Doświadczenia transformacji usług starej generacji, szansa na skok innowacyjny i duże wyzwanie operacyjne

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Every success has its network

Alcatel·Lucent

Agenda

1. Why IP Transformation?
2. Technology shift model
3. Business model
4. Challenges and synergies
5. Conclusions

WHY IP TRANSFORMATION?

WHAT DRIVES SERVICES AND TECHNOLOGY TRANSFORMATION ?

Customer Experience

Become the number one choice of our customers every time

Improved NPS/CLV

Mobility – Nomadicity

Ultra-broadband

Application level experience

Agility To Innovate

Reduce time interval and cost of New Product Introduction

Reduce NPI a factor of ~4

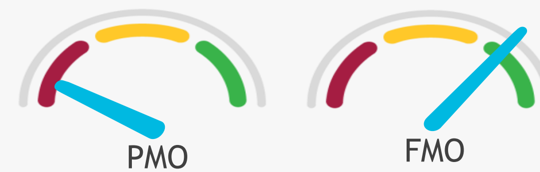
Match speed with OTT players

Personalization

Prototyping vs waterfall design

Cost Efficiencies

Generate healthy margins that drive shareholder value



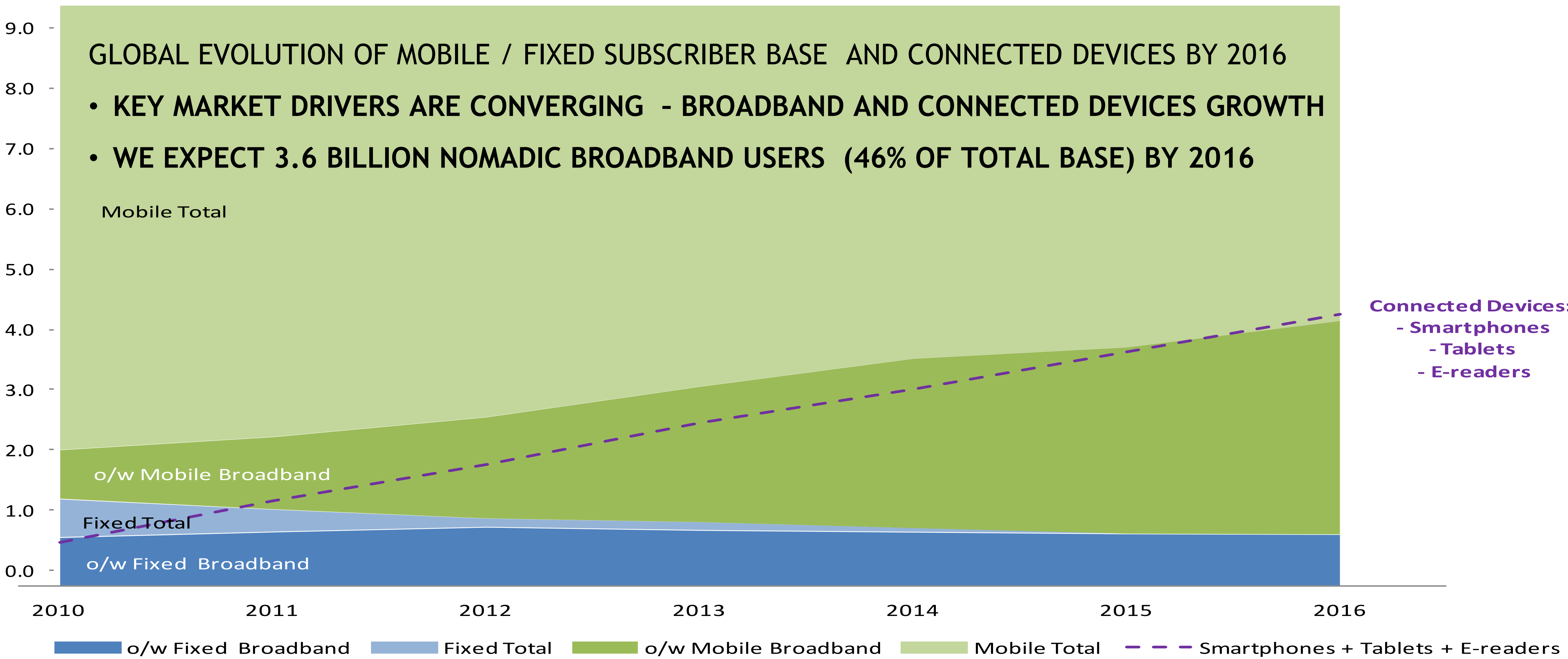
Reduced cost per bit

Simplified network

Optimised services portfolio

Reduce services delivery costs

WE SEE MAJOR SHIFT IN NOMADIC CUSTOMER EXPERIENCE ENABLED BY CONNECTED DEVICES AND ULTRA-BROADBAND



Source: Infonetix Reseach 11'13 + Yankee Group 07'13

HOW SERVICES PROVIDERS ARE RESPONDING ?

Growth focus

Continued investment in Mobile Broadband

- Broadband Mobile Data remains greatest revenue growth area, taking lion share of operator investments

Vodafone Spring program driving further 40bn of investment into networks

Telefonica adopting an overlay strategy to accelerate time to market for LTE launch and introduction of future services

Transformation focus

Accelerated modernization of PSTN & TDM

- The cost and complexity of managing legacy networks is an increasing burden
- Need to refocus investment in fixed assets to reduce complexity and retain competitive advantage

DT ALL-IP Terrastream project to reduce protocol complexity, enhance time to market and improve customer experience.

