



TETRA  
ASSOCIATION

# Managed Services for large public safety networks

Timo Bakker, Global Market Leader Public Safety & Defence





- Alcatel-Lucent & Public Safety
- What are the Public Safety functional building blocks ?
- The TETRA transformation model
- Why Public Safety networks are a challenge to manage ?
- Moving Tetra Operations from network centric to user service centric focus
- Sub-System Integrator & Dynamic Communications needs
- Public Safety Service Centric references





- Alcatel-Lucent
  - General info



■ **Ben Verwaayen** Chief Executive Officer

- Worldwide Presence: **More than 130 countries**
- Annual Revenues: **€15.2 billion (2009)**
- Employees: **More than 77,000**
- Employee Nationalities: **More than 100**

■ **Paris**  
Global Headquarters





We are a leading network integrator with more than 24,000 network experts providing professional services that encompass the entire network life cycle: Consult and Design, Integrate and Deploy, Operate and Maintain.

## Offer

Enhancing value by designing, integrating, implementing and running complex projects in a changing environment.

## Market Leadership

75+

Managed Services  
Contracts  
Worldwide

#1

in IPTV and Triple-  
Play Networks

#1

in Fixed Network  
Outsourcing

Leader

in IP  
Transformation  
Projects

Leader

OSS/BSS  
Integration  
Player

#2

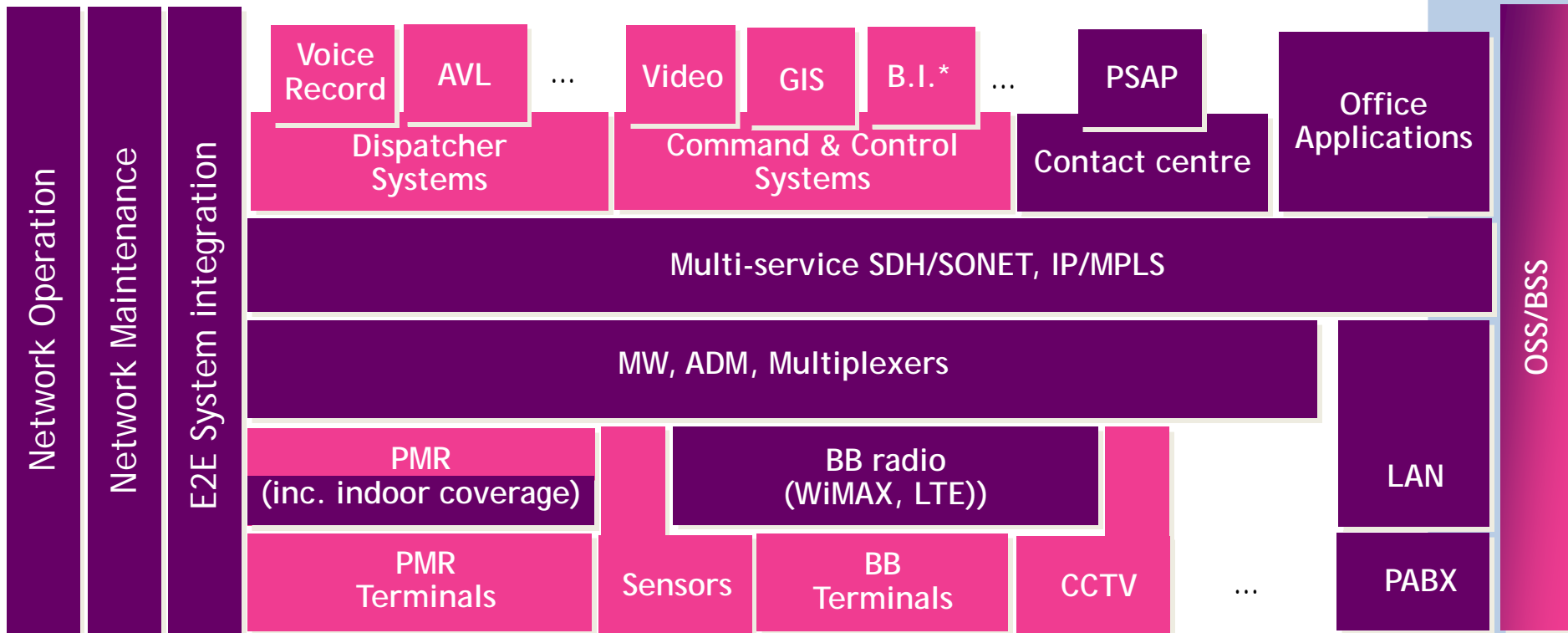
in Carrier Network Integration, Carrier Multi-vendor  
Network Maintenance

#2

in Combined Fixed and Mobile Network Operations  
Services Globally



## Public Safety E2E Functional Blocks



Legend:



