



european
creative
hubs
network

MAKERSPACE TOOLKIT





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WHO IS THIS TOOLKIT FOR?

This toolkit hopes to act as a brief guide to anyone wanting help with creating or running a makerspace, regardless of the scale.

NEW MAKERSPACES

If you're thinking about setting up a makerspace, this toolkit has some broad topics to think about and suggestions of the best order to tackle different elements.



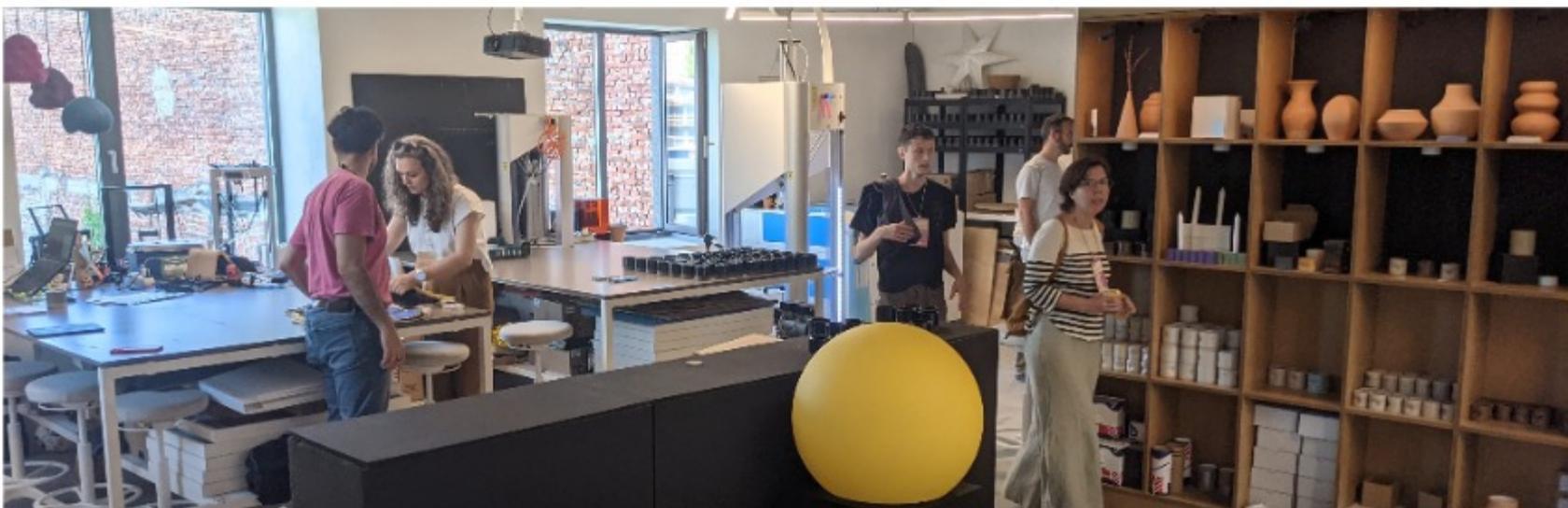
CREATIVE HUBS WANTING A MAKERSPACE

If you run a co-working or co-living space, and you're interested in including elements of a makerspace in your offering, this toolkit will help you think about the community you already have and want they need. If you are new to making and creative technologies, there's also lots of ideas around themes, machines and software.



ESTABLISHED MAKERSPACES

You have a makerspace in full swing but know that there are always ways to improve or expand what you offer, there's loads of ideas in this toolkit. If you have ideas from your own space that you'd like to contribute, please do get in touch!



MOTIVATION FOR THIS TOOLKIT

Makerspaces are not easy to setup or run. Many struggle and all of them could be better. Every makerspace has a part of the puzzle, and if we share ideas we can build better organisations to serve our communities.



WHO CREATED THIS?

This toolkit was created by the European Creative Hubs Network and The Making Rooms from the exchanges and ideas of 15 hubs from 11 countries.



ECHN WORKSHOP - MAKING SPACES

The ECHN Workshops program supports emerging creative hubs set up impactful workshops that target other hub managers and stakeholders, to spread and share specific know-how and expertise that would otherwise remain uncollected.

Every year, one creative hub from the ECHN network will be elected by the ECHN community to produce a learning experience powered by ECHN. Small and emerging creative hubs will be prioritised to allow them to amplify their resonance in the international map.

THE SCHEDULE

The week was jam-packed from the get-go but with encouraging delegates to make the week their own, we soon had numerous activities happening in parallel, including impromptu visits to partner facilities and delegates running their own knowledge exchange sessions!



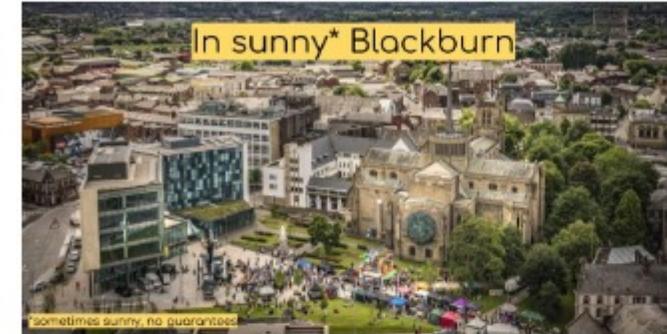
THE SILVER SCREEN

REEL cinema generously gave the team free rein on a 150 seater cinema screen to present their hubs. We then return 2 days later to here from our local Creative Alliance partners.



ALWAYS SUNNY IN BLACKBURN...

...now a running ECHN joke, on the 3 occasions ECHN members have visited Blackburn it has been beautifully sunny. Blackburn is a large former cotton town in the North-West of England with this manufacturing identity continuing to this day, boasting the highest proportion of people working in the sector across the UK. The team had a morning tour of the town, including Blackburn Cathedral and The Exchange.



LOCAL PARTNERS

During the week we visited a number of local partner organisations, learning about their positive impact on the town and all the creative and technology they have available to local people.

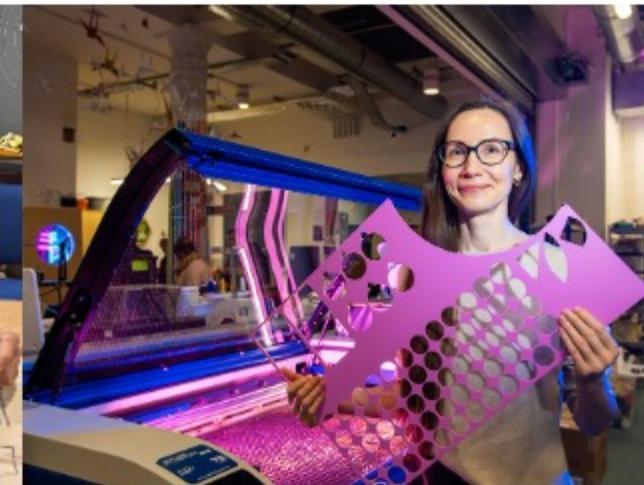
- Advanced Manufacturing Research Centre
- Blackburn Museum
- Uncultured Creatives
- Prism gallery
- Blackburn College
- The Exchange



MAKING!

It wouldn't be a making workshop without it! The team got up to all sorts of making during the week, learning from The Making Rooms' team, local partners and of course, each other!

- Soldering
- E-textiles
- 3D modelling & printing
- Laser cutting
- Biomaterial making
- CNC routing
- Vinyl cutting
- Plastic recycling
- Screen printing
- Print making
- Ceramics
- Circuit design
- Programming



WHAT IS A MAKERSPACE?

At its simplest, a makerspace is a space for making! A workshop with equipment for people to have shared use of and (hopefully) collaborate on projects together. They are often place of learning and development, where users bring their skills and exchange them with others.

A place where people with different skills can mix and brew ideas, in an open and creative way



A place to invent, try out ideas, be creative, share experience and educate.

An educational and workshop space that allows new ideas, technologies and practices to be tested and grow

Somewhere projects can be prototyped, developed and re-iterated

A community hub.

A place where makers can try out their ideas implementing them, thanks to the machines in it

An open space where we can meet other people and try out new ideas and concept

A place where creativity happens



A place where anyone can make almost anything

Sharing ideas and designs

A place where people are introduced to technology and encouraged try things themselves

A place of possibilities.

Shared work space to bring ideas to life



Share knowledge & skills

Training and entrepreneur hub

FLAVOURS OF MAKERSPACES

Makerspaces go by many names, such as Fab Labs, Hackspaces or workshops. Different countries will have their own preferred terms in both English and their language, but the most widely used terms are Makerspaces or Fab Labs. Spaces can also focus on different themes, such as Wood work, textiles or repair.



Potential to support local economy and drive development.