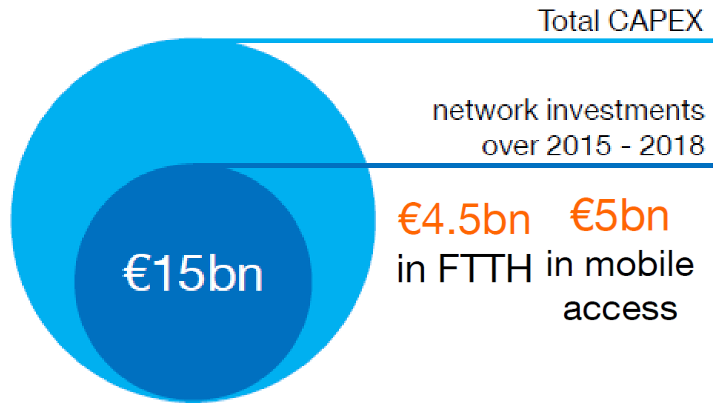
Belgacom Mantra to simplify network, reduce cost of real estate and increase network agility

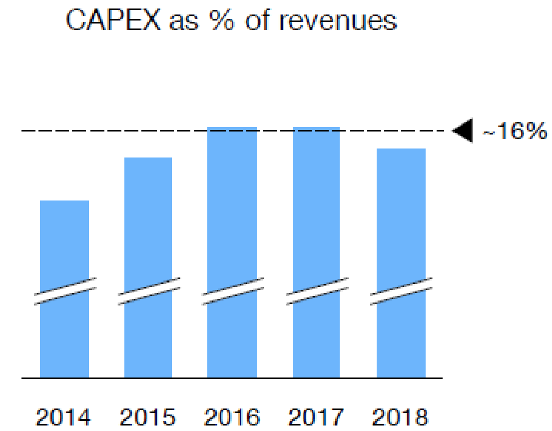
Convergence and refocus on fixed assets

- Service differentiation is happening across multiple converged domains
- Fixed assets will become increasingly important as mobile cell density drives the need for fiber

KPN Avanti transformation to re-engage fixed broadband, and reduce complexities by moving to next gen All-IP

BT acquisition of mobile spectrum in UK to capitalize on market presence with a convergent services offer



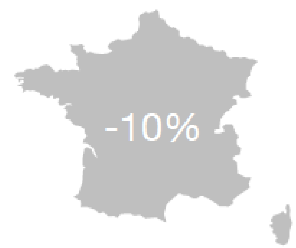


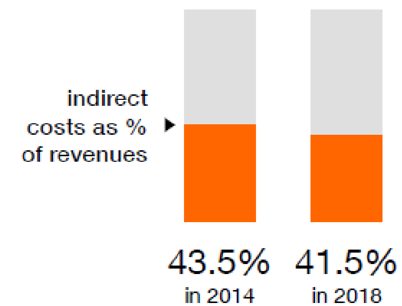
€3 billion

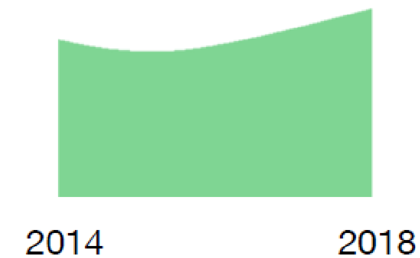
additionnal gross savings

2015 - 2018

-25k leaving employees in France over 2015 - 2020







Indirect costs in France
decreasing by 10% over the period, excluding labor costs

Group indirect costs
as % of revenues will decrease by 2 points over the period

Restated EBITDA
2018 > 2014
with low point in 2015

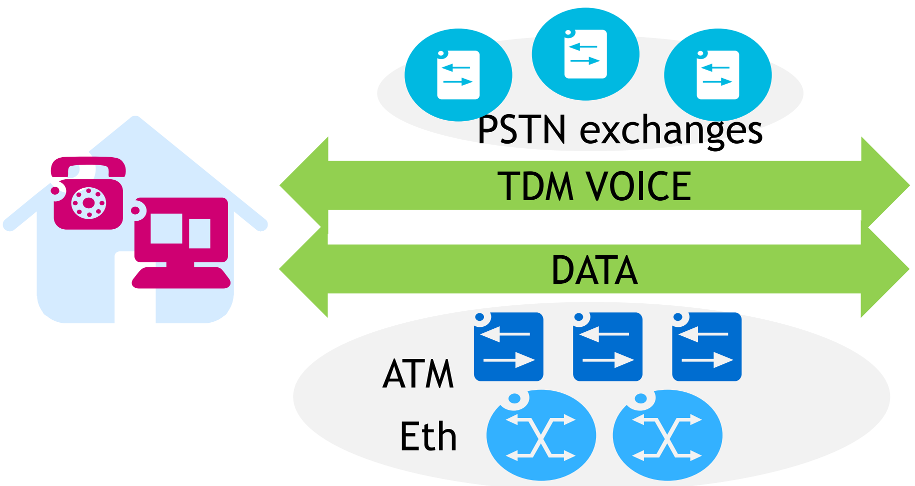
CEM
Customer Experience Management

Continuing network modernization
Orange will also continue to modernize its infrastructure with the aim of ensuring the Group has a cutting-edge network armed with the necessary flexibility and agility that will allow it to respond rapidly to customers' needs. The Group will drive the evolution of its network towards all-IP, the cloud and the virtualization of network functions, as well as preparing for the introduction of 5G.

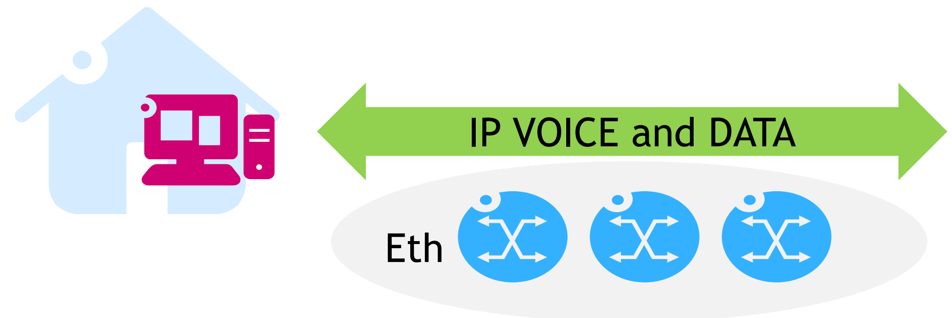
TECHNOLOGY SHIFT MODEL, WHAT HAPPENS TO PSTN ?

