

# 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



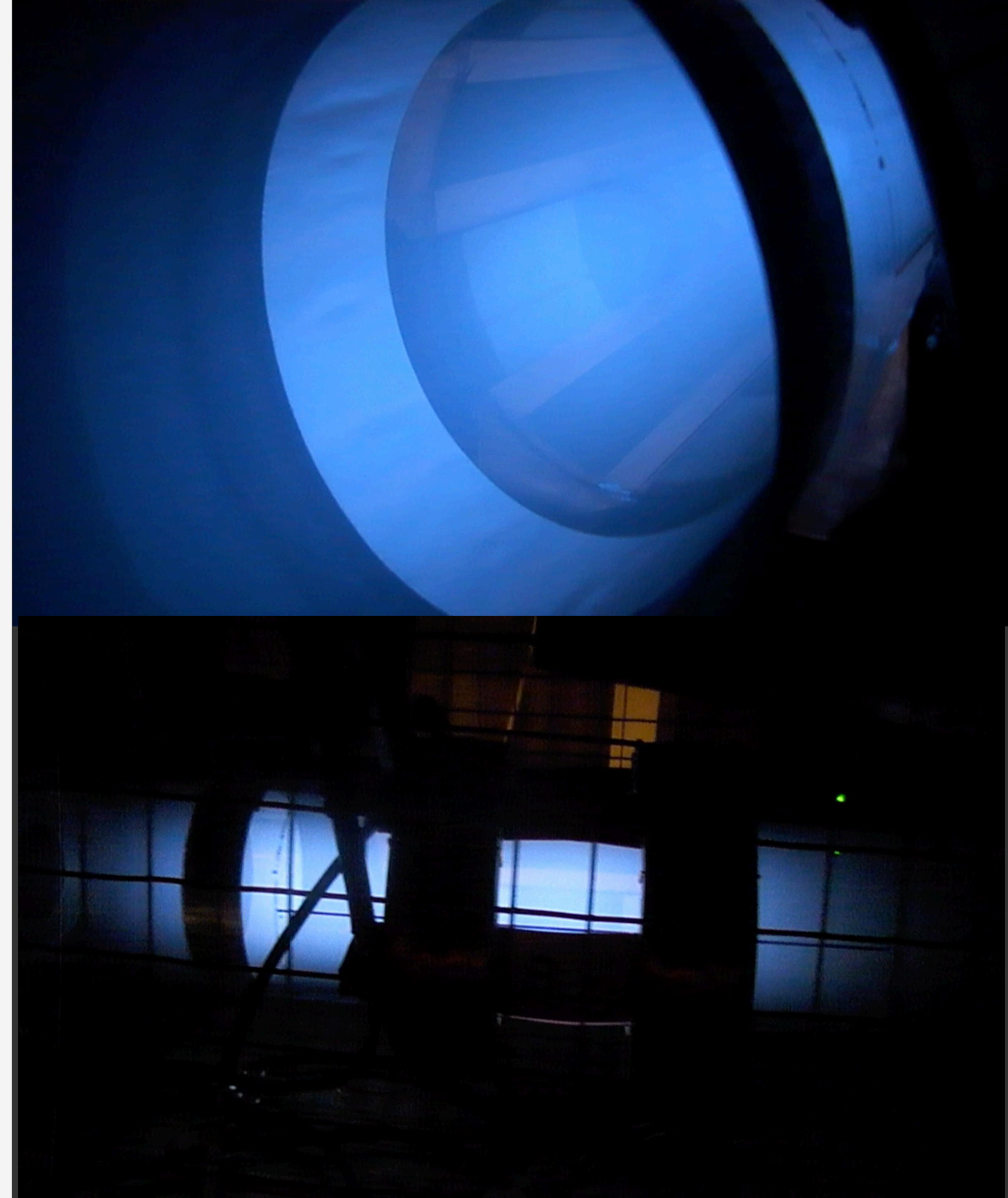
It solves the problem of drag-compensation on VLEO ( $>250\text{km}$ )