The Fablab Charta requires accessibility/low threshold fees on a communal basis

Whilst makerspaces tend to be a commercial version

A place where people can do digital making

A place where we can share tools to build stuff



Sharing tools, equipment, facilities, resources

A space with equipment for physical making

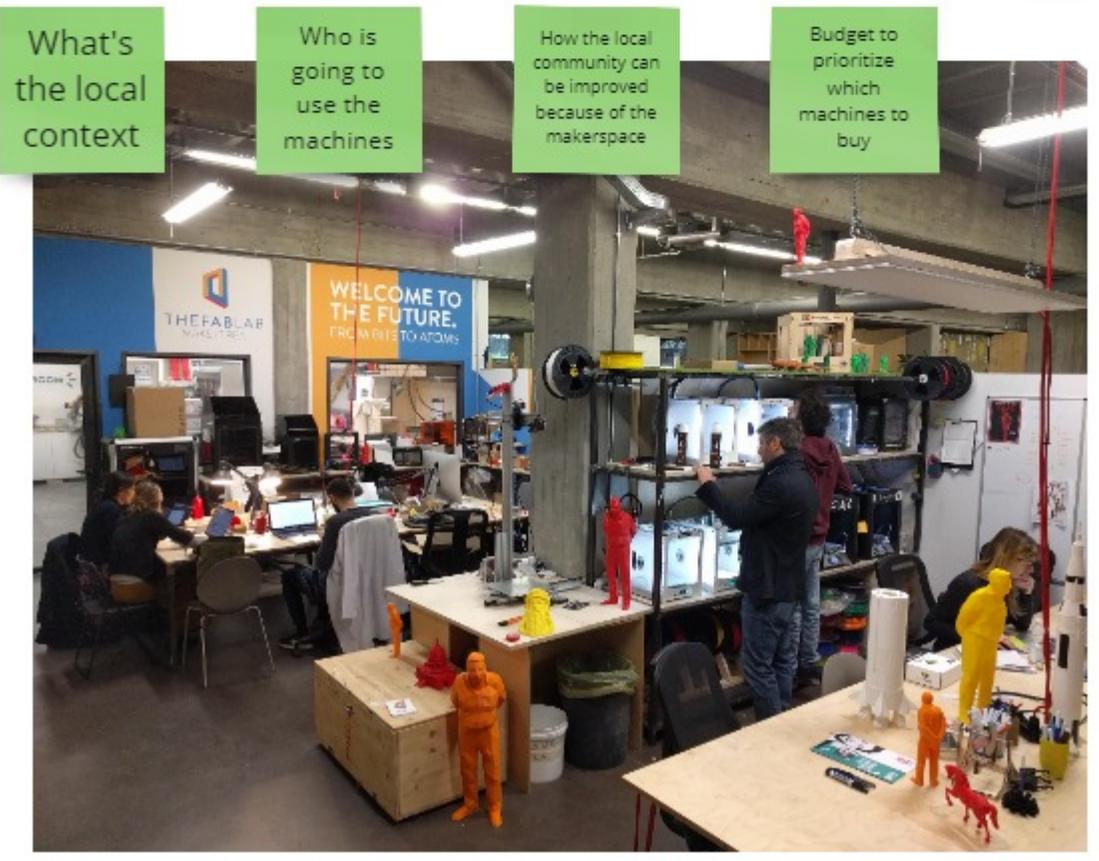
WHAT TO THINK ABOUT WHEN STARTING A MAKERSPACE?

There are a lot of moving parts to a Makerspace, both literally and figuratively! Most people's first instinct is to think "What shiny new machines can we get?" **RESIST** the urge to do this, as there's a lot of factors that goes into making these decisions.



- Satisfying needs of the local community
- Is the local community and audience giving support?
- Do we have a devoted and reasonably qualified team?
- Feasibility of the endeavour

- Priority
- Who is your target audience
 - How are you going to be sustainable
 - How is the space going to be effectively managed?
 - What are the values you want to achieve
 - What machines do you want



- What's the local context
- Who is going to use the machines
- How the local community can be improved because of the makerspace
- Budget to prioritize which machines to buy

- Are people enjoying their work, motivated towards the goals?
- Do not underestimate the machine maintenance capacity
- Are the goals of the endeavour well defined?
- Is the area well accessible? Is the place barrier-free?
- Is it fun?
- Should you focus on certain materials like wood or textiles? Is there a need in the area?

- Sustainability
- Who is the target audience
- Audience
- Who is gonna be in charge of running it between partner organisations
- Impact

HOW CAN MAKERSPACES BUILD COMMUNITY?

Most people start a makerspace to have a positive impact on a local area and the people who live and work there, but how can you reach people to build a makerspace community?

By asking the neighbours what their current issues are - or if they know what we are doing. We started by asking a restaurant next door for avocado pits to explain we dye textiles with it.



By posting some engaging content on social media

By creating useful resources online that people could find and then want to collaborate

by collaborating with different organisations

Offer outreach projects/sessions that introduce what is possible within the making space.

Partnerships with local and regional authorities, schools, businesses etc.

House sessions for different organisations

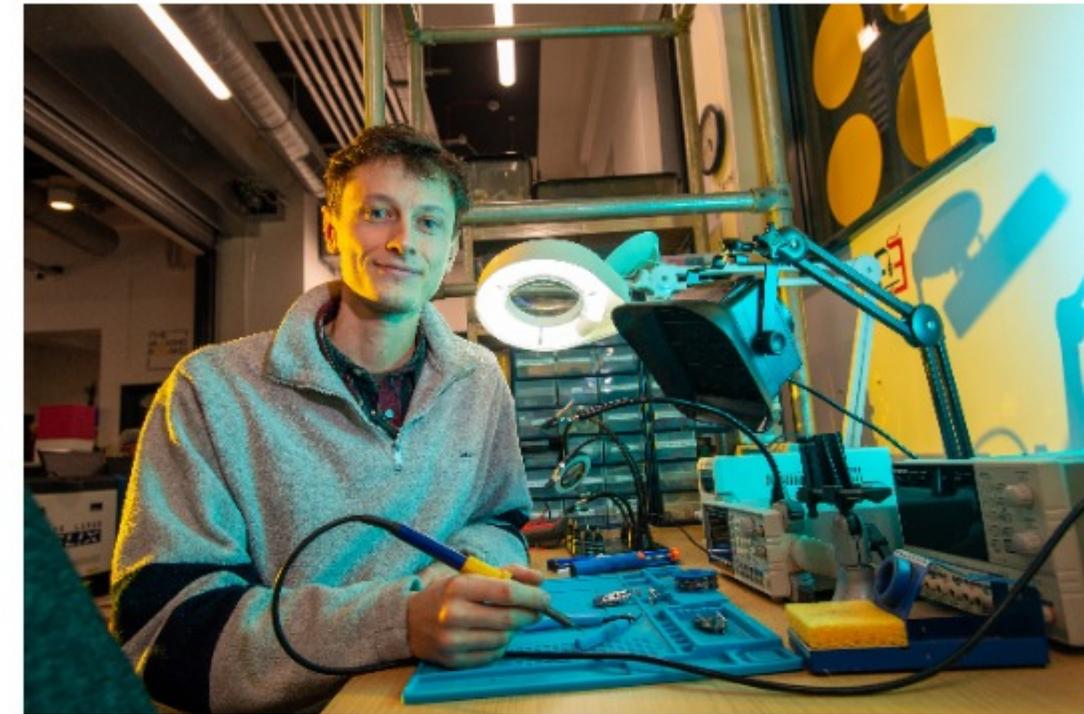
Word of mouth.

Bring a friend/relative day to build engagement from existing regular attendees.

Networking with kindred organisations and companies.

Bespoke introductory sessions to engage individuals whom maybe a little technology shy.

- Open Events
- Whatsapp Groups
- Online Presence
- Social/local community presence
- Partner Organisations



Communal projects to develop

Creating meet up points for a coffee / snack where people can hang together

Fixing needs of the community where the makerspace is located

Hosting free events for the community



Add value to individuals

Create a network of like minded individuals

Provide space for creatives to express their creativity

Upskilling people

A problem shared is a problem halved

Value exchange for volunteers

Train people to help run the lab

WhatsApp groups for thematics

Engage as many partners as reasonable possible - even fails may be wins later on

An unlike minded individuals, diversity breeds creativity

Regularly generate public. Have events that have a fixed frequency. When people know it is going to happen, it becomes an option they consider joining.



SOURCES OF FUNDING FOR MAKERSPACES

There are thousands of makerspaces in the world, and each one has a different business model. That being said, there are plenty of elements in common.



