

# Satellite Market and Technology Trends

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Denpasar, Bali, Indonesia



# OUTLINE

## 01 Telkom Indonesia in Brief

Satellite Market and  
Technology Trend

## 02



# Telkom Business Group



Total Shares  
100 799 996 400 shares



Government  
52.1%



Public  
47.9%



Market Capitalization  
Rp 426 Tn (USD 32.5 Bn)  
As of July 2016



Note:  
T : Telecommunication  
IME : Information, Media & Edutainment

# TELKOM Main Program & Performance

1

## Telkomsel

### Leading Mobile Digital Business

- **157.4 mn** customers, increased +9.2% YoY.
- 3G/4G-capable device users: **70.1 mn** (+45.7% YoY).
- Mobile data payload jumped 82.7% YoY to 278,583 TB.
- **5.9 mn** customers changed to USIM to enjoy 4G LTE.
- **17,869 new BTS** in 2015 and Added **15,384 new BTS** in 1H16, 90.5% are 3G/4G BTS.

2

## Indonesia Digital Network

### Drive Digital Home & Enterprise

- IndiHome subs reached **1.5 Million** in 1H16
- Fixed broadband users (incl. non-IndiHome) increased 15.7 % YoY to 4.3 mn
- **10 Mn** fiber-based homes passed, 1.5 Mn Indihome 3P customers
- **> 83,000 km** nationwide fiber-based backbone network
- **> 70,000 m2** data center

3

## International Expansion

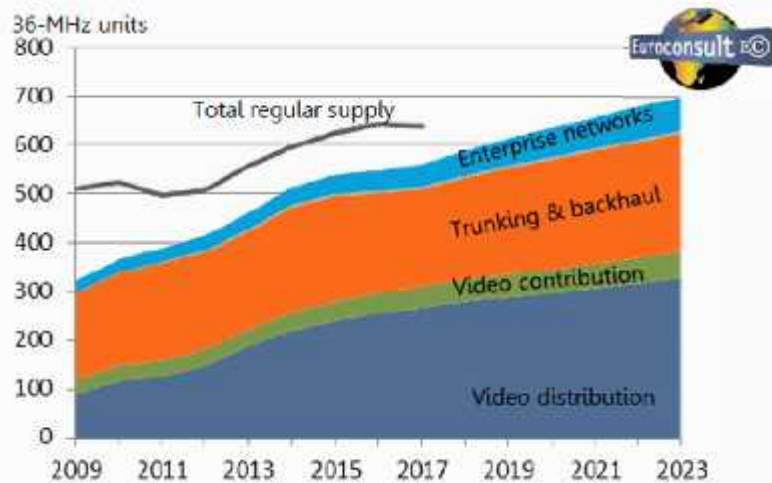
### Smart International Business Growth

- **10** International Footprint
- **SEA-US Submarine** Cable System: Connecting Indonesia to United States, Consortium of 7 operators , expected completion 4Q17
- **SEA-ME-WE 5** Submarine Cable System, Connecting Indonesia to West Europe, Consortium of 22 operators, expected completion 4Q16

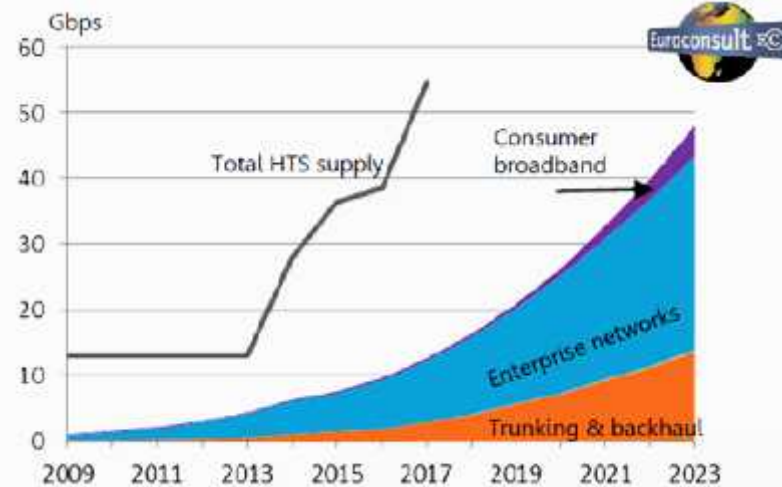
# Satellite Market & Technology Trend

## Market Dynamics in South East Asia

Satellite industry growth moving from video distribution to high throughput satellite (HTS) broadband applications



- Video channel distribution continuing to grow
- Backhaul still growing due to fast-growing wireless networks (4G) and enduring gaps in terrestrial networks
- **Traditional Satellite service business models are evolving.** Managed Capacity or Managed Satellite Services are generating new interest.

