IGLUNA – ESA_Lab@CH





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- The ESA_Lab@ Initative
- + IGLUNA 2018/2019
- + IGLUNA 2020
- + IGLUNA 2020/2021
- About the Swiss Space Center





ESA_Lab@CH: IGLUNA



Engaging students across Europe to innovate and showcase technologies

- IGLUNA 2019 and 2020: Demonstrate how to sustain life in an extreme environment
- Educating the next generation of space experts through project experience
- Engineering, science, life support and design projects
- Over 300 students from more than 20 universities across Europe and the USA

ESA_Lab@ Initiative

Cooperation



- International platform
- Interdisciplinary collaboration



Inspiration



- + Student education
- Next generation of space experts

Development



- Maturity of key technologies
- Future of space exploration



ESA_Lab@ Coordination – mobilizing partners



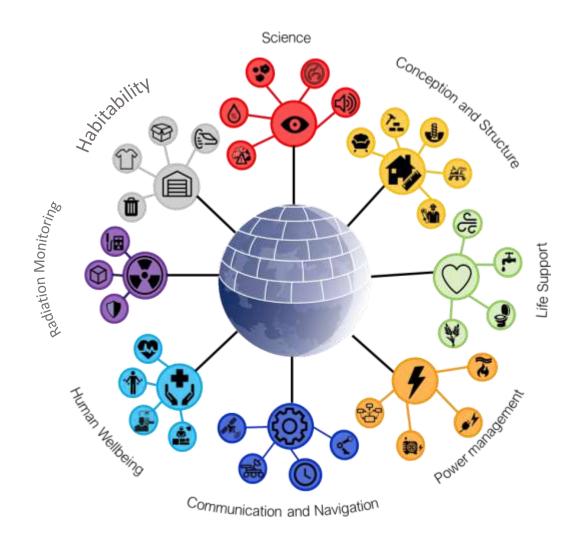








IGLUNA – Research Topics





IGLUNA 2018/2019 – Partners and sponsors







Warsaw University of Technology























IGLUNA 2018/2019 - Kick-off Event











IGLUNA 2018/2019 - Reviews

- Based on the European Cooperation for Space Standardization (ECSS)
- To introduce students to systems engineering best practices, but simplified with respect to a formal space project review process



Preliminary Design Review (PDR)



Critical Design Review (CDR)

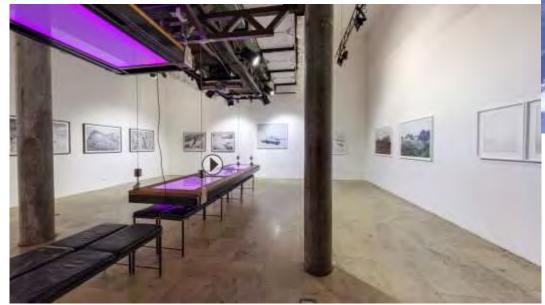


Readiness Review (RR)



IGLUNA 2018/2019 – Field Campaign in Zermatt

At the highest cable car station of Europe inside a glacier cave at 3883 m – Matterhorn Glacier Paradise





... and in downtown Zermatt – Backstage Hotel Vernissage











IGLUNA – Outcomes

- International, interdisciplinary, collaborative platform
- Technological outputs
- Student education
- + Public outreach





IGLUNA 2020 – space habitat with remote operations

- + Based on the ESA_Lab@ initiative
- + Building up on IGLUNA 2018/2019
- Developing bottom-up ideas into technologies for the future of space exploration

Igniting innovation Powered by





ESA_Lab@CH – a platform to demonstrate collaboration, education and technologies



Volker Gass, Swiss Space Center Director and Jan Wörner, ESA Director General, signature of the Memorandum of Collaboration in Paris, October 2019.



