

# Buinho

Buinho Creative Hub

## YOUTH EXCHANGE INFOPACK

**CASTRO VERDE 22-29 JULY 2024**



Cofinanciado pela  
União Europeia

Project number 2023-1-PT02-KA151-YOU-000124702

[info@buinho.pt](mailto:info@buinho.pt) | [www.buinho.pt](http://www.buinho.pt)

**PLEASE START BY ACCESSING  
OUR WHATSAPP GROUP**

**<https://bit.ly/3L88OB0>**



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## PREAMBLE

This guide seeks to provide all you need to know before applying to this Erasmus opportunity. It will help you to better understand the project goals and day-to-day activities

This Youth Exchange aims to provide a first contact with the Maker culture and creative skills development for disadvantaged Youth across Europe, but it also seeks to create an opportunity for multicultural exchange in Southern rural Portugal. If after reading this document you still need to clarify any issue please feel free to contact us at [info@buinho.pt](mailto:info@buinho.pt)



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## WHO WE ARE

Buinho is a MIT fablab located in the South of Portugal ([www.buinho.pt](http://www.buinho.pt)). Besides aiming to contribute to democratizing access to digital technologies, Buinho has been creating a specialization in the environmental sustainability field of action since our region's first Precious Plastic workshop ([www.preciousplastic.com](http://www.preciousplastic.com)).

Since then, we have been developing innovative strategies that combine environmental and digital education, some of which have been recognized as [good practices](#) by the Erasmus program.

Based on past experience in the development of education projects related with digital empowerment and non-formal education we now host these Youth Exchange in Castro Verde. Its a priority for us to provide Young people with quality educational and international exchange opportunities, in particular in rural areas where those opportunities are more scarce

## GOALS OF THE TRAINING

This training is funded by the Erasmus program, under an accreditation grant agreement provided to Buinho for the period 2021-27 (2020-1-PT02-KA150-YOU-007844).

During this period Buinho is committed to share best practices in digital fabrication, non-formal education and maker education, and innovative practices in the field of circular economy for Youth Workers.

Our goal, besides promoting a good environment and program for an international summer exchange, is to introduce Youth to what is digital fabrication, electronics, microcontrollers, and in particular the Maker culture.

## REASONS FOR TAKING PART IN THIS YOUTH EXCHANGE

1. opportunity to travel to another European country and participate in an international exchange with other participants;
2. opportunity to learn how to digitally design and fabricate your concepts in order to enable your ideas to become physical creations;
3. learn how electronics work, learn how to transform things, and ultimately learn how to hack normal electronics in order to transform its functionalities according to your needs and creative desires;
4. learn also about digital hacking by learning how to use microcontrollers like the Arduino and micro:bit to program physical objects;
5. Get introduced to digital fabrication, in particular learn how to 3D model and 3D print physical objects. Learn how to use a vinyl cutter for different purposes and materials, and experiment designing for a laser cutter;
6. Develop some volunteering together with isolated rural communities, and get to know more deeply what you can do for your society;
7. Opportunity to get a certified Youth Training from a EU funded project and visit the Southern region of Portugal

# DATES AND SUPPORT

We will offer only this 1 week Youth Exchange opportunity - In the beautiful town of Castro Verde, and within the period 22 till 29 of July 2024.

The Erasmus funding support training, accommodation, food, and travel costs, which means that not only the training will be free of charge for the participants and Buinho will provide food and accommodation, but also we will reimburse the travel expenses according to a maximum defined by the distance bands:

- Up to 180€ - distances between 100 and 499kms
- Up to 275€ - distances between 500 and 1999kms
- Up to 360€ - distances between 2000 and 2999kms
- Up to 530€ - distances between 3000 and 3999kms

If you share a vehicle with another participant and/or take another form of green travel then the travel grant is slightly higher.

The travel support is reiumbered upon arrival to Portugal. A declaration of honour with the itinerary will be signed between Buinho and the participant, nevertheless do keep copies of the tickets and provide to us at the start of the Exchange.





