History

1985
SES, Europe’s first private satellite operator, is founded in Luxembourg and signs launch agreement with Arianespace.

1991
Co-location – an innovation by SES. SES’s first satellite co-located to multiply the number of services that could be transmitted from one position.

1995
SES goes digital – a huge attraction for channel providers was SES’s pioneering of digital broadcasting technology.

2001
SES acquires Americom from GE. SES GLOBAL is established with two operating companies: SES ASTRA and SES Americom.

2013
SES Launches its first Ultra HD demo Channel.

2016
SES forms MX1 and acquires O3b to significantly enhance existing video and data capabilities.

2017
SES pioneers reusable technology with the first ever satellite launch on a flight-proven Space X Falcon 9 rocket.
Global Presence, International Team

- 2,000 employees of more than 65 nationalities in over 20 locations worldwide
- EUR 2 billion annual revenue

*SES employees with a permanent SES employment contract, excl. externals and students/trainees
PARTNER OF CHOICE

serving over 700 broadcasters, telcos, enterprises, governments and institutions in over 130 countries
The World-Leading Satellite Operator

65 satellites covering 99% of the globe and world population

Unique GEO-MEO constellation complemented by a ground segment, together forming a flexible network architecture that is globally scalable

Driver of INNOVATION in next generation satellite development
Combining the Strengths of GEO and MEO

**SES**

### GEO wide beam
- Over 50 satellite constellation
- Reaching 325 million TV households worldwide

### GEO HTS
- Adding 36 GHz total Ka- and Ku- capacity by end-2017
- Global HTS platform
- Reduced cost per MHz, improving value proposition for data applications

### MEO HTS
- 12 satellite constellation
- Covering between 45° North and 45° South
- High throughput of over one Gbps per beam
- <150 ms Ultra low latency for ‘fibre in the sky’ type of service
- Additional eight satellites to be launched in 2017 and 2018

* SES holds an 100% ownership to O3b

Completing and deploying a multi-layer satellite network to capture global opportunities

* SES Proprietary and Confidential | Company Overview — April '17
Industry-leading network performance

99.9% NETWORK AVAILABILITY

Additionally, we have 12 satellites flying secondary missions:-

ASTRA 1G, ASTRA 1H, ASTRA 1C, ASTRA 2A, ASTRA 2B, ASTRA 2C, ASTRA 3A, ASTRA 3A

The SNG network also includes 12 MEKO HTS satellites — not reflected in the map. Fleet configuration is based on current planning and is subject to change. SES mùi a 99.9% interest in CielSatellite Limited Partnership and a 100% ownership interest in Quebec-based Iusacell. Iusacell’s brand portfolio is owned by Iusacell, which is 100% owned by a 50% ownership interest. MonacoSAT is a partner satellite with transponder orbital Tournedos at 1°E.

**SES-7 (to be launched) in 2023**

**SES-7 (in orbit) in 2023**

**Future link**

**Existing link**

**Planned presence (POP)**
# Launch Manifest 2017 - 2020

<table>
<thead>
<tr>
<th>Satellite</th>
<th>Region</th>
<th>Application</th>
<th>Launch Date</th>
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<tbody>
<tr>
<td>SES-10</td>
<td>Latin America</td>
<td>Video, Networks</td>
<td>Q1 2017</td>
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<td>Video, Networks, Government</td>
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<tr>
<td>SES-16 (GovSat-1)</td>
<td>Europe/MENA</td>
<td>Government</td>
<td>H2 2017</td>
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<td>O3B (Satellites 13-16)</td>
<td>Global</td>
<td>Networks, Government</td>
<td>H2 2018</td>
</tr>
<tr>
<td>O3B (Satellites 17-20)</td>
<td>Global</td>
<td>Networks, Government</td>
<td>H2 2019</td>
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<tr>
<td>SES-17</td>
<td>Americas</td>
<td>Networks, Government</td>
<td>2020</td>
</tr>
</tbody>
</table>
SES focuses its differentiated strategy on value-added, end-to-end solutions in two key market verticals.

**Video**
- Technical reach of 325 million TV households worldwide, delivering over 7,500 TV channels and >2,500 HD channels, 33% of all SES channels are HD

**Networks**
- Widebeam and GEO/MEO HTS capacity and teleport services for >300 enterprise customers, 99% global coverage of global maritime and aeronautical traffic, 62 governments in 28 countries

**Fixed Data**
- +1 million simultaneous fixed internet connections supported by SES >300 customers

**Mobility**
- >2,500 aircraft served by SES satellites

**Government**
- Serving 62 government entities in 28 countries
- Participant in >5 PPP
VIDEO

>7,500 channels

| UHD | 21 commercial Ultra HD channels |
| HD  | <2500 HD channels |
| SD  | >5,000 SD channels |

33% of all SES channels are HD

SES share of global channels broadcast via satellite

- Total: 18%
- HD: 27%
- UHD: 43%

>600 Broadcast clients with long-term contracts

2017 increasing capacity for developing markets

>2,750 broadcast TV channels distributed

>500 Managed playout channels

>120 VOD platforms

HD GROWTH

Europe*
- 14% >750 channels

North America*
- 5% >1,360 channels

Developing markets*
- 2% >370 channels

* 2015 to 2016 growth
FIXED DATA

SES serves Fixed Data customers in >130 countries

The SES network reaches >1M enterprise-grade data terminals

Connecting the unconnected

O3b provides more than 10 Gbps to remote islands around the globe

Industry-leading latency for any satellite-based broadband system

<150 ms

Can enable up to 150 Mbps of LTE backhaul per tower

99.99% measured service availability

Compared to 99.97% benchmark service availability

Flexible and scalable global network/solutions

>50 GEO 12 MEO

SES serves >300 enterprise customers

≈80% of enterprise revenue from Tier-1 applications/managed services

Growth of average bitrate per site

15 Mbps

2013

2016

1 Mbps

x4
MOBILITY

Provides over 99% coverage of global maritime and aeronautical traffic.

Capable of delivering 1 Gbps per cruise ship.

Scalable connectivity ranging from 100 Mbps to 1 Gbps per cruise ship.

O3b serves >1,000,000 passengers of Royal Caribbean Cruises per year.

SES customers serve about 90% of all global connected planes.

SES today provides connectivity to about >2,500 connected planes.

70% growth in committed mobility capacity since 2014.
EUROPE
Europe

**DIGITAL CABLE**

Digital migration on the terrestrial side largely finished, but still big digitalization potential amongst cable homes

**HD UBIQUITY**

HD screens are now in almost every home – major TV channels already broadcast in HD

**UHD ROLLOUT**

Perfectly positioned as early Ultra HD adopter

- Developed pay TV market
- Trend to larger screens continues
- Every 2nd home will have UHD by 2025

**SUPORTING ENTERPRISE**

SES enables businesses to provide reliable broadband connectivity to homes and offices in rural areas, allows SCADA/M2M/Smart Grid networks to be realized with an always-on secure broadband connectivity
SES’s Growing Presence in Europe

**20**
Premium presence with 20 satellites at 13 orbital positions

**TV**
Satellite is leading TV infrastructure

**156M**
TV households reached by SES

**NO.1**
DTH platform provider

PROVIDING SOLUTIONS FOR

- GLOBECAST
- CHANNEL 5
- M7
- orange
- IABG
- VIASAT
- RTL
- ORF
- ARD
- 2DF
- digitaria
- Discovery Networks
- CANAL+
- MAGiSAT
- GLOBECOMM Europe
- Signalhorn
- Sky