



# OneWeb

ACCESS FOR EVERYONE

The OneWeb logo features a green globe icon above the word "OneWeb" in a large, bold, blue sans-serif font. Below the main text, the tagline "ACCESS FOR EVERYONE" is written in a smaller, green, bold, sans-serif font.

Tony Azzarelli  
VP Regulatory and Government Affairs

28.04.2016

# The unconnected and underserved world (1)

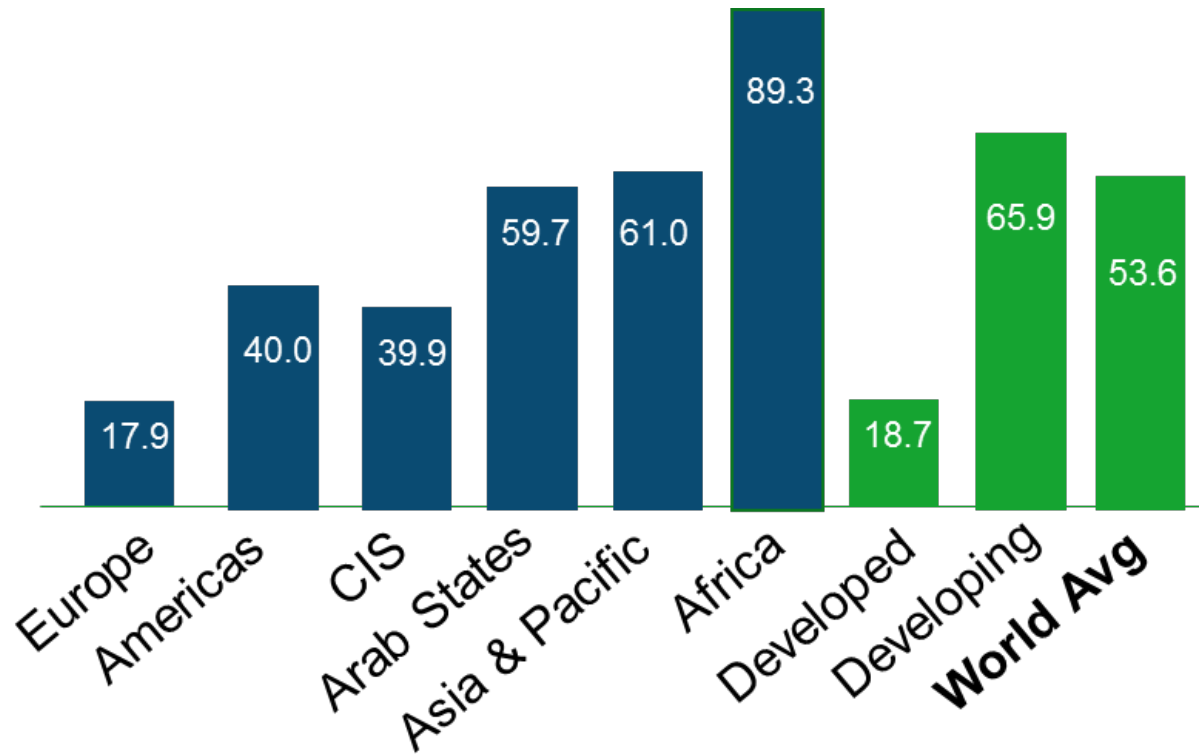
World Average	53.6%
Developing Countries	65.9%
Developed Countries	18.7%



