

A decorative graphic on the left side of the slide, consisting of a series of parallel diagonal bars in various colors (green, red, blue, yellow, red, green, pink, teal, green, red, yellow, blue, pink, red, yellow, teal, blue, pink, green, yellow, teal) arranged in a curved, fan-like pattern that tapers towards the bottom right.

NETWORK DETAILED OVERVIEW

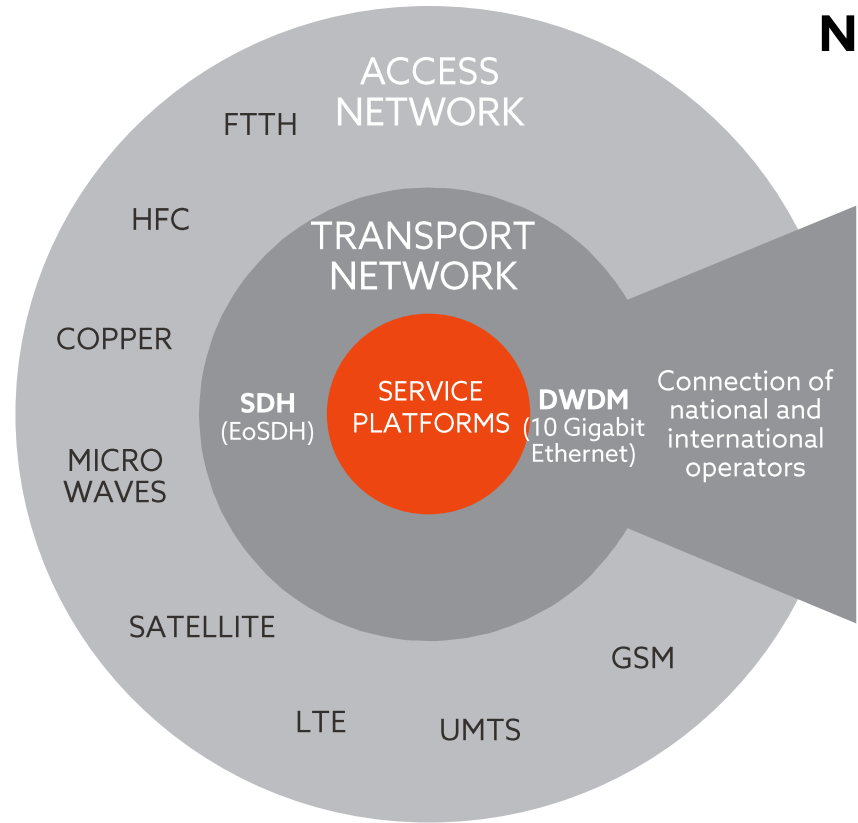
NOS has a **fully convergent** and **integrated network**, supported in its own optical backbone network, with national coverage, serving transparently its access networks

- **INTEGRATED AND CONVERGENT IP NETWORK IMS ENABLED**
- **IP HIGH CAPACITY BACKBONE FOR VIDEO, VOICE AND DATA**
- **NATIONAL MOBILE COVERAGE NETWORK**
- **NATIONAL LEADERSHIP HFC NETWORK**
- **NATIONAL SATELLITE TV OPERATION**

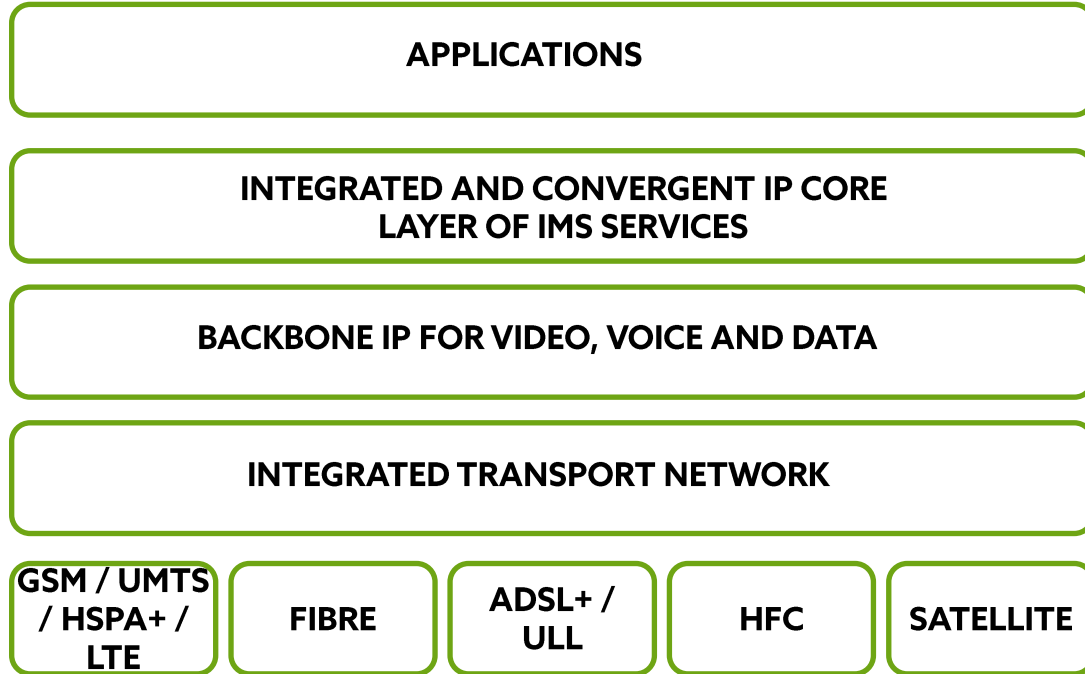
NETWORK DESIGNED TO MEET CUSTOMER DEMANDS e.g. 4P INTEGRATED OFFER, FIXED-MOBILE SME PRODUCT, 3P BUNDLE WITH SATELLITE AND 4G

