



THE COMING GROWTH IN THE GLOBAL WEATHER ENTERPRISE

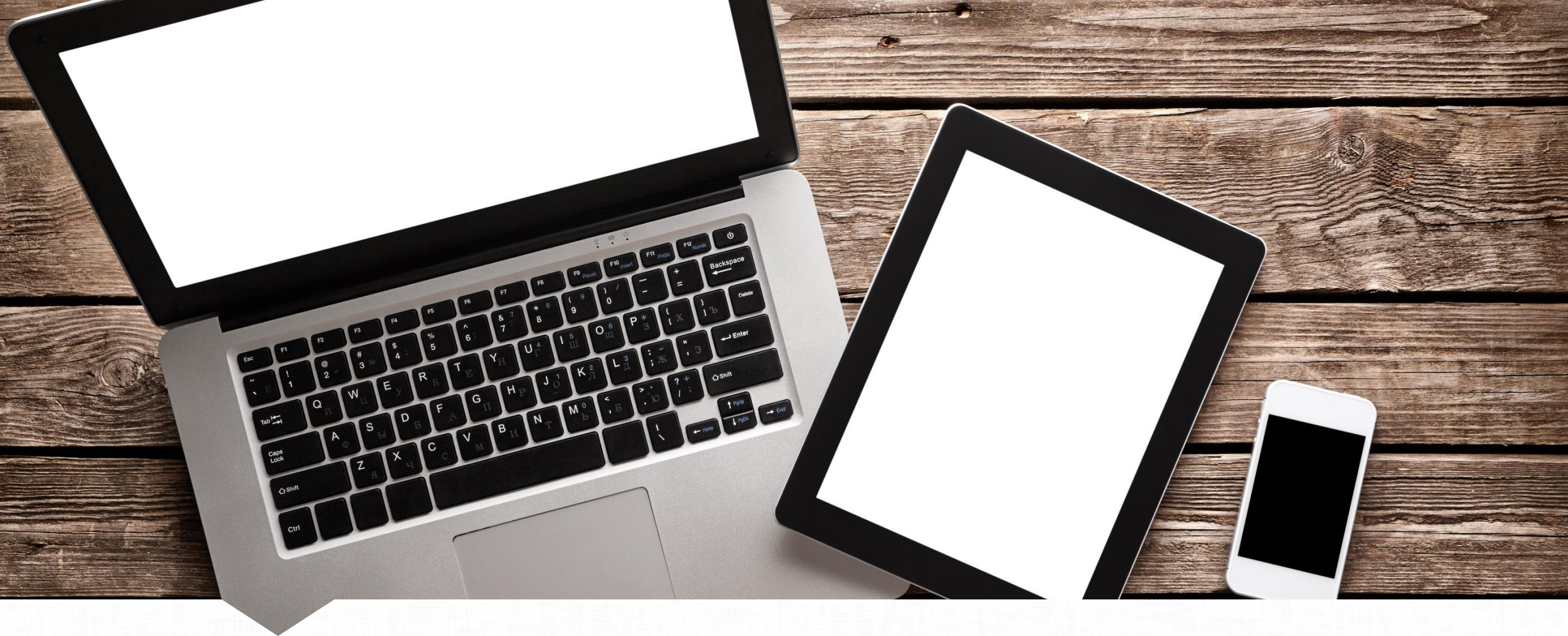
Brought To Earth Through A Small Satellite Constellation Near You

