YEEP-tech and -business hackathon week in Ethiopia

8 – 19 April 2022

About YEEP

The Young Entrepreneur Exchange Project (YEEP) is a Swiss-Ethiopian initiative, which started 2013 with a first pilot project. Since then, 6 editions of YEEP have been successfully organised. A classic YEEP-business contains the following elements:

- In Switzerland, students from different partner schools apply to participate in the project as business and technical coaches
- In Ethiopia, engineering students from Hawassa University's Institute of Technology hand in a business idea and get some preliminary training
- Swiss and Ethiopian participants meet during a YEEP-week in Ethiopia, where they work together on the Ethiopian business ideas, which they try to improve and bring closer to implementation
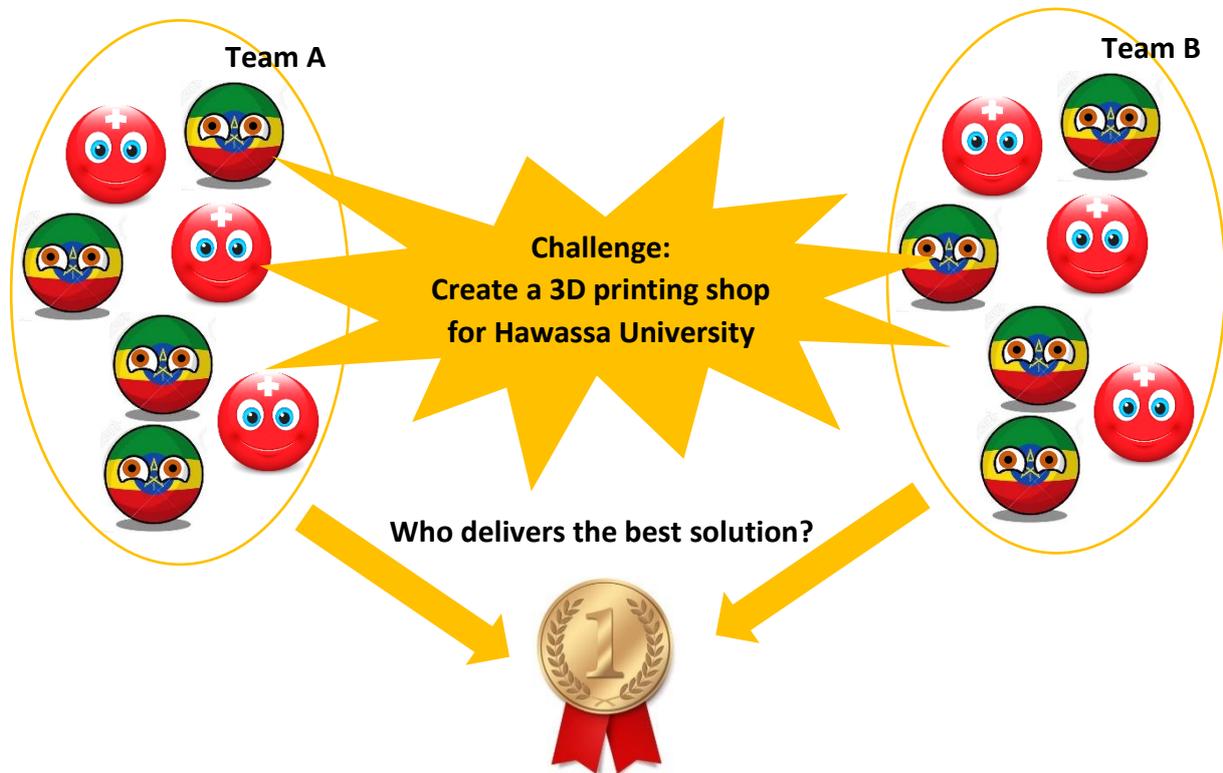
Through its activities, YEEP wants to promote entrepreneurial thinking, increase chances for Ethiopian start-up businesses to succeed and create a training field for international and intercultural learning experiences.

The YEEP-tech and -business hackathon week

The YEEP-tech and business hacakthon week is a new format of YEEP with a stronger focus on technical competences. The first edition will take place from 8 to 19 April 2022 in Hawassa, Ethiopia

During the hackathon week in Ethiopia, two mixed groups with Swiss and Ethiopian participants will compete against each other and fulfil the following challenge: Develop a 3D-printing shop on the campus of Hawassa University. The concept of the shop is derived from "normal" copy shops, which already exists on the campus, where one can copy a document or print out a file on a USB stick by paying a small fee. The 3D copy shop will work similarly: students, teachers or researchers on the campus who want to get an object printed can use the 3D-printer and the plastic filament, which are the property of the shop.

