

Satcom Forum 2018

Amsterdam, Netherlands

2018/10/09

Low Earth Orbit & CubeSats



 **KEPLER**

KEPLER COMMUNICATIONS INC.



Kepler was founded in 2015 with the mission to provide in-space connectivity services to help enable the space economy. To that end, Kepler develops next-generation satellite communication technologies and provides global data services with the intent on incrementally deploying products and technology in the pursuit of building the internet in space.



Kepler's First Satellite
Internal Name - KIPP
NORAD ID 43157

LAUNCHED

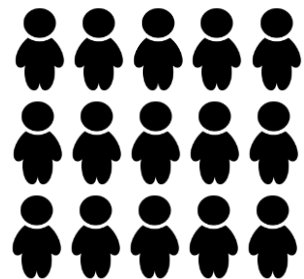
January 19th, 2018

CONFIRMED

HEALTH

January 20th, 2018

Kepler at a Glance



20 PERSON
TEAM



12 MONTHS
NAPKIN TO ORBIT
1st KU-LEO SAT



PROPRIETARY
RADIO / ANTENNA



GLOBAL KU-BAND
SPECTRUM LICENSE



PATENT FILED



2 TELEPORTS
OPERATING



PILOT
CUSTOMERS

Traditional Satellite

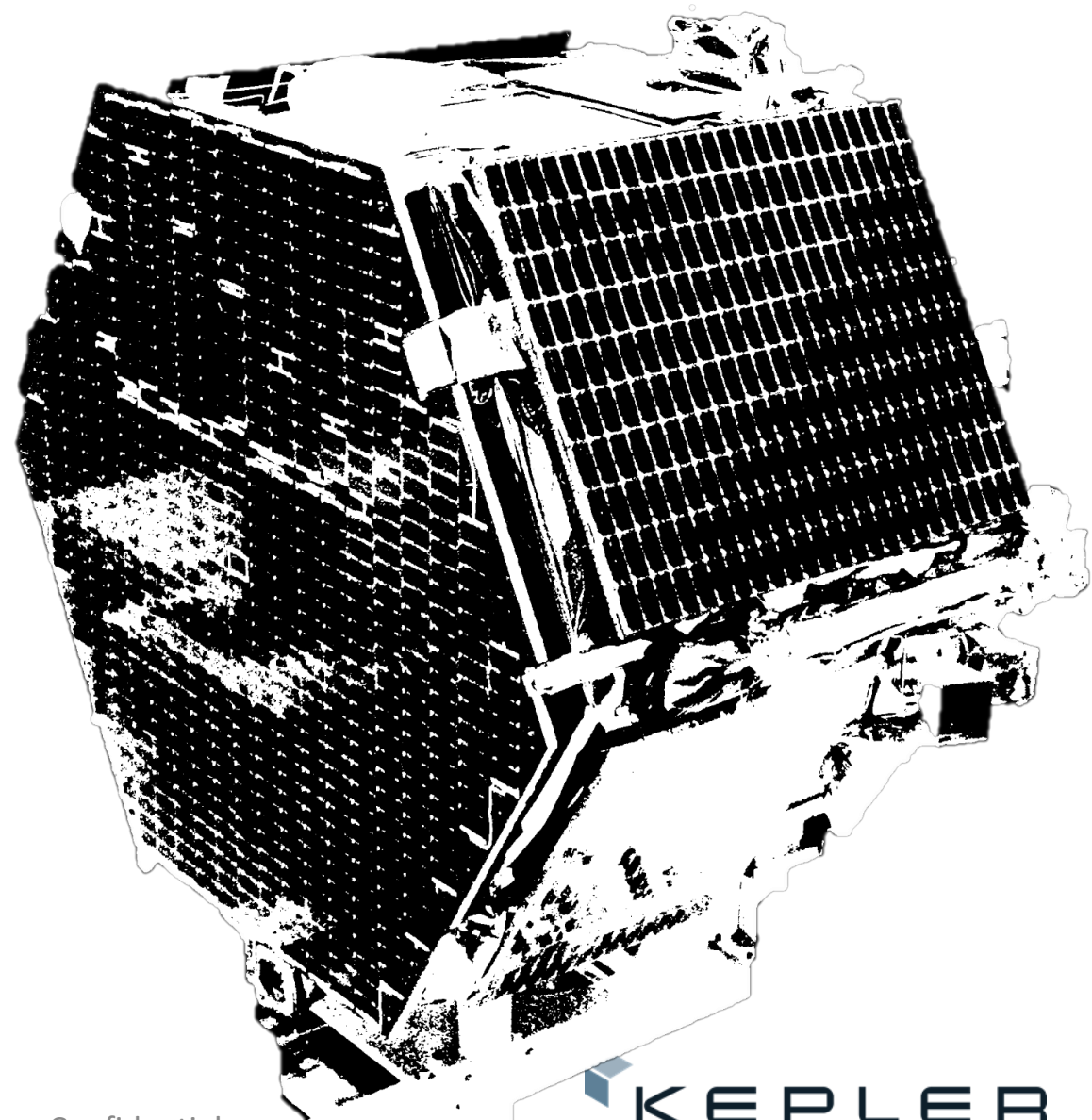


113 MM
13 YEARS
TO BUILD



REFRESHED EVERY
15 YEARS

LAUNCHED IN 2013



Kepler Satellite



1/100TH THE
SIZE & COST

01100
10110
11110

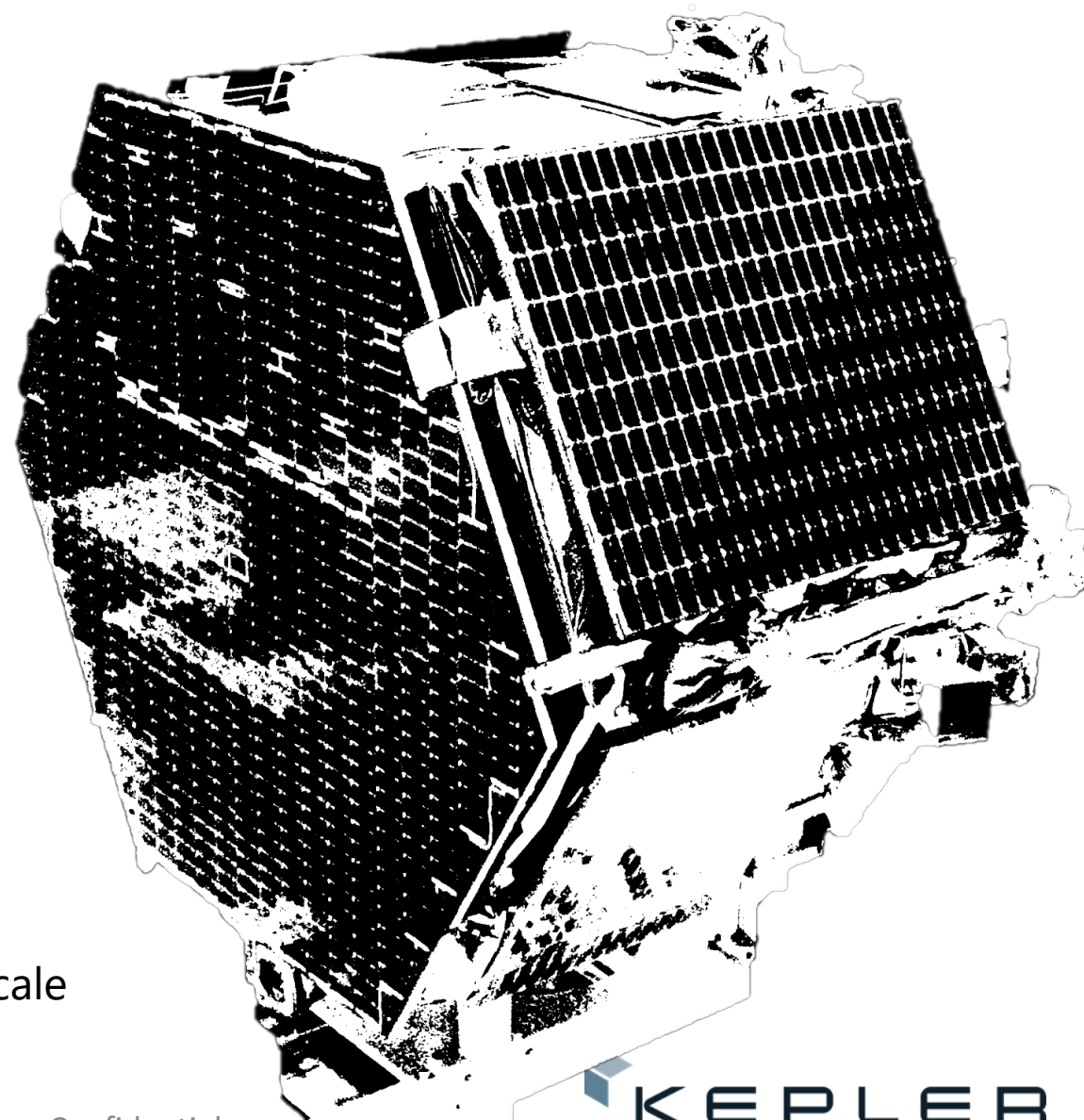
SOFTWARE
DEFINED
(DIGITAL)



