Introducing ionoSat
ion air-breathing propulsion

If you wanna join or spread the word
just visit

https://spacelabeu.kickoffpages.com/

Best idea for the first FREE-LOAD

May-Sept 2019

Best model of satellite constellation

May-Nov 2019

What do we do?

We bring satellites to very–low orbit which is currently empty (220-350km)

Our air-breathing ion-propulsion engines are cheaper, more ecological and provide longer life-time to satellites on VLEO

Why we do it?

Because if thousands of satellites should be deployed to provide internet from space, then price and orbit height and longevity on orbit matter!

Meet ionoSat

ionoSat = engine using air breathing ion-propulsion principles to keep small satellites at very low orbit
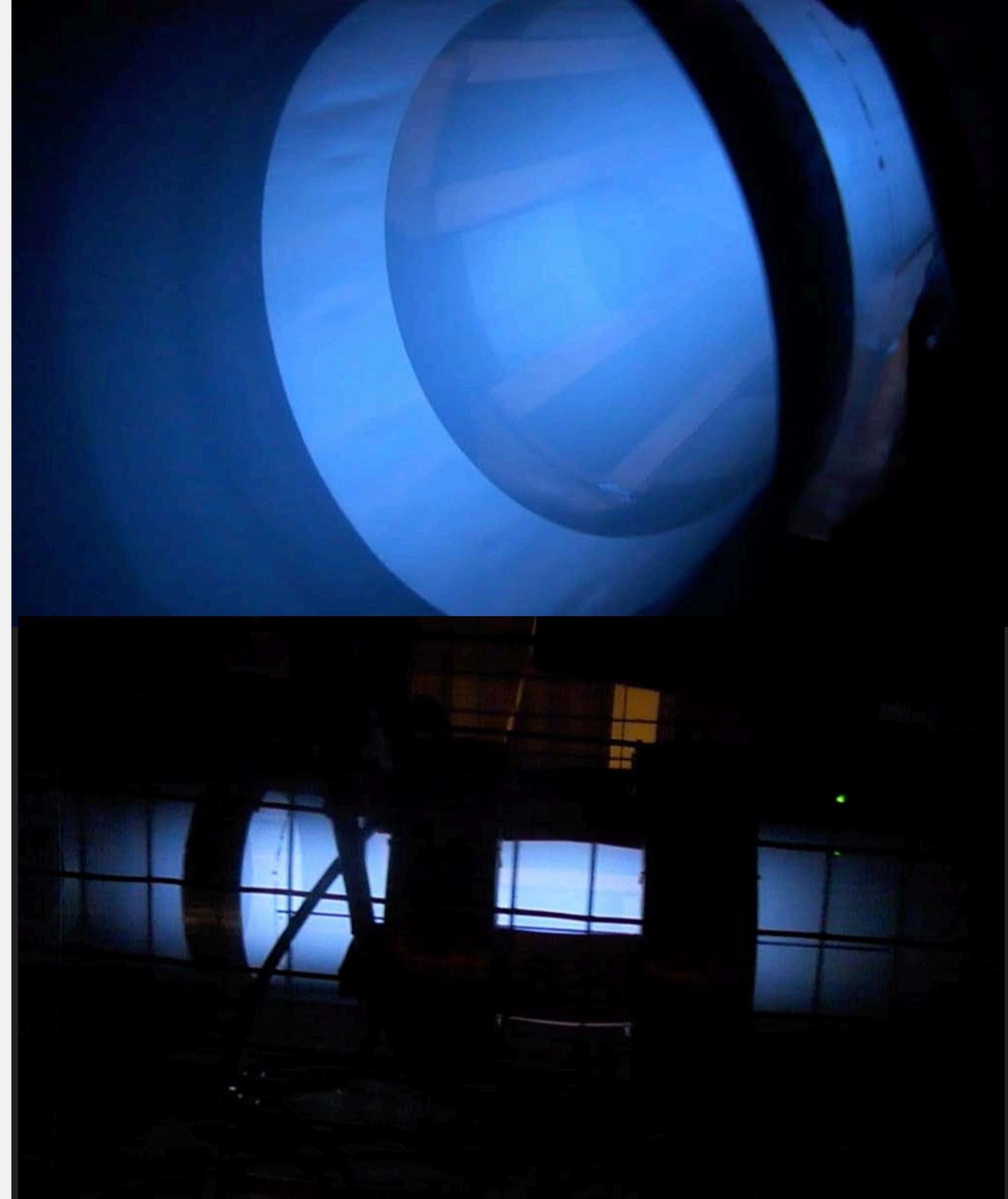
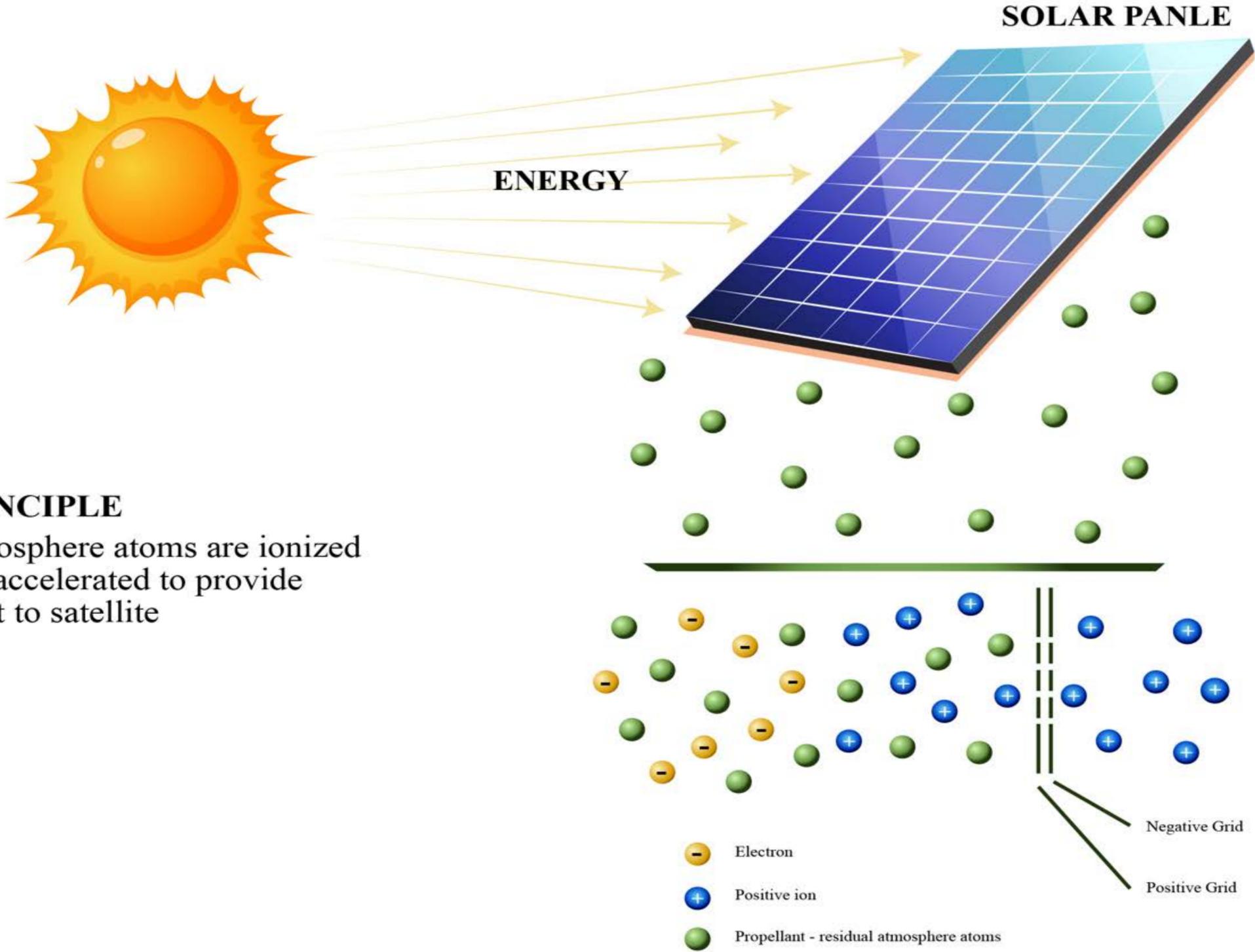It solves the problem of drag-compensation on VLEO (>250km)

