

When collaboration (cooperation) works more than competition



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September 12, 2020
UNISEC Global Meeting

Jean-Jacques Dordain
ESA Director General (2003-2015)

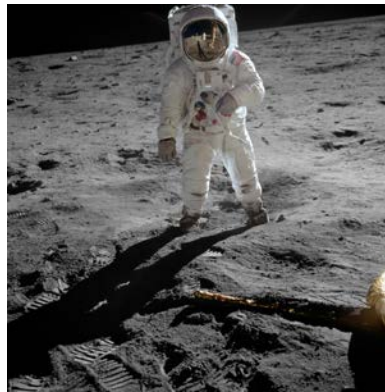
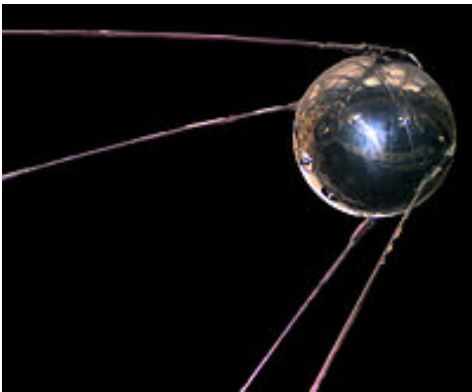
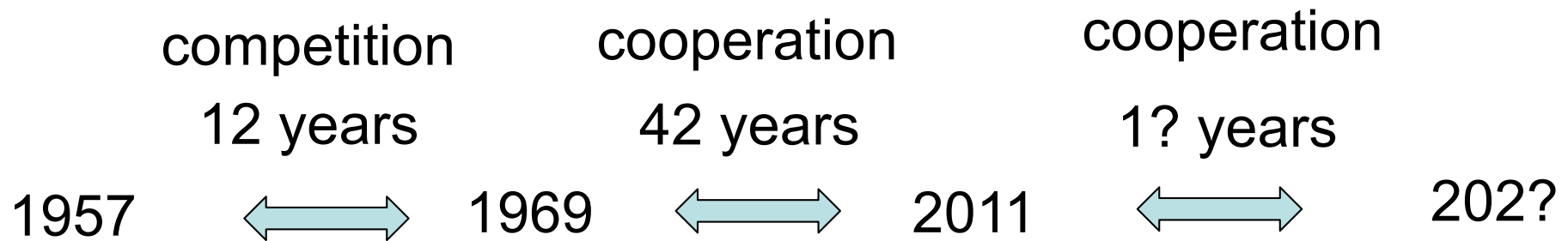


”Cooperation takes time, it is much slower.
Competition is faster”

From interview by UKSEDS

<https://ukseds.org/2015/07/jean-jacques-dordain/>

History



<http://nssdc.gsfc.nasa.gov/database/MasterCatalog?sc=1957-001B>

<http://www.hq.nasa.gov/alsj/a11/AS11-40-5903HR.jpg>

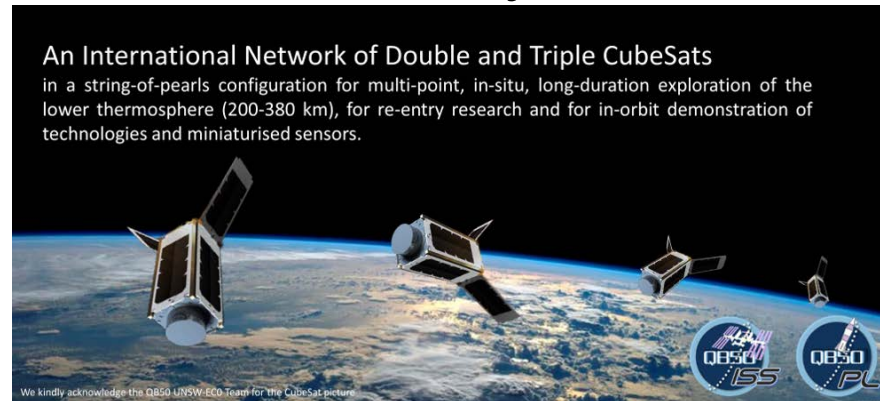
<http://www.spaceflight.nasa.gov/gallery/images/shuttle/sts-134/html/s134e010137.html>

<https://www.forbes.com/sites/jamiecartereu/rope/2019/07/22/from-apollo-11-to-artemis-3-heres-nasas-mission-timeline-for-putting-humans-back-on-the-moon/#203e04514048>

It took only 12 years to go to the Moon. It took more than 40 years to build ISS.