FIRST THERE WERE A FEW SUPER COMPUTERS



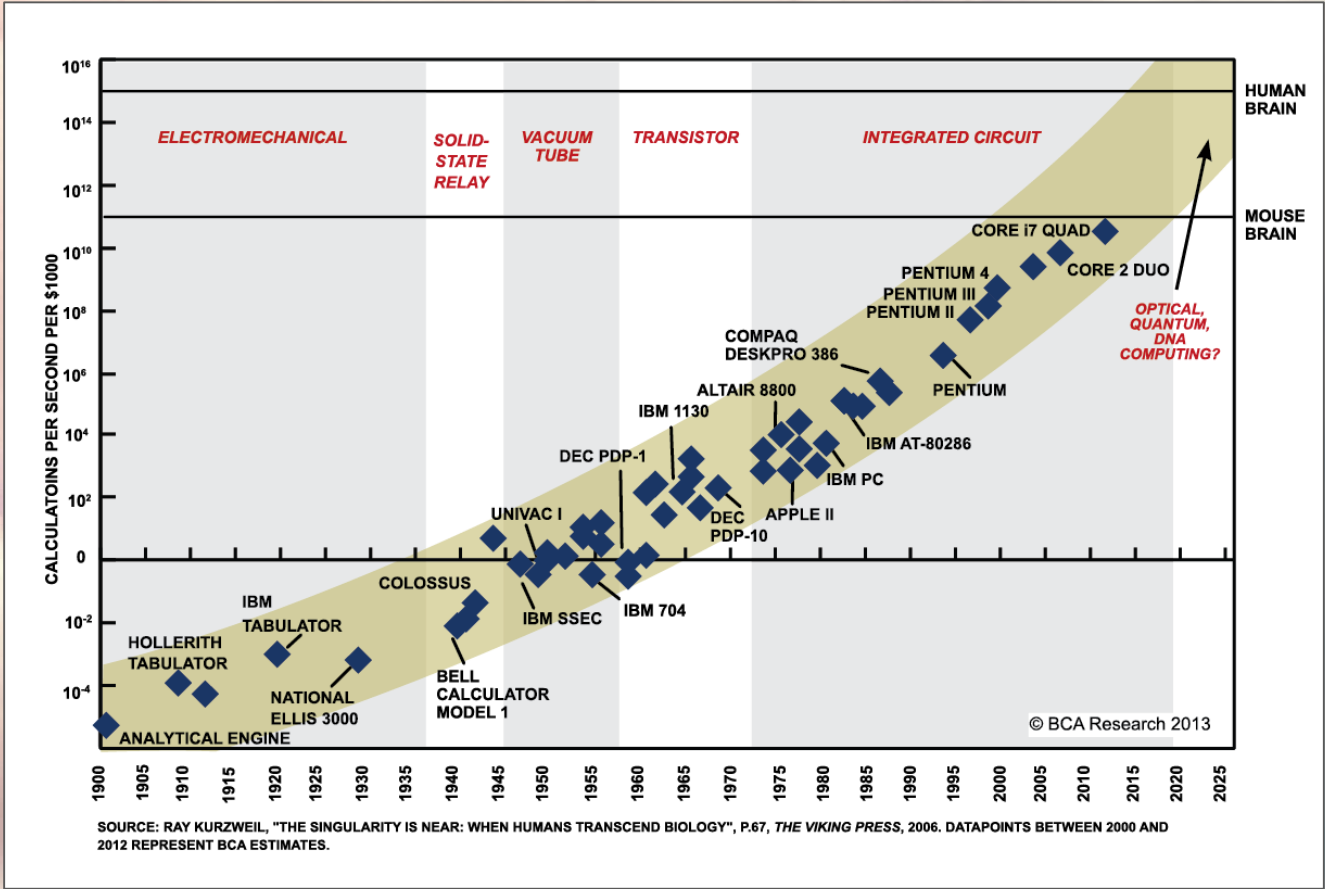
"I think there is a world market for maybe five computers."

Thomas Watson, IBM, 1943



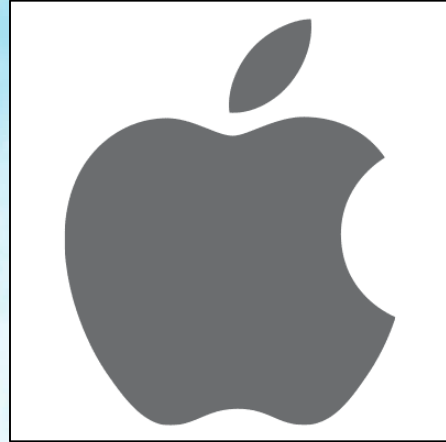
THEN THERE WERE PC's AND MOBILE PHONES

Creating networked compute power at a fraction of the cost and a rapid pace of innovation.



BRINGING MOORE'S LAW TO THE WORLD

Rapid innovation allowed the power of a Cray to be carried on one's wrist today.



Access



Use

CREATING THE FIRST TWO \$1T COMPANIES

One providing “access”, the other providing “use”.

BUSINESS

The \$8 Trillion Internet: McKinsey's Bold Attempt to Measure the E-economy

DEREK THOMPSON NOV 6, 2011

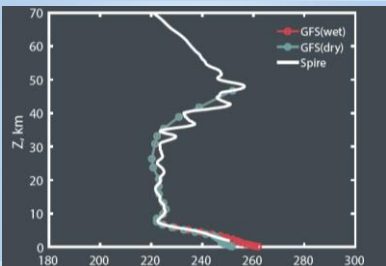
The Internet -- that 200 million-person, \$8 trillion global economy -- accounted for 21 percent of GDP growth in the world's largest economies over the last 5 years, McKinsey found in a report released this week.* As an entity, it

