

# Argentine TIC Day

## Ministry of Communications

ARSAT OVERVIEW &  
FINANCIAL OPPORTUNITIES  
Dr. Rodrigo De Loreda  
CEO - ARSAT

Washington DC, USA  
November 2016

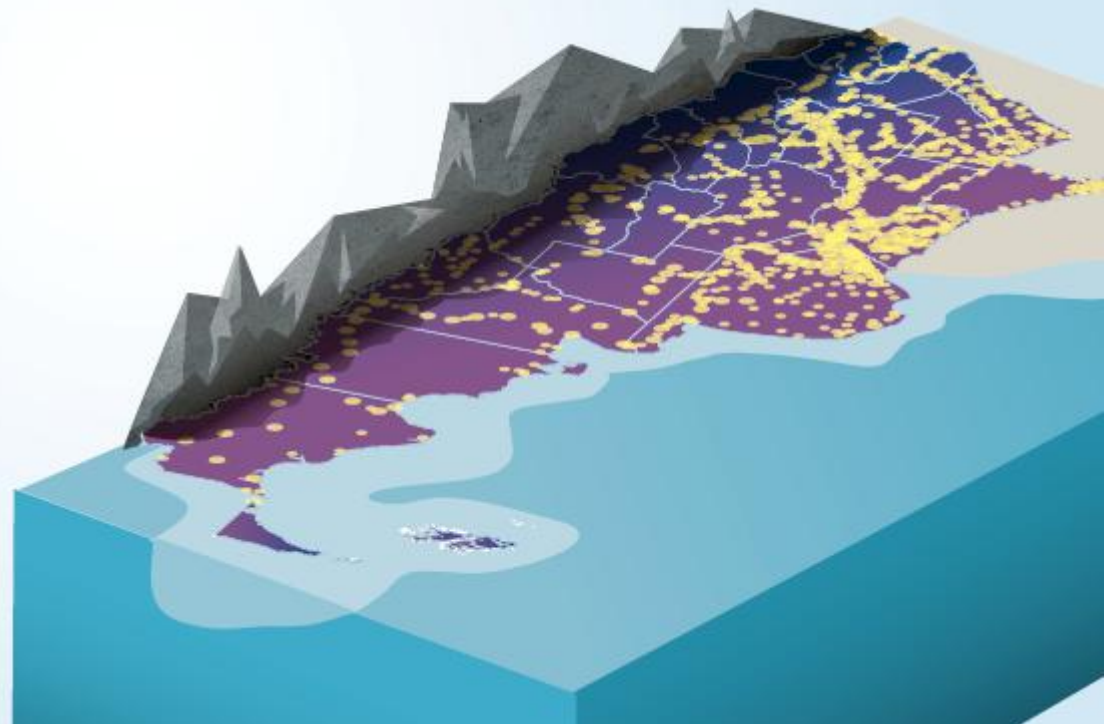
## Company Overview

# ARSAT

Empresa Argentina de Soluciones Satelitales S.A.

National carrier, responsible for providing telecom services through a combination of different land, air and space infrastructures.

High quality connectivity at reasonable and competitive prices for high potential improvement of the Argentine population.

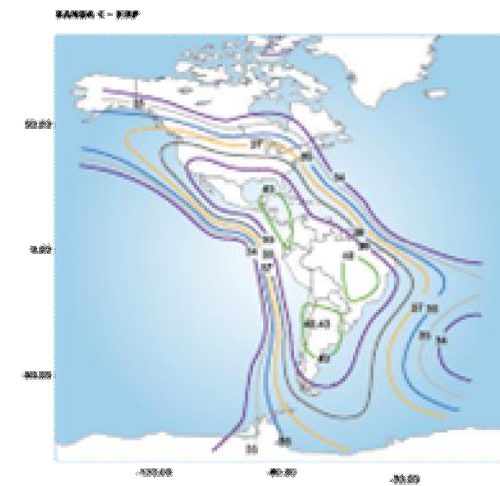
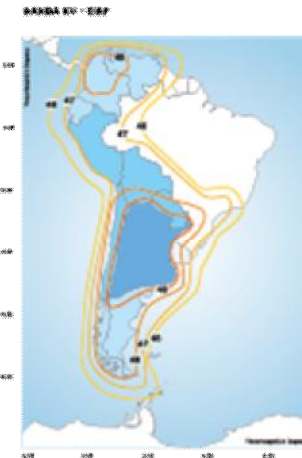
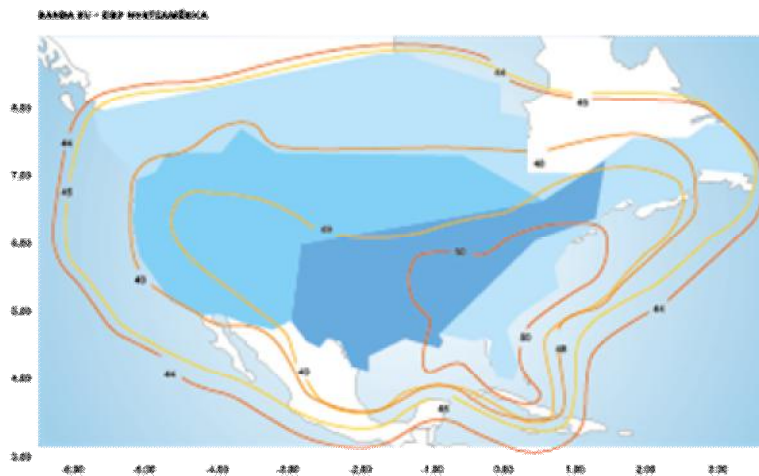