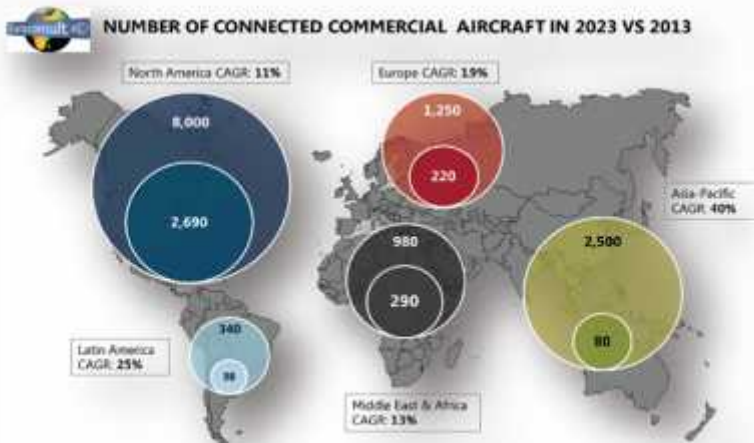
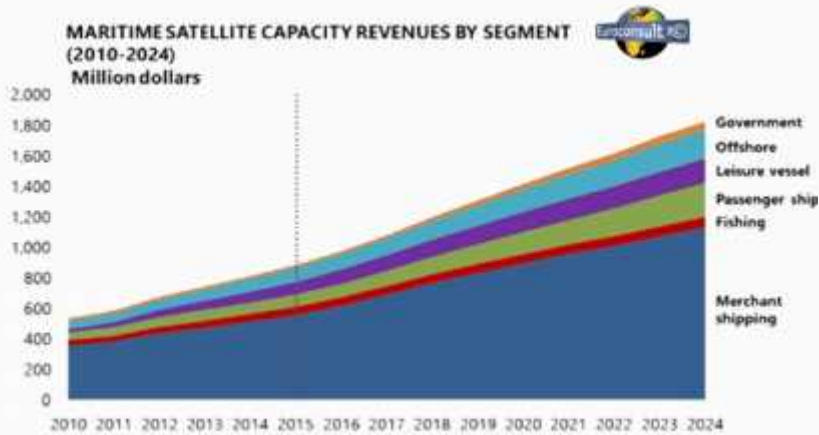


- HTS capacity growing substantially to meet the potential exploding demand for broadband access
- In SEA, Ku-band HTS is expected to remain the dominant frequency band, as Ka-band HTS suffer from rain fade propagation
- HTS should be designed for specific service level and designed for specific market
- Could be an over supply of HTS capacity coming from national player and regional player.