An **INTELLIGENT NETWORK** Based on Last Generation Technology

29.000	km
Access Network	
6.000	km
Backbone Network	
2.000	km
FTTH Network	
37.000	km
Total Kms of Fiber Optical Network	
28.500	km
HFC Network	



**THE MOST ADEQUATE ACCESS NETWORK TO MEET EACH BUSINESS NEEDS:
OPTICAL FIBER, COPPER, HFC, MICRO-WAVE, 2G, 3G OR 4G**



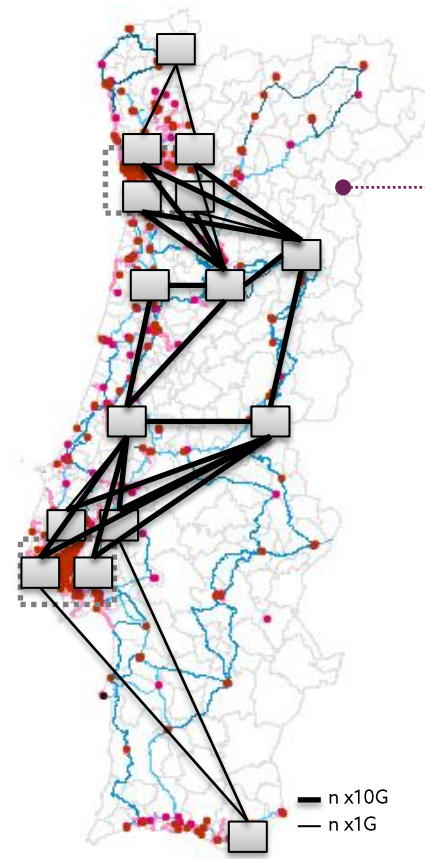
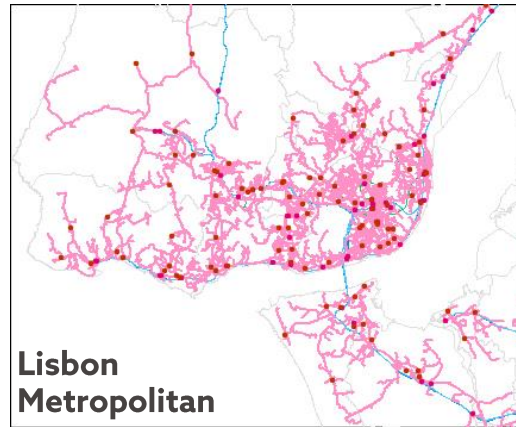
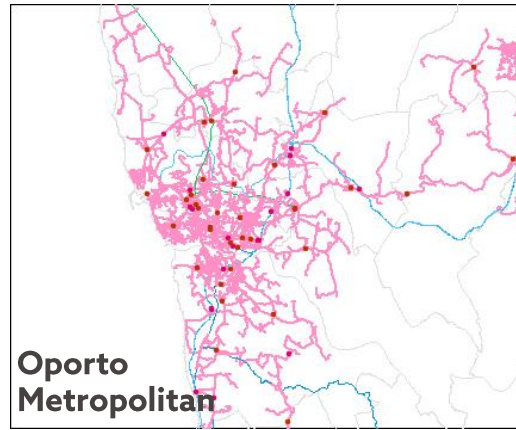
This layered architecture facilitates network management and operation, and increases the efficiency by which new services are developed

NOS NETWORK IS DESIGNED IN SUCH A WAY THAT HIGH LEVELS OF AVAILABILITY, SERVICE QUALITY AND SECURITY ARE ASSURED

NOS NETWORK

... the **NOS** network consist access network with countrywide coverage, transport and distribution network.