Alcatel-Lucent



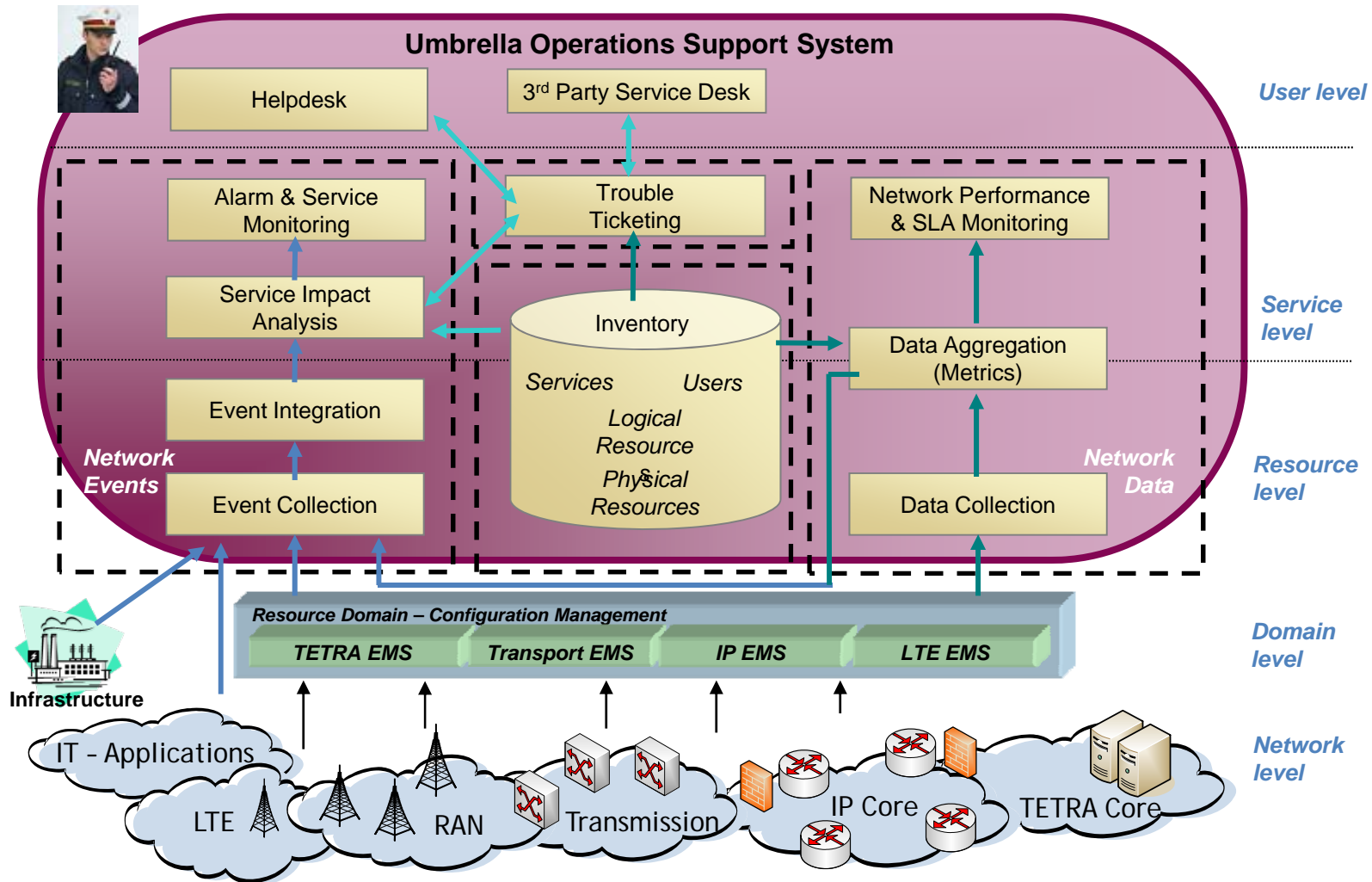
Third party

\* = Business Intelligence = datawarehousing, trend analysis





## Functional Building blocks for Operations Support







## - Alcatel-Lucent

- Strategic Industry – Public Safety



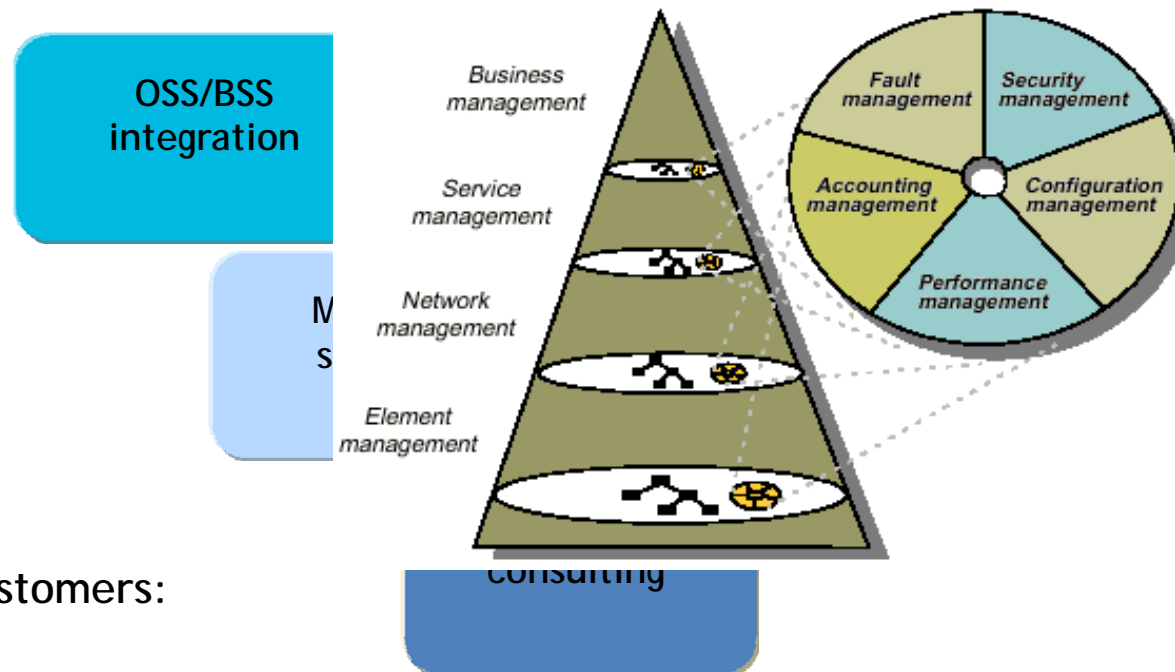
Why Public Safety networks are a challenge to manage ?

Why Alcatel-Lucent is the right company to off load the risks ?

