CRAFTINGEUROPE
New models for European Crafts

Co-funded by the
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iAtelier
RESIDÊNCIAS

CEARTE

Centro de Formação
Profissional para o
Artesanato e **Património**




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RESIDÊNCIAS

Após o evento inicial SANDBOX em que os participantes tomaram contacto com as tecnologias e apresentaram as suas ideias para desenvolvimento de projetos em parceria, um júri, composto por técnicos do CEARTE e do FabLab da NOVOTECNA irá selecionar as 5 parcerias (10 participantes) que irão participar na série de residências.

Estas residências vão dar a possibilidade às parcerias de trabalharem e desenvolverem as ideias apresentadas durante a SANDBOX, juntando os conhecimentos adquiridos sobre as tecnologias de fabricação digital com as técnicas artesanais que dominam.

Os materiais a utilizar durante as residências serão disponibilizados de acordo com as necessidades e as características dos equipamentos a usar.

As residência implicam disponibilidade para permanência na localidade de Messejana (Aljustrel) cerca de uma semana cada. O alojamento e refeições estão incluídas.

datas: entre setembro e novembro de 2021

local: Buinho FabLab - Alentejo

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Residência 1 **EXPERIMENTAÇÃO** (datas e local a confirmar)

datas: **27 de setembro a 2 de outubro**

local: **FABLab Buinho / Alentejo**

Esta residência com duração de 1 semana, incidirá sobre a experimentação. Os participantes irão aceder ao espaço, ao equipamento e às orientações em formato de residência.

Os participantes receberão tutoriais de software e fabrico digital para os ajudar a desenvolver os seus projetos.

Os participantes serão incentivados a testar ideias, conceitos e protótipos rápidos para se familiarizarem com as capacidades dos equipamentos. Esta semana será de desenvolvimento de trabalhos espontâneos e exploratórios. Espera-se que os participantes tenham uma série de protótipos conceituais ao concluírem a residência 1.

NOTA:

Após a 'Residência 1', os participantes terão quatro semanas para desenvolver as experiências em projetos prontos para produção.

Residência 2 **PRODUÇÃO** (datas e local a confirmar)

datas: **1 a 6 de novembro**

local: **FABLab Buinho / Alentejo**

Durante a 'residência 2', os participantes irão aceder ao espaço, aos equipamentos e às orientações para desenvolver os projectos. Espera-se que os participantes tenham uma série de protótipos funcionais até o final da série de residências que possam ser exibidos publicamente.

NOTA:

Os materiais a utilizar durante as residências serão disponibilizados de acordo com as necessidades e as características dos equipamentos a usar.

As residência implicam disponibilidade para permanência na localidade de Messejana (Aljustrel) cerca de uma semana cada. O alojamento e refeições estão incluídas.