ARSAT

# What ARSAT offers to private companies to leverage their investments

## Satellite Services

- 2 geo satellites operating in excellent health
- ARSAT Satellite Program was awarded internationally
- +3500 VSAT in service, under multivendor platforms
- State of the art and most reliable Teleport in the región, located in Benavidez, Buenos Aires
- +70% of occational use market in Argentina serviced with ARSAT-1 and 2

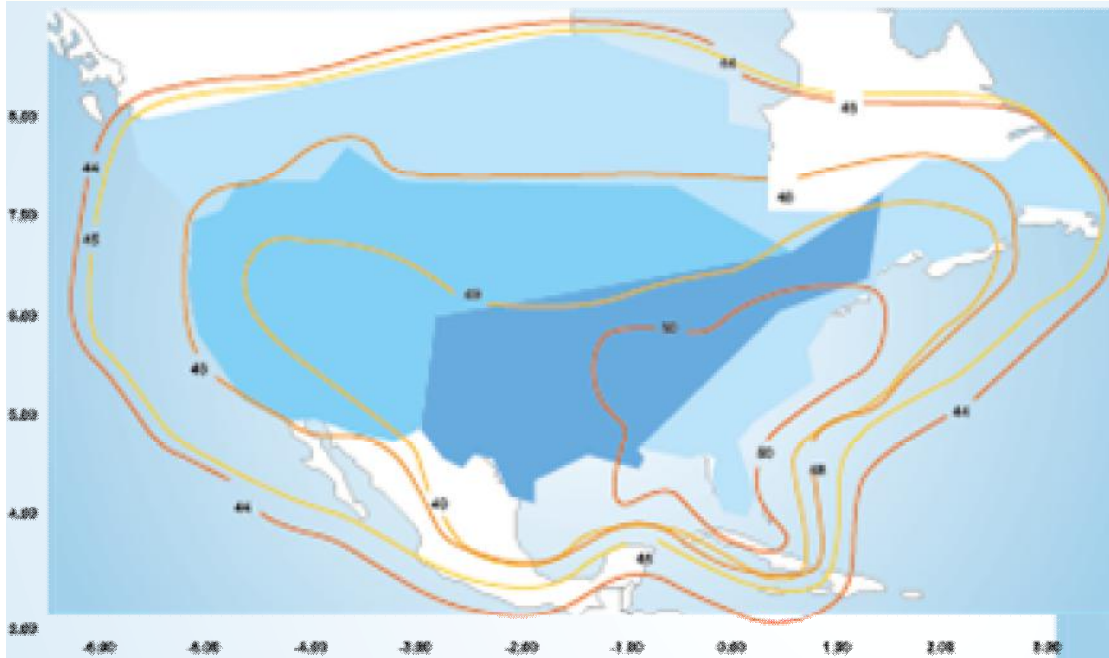


Operating in **perfect health** with  
**100%** service availability  
Service in Ku and C bands, over USA  
and Canada from 81° West