History

- QB 50 (36 CubeSats)
 - Announced, February 2012
 - Deployment from ISS, May 2017



- BIRDS-1 (5 CubeSats)
 - Started, summer 2015
 - Deployment from ISS, July 2017
- <https://www.qb50.eu/>



Competition

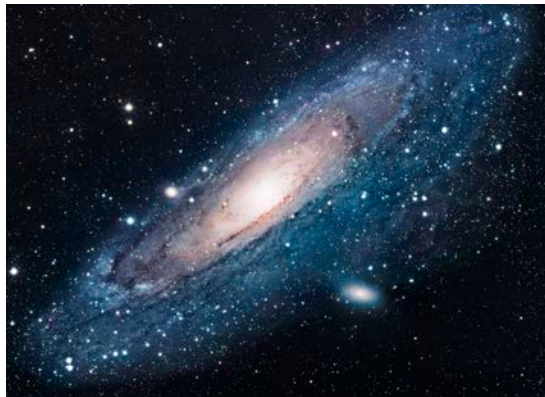
- Human nature(?)
 - Drives motivation
 - Clear leadership
 - Small team
 - It works if the goal is within the reach
 - Budget
 - Technology diversity
- } → Faster decision

Competition accelerates innovation

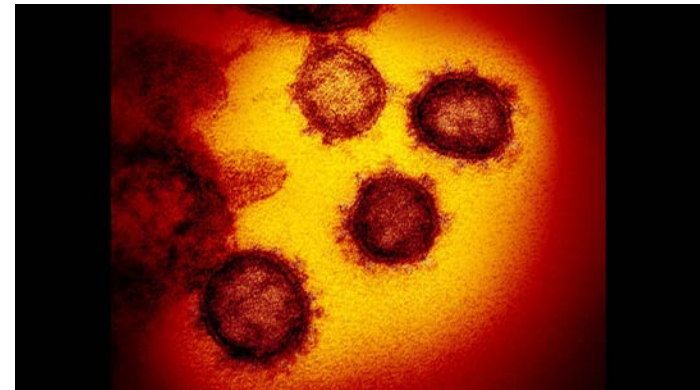
- Looking at the rival
 - Stimulates motivation
- Knowing what the rival is doing
 - Rethink whether we are in the right path
- Having a place where rivals meet
 - Show each other what they do
 - Promote the sound competition

Cooperation/Collaboration

- Competition does not work
 - If the goal is too far
 - If the enemy (target) is too strong



<https://japanese.engadget.com/jp-2018-07-24-20.html>



<https://www.nippon.com/ja/in-depth/a06601/>

Competition, Cooperation, Collaboration

- Difference between “cooperation” and “collaboration”
- *Collaboration*
 - *A collective activity that works like the parts of an old machine which priorities to work in the group instead of individually. They also encourage other participants to be united and use a common identity to achieve the goal shared with them*
- *Cooperation*
 - *A connective activity in which no priority is given to the individual or group of individuals but encourages and supports both at the same time. In a connective activity no shared identity is used because every participant is working to achieve the goal for his own benefit.*

By Berat Özfidan

<https://medium.com/@beratzfidan/the-difference-between-cooperation-and-collaboration-4cda8868502f>

Collaboration or Cooperation?

The goal is the same. But the reason for working is either for the collective (collaboration) or for the individuals (cooperation). I think UNISEC-Global can be both. Anyway let's work together.

When do we need to work together?

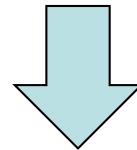


- For the sake of bigger objectives
- The subject is beyond the capability of individuals
- Stronger force (voice) is needed

By the way...

