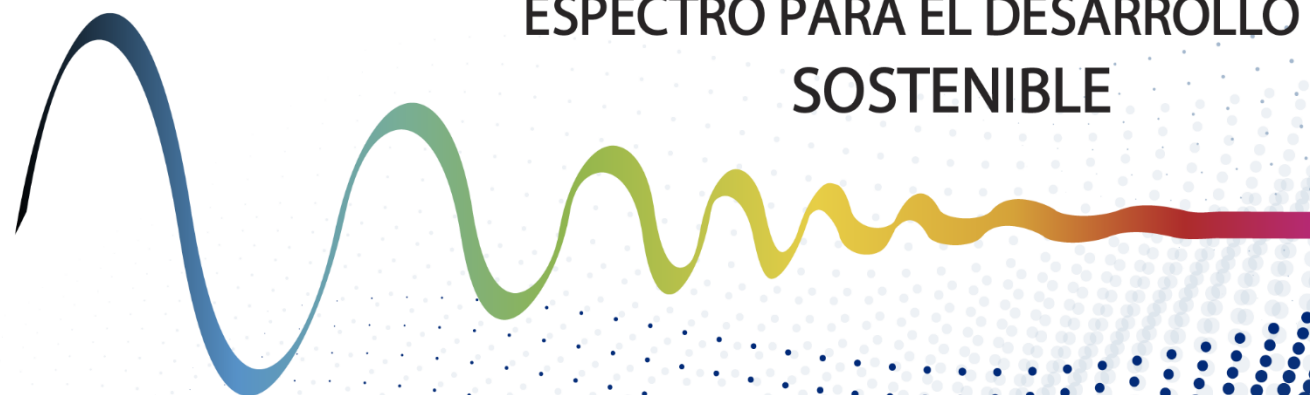


9º CONGRESO INTERNACIONAL DE ESPECTRO

ESPECTRO PARA EL DESARROLLO
SOSTENIBLE

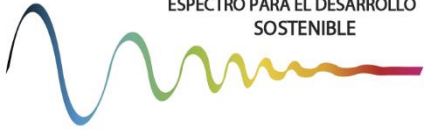


Panel 3: Conectividad y redes futuras
17 de septiembre de 2019
OneWeb -- Gabriela Lago



9º CONGRESO
INTERNACIONAL
DE ESPECTRO

ESPECTRO PARA EL DESARROLLO
SOSTENIBLE



Bridging the digital divide




www.ane.gov.co




We are OneWeb

A well-established partner ecosystem

 A pioneering communications company - aiming to bring connectivity to everyone, at any time, anywhere