Team A

Team B

**Challenge:
Create a 3D printing shop
for Hawassa University**

Who delivers the best solution?

Given the format of the hackathon, the groups are not supposed to work out perfect solutions, but rather have a product that just works (and which can possibly be improved/ finished after the hackathon) and to deliver a proof of concept.

The event is organised in the form of a competition in order to stimulate innovation and to motivate the participants to deliver an excellent result. There is a preparation phase, with an onboarding day on Saturday 5 March and 2 online meetings on 19 and 26 March (afternoon). Furthermore, there will be a debriefing meeting after the week.

Profile of potential particpants?

YEEP wants to recruit 10-15 students from its partner schools, mainly with a tech or business background. The group will be accompanied by 2 coaches. The project aims at maximising diversity, by having students from different fields (tech, business) but also different school levels (higher education vs. apprentices) and linguistic regions (German and French speaking) or gender (male, female).

Requirements for Swiss participants:
- Open minded, flexible personality who is ready work with enthusiasm during one week
- Interested in technical topics and in particular in 3D-printing
- Interested in international and intercultural collaboration
- Competences in one of the tasks described below (tech or business) or general practical competences in applied technology or business (technical apprenticeship, commercial education or professional experience etc.)
- Able to express himself/ herself in English
- Ready to participate in the preparation phase (3 meetings in March) and the hackathon week in Ethiopia in April.
- Ready to give feedback after the project and ideally interested in continuing working with the project after the week in Ethiopia.
- Ideally: interested in working with one of our YEEP groups as a volunteer
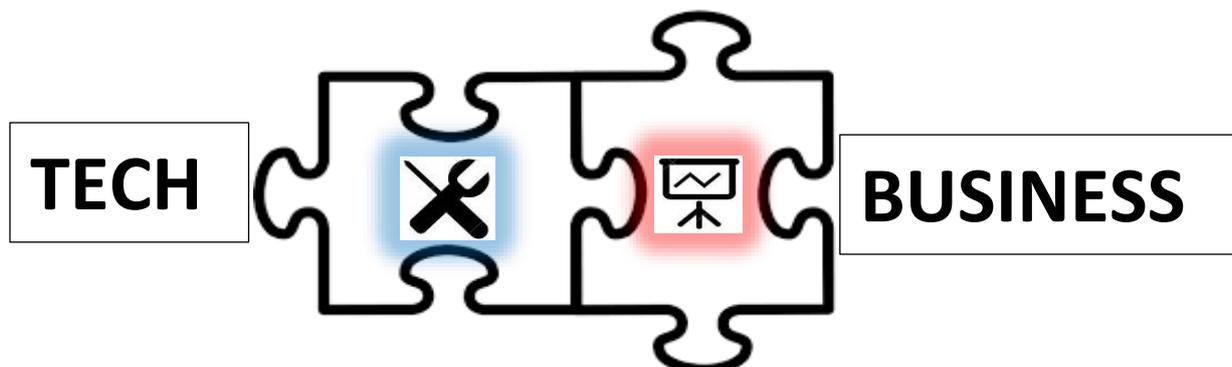
Your benefits – Why to participate

Thanks to YEEP you can live an extraordinary experience in a context, where you would probably not go just by yourself. This is a unique learning opportunity, which might even change your perception of yourself and of the world. The concrete benefits of the project are:

Benefits:
- Opportunity to work in an international environment in an interdisciplinary team. Certificate of participation, which you can use for your CV.
- BFH and HFTM: possibility to receive credits for your studies
- Support from an experienced team of Swiss and Ethiopian coaches
- Support in the preparation of the trip (flights, visa etc.)
- Possibility to apply for subsidies for the trip costs

Concrete tasks during the week

The challenge is composed of different tasks, which the teams receive. There are more tasks than the teams can fulfil in one week. The teams will therefore have to set priorities and focus on certain tasks rather than trying to fulfil all of them. The teams can organise themselves as they wish and labs and workshops will possibly be accessible in the evening, too.