Recently (April 2020), the name of my laboratory changed

Laboratory of **S**pacecraft **E**nvironment **I**nteraction **E**ngineering
(LaSEINE)



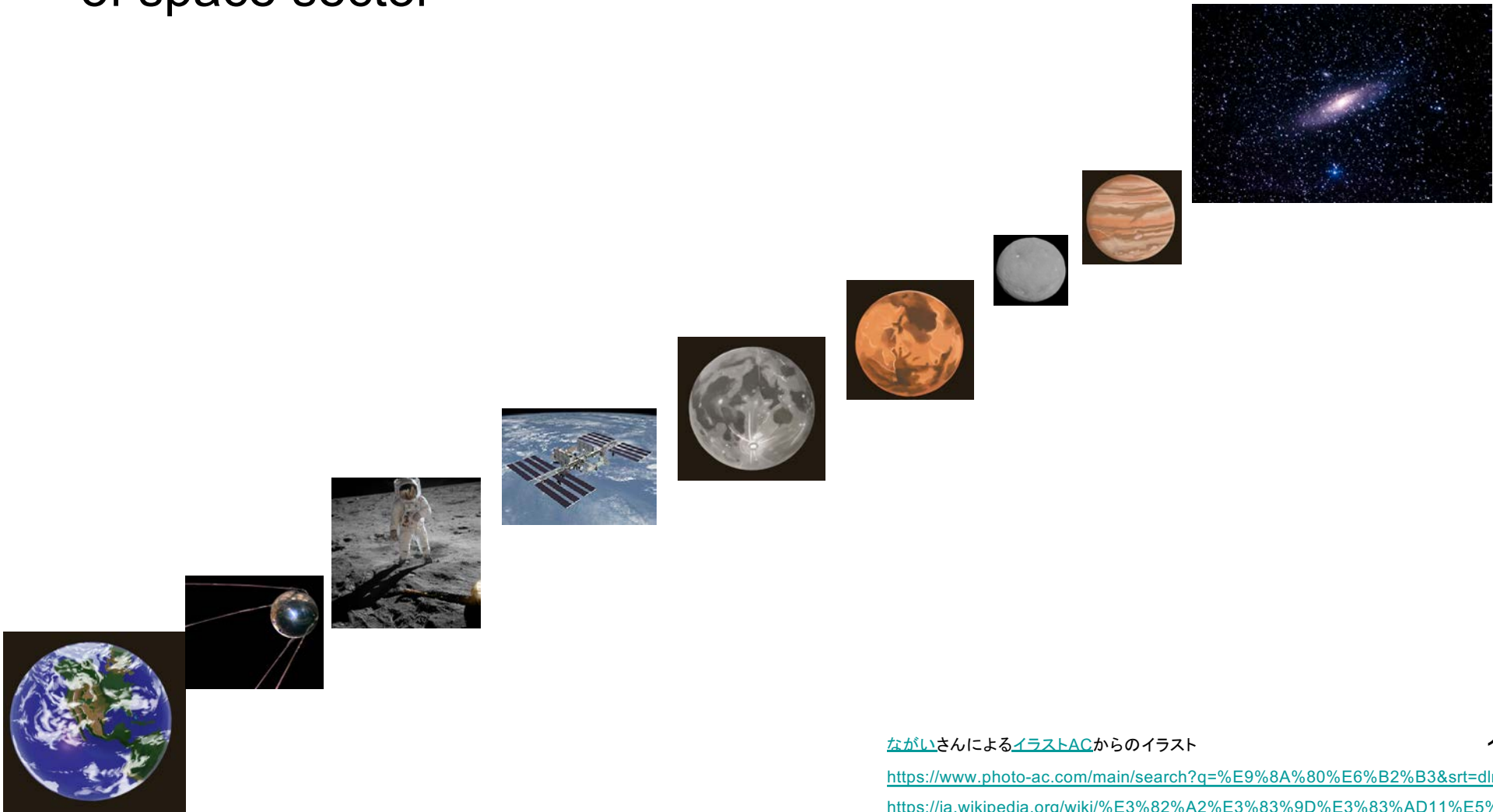
Laboratory of Lean **S**atellite **E**nterprises and **I**n-Orbit **E**xperiments
(LaSEINE)

Laboratory of Lean Satellite Enterprises and In-Orbit Experiments

Kyushu Institute of Technology

Vision

Accelerate the frontier development by expanding the “base of space sector”



