

A Broadband Network to fit the Digital Transformation with purpose

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Network Strategy
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ETSI F5G and Broadband Forum:
Jointly Evolving towards Fibre to Everything & Everywhere
Oct, 19th, WBF - Network X

4 countries



30M customers

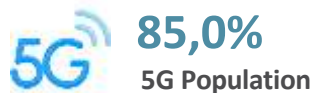
Leadership in convergence

- Telecommunications
- Media and Content
- Publicity and Entertainment

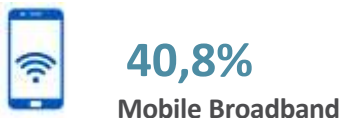


Leadership in fixed voice, fixed broadband, mobile voice, mobile broadband, TV and packages

COVERAGE



MARKET SHARE



The Digital Transformation iceberg

What we see and we won't see!



Customer Experience Centricity

Digital Services & Apps

- +Think Digital First
- +Interact Often
- +CRM, ERP, HCM, SCM
- +Big Data
- +AI/ML
- +Analytics
- +Edge and Public Cloud

IT Tools
Data
Cloud
Automation
Security

- +Innovation
- +Digital Strategy
- +Culture
- +Processes
- +Talent
- +Governance
- +Sustainability

**Broadband
Connectivity**



Altice Portugal Digital Transformation

Our customer and technology journey



MEO App

Billing Invoice

User Data Control

Targeted Marketing

Customer Support 24/7

PIN/PUK



Altice Portugal Digital Transformation

Network and OSS/BSS journeys



IT Transformation

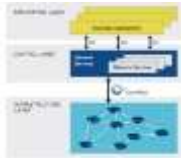
Cloud based OSS/BSS
Agile, SaaS
APIs



Digital First Services

Self-X (order, care, social)
Customization
Fast delivery and Zero touch

Smart Connectivity



Automated fulfillment
Close loop assurance
Secure by Design
API Expose

Virtualize &
Cloudify

Automate

Simplify

Business Transformation

Digital with purpose
Sustainability

Technology Transformation

Best value for the Money

Organization & People Transformation

Organization and skills



Altice Portugal pioneer of a successful story

FTTH important milestones



2009



FTTH LAUNCH

2015



2.3MHP MARK
5.3MHP ANNOUNCEMENT

2021



6.0MHP MARK

2007



1st Commercial FTTH
Customer

2010



1MHP MARK

2019



10 YEARS FTTH CELEBRATION
1M FTTH CUSTOMERS MARK
5.0MHP MARK

Deployed a FTTH Network and offered
Broadband Services to all and everywhere!

100% Fibre Zones

On the path to a fully optical network (0% Copper; Copper Phase-Out)

100% FIBRE

Ca. 40% of CO* currently ongoing Ca. 60%
of CO* planned
(until 2030)

- + Reliability
- + Energy Efficiency
- + Economic Efficiency
- + Value Proposition for Customers
- + Value Proposition for Investors



100% FIBRE

Ca. 1000 Parishes
(30% of total parishes)