CREATING A \$8TN GLOBAL INTERNET ENTERPRISE

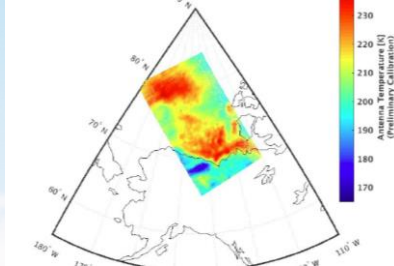


FIRST THERE WERE A FEW SUPER SATELLITES

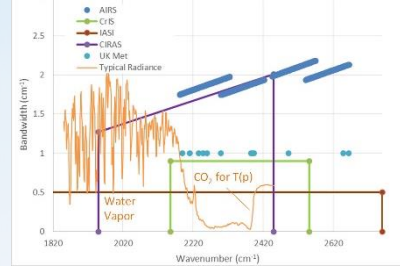
“There’s not that much interesting about CubeSats.” – Jeff Bezos



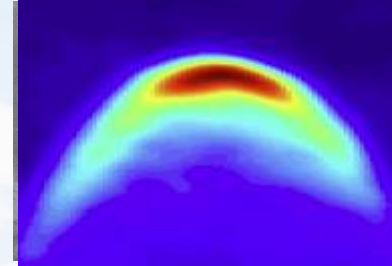
GNSS-RO
Lemur, Spire



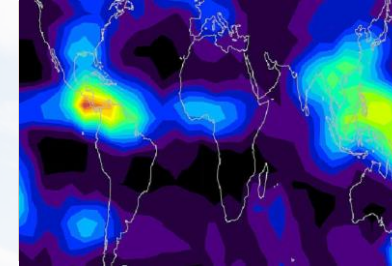
MW-Sounding
MiRata, MIT



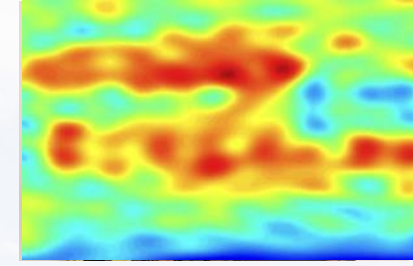
IR-Sounding
CIRAS, NASA



DDM
CYGNSS, NASA