- Figures based on International Telecommunications Union's estimates for 2015

# The unconnected and underserved world (2)

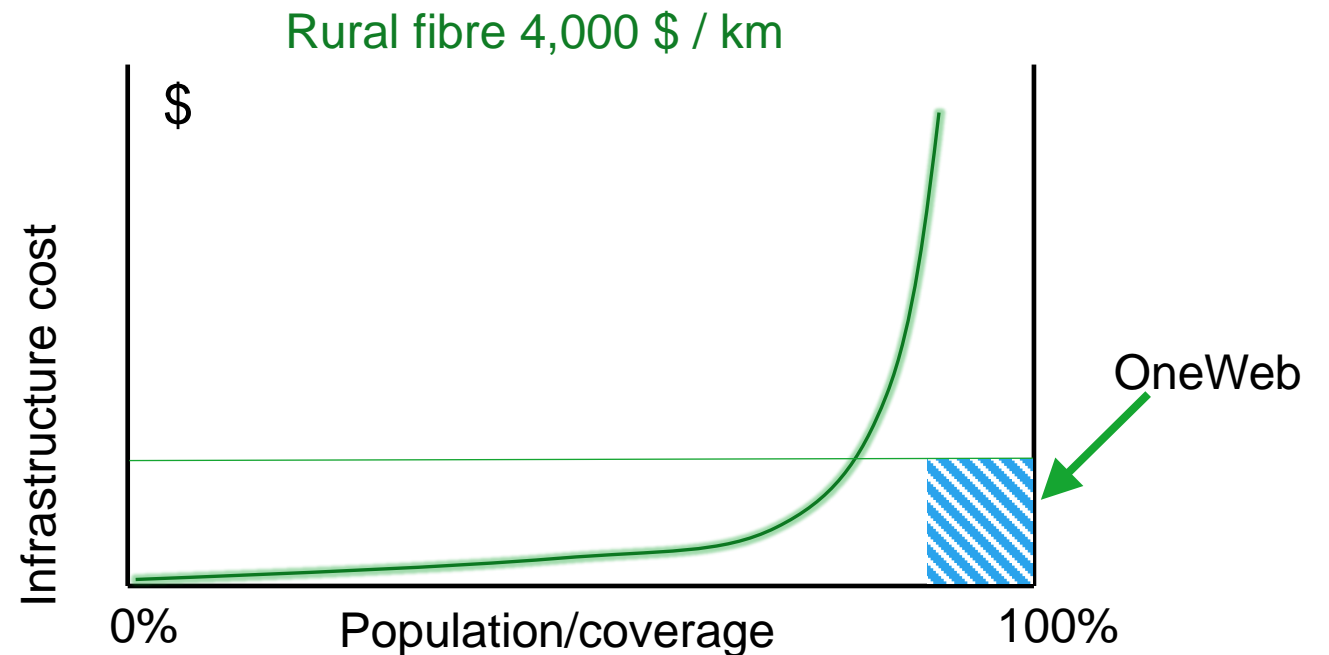
% of unconnected households



\*figures based on 2015 ITU estimates

# OneWeb is here to bridge the Digital Divide

- Prohibitive costs to deploy fibre in rural areas
- Satellite solutions are cost effective



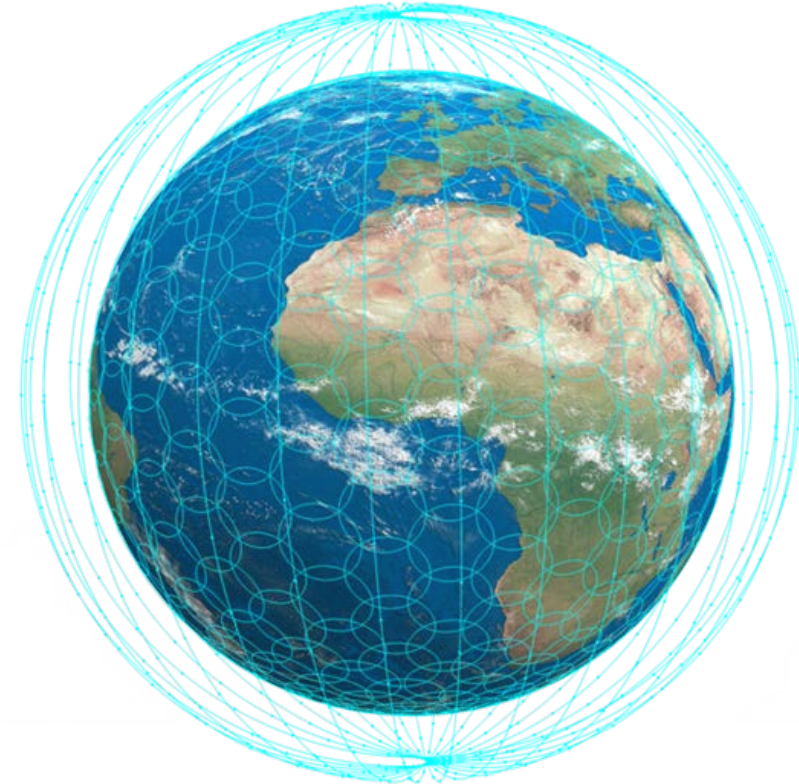
# World Class Group of Partners and Shareholders