LONG TERM VISION BY 2020 IS TO SIMPLIFY OPERATIONS BY TRANSFORMING VOICE AND DATA INTO SINGLE IP NETWORK

FROM TDM FOR VOICE + IP FOR DATA…

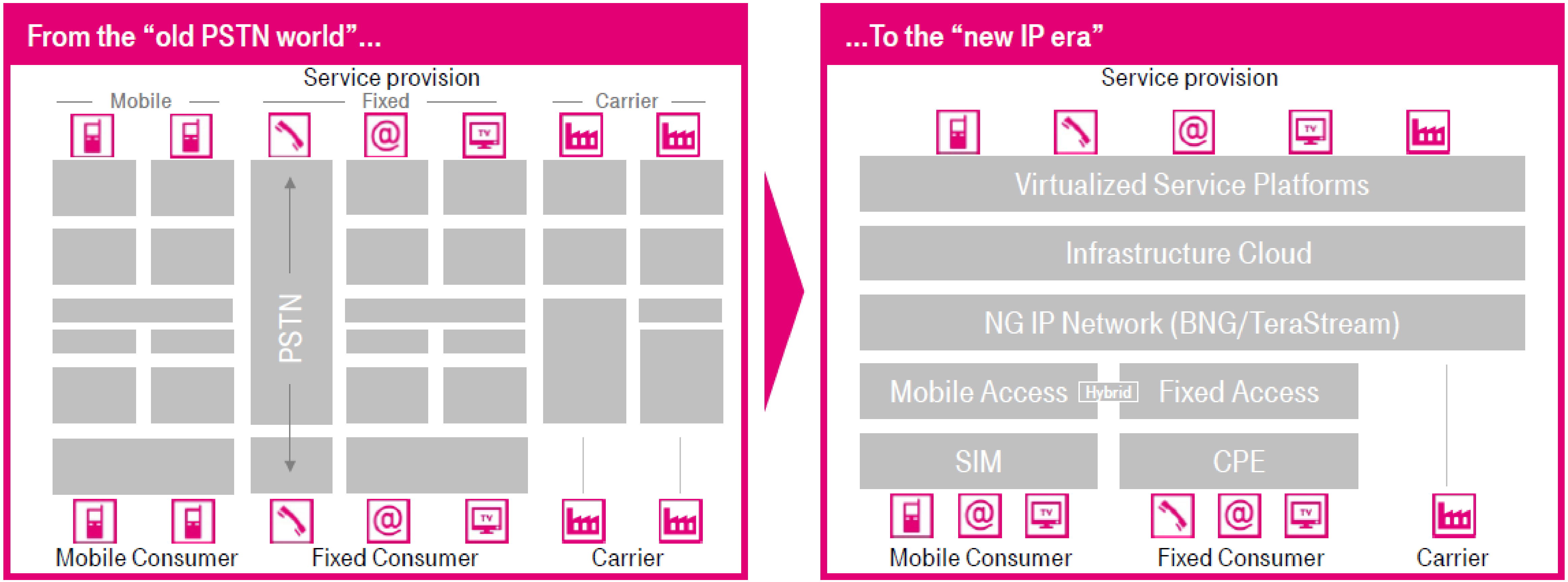


… TO A SINGLE IP-BASED NETWORK



ATM Core Phase Out → ATM DSLAM Phase Out → PSTN Phase Out → Legacy SDH Phase Out → CO Exit

EXAMPLE OF IP BASED TARGET ARCHITECTURE - CREATION OF HOROZONTALY INTEGRATED NETWORK AND SERVICES PLATFORMS

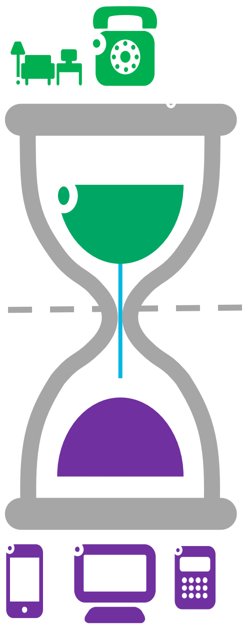


SOURCE: "PSTN Migration The Key Steps Towards The IP World" Broadband World Forum 2013

PSTN SERVICES PORTFOLIO IN URGENT NEED OF CHANGE … WHILE MAINTAINING PSTN VOICE FOR SOME MARKETS

VOICE END-USER TRENDS

PSTN



By 2017:
70% of all fixed voice users still on PSTN
(= 650M subs)

Voice over BB

By 2020:
300M fixed subs move to VoIP
Fast adoption of VoLTE 2015-2017

Source: Infonetics Research 2013, Pyramid Research 2014

TRANSFORMATION DRIVERS

AGING PRODUCTS AND TECHNOLOGY

- Technology and products support end-of-life
- Growing maintenance cost, increased risk of failures, limited availability of spare parts
- Loss of PSTN skills & expertise

HIGH COST TO SERVE

- Low port utilization due to churn
- High energy costs and issues with regulations (green certificates)
- High operations costs due to complexities