Accelerator programmes



Supplying services

Charging to companies or people for use of the machines



Summer schools (or any longer holiday where parents have to work)

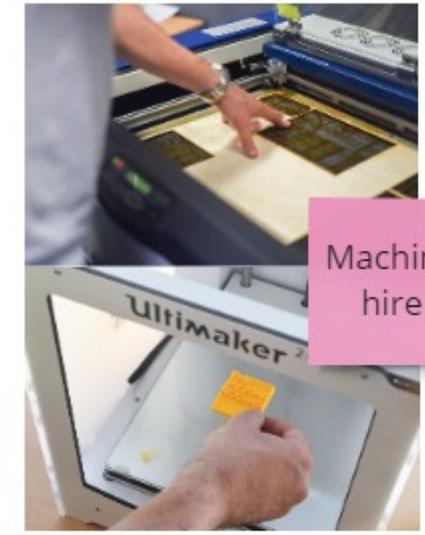
Seasonal funds	Membership	Patrons
diy shop : if you want something from the shop online, you have to learn how to do it. keep an interesting selection of personalisable items that aren't too time consuming to make	European (or National) research and/or cultural programs, maybe in cooperation with educational institutions. together and widening the scope, there is a better chance to get grants)	Sponsorship



Comercial work



Run commercial classes utilising the equipment and facilities.



Machine hire



Venue Hire

GRANT FUNDING VS COMMERCIALISATION

The two main types of funding are either charitable grants where services are provided free or at a subsidised rate. Or commercialisation through paid workshops, machine hire. This choice is usually determined by the communities you want to engage with, the impact you're looking to have and the type of organisation you are wanting to register as. As a general rule of thumb, poorer regions may have more grant funding available to them and fewer opportunities for paying end-users.



Educational courses

Grant funding for training



Selling users products



Making products

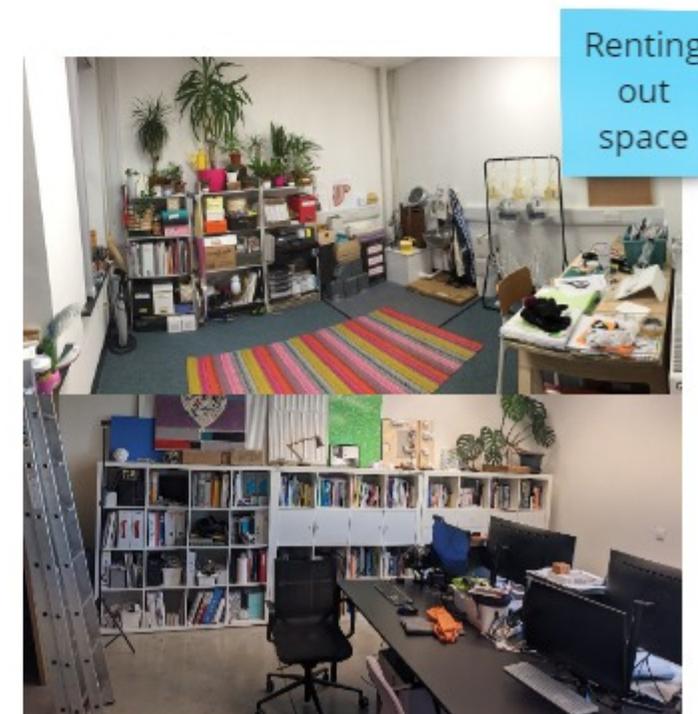
Production of items for sale



Paid workshops



Project calls



Renting out space

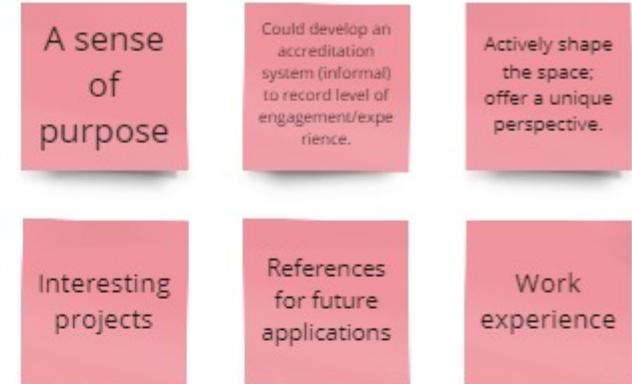
PEOPLE

The most important part of any makerspace is the people. Without the right people, floor space and fancy machines aren't going to cut it.



VOLUNTEERS

Makerspaces, like many 'third places' often rely heavily on volunteers to operate, but what's in it for them? (a lot!)



NETWORKS

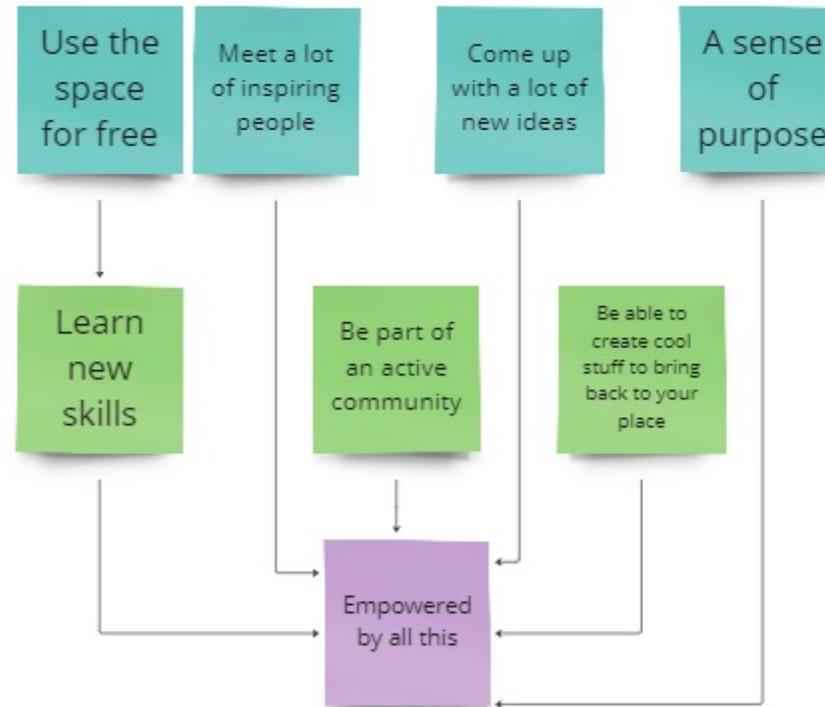
Don't reinvent the wheel is a phrase often banded around in the making process, but applies to organisations too. There are lots of people to learn from who have made the mistakes (and some successes) for you already. Networks are a great way to skip a few levels...



Academic institutions

Town / city / village administrations

Your country may have a makerspace network



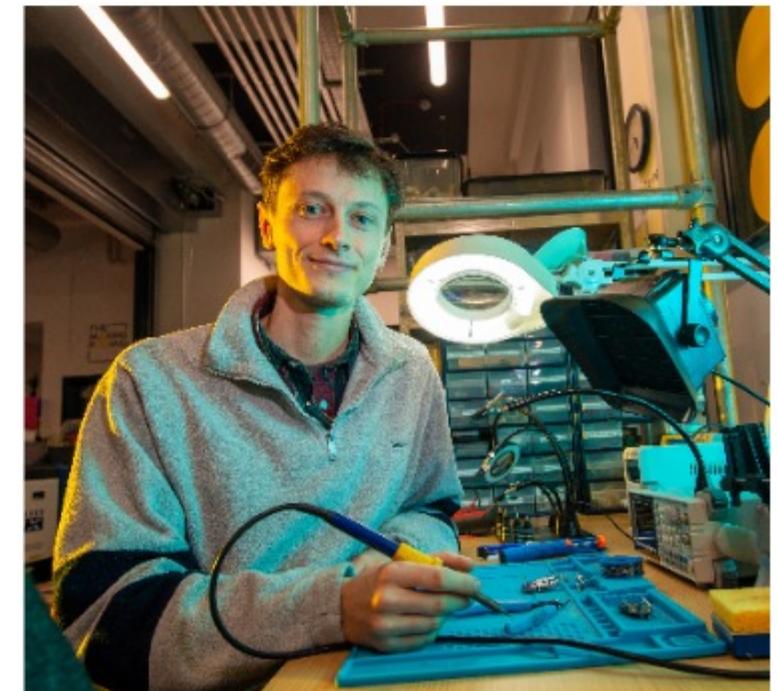
PARTNER ORGANISATIONS

Working in a vacuum is hard (both literally and figuratively). That's why it's always better to find like-minded organisations to partner with.



PROGRESSION PATHWAYS

It may take some time, but one of the most sustainable things about makerspaces, is that often you're future workforce are training themselves in their spare time!



LOCATION, LOCATION, LOCATION

Makerspaces (much like life) will find a way to exist anywhere. From old factories scheduled for demolition, to shiny custom built structures from the future. Some exist everywhere (makerspace buses) and some nowhere (machines taken home at the end of the day).