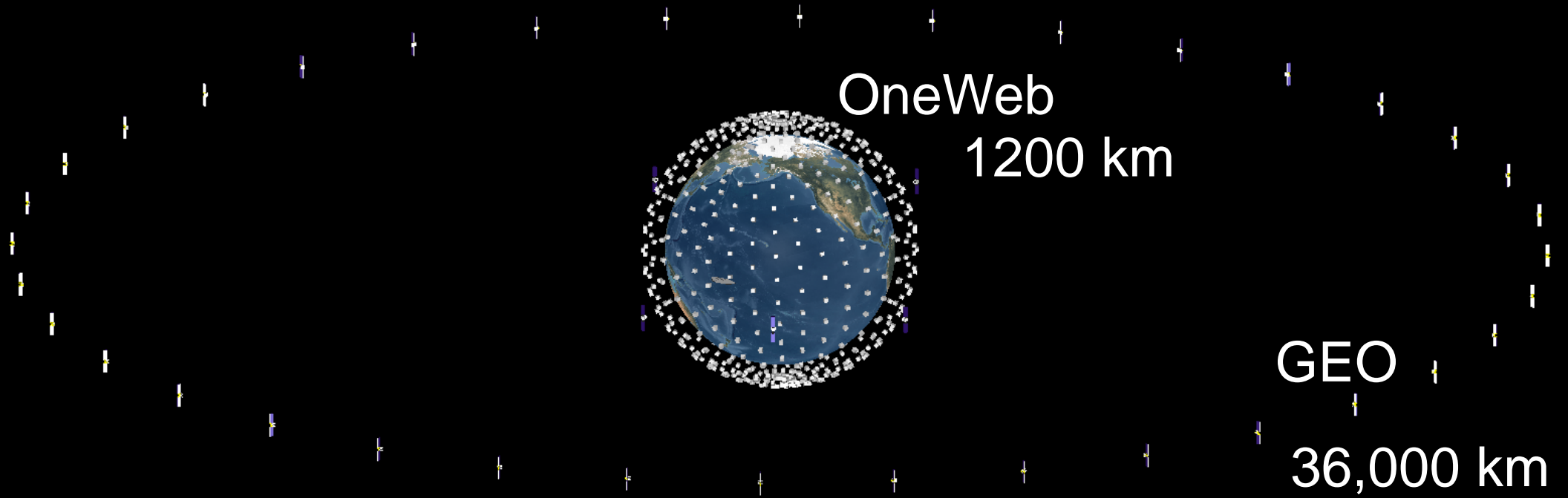


# OneWeb's Global Constellation

- 648 satellites by 2020 - initial deployment
- Low Earth Orbit - altitude of 1,200 km
- 18 orbital planes - 36 satellites per plane
- Ku-band and Ka-band
- Global coverage with high quality broadband



# OneWeb orbit is much lower than Geostationary



# OneWeb's Broadband Quality

Comparable to terrestrial internet services

**Speed:** Download up to 50 Mbps  
Upload up to 25 Mbps

**Volume:** 10 to 150+ GB per month

**Latency:** Round trip as low as 50 ms

**Coverage:** Everywhere thanks to High elevation angles



# OneWeb enables Connectivity and Growth

## Citizens inclusion in the Digital Economy

- e-Government
- e-Medicine
- e-Learning
- e-Commerce
- e-Office
- Tele-conferencing
- Cloud computing
- e-Games

