Argentine TIC Day
Ministry of Communications

ARSAT OVERVIEW &
FINANCIAL OPPORTUNITIES
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Company Overview

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.
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 occasional 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

- Excellent Ku band coverage in USA en Canada
  - 144 Mhz fixed, up to 720 MHz switchable
  - 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

**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

Source: FTTH Council of the Americas

Latin America Growth forecast

**2014**
- 2,66 Million connections
- 15 Millions of homes passed

**2019**
- 10,5 Million connections
- 56 Millions of homes passed

Source: Carrier y Asociados, 2015

Source: TIC Idate

From 2013 to 2014
- Subs growth of 57%
- Homes passed growth of 45.6%
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

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)

Consumer Broadband Subscribers

<table>
<thead>
<tr>
<th>Year</th>
<th>Subscribers</th>
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<tbody>
<tr>
<td>2015</td>
<td>2.5 Million</td>
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<tr>
<td>2024</td>
<td>7.1 Million</td>
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Commercial ships

<table>
<thead>
<tr>
<th>Year</th>
<th>Ships</th>
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</thead>
<tbody>
<tr>
<td>2015</td>
<td>120</td>
</tr>
<tr>
<td>2024</td>
<td>25,000</td>
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HTS Systems Launched

<table>
<thead>
<tr>
<th>Year</th>
<th>Systems</th>
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<tbody>
<tr>
<td>2004-2015</td>
<td>48</td>
</tr>
<tr>
<td>2016-2024</td>
<td>129</td>
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</table>

Business Jets

<table>
<thead>
<tr>
<th>Year</th>
<th>Jets</th>
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<tbody>
<tr>
<td>2015</td>
<td>0</td>
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<tr>
<td>2024</td>
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Commercial Airlines

<table>
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<tr>
<th>Year</th>
<th>Airlines</th>
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<tbody>
<tr>
<td>2024</td>
<td>6270</td>
</tr>
<tr>
<td>2024</td>
<td>11700</td>
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</tbody>
</table>
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
ROI 5 years
IRR ~20%
Real state – Towers for mobility services market

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

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)

Neutral Infrastructure operator sites
- Colombia: 15,200 sitios, 58 M Subs (33%)
- Argentina: 16,000 sitios, 62M Subs (93%)
- México: 27,000 sitios, 105M Subs (71%)
- Brazil: 54,400 sitios, 287M Subs

Population per site
- Colombia: 3.816
- Argentina: 4.133
- México: 3.889
- Brazil: 5.276

Fuente: Atis Group
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 important strategic partner to get immediate access to 9% of total towers embedded Base for mobile services.
Thank you