

IdeaSquare Planet: Mission on Planet Y debrief

Making sense of a week-long thought
experiment

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Idea^s



Retrospective

Think of last week and reflect on the following points.

You can consider aspects related to your teamwork, the narrative provided, the timeframe given, facilitation by coaches, schedule, etc...

15 min

What went well?

What went bad?

What would you change?

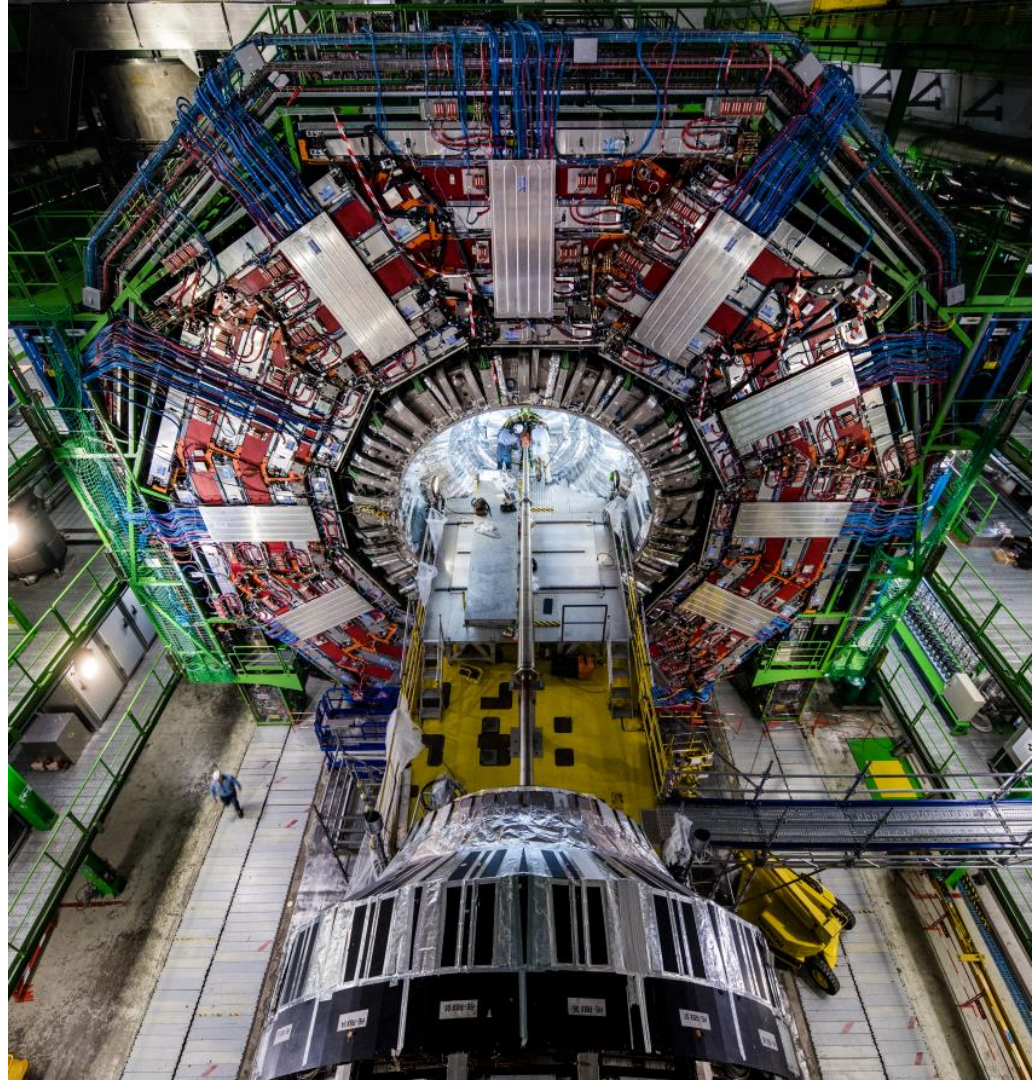
Other comments or ideas?