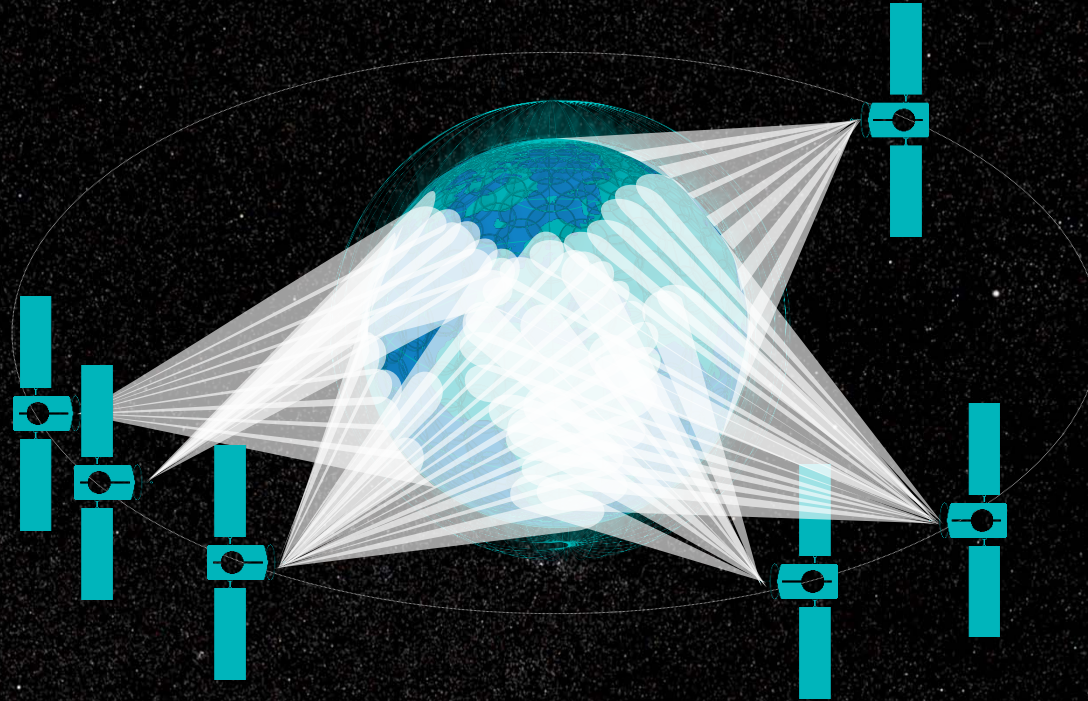
# OneWeb / Intelsat - Hybrid Network



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- Launching 6 Epic<sup>NG</sup> Satellites and counting

# OneWeb Will Serve Three Market Segments

## Satellite Broadband

- Consumer Residential
- Corporate Small Enterprise
- Integrated Small Cells

## Cellular Backhaul

- Macro-cell
- Satellite Trunking

## Enterprise Vertical Markets

- Trains/Vehicular
- Maritime / Oil&Gas
- Aeronautical
- Government
- Public Protection & Disaster Relief



# Rural Broadband Access for Schools



# Coca Cola Kiosk – integrated Wifi and Cellular





# Mobile Broadband





# First Responder – Emergency Services



# Instant and Constant Infrastructure



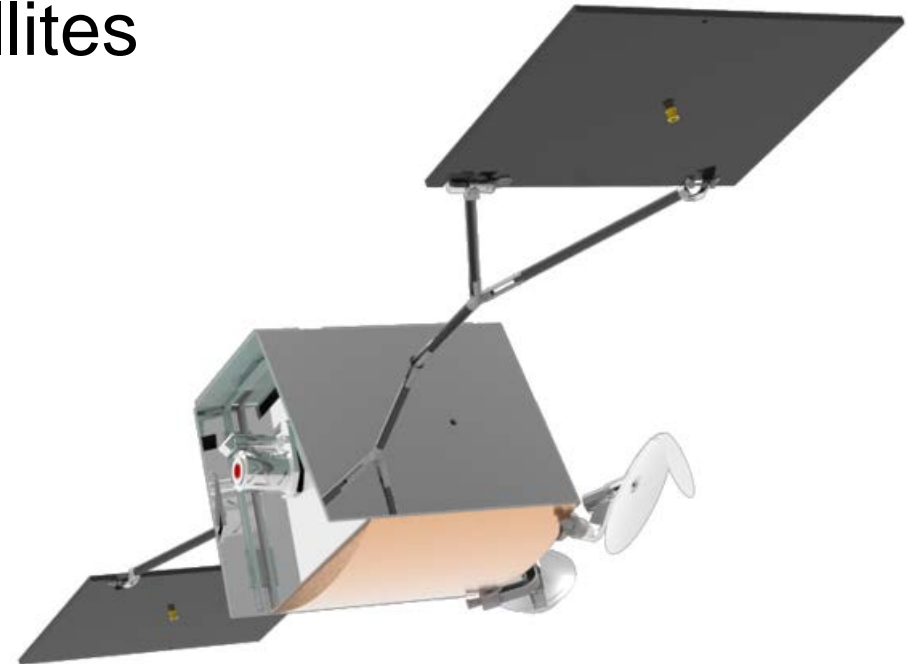
# OneWeb Satellite Manufacturing

## Joint Venture



Small, low cost and quick to build satellites

- High volume production
- Simple satellites
- Size: ~1 cubic meter, ~150 kg
- Lifetime: 7+ years
- De-orbit capability





# OneWeb Ground Network



- Hughes developing and deploying network
- Requires 50-70 sites around the world



# OneWeb Launch Campaign from 2018

## Arianespace / Soyuz Contract

- 21 Soyuz + options
- 3 Separate launch pads
- First Launch 2017
- Campaign from 2018-2019





# Launchers – Virgin Galactic

- 39 Virgin Galactic launches
- From authorized space ports
- Immediate space access





# OneWeb is a Good Stewards of Space

**OneWeb goal is to operate more cleanly and responsibly than current policies require**

- Space is a shared, natural resource that must be protected
- Passionate about preventing debris creation
- Respecting existing space assets
- Ensuring a safe and sustainable space environment

# Clean Space

## OneWeb is Taking Responsible Measures

- Operating at a safe orbit (1200 km)
- Positional knowledge of satellites (by GPS and radars)
- In-orbit flight coordination & Space data sharing
- Maneuverability and deorbiting of satellite
- High reliability of deorbit components
- Spacecraft “designed for demise” at re-entry

# Thank you



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