Network CORE is made up of high capacity redundant commutation junctions, and service platforms, from which a number of services are provided, namely voice, data, tv, internet and other intelligent network services.



POPULATION COVERAGE

99,9%

GSM network

90%

UMTS network

80%

4G network

80%

HSDPA network

47%

HFC network

7%

FTTH network

A HIGH QUALITY NETWORK AND FULLY BASED ON FIBRE OPTICS

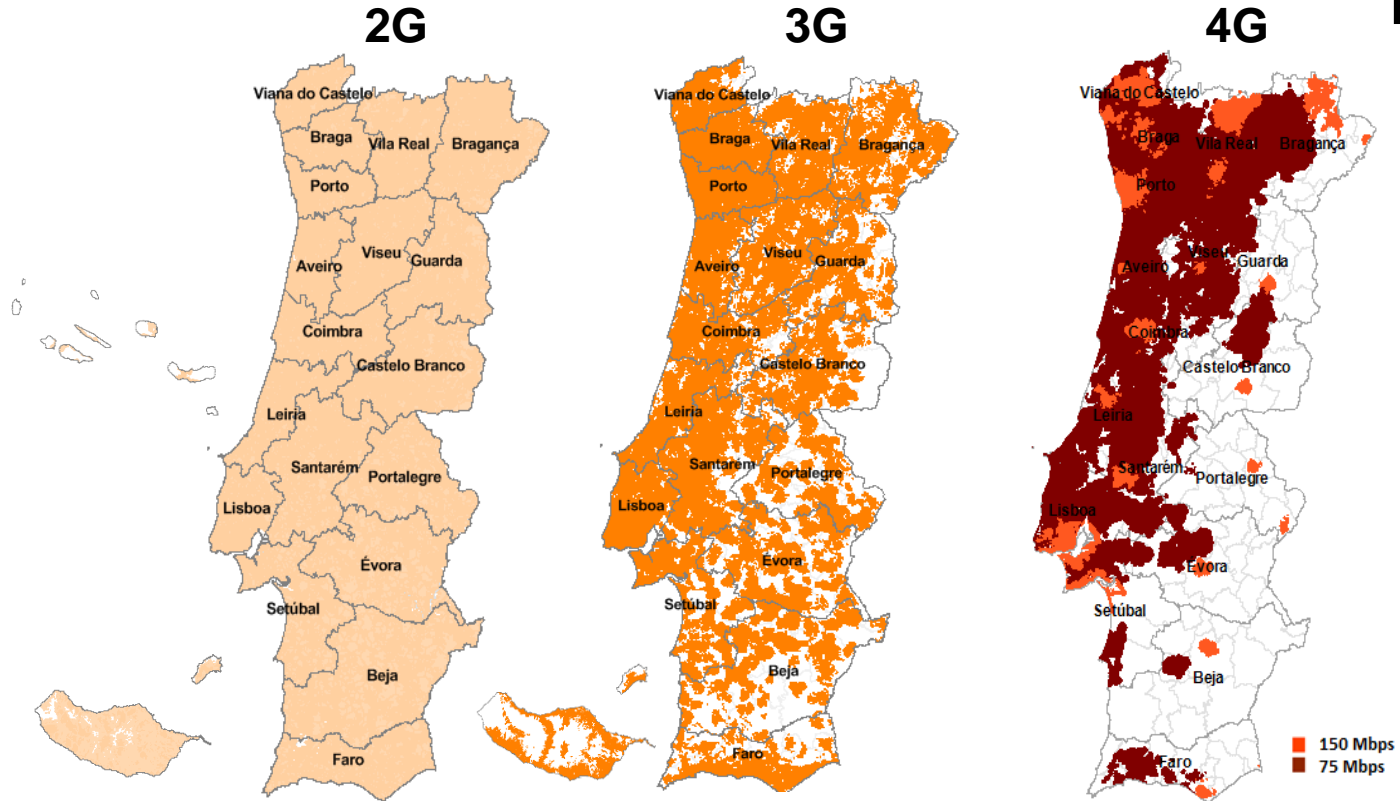
MOBILE NETWORK

The consistent results achieved reflect the **continuous investment made by NOS to strengthen its MOBILE network in order to ensure the communications quality to our customers.**