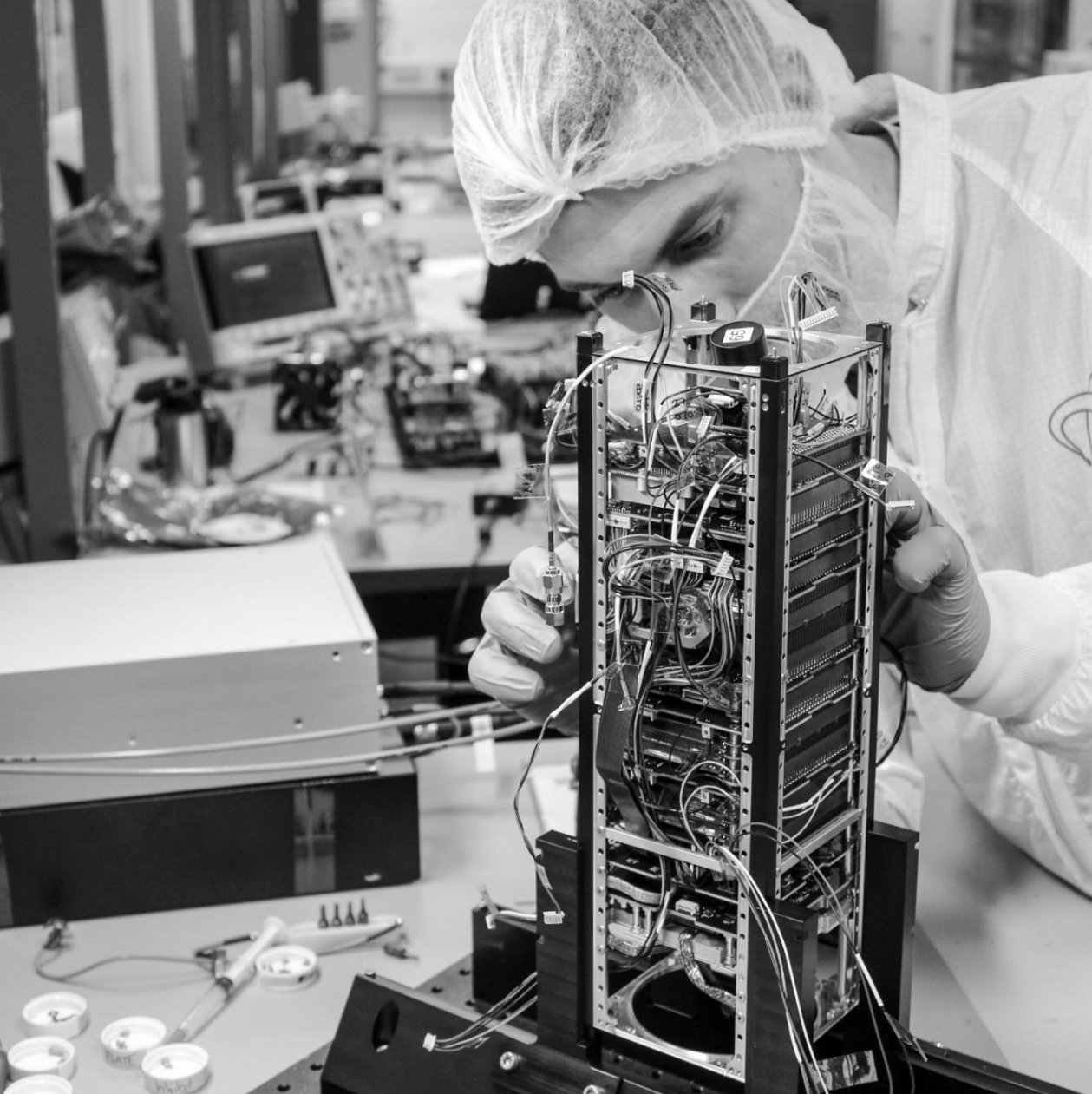
REFRESHED
EVERY 3 YEARS

Drawn to scale

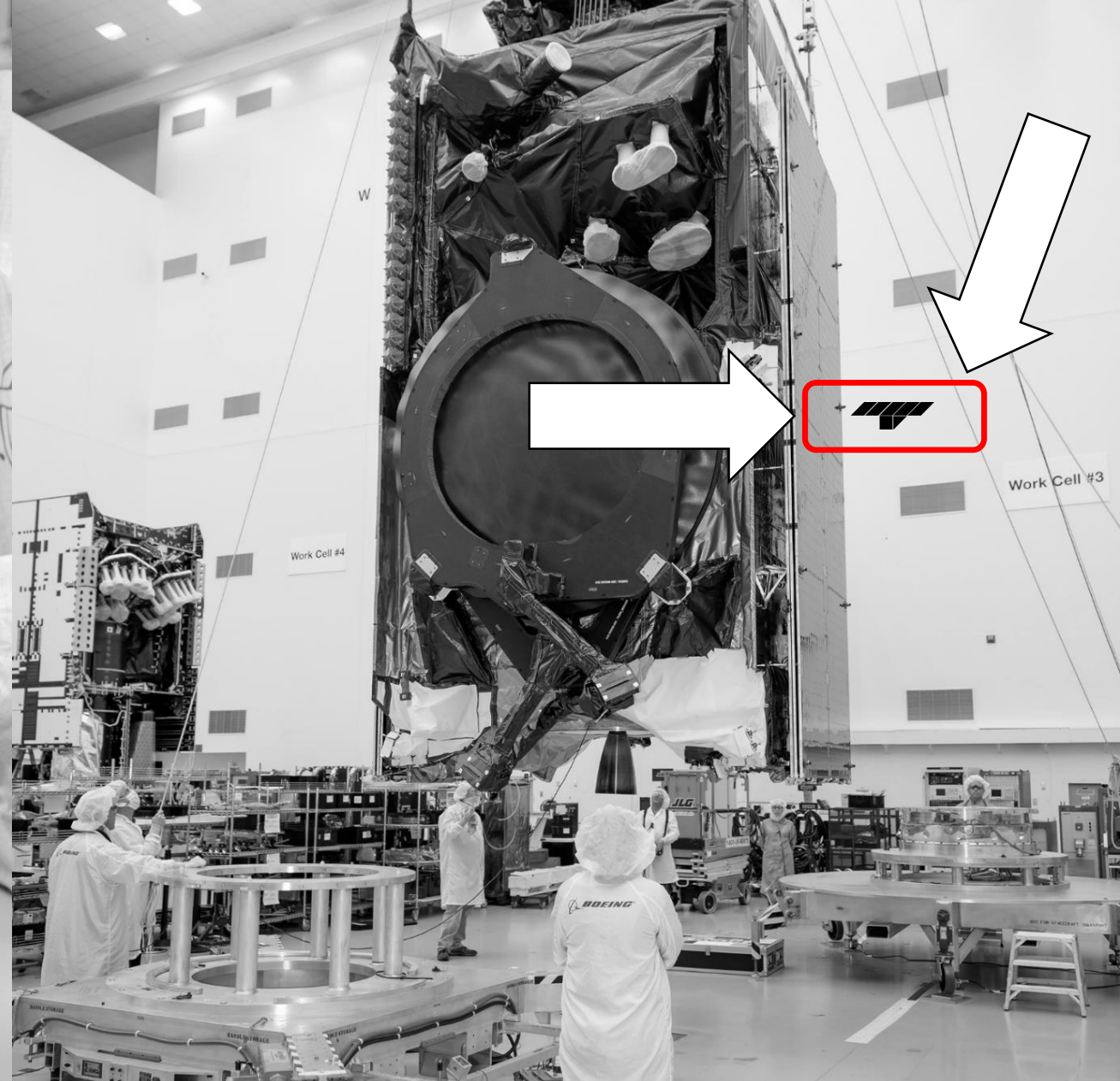
Traditional Satellite



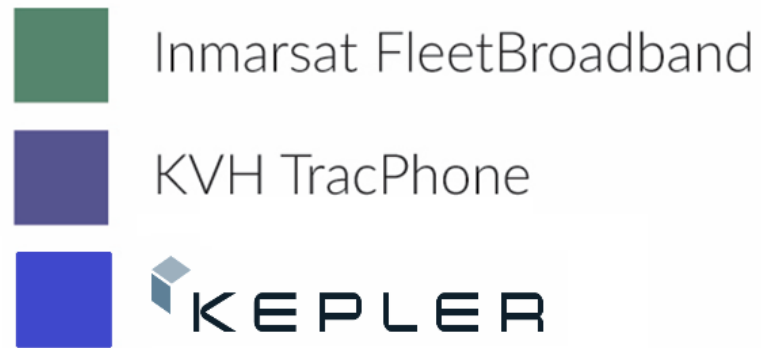
Kepler KIPP Spacecraft



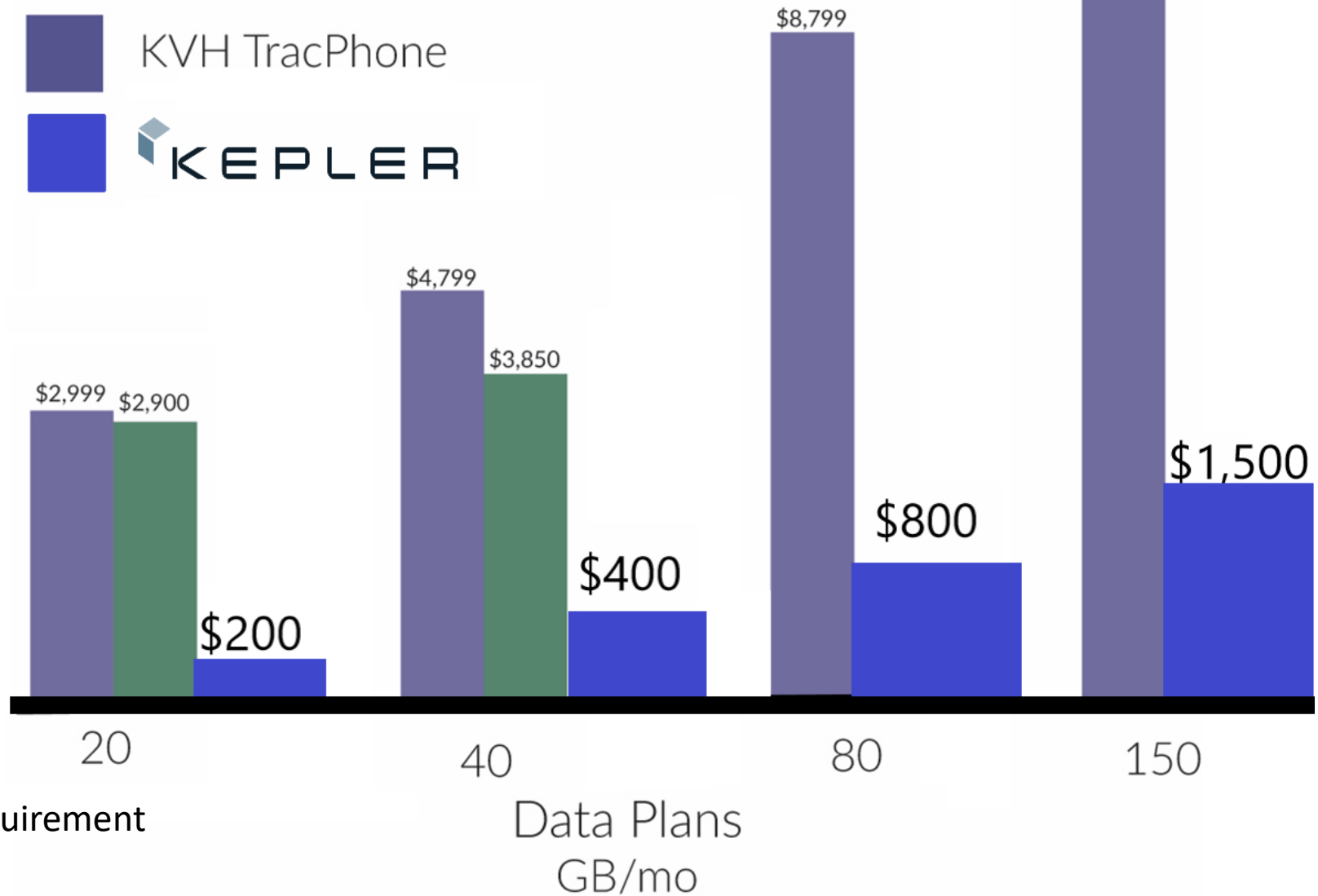
Intelsat 35e Spacecraft



Kepler Global Connect Pricing



Store & Forward
Data Plans at
~\$10/GB*



*Dependent on Plan and Annual Data Requirement

Kepler's LEO Satellites



A single low-Earth-orbit satellite at 500 km altitude will pass each pole every 90 minutes



Weighs less than 5 kg



Can be replaced every 3 years to keep up with the latest technology



Low-cost nanosatellites enables massive per GB savings when shifting to store-and-forward service