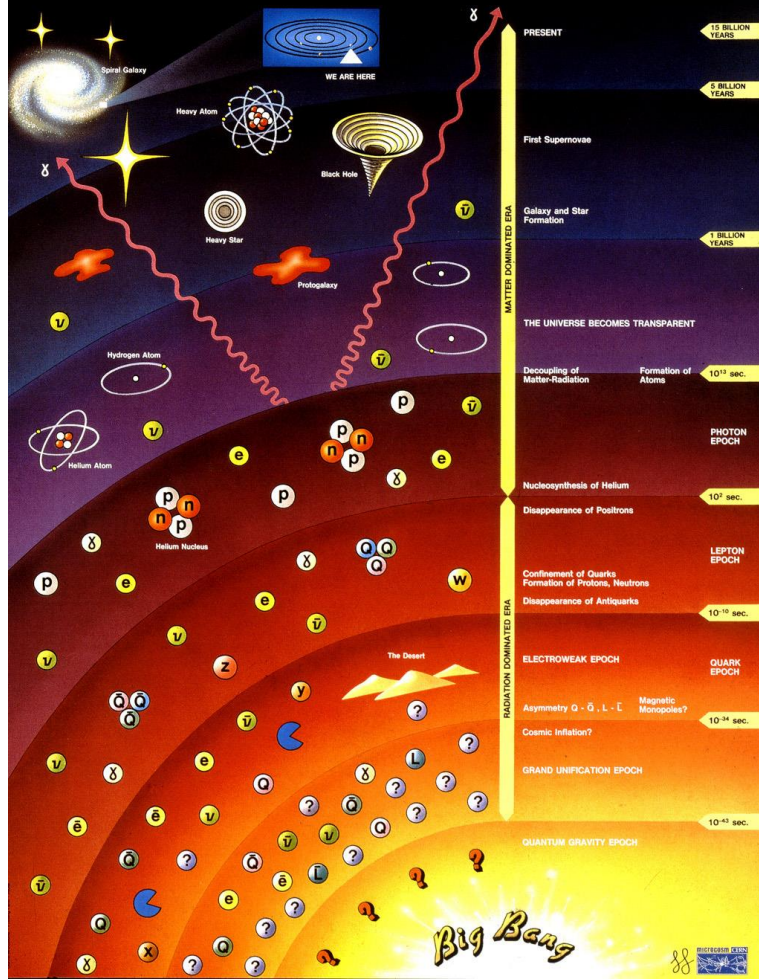
Connecting the dots

**Business as usual
is not in our DNA,
but we also don't
want any "magic"...**

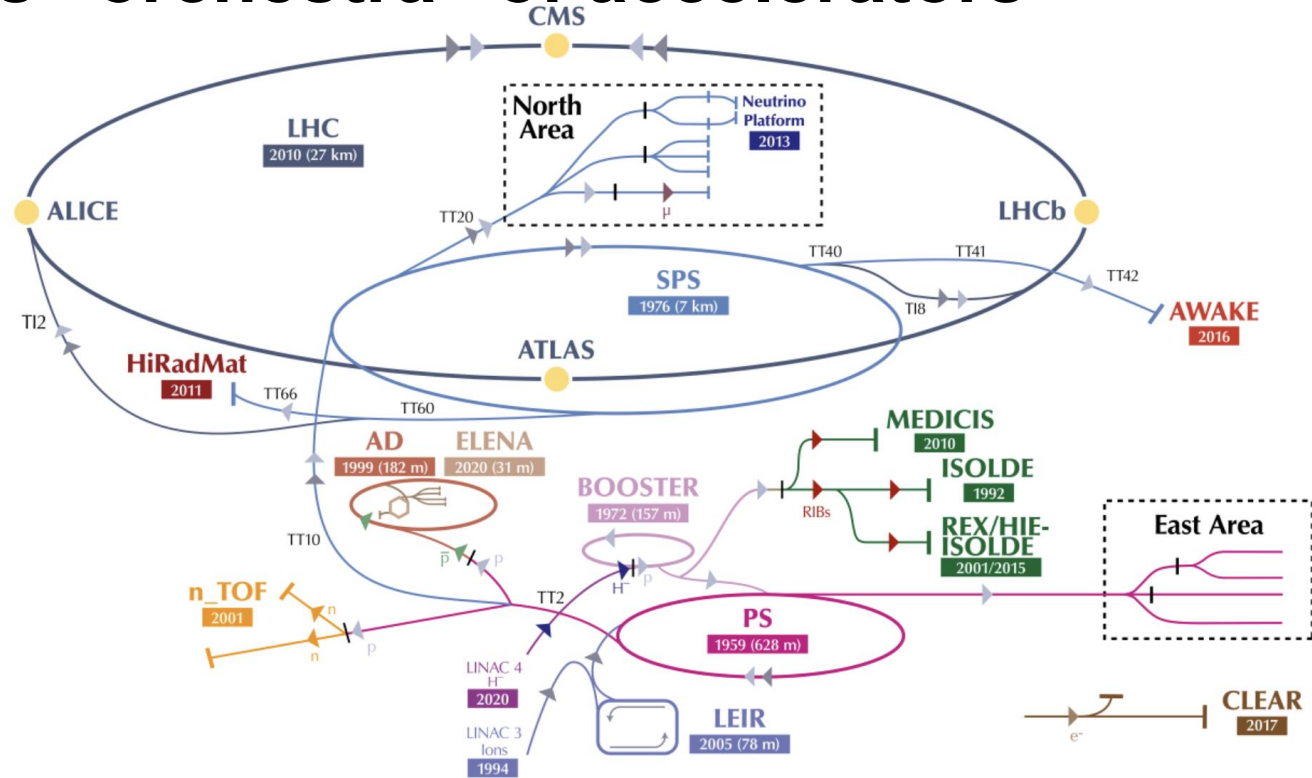
- Ideas should be disruptive, without:
- Breaking the laws of physics;
- Causing more harm than good.