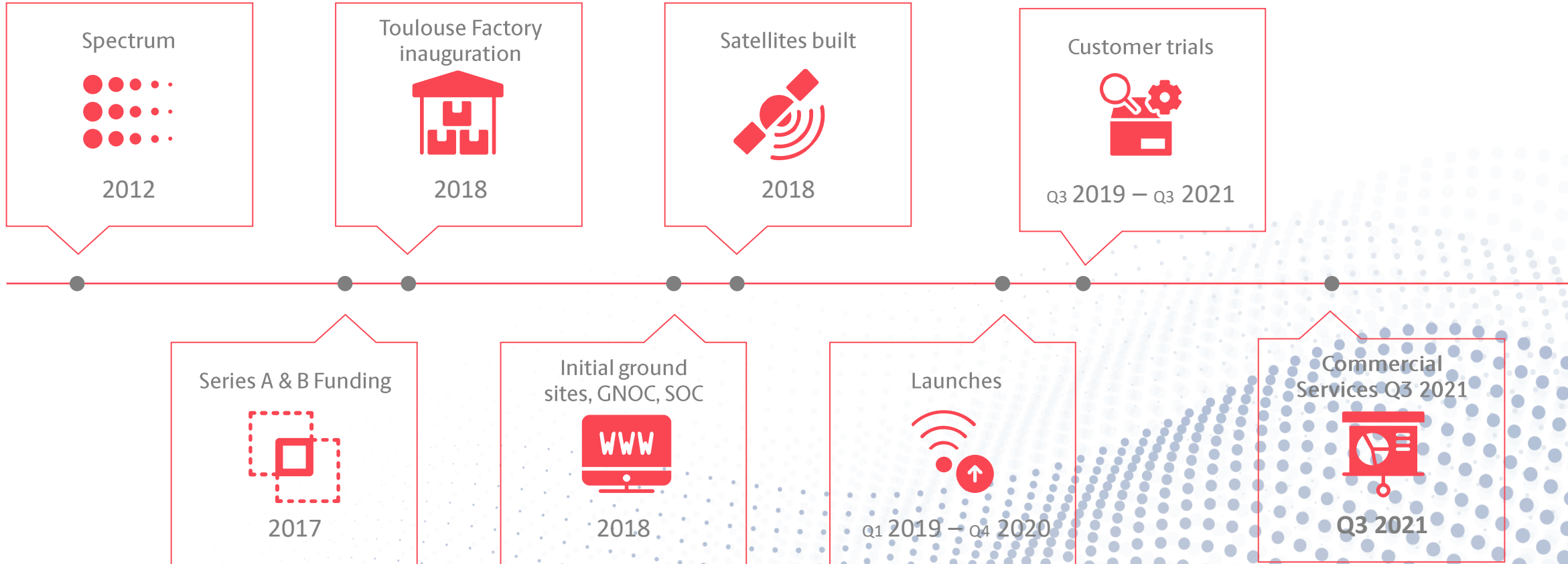
 First to market with truly global, low-latency broadband connectivity