# TRAINING AGENDA

# Day 1

**10:00 – 12:00**

## **Welcome session and introduction to the Makerspace**

We will receive the participants in our working space, making a short introduction to Buinho's, meeting the team and also the other participants. We will also discuss in more details all the activities of the upcoming, defining some of the goals and dynamics to be developed each day. We will then provide a introduction to Makerspaces and Maker culture as a whole and share some common values that will guide us during the upcoming week.

**12:00 – 13:00**

## **Introduction to soldering**

Because just talking about the Maker Movement doesn't represent its essence, we will start experimenting with one of the most important skill of any Maker - soldering electronics. Before lunch we will get to know how to use the soldering iron, a desolder, a helping hands, among other tools to do a simple circuit.

**15:00 – 17:00**

## **Outdoor activities / Makerspace time / Free time**

We will give total freedom of choice to what the participants want to do during the afternoon. They can propose outdoor activities like some games and sports activities, do some more projects in the Makerspace, or just enjoy a bit of free time to go the swimming people or getting to know Castro Verde and the other participants. The trainers of Buinho and the Youth leaders will be available to work with you in the Makerspace or just developing some games and activities in other locations. You choose what you want to do and we will support it.



# Day 2

**10:00 – 13:00**

## **Hacking Electronics I**

### **Analog Hacking**

What better way to learn electronics than by hacking electronic stuff? Yes, we will start you in electronics hacking where you will learn how to transform a normal object into something else, by adding functions, components, or even sensors.

In this first session of Hacking Electronics we will start by going inside the electronic objects (small appliances, toys, others) and understand the circuit. We will then learn how to add new components and change functions - like changing powersupply, adding touch buttons, bluetooth connectivity, etc.

**15:00 – 17:00**

### **Outdoor activities / Makerspace time / Free time**

Again you choose what you want to do and we will support it.

# Day 3

**10:00 – 13:00**

## **Hacking Electronics II**

### **Digital Hacking**

This is when hacking goes wild! We will learn how to use and program microcontrollers like the Arduino or the Micro:bit to digitally control physical electronic components like LED's, motors, buzzers, or sensors.

We will then learn how bring the microcontroller inside normal electronic objects in order to program them, or even connect them to the internet (IOT). The more you experiment the more serious you will become into your hacking adventure, and the more you will be learning about real electronics.

**15:00 – 17:00**

### **Outdoor activities / Makerspace time / Free time**

Again you choose what you want to do and we will support it.

# Day 4

**9:00 – 12:00**

## **Volunteering activities in a rural village**

One of the goals of this Youth Exchange is to allow Youth to understand the potential of their voice and actions. Being in an isolated and rural region like Alentejo it becomes increasingly relevant to direct your energy into social projects, specially when we have the opportunity to work with more isolated villages . With the help of the local municipality we will dedicate our time and effort for some morning volunteering activities, followed by a community lunch with typical Alentejo's food

**15:00 – 17:00**

## **Introduction to the YouthPass and European Solidarity Corps**

On the last day we will dedicate a session just for explaining the work abouts of the Erasmus and European Solidarity Corps programs.

Knowing that most participants working on makerspaces and fablabs are interested in knowing more about mobilities opportunities, and taking advantage of Buinho's already extended experience within EU projects, we will provide our best in describing and explaining how projects are written, what are the quality criteria, what could be the opportunities offered, among other important contents.

# Day 5

**10:00 – 13:00**

## **Digital Fabrication I**

### **Introduction to 3D Printing**

What better way to introduce you to the world of digital fabrication than starting with everyone's favorite - 3D printing!

Our Makerspace will have around eight 3D printers at your disposal during the week so that you can take the most advantage of this opportunity. In this day we will dedicate a particular session to those that have zero or limited experience in 3D printing and 3D modelling, where you will not only learn how to use 3D printers but also how to 3D design your own creations for fabrication.

**15:00 – 17:00**

### **Outdoor activities / Makerspace time / Free time**

Again you choose what you want to do and we will support it.