As part of a school, college or university



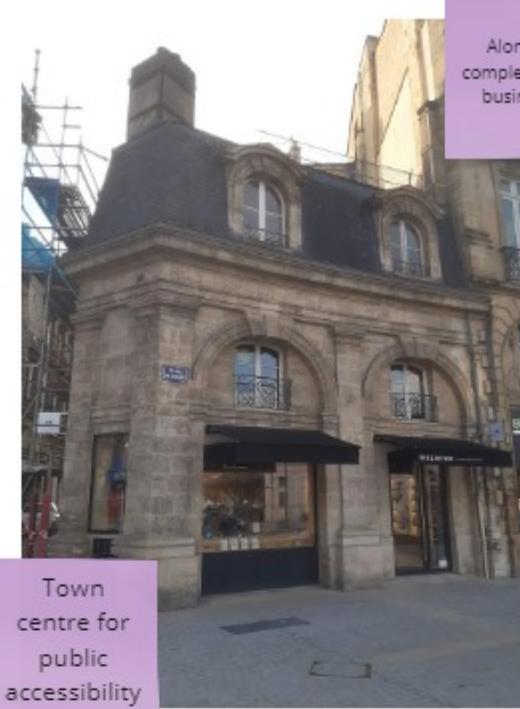
EDUCATION INSTITUTIONS

More so than any other kind of space, makerspaces are located in schools or universities. This makes sense, as makerspaces are primarily places of learning. There are of course pros and cons to makerspaces being based within universities:

- Lots of potential members
- Strict health & safety
- Well funded
- Often no public access
- Progression of members
- Peak demand capacity issues (student deadlines)



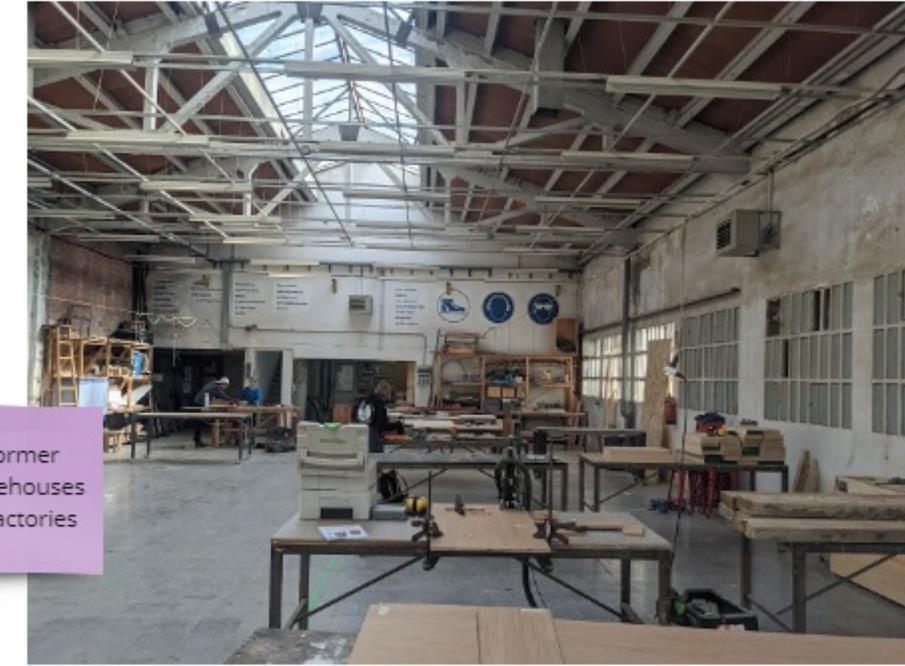
Inside museums & libraries



Town centre for public accessibility



Alongside complementary businesses



Former warehouses & factories

ACCESS + FACILITIES



Depending on your audience and machine set, you may want a space that's out-of-town with lots of parking space and wide level access for bringing in large materials, or you may want somewhere on the high street with good transport links to facilitate everyone to be able to pop by. Both options to promote accessibility - but to different users and activities.



MEANWHILE...

Meanwhile space can be available when a building is scheduled for redevelopment or demolition. They usually come barebones or even need a bit of work by you and your community. The advantages can be low cost and more freedom of use, however unfortunately occupants often have only a couple of months notice when being moved on.



Meanwhile space

MACHINES

While not critical, makerspaces are synonymous with shiny digital equipment such as 3D printers and laser cutters - though there are many flavours of makerspaces that will focus on different themes such as textiles, woodwork or even biohacking.

great library
of machines >

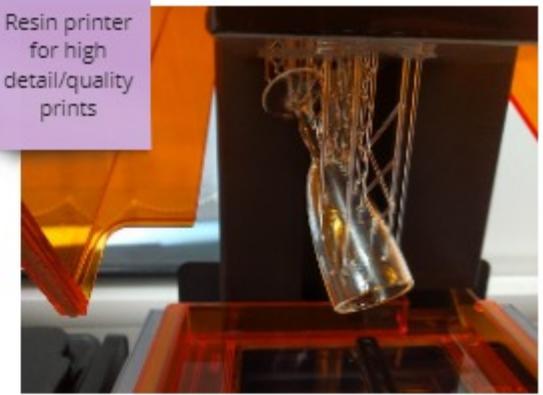
fablabs.io



Machines | FabLabs

A platform for connecting Fab Labs and their users from around the world.

Resin printer for high detail/quality prints



Vinyl cutter for signage and great (also easy) workshops



Assortment of hand and power tools

A SECOND LIFE

You may be surprised how many machines there are out there looking for a new home, from factories modernising to OG home machinists hanging up their aprons.

Shaper router if a large CNC is too bulky and you do stuff outside the maker space

brother KH910 and AYAB Arduino Shield

Assortment of computers (windows, mac, linux) and someone who can maintain them

Genmitsu 1830 CNC (or any sturdy GRBL gcode variant) for value, hackability and community

Coverlock 4 or 5 thread for jersey and sportswear

Set of hand weaving looms

Tufting Gun

Precious Plastic Machines



Ender 3 for value and accessibility, hackability and community (some assembly required)



Prusa 3d printers for reliability and (more recently) speed



Large CNC (>1m^2) if you want to make big things



more on this later >

Hardware that isn't stuck to proprietary consumables

Is the machine locked down to particular software?

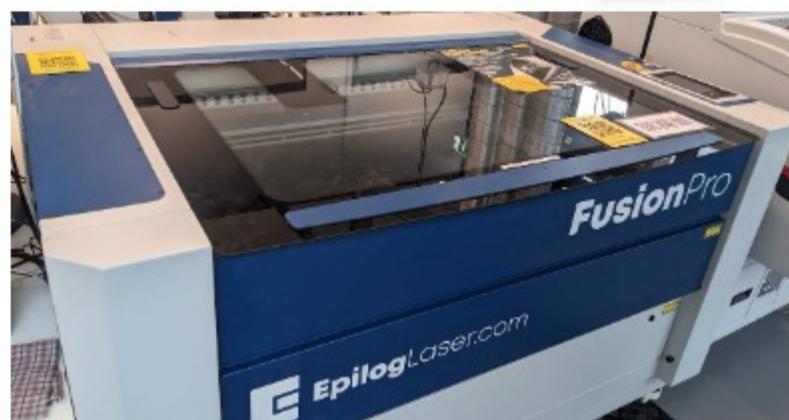
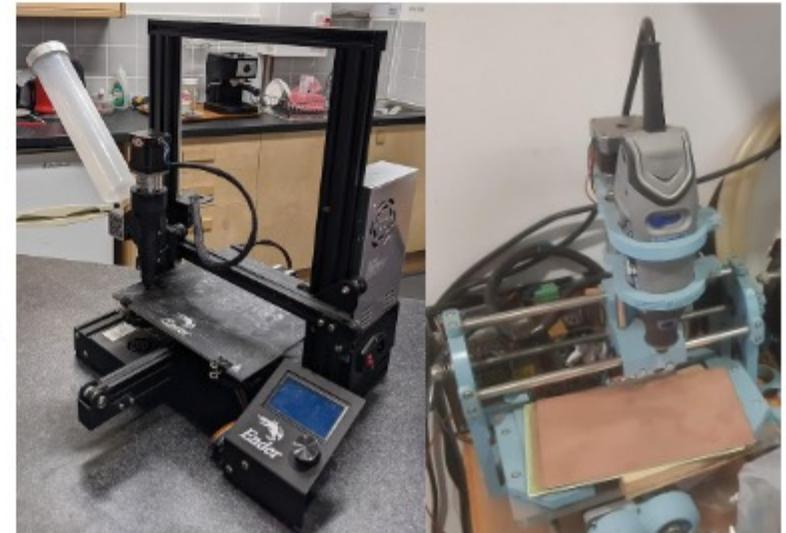
Reliability

Tip: Check places like Facebook marketplace or Gumtree for people passing on their old machines.