History of the Universe



CERN's "orchestra" of accelerators





Dissect the problem



What is the origin of the universe?

Theory

Experimentalists

Mathematicians

Engineers

Data Scientists

Cafeteria (R1 open -> more papers published)

Infrastructure

Management

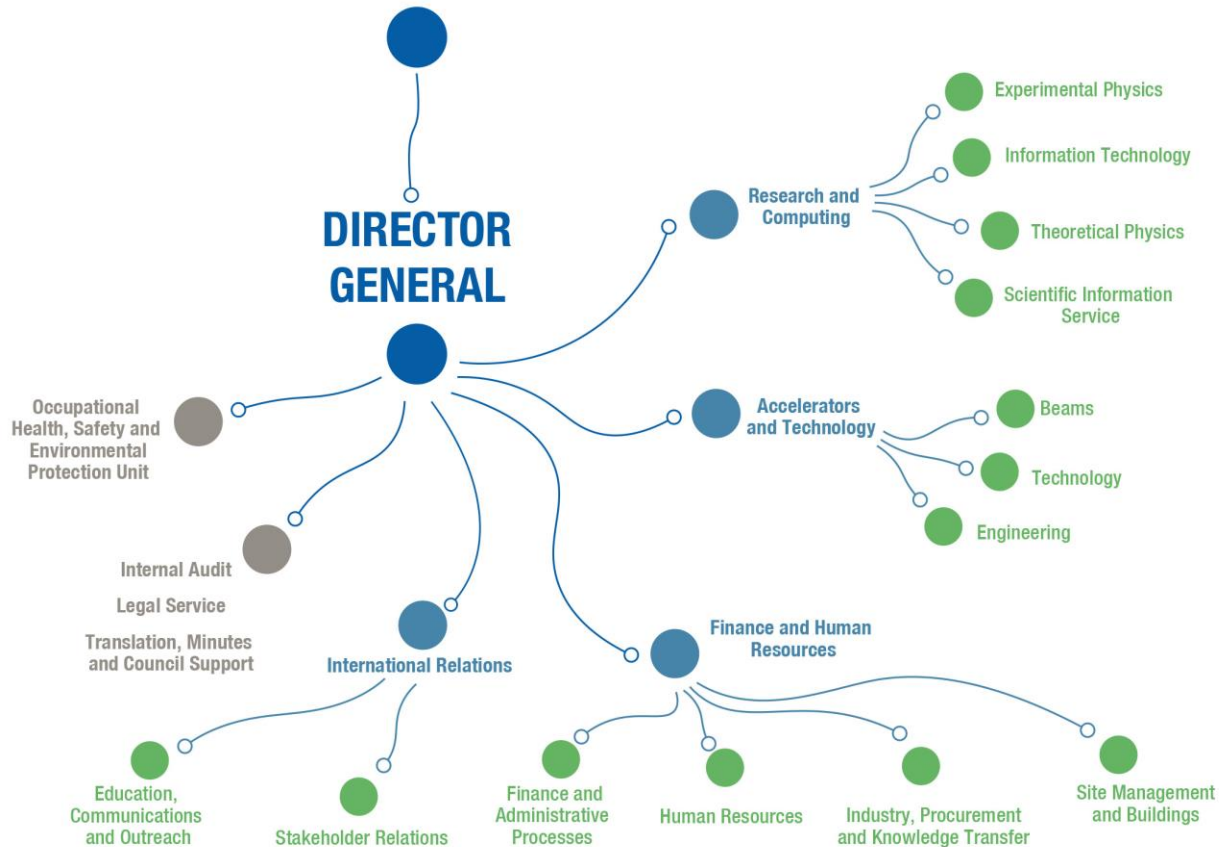
Human Resources

International Relations

Procurement



CERN COUNCIL



Unite different disciplines and backgrounds

Not one single person has studied “Particle-collision detector construction management”

Which is why we need Theoretical & Experimental Physicists, Engineers, Data Scientists, Economists, Lawyers, Technical workers and many more disciplines to plan, organize parts, build, manage and maintain the LHC and all connected experiments.

You need to learn to **“speak the same language”** and establish a common baseline by **agreeing on a set of assumptions** that you share. Otherwise you will struggle repeatedly throughout your project.





Anticipate the future



When pursuing big(ger) projects, the aspect of time becomes ever more impactful.

The LHC was conceived at a time when the Magnets that are needed to steer the protons did not exist yet at an affordable price.