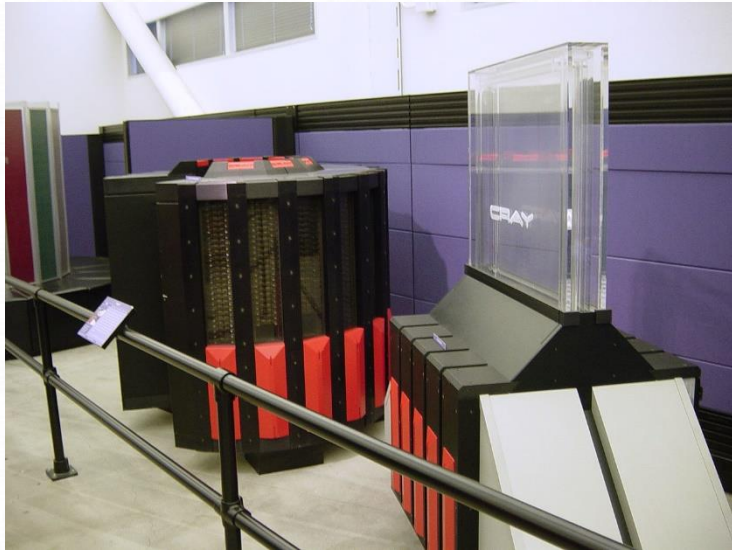
Aerosol
IceCube, NASA



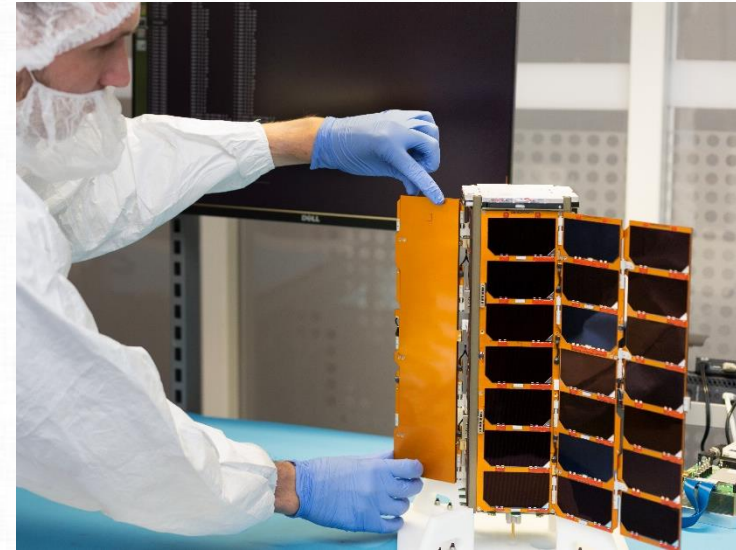
Radiation
RAVAN, NASA

THEN THERE WERE NANOSATELLITES

WITH THE COMPUTE POWER OF A CRAY



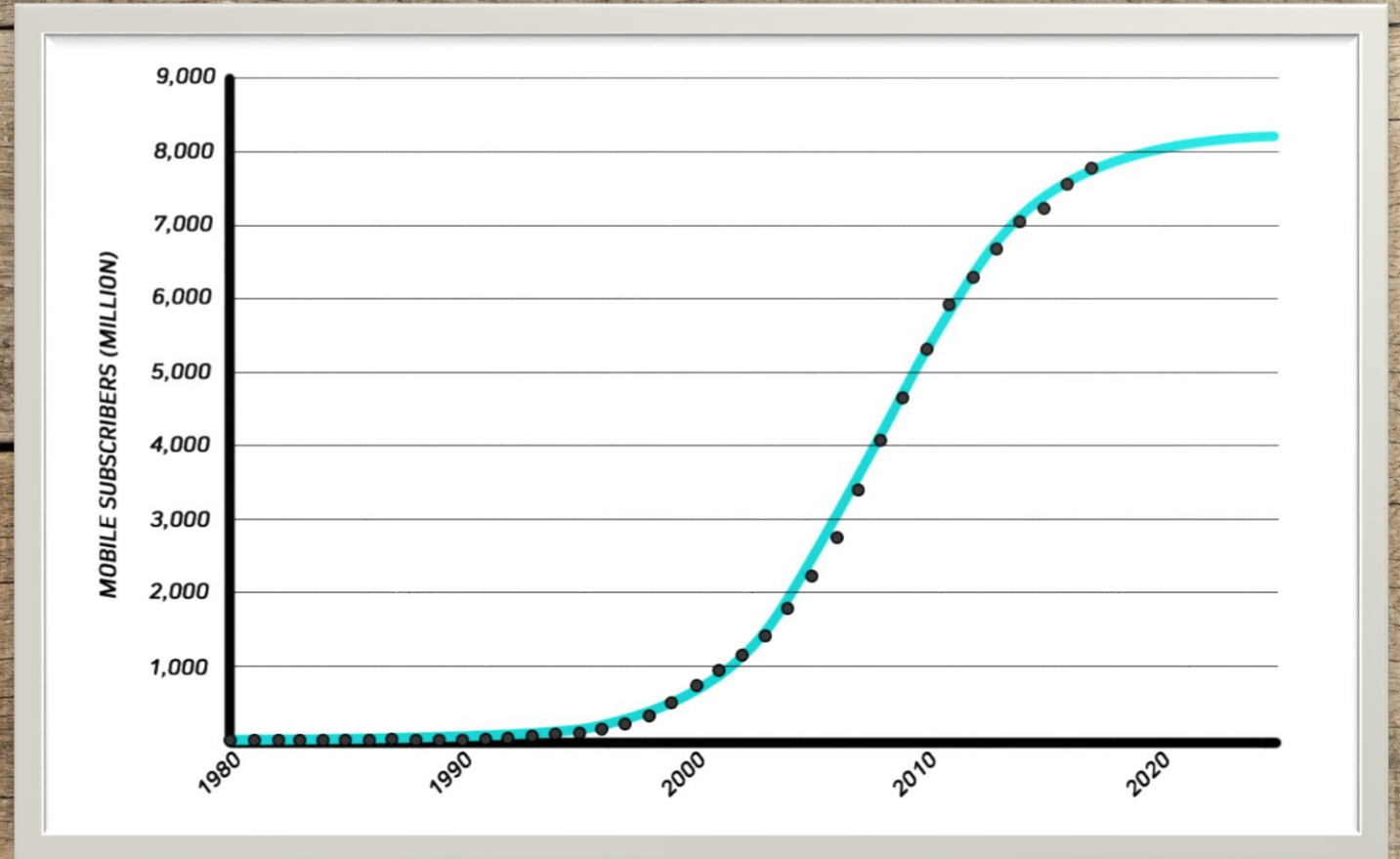
Cray-2 Supercomputer