REVENUES & MAGIN FOR VOICE SERVICES

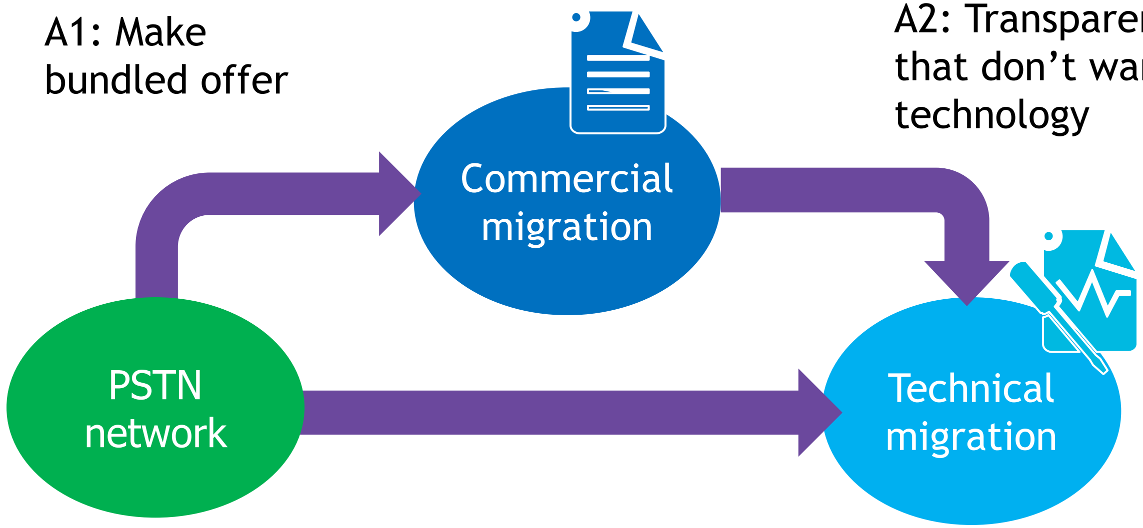
- Minimize and control decline of customer base
- Protect and increase ARPU by offering services bundles and/or new services
- Improve margin by migrating to unified platforms

HOW TO MIGRATE PSTN CUSTOMERS TO THE IP NETWORK?

TWO MAIN OPERATORS' SCENARIOS WITNESSED ON THE MARKET:

A1: Make bundled offer

A2: Transparent migration for users that don't want to move to new technology



B: Transparent migration where commercial offer can not be made or where customers should not be disturbed

COMMERCIAL MIGRATION

NEW CONTRACT WITH END-USER

Migrate customers to a new technology, with a bundled offer, like Internet access with VoIP

- Not all customer will be willing to move
- Brings danger of customer churn

TECHNICAL MIGRATION

TRANSPARENT FOR END-USER

End-user continues with the same services: "like-for-like"
It is therefore also referred to as "PSTN Emulation"

- No churn: no changes in service and no customer interaction
- "Non-transparent migration" in case IAD is used at end-user

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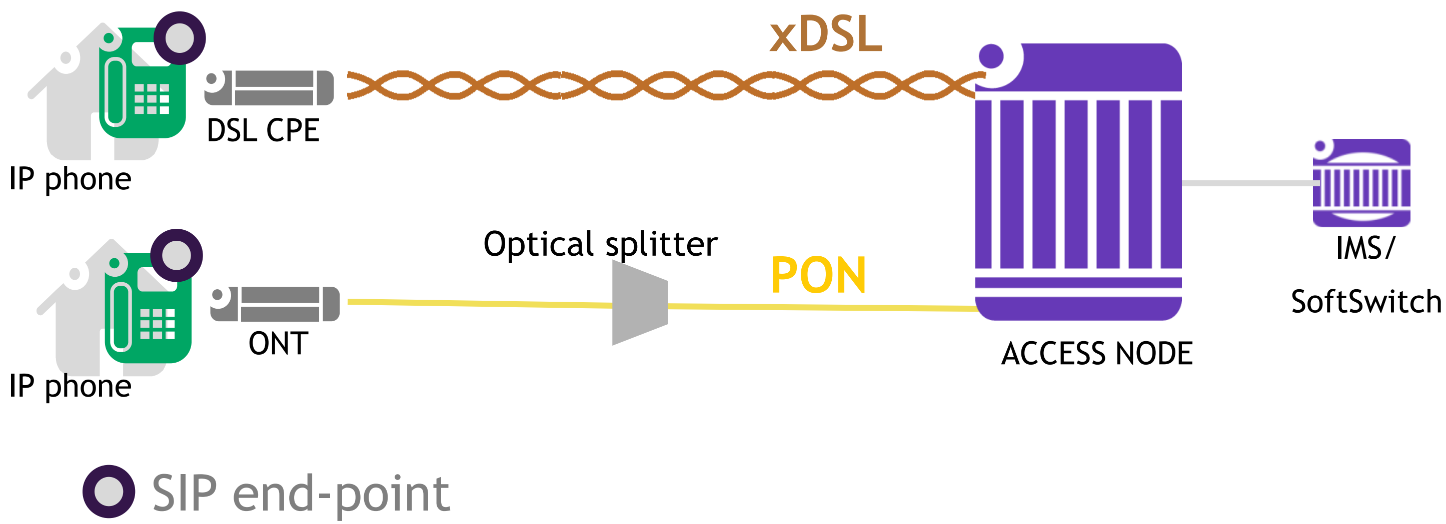
TARGET ARCHITECTURE – PSTN SIMULATION



PSTN SIMULATION:

-Simulate most popular PSTN services

-Possibly different behavior of services

-Enable introduction of new services (push to call, IP-Centrex etc) and Unified Communications suite

END-USER IP EXPERIENCE

- Enables new communications services
- Selection of popular PSTN features

REGULATION COMPLIANCE

- Nor regulated in most markets

CAPEX REQUIRED

- Low opex: fully integrated with IP network
- Truck roll and CPE related capex required

