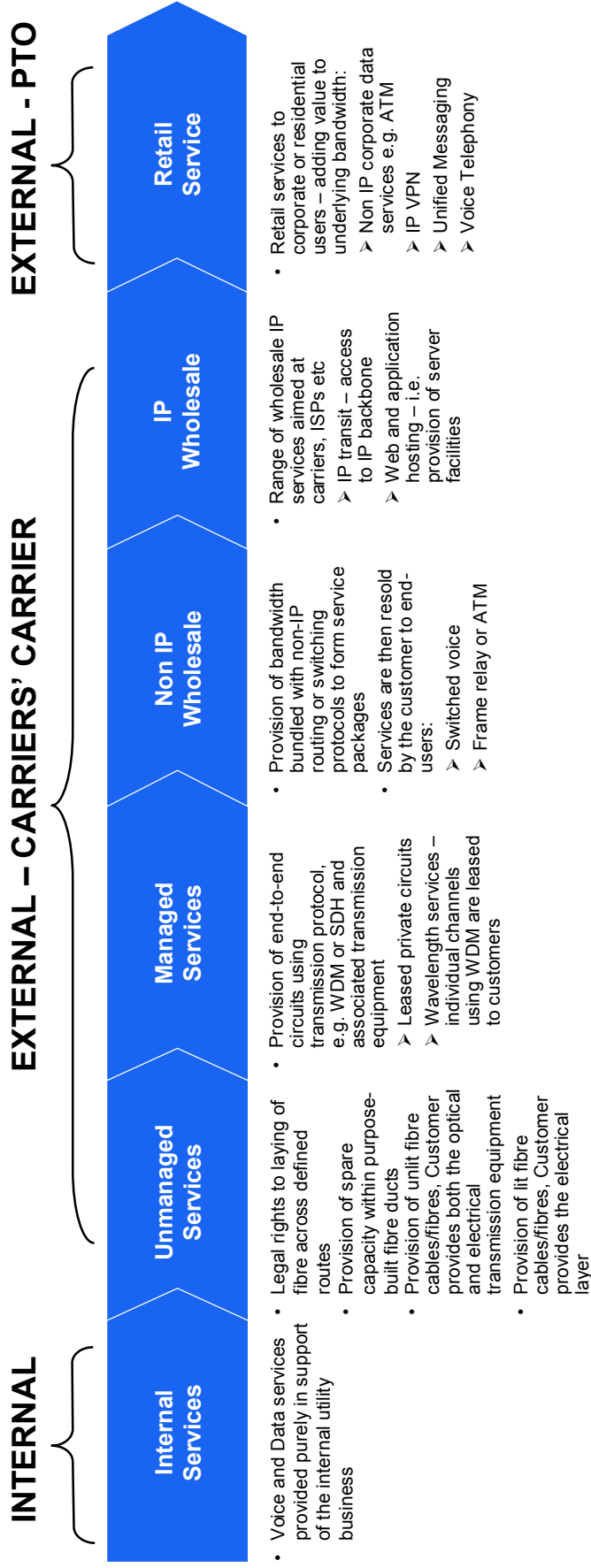
The Utelco Opportunity – Which Business Model?

There are five broad categories:

- Provider to internal customer
- Carrier's Carrier
- Niche market eg large corporates
- Mass/Retail market
- Virtual Operator

The Utelco Opportunity – Which Business Model?

There are three high-level directions in which an infrastructure-based Utelco business model may develop, within these categories there can be several sub-divisions, these are described by the model below:



New and Innovative Technologies

- PowerLine (PLC) technology allows the creation of broadband networks through the use of medium and low voltage electrical power networks
- Electricity Companies are interested because:
 - Enhances the value of their assets
 - Provides direct communications channel to end customers, especially important in the competitive telecoms environment
 - PLC is proving to be useful for power network operations and customer service improvements

Summary

- Traditional Utility Telecom Networks are large Complex Private Systems
- This Service Delivery Model is Being Challenged by Experience from the Wider Enterprise Sector
- Some Areas of Utility/Energy Businesses will Face Increasing Levels of Legislation and Regulation, Others Will Face Increasing Levels of Competition
- Delivering Value for All Stakeholders Will:
 - Drive Demands for New and Innovative Telecoms Solutions
 - Make Companies Consider Long Term Partnerships in Managed Services
 - Enable Those Companies with Suitable Telecom Assets to Deliver Added Value Through Competitive Utelco Businesses