

# Technology *and* Innovation Platform

@ General Assembly 2022

*F. Pepe, Leader*

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# Technology & Innovation Platform (TIP) Strategy – A reminder

## **1. Seed funding**

Continue and strengthen seed-funding for new ideas, strengthen the link with industry and foster projects in industry

## **2. Networking**

Strengthen contact with existing KTT organisations (SwiTT, UniTec, UniTectra, etc.)

## **3. Training**

Propose training for PlanetS collaborators through KTT activities (workshops, forums, meetings, competitions, externships, etc.)

## **4. Participating**

Be and become member of KTT initiatives that already exist (Bench2Biz, LTA, etc.) while avoiding 're-inventing the wheel'

# TIP web-page (Thanks to Piero Pontelandolfo!)

- Newsletter ⇒ 
- Lists of:
  - Facilities and infrastructures available in PlanetS ⇒ 
  - Competences available in PlanetS listed by contacts ⇒ 
  - Companies related to PlanetS' projects ⇒ 
- KTT, IP and Start-up support ⇒   
- KTT funding programmes ⇒  
- KTT applications in society
- Events & Deadlines
- News

[www.planets.ch/platforms/technology-transfer/](http://www.planets.ch/platforms/technology-transfer/)



# Electronic newsletter

- Updates from the TIP
- Spotlight on a project
- Focus on a company
- News and upcoming events

**To subscribe:**



## TechS - The e-newsletter of the PlanetS Technology Innovation Platform (TIP)

No. 6, March 22

### Editorial

Welcome to the 6<sup>th</sup> issue of TechS, an electronic newsletter reporting the information and updates on the activities of the Technology Innovation Platform (TIP) of PlanetS. In the current issue we have invited the CoRES group at the HEPIA, HES-SO Geneva, to present their activities. The spotlight is on a PlanetS alumnus, Dr. Patricio Becerra, who was offered a position at Micro-Cameras & Space Exploration (MCSE), after he successfully completed an externship with them, sponsored by our TIP Knowledge Transfer program.

To make the newsletter a success, we are relying on you, the subscribers, to send us news and updates about what you think is important to share within our community in terms of **Seed funding, Networking, Training, Participating, Infrastructures and Competences**. Let us know [here](#).

Best wishes,

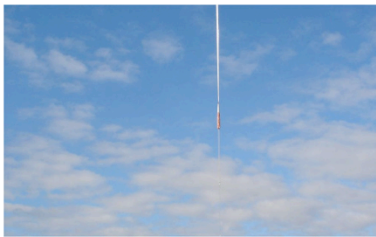
The Technology Innovation Platform (TIP)

- Webpage of the TIP: [link](#).
- To subscribe or unsubscribe to the TechS newsletter: [link](#).

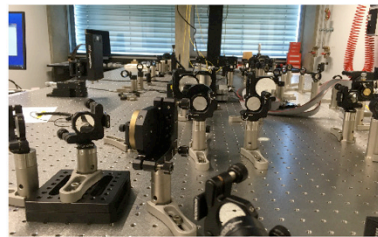
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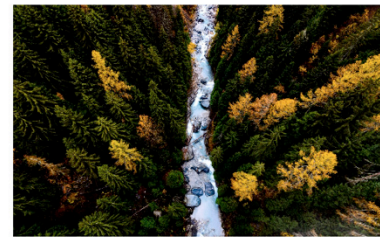
# Seed Funding & Short Term Projects



SF5: Spacetek  
(commercialization of  
disruptive mass  
spectrometers for  
terrestrial applications)



SF6: A Swiss  
Technology R&D  
Initiative Towards the  
Direct Detection of  
Nearby Exoplanets



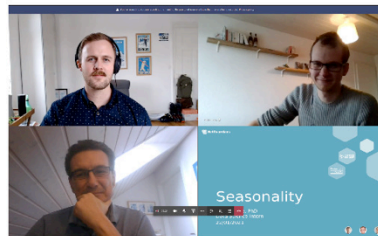
SF7: Pre-study of  
transit recognition with  
machine learning



SF8: BrainPol:  
Diagnosis of brain  
tumors using in-vivo  
spectro-polarimetry



STP1: Externship within  
Google Cloud



STP2: Externship within  
NetGuardians



STP3: Externship within  
Micos Engineering  
GmbH



STP4: Externship within  
Micro-Cameras &  
Space Exploration SA

# Knowledge Transfer with a short-term project (externship)



- **What?** A KT project in industry, research laboratory, etc.
- **Who can benefit?** PlanetS Members and Associates
- **How?** TP can fund up to 3 months of the PlanetS collaborator's salary with an ad hoc contract for you

*Completed 2021*

2019

Google

2021

Micro-Cameras & Space Exploration

2020

NetGuardians

2021

micos  
Optical Systems for Space and Industry

*Available for you*

identitas

Statistics

NetGuardians

 OFFICINA STELLARE  
OUR WORLD, YOUR SPACE

*Concept of a Lasercom ground station*

# Example of a Short Term Project (2021)

## RadCam/JMC Colour Chart and Image Processing

Develop colour correction and calibration capabilities for MCSE's RadCam camera, which will be used for ESA's JUpiter ICy moons Explorer (JUICE) monitoring cameras.