IGLUNA 2020 – Student projects



IGLUNA 2020

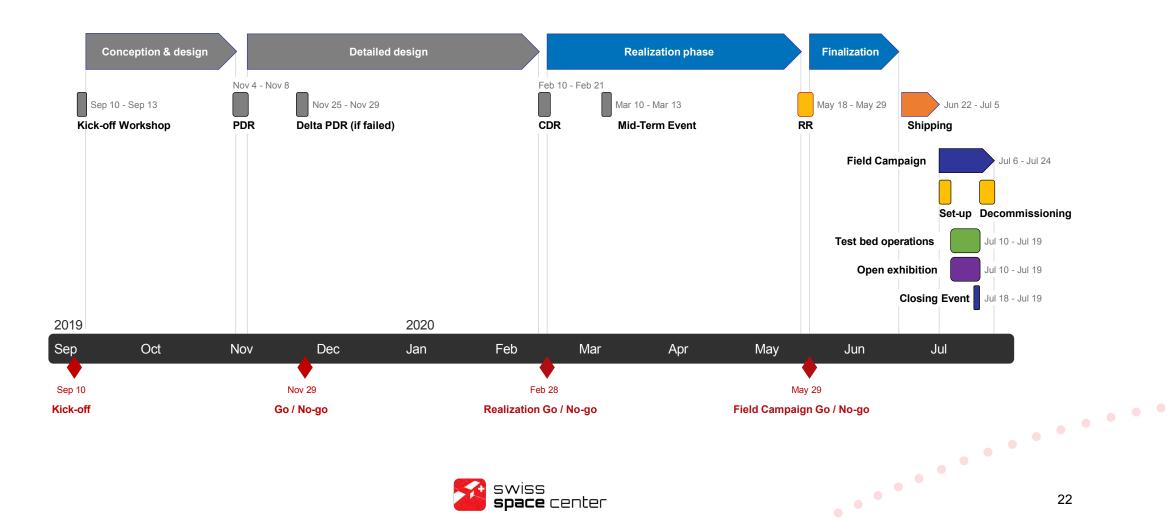
Life Support Systems	Habitat Conception & Structure	Communication & Navigation	Power Management	Human Well-being	Science
P01_MELiSSA	PO7_HABITAT	P11_CELESTIAL	P15_POWERHAB	P10_FOCUS	P14_LDMS FOR LIFE
P02_GROWBOT HUB	PO8_AMPEX	P13_LIGHT		P12_SMART LUNAR CLOTHING	
P03_SWAG		P16_ROVER			
P04_V-GELM					
P05_SAMPLE					
P06_HYDRATION II					