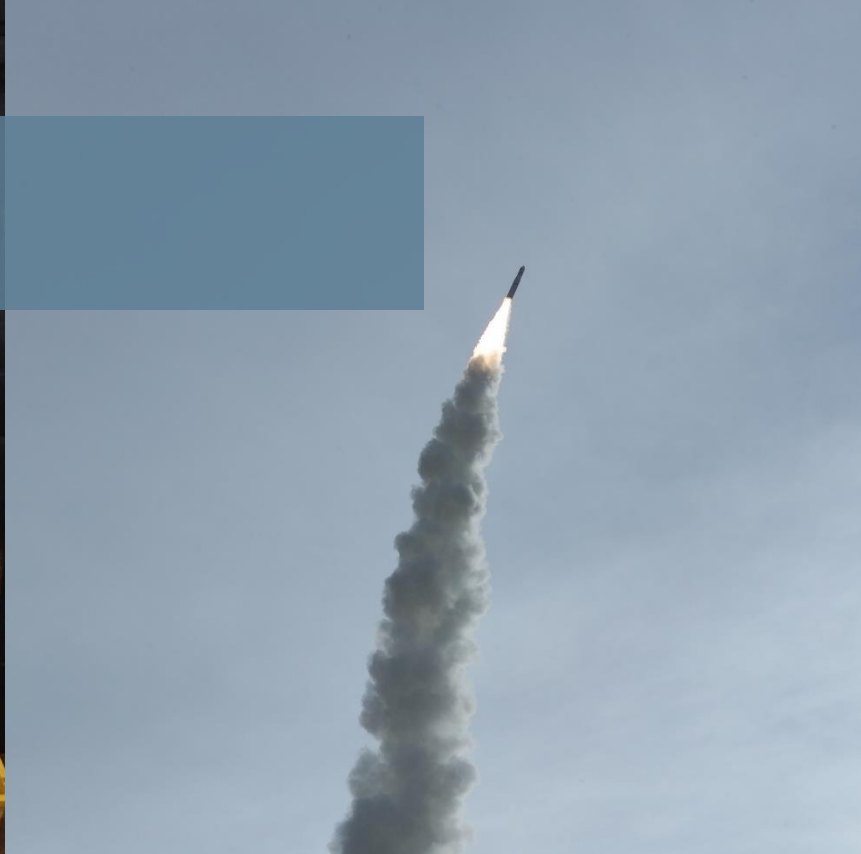
100% global coverage enabled by polar orbiting satellites



Repurpose existing Ku-band ground equipment for the Kepler service and eliminate switching costs