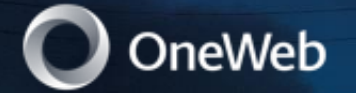
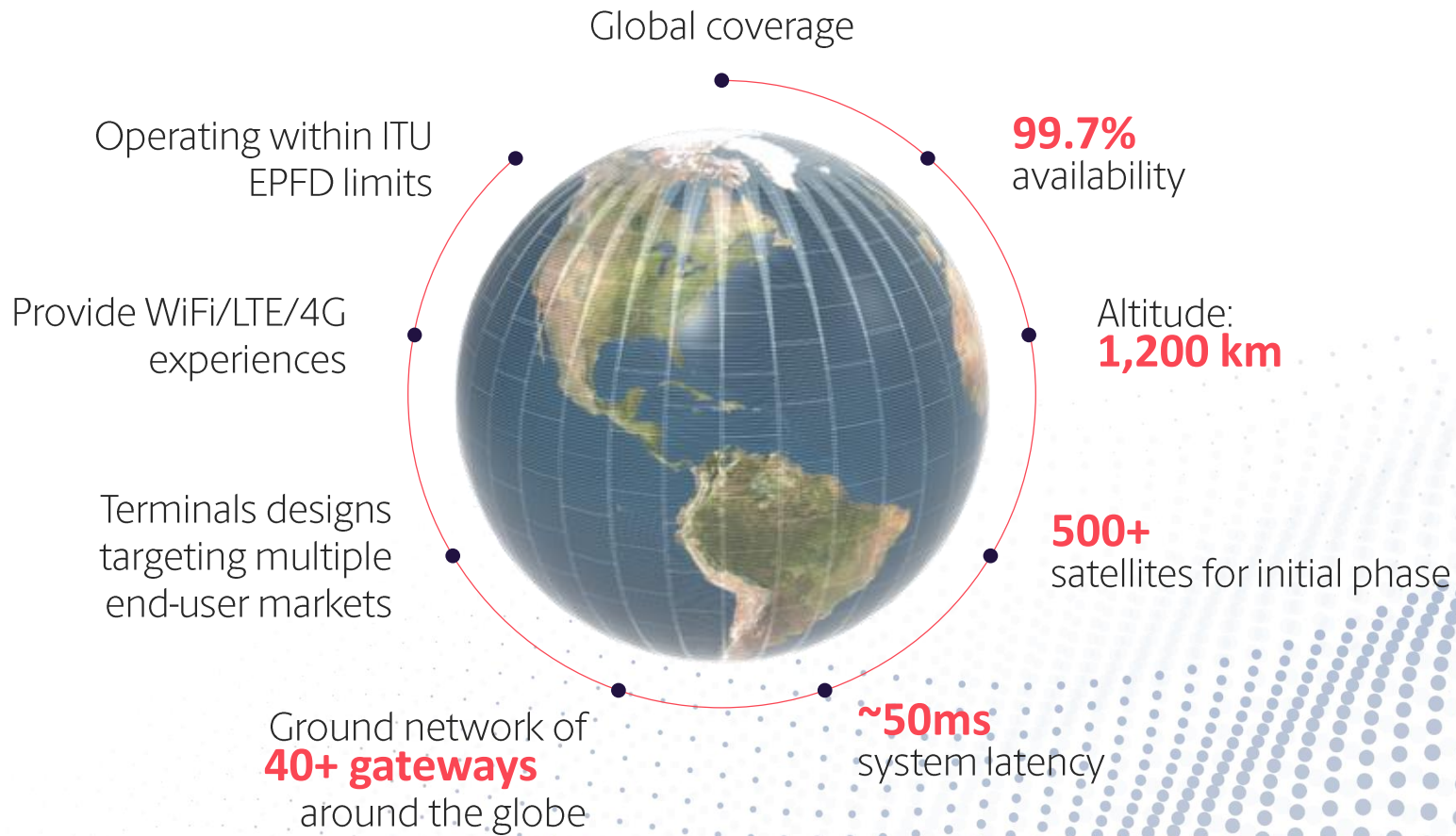
Investment from a host of world-class partners - >\$3bn raised to date 