But to reach superconductivity by cooling should be possible because:

- 1) did not violate the laws of physics
- 2) considering the prices of other technologies it could be expected that they will become affordable in the quantity needed by the time the experiment was built.

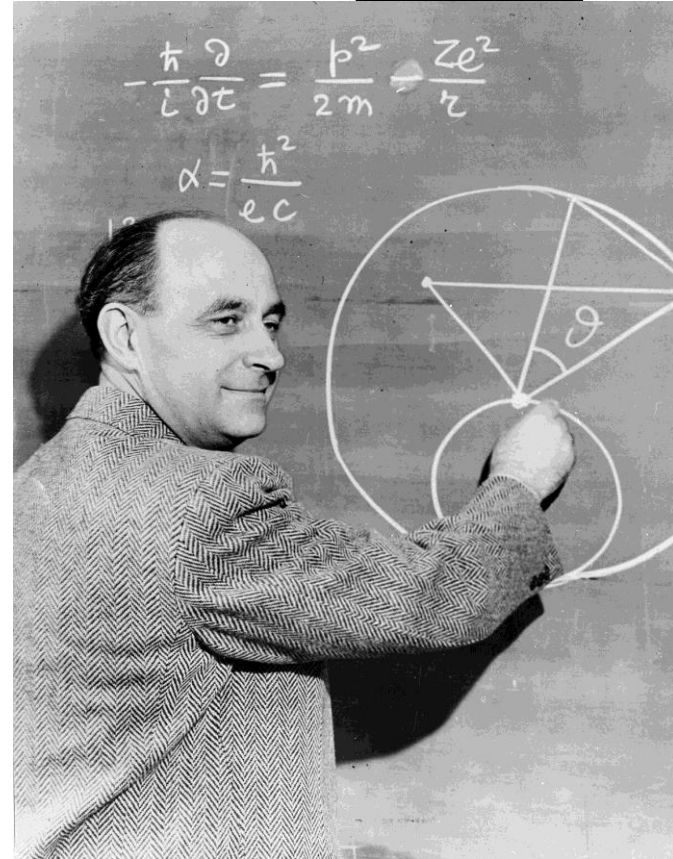
Planning for 30-50 years challenges you to **take a look at the world outside of your projects, look at trends and make assumptions.**

Argue Scientifically

Talking about anything without having some data on it, is a bar talk.

Using basic calculations (back on the envelope calculations) is a great way to understand the **order of magnitude** of a problem or a solution.

Think of Enrico Fermi and his pieces of paper. With proper estimations you can argue, without data, you cannot.



Challenge Paradigms

Thinking in terms of “if... then” is putting you in a reactive mode, in which it is extremely hard to achieve real change.

Thinking in terms of “what if...”, however, enables you to imagine, dream and change.

Think of Rosa Parks (and activists before and after her), challenging existing paradigms (with good reason), might end up changing the whole world.





