

SES's growth markets: Mobility

Elias Zaccack, SVP & MSC Leader for Mobility



Substantial growth outlook in Mobility



Number of connected ships⁽¹⁾



1) Source: NSR (FSS only)

- Growth driven by explosion in passengers carrying smartphones, tablets and laptops
- Dramatic rise in airlines deploying IFC, and resulting surge in connected aircraft over next decade in all regions, led by North America
- Maritime segment driven by cruise requirements, which accommodate BYOD for up to 5,000 passengers per ship
- Office-at-sea, cargo processing, ship diagnostics and crew welfare driving the maritime space
- SES has cemented solid, long-term contracts and with virtually global providers, and is establishing recognition and 'brand' with end-users (fleet owner/operators)
 - Already serving up to 2,000 aircraft today
 - 5% of group revenue (revenue +25% in 2015 at constant FX)
 - 20%-30% of SES HTS already pre-committed, two years ahead of OSD



Passengers expecting a home-equivalent quality of service

Importance of moving with changing consumer demand patterns supports SES's technology approach

	Yesterday	Today	Tomorrow
Satellite	L-band	Ku wide beam and HTS Ka spot beams	GEO Ku/Ka HTS, MEO
Antenna	Flat aperture	Phased Array	Metamaterial & conductive coverings
Modem speed (FWD / RET)	6 Mbit/s / 4 Mbit/s	150 Mbit/s / 18 Mbit/s	200 Mbit/s / 30 Mbit/s
Throughput per plane	1 Mbps	2-10 Mbps	>200 Mbps
Typical app	Email	Email, Browsing, Social Media and Video Streaming	At home-type experience (including HD video)
Take up rate	3%	6%	>50%
Date rate per seat ⁽¹⁾	166 kbps	0.5 Mbps	>2 Mbps

1) Assuming an average of 200 passengers per aircraft



Providing a scalable and optimised global solution



SES[']



Delivering differentiated, holistic solutions using SES' GEO and O3b



SE⁹





▲ SES's global aero capabilities well placed to deliver optimal IFE/IFC solutions





Case study: Delivering seamless connectivity with SES Maritime+



- Customised connectivity solutions using best mix of technologies for specific users
- ▲ Multi platform offerings including iDirect, Gilat, Comtech
- Cooperation with manufacturers on new antenna development (flat panel, tri-band, GEO/MEO)



Shaping the future by innovating at all levels



Accelerating SES's future-proof differentiation

Three key principles:

