

# INDIA: GETTING READY TO LEAD IN IFC

## India SatCom 2020

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PRESENTED BY:

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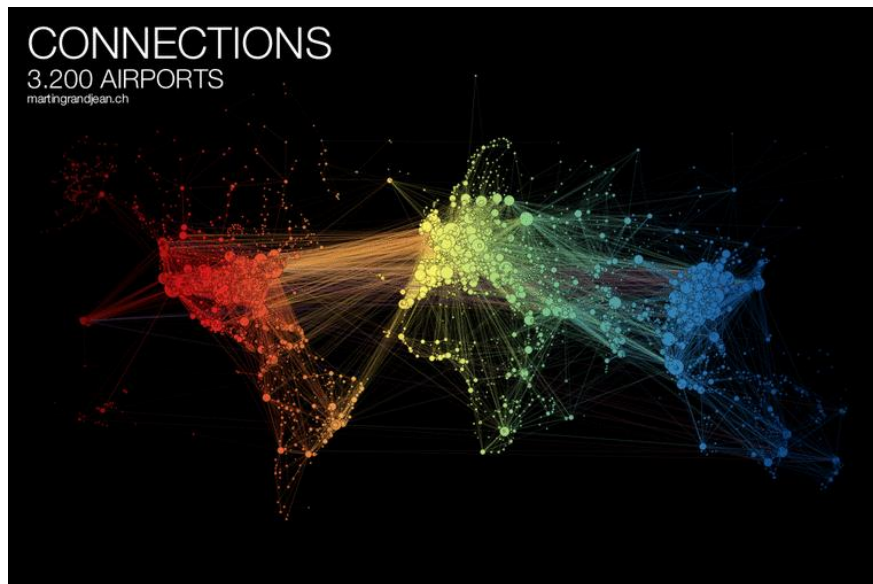
SVP, Segment Marketing Management, Aero

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PRESENTED ON:

25 November 2020

## Growing airline passenger traffic



# 7.8b

passengers to travel in 2036; almost doubling the 4 billion air travelers expected to fly this year

# 3rd

largest commercial aviation market by 2026 - INDIA

# 6.1%

annual baseline growth, expected to result in a total market of 520M India passengers in 2037, driven primarily by domestic air travel

# COVID-19 Impact On Airline Industry



Global passenger kilometers were down 73% in September 2020, and are expected to average -66% growth for the full year 2020



66% of surveyed carriers expect demand recovery to pre-crisis levels to take longer than 2 years



Domestic markets are faring better than international routes, with 72% of surveyed carriers expecting long-haul flights to resume in H2 2021

Year-on-year change in global passenger kms  
(September 2020)

Domestic

-43%

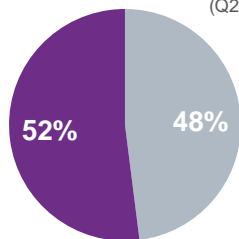
International

-89%

Global

-73%

IFC-equipped aircraft in the APAC region (excl. China)  
(Q2 2020)



Grounded due to COVID-19

Active



The Asia-Pacific market is widely expected to recover to pre-crisis passenger demand levels faster than the rest of the world



Cost cutting is a focus for airlines, though APAC carriers are experiencing less acute contractions in EBIT margins than those in other regions

# Indian IFC requires the right satellite network services partner now



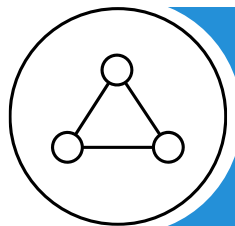
## **FUTURE-PROOF SOLUTION**

- ▲ Expansion spectrum
- ▲ Satellite roadmap tailored for mobility
- ▲ Redundant satellite network
- ▲ Scalability



## **GLOBAL COVERAGE**

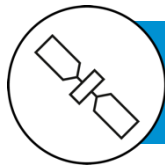
- ▲ Global presence
- ▲ Comprehensive coverage over high-density areas



## **OPEN ARCHITECTURE**

- ▲ Flexibility
- ▲ Ability to leverage innovation across the value chain

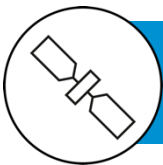
# SES: the right partner to build the next generation IFC



## GEO wide beam

Constellation of over **50 GEO wide beam satellites** providing unmatched resiliency

**99% global coverage**

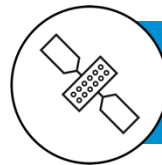


## GEO HTS

Expanding GEO HTS fleet

Most recent generation of in-orbit high-throughput satellites

**SES-12 HTS** now in service for India



## MEO HTS

Constellation of **20 MEO satellites** launched

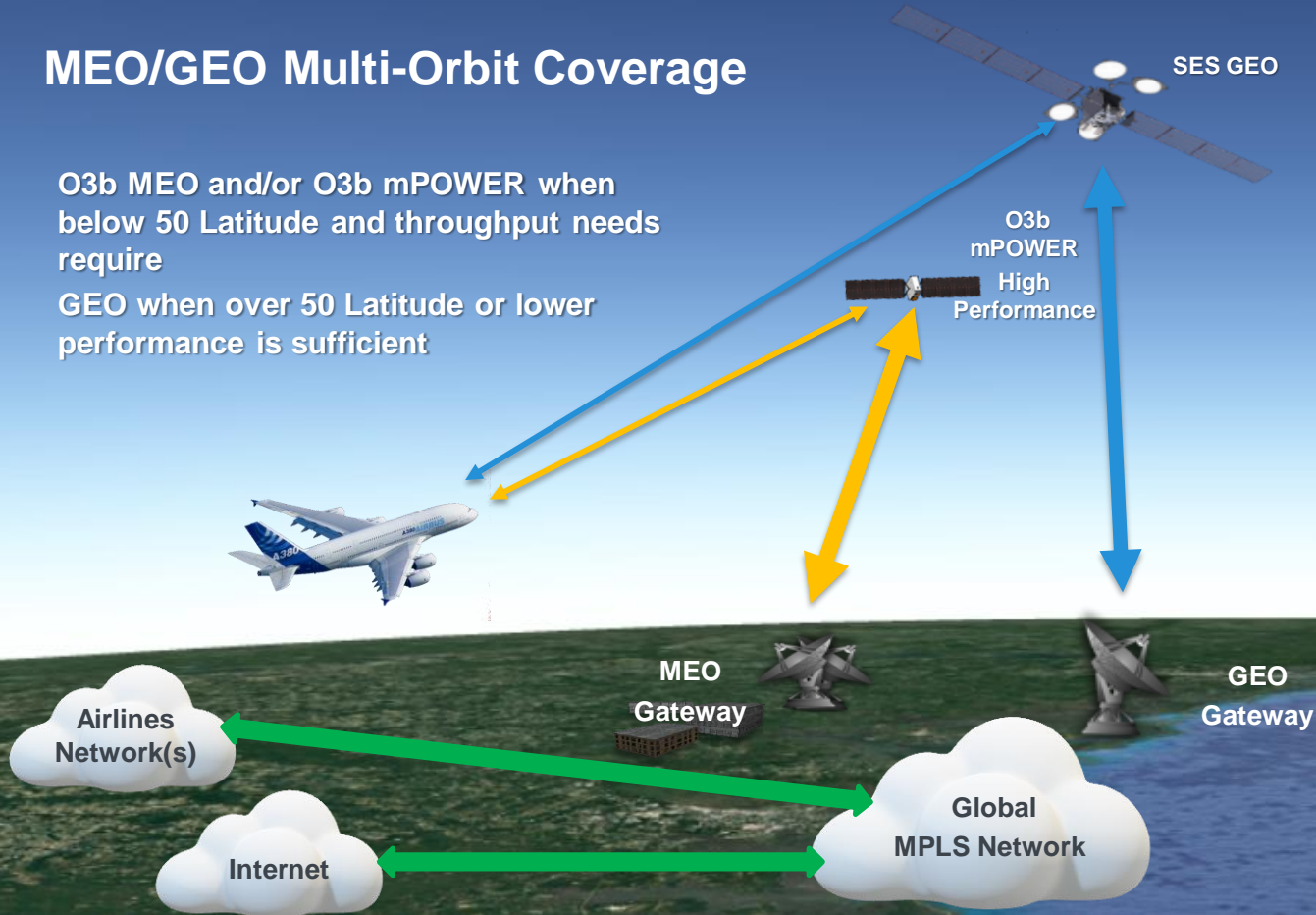
High throughput, lowest latency

Only commercially successful NGSO fleet in the market

**11 MEO satellites with next-generation O3b mPOWER** will deliver unprecedented flexibility and scalability

# MEO/GEO Multi-Orbit Coverage

- O3b MEO and/or O3b mPOWER when below 50 Latitude and throughput needs require
- GEO when over 50 Latitude or lower performance is sufficient



## ▲ MEO

- High Throughput and SDRD to allow for new IFEC solutions

## ▲ GEO

- Broadcast capabilities for content distribution and standard IFEC

## ▲ 4G/LTE/5G

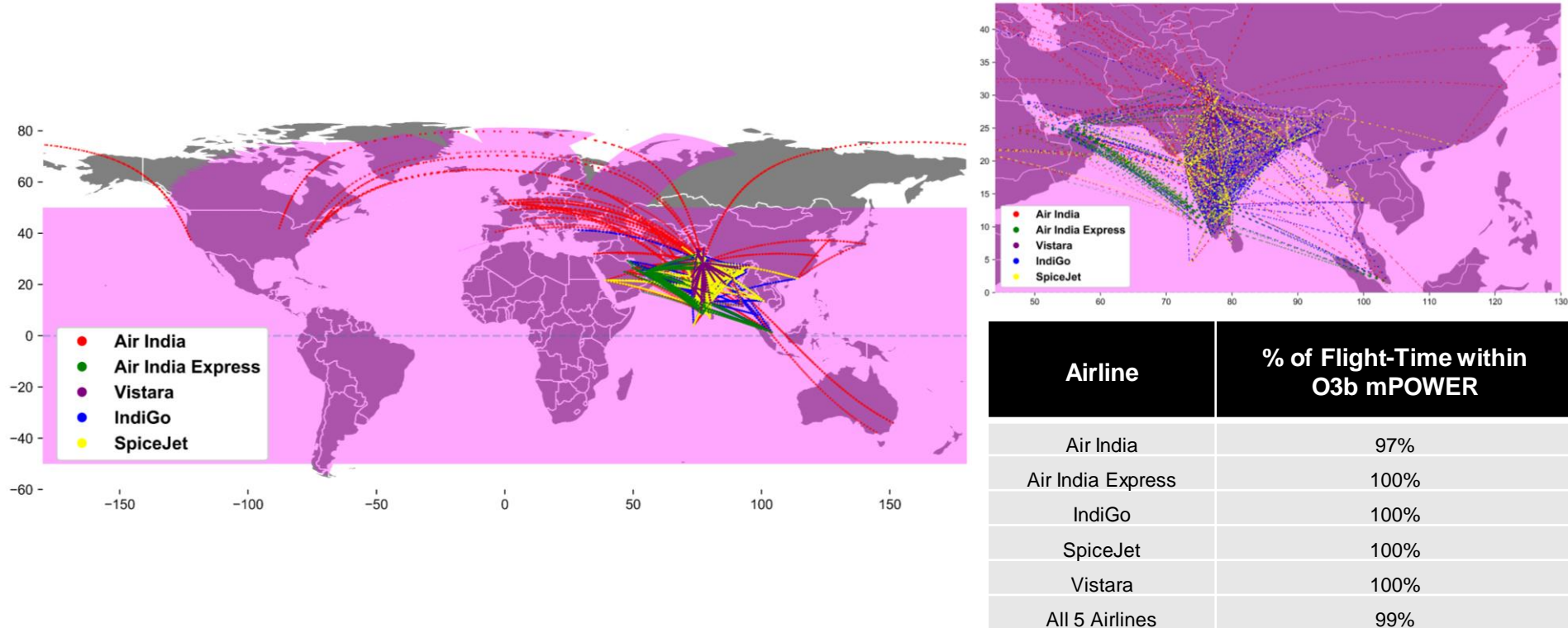
- Allows for continuous connectivity from home to the plane network

## ▲ WiFi

- Allows for gate communications & downloads
- Gate to Gate communication

# Indian Commercial Airlines (some examples)

## O3b mPOWER Flight-Time Analysis



# SES Ka Solution

## ▲ MEO-GEO Hybrid

- GEO FWD + MEO RTN (Overlapping coverage)
- GEO FWD/RTN + MEO FWD/RTN (Non-overlapping coverage)

## ▲ Follow-the-Aircraft (MEO)

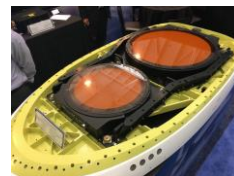
- To be used over less frequently traveled routes/regions (oceans, etc.)