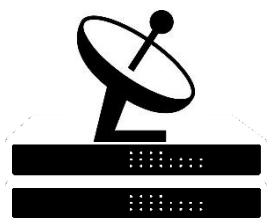


FIRST MISSION
READY TODAY



USER TERMINAL

✓ READY



SATELLITE

✓ LAUNCHED



GATEWAY

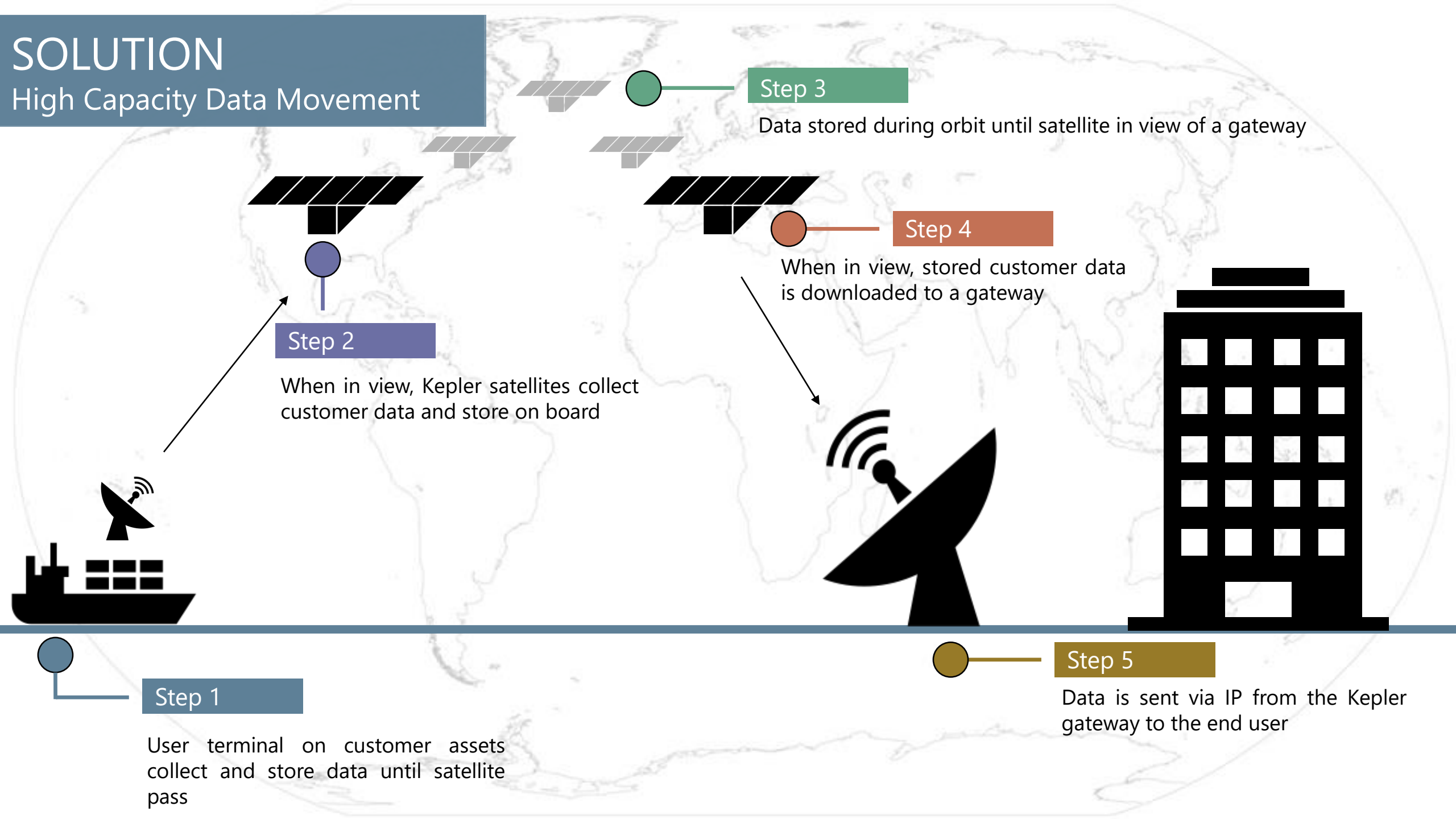
✓ COMMISSIONED



KEPLER

SOLUTION

High Capacity Data Movement



SHIFT DELAY-TOLERANT DATA TO A MORE ECONOMICAL SERVICE



Scientific data

Transmit bulk scientific data such as undersea mapping data, environmental logs or meteorological data.



Media vaults

Transport high bandwidth media content (e.g. Netflix) to a local server.

