




DOES IT TAKE A VILLAGE TO RAISE A (SPACE) ECOSYSTEM?




Memoirs of a (Space) practitioner









MY Space



Agenzia Spaziale Italiana

 <h3>SE Advisor</h3> <p>Local Ecosystem builder, supporting regional gov</p>	 <h3>VC fund partner</h3> <p>Aerospace and security, seed-early stage, 1st investments by Q4-23</p>	 <h3>Research Fellow</h3> <p>Tech transfer, member of advisory board</p>
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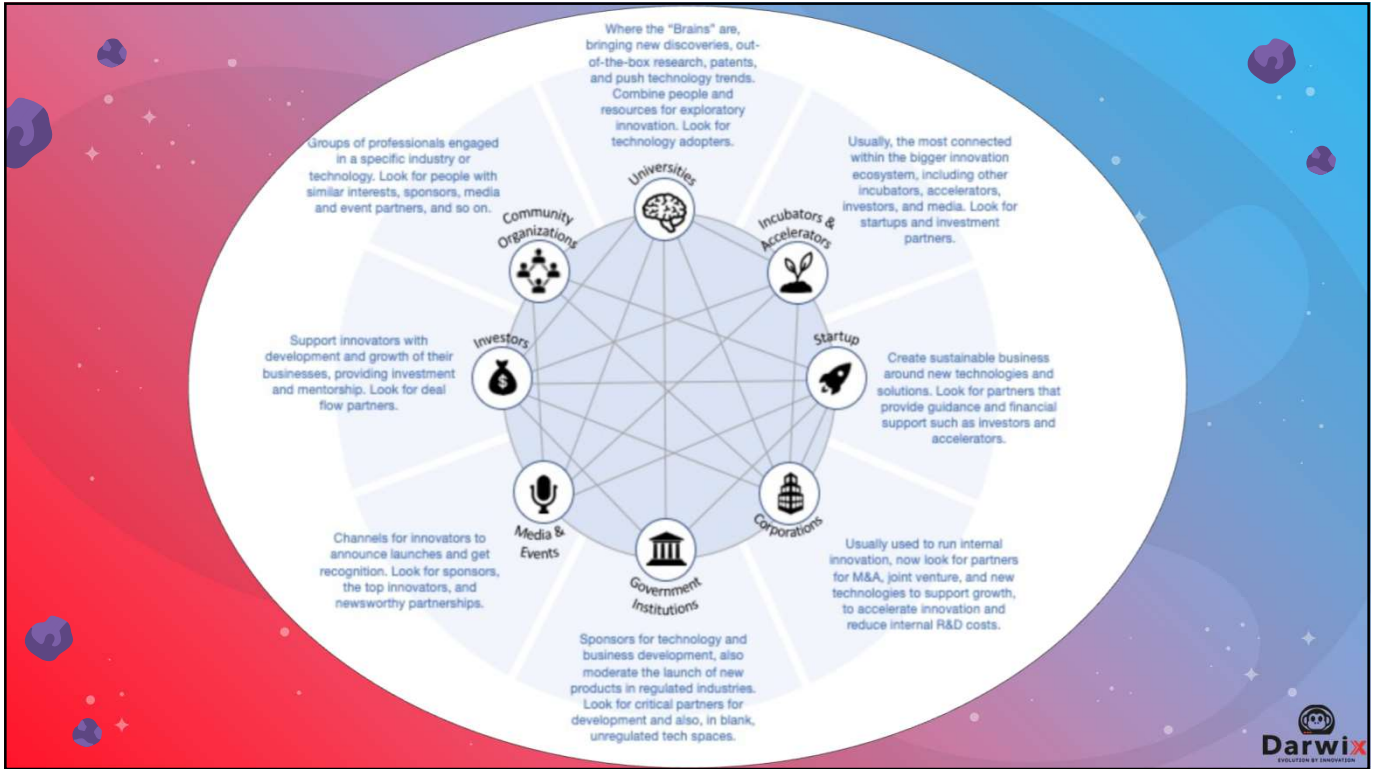
ECOSYSTEM

The basic unit of study in environmental science is the ecosystem (short for 'ecological system'). An ecosystem consists of a biological **community** and its physical **environment**, it can be as small as a drop of water or a puddle, or as large as a forest and vast, such as an ocean.