## ▲ Terminal: Thinkom 2517 (2Ka)

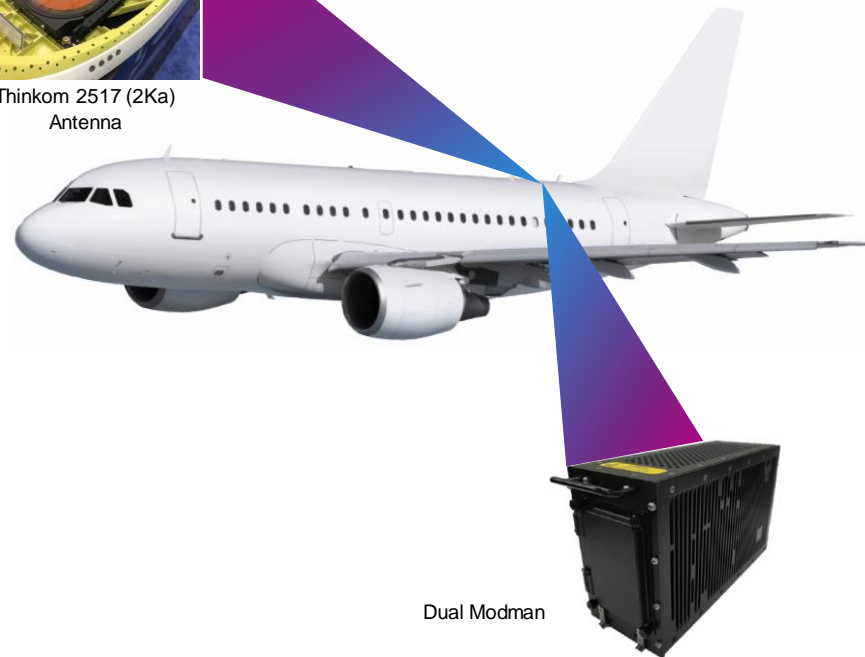
- Interoperability among LEO, MEO, and GEO constellations
- High throughput: Up to 400 Mbps down and 100 Mbps up
- High spectral efficiency: Up to 3 bits/Hz

## ▲ Dual Modman (iDirect/Gilat)

- Intel Xeon processor
- Managed Gigabit ethernet switch
- Cellular modem (global)
  - Sierra Wireless 4G/LTE modem for global access