We chose Alcatel-Lucent because of their customer-focused and solution-oriented approach, their full-range service capabilities all over Austria and their commitment to deliver this contract."  
Peter Skorsch, General Project Manager,  
Ministry of the Interior, Austria



## TETRA transformation Services model



Public Safety customers:



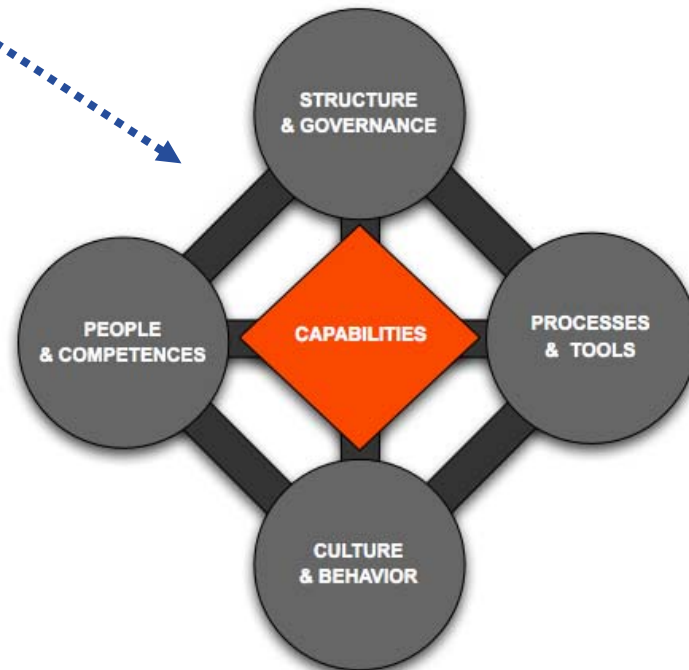
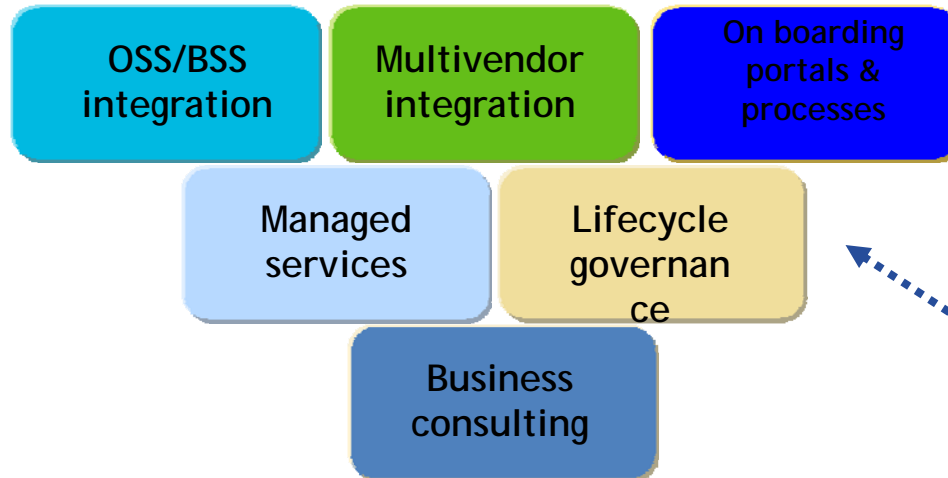
**TETRON**  
**DIGITALFUNK**