ながいさんによるイラストACからのイラスト

<https://www.photo-ac.com/main/search?q=%E9%8A%80%E6%B2%B3&srt=dlrank>

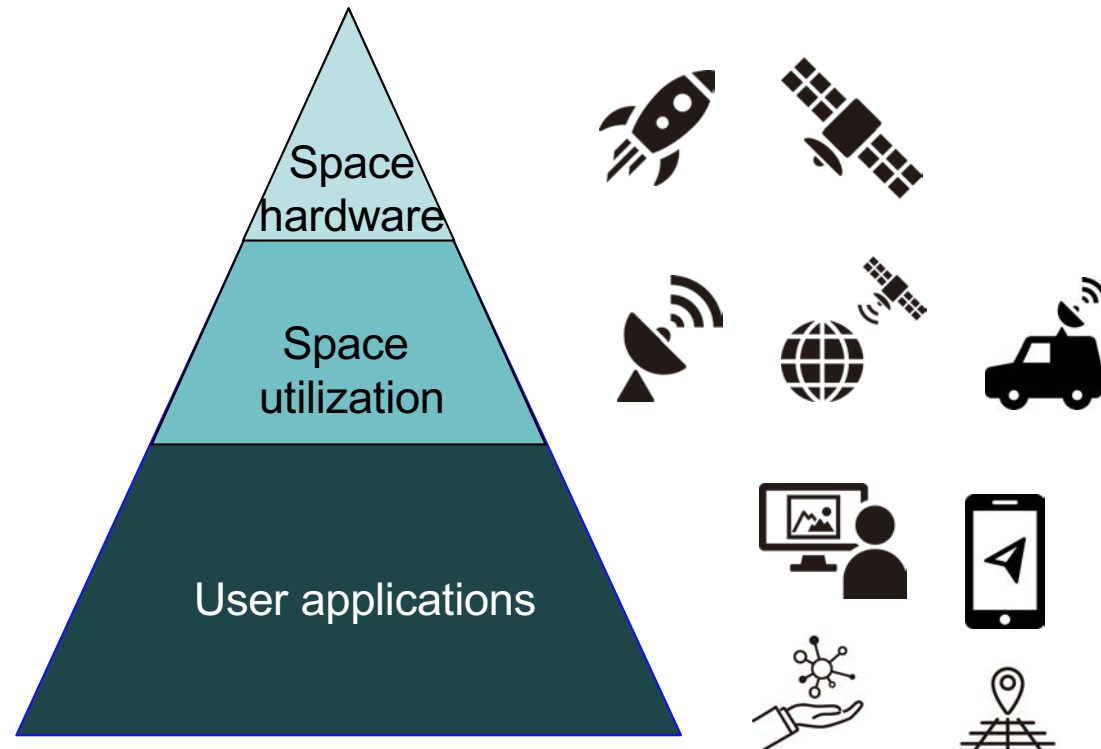
<https://ja.wikipedia.org/wiki/%E3%82%A2%E3%83%9D%E3%83%AD11%E5%8F%B7>

Base of space sector

Make something to fly

First usage of space
(broadcasting,
communication, etc.)

Secondary, ternary
usage of space
(positioning, big data,
IoT, etc.)



Space sector is feeling a sense of stagnation due to technical and financial barriers to entry