It's about half price of currently available modular options

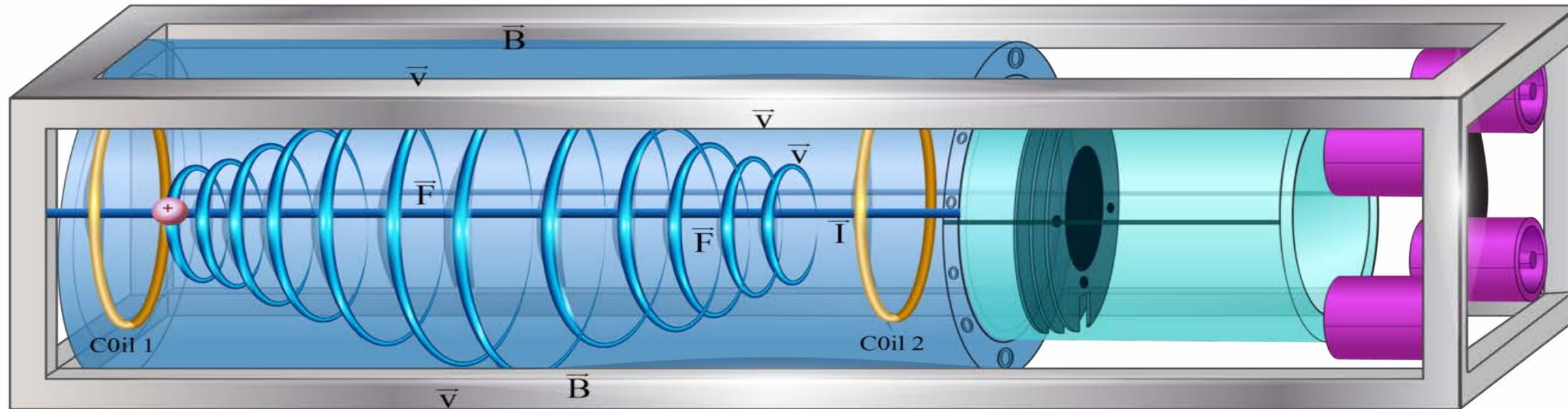Possibly 5x extended life-time compared to current ion propulsion engines

How it works

SOLAR PANLE

ENERGY

PRINCIPLE
Atmosphere atoms are ionized and accelerated to provide thrist to satellite