MAKING MODIFICATIONS

There are lots of machines out there for almost every purpose, the keyword being almost. Sometimes you just need to do something extraordinary.

From homebrew Dremel CNC routers to Open Source modifications to the most popular hobbyist 3D printer turning it into everything from a bioprinter to a filament/bottle recycler.



FLOOR MANAGEMENT

Makerspaces have a wide array of machines, often even within one space! That's why it's so important to plan out what machines will go where, based on some of the ideas below. To make a plan, you could 3D model your space, make a magnetic whiteboard with cutouts of machines, or even good old pen and paper.



MECHANICAL + ELECTRICAL

It's often worth hiring a specialist consultant with planning the electrical, ventilation and water supply requirements, but here's a spreadsheet template to help with the process.



APPROACHABILITY

People feel differently about machines and processes they've seen before. For instance, most people will be less intimidated by a potter's wheel than a CNC router. It's worth thinking about if you're wanting to attract new users, so maybe... Don't put the scary stuff up front!



SAFETY

Never the most fun subject, SAFETY! Machines and processes that are inherently more dangerous need to have restricted access. Luckily, there's an app for that!

Check out this Open Source building management project by Leigh Works:



ACCESSIBILITY

Unfortunately not all machines and processes in a Makerspace are going to be accessible to everyone, but there are lots of ways to maximise the accessibility of your lab.



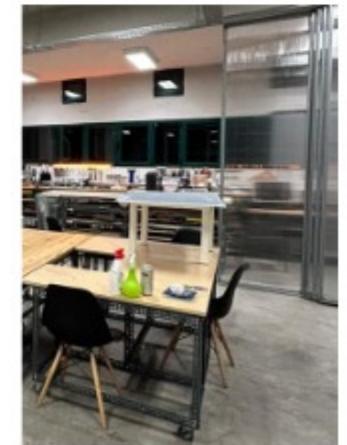
DUSTY, NOISEY, SMELLY...

Different machines affect and are affected by the environment in different ways. You probably definitely don't want loud machines near a presentation area or clay dust near your 3D printers (from experience!). You also want to think about your users, if they're spending hours working on a machine, they probably don't want to be in a cold dark room.



FLEXIBLE

We often don't know what may happen from one day to the next, let alone in a couple of years! So try to make your space/ furniture/ layout flexible and adaptable to change.



SOFTWARE + PLATFORMS

With most of the machines in makerspaces being digital in nature, they of course need design software to make anything beyond a straight cut or a pile of squirted material.

- Existing Tutorials and community etc
- Actively developed software
- Open source/hackable

- FREE/affordable
- More expensive usually has some support from the manufacturer (but not guaranteed)
- Industry skill/standard
- Having different tiers (from people with no knowledge to industry users)

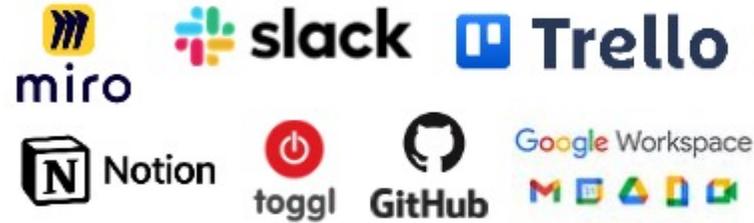
HOBBYIST OR PROFESSIONAL?

When making decisions about software in makerspaces, you must think about your audience. Does it need to be free? Easy to use? Industry standard?

As with a lot of choices in setting up a makerspace, figuring out **what** you want to do with **who**, will make most other decisions obvious.

ORGANISATIONAL

Keeping a makerspace organised is hard, and not just the tools... these should help keep every ordered!



MEDIA

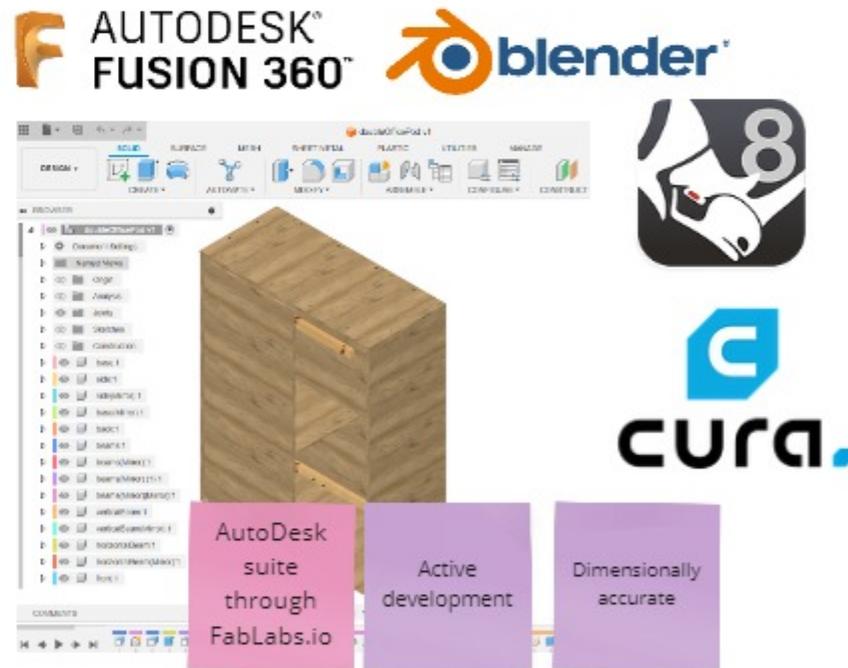


Not too expensive permanent licenses

ACCOUNTING

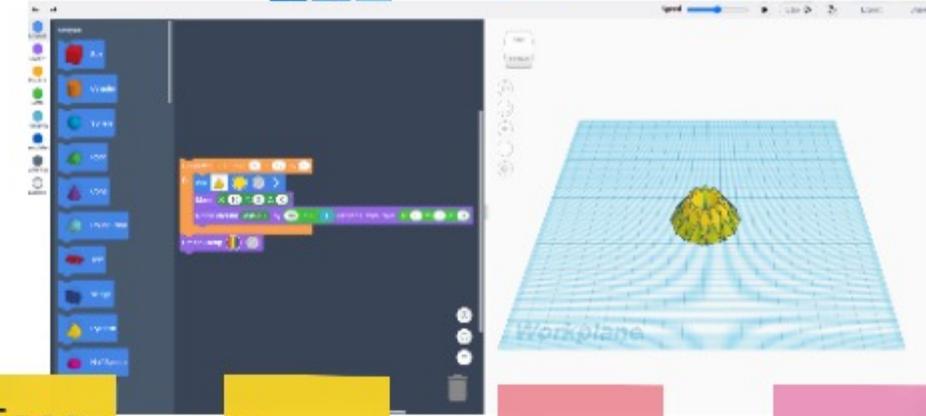


3D MODELLING



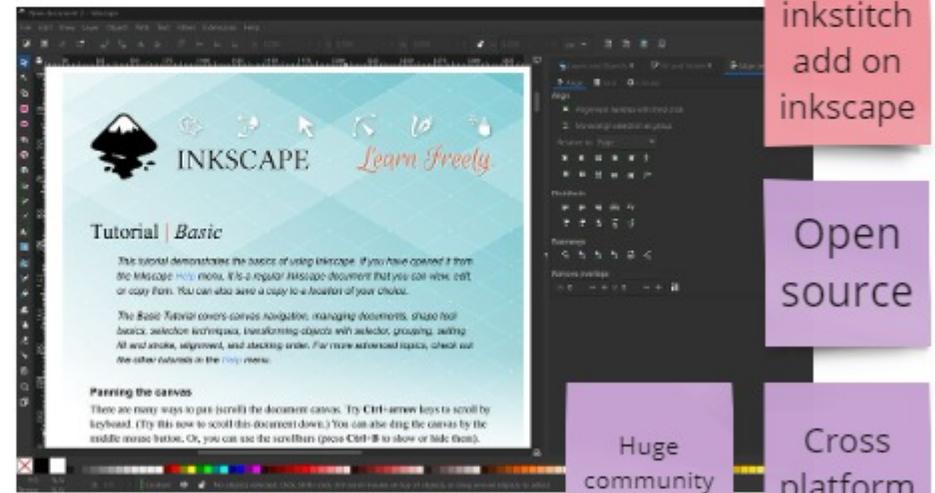
- AutoDesk suite through FabLabs.io
- Active development
- Dimensionally accurate

KID FRIENDLY



- Ease of use
- Browser Based
- Accessible
- Commonly used

2D



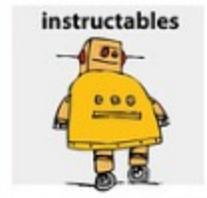
- inkstitch add on inkscape
- Open source
- Huge community
- Cross platform

CODING



DESIGN + PROJECT REPOSITORIES

Let's face it, sometimes it's hard to get started. Thankfully not everything in the maker movement requires you to start from scratch. There are dozens of sites with thousands of useful or beautiful designs to get you going.