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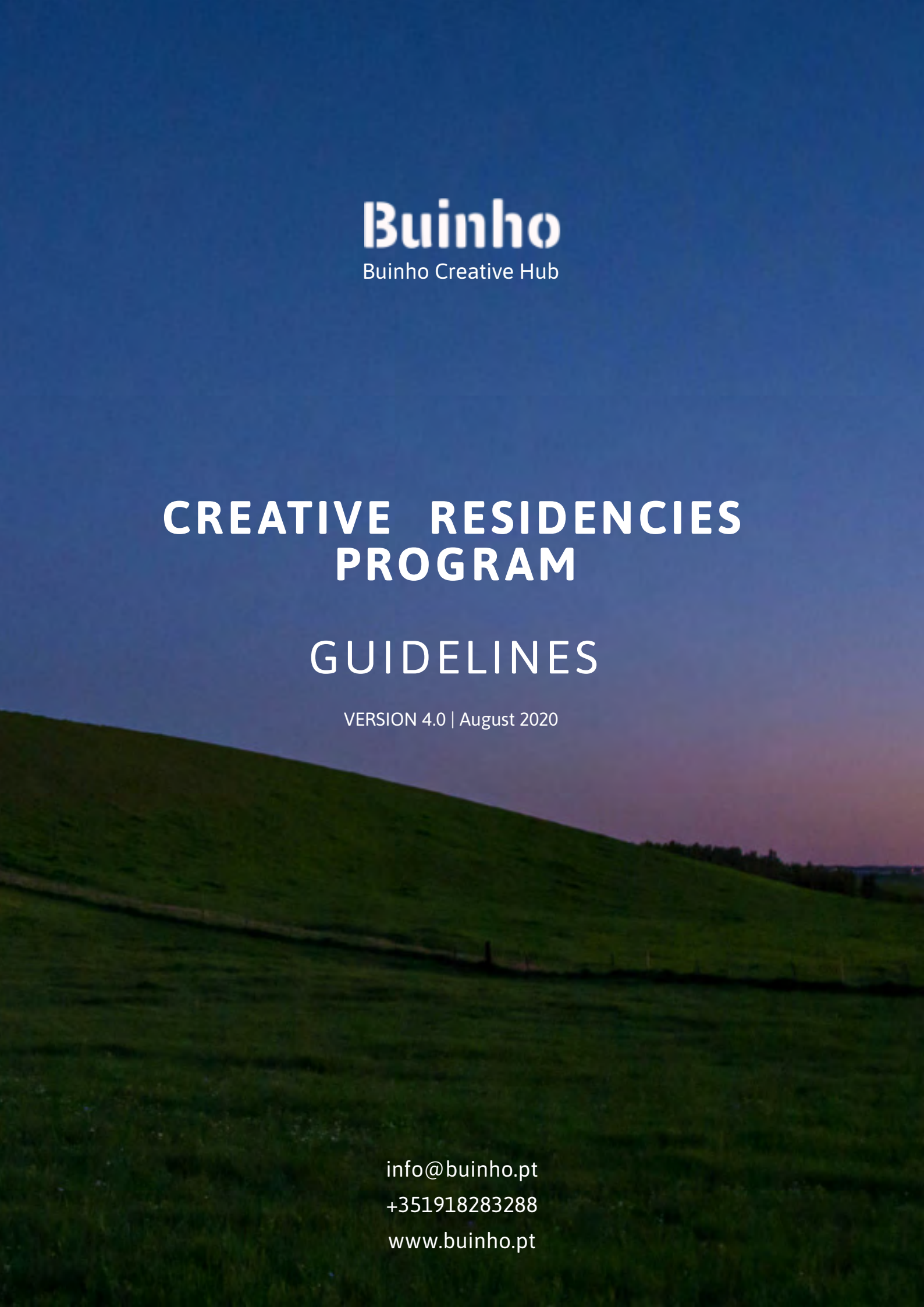

Buinho

Buinho Creative Hub

CREATIVE RESIDENCIES PROGRAM

GUIDELINES

VERSION 4.0 | August 2020

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BUINHO FABLAB

From idea to prototype, Buinho FabLab is the place where you can work on your projects day and night.

Fablabs are laboratories of digital fabrication. In a Fablab we can equally digitally design and produce a physical product. It is a space dedicated to the development of concepts and prototypes.

At Buinho we also envision Fablabs as catalysts for local development, attracting talent and raising the connectivity in rural territories. A fablab with a residency program helps us to materialize this vision, and to this day Buinho is still one of the very few European Fablabs offering the possibility of residency within its own premises.