1.9 GFLOPS



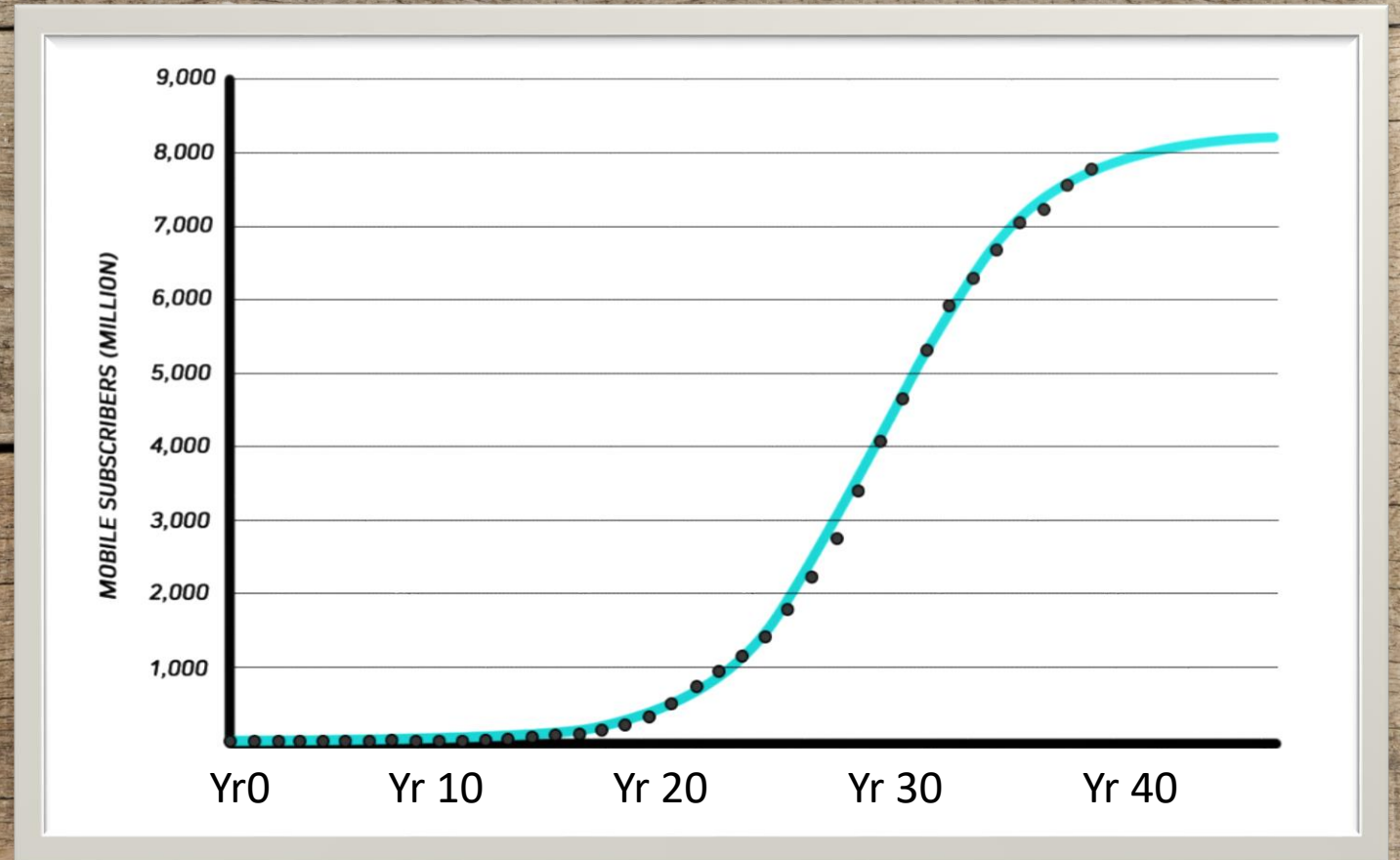
Spire's Nanosatellite
>365 GFLOPS*

* Conservative figure based on 2019 projection

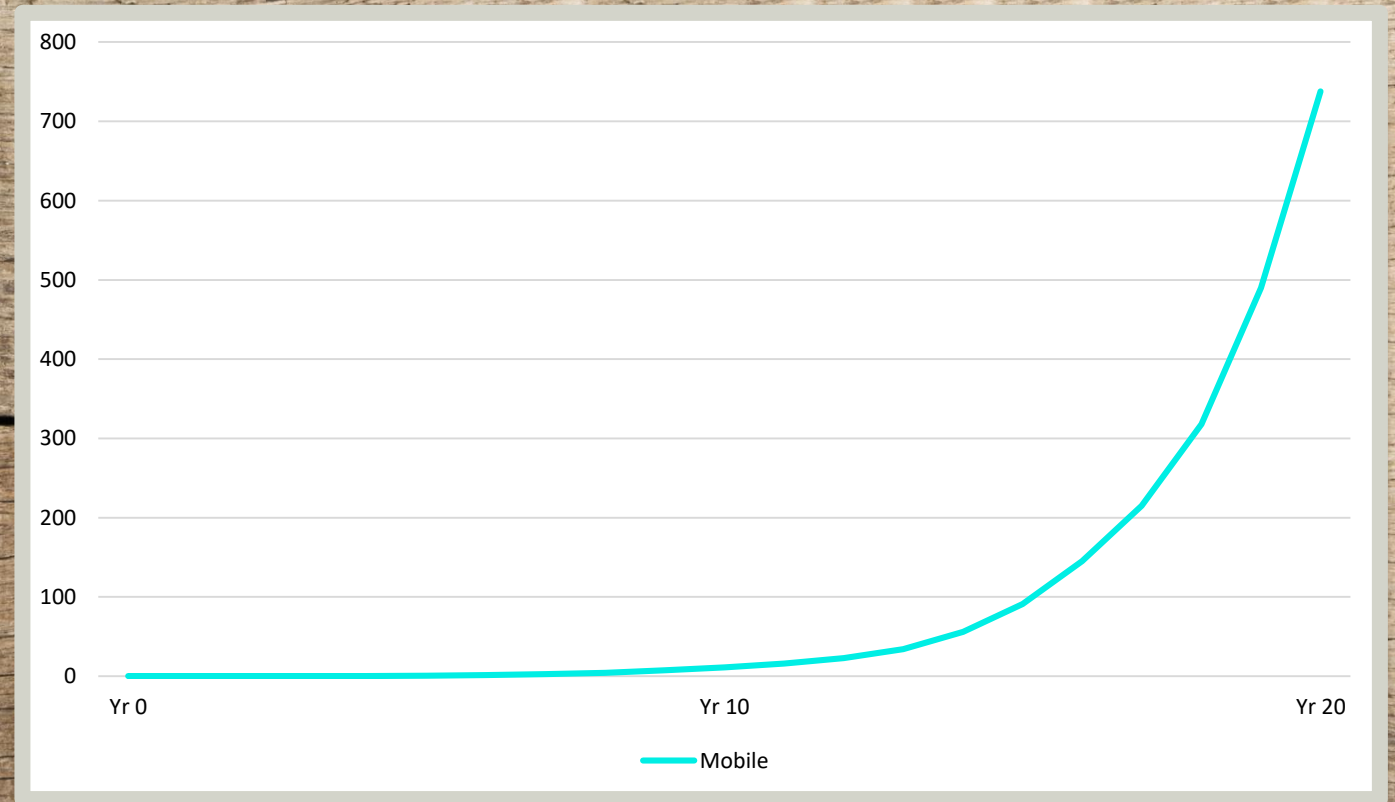
NOW I WANT TO REALLY STRETCH YOUR IMAGINATION