Bundesanstalt für den  
Digitalfunk der Behörden  
und Organisationen mit  
Sicherheitsaufgaben

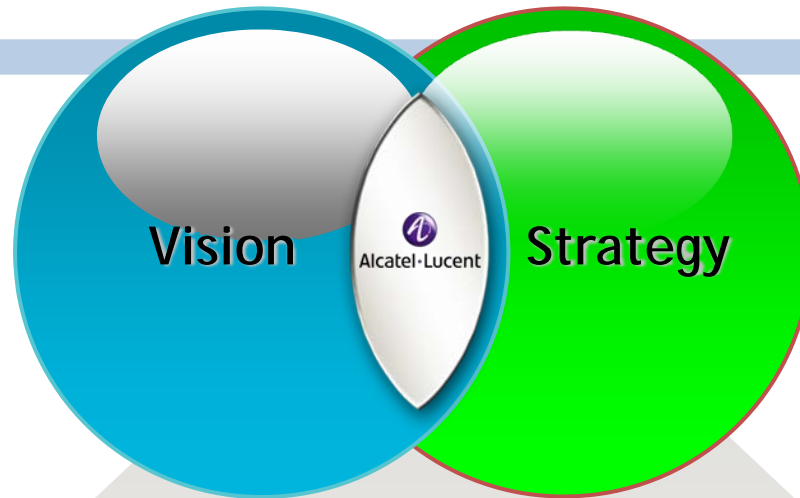


## TETRA transformation Services





## Managed Services – General Concept



Leadership  
in Business  
Transformation

Wireless  
Strength



Multivendor  
Solutions

End-to-End  
Services

Opportunity  
& Contract  
Management

Alcatel-Lucent Business Transformation model



## Managed Services and Outtasking Solution Components

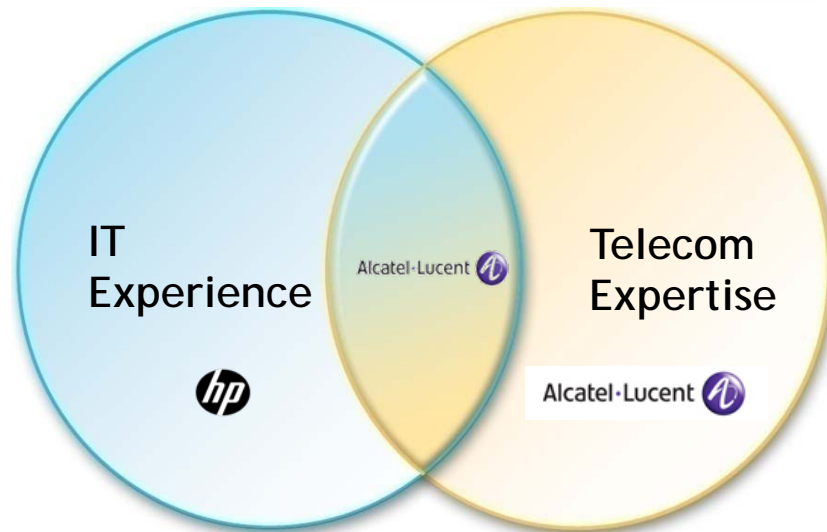
Network Outtasking

Build Operate Manage

Public Private  
Partnership

End to End Services  
Operations

Multivendor  
Maintenance





75+

Managed Services  
Contracts Worldwide

## Innovative Managed Services Solutions

### Business Models

### Solutions

### Proven Wireless Client Benefits

Network  
Transformation

Out tasking  
Strategic  
Partnership

Managed  
Infrastructure

Assistance and  
Consolidation



Increasing Value Added

Combines the full spectrum  
of Alcatel-Lucent service  
and product solutions!

TETRA Network Out tasking  
End to End Services  
Operations

Build Operate Manage  
PPP

Managed Network  
Operations  
Multivendor Network  
Support  
Managed Security

- **Business Value and Savings**

- Ongoing operational cost savings of **15%-30%** yr
- € hundreds of thousands annual savings in maintenance staff/training costs
- >20% savings on overall inside plant maintenance cost

- **Process Improvement**

- Increased productivity by 70%
- Boosted first call resolution to 90%
- Overall optimization and improvement of operations to allow investment of constrained capital into future network evolution

- **Quality Improvement**

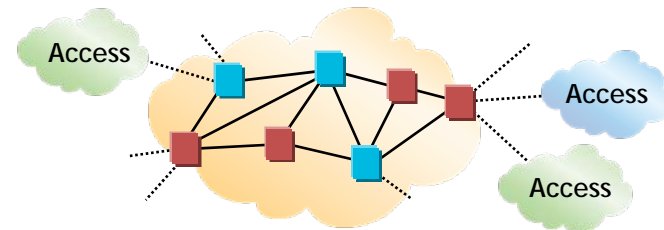
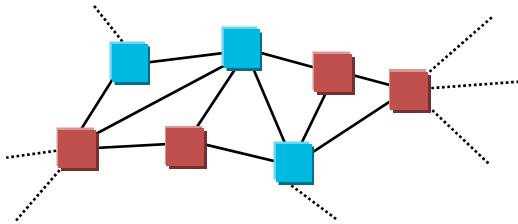
- 15% improvement in network KPIs
- Increased established call rate by 3%
- Decreased drop call rate by 30%
- Decreased access failures by 40%
- Increased service levels by 60%
- Lowered the abandoned call rate by 20%
- Improved call set-up and reduced cell drops — leading to greater revenue and bottom line





End-to-end services operations: Extends today's operations processes to cover service-based metrics in a fully migrated IP-based end-to-end Public Safety network environment. This solution expands beyond the traditional boundaries of network operations support (TETRA core) to include handhelds that control end-user services.