Negative Grid

Positive Grid

- Electron
+ Positive ion
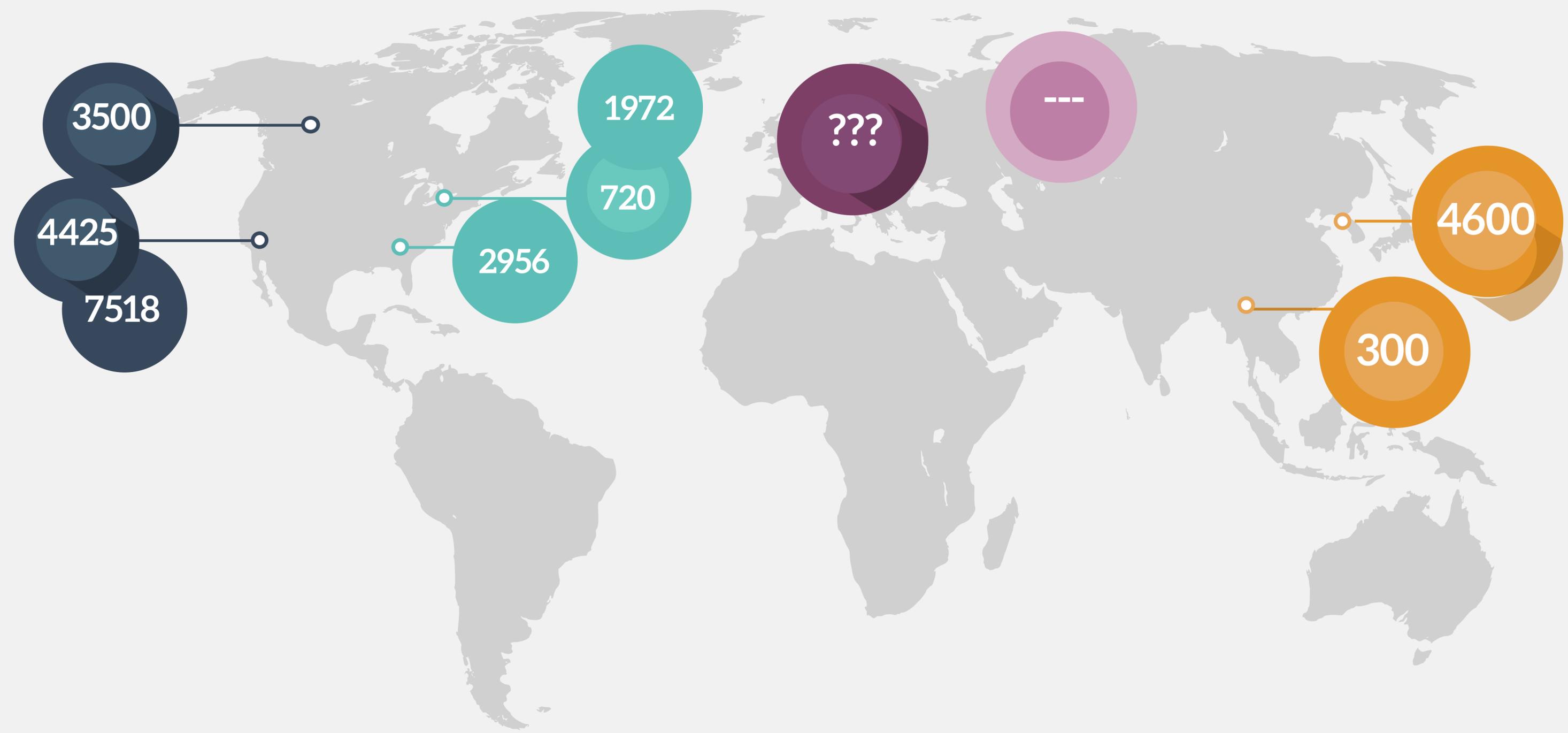Propellant - residual atmosphere atoms

How it looks

What we want to do

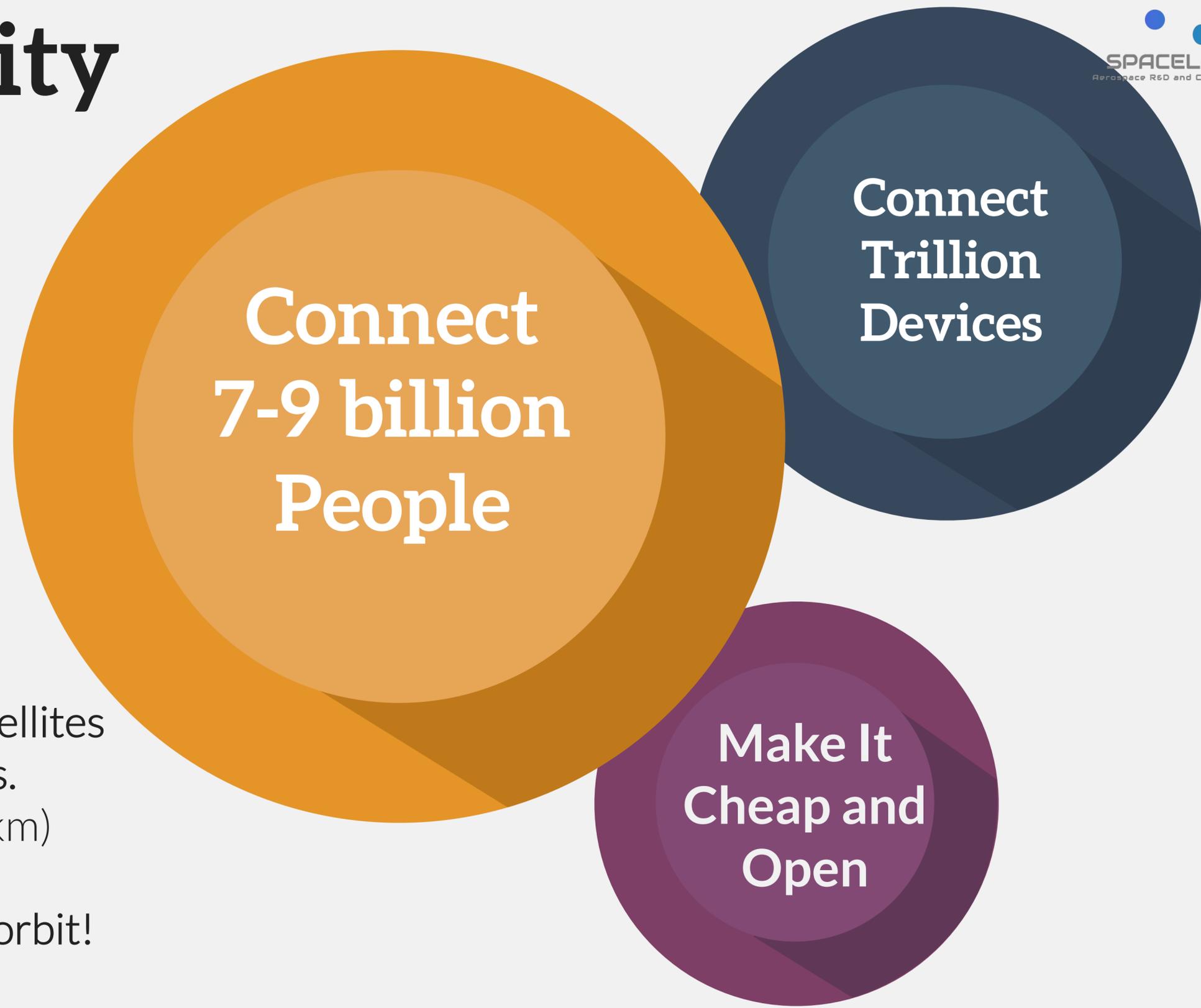We want to make communication and connectivity universally accessible.