- + 15 student teams
- 15 universities
- + 10 countries
- Over 130 students



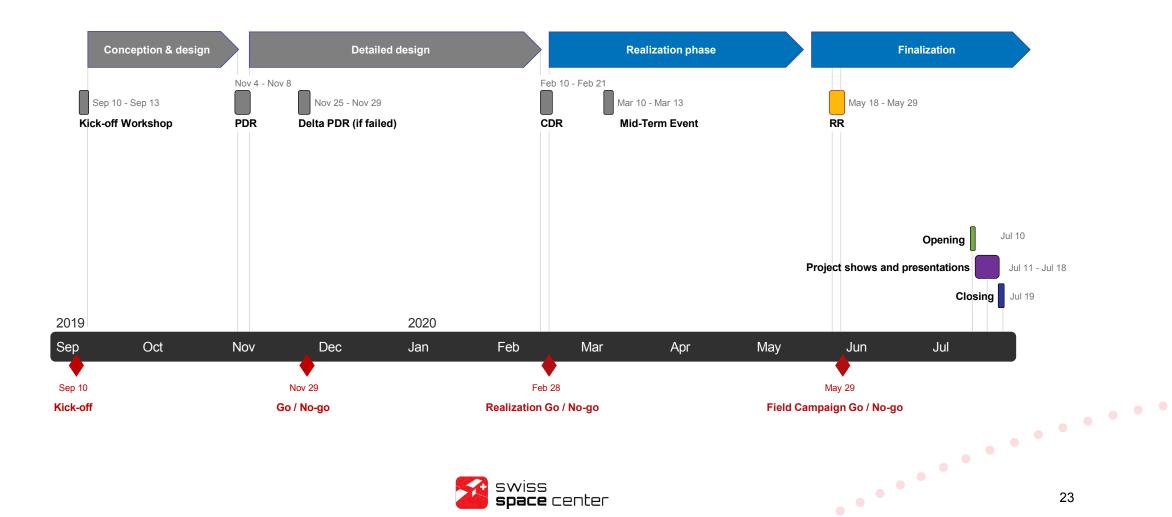
IGLUNA 2020 – Initial timeline

Field Campaign: 10. – 19. July 2020

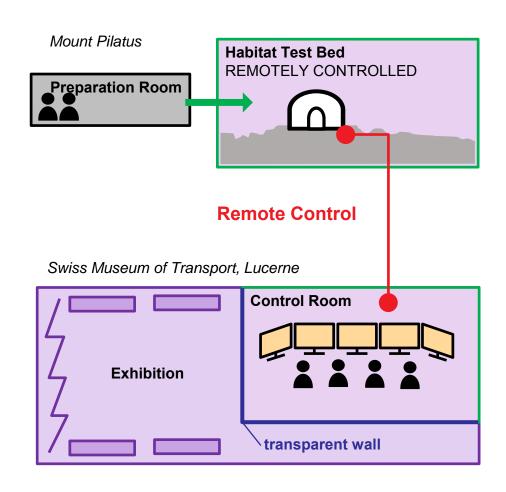


IGLUNA 2020 – New timeline due to COVID-19

Virtual Field Campaign: 10. – 19. July 2020



IGLUNA 2020 – Field Campaign original concept

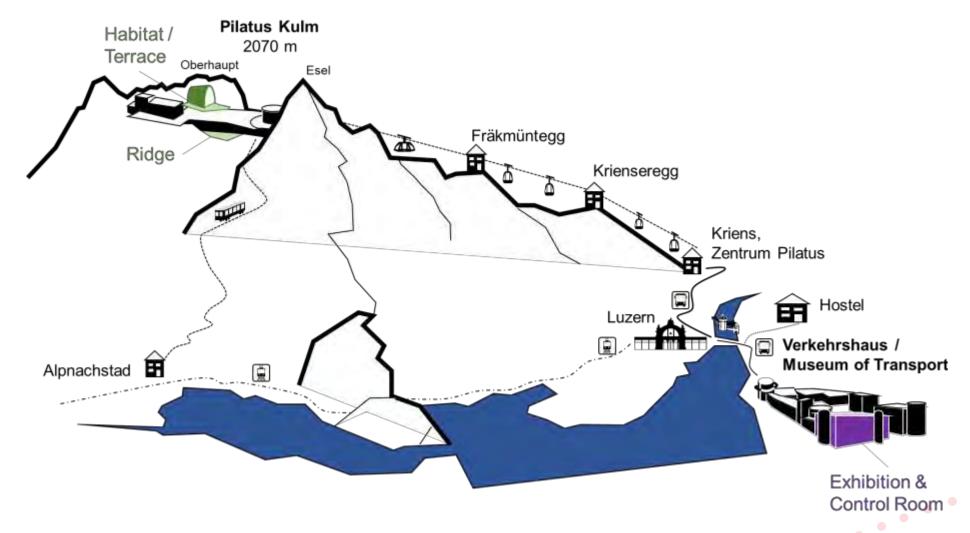








IGLUNA 2020 – Field Campaign original concept





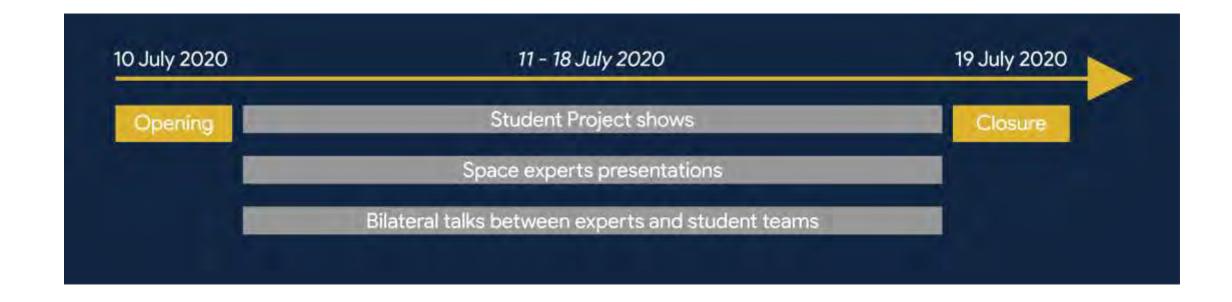
IGLUNA 2020 - Field Campaign updated concept