Strategic partnerships with leading industry players to help us realize our vision 

History



OneWeb Constellation



The OneWeb Solution

How it Works

Constellation

- Orbital planes; multiple satellites per plane
- Innovative beam technology
- World's only high-volume satellite production yields lowest cost per satellite

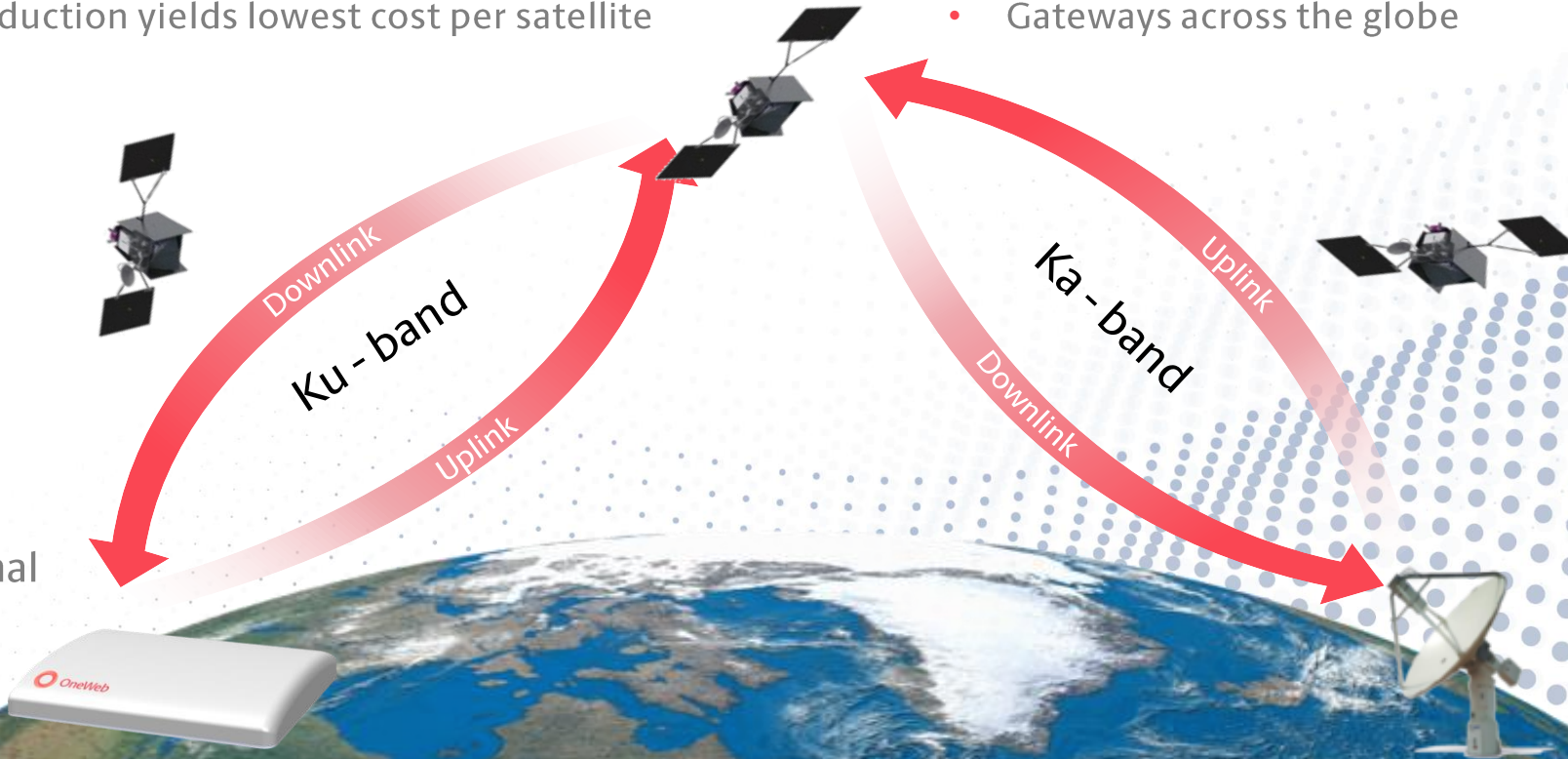
Ground

- A range of user terminals to meet varying target markets
- Many can be easily installed without position aiming
- Gateways across the globe



User Terminal
30cm to 65cm UT

Gateway
3.4m Antenna



EASY TO INSTALL



Built in WiFi
and LTE
available

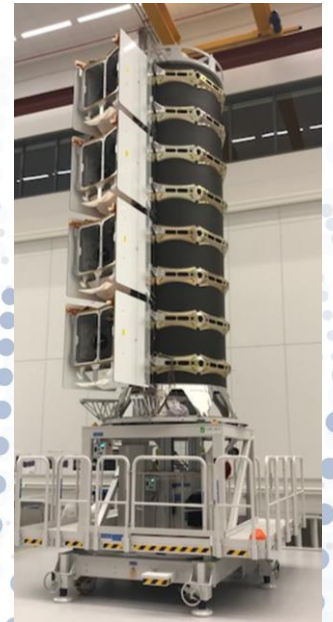
OneWeb Satellite System

Connecting with the grounds system



OneWeb – Launch of First Six Satellites

February 27, 2019



Ongoing testing

[OneWeb's Satellites Deliver Real-Time HD Streaming from Space - July 16, 2019](#)

The test demonstrated:

Extremely low latency with an average of 32 milliseconds

Seamless beam and satellite handovers

Accurate antenna pointing and tracking

Live streamed video at resolutions up to 1080p (Full HD)

Test speed rates of more than 400 Mbps



Transforming satellite production

OneWeb Satellites Factory -- July 21, 2019

[More details on OneWeb Satellites Factory](#)