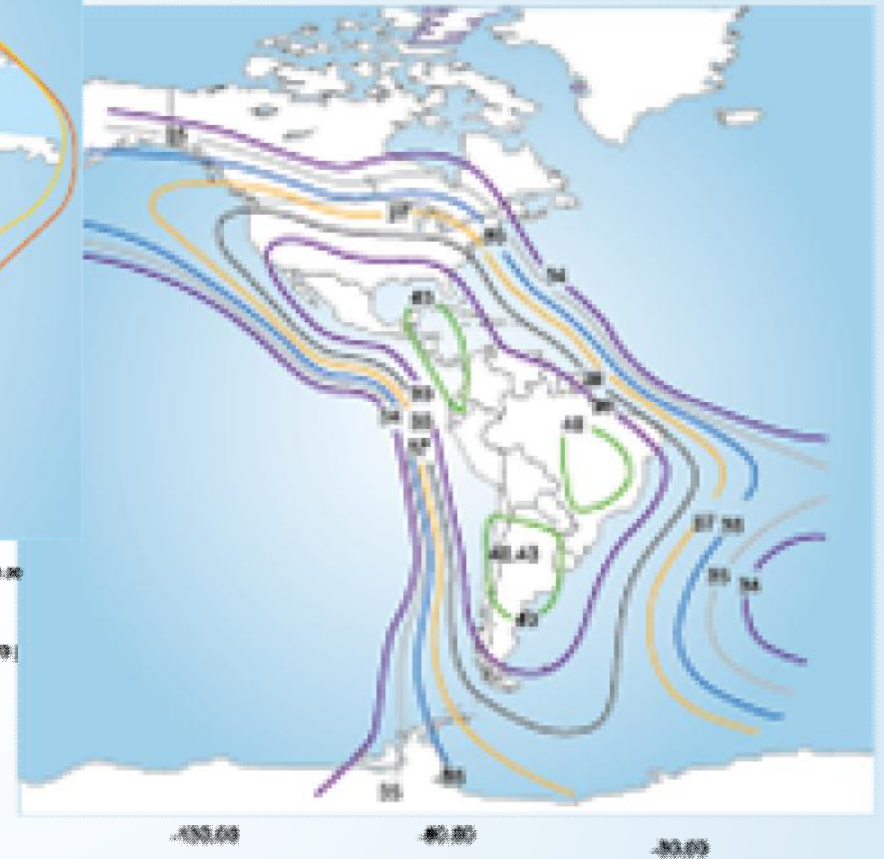
**Excellent** technical specs for **mobility and other** services  
**Best cost-effective** choice for USA customers

# ARSAT-2 in USA and Canada

BANDA KU - ZONA NOROCCIDENTAL



BANDA KU - ZONA OCCIDENTAL



- Excellent Ku band coverage in USA en Canada
  - 144 Mhz fixed, up to 720 MHz swticheable
- Complete american C band coverage
- Available for all type of services such as:
  - Telephony
  - Internet and Data
  - Video and TV distribution
  - Mobility services: terrestrial, in-flight and maritime
- Interconnection available between North and South Ku spots



What ARSAT offers to private companies  
to leverage their investments

## Fiber Optics Network *(at 28-oct-2016)*

**34,886 km**  
Fiber Optics deployed

**29 Millions**  
people reached

**+1,300**  
towns interconnected

**17,000 km**  
Fiber Optics network in service

**48 fibers per cable**  
in redundancy

**134 towns today**  
in commercial service



What ARSAT offers to private companies  
to leverage their investments

## Data Center

- **4,200** square meters, 50% in service
- **4 rooms** with capacity to install more than 600 racks, plus a maximum security vault room
- **ISO / IEC 27001 Certified:** 2013, International Standard for Security Information Management Systems