Exponential innovation, a CERN recipe

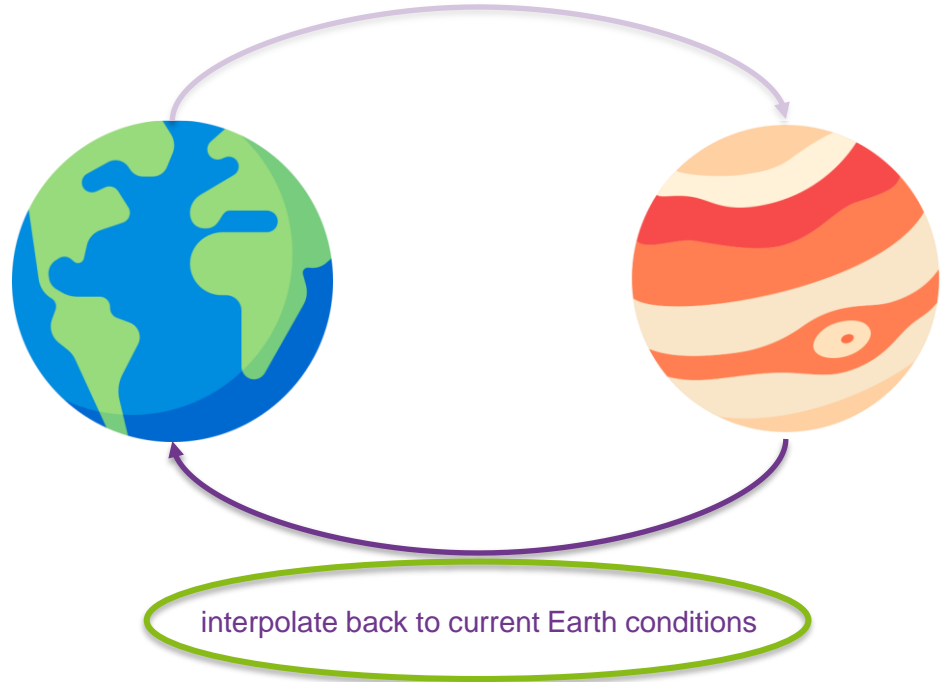


- 1) Dissect the Problem
- 2) Unite different disciplines and backgrounds
- 3) Anticipate the future
- 4) Argue Scientifically
- 5) Challenge Paradigms

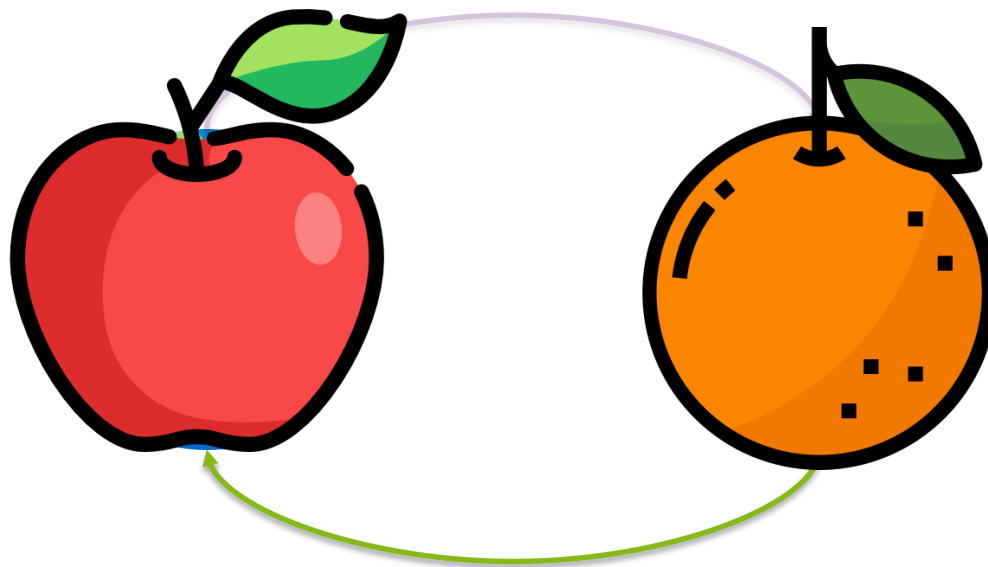
IdeaSquare Planet

- **Systems-thinking approach** to design and simulate a first settlement on an exoplanet.
- Showcasing scientific methods can be used to **address complex societal challenges.**
- Reference point for **assessing** the potential **societal impact.**