It's about half price of currently available modular options

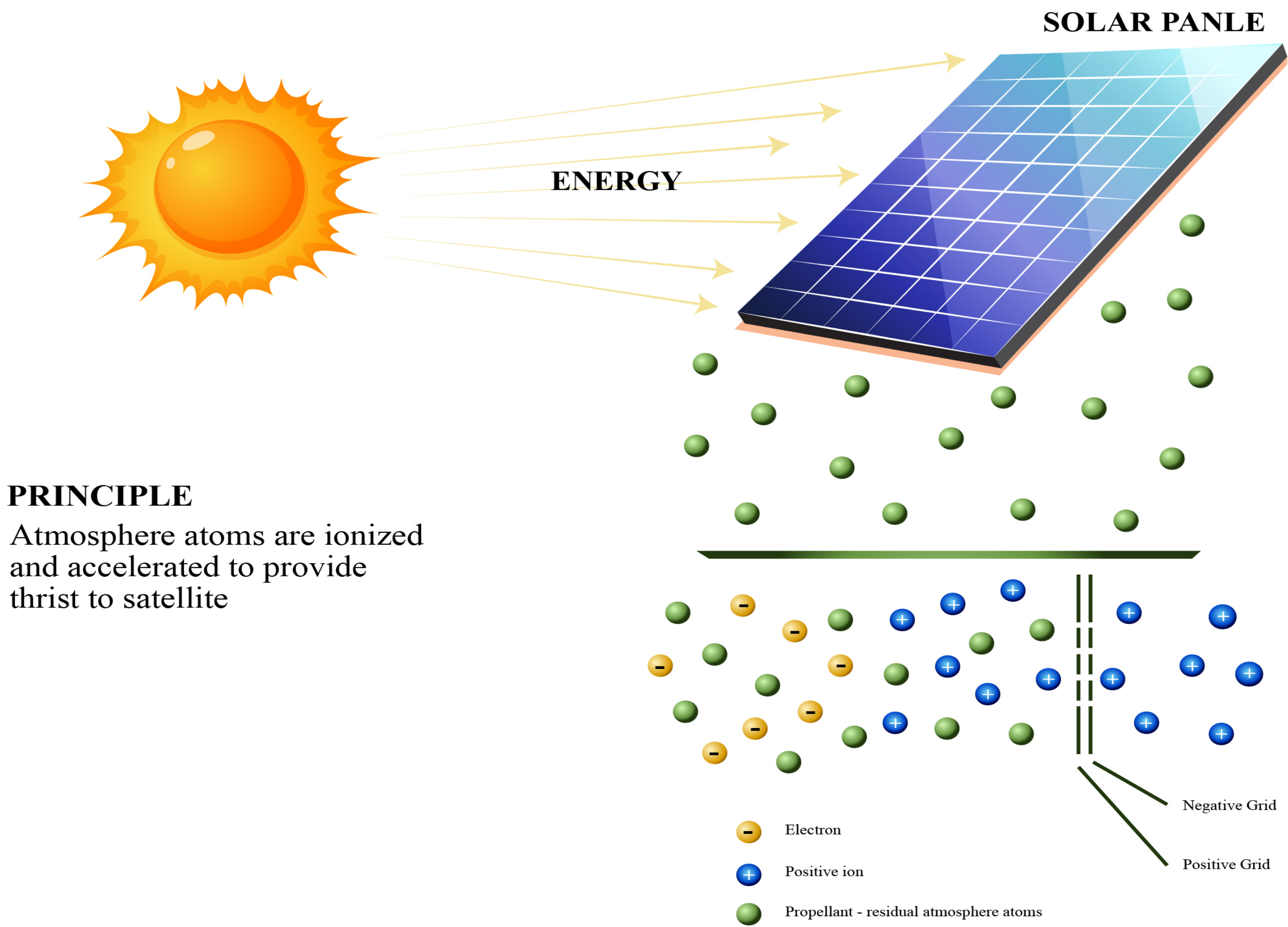


Possibly 5x extended life-time compared to current ion propulsion engines



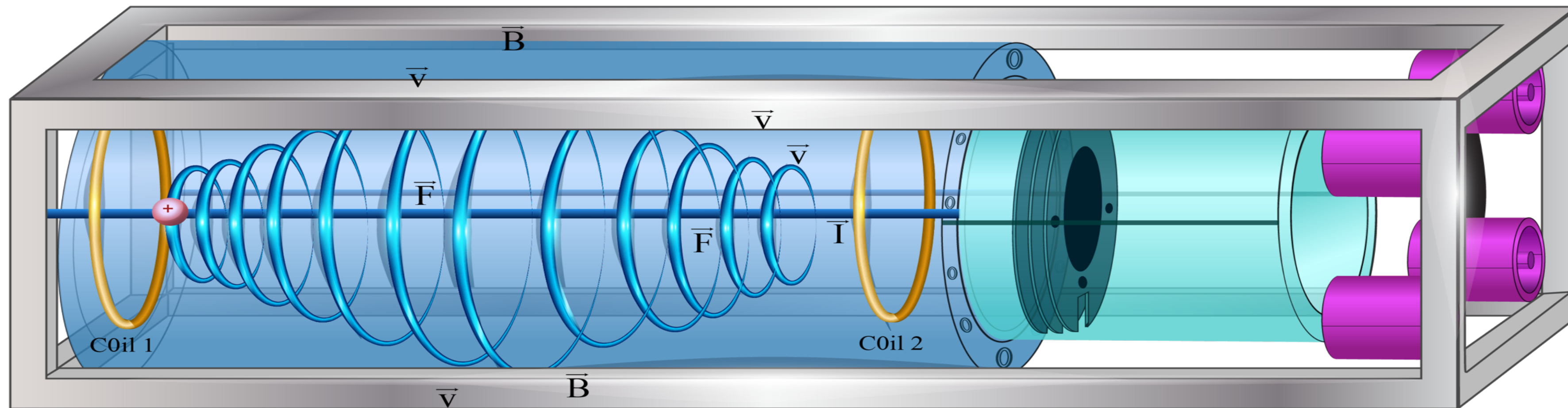