An ecosystem provides the organisms that live in it **what they need to survive**: food (=energy), water and shelter.

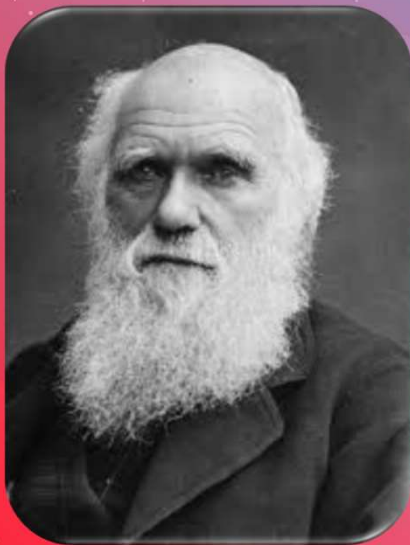
A lake ecosystem includes biotic (living) plants, animals and micro-organisms, as well as abiotic (nonliving) physical and chemical interactions.





EVOLUTION

Charles Darwin
1809-1882



The desires of animals have nothing to do with how they evolve, and changes in an organism during its life do not affect the evolution of the species. Organisms, even of the same species, are all different and that those which happen to have variations that help them to survive in their environments survive and have more offspring. Other individuals, that are not so well adapted, die off. Most elephants used to have short trunks, but some had longer trunks. When there was no food or water that they could reach with their short trunks, the ones with short trunks died off, and the ones with long trunks survived and reproduced. Eventually, all of the elephants had long trunks.

Jean Baptiste Lamarck
1744-1829



If an organism changes during life in order to adapt to its environment, those changes are passed on to its offspring. Change is made by what the organisms want or need. Elephants all used to have short trunks. When there was no food or water that they could reach with their short trunks, they stretched their trunks to reach the water and branches, and their offspring inherited long trunks. Giraffes stretched their necks to reach food and their offspring and later generations inherited the resulting long necks.

Anilkumar Dave
1972-as late as possible



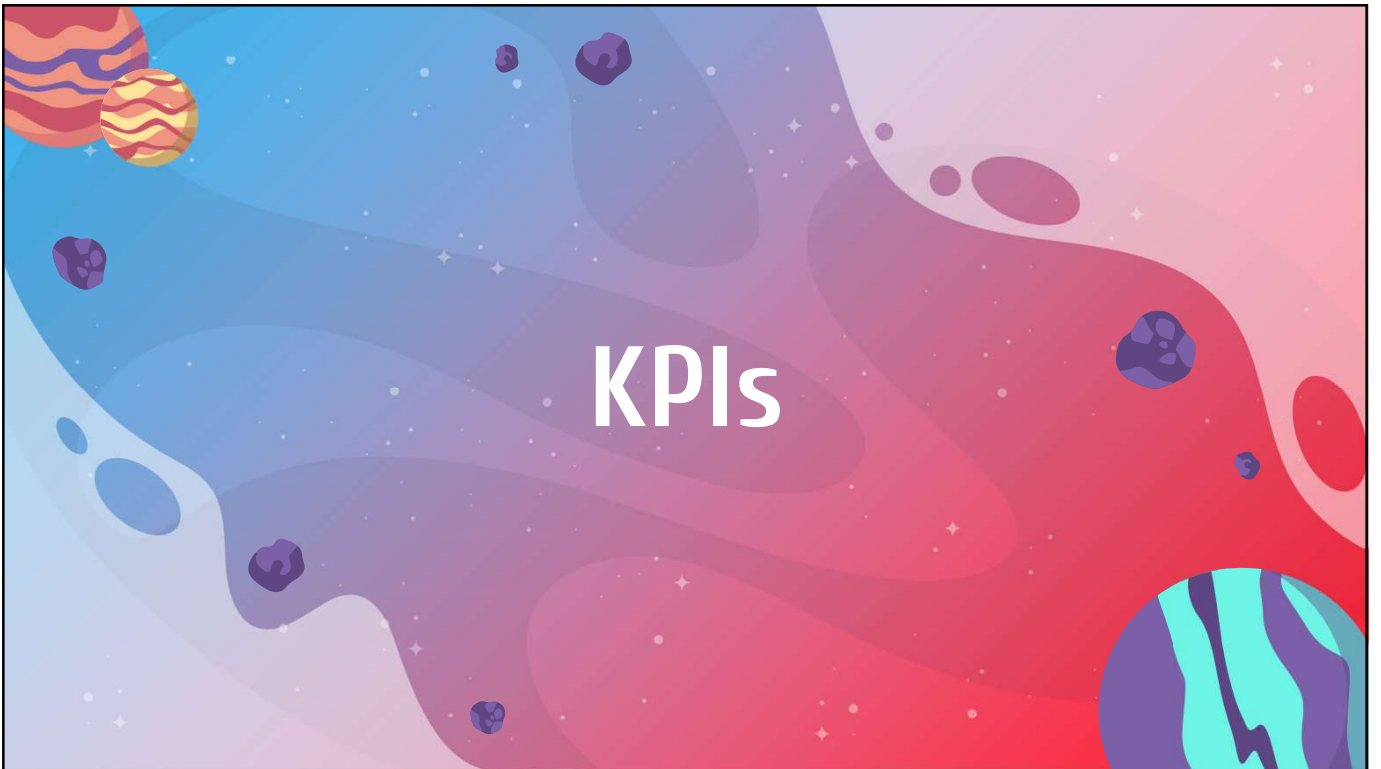
The evolution process is affecting the ecosystem as a whole and not only the single species. It can be orchestrated or self-generated by exogenous factors (ie competition, scientific discovery, global challenges, etc) in a mixed Darwin+Lamarck approach.