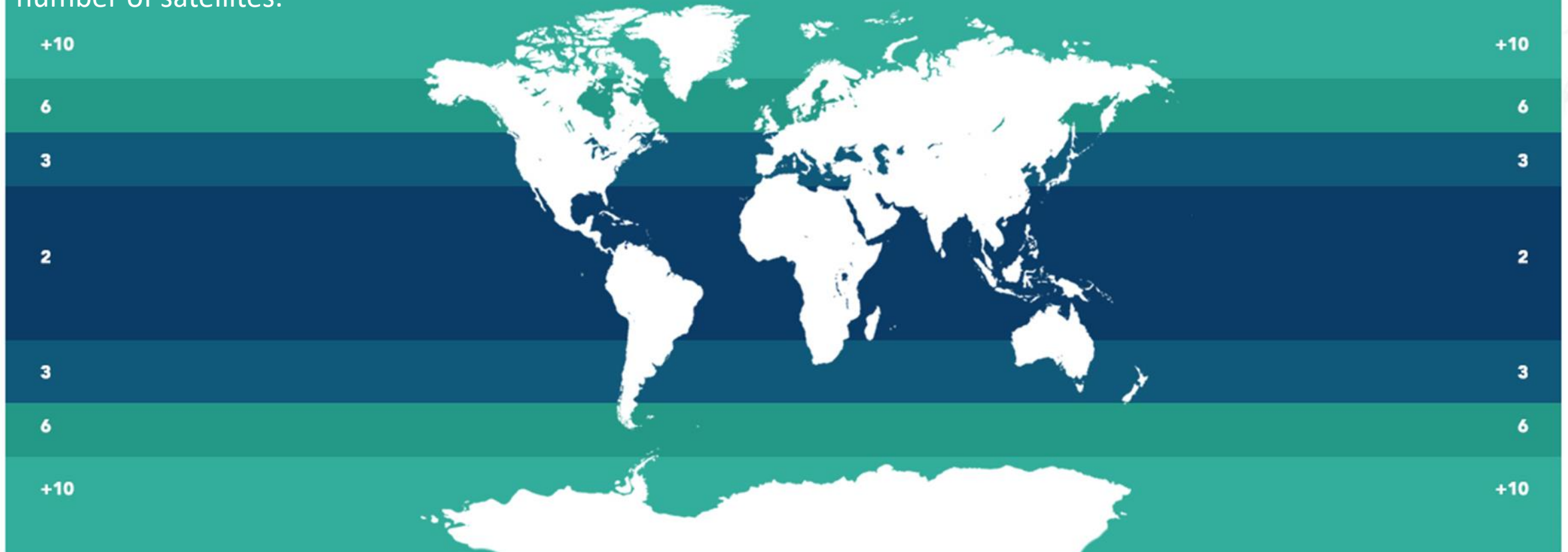


Local dropbox

Provide your community, cruise ship passengers, or mining personnel a means of sharing large, bandwidth-intensive files without clogging your real-time links.

Satellite Passes per Day

Number of passes is based on the latitude of the user site.
Graphic below is based on a per-satellite orbit – as the constellation grows the passes indicated are multiplied by the number of satellites.

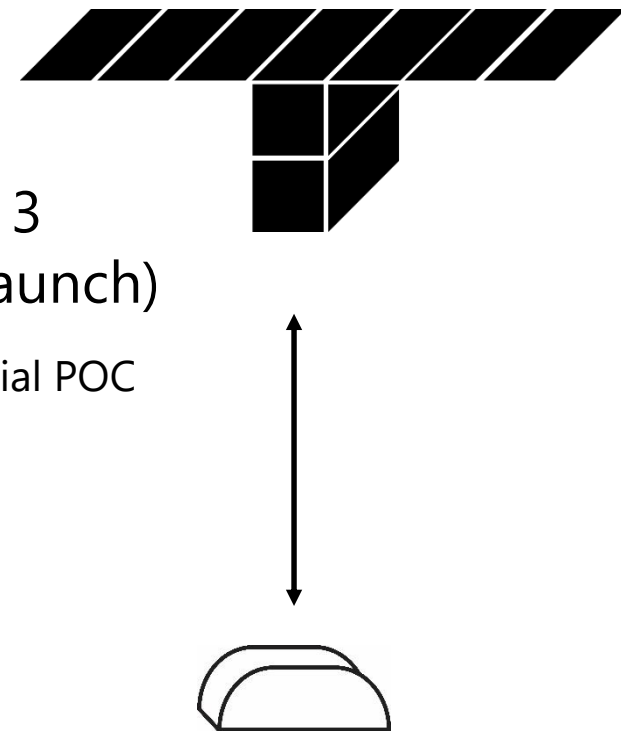


Kepler's User Terminal - Today

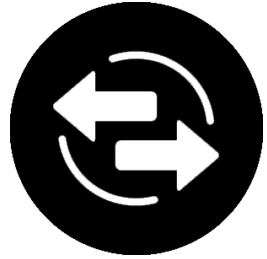


Kepler's IoT Module - Tomorrow

Satellite 3
(Mid-2019 Launch)
S/L band for Initial POC

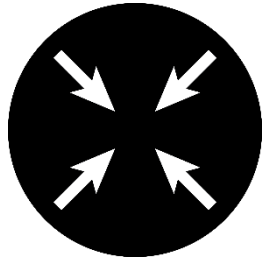


Kepler Generation 1 Direct-To-Satellite Module



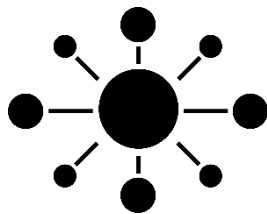
Bi-Directional

Firmware Updates
Acknowledgements



Small Size

Self-Contained
User-Friendly



Large No. of Devices

Many applications
Lower per-unit costs



Phasor and Kepler Usher in New Era of Satellite Communications

September 10th, 2018 · NEWS



Washington D.C./Toronto – September 10, 2018 – Phasor, the developer of leading, enterprise-grade electronically-steerable antenna systems, and Kepler, a low-Earth orbit (LEO) satellite operator and telecommunication services provider today announce successful tests between Kepler’s first in-orbit LEO nanosatellite and Phasor’s wideband electronically-steered antenna.

<http://www.phasorsolutions.com/news-1/phasor-and-kepler-usher-in-new-era-of-satellite-communications>

CONTACT US TO DISCOVER
HOW TO TAKE ADVANTAGE
OF LEO SATELLITES FOR
YOUR OPERATIONS

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