### Proactive service problem detection



#### Network operations support

- Fault management alarm monitoring
- Single point of contact for a network
- Network fault isolation and trouble detection
- SLAs based on respond/restore/resolve

#### End-to-end services operations solution

- Performance measured against service quality targets
- Proactive monitoring of end user service quality
- SLAs driven by end user service quality metrics
- Includes end-to-end proactive operations data analysis to detect problems early

*Moving Tetra Operators from a "network-centric" focus to a USER "service-centric" focus*



Alcatel-Lucent



Public Private Partnership

**Payments are based on network availability & performance**

**Months**

**Build**

CAPEX

CAPEX

**10+ Years**

**Operate and Manage**

OPEx

OPEx

OPEx

OPEx

OPEx

OPEx

OPEx

OPEx

OPEx

OPEx

OPEx

BOM Client Payments

PYMT

PYMT

PYMT

PYMT

PYMT

PYMT

PYMT

PYMT

PYMT

PYMT

PYMT

PPP Client Payments

Network Usage

*Alcatel-Lucent's PPP Solution builds on the Build Operate Manage model and financial engineering*

## Multivendor Maintenance – one simple interface

### Preventive Maintenance

- Proactively monitor and manage resources
- Efficiently deploy resources
- Minimize costly outages



### Integrated Remote, On-Site, Repair Services

- Increase efficiency and improve operations
- Provide consistent delivery and quality
- Transparent SLA mgmt
- Reduce overall spend by 10-20% on opex



### Managed Spares

- Simplify contract & supplier management
- Savings on logistics (warehousing/transport)
- End to end SLA mgmt
- Savings in materials planning and in repair

*Multivendor experience spans over 290 vendors and 1,600+ products*



## Innovative Managed Services Solutions

75+

Managed Services  
Contracts Worldwide

Levering expertise & experience is a must...

### Expertise

- Experts averaging over 20 years industry experience
- Business modeling and quantitative analysis tools that provide client-driven, objective solutions
- Comprehensive services across all dimensions of network planning, design, implementation and management
- Best-in-class managed services governance with setting SLAs and managing customer KPIs
- Proven methodologies tools and processes including best-in-class OSS platforms and network management systems

+

### Execution

- Managing over 75 networks that support 170+ million subscribers around the world
- 12 state-of-the-art Global Network Operations Centers providing 24X7 support
- Multivendor trained and certified engineers and technicians supporting 1,600 products from 400 vendors
- Best-in-class tools & processes delivering improved network service quality
- A single source solution from a global partner that allows for clear accountability