The new paradigm require more flexibility, adaptability, strategy, augmented governance and might increases the complexity and ecosystem overall entropy. But the results could be fast, effective and on a larger scale.

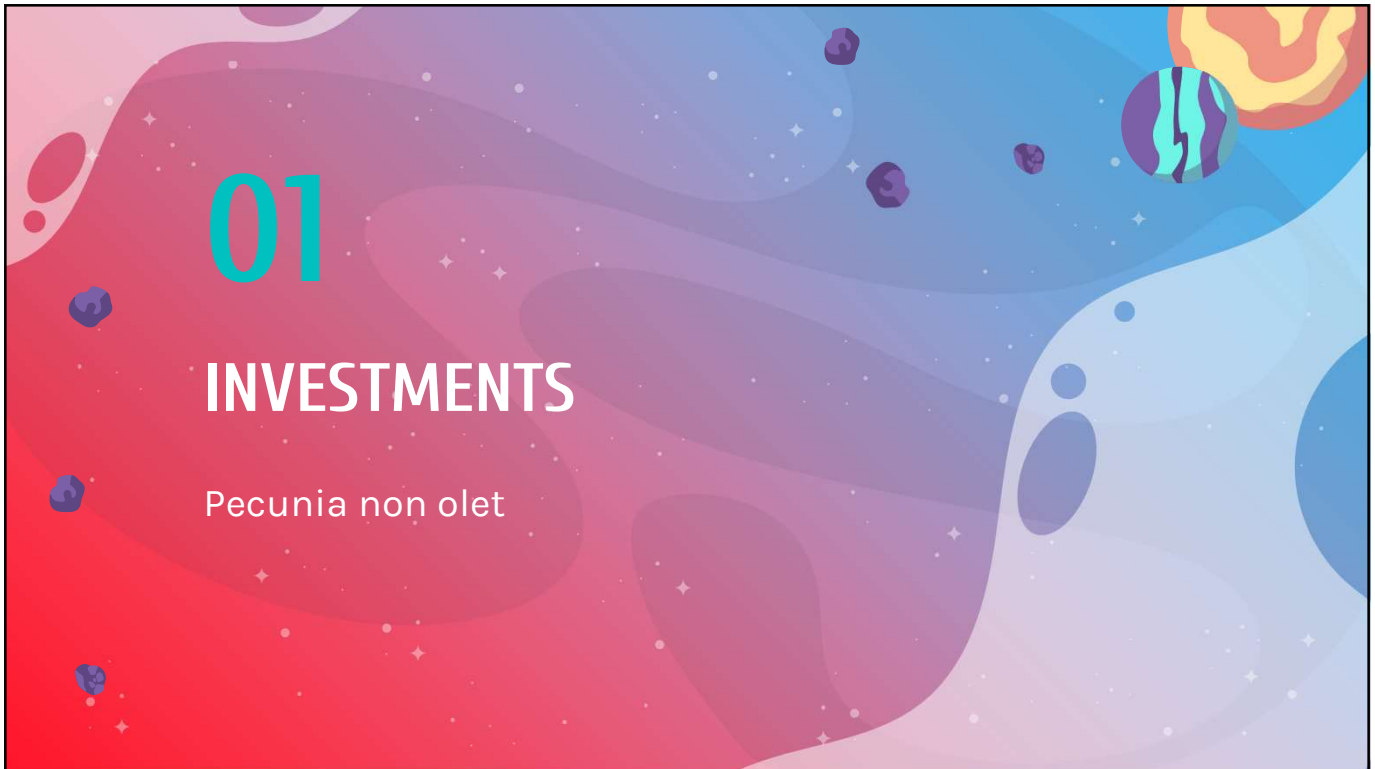