Thinkom 2517 (2Ka)  
Antenna



Dual Modman



# The Solution is Future-proof

## TODAY



IFC cost is additional to cost of flight ticket



0.5 Mbps per seat | 150 Mbits/18 Mbits modem speed

Only a share of passengers are connected

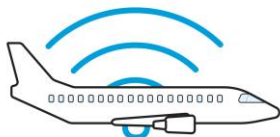


email, browsing, social media, video streaming

## TOMORROW

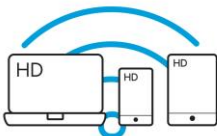


IFC Bundled into passenger's regular phone plan

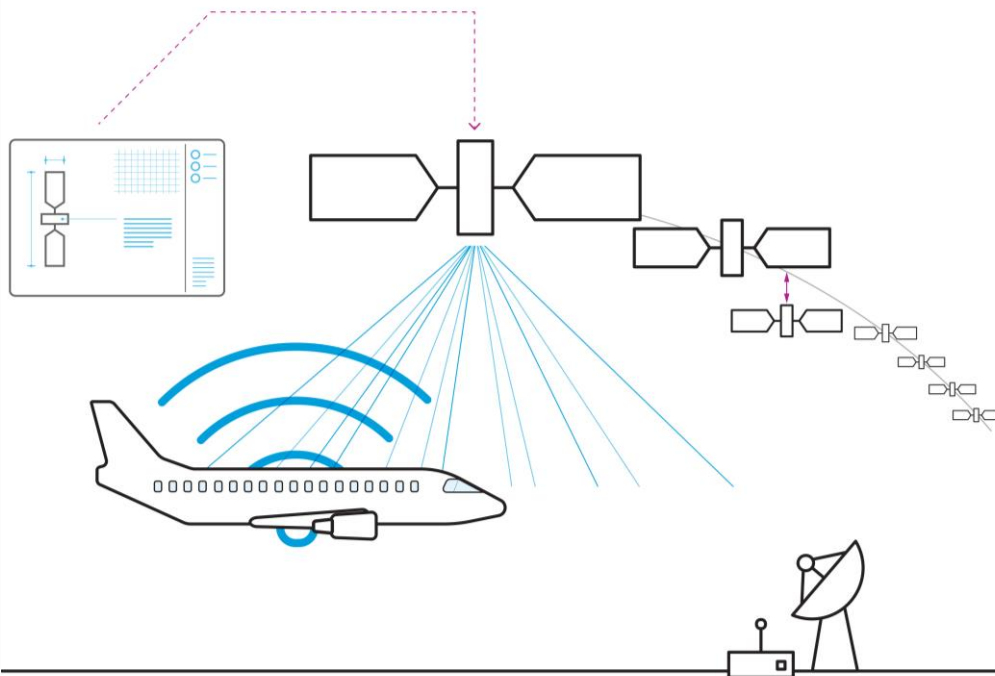


Home user speeds

**Total passenger immersion**



**At home experience including HD video and Virtual Reality**



# SES's unique capabilities provide global seamless connectivity

## Integrating with Open Standards

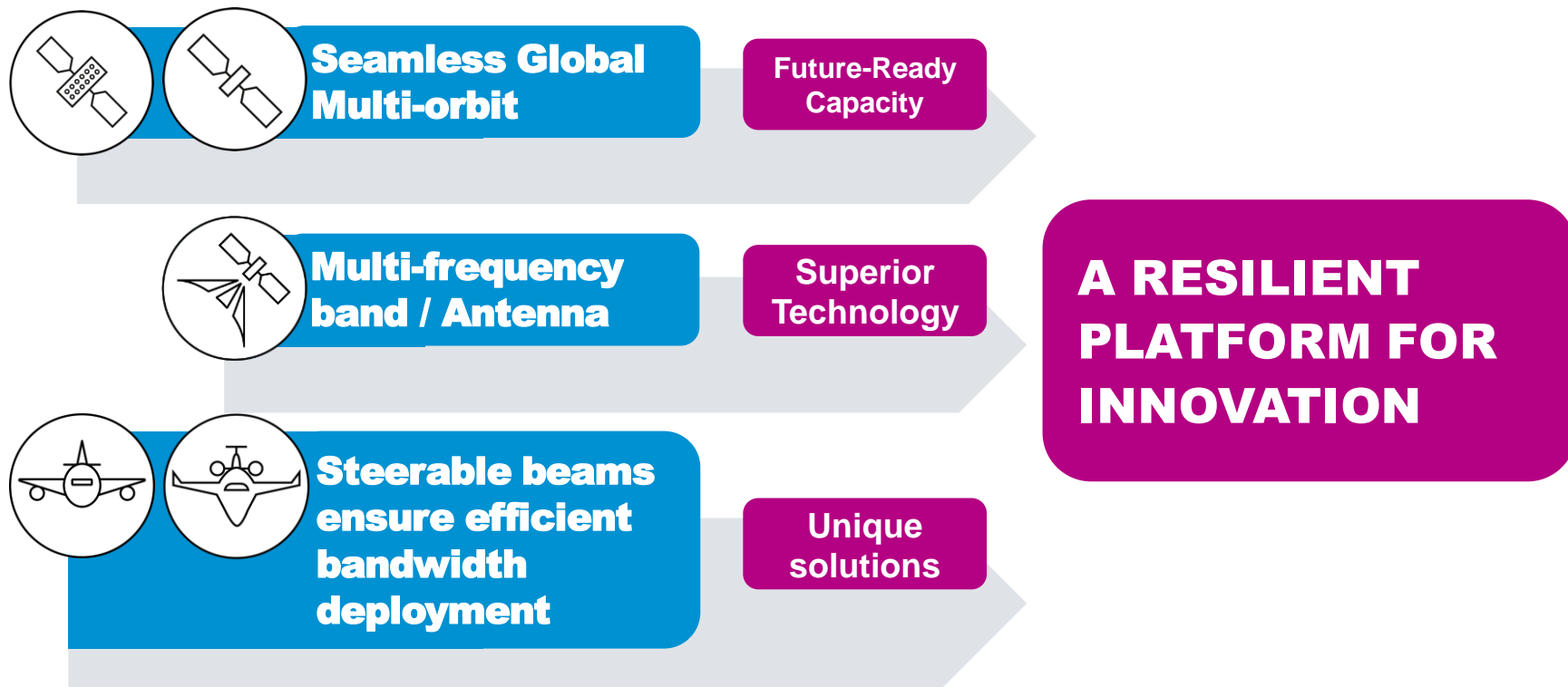


- ▲ We strongly believe the future mainstream acceptance of satellite requires us to engage with the rest of the communications industry and have actively been involved in open standards development efforts.
- ▲ SES is currently participating in the development of 5G and the support of satellite-based services to be integrated into the specification.
- ▲ 3GPP framework and architectures are being developed for current and future services.
- ▲ Engaged with Open Standards working groups and developing internal strategies to integrate into SES environments.



**SES's engagement in open standards and 5G development provides Airlines with future proof satellite solutions that integrate seamlessly with Telcos, MNOs and Cloud Providers.**

## Always a step ahead with our partnership



# Questions?

SES<sup>▲</sup>



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