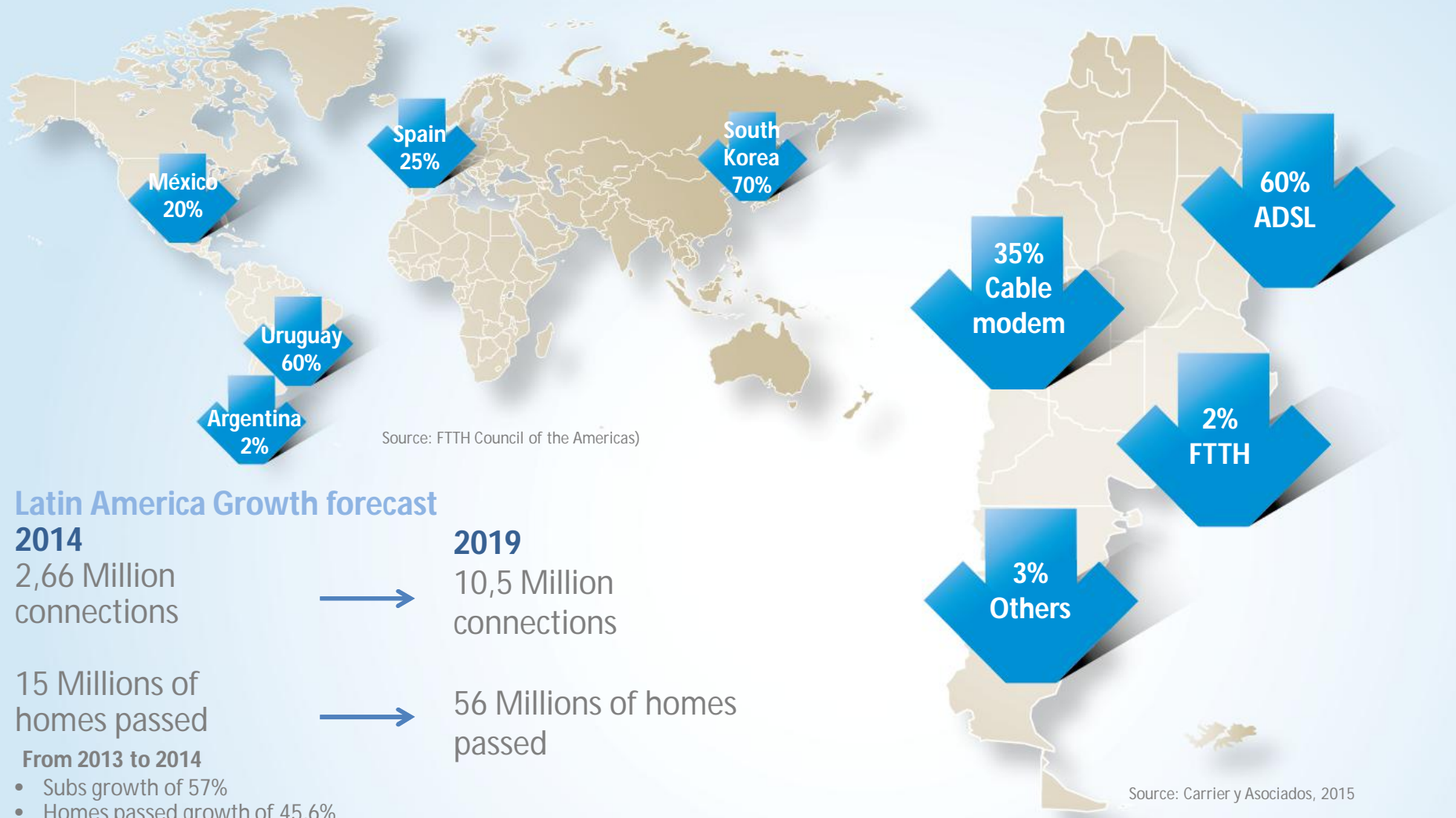
## Free to Air TV Stations

- **88** TV stations deployed
- **82%** of population coverage with free to air service
- **1.200.000** homes