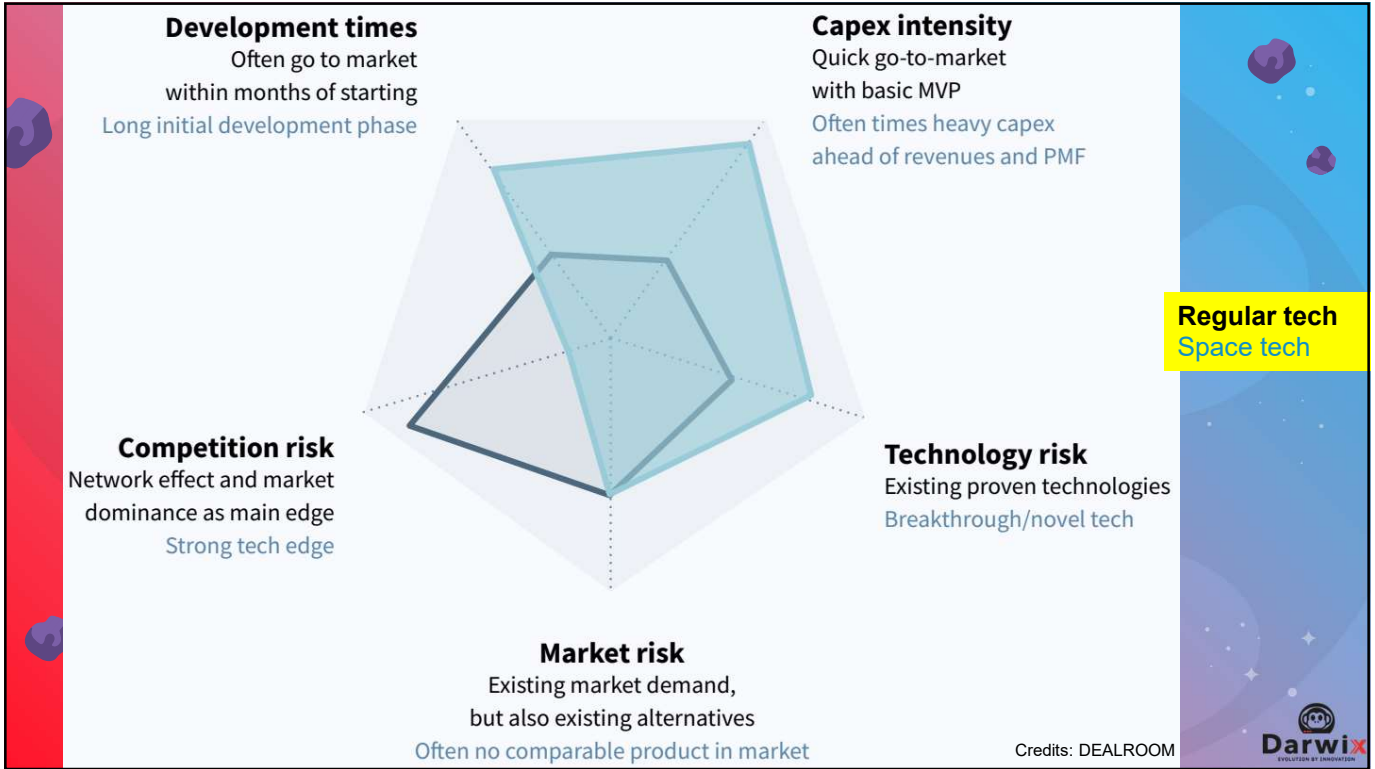
Species should evolve, generate different offsprings (ie start-ups, "smart" SMEs), enter new domains, design new BMs, face new challenges both as a single entity and as ecosystem. New and dynamic intermediaries to spark the evolution factor are required.