# Day 6

**10:00 – 13:00**

## **Digital Fabrication II**

### **Laser cutting and Vinyl cutting**

After three dimensions we will go to 2D during our journey into not only digital fabrication but a digital Makers favorite toys. We will learn how use the vynil cutter to design and create solutions for spaces and even clothing. And we will then dedicate some time to be introduced to the faster and versatile Laser cutter. For better optimization of time and resources we will split the group into two, and will have separate sessions in different rooms.

**15:00 – 17:00**

### **Outdoor activities / Makerspace time / Free time**

Again you choose what you want to do and we will support it..

# Day 7

**10:00 – 13:00**

## **Personal projects**

After going through electronics, microcontrollers, 3D printers, lasercutters, and so on, we will give you the time, the place, and the support for exploring your favorite things and develop your personal project at your own pace and interest.

**15:00 – 17:00**

## **Outdoor activities / Makerspace time / Free time**

Again you choose what you want to do and we will support it..



# Day 8

**10:00 – 12:00**

## **Wrapping up and sharing resources**

For the last day Buinho organized a final morning brunch to commemorate the end of the training. Participants will receive a quick introduction to the Maker Movement and its importance for the development of digital competencies in the context of non-formal education. We will also provide to all of participants additional resources so that you can keep going further in what was started during this week. This includes tutorials, activities and books for all the contents covered.

**12:00**

## **Delivery of the YouthPass and certificates**

We will finish the training with the delivery of the Youth passes and Certificates of presence.

It will also be a feedback regarding the quality of the training and discussion of future collaborations between the participants and Buinho.

# OUR TEAM FOR THIS COURSE

Course Trainer and General Manager  
Carlos Alcobia  
[coordination@buinho.pt](mailto:coordination@buinho.pt)



Course trainer and educator  
Hugo Camacho  
[info@buinho.pt](mailto:info@buinho.pt)

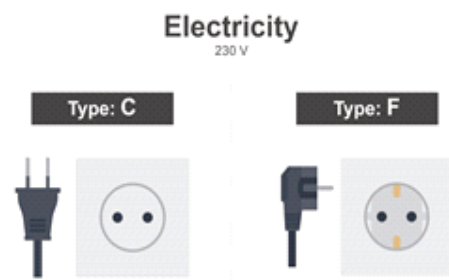
Educator, Executive production support  
Mónica Reis  
[info@buinho.pt](mailto:info@buinho.pt)





## PRACTICAL INFORMATION AND WHAT TO BRING

- Time zone: UTC+00:00 (Portugal also has Daylight Saving Time, which begins in the last week of March and ends towards the end of October)
- Plug types: C and F (see figure)
- Electricity: 230 V with a frequency of 50 Hz.
- Currency: Euro (€)
- International dialing codes: +351
- Emergency telephone number: 112
- Lisbon airport: +351 21 841 3500



We recommend that you bring with yourself.

- A personal laptop computer. At least one computer should be available to each pair of participants. Nevertheless, and if you don't have the possibility to bring one, Buinho will provide personal computers for those in need.
- Personal towel, flipflops for shared bathrooms and hygiene products.
- Time to experience some typical Portuguese Cuisine. But If you have any food restrictions, please inform us.
- Your ID card or Passport
- Hiking shoes or sneakers for outdoor activities
- Plenty of questions and ideas. This training is also made by your contributions

# **BASIC PORTUGUESE SURVIVAL GUIDE**

**Cheers! - Saúde!**

**I am sorry - Desculpe**

**Goodbye - Adeus**

**Hello - Olá**

**How are you? - Como está?**

**Have a nice day! - Tenha um bom dia!**

**How much is this? - Quanto custa?**

**Good morning - Bom dia!**

**Good afternoon – Boa tarde!**

**Good evening – Boa noite.**

**Excuse me – Com licença**

**One coffee please – Um café por favor**

**A custard cake please – Um pastel de nata por favor.**

**Water – água**

**Breakfast – pequeno-almoço**

**Lunch – almoço**

**Dinner - jantar**

**No - Não**

**Yes - sim**

**Please - Por favor**

**Thank you - Obrigado**

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*More than a fablab, more than a house, Buinho is an  
open community for sharing experiences.*



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