# How it works



**PRINCIPLE**  
Atmosphere atoms are ionized  
and accelerated to provide  
thrust to satellite

# How it looks



# What we want to do

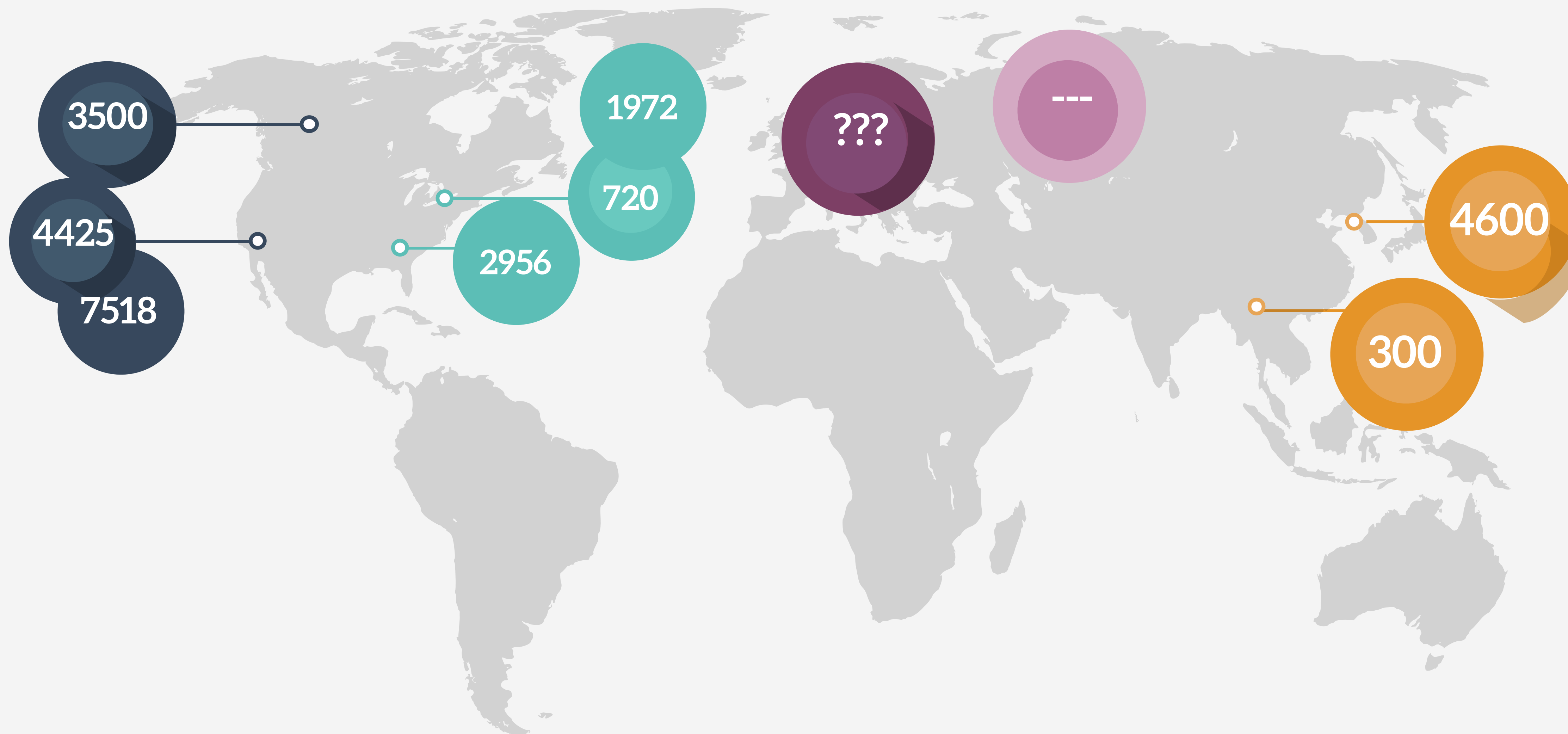
We want to make communication and connectivity universally accessible.