Because if thousands of satellites should be deployed to provide internet and other services from space for US and Asian companies, why should Europe be left behind?
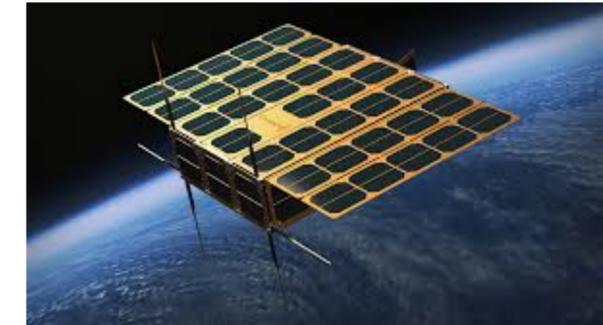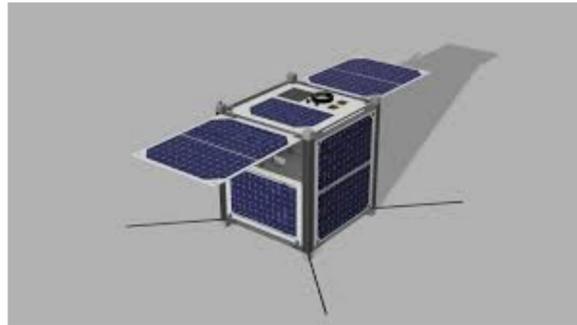
Low Orbit Satellites Plans

(in Raw Numbers)

SPACELAB EU
Aerospace R&D and Commercialization

3500

4425

7518

1972

720

2956

???

