

Disruptive events in telecom market

Challenges and possible response

Proposed approach by NEC Corporation Ziua Telecomunicatiilor

Bucharest, May, 20th, 2014



MARKET CONTEXT



Fundamental shift in European telecom market

NEC Confidential



- Negative **macroeconomic environment**, leading to lower consumer spend
- Long tail **negative impact** of existing **regulations** (mobile termination, roaming, net neutrality)
- Value migrating from carrier to OTT (OTT and social networks crowding voice, messaging and media services)
- **Price based competition** leading to lower margin, increasing churn and higher commercial costs
- **Continuous investments** to sustain innovation and demand even at lower ROCF.

- Booming **smartphone penetration** and mobile data usage across market segments
- Growing demand for integrated experience on multiple devices, driven by the digitalisation of the daily life
- Internet advertising (personal, location based), taking over TV at rapid pace
- **All IP migration and transformation**, required to simplify the biz and increase flexibility
- **Trend for consolidation** (mergers, network alliances), given the quest for scale to compete.

Source: ATKearney

Resulting in:

- Market under complete transformation, departing from the known operating paradigm
- The challenges coming from the market cannot be managed by traditional measures cost cutting, structure optimization, pressure for cost down to the suppliers. Everything has been tried already. Review of the fundaments of the business model is critical for survival in the market.
- We see intensive collaboration between carriers in the market → network sharing, market alliances, procurement alliances, joint strategic evolution groups. It is primarily about scaling up, improved position versus competitors and investment efficiency.
- We do not see sufficient effort to change the offerings to the customer.



- Need to rethink about essential needs expected to be covered
- B2C or B2B2C, it always goes to the needs of the final customer.
- Engagement rules between carriers and strategic suppliers to be reconsidered > move from transactional relationship into wide boundary collaboration, long term future thinking for the needs of final customer and risk sharing pursuing the target.



NEC'S APPROACH



"C&C" - Integration of computers and communications of computers and computers are computers and computers and computers and computers are computers are computers and computers are computers are computers are computers and computers are computers and computers are computers are computers are computers are computers and computers are com

In 1977, then-Chairman Koji Kobayashi presented the concept of "C&C"

- "to talk and see between any persons, at any time, at any place on the earth, in the early days of the next century."
- "all technology, communications, computer and television will be, and should be, integrated."
- it is important to help countries to be able to participate in such a worldwide telecommunications system."



Koji Kobayashi(INTELCOM 1977)

NEC's focus: Solutions for Society

Needs













Solutions

Public Sector & Energy

Smart cities, smart traffic control, smart water management, renewable energy storage, e-administration, disaster prevention, security...

Telecom Carriers

Information networks, emergency service communications, submarine cables, mobile systems...

Enterprise

Logistics, distribution, transport, production management, plant management...

Converging advanced computer & communication solutions

Big data engines:

Invariant analysis

RAPID machine learning

Textual entailment recognition

Heterogeneous mixture learning

Security

Environment

Diverse sensor, management & control systems Power grid

Energy solutions

Energy storage

LTE

SDN

Next generation network technologies

Cloud

Data centre

High performance, high reliability core IT technologies

NEC

Social infrastructure applications

Prediction



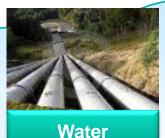
Prevention



(Cost, time, resource usage)



Energy storage & power consumption forecasts



Identifying water leaks, quality issues & illegal use



Smart transport, water, waste & energy management



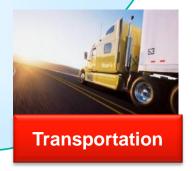
Environmental & disaster monitoring



Sensors to optimise irrigation & fertilizer delivery



High speed mobile broadband & cloud-based software to boost development



M2M technologies to reduce congestion & improve safety

Empowered by Innovation

Key solution areas in Europe











Carrier

Public sector

Smart energy

Enterprise

System platform

Transport solutions (incl. mobile backhaul)

"New Last Mile" RAN managed services

Indoor/outdoor small cells

Emergency service solutions

SDN/NFV

TOMS (OSS/BSS)

Cloud service platform

Value Added Services Public safety (face & fingerprint recognition

Urban surveillance

– cameras and

analytics

Cyber security)

Broadcast

New business development: smart city, transport, water & agriculture

Energy Storage Systems (ESS)

Generation
Energy
Management
Systems (GEMS)

Distributed & Storage Energy Management Systems (DEMS/SEMS)

> Demand Response Systems (DREMS)

Business mobility

Cloud

Unified communications & collaboration

High availability solutions

IT solutions

- Retail

Manufacturing

Displays

Monitors

Digital cinema solutions

Super computers

Servers

Mainframes

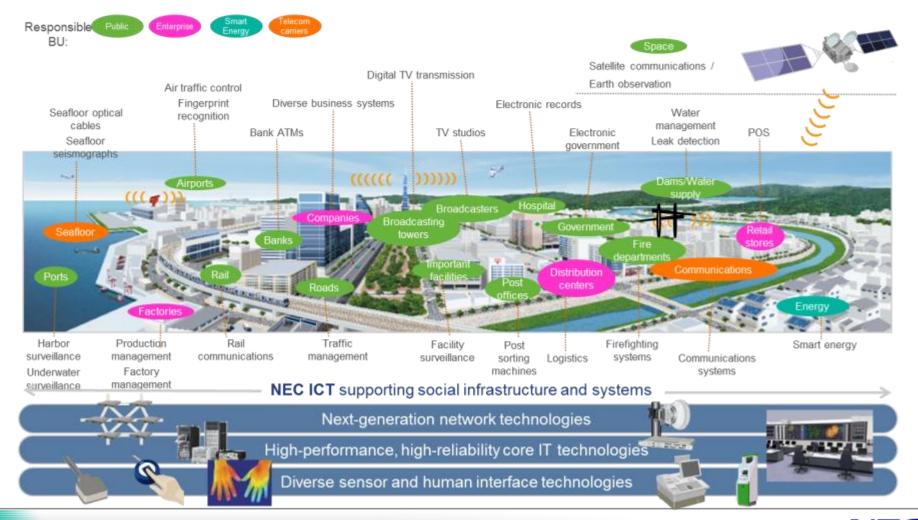
Storage



Innovation of Social Infrastructure via ICT

Leveraging our proven results and strong position for global expansion

 From the seafloor to outer space, concentrating management resources in areas in which social infrastructure will be innovated by ICT



Empowered by Innovation