# Fiber Optics Market

## Residential FTTH Market



### Latin America Growth forecast

**2014**

2,66 Million connections



**2019**

10,5 Million connections

15 Millions of homes passed



56 Millions of homes passed

From 2013 to 2014

- Subs growth of 57%
- Homes passed growth of 45,6%

Source: TIC Idate

# Private funding opportunities Fiber Optics network – Residential Access FTTH

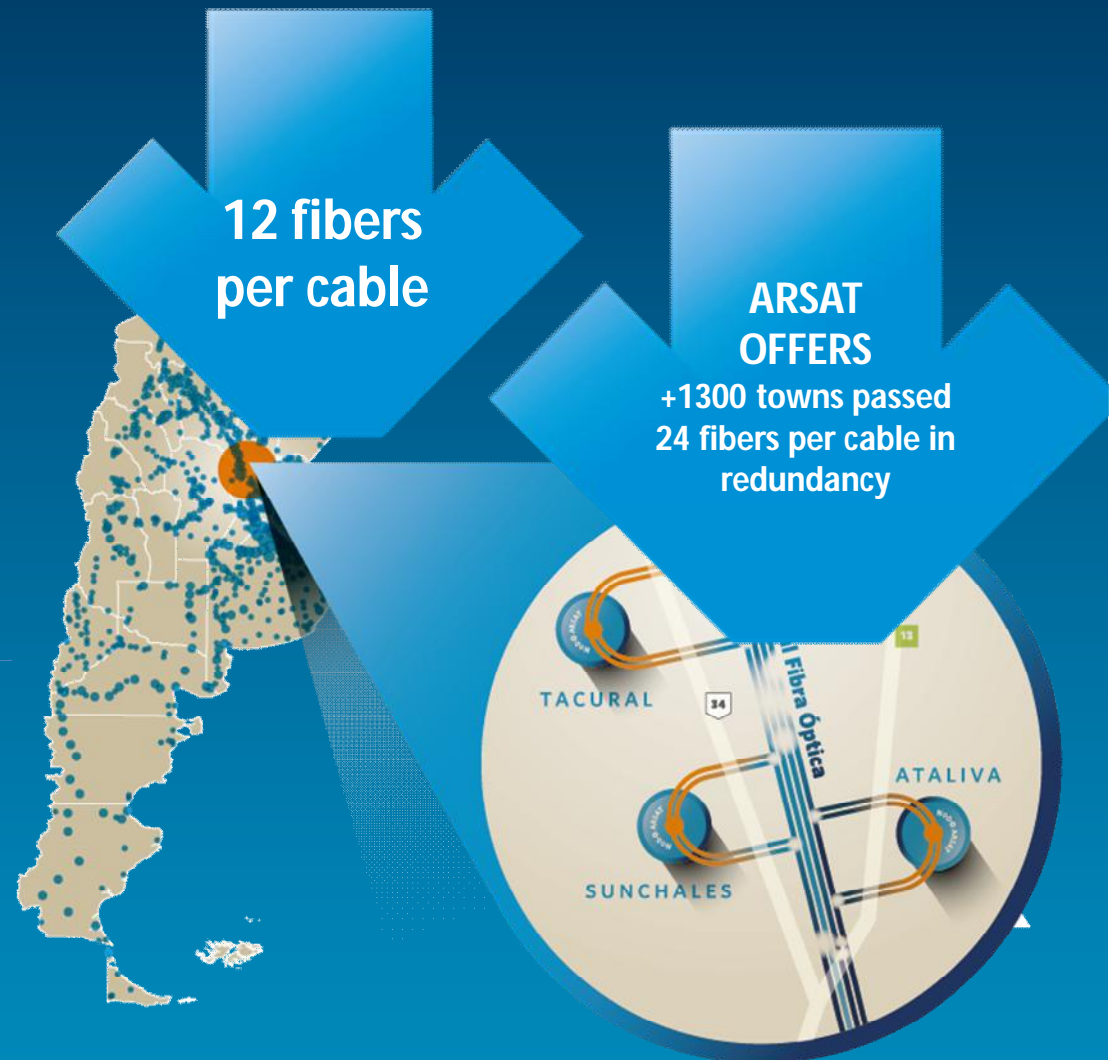
## FTTH Home Access

Objective: growth from 300K (2%)  
to 3M users (20%)  
Cost per home between USD 300 and 500  
Investment of USD 1050 millions