4600

300

The Opportunity

Connect 7-9 billion People

Connect Trillion Devices

Make It Cheap and Open
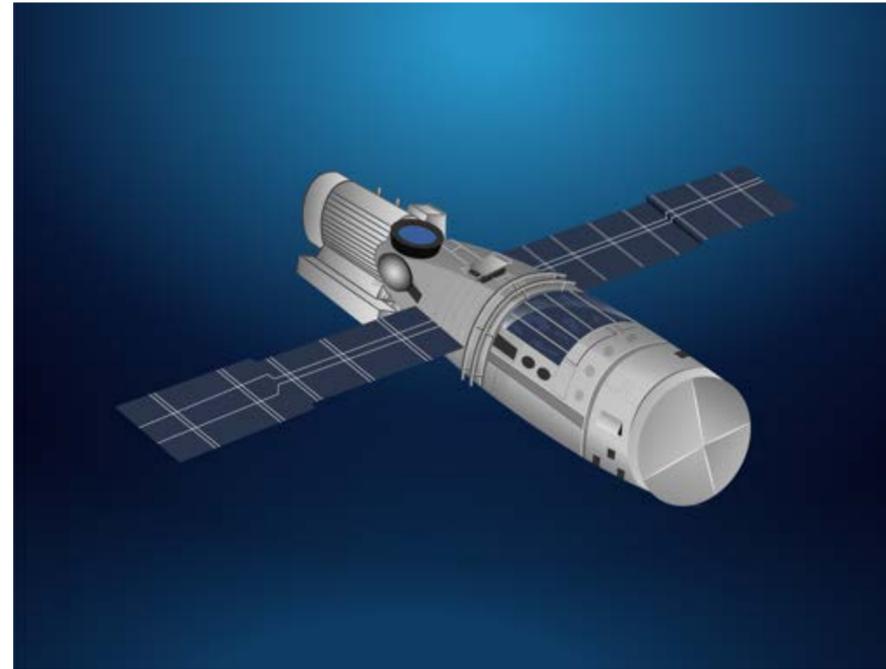
SPACELAB EU
Aerospace R&D and Commercialization
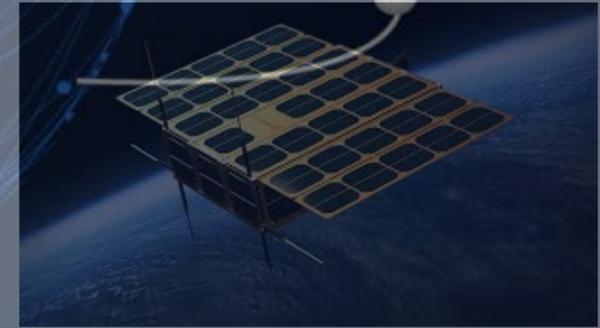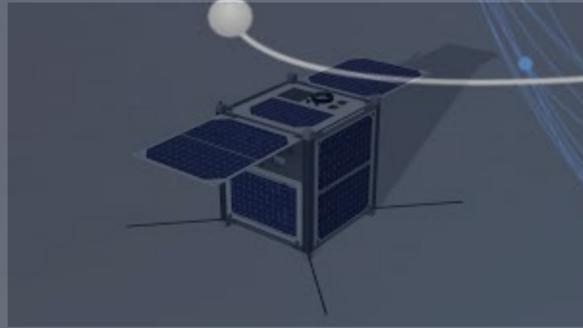
Opportunity is huge!

Currently plans are for 10.000+ satellites being launched during next 10 years.
All aiming for low orbits (500–600km)
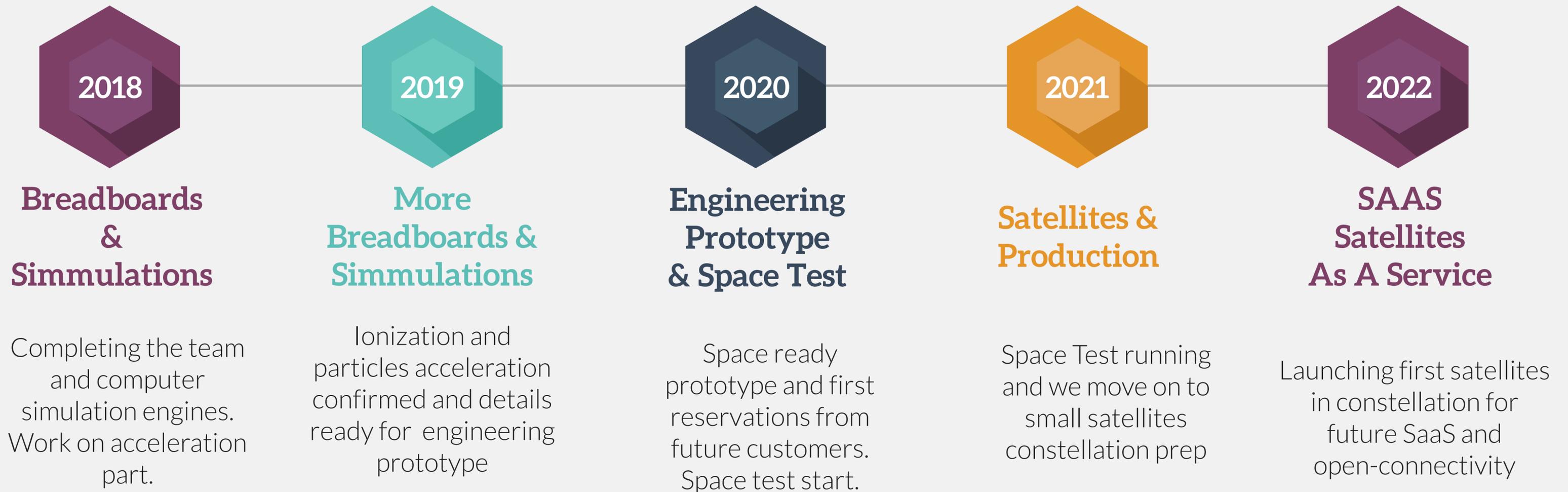
What if they could aim for very low orbit!