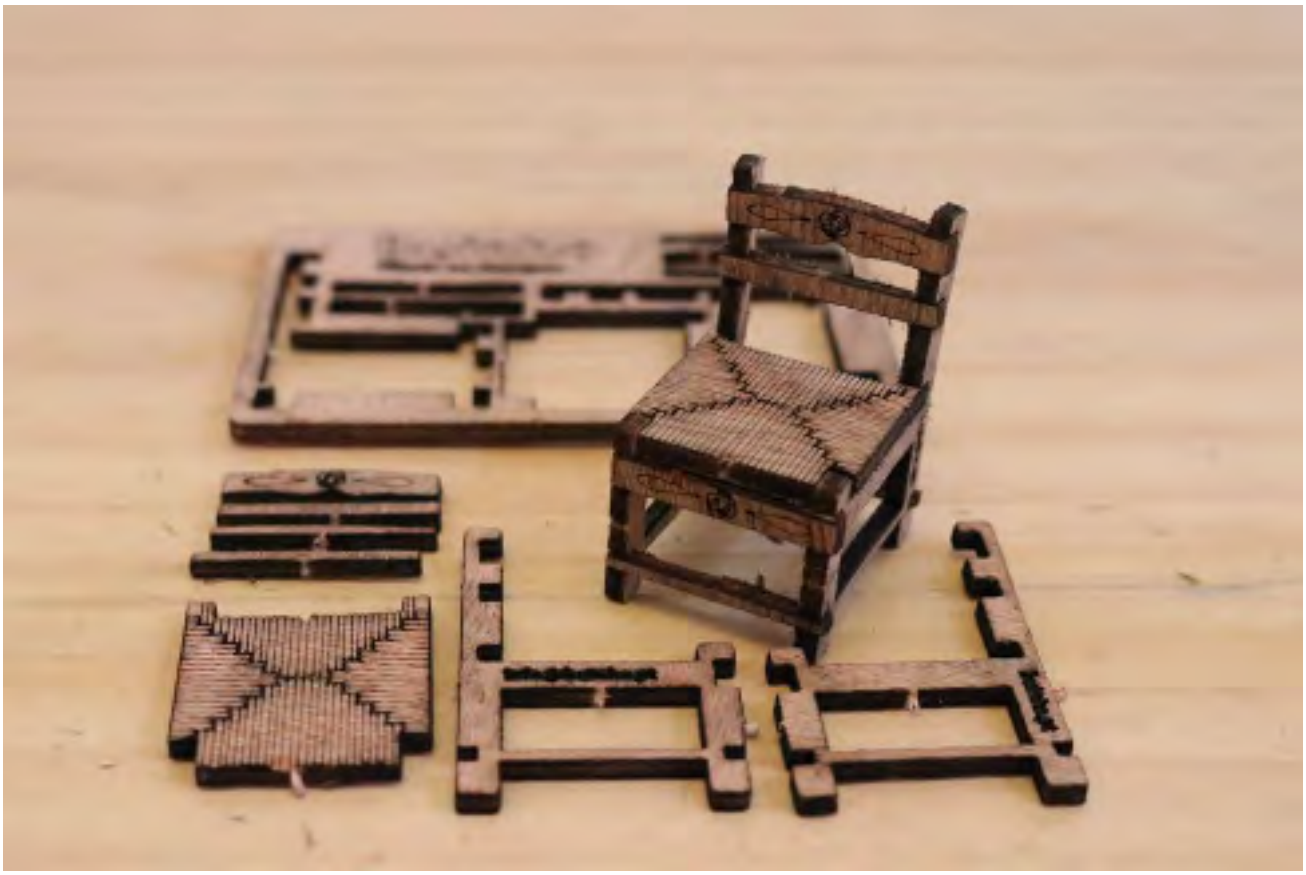
Buinho FabLab is divided into two main spaces:

- The workshop, which is equipped with CNC mills, two laser cutters, a resin 3D printer,vand various tools and machines for woodwork and prototyping.

- The studio which has several 3D Printers, vinyl cutter, sewing machines, several electronics and robotics equipment, controllers, 3D scanner, sensors, and other components to be used in creative projects. The studio also offers several PC workstations, complemented by two iMacs with adequate software for graphic and product design.

The use of the equipment requires supervision from the staff. We offer free weekly workshops and training sessions to our residents. And our staff also provides specific technical assistance to help residents develop their personal projects.

All projects developed by Buinho team within the fablab can be shared with the residents, and we also encourage the engagement and participation within other educational activities developed by Buinho and for the local community.



LASER CUTTER

The power of the laser cutter comes from its ability to cut through a wide range of materials with high precision. Drag-knife cutters can't penetrate hard and thick materials, while a laser can slice through them like butter. And a CNC router has a hard time creating ultra-sharp details.

A laser cutter can also engrave, it's just a matter of defining the settings, and thus increasing the versatility of this equipment.

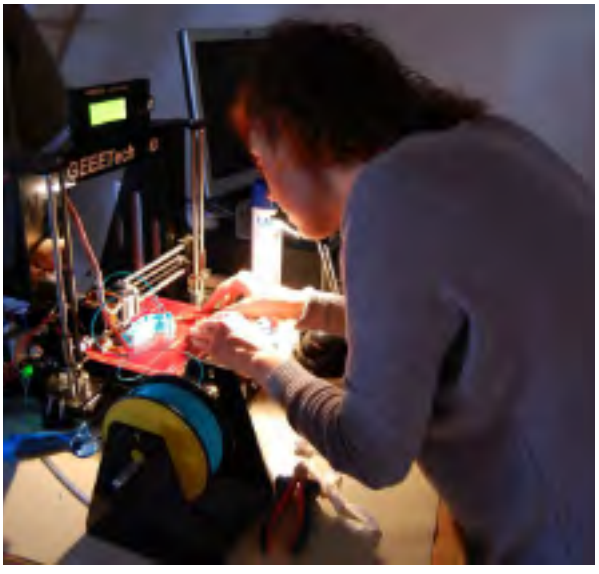
This equipment has become so popular among our residents, and we grant free access to it.