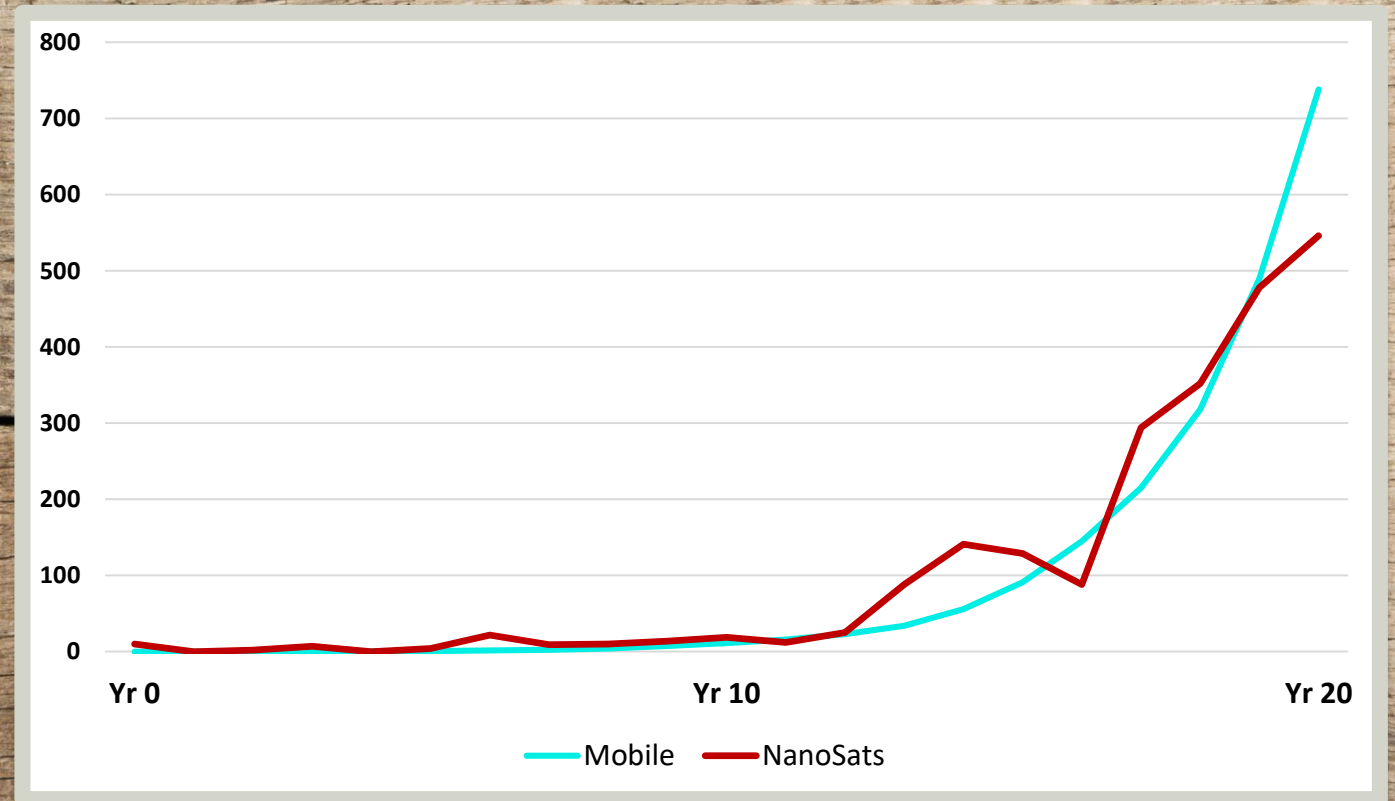
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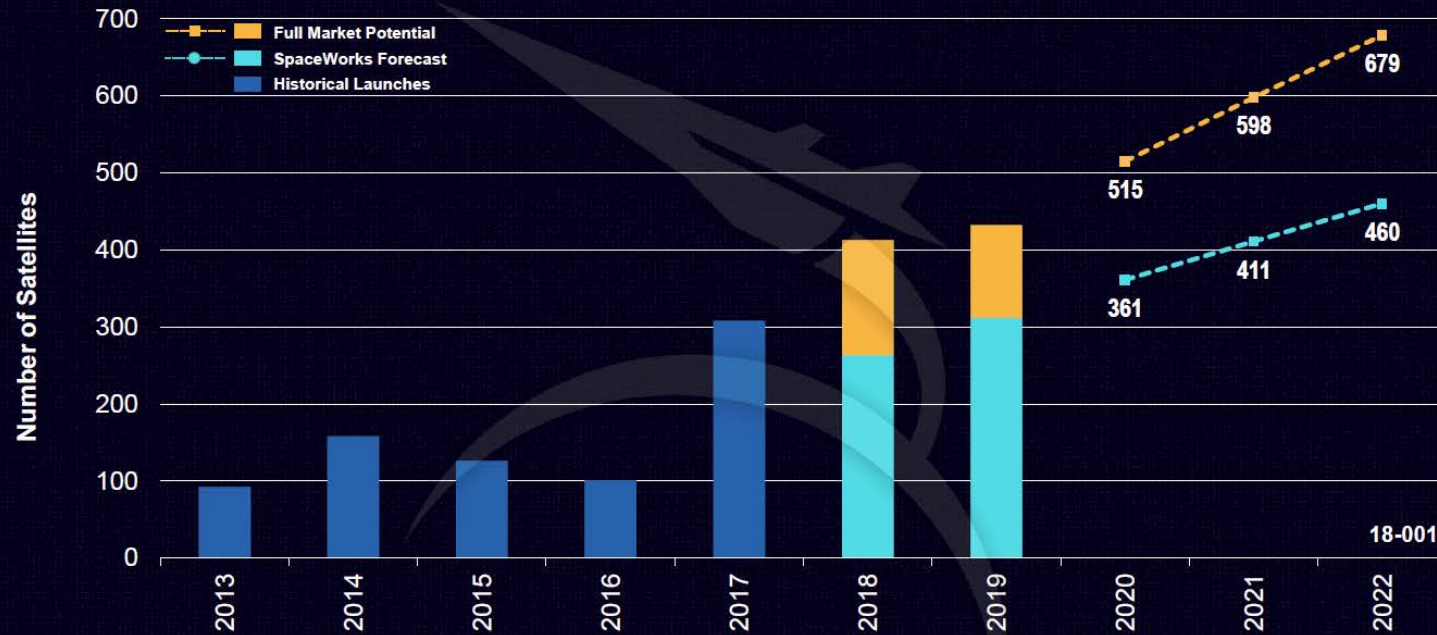
NOW I WANT TO REALLY STRETCH YOUR IMAGINATION