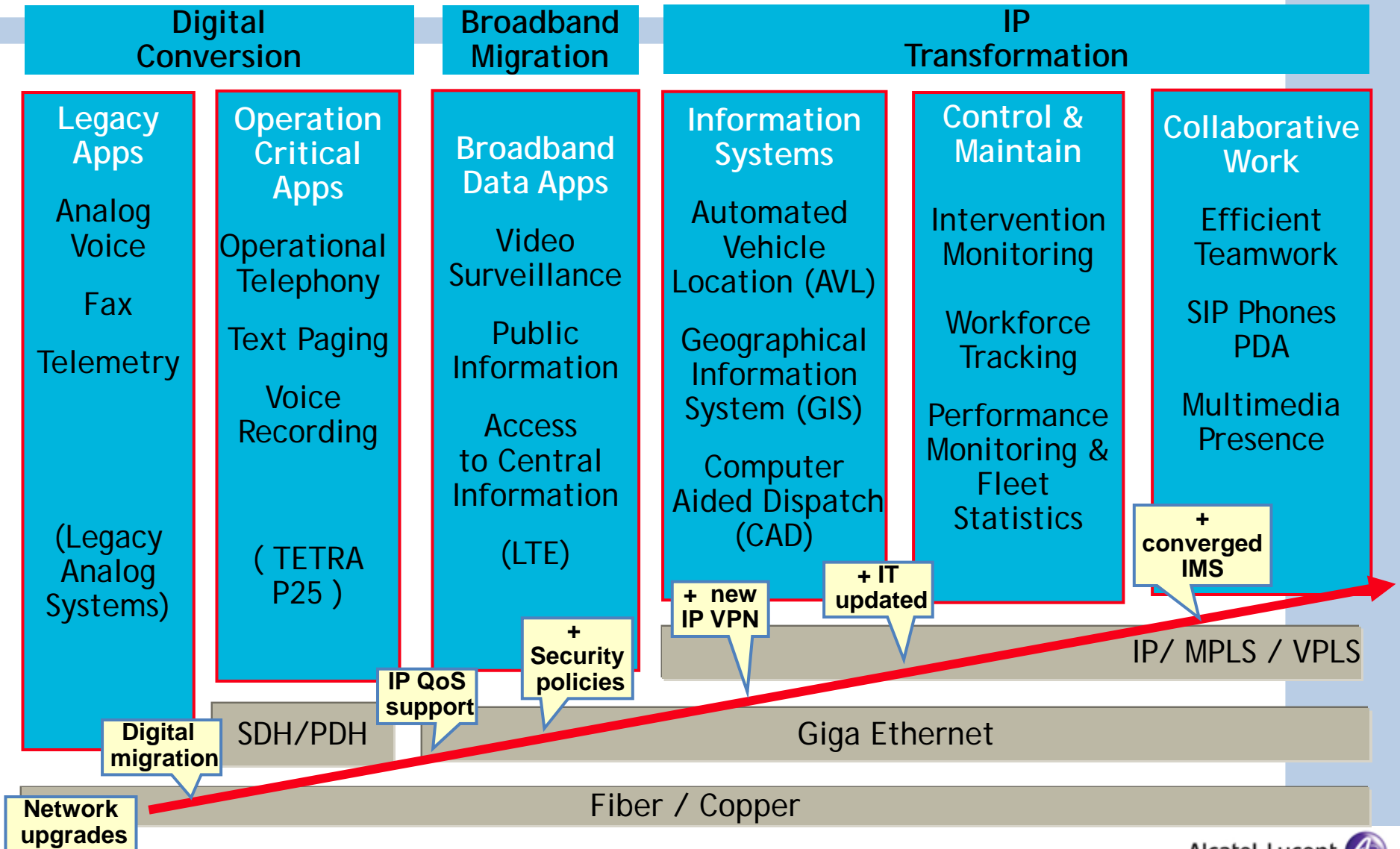
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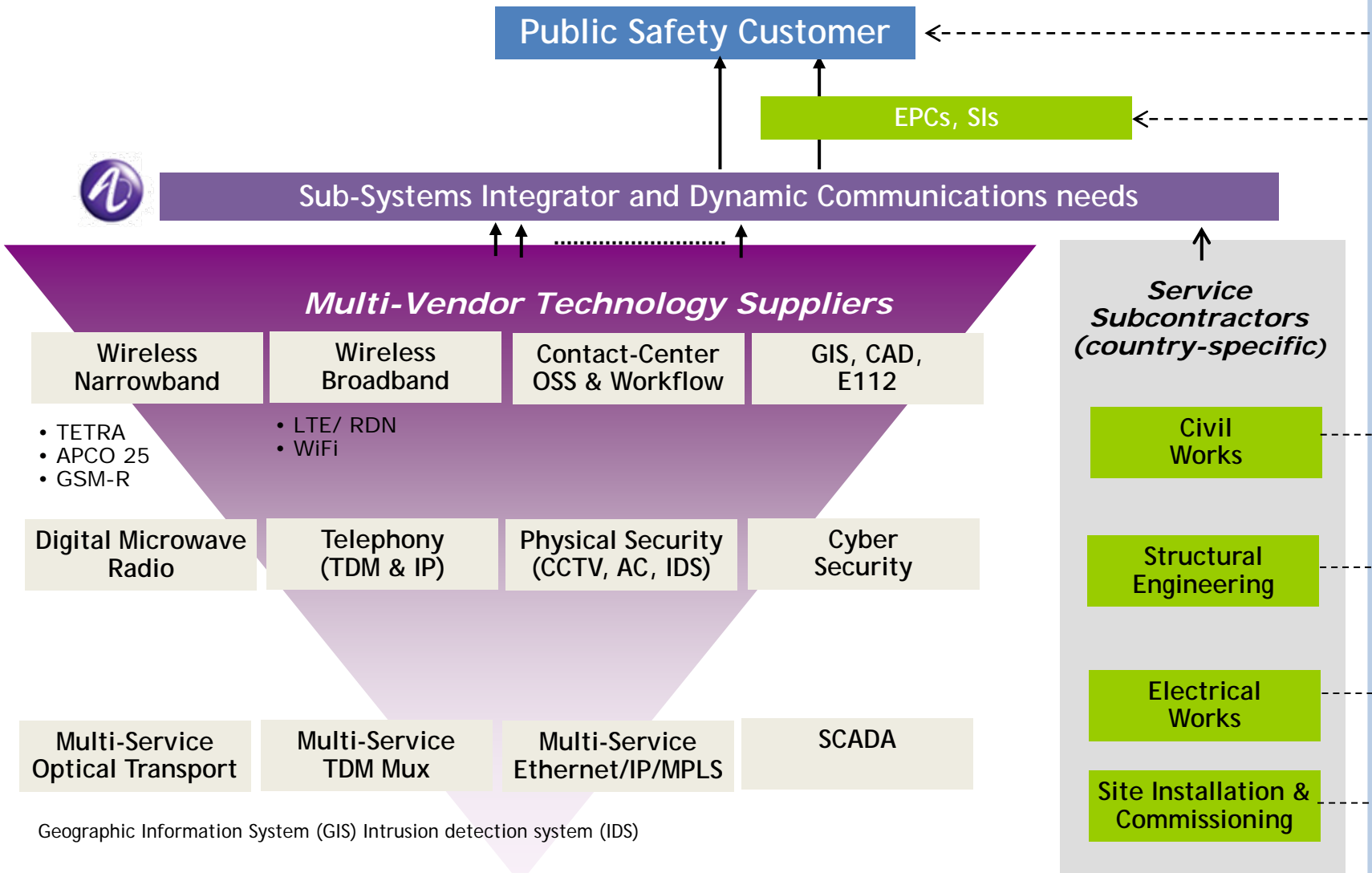
### *Business Value*