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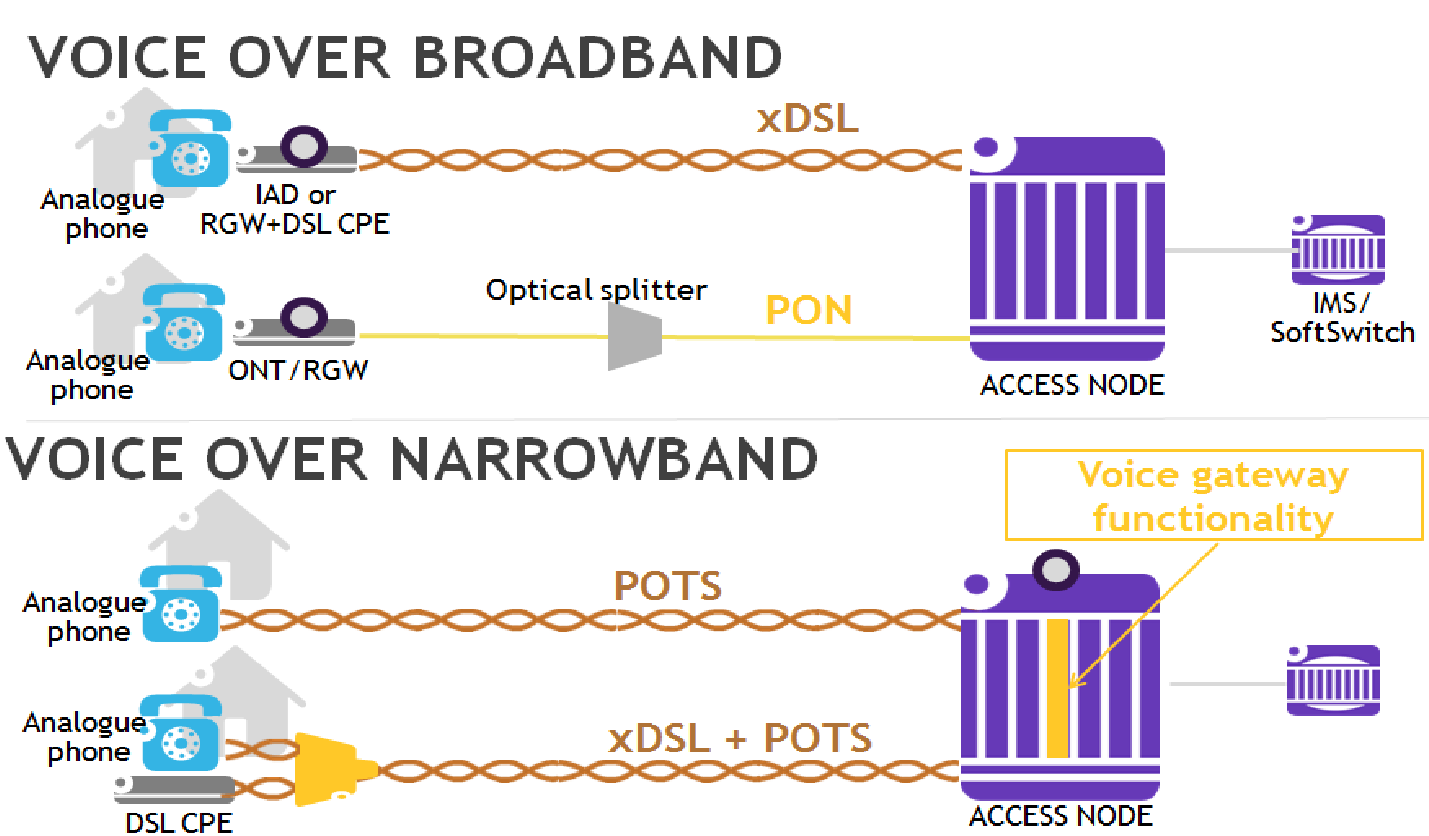
INTERIM ARCHITECTURE – PSTN EMULATION



PSTN EMULATION:

-Supports all legacy services
-Near perfect PSTN emulation
-Transparent to the end-user
- Black phone remains