EBITDA: 25/30%  
ROI: 24/36 months

### FTTH Services:

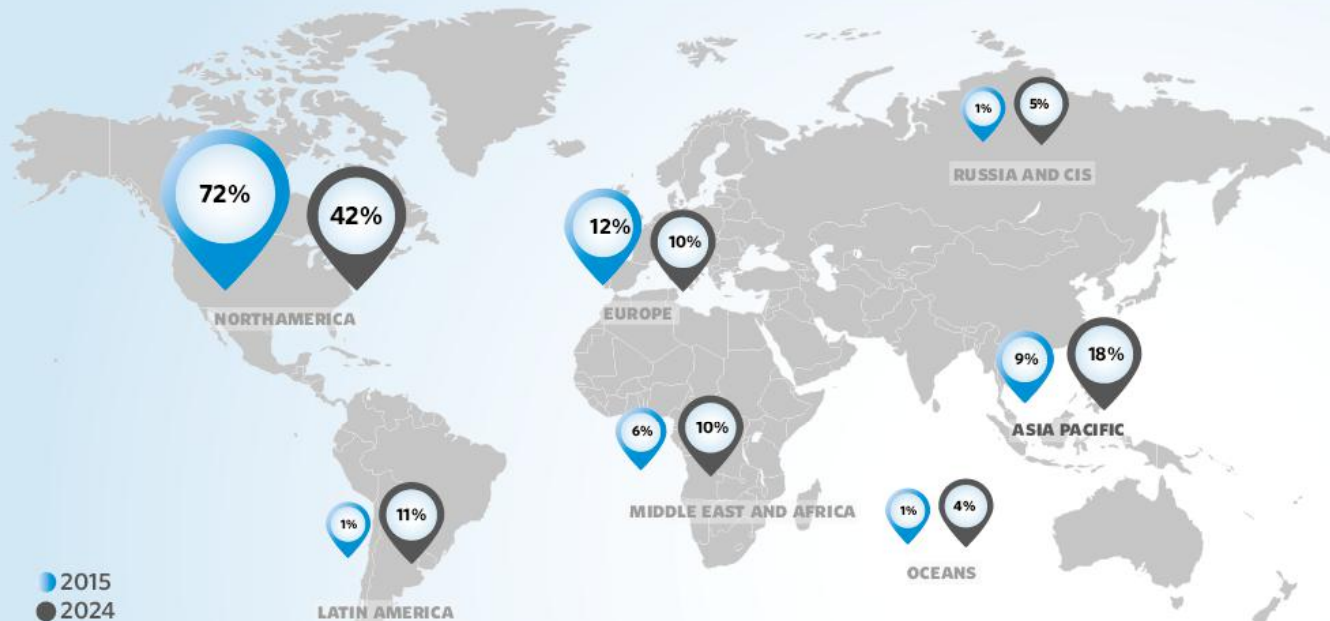
- IPTV, VOD, OTT, Video-conference
- Internet from 100 Mbps up to 1 Gbps
- Telephone
- Mobility
- Telemedicine, Remote workstations, Teleducation
- Security, IP Cameras
- Gaming, social networks
- TV (analogue and digital)





# Internet Broadband Market

## HTS Global Market Share Current vs. Forecast



### Consumer Broadband Subscribers



Source: Euroconsult

### Commercial ships



### HTS Systems Launched

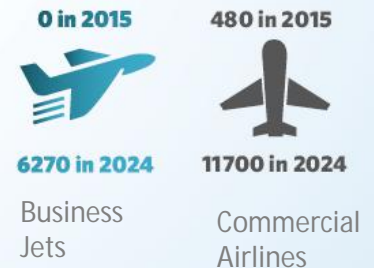


## In Argentina

**+1.2 million** homes have no access to land networks  
(Source: INDEC, 1Q2016)

**+80%** of the country have little to no broadband services

**<4.2 Mbps** average connectivity  
(Source: Akamai, 3Q2015)



Private funding opportunities  
ARSAT-3 – Ka band High Throughput Satellite (HTS)



100% Southern Cone Coverage

40 Gbps

+350k

homes

Backhaul 4G

service until fiber is deployed

2021 launch

Lifetime of 15 years

**Investment**

**USD 230 M**

**IRR ~20%**

**ROI**

**5 years**

# Real state – Towers for mobility services market



2.1 out of 3.4 million cell sites in the world belong to Neutral Infrastructure Operators



Neutral Infrastructure operator sites

33%      0%      93%      71%

Population per site

3.816      4.133      3.889      5.276

16k sites are deployed today in Argentina and **30k** are required for 2020 in order to face new **4g/5g market layout.**



Mobile market is in expansión based on:

1. More specturm available
2. More spectral efficiency
3. More sites (Objetives)

Private funding opportunities  
Access to real state - Towers

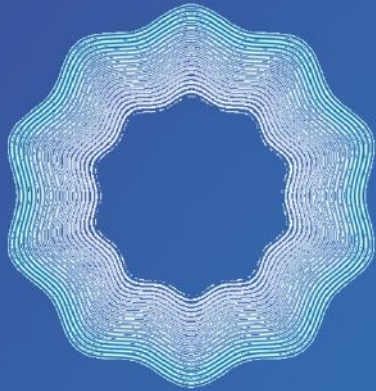
ARSAT owns 1447 sites immediately available for new cell sites, distributed throughout the country with support and maintenance.

Besides all ARSAT sites are interconnected by fiber optics and satellite services, to ensure high quality services.

Thus, ARSAT is the most importante strategic partner to get immediate access to 9% of total towers embedded Base for mobile services







Thank you

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