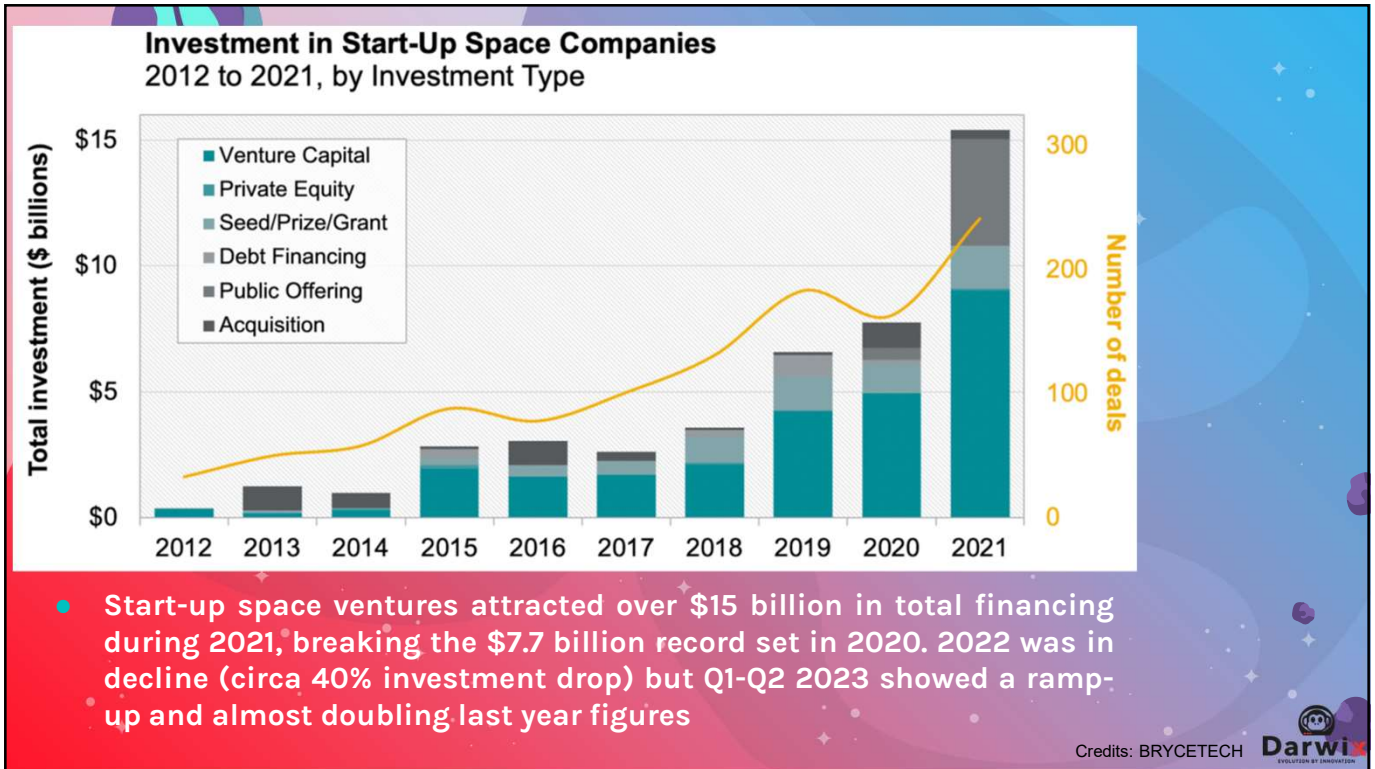