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ZERO END-USER IMPACT

- Transparent migration
- No additional CAPEX, No truck-rolls

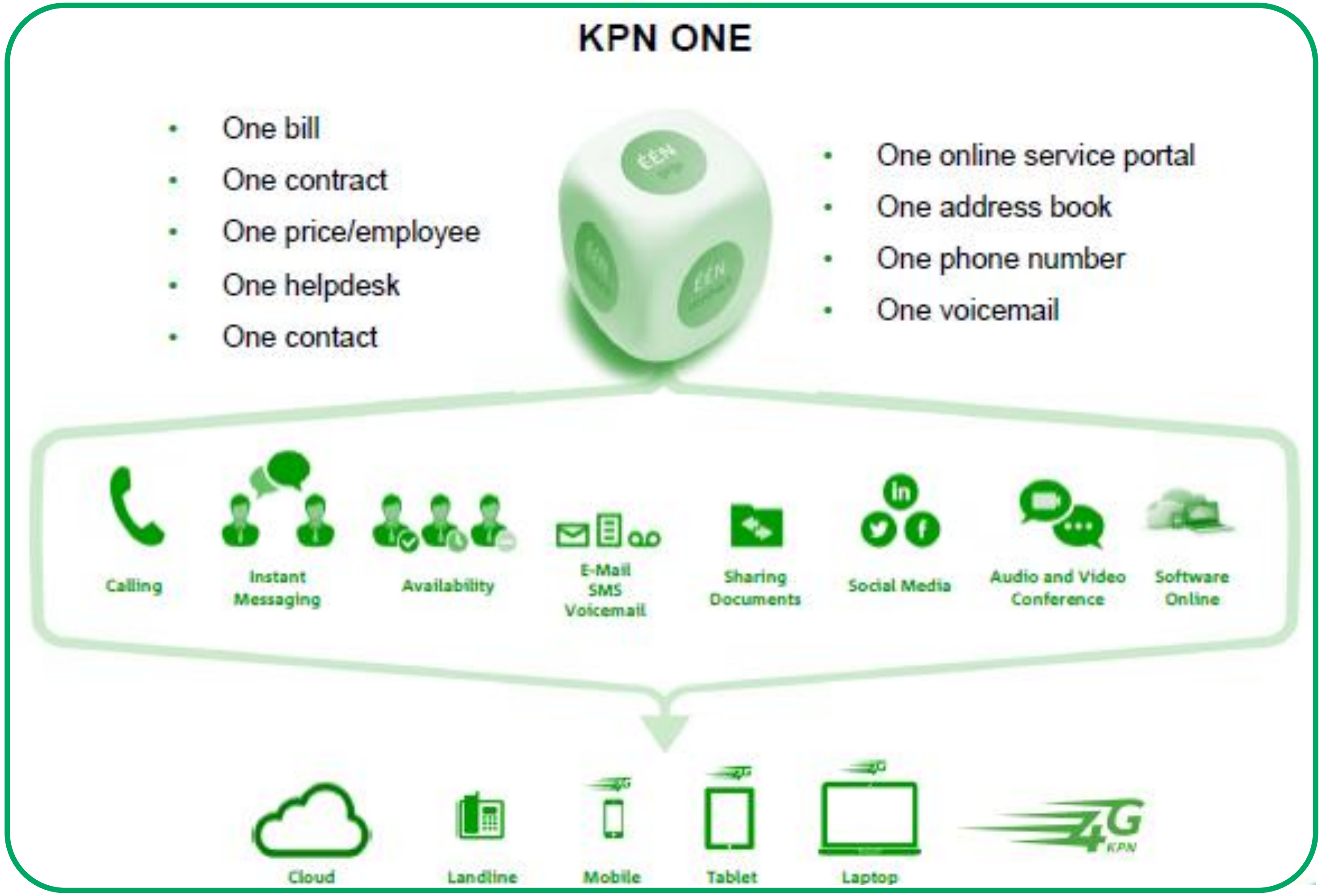
REGULATION COMPLIANCE

- Payphones
- Life-lines

LOW OPEX

- Low foot print / power consumption
- Easy to maintain: POTS interfaces in the CO

TARGET ARCHITECTURE - INTERGATED FIXED AND MOBILE VOICE, WITHIN UNIFIED COMMUNICATION SUITE FOR ENTERPRISES

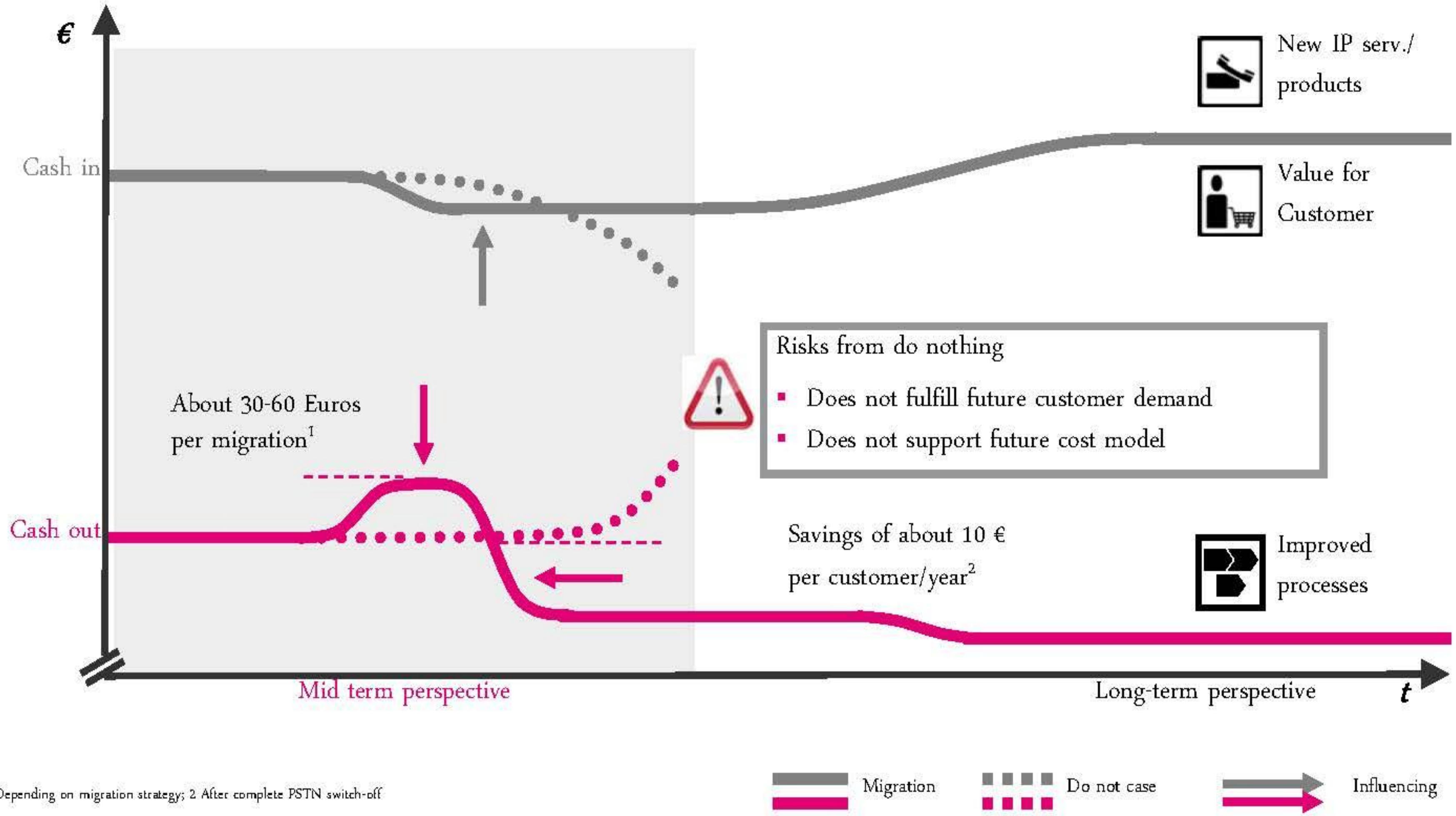


- „KPN One” - integrated fixed and mobile telephony, messaging, fax, conferencing, desktop and enterprise social media - single user experience across many user devices
- To serve 20% of addressable market by 2016, offsetting core telco services decline
- Delivered by KPN partnering with Microsoft Lync