Please understand that for safety reasons the use of this equipment requires supervision from our staff, and that availability and access to this equipment is also constrained by our own necessities of use.

3D PRINTING

3D printing or additive manufacturing is a process of making three dimensional solid objects from a digital file. It's basically the opposite of the other fablab technologies, of subtractive manufacturing which cut out / hollow out a piece.

3D printing is revolutionary in providing residents the possibility to design an object and replicate it entirely by digital means. It further expands the boundaries

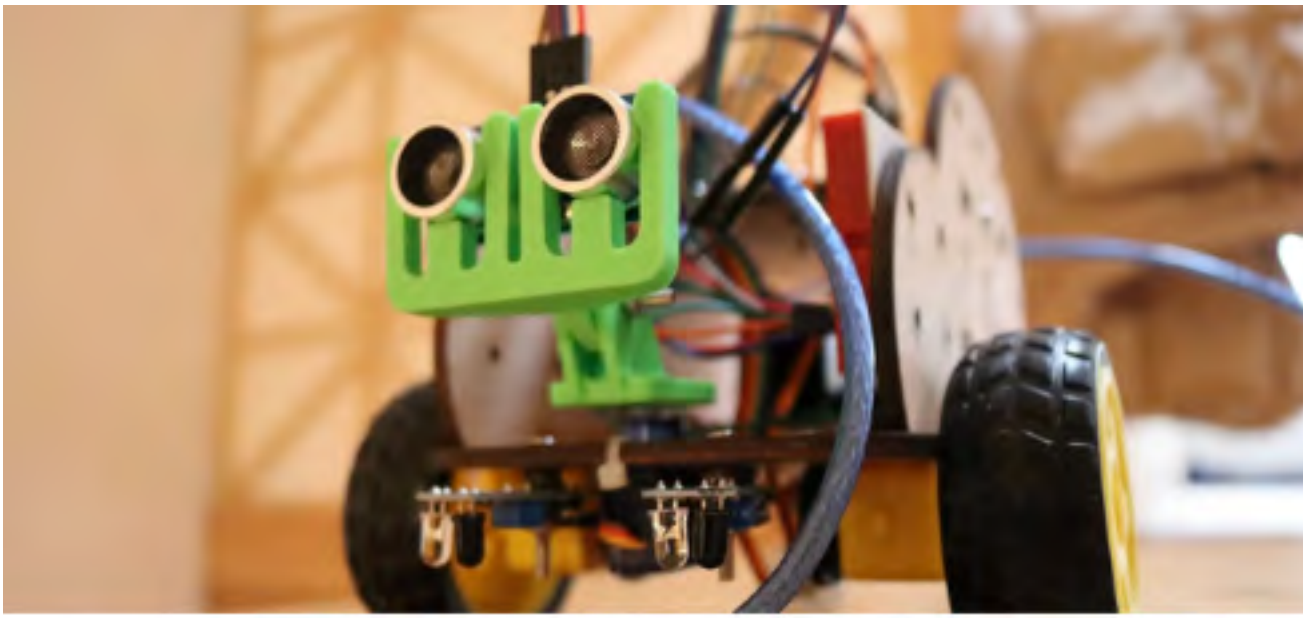


CNC MILLING

Buinho has two 3-axis milling machines. This is the most common variety of milling machines. You can cut in any direction, but an object like a sphere will need to be done one half at a time.

CNC milling machines are more useful to produce larger objects, since laser cutter and 3D printing have bigger constraints in terms of thickness and dimensions of the materials. Examples of uses of the CNC milling machines for creative practice include the manufacture of furniture, sculpture, and installations.

Working with a milling machine requires specialized CAD/CAM training and know-how, being essential the supervision of Buinho staff during the operation of these pieces of equipment. Materials usually used from CNC milling includes plywood, MDF, other types of wood, some soft metals (eg aluminum), foam, and plastics.



PLAY LAB

In Buinho we explore the intersections of art, technology, and community. A special emphasis is given to our educational branch, where we teach robotics, coding, and electronics to local children ages 3 to 14 years old.

The digital fabrication capabilities offered by the Fablab are complemented by an ecosystem of other technologies and devices that enable a creative and explorative immersion within the digital realms.