NOW I WANT TO REALLY STRETCH YOUR IMAGINATION



2018 Nano/Microsatellite Launch History & Market Forecast (1 - 50 kg)



SpaceWorks' estimates up to 2,600 nano/microsatellites will require launch over the next 5 years

2,600 NANO/MICROSATELLITES OVER THE NEXT 5 YEARS

Forecasted by SpaceWorks, which had to re-adjust its forecast after 2017 outperformed projections

2017: 205% increase over 2016

“What you see”

COMMUNICATIONS SATELLITES

Today

100s of Satellites

Planned

10,000+ Satellites

SpaceX, Boeing, Sky Global, OneWeb,
Keppler, etc

“Dark horse”

EARTH OBSERVATION SATELLITES

Today

< 50 Satellites

Potential

5000 Satellites

IMAGINE A FUTURE EARTH OBSERVING SYSTEM
5000 Satellites

IMAGINE A FUTURE OF THE GWE BY 2030 WITH:

1,000,000

GNSS-RO Profiles

15

Minute Global DDM

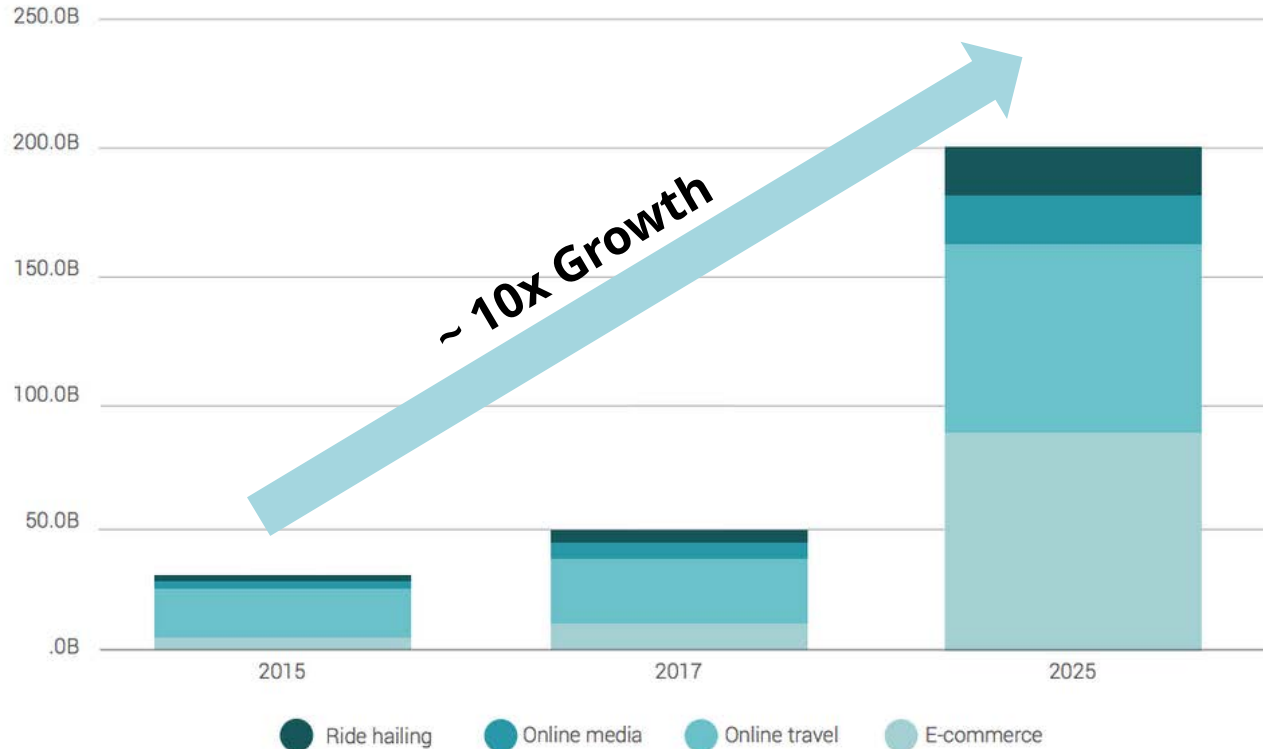
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Minute Global
MW Sounding

15

Minute Global
IR Sounding

INTERNET ECONOMY GROWTH (SEA)



I believe in the possibility
of 10x GWE in 10 years

If we collaborate and
support each other.

**"I think there is a world market
for maybe five computers."**

Thomas Watson, IBM, 1943

**"People will carry around small
devices that allow them to constantly
stay in touch and do electronic
business from wherever they are."**

Bill Gates, 10 years before the iPhone launched

WHOSE SIDE DO YOU WANT TO BE ON?

For any questions, please contact:

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