In order to work efficiently, teams will have to organise themselves, plan the week and distribute the tasks. They will have to define, how, decisions should be taken (defining one or several team leaders, vote on decisions, discuss until there is a consensus in the group). Furthermore, there are technical tasks as well as business tasks and the challenge can only be fulfilled, if both fields are well covered by the teams.

Task 1: Assemble, calibrate and test a Prusa i3 printer

Every team will get a kit to assemble a Prusa i3 printer plus the manual with instructions. From the experience of our online pilot project we know, that 3-5 persons can work on this task, which will take approximately one day. Besides the assembling of the printer, the team will also have to calibrate and test the printer.

Task 2: Construct the 3D-printer enclosure using the manual of the existing prototype

A prototype of an enclosure has been constructed from a student in Switzerland and this work is well documented in a manual. The teams will receive the material for the construction plus the instructions. They might also have to print out some of the parts themselves on the 3D printer and they will have the possibility to modify (improve or simplify the prototype).

Task 3: Develop a (web) app to remote control the printer through the raspberry PI

Both teams will receive a raspberry PI Mini-Computer, which can be connected to the printer. They should find a solution, how printing jobs can be sent to the printer (for example via a web application). Furthermore, the printer enclosure also comes with a webcam, which could also be accessed over the app. There are other possible projects such as a reservation system or the calculation of the price of a printing job.

Task 4: Develop a series of basic tutorials for a 3D printing software such as TinkerCAD or FreeCAD

In order to support potential users of the printer, both teams can develop tutorials in the form of internet videos. Those tutorials should introduce the basic functions of a free software such as TinkerCAD or FreeCAD.

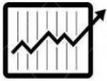### Task 5: Carry out a market research on the campus to define the needs of potential customers

Both teams will have to find out, who could be potential users of the printing shop and what are their needs. To clarify these questions, they can for example interview experts, carry out focus group discussions or launch surveys among potential users.

Task 6: Develop a communication and marketing strategy for the 3D-copy shop

The teams will have to think about the way they would like to communicate about the 3D-copy shop. They can create a logo, a website, flyers or other means of communication and develop a strategy, how to use those products. At the same time, the communication team can also document the work

done during the week and prepare a presentation for the final pitch at the end of the week, where both teams will present their results.

Task 7: Develop different business models to make the 3D-copy shop sustainable

The printing shop will only survive, if it can generate some income in order to buy filament, spare parts and maintain the machine. There are different ways, how this income could be generated, for example through payments of the users, advertisement or donations. The teams will have to develop and rate different models.

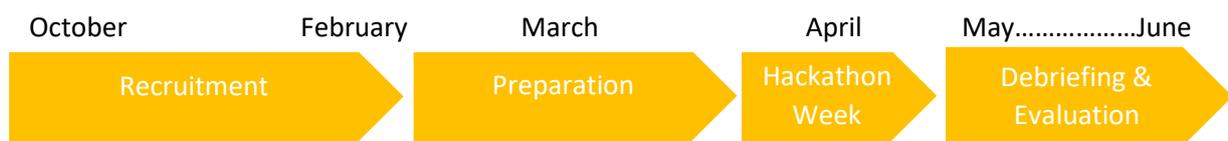### Task X: Implement other ideas that you might have

Depending on the interests and competences of its members, the teams can also develop other tasks, which they want to tackle during the week.

Overarching task: Coordination of the team

A team will be composed of around 15 participants from Ethiopia and Switzerland, each of them with different competences and interests. Together, they will have to fulfil a complex task, which will need a lot of coordination among them. The teams are free to work in the way they want. However, they will probably have to find a structure, how to take decisions and to coordinate the progress of the different tasks. One possibility is that some of the team members, ideally at least one from the Swiss and one from the Ethiopian side, take the role of a coordinator, who will guide the team through the week.

Next steps and organisation

October	February	March	April	May………………June
Recruitment	Preparation	Hackathon Week	Debriefing & Evaluation	

If you are interested, we kindly ask you to participate in one of our information sessions. There you will learn more about the project and you can ask questions, too.

Online Information sessions:
- Tuesday 8.2.2022, 19:30h (online)
- Thursday 17.2.2022, 19:30h (online)

The sessions will take place on MS-Teams. Please use the following link to participate: https://bit.ly/YEEPInfo

If after the info session you are sure that you want to participate, we kindly ask you to fill out our short application form. We would like to know more about your motivation and understand, what tasks you are interested to take over during the week. Furthermore, you can also apply for subsidies for your flight and board and lodging.

https://bit.ly/applyYEEP2022

Dont miss the application deadline, which is Sunday, 27 February!