Our PLAY Lab equipment is used primarily to support the educational mission of Buinho. It is also available for those residents that want to experiment with physical computing, interactive environments, sound, among others.

Residents can also engage with some of our weekly creative classes in the primary school of Messejana, and experiment fun activities as toy hacking, biohacking, 3D modeling, robotics, and other STEAM activities.

The list of available equipment:

MicroControllers and electronic prototyping platforms- Arduinos, Raspberry Pi's, Microbits, LilyPad, Makey Makey Robotic Kits - Mbot, Little Bits, Cubetto, Arduino based rovers (NiCo's)

Electronic Bench - Variable power supply, oscilloscope, multimeter, soldering stations, calipers, precision tools, etc.

Electronic Components - Arduino sensors kits, conductors, resistors, capacitors, breadboards, jumpers, perfboards, DC motors, stepper motors, servo motors, etc

Other relevant equipment - Kinnect, Virtual Reality Head Mount, Leap Motion, Sewing Machine.

OVERVIEW OF THE MAIN EQUIPMENT AVAILABLE IN THE FABLAB

For more detailed information please consult our website www.buinho.pt

FDM 3D printers:

- Creality CR - 10S (1x)
- Creality Ender 3 Pro (3x)
- Blocks Zero (1x)
- Anet AM8 (2x)
- Startt (3x)

Resin 3D Printer:

- Anycubic Photon (1x)

CNC Mill

- Inventables X-Carve 1000x1000
- Openbuilds Workbee 1000x1000

Laser Cutter

- 60W CO2 Laser cutting machine

Vinyl cutter

- Liyu SC631-A 28

Industrial Welder

- MIG Welder (2x)
- Metal arc welding (1x)

Sewing Machines

- Jata MC695-2

3D Scanner

- Microsoft Kinnect

SLR Cameras

- Canon 80D
- Nikon 40D

Audio Microphones

- Zoom H2n
- Zoom H1

Powertools

- Circular Saw
- Jig Saw
- Hand Drill
- Drill Press
- Orbital Sander
- Belt Sander
- Heat Gun
- Grinding wheel
- Miter saw
- Cutting table
- Electric Planer
- Dremel

Wood Hand Tools

- Chisels
- Handsaws
- Planes
- Mill files
- Marking Knifes
- Squares and other measures
- Screwdrivers

Precious Plastic Machines

- Extruder
- Pro Extruder
- Shredder
- Compressor
- Injector
- Safety Equipment
- Tools for mould making

BUINHO PRECIOUS PLASTIC

The Precious Plastic project exists to reduce plastic waste, but our Precious Plastic enables much more.

Our Precious Plastic workspace initially started as an Erasmus+ project of non formal education (preciousplastic.pt), centered around the importance active citizenship in youth and the promotion of a plastic waste recycling culture. In this project, Buinho provided training to more than 50 participants from 6 different European countries in machine building, plastic recycling, and how to run a Precious Plastic workspace.

We later had the opportunity to further enlarge the Precious Plastic workstation and project, and with the support of a national grant we opened in Messejana the first Community Plastic Recycling Center in Portugal (2019). The increased spaces and specialized tools allow us to provide an educational program for the regional schools of Alentejo, together with the possibility to build machines to other organizations.

We recently made a set of Precious Plastic Machines for the United Nations Development Program in São Tomé e Principe, and still dedicate some of our time for machine building purposes. We aim to enlarge the scope and presence of the Precious Plastic community in Alentejo.

Today the Buinho Precious Plastic workstation is also open to the use of the residency program, having already been the centerpiece of some residency proposals. The Precious Plastic machines allows residents to experiment a whole new field of Plastic transformation while making a direct and positive impact in terms of environmental sustainability.

Buinho provides supervision and introductory training courses on how to separate and prepare plastic, as well as the individual use of each machine.

THE PRECIOUS PLASTIC PROJECT

In Buinho AIR program you can use these machines to further expand your artistic experimentation and research.

Precious Plastic (www.preciousplastic.com) is a global community composed by individuals and groups that are working towards a solution to plastic pollution. Knowledge, tools, and techniques are shared online, for free.

Our workspace is connected and spread through Messejana. The plastic waste is separated and deposited by the local's in specific points created by us, and then brought to the Plastic Recycling Center. There, a group of Buinho volunteers transform the plastic waste in raw material and use it to produce products that are given back to the local community.