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)



# The Opportunity



Connect  
7-9 billion  
People

Connect  
Trillion  
Devices

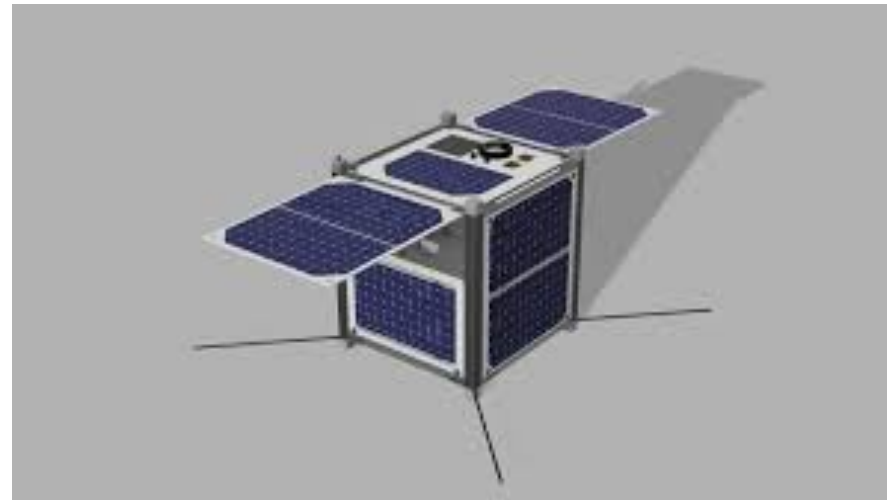
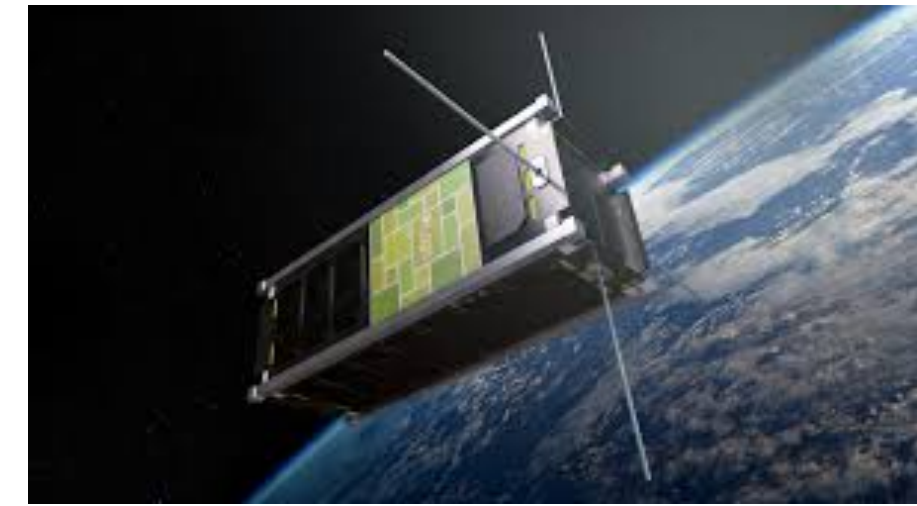
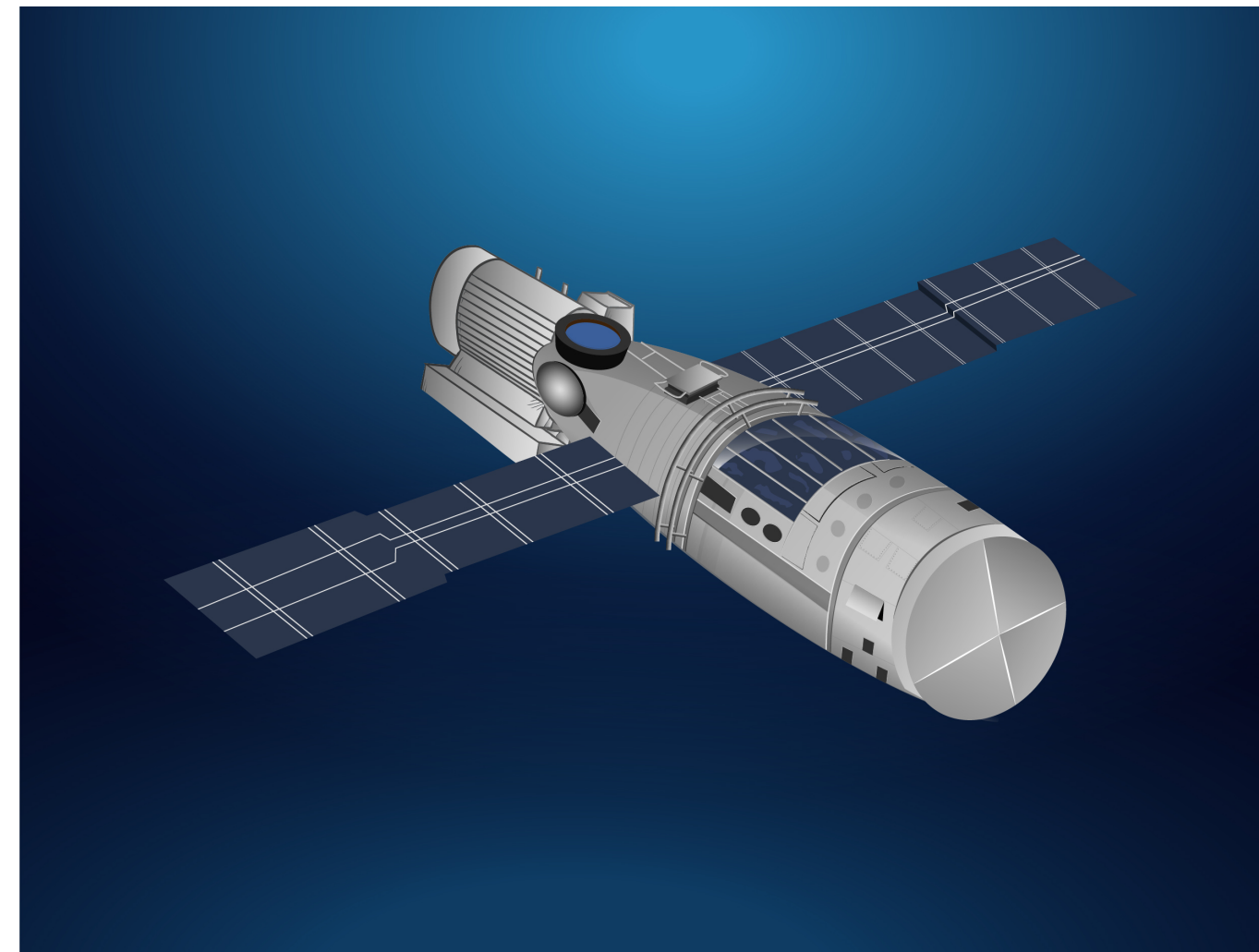
Make It  
Cheap and  
Open