SOURCE: “KPN Capital Markets Day 2014 – Business”

BUSINESS MODEL

PSTN MIGRATION BUSINESS CASE SPONSORED BY COST REDUCTION



[1] Depending on migration strategy; 2 After complete PSTN switch-off

- PSTN migration investment of 30-60 Euros generate 10 Euro savings per annum (per customer)
- Alcatel-Lucent migration tools deliver execution savings of 30% over the standard migration approach

 SOURCE: “PSTN Migration The Key Steps Towards The IP World” Broadband World Forum 2013

POWER OPTIMISATION GREATLY CONTRIBUTES TO TRANSFORMATION BUSINESS CASE

CASE 1: No migration	
PSTN users	100%
DSL users in overlay	60%
Energy cost over PSTN	1.75 M €
Energy cost of overlay DSL network	0.61 M €
TOTAL Energy costs	**2.36M €**
Energy waste due to overlay DSL, while the network is already in place to offer VoIP	**BASELINE**

CASE 2: PSTN user are migrated to mix of VoBB and VoNB	
VoNB users	40%
VoBB users - bundle with DSL	60%
Energy cost for DSL network	0.61M €
ISAM Voice gateway energy costs	0.15M €
TOTAL Energy cost of combined solution	**0.76 M €**
Energy savings due to PSTN migration to VoBB and VoNB	68%

Subscribers	1M
PSTN power consumption / user - ACCESS ONLY	2 Watt **NOTE:** power consumption is 6-8 Watt if PSTN core is included
DSL power consumption / users	1.17 Watt
ISAM Voice gateway power consumption /user	0.43 Watt
Price kWh	0.1 €

CHALLENGES AND SYNERGIES

TURNING OFF LEGACY SYSTEMS IS MUCH HARDER THAN ANYONE EVER ANTICIPATES

TIMELY DELIVERY

No incumbent operator that has announced and been implementing a major transformation program - in many cases for more than 5 years,

Have accomplished their initial full objectives in the timeframe planned.

REACHING OBJECTIVES

However, those who have started, although none can claim full success, have achieved savings and are better off competitively than they were before they started.

Positive impacts on competitive fit can be seen in 2-3 years.

ALCATEL-LUCENT CUSTOMERS TRANSFORMATION EXPERIENCE

RETURN ON INVESTMENT

There is never a business case that is positive quickly - it is important to focus on the alternative of not transforming and quantify what that will do to you competitively in 5 years.

Look for interim wins rather than a big bang.

GOVERNANCE

Alignment across the organization – marketing, sales, network, IT, and operations – is critical to success and its importance can not be underestimated.

This can only happen with very strong and consistent top exec commitment and engagement.

EXAMPLE OF SUCCESFULL IP TRANSFORMATION PROGRAM WITH ROADMAP TO COMPLETE SHIFT TO IP BY 2018

kpn

Bell Labs Consulting Services

+

Network Transformation Services

+

Operations Transformation Services

=

Transformation

AVANTI Innovations Transformation Program

Broadband access speed / coverage	Softswitch migration to IMS	TDM phase-out	SDH overlay	Wi-Fi offload
• Innovation and new service introduction • MSO competition response **„Beat the Cable”** program • Re-use of copper	• Business continuity; EoL softswitches • OPEX reduction through consolidation • Innovation and new service introduction	• Business continuity • Reduce dependency on SDH • OPEX reduction • Revenue assurance	• Address short-term EoL issues • Ensure Business continuity for critical services beyond 2015 • OPEX reduction	• Innovative new mobile data services • Secure your network and subscribers • HetNet integration across small cells and Wi-Fi