The Buinho Precious Plastic is also a part of the makerspaces network, It is located in the local municipality workstation enabling users to work in metal and machine-building using specific equipment and workspaces.

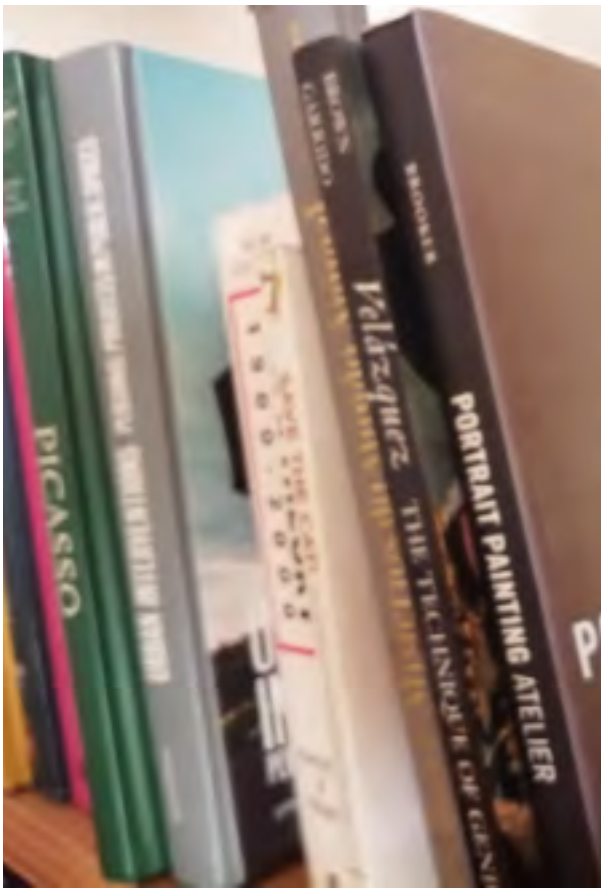
We provide an educational program targeted to school students and enable special training sessions to teachers, residents, and local people.

BUINHO LIBRARY

Buinho offers access to both its physical and digital library, where monographs, magazines and catalogs can be found in Portuguese and English, and in the main areas of Design, Arts, and Technology.

Although small, our library is ever growing, and it is highly specialized, including main references in the fields of maker education, creative practices, curatorial studies, digital fabrication, robotics, and other aspects of our daily practice.

Residents can also have access to some of the open source projects available in our digital library that can be used, transformed, and produced within the fablab or Precious Plastic working spaces.



MESSEJANA, TOWN OF THE SEVEN CHURCHES

Buinho is located in the sunniest region of Europe.

Providing more than 3000 hours of sunshine per year, alentejo is also famous for its gastronomy.

We are just 1 hour and a half from Lisbon and other major cities.

Located in Southern Portugal, deep within the region of Alentejo, Messejana (the town of the seven churches) weaves a colourful composition of blues into Mediterranean whitewashed houses. Offering a unique rhythm, Messejana is a place of contrasts between past aristocratic houses with its hidden patios, and the small rural taipa houses surrounded by baroque white churches.

Messejana has currently 800 population and a long story of human occupation. It possesses archaeological artefacts which dates to the neolithic, including the Romans, Moors and of course the Portuguese.

As a result Messejana possess several points of interest and a strong local identity, full of traditions, folklore and festivities.

Messejana is surrounded by Alentejo's plains and its world famous cork trees. We provide bicycles to our residents for free but residents are requested to keep them in a good condition and return them to the allocated places.

Other private spaces might be available for interventions, installations, presentations, exhibitions or performances. Nevertheless availability will be dependent of its owners.

HOW TO GET TO MESSEJANA

Messejana is in the heart of Baixo Alentejo region, 150 km away from Lisbon in the north and 150km away from the Algarve in the South.

The major nearby town is Aljustrel, located just 9kms away from Messejana.

We recommend you take the plane to Lisbon international airports. Then take in Sete Rios terminal station (Lisbon) one of the daily express buses to Aljustrel. Depending on availability we can drive you to Messejana. If we are not able to provide that transportation you can always take a taxi from Aljustrel to Messejana (the trip by taxi takes around 10 minutes and should cost about 12 euros).

Another possibility is to take a train from Oriente train station (Lisbon) and to Funcheira. Funcheira is around 20 kms from Messejana. From there residents should take a taxi which has an approximate cost of 30 euros.

More than a place, more than a fablab, Buinho is a common house for sharing experiences.

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