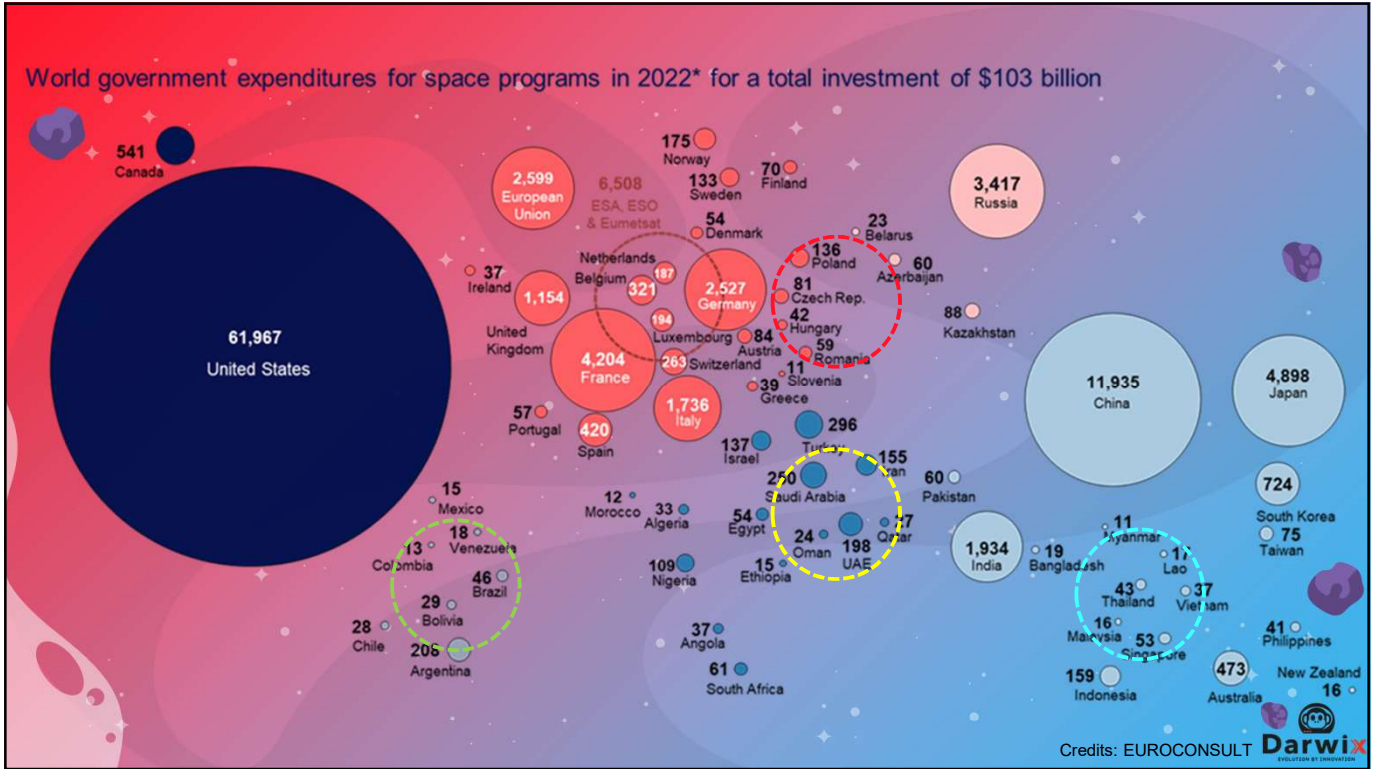