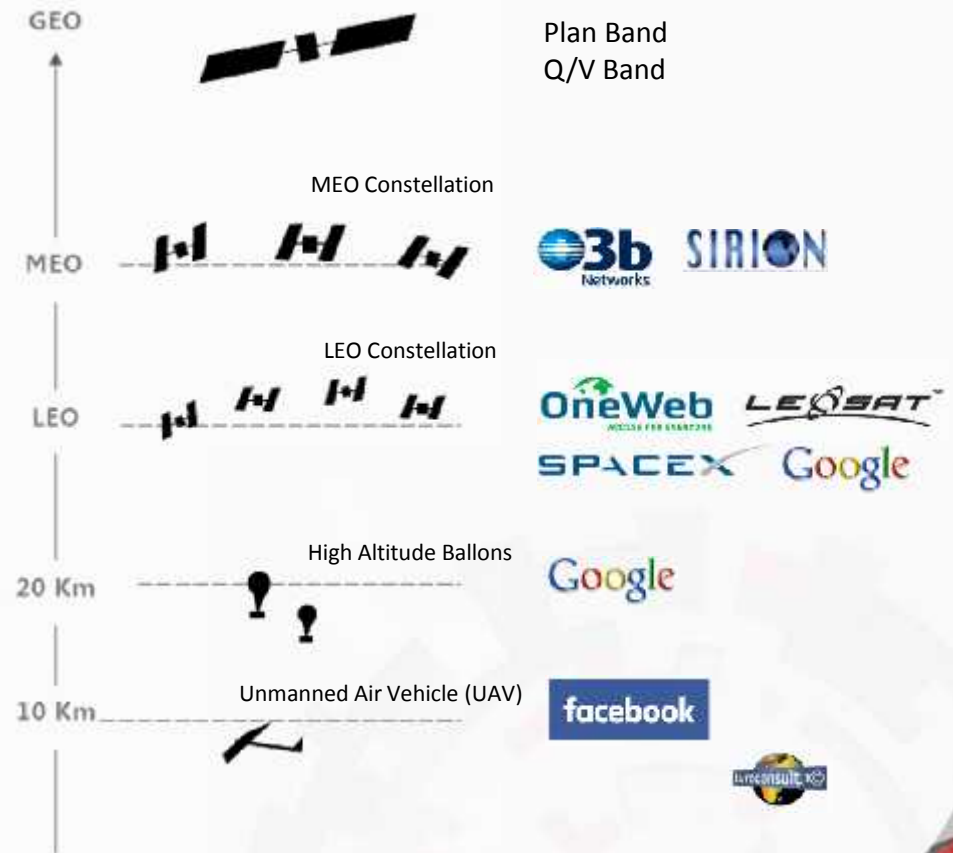
- The big selling point HTS is higher throughput at a lower cost. HTS satellites will put significant price pressure on traditional satellites
- HTS business model needs vertical consolidation – megabits based

# Satellite Market & Technology Trend

Growth in mobility, especially aeronautical (in-flight communications) and maritime

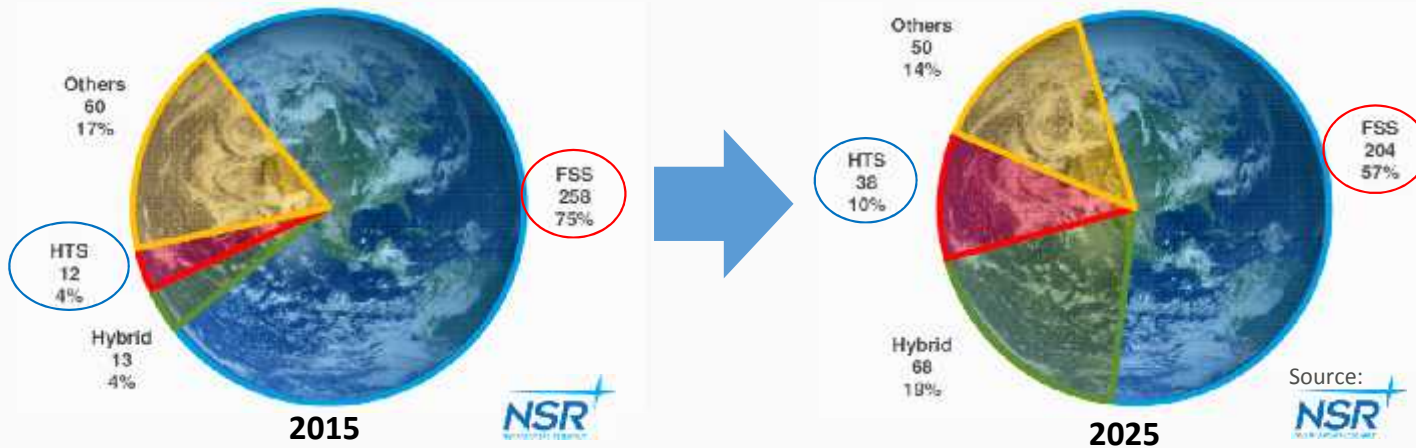


## New Communications Infrastructure



# Satellite Market & Technology Trend

1. NGSO Constellation continuing to progress
2. Satellite industry growth moving to high throughput satellite (HTS) broadband applications