extrapolate and simulate a sustainable, futuristic socio-ecological system



extrapolate and simulate a sustainable,
futuristic socio-ecological system



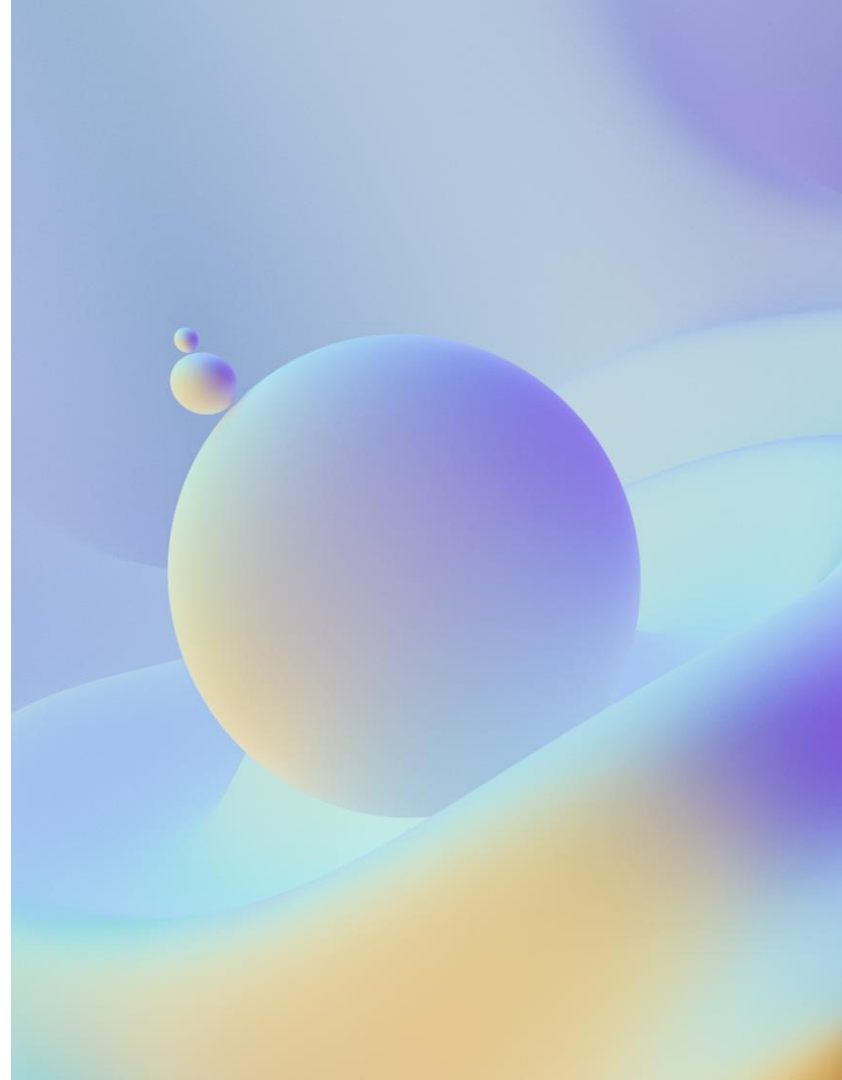
We cannot compare apples with oranges...

How can you switch contexts?

Consider that whatever worked on your exoplanet, **does not necessarily translate directly to planet Earth.**

We're not "copy pasting" the plans we came up with last week.

We are rather abstracting and translating the learnings related to the process we went through, and applying them to our future work.