- Virtual Field Campaign
- Held live online (WebEx, YouTube, Facebook, LinkedIn)
- + 10 19 July 2020
- Student projects closure
- Showcase the hard work of students giving visibility to their projects





IGLUNA 2020 – Field Campaign updated concept





IGLUNA 2020 – Virtual Field Campaign schedule



Full programme on www.spacecenter.ch/igluna/virtualfieldcampaign



IGLUNA 2020 – Partners and sponsors



















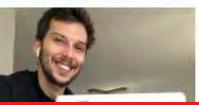




































IGLUNA 2020/2021 – another round of projects to the next level



Call for projects

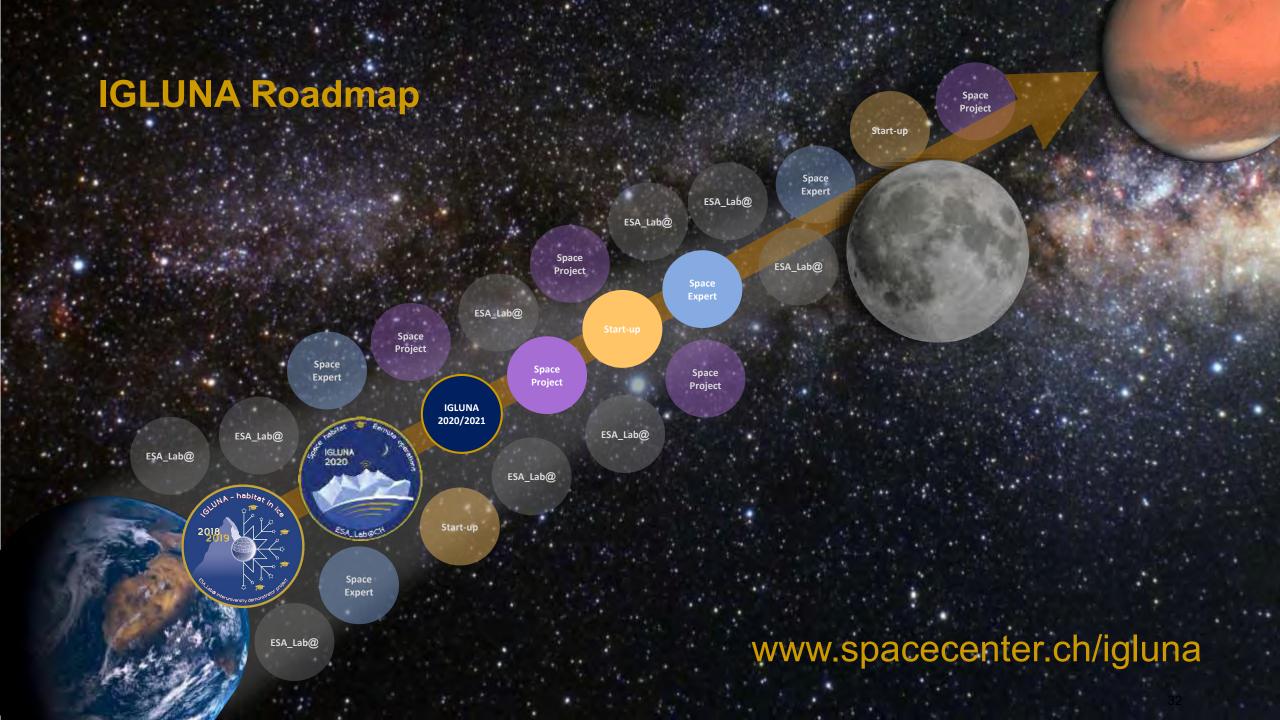
- Mid-May 2020: open call for projects
- End June 2020: deadline for application
- Beginning July 2020: project proposals evaluation