**"DON'T
REINVENT
THE
WHEEL"**



Makerspaces have an ethos of sharing, access, designs and most importantly, knowledge. That's why so many makers have shared their projects free-of-charge.

OPEN SOURCE

"Think free as in free speech, not free beer." - Richard Stallman

Originally pertaining to source code of computer programs, Open Source now covers all sorts of ideas and projects. A key element to this thinking, is that you have the freedom to make changes to your own version of other people's works (when they've granted permission). The most common system of licenses is known as...



different kind of source



[FORMUFIT
PVC Plans
Library](#)

[Pen
Practice
Game](#)

[Colour
Matching
Game](#)

[The
Kern
Game](#)

[Open
Desk](#)



HOW TO KEEP TOOLS/SPACE ORGANISED

We've all been there; it's the 11th hour (or 3am before a deadline) and you can't find that one tool/bolt/widget to finish the project and save the day. You rummage for half an hour and find something that will just about do. You make the deadline but are so exhausted that you may not put everything back exactly where it goes... hurt people hurt people!

"Entropy is high in makerspaces"



Racking and clear boxes



A place for everything and everything has a place

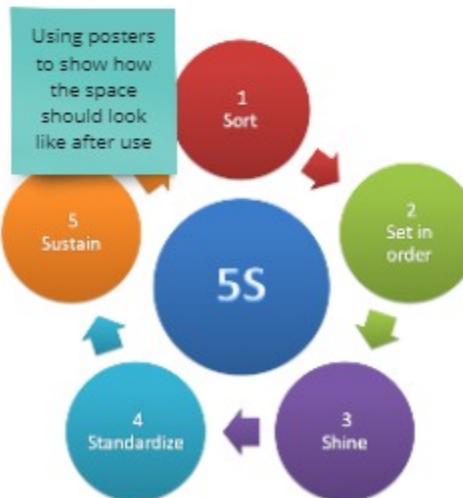
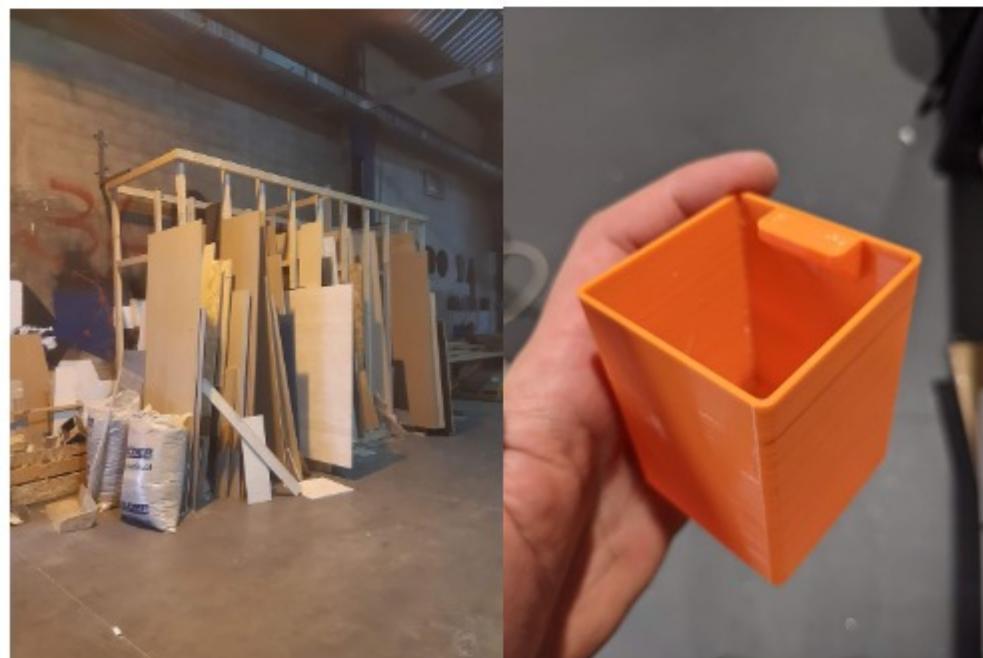
BROKEN WINDOWS THEORY

Visible signs of crime, antisocial behavior, and civil disorder create an urban environment that encourages further crime and disorder.

(MESS BEGETS MESS)



SYSTEMS



- Happy Hour (an hour tidying up on public days)
- Having a person in the space to organise them on a daily basis
- Dymo for labeling everything
- Lead by example
- Make people accountable & give them ownership
- Smart relay switches on the big machines
- Asset tagging
- Messages in internal chat when things are not done properly
- Add some friendly messages here and there to remind people to clean or put stuff back into place
- Colour Code areas and machines

CAN MAKERSPACES BE ENVIRONMENTALLY SUSTAINABLE?

There's already a lot of stuff in the world, maybe too much? So the idea of a space to make more things may be off-putting to the environmentally minded. However makerspaces are often places for re-making things and in recent years have seen a shift towards repair, recycle and sustainable materials.



Nurturing sustainable practices

Precious Plastic is a set of recycling machine designs and resources to help makerspaces create beautiful items from this amazing material in a sustainable way. The project is great for social mobility because you take a free material and from it can create products that are more valuable than if you had used virgin plastic.

Repair, reuse, recycle, donate.

Organising repair cafes in the space



Upcycling Projects

FIXING FASHION



Fixing Fashion is a repository of ideas and high-quality tutorials on how to help people get more out of their clothes and make sustainable choices for their wardrobes.

Repurposing materials



Cast new sheets from offcuts

Scrap material boxes

BIOMATERIALS

Whilst there are lots of great examples of sustainability projects in makerspaces across the world, you must take your local context into account.

Creating new materials from waste



Make from local waste streams



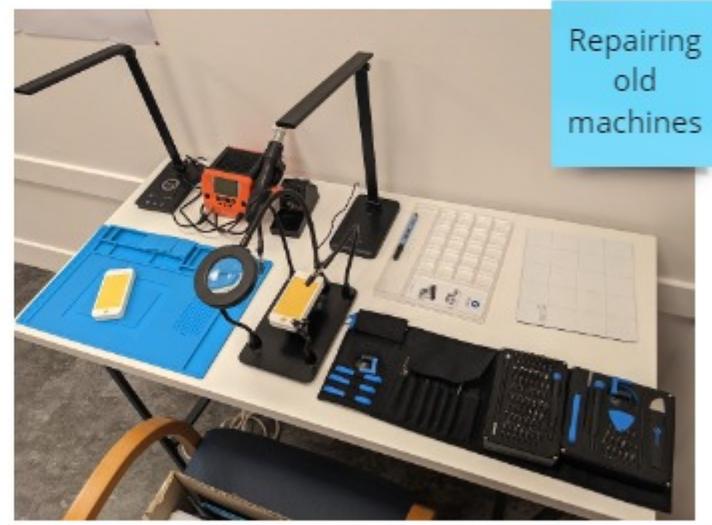
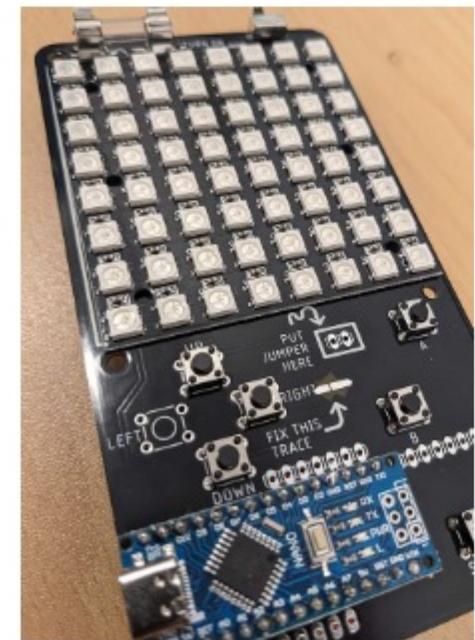
What things can you make that will be useful to local people?



Try to reuse the raw materials that have been used already

REPAIR

Many makerspaces are naturally used for their repairing superpowers, but some spaces are setup as dedicated repair spaces. These spaces often focus on electronics, but also include activities like Kintsugi - the art of gluing broken pottery while mixing in powdered gold to make the break beautiful and noticeable.



Repairing old machines



Right to repair: organise workshop to facilitate this.

Making use of what already exists

Promoting feasible DIY energy capturing projects, eg electric windmill from old motor, solar panel for recharging batteries, parabolic antenna for solar cooking or heating of metal plates?