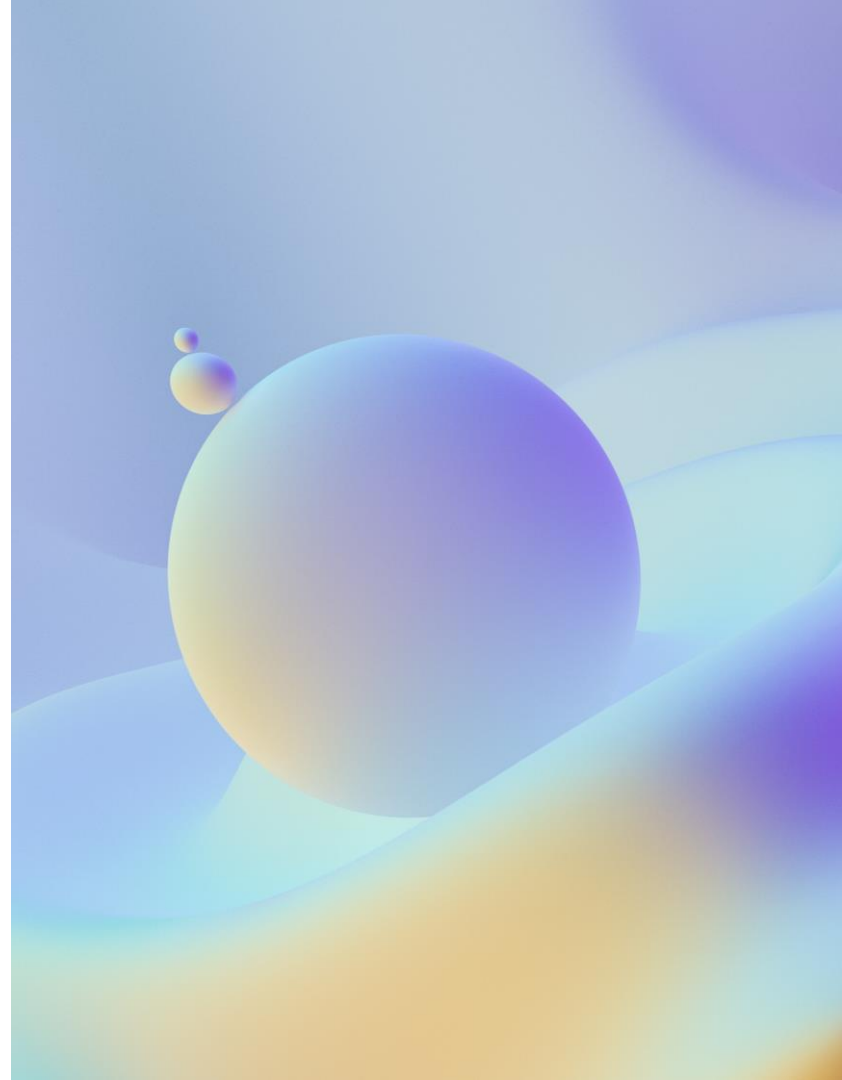


How can you switch contexts?

Contrary to last week, in which you created a new system, with (largely) a lot of freedom.

You will now have to **intervene in existing contexts.**

→ Remember the possible impacts you will be creating in the current earthly system.





Let's look back...



Find a partner and discuss your experience from last week. Document your insights in stickies.

- How was it to navigate the **process of tackling the mission**?
 - What challenged you? Where did you find yourself comfortable?
- What **different approaches** did you see in others?
 - What inspired you? What might you adopt/integrate into your way of working?
- What did you learn about **yourself and your unique contribution** regarding your teamwork this week?
- What were some of the **topics you learned about**?
- What do you think this **experience brings to your project**?

Systems Intervention - Idea

12Planet - Challenge on Nisi



Things to consider:

- How does it work?
- Who uses it?
- Is there any technology you want to use?

DESCRIBE YOUR IDEA

Problem:



Solution:



HOW IS YOUR IDEA ON PLANET Y CONNECTED TO YOUR EARTH CHALLENGE?



Potential Consequences & Side Effects:

Limitations:

Assumptions:



What's next?

Calendar

November 2024



M	T	W	T	F	S	S
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	1
2	3	4	5	6	7	8

December 2024



M	T	W	T	F	S	S
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

January 2025



M	T	W	T	F	S	S
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9

February 2025



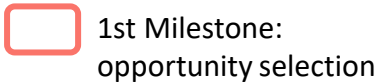
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Discover



Define



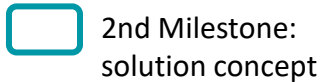
1st Milestone:
opportunity selection



Ideate



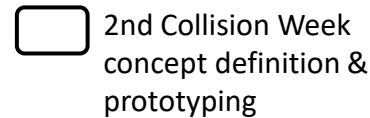
Develop



2nd Milestone:
solution concept



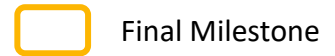
1st Collision Week
I2Planet Dark Horse



2nd Collision Week
concept definition &
prototyping



Deliver



Final Milestone



Goal Check-in

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