## Opportunity is huge!

Currently plans are for 10.000+ satellites  
being launched during next 10 years.  
All aiming for low orbits (500–600km)

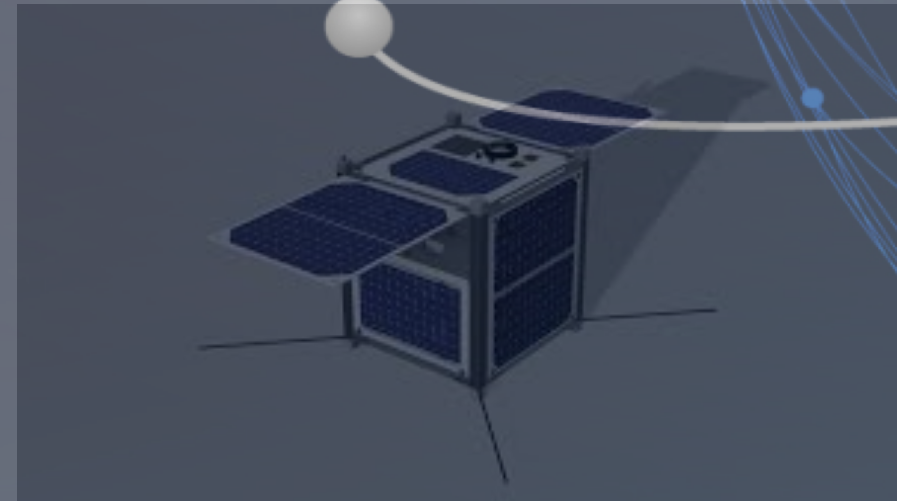
What if they could aim for very low orbit!

# We aim for small satellites



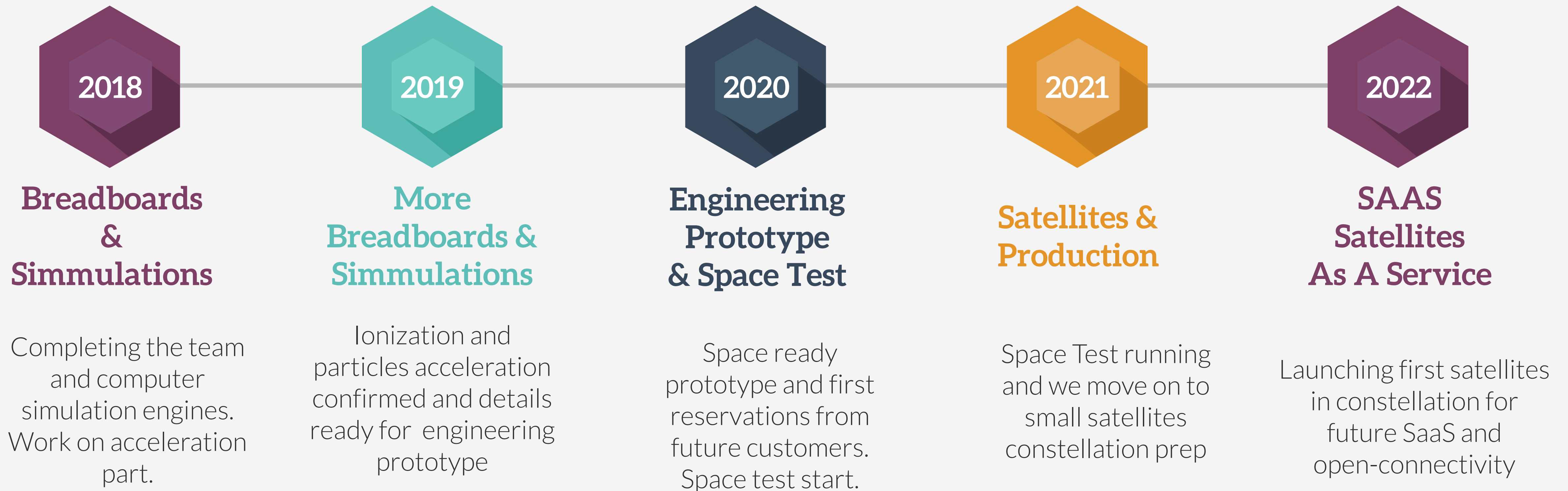


# In action





# Project timeline



# 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,-

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# Contact



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