**Host:** [Micro-Cameras & Space Exploration \(MCSE\), Neuchâtel](#)

**Extern:** [Dr. Patricio Becerra](#)



“ My main contribution in terms of KT was my experience in the use and conception of instruments for space missions. In addition, MCSE vastly benefited from my scientific network [...] I learned a vast amount of new information in a short time. After conclusion of the project, I was hired by MCSE as full-time Project Scientist and Manager.”





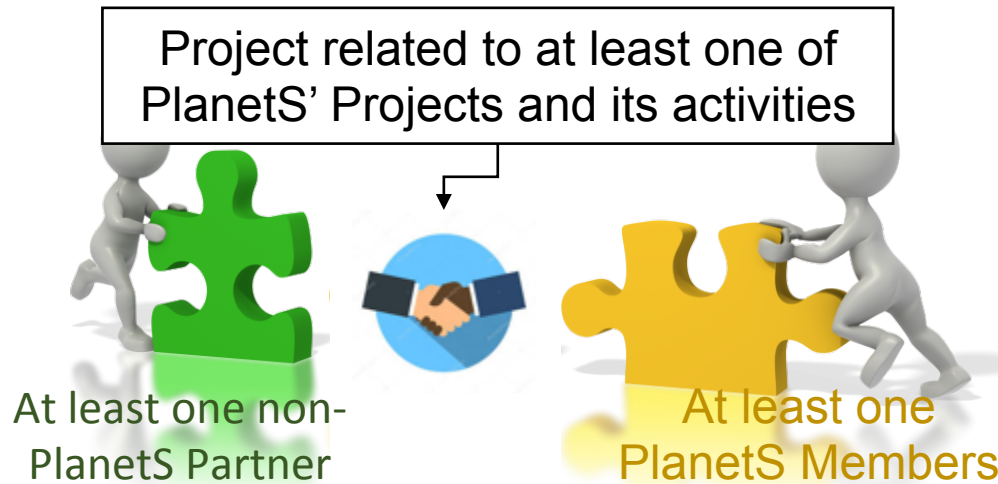
# KT Short Term Projects - 2021

#	Project	Host institution	Extern	Outcome
STP2 (started end 2020)	Seasonality analysis (statistics) for transaction in banking.	NetGuardians	Dr. Miles Timpe	Offered a position
STP3	Blackbody light sources for the calibration of Earth observation satellites.	Micos Engineering GmbH , Dübendorf	Dr. Anna Boehle	Hired
STP4	RadCam/JMC Colour Chart and Image Processing.	Micro-Cameras & Space Exploration (MCSE), Neuchâtel	Dr. Patricio Becerra	Hired

Unfortunately, an additional STP involving a PhD student was not approved by SNSF and could not be implemented.



# Seed funding – Call for ideas



- Technology link with and motivation from existing PlanetS project
- Collaboration with external Partners, e.g. private company, technical institutes, etc.
- Demonstrate KTT (patent, market opportunity/commercial product)
- **NEW: Develop a high-risk technology item that could potentially lead to an added value for a PlanetS' (supported) project, space- or ground-based!**

# Example of seed-funding (2021)

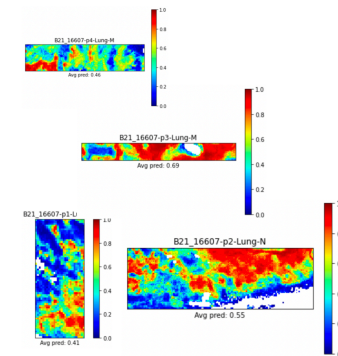
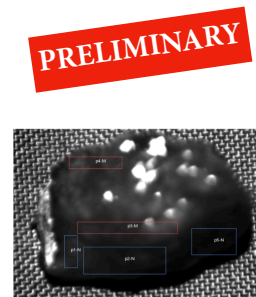
## *BrainPol: towards non-invasive, real-time detection of malignant tumours*

### Phase I *ex-vivo*

- Design of a dedicated polarimeter for tissue characterisation  
(funded by NCCR *PlanetS* TP)
- Coupled to histopathological analysis and fast-assessment algorithm trained on biopsy gold-standards  
(funded by UniBE)
- Application to multiple tumour types
- Goal: **clinical validation (ongoing)**