*Central Offices

A FTTx for multiple access and aggregation

A pillar for sustainability



B2C Market



TV+NET+Voice+Mobile



TV+NET+Voice



TV+Voice



NET+Voice

B2B and Wholesale Market



- FIBER@VPNs
- FIBER@Internet



- Symmetrical Bitrates
- Asymmetrical Bitrates



- Multi Classes of services
- Bitrate Assurance



- Multi connectivity per access

Network Services



FIBER@MBH



FIBER@WiFi

Symmetrical/Asymmetrical Bitrates

Bitrate Assurance



HOME

>6,2M of homes passed



BUSINESS/ ENTERPRISE

New low budget offers are increasing the fiber share

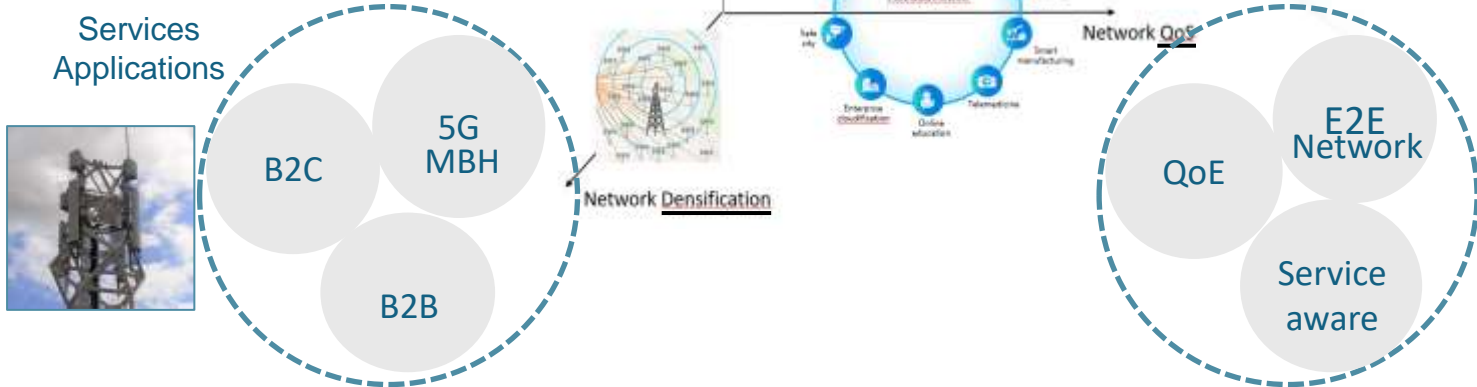


MOBILE BACKHAUL

>99% of cell sites already have fiber for backhauling

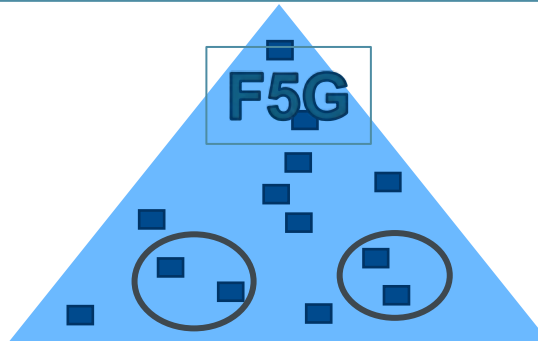
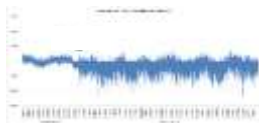
Altice Contribution to the F5G ETSI ISG

Bringing the Experience



Use Case (UC)

Targets



Guidelines to evolve the Broadband Network

Building the future economy landscape



Main Goals

i. Delivery E2E service experience

- _ Delivery the bandwidth, latency, and QOE for existing and future applications and services with purpose
- _ Answering the connectivity requirements to consumers, to enterprises, to vertical industries supporting them for the Digital Transformation

ii. Sustainability

- _ Environment responsible, reduce carbon and waste
- _ Financial return ROI for operators and industry

iii. Collaborative and inclusive for all

- _ Cooperation between operators, industries, SDOs, governments & regulators
- _ Promote the digital transformation and the economy at a National level

Design Guidelines

1. Service Adaptable Network

- _ One network for all services. Multiservice, end users and network support services
- _ Services SLAs adaptable network

2. Simple and Scalable

- _ Simple network layers
- _ Use of technologies with purpose

3. Programmable and automated

- _ SDN approach
- _ Autonomous, reduce O&M complexity

4. Service consistency and resilience by design

- _ Planned for resiliency and QoE guarantee

5. Security by design

- _ E2E perimeter security

Fixed and Mobile Broadband

Getting the best from each



F5G and 5G complement each other.

And their combination is essential for investment optimization and business sustainability!



F5G

Home
Campus
Private Line

Assured Service Experience

High Speed

Stable Service

Immune to interference

Flexible Connectivity

Wide coverage

Outdoor mobility

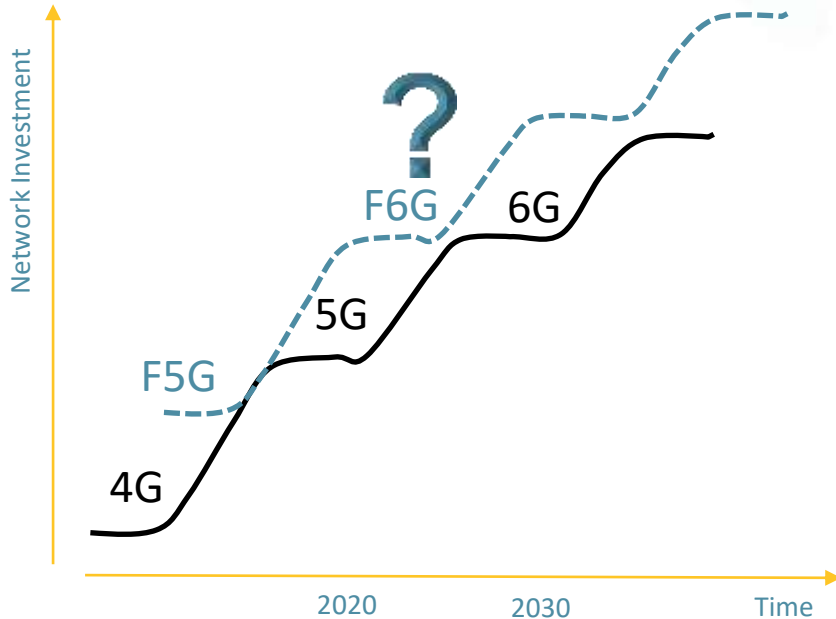
Massive device connectivity

5G

Mobile Access

Network Investment Cycles

Getting the balance



_Additional financial resources would be necessary if operators need to simultaneously deploy new fixed and mobile generations

_Human Resources are a precious asset and need to be allocated per project

_Network stability is required to delivery service consistency QOE

1

_ **Connectivity**, and Broadband, is at the **base** for the Digital Transformation

2

_ **Optical** fiber is a sustainable communication solution, that provides **virtual unlimited bandwidth**, low latency, and optimizes **energy consumption**

3

_ The **Broadband Network** impacts national level **economy** GDP, with **benefits** to **consumers, enterprises and vertical industry**

4

_ **Collaboration** and **cooperation** between **operators, industry, SDOs, Governments and Regulators** are needed to evolve to the next **Broadband Generation!**

DANKE | THANK YOU | MERCI | OBRIGADO

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alice

Together has no limits