SPACE ECOSYSTEMS



KPIs





02

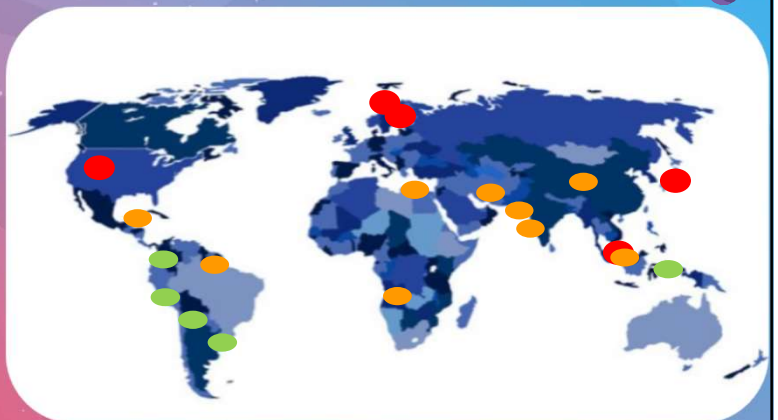
ROI_n

Return of Innovation

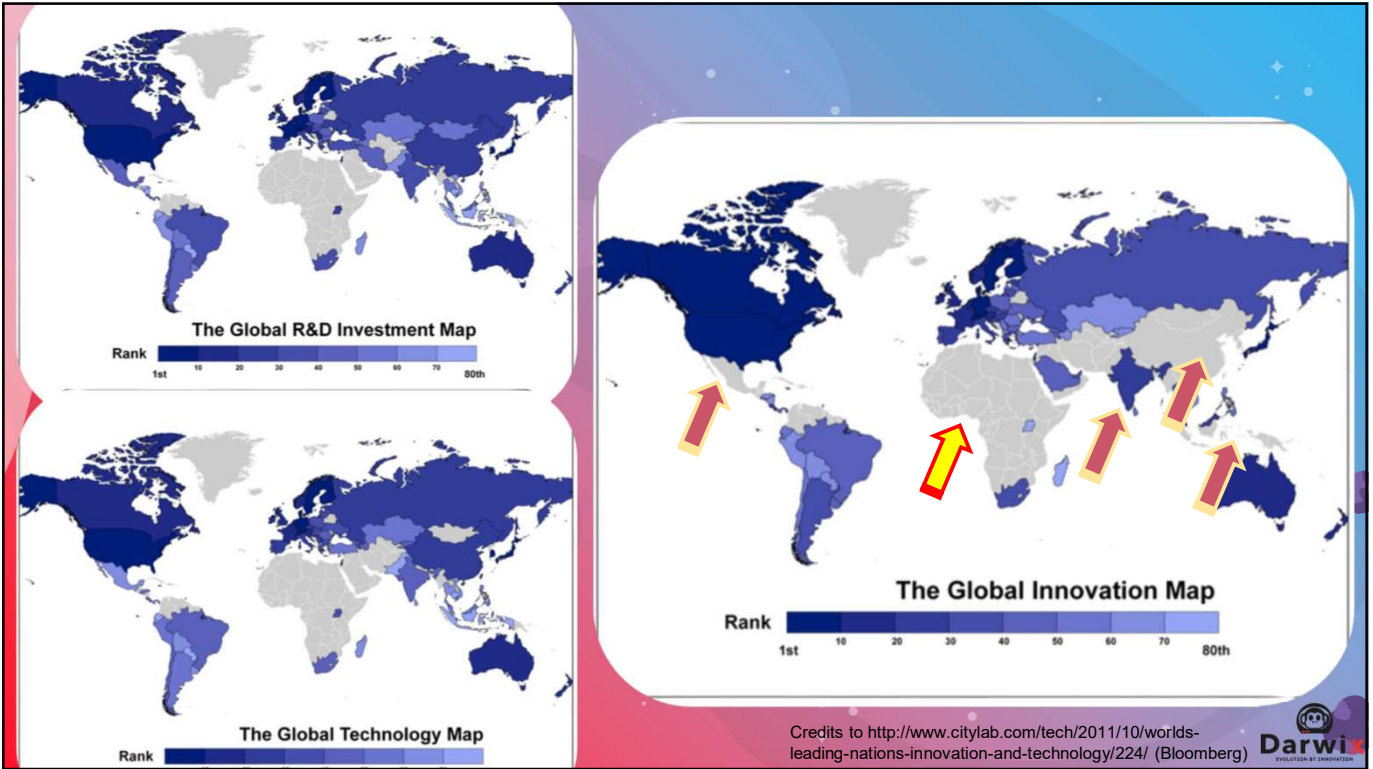
The countries that rank highest are described as **technological leaders**: Finland, US, Sweden and Japan, Republic of Korea and Singapore.

The second level of **potential leaders** in technology includes many developing countries: Malaysia, Mexico, Argentina, Costa Rica and Chile

The third level, **dynamic adopters**, includes: Iran, South Africa, Panama, Brazil, China, Egypt, Indonesia, Sri Lanka, India and others.