Being mindful of the energy necessary to make things and try to use green energy

Being mindful of the waste created and minimising it

Recycled material suppliers

Grey water recycling

Choosing biodegradable material

Being energy independent (e.g. solar energy)

Using Materials efficiently

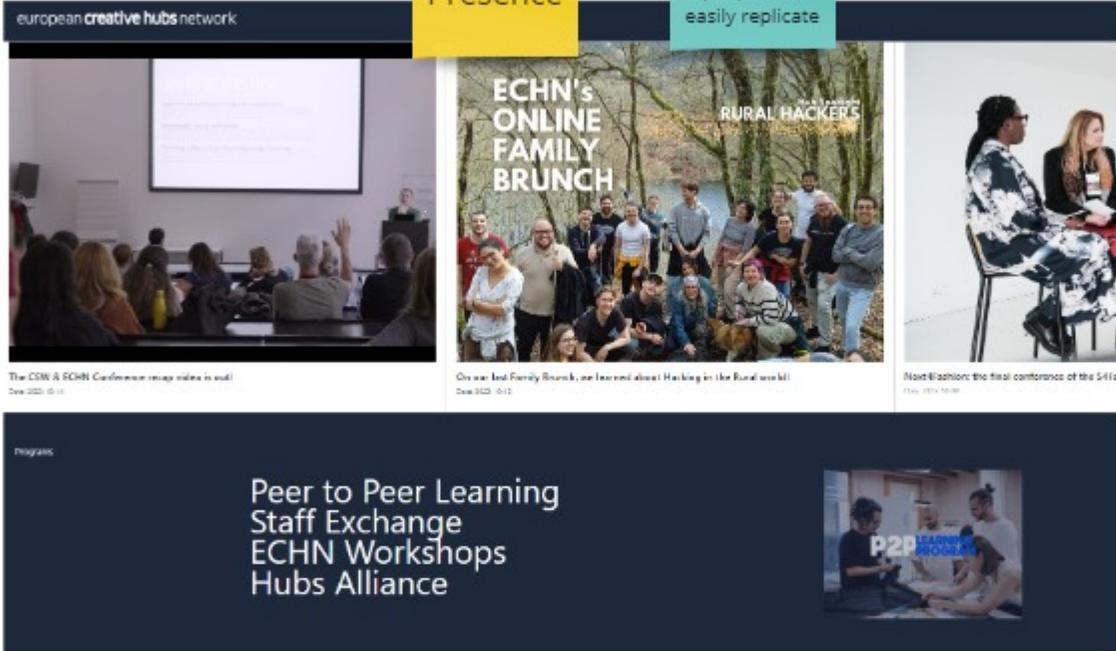
Encouraging in the space classical recycling

recycling

HOW TO MAXIMISE IMPACT

Why are you doing this? It's probably not to make a lot of money! People start makerspaces because they care. They want to have an impact, so let's look at how to maximise that.

Online Presence
Creating good wikis about projects that people can easily replicate



Helping other organisations
Simple online tasks that can be completed prior to attending. Introduction to the design process.

Empowering people to become self-employed and facilitate the creation of small and micro businesses in the community

Fixing local community problems through digital making

REJUVENATE TOWN CENTRES

In many countries, highstreets are dying. Online shopping (let's face it - Amazon) has meant traditional retail for generic products is only going one way. Makerspaces and other creative hubs are a great way to bring people back to an area.



Attracting Visitors

Bringing value back to town centers

By providing a space where members of the community can meet and exchange ideas

Venue to host local groups



Enabling vocational based learning
Liaise with schools and colleges exploring ways that resources can be utilised to develop curriculum.
Space to fill the gap between formal education and industry. Bespoke training that can be very responsive to the local needs.

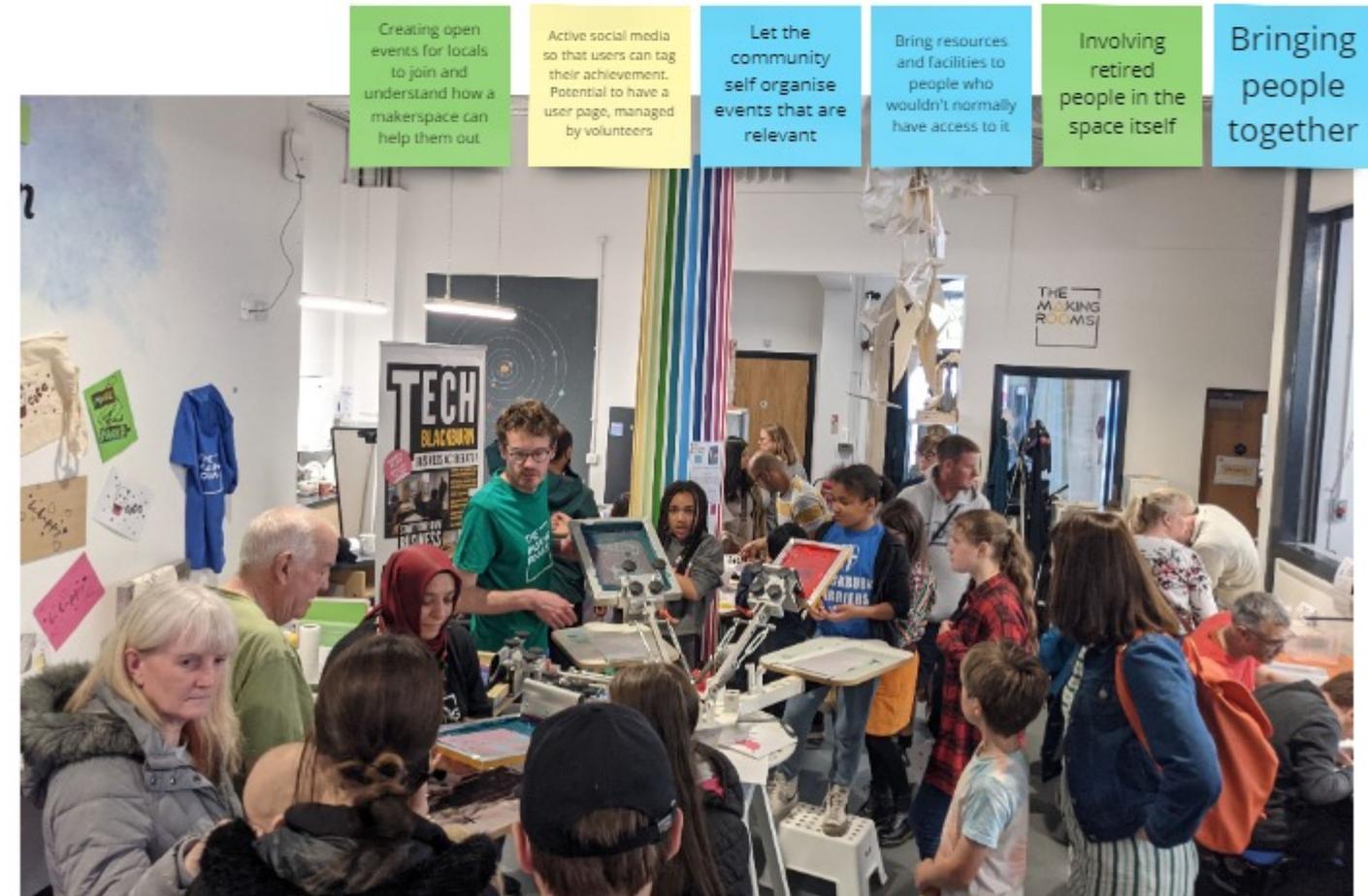
Training

Teach users how to teach new users

Practical education through introduction of new skills and technologies

Potential to offer accredited qualification

Programmes to support volunteers



Creating open events for locals to join and understand how a makerspace can help them out
Active social media so that users can tag their achievement. Potential to have a user page, managed by volunteers
Let the community self organise events that are relevant
Bring resources and facilities to people who wouldn't normally have access to it
Involving retired people in the space itself
Bringing people together

CASE STUDY: THE MAKING ROOMS

The Making Rooms is a not-for-profit based in Blackburn in the North West of England. A classic 'everything makerspace' we have most of the usual suspects in terms of machines. We open to the public for free every Saturday, and during the week help entrepreneurs, students and other organisations get to grips with creative technologies.



"IT DOESN'T MATTER IF WE'RE DOING IT, SO LONG AS IT'S HAPPENING IN THE BOROUGH."



Leverage technology
That serve the community
Whilst embedding skills in others
So we can discover new ideas
From around the world
And bring them home



PEER-TO-PEER LEARNING

There's so many ideas, skills and willing participants that we can't teach it all. That's why we rely on our members to pass on the skills we teach them to others.