We aim for small satellites

In action

Project timeline

SPACELAB EU
Aerospace R&D and Commercialization

2018

Breadboards & Simmulations

Completing the team and computer simulation engines. Work on acceleration part.

2019

More Breadboards & Simmulations

Ionization and particles acceleration confirmed and details ready for engineering prototype

2020

Engineering Prototype & Space Test

Space ready prototype and first reservations from future customers. Space test start.

2021

Satellites & Production

Space Test running and we move on to small satellites constellation prep

2022

SAAS Satellites As A Service

Launching first satellites in constellation for future SaaS and open-connectivity

Why We Need You?

We are launching 2 calls for smart ideas

Best idea for the first FREE-LOAD

- What type of use-case would you like to see on our first open-source satellite
- Which device would you like to send to space for free?
- What would it do and why?
- How would it benefit you and the community?

Your focus can be anything – connectivity, security, imaging, free communication, space communication, etc.

Best model of satellite constellation

- How many satellites would need to fly at 250km height to cover the Earth with connectivity
- What type of connectivity (radio, laser) should they carry on board
- What bandwidth would they provide?
- What rules should apply for community use

We want to see simple model which can answer the #of Sat question for different heights

Prizes for smart ideas

Best idea for the first FREE-LOAD

WIN:

- Free publicity + Your idea will fly on our first satellite

- We allocate ½ U for FREE-LOAD and we make the hardware with you

Best model of satellite constellation

WIN:

- Free publicity + invitation to work with us on real satellite constellation after testing flights

- €1.000,-

If you wanna join or spread the word
just visit
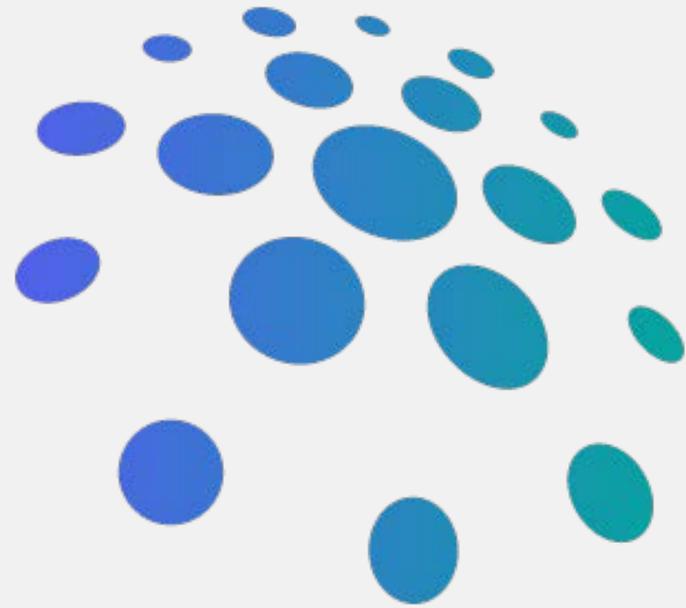
https://spacelabeu.kickoffpages.com/

Best idea for the first FREE-LOAD

May-Sept 2019

Best model of satellite constellation

May-Nov 2019

Contact

SPACELAB EU
Aerospace R&D and Commercialization

Petr Palan

+ 420 603 170 749

petr@SpaceLabEU.com