### Results on *lung*

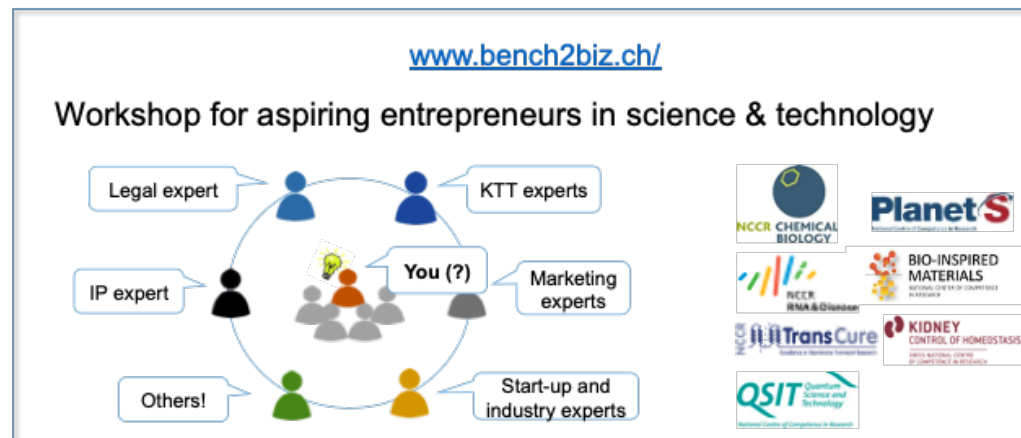
Analysis on a lung sample (among 200 other samples):  
blue/green indicates healthy tissue, while red is high likelihood of a tumour.



*BrainPol team*

# Other highlights

- PlanetS becomes member of **SwissILO** in July 2021
- **Bench2Biz** in November 2021 - online
- New Executive officer (**Elena Benedetto**) in Dec. 2021
- 4 additional **seed-funding projects** approved in Dec. 2021
- **ELT Industry Day**, 7<sup>th</sup> Apr.2022



# Sponsoring the **ELT Industry Days** in Geneva 7 Apr.22

To bring together EU- Industry  
with ESO and ELT Instruments  
representatives

**60** companies

**140** participants + **40** online

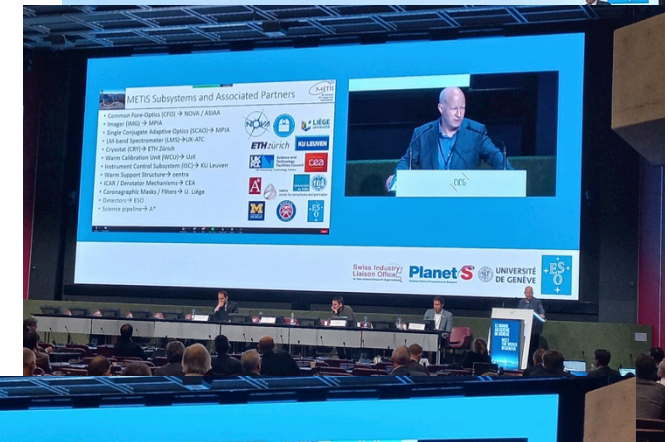
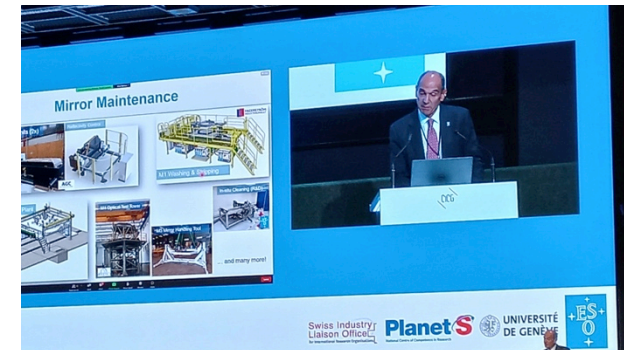




# ELT Industry Days



ESO talks  
ELT Instruments talks  
Companies Poster session



## Next event: “Astronomical innovation”

- Thur. 2<sup>th</sup> June @ 14h at UniGE Observatory
- To promote the academic **entrepreneurial initiatives** of the NCCR's partners to their students, postdocs, staff, with presentations from their "Innovation Offices" and start-ups
- Co-organized by the TIP and the UniGE Science Innovation Hub
- The idea (if the formula is successful) is to replicate it next years in Bern and Zurich

# To conclude...

The Technology and Innovation Platform is providing funds for:

- **Short Term Projects**

- big success! the last 3 postDoc have been offered a position / hired by the company after their Externship

- **Seed Funding**

- for projects with a potential KTT return
- for innovative/high-risk projects

Phase 3: reductions of funds, but the TIP got a proportionally smaller reduction

And it is organizing training/events to encourage interactions with industry

**Please get in touch with us with your ideas!**



# Thanks for your attention!

## *Questions?*



[www.nccr-planets.ch/platforms/technology-transfer/](http://www.nccr-planets.ch/platforms/technology-transfer/)