World Radio Conference 2019

Agenda Items affecting NGSO Satellite Systems

Overview of NGSO-related AIs

- **WRC-19 Agenda Items for the promotion and deployment of non-GSO systems:**
 - **Agenda Item 7, Issue A** — **Bring Into Use (BIU) and the new Milestone Regime**
 - **Agenda Item 7, Issue H** — **Required Non-GSO Information for API and CR/C**
 - **Agenda Item 1.6** — **Non-GSO FSS in V- and Q-bands**
 - **Agenda Item 9.1.3** — **Non-GSO FSS in C-band (3 and 7 GHz)**
 - **Agenda Item 9.1.9** — **Possible new allocation to GSO FSS in 51.4-52.4 GHz**
 - **Agenda Item 10** — **WRC-23 agenda items**

- **Other WRC-19 Agenda Items for the protection of non-GSO systems:**
 - **Agenda Item 1.13** — **Additional identifications for IMT-2020 in bands above 26 GHz**
 - **Agenda Item 1.5** — **GSO ESIMs in the 27.5-29.5 GHz band**
 - **Agenda Item 1.14** — **HAPS Identification**

About Agenda Item 7, Issue A

- Agenda Item 7, Issue A seeks to provide **clarity to the process of Bringing Into Use (BIU) the frequency assignments of non-geostationary (NGSO) satellite systems** by developing appropriate regulatory provisions that:
 - define the requirements for BIU and
 - maintain the frequency assignments of a constellation of NGSO satellites in the Master International Frequency Register (MIFR).
- The CPM draft proposals to Agenda Item 7, Issue A aim to:
 1. establish rules and timelines for the BIU of frequency assignments to all Non-GSO systems,
 2. develop a milestone-based approach to Non-GSO system deployment, and
 3. consider transitional measures for Non-GSO systems already brought into use before the entry into force of WRC-19 decisions to meet the newly developed deployment milestones.
- With the appropriate measures adopted at WRC-19, Agenda Item 7, Issue A **prevents the warehousing of spectral and orbital resources** by encouraging deployment of NGSO satellite systems within a reasonable amount of time.

Agenda Item 7, Issue A – Regional Positions for WRC-19

Comparison of announced positions in different regions

| | APT ⁽¹⁾ | ASMG ⁽²⁾ | ATU ⁽³⁾ | CEPT ⁽⁴⁾ | CITEL | RCC |
|---------------------------------------|-------------------------|---|--------------------|--|--|---|
| Transition measures | 01/01/21 | 01/01/21 | 01/01/21 | TBD | 01/01/21 | 01/01/21 |
| Duration of milestones (associated %) | TBD | 1 year (10%) 3 years (33%) 5 years (100%) | TBD** | 2 years (10%) 4 years (30%) 7 years (100%) | 3 years (10%) 5 years (50%) 7 years (100%) | 2 years (10%) 4 years (30%) 7 years (90%) |
| 1 st milestone | 01/01/23 or 01/01/24 | 01/01/22 | [01/01/22] | 01/01/23 or 01/01/25* | 01/01/24 | 01/01/23 |

Notes: Transitional measures apply ONLY to NGSO systems whose 7-year regulatory period ended before WRC-19

- (1) **APT:** First milestone in 2 or 3 years (Indonesia, Singapore, China: 2 years; India: 1 year). Current draft MCP proposal commencement date Jan. 2021, 80% preliminary support.
- (2) **ASMG** position is unanimous.
- (3) **ATU** has 4 sub-regions: EACO and SADC support 1 year (10%), 3 years (33%) and 6 years (100%), while ECOWAS and ECCAS have not agreed on the options to be supported. Noted in the ATU meeting report was that “it is important that the 1st milestone take place before WRC-23.”
- (4) **CEPT:** An indicative vote showed 13 supporting 01/01/21 and 8 supporting 01/01/23