OUTDOOR COVERAGE

% POP

- 2G – 99%
- 3G – 89%
- 4G – 80%

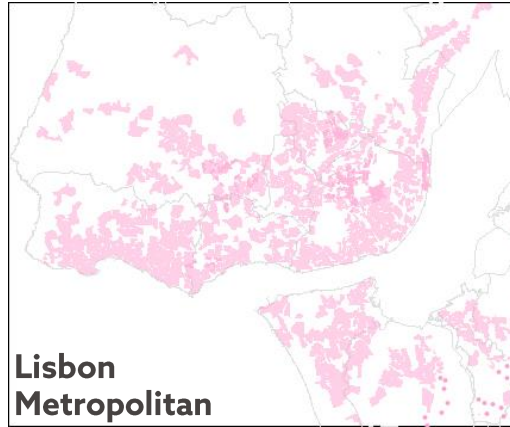
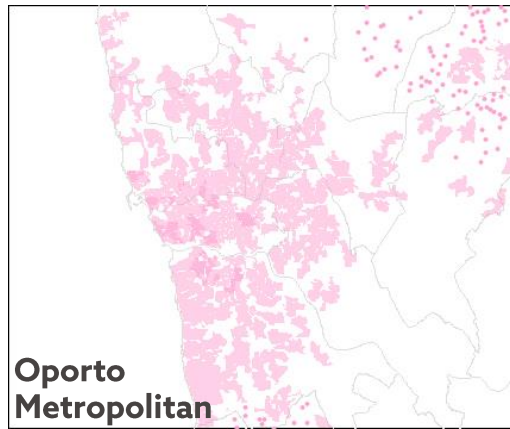


... THE TECHNOLOGICAL SUPERIORITY OF THE NOS MOBILE NETWORK HAS BEEN PUBLICLY RECOGNISED BY A NUMBER OF PORTUGUESE AND INTERNATIONAL ORGANISATIONS

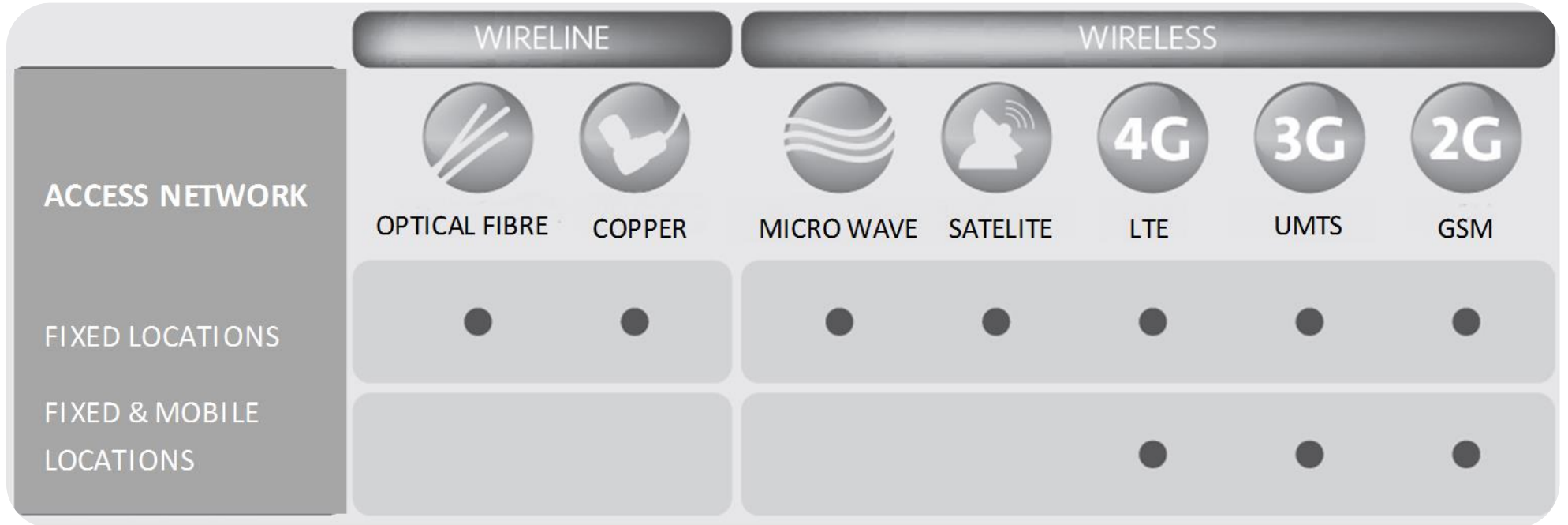
FIXED NETWORK

... **NOS** HFC network is deployed on major urban areas covering 3,2 M homes.

Leadership national network covering **47%** of the population



100% DOCSIS 3.0 ENABLE WITH UP TO 400Mbps COMMERCIAL OFFER



NOS TRULLY VERSATILE ACCESS NETWORK...