- Grow your business and let Alcatel-Lucent manage your network efficiently, while you are free to focus on customers
- Speed-to-market leveraging Alcatel-Lucent's experience
- Technology deployment plan to accelerate revenue growth and plan to add new services
- Deferred CAPEX and reduced OPEX spend yielding a lower total cost of ownership
- Control over QoS levels to ensure superior customer service and satisfaction
- Increased chance of an optimized return on investment by leveraging a shared capital model



## ICT access to first responders

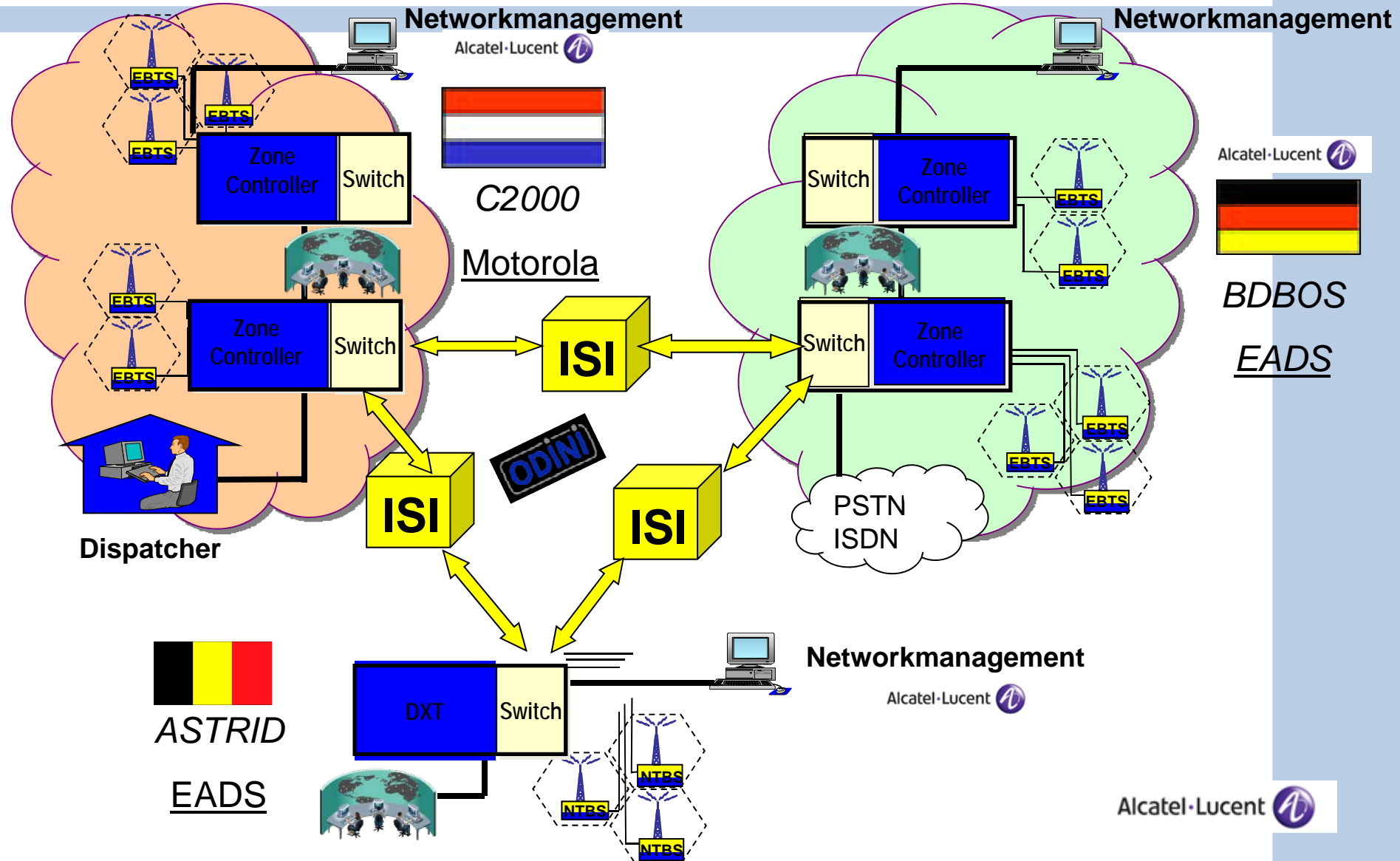