Start of IGLUNA 2020/2021

- Mid-July 2020: announcement of selected projects
- + September 2020: IGLUNA 2020/2021 kick-off















To promote interaction between the stakeholders

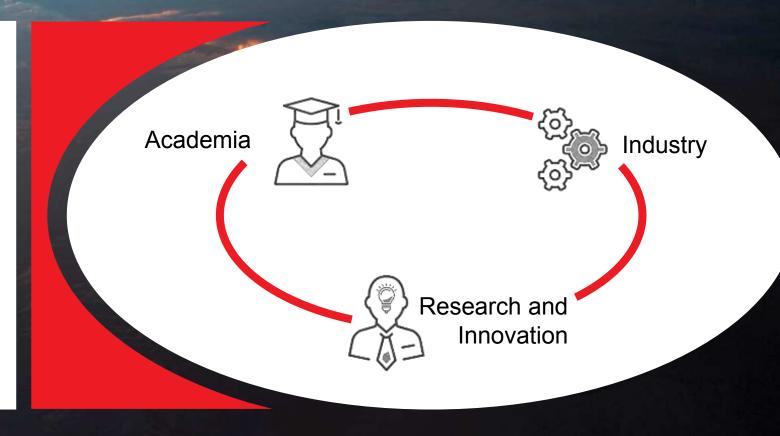




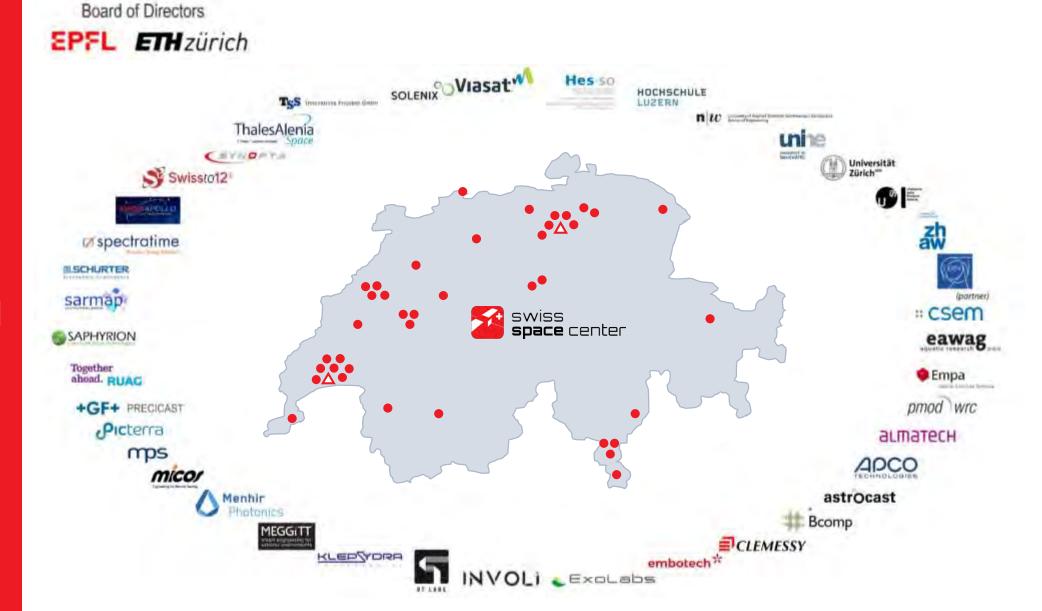
Schweizerische Eidgenossenschaft Confederation suisse Confederazione Svizzera Confederazion svizza

Swiss Confederation

Federal Department of Economic Allains, Education and Research EAER State Secretariat for Education, Research and Innovation SERI Swiss Space Office



To network
Swiss
industries,
academia and
research
institutions.





SATW TecDays **Space Career Days** SSC Summer Camp National Trainees at ESA Public events



Funding opportunities
Working with ESA
Infrastructure
Working groups
Continuing education



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