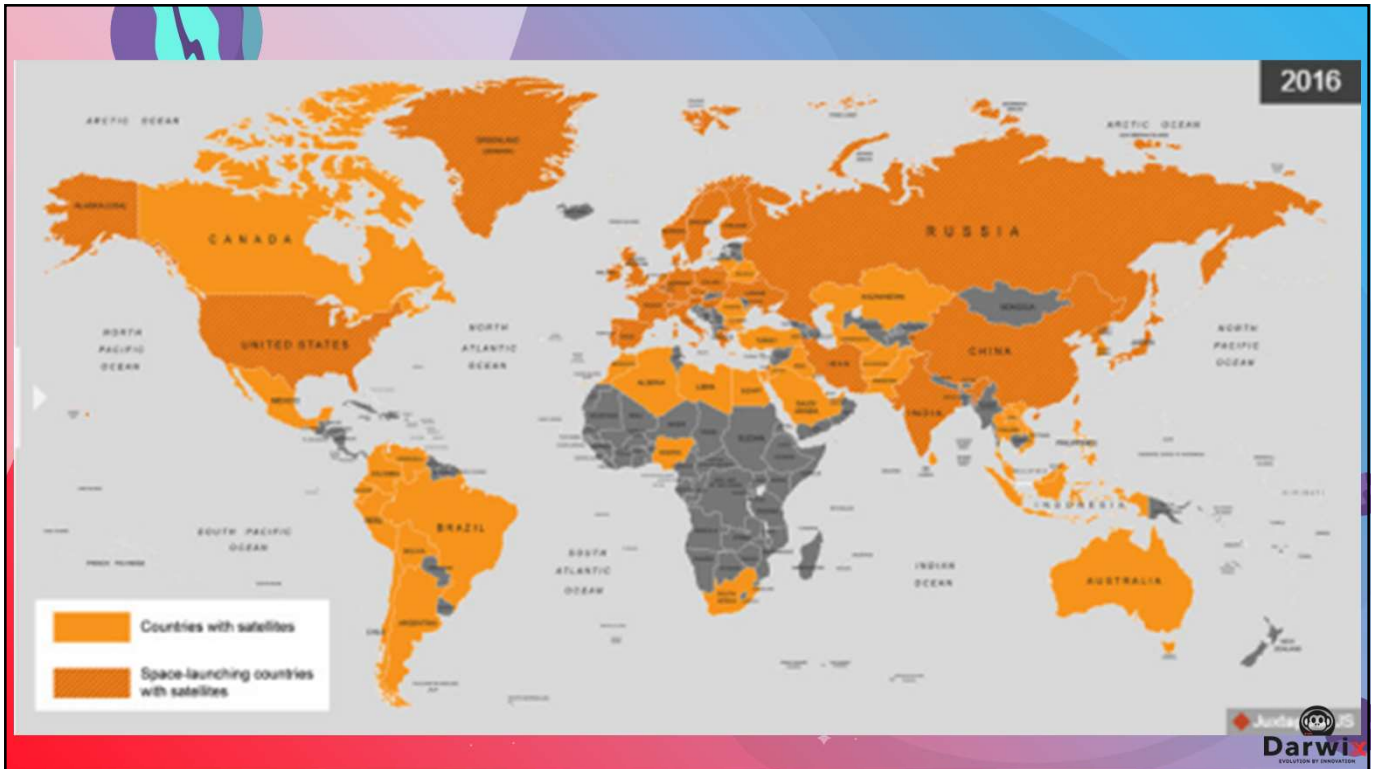
Authors' elaboration from GLOBAL INNOVATION INDEX



03

Geography..

...of Innovation





WHAT IS AN ECOSYSTEM AIMING AT?

GROWTH →

NEW GLOCAL

From «act local think global» to «think global act local»

INNOVATION → **S4**

Space Smart
Specialisation Strategy

GOVERNANCE

Strategy design,
common language

TECH TRANSF. →

KETs

Cross-contamination

NEW ENTERPR. →

EXPANSION

Strengthening

TOOLS

Policy makers, ecosystem
builders dialogue

NEXT GEN ECOSYSTEM



Socio-economic impact,
sustainability, global
challenges (eg SDG), quality of
life: **VALUE CREATION**



FINANCE

VISION

POLICY

GOVERNANCE

R&D&I

DOES IT TAKE A VILLAGE TO RAISE A (SPACE) ECOSYSTEM?

Darwix
EVOLUTION BY INNOVATION



GEN SPACE

THANK YOU!

Darwix
EVOLUTION BY INNOVATION