Broadband Access + IMS

Transport

HetNet

Avanti Operations Transformation Program

Managed Services for Legacy and Next Gen domains

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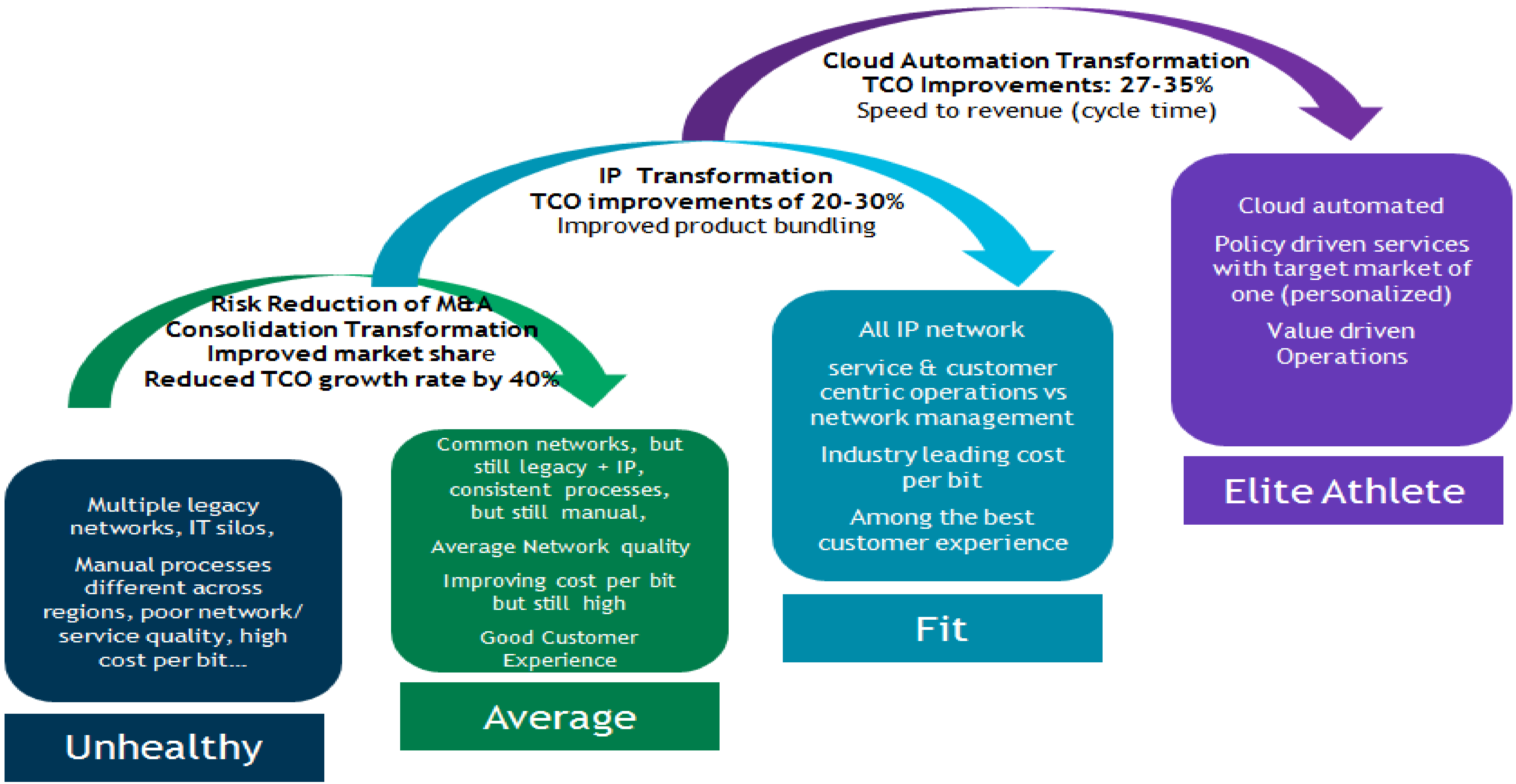
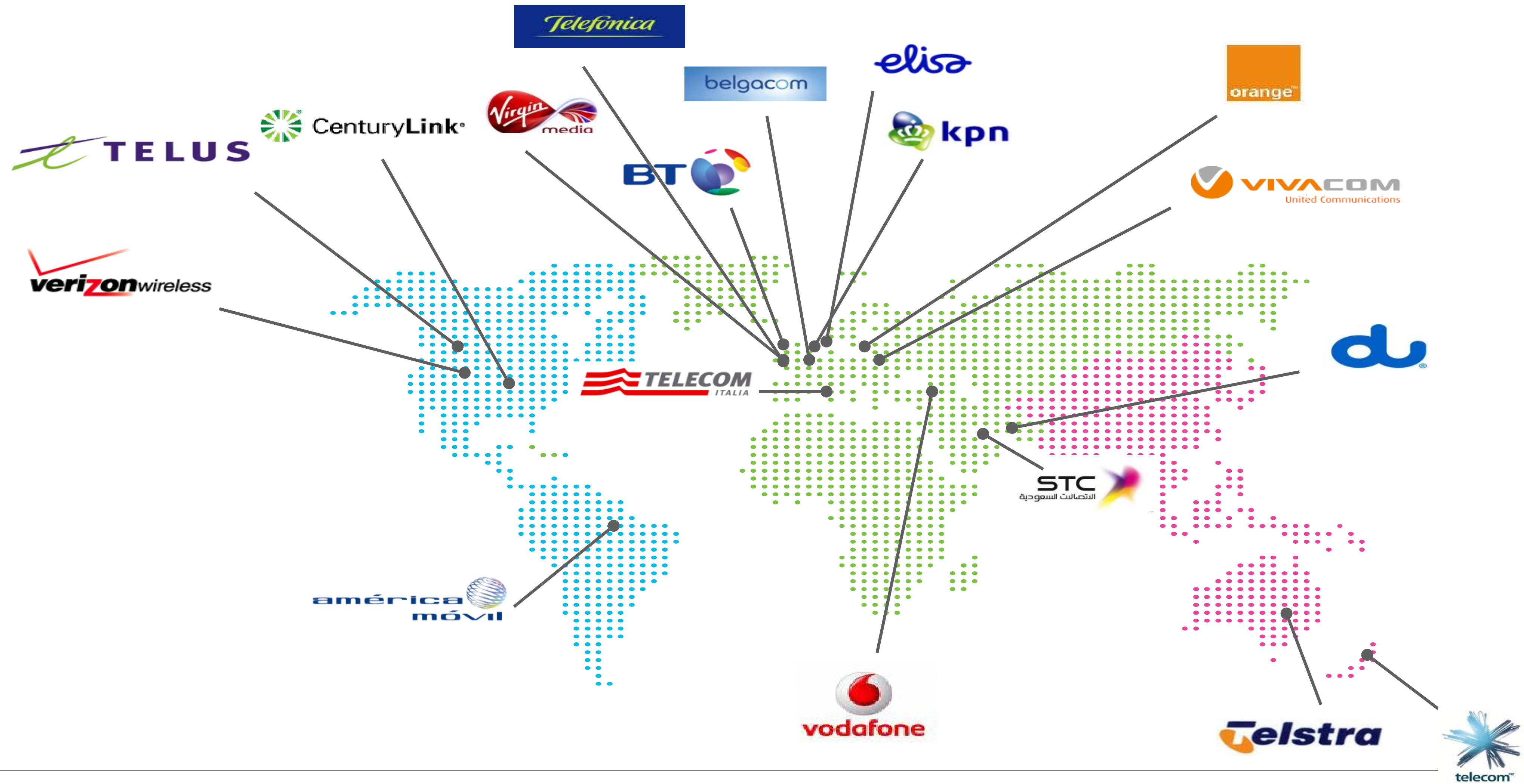
Conclusions

IP TRANSFORMATION ON THE PATH TO COMPETITIVE FITNESS©



ALCATEL-LUCENT'S GLOBAL TRANSFORMATION EXPERIENCE WITH MORE THAN 70 TRANSFORMATION PROGRAMS GLOBALY



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