We will inform you until 1 March if your application was succesful.

Please reserve already the following next steps in the preparation phase (all dates are preliminary):

- Saturday 5 March, whole day: On-boarding day in Bern with Swiss participants
- Saturday 19 March, 14h - 15:30h: Online meeting with Ethiopian participants, getting to know each other
- Saturday 26 March, 14h - 15:30h: Online meeting with Ethiopian participants of your own team, organisation of the team roles and first

Who is behind this project?

YEEP is a project of DEVENTURE association (www.deventure.ch), an organisation of public utility and as such recognized by the canton of Bern. The association has around 50 members where off around 15 are active in one of the project groups.

The YEEP-tech and business hackathon week is organised together with partner schools in Switzerland:

- Höhere Fachschule Technik Mittelland (HFTM) –> Main partner for the current project
- Höhere Fachschule für Wirtschaft Bern (HFW/ WKS)
- Berner Fachhochschule (BFH)
- Berufsbildungszentrum Biel/ Bienne (BBZ)
- Centre jurassien d'enseignement et de formation (CEJEF)
- Centre interrégional de perfectionnement (CIP)
- StudentImpact (HSG)

Contact details

You will find more information about the project and past editions of YEEP on our website (www.yeeproject.org) If you have more questions or if you would like to have a private consultation, contact stephan.brun@yeeproject.org, +41 76 545 96 32.

Frequently asked questions?

We have put together a few of the questions that often appear during the application phase of YEEP.

Do I have to be vaccinated if I want to travel to Ethiopia ?
We strongly recommend that you are vaccinated against Covid19, as the virus is also circulating in Ethiopia and it is often very difficult to keep a distance to other people.
However, currently there is no obligation to be vaccinated when entering in Ethiopia. And even vaccinated persons have to present a PCR-test.
For returning to Switzerland, you will have to test twice at your own cost, if you are not vaccinated (upon arrival and a few days later).
Don't forget that all these rules can quickly change and it could be that airlines decide only to transport vaccinated passengers.
NB : Vaccination against yellow fever is compulsory for traveling to Ethiopia.

My level of English is not good. Is that a problem ?
We never had a problem so far with language skills as we all use a simple English in the project and your team members can alsways help you, if you don't understand something. If you had a least some English at school, your level will be more than ok to participate.

Can I participate if I am not studying at one of your partner schools ?
Yes, there are no restrictions. However, if we have too many applications, we might give priority to participants from our partner schools.

I am not sure if I have the right competences to participate. Do I fit in the project ?
We are not looking for specialists. If you have a technical or commercial background and maybe even some professional experience, then you will have enough competences to participate. From the past projects we know that the most important is your motivation and openness for new experiences. If you are still unsure, contact us to discuss your case with us.

How do I book the flight/ get the visa ?
We will give clear instructions during the preparation phase and support you with getting all the practical preparation done.

I cannot afford to pay for the flight/ board and lodging. Can I get support?
Thanks to funds we received from Movetia and the HFTM Förderverein, we are able to support those participants who cannot afford to pay for he project. We can subsidize parts or 100% of the costs depending on your situation. Don't hesitate to declare your needs ! On the other hand, if you get supported, we would be happy if you can give back something, for example by taking over some more tasks during the week or by working in one of our association's groups after the hackathon.

Is it safe to travel to Ethiopia ?
There is a civil war going on in the North of the country and there also have been tensions in other regions. Currently there is a state of emergency and the Federal Office of Foreign affairs recommends not to travel outside Addis Ababa. However, the siutation is improving and after many discussions with our local partners and the Swiss Embassy in Ethiopia we are rather optimistic that we can organise the trip as planned. Nevertheles, things can change quickly. We will discuss these questions with you during the preparation of the trip.

Other questions such as health risks, criminality or accidents can be discussed during our preparation meeting. If you are unsure, just contact us to discuss your case with us.

Our sponsors

YEEP-tech is financially supported by Movetia. Movetia promotes exchange, mobility and cooperation within the fields of education, training and youth work – in Switzerland, Europe and worldwide. wwww.movetia.ch

YEEP-tech is financially supported by the Hirschmann Foundation (https://hirschmann-stiftung.ch/)

Participants from HFTM are financially supported by the "Förderverein" (https://www.hftm.ch/de/foerderverein)