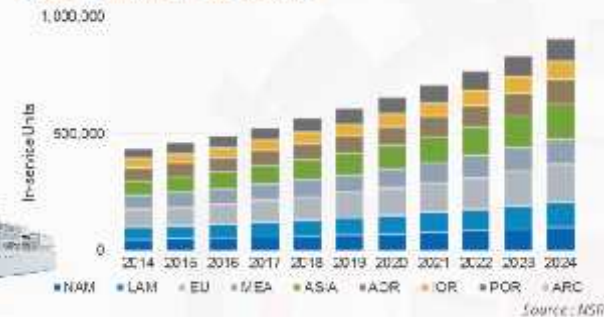


3. Growth in mobility, especially aeronautical (in-flight communications) and maritime

Aeronautical Satcom In-Service Units by Region



Global Maritime In-Service Units

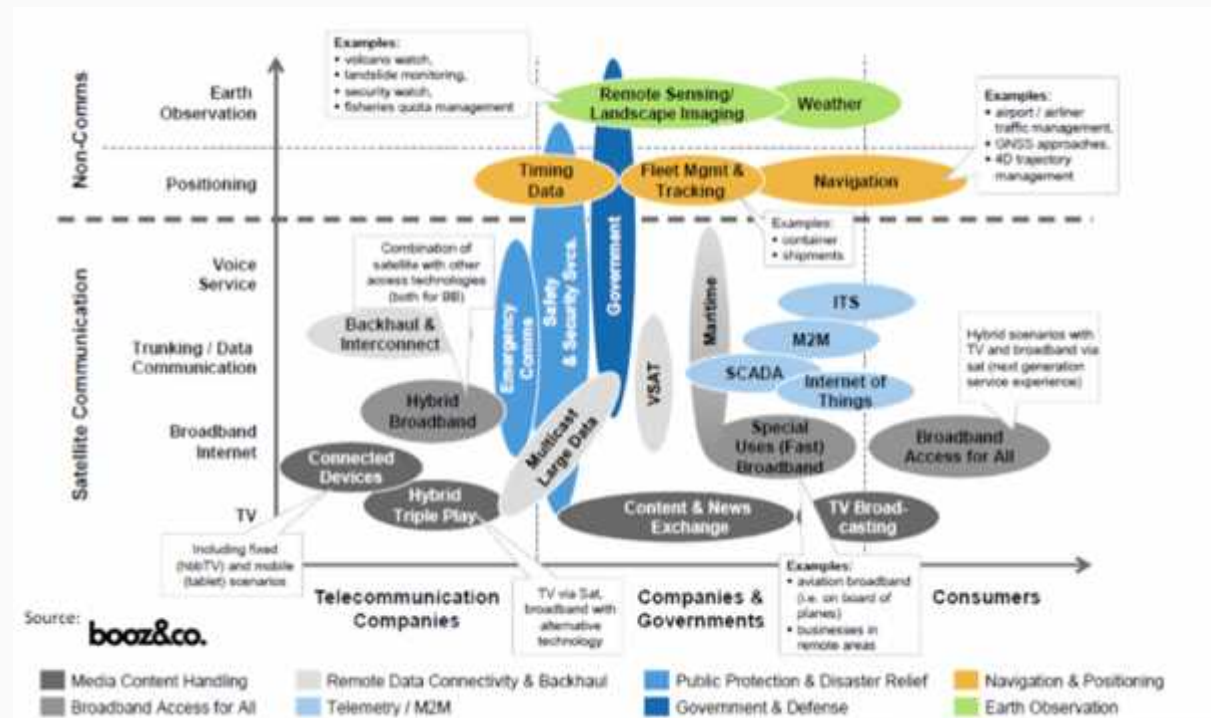


# Satellite Services Trends



## Converged Satellite Services

Distinctions are becoming less significant as technological advances find ways to merge the





# Thank You

PT (Persero) Telekomunikasi Indonesia, Tbk



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