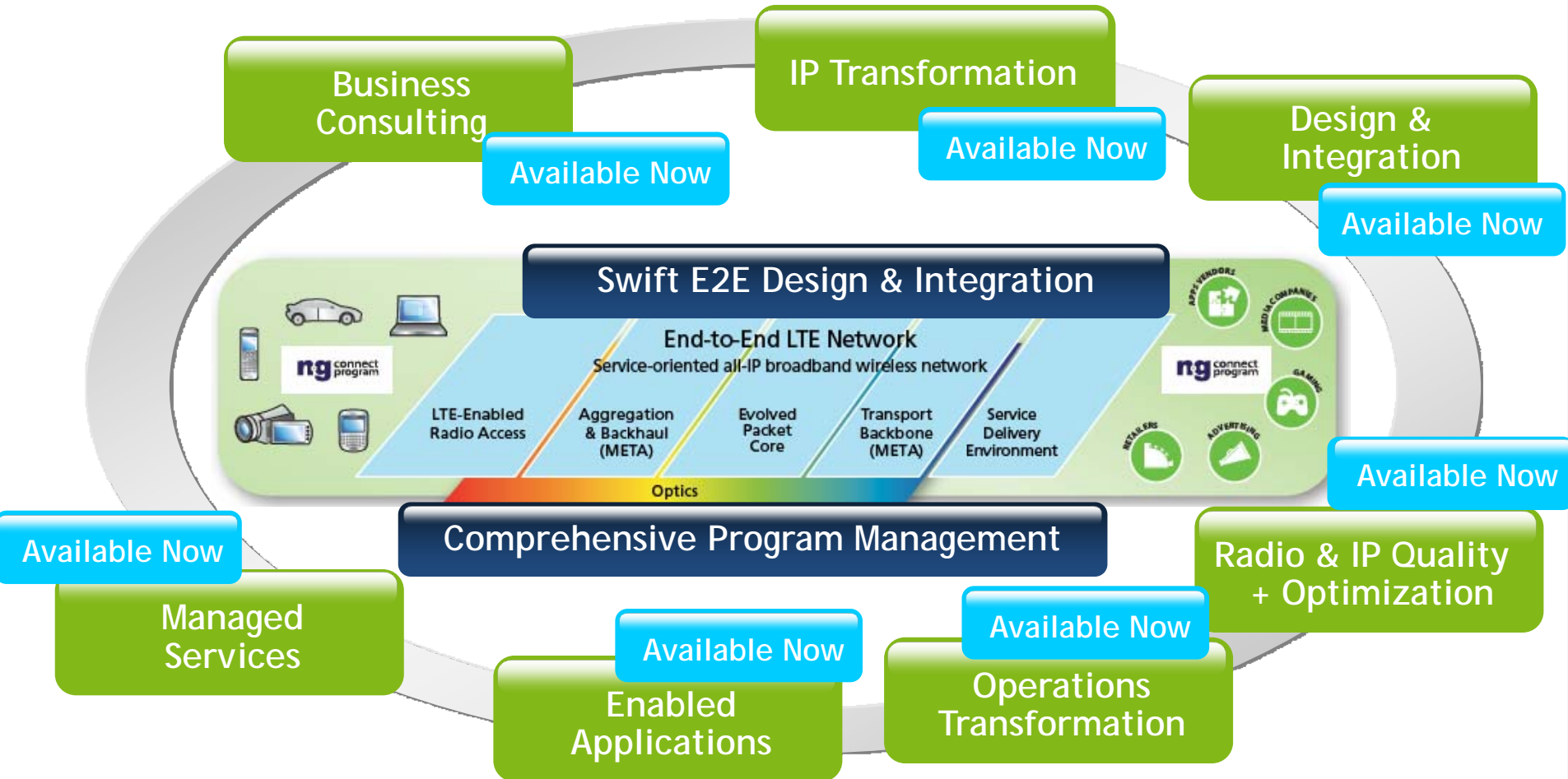






## Cross Border Communications: Managed Service a key enabler







- TETRON (Austria)
- District of Columbia (USA)
- Mendocino County (USA)
- Fresno County (USA)
- Taiwan National Fire Administration (Taiwan R.O.C.)
- Iraq First Responder Network (Iraq)
- Sao Paulo P25 turn key project (Brazil)
- RATP (France)
- C2000 Operations Support (The Netherlands)
- Astrid Operations Support (Belgium)
- BDBOS turn key project (Germany)



# TETRA ASSOCIATION



## Thank you