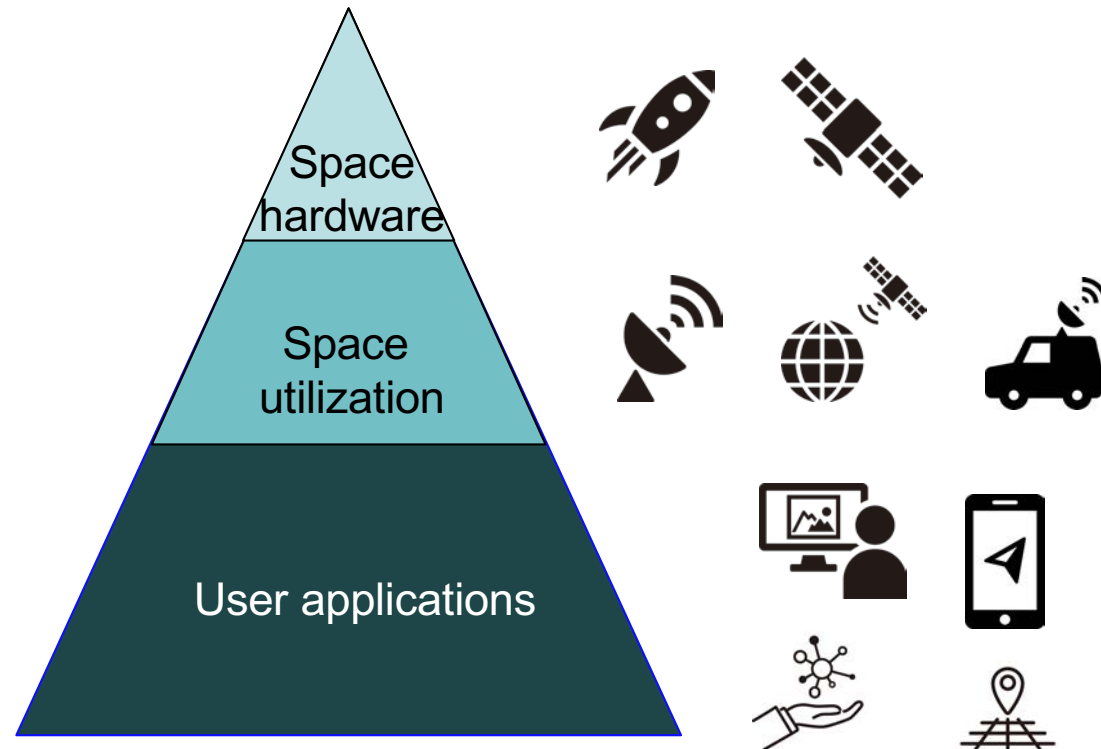
- Difficult to have new ideas of space usage
- Slow progress of space technology

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Lean satellites to demonstrate and realize new space applications
Expansion of base → Diverse talents → Technology innovation → New frontier

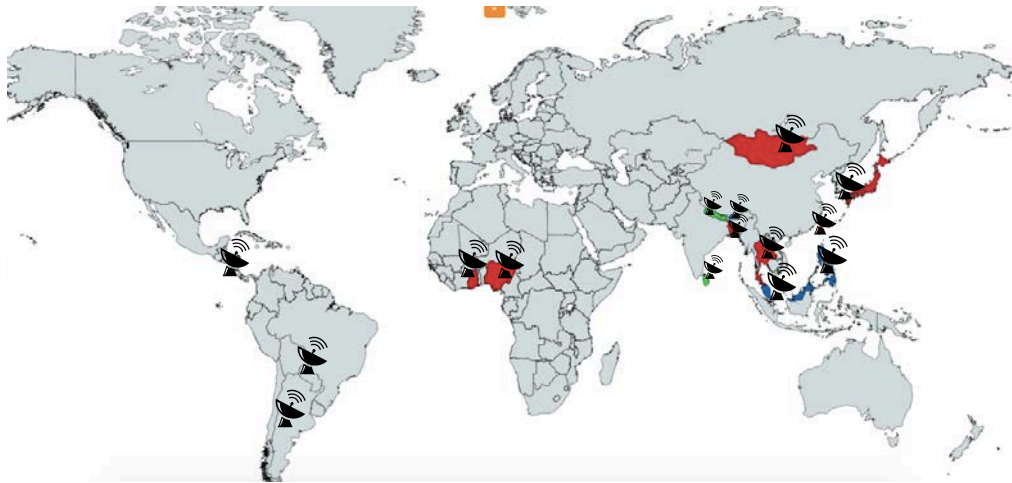
When do we need to work together?



- Expanding the base of space sector cannot be done alone
 - Progress of lean satellites
 - Lowers the technical and financial barriers to entry into space sector
 - Diversify the human resource
 - Evolution stops when diversity is lost
- For the sake of bigger objectives
 - To accelerate the frontier development
 - To make the world a better place to live by expanding the benefits of space science and utilization to countries across the world

When do we need to work together?

- Global network of ground stations
- Going to the Moon and beyond
- The subjects are beyond the capability of individuals.



When do we need to work together?



- Affecting government policies
 - Regulations over space activities
 - Affordable or free launch slots
- Affecting international bodies
 - UN
 - IAF
 - ITU
 - Others
- Stronger force (voice) is needed

Conclusion

- Competition is faster
- Working alone is comfortable
- But if we work together, each can get a bigger apple.
- So, let's join UNISEC-Global



Competition



Cooperation/Collaboration