BUSINESS MODEL

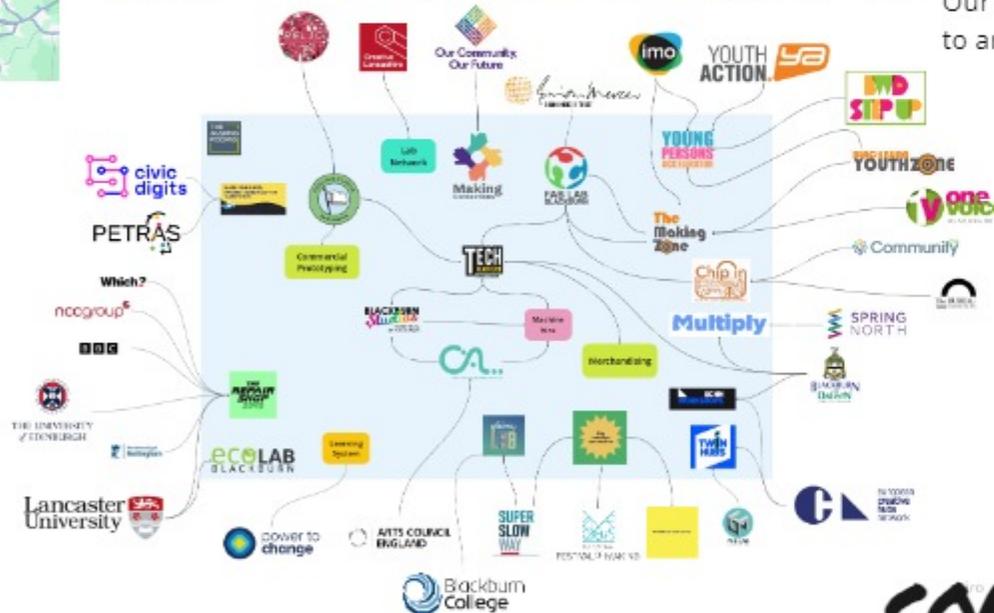
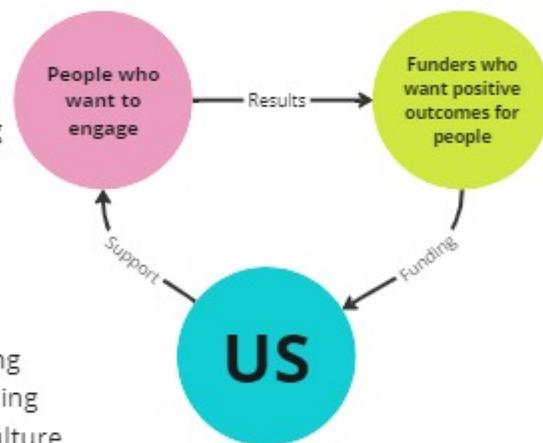
Most of our turnover comes from grant funding - focused around training, access and research. Whilst this is often seen as unsustainable by other spaces, we've taken inspiration from other types of organisations in always designing new ideas and programmes to keep things fresh and funders wanting more!

Our model also promotes user progression, from a member, to an entrepreneur who may need our services commercially.

EQUIPMENT



- 3D printing
- Laser cutting
- CNC routing
- Vinyl cutting
- Electronics
- Textiles
- Ceramics
- Mould making
- Plastic recycling
- Urban agriculture
- Screen printing



Labour			Assets		
Funded programmes	Commercial Prototyping	Training	Studio rentals	Machine hire	TMR products
		Consultancy	Virtual offices	Merchandise	



OUR WHY

The Making Rooms was founded by our local council to have a positive impact on local people and organisations. That's our North Star.

Ultimately if we can help facilitate the environment for exchange of new ideas and access to new equipment... job done.

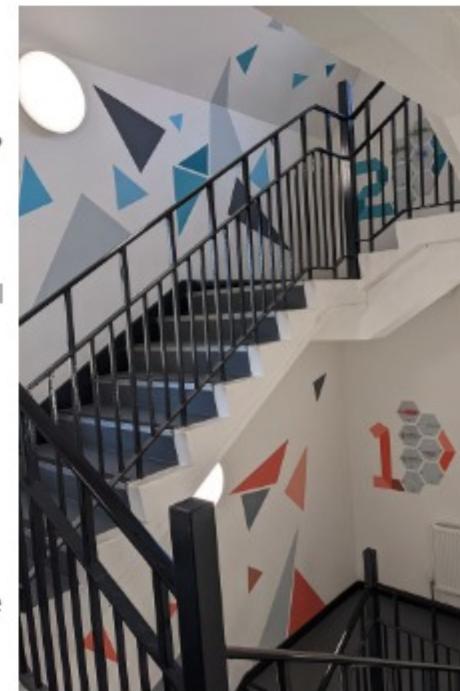
That's why we've visited over 40 spaces in 12 countries to bring new ideas and ways of working back to our community, and share these learnings with local organisations to help make things, better.



"WE WANT TO DO OURSELVES OUT OF A JOB AS MANY TIMES AS POSSIBLE"

STUDIO COMMUNITY

Our two upper floors are home to our tenants, a potent mix of third sector organisations and individual artists and technologists. Some of our tenants have learnt their craft within our walls, through our FabLab open Saturdays and accelerator programmes. We support our community in finding grants, project partners and commissions. We have curated the organisations here to collaborate perfectly together.



CASE STUDY: HOUSE OF ALL

House of All is a Hamburg based company founded by Sarah Prien in 2020. It acts as an agency and is built around the cultural value of sustainable fashion and textiles, following a holistic approach to radically reshape the perception of fashion. Through principles of commoning and open-source values, it shares knowledge, reduces costs, and encourages community participation. The goal is to revive local textile production and collectively embrace circular fashion. House of All operates the Open Lab Circular Textiles, established in late 2022 as a living lab in collaboration with Helmut Schmidt University through the research project "FAB CITY," a dtec.bw initiative. The lab features various analogue and digital textile manufacturing machines, some of which are open-source hardware.



OUR WHY

House of All's mission is to make sustainable fashion affordable and accessible to all, reconnecting individuals with the culture of dress. The vision is a future where a local circular economy thrives, with clothes globally designed and locally crafted, reducing mass production and addressing regional needs. This approach aims to reshape the fashion industry by promoting sustainability and community engagement.

EQUIPMENT

- 3D printing
- Laser cutting
- 10 colour Embroidery
- HILO OS Spinning machine
- Digitally driven jacquard loom
- Industrial Sewing machines
- Button Hole Machine (Eyelet)
- Brother Knitting machines with AYAB
- Knit Linking Machine
- Textile Recycling (Precious Plastics Shredding machine)
- Tufting Guns
- Screen printing



Sustainability should not be luxury!

DESIGN

In our Textiles Lab, members design and produce sustainable fashion pieces, guided by circular principles.

WEAR

Our shop offers locally made textile products, supporting sustainable fashion by providing a platform for local artisans and conscious consumers.

CARE

We cultivate knowledge and skills in sustainable fashion through workshops and research, fostering a community committed to a greener future.

DIY? DIT!

design it together

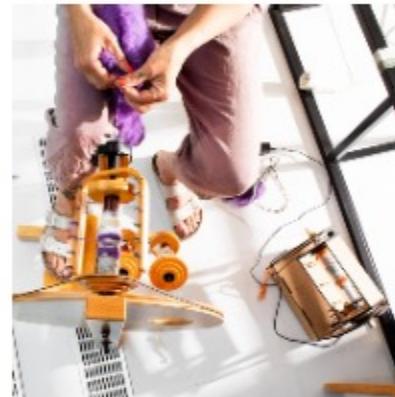


photo credit Enrico Martinez



BUSINESS MODEL

We, at House of All, operate on a community-supported model similar to solidarity agriculture. The goal is to share the costs for the value of sustainable clothing locally made together through monthly or annual contributions. Starting out our revenue streams include education and research cooperations, membership fees, services, and retail. Recently achieving nonprofit status, we seek to bolster funding for educational programs and sustainable digital manufacturing. With a membership model offering affordable rates and requiring six hours of community engagement, our members actively contribute through workshops, machine maintenance, and content management. This structure not only ensures financial stability but also fosters a collaborative, sustainable community.

SHOP + POOL

The Shops consists of a pool of garments which can be taken home for a period of time and swapped as and when required. We also sell products created in the lab or by tailors in the city.

COMMUNITY

Our Community is growing and consists of textile and fashion designers as well as enthusiasts. Some of which are not so much textile focused but just use 3D printers and Lasercutters or plan to dive into textile projects. The space is equipped with a smartlock so all members can come and go as they wish. There are usually 4-6 people working at the same time, Fridays is Open Lab where Sarah, the founder is available for questions and machine intros.

CASE STUDY: _ARTERIA_LAB

_ARTERIA_LAB is a creative laboratory the University of Évora, in Portugal. It opened its doors in 2020, at the same campus as the School of the Arts. _ARTERIA_LAB was built within Magallanes_ICC, an european project that aimed to support the cultural and creative industry in the regions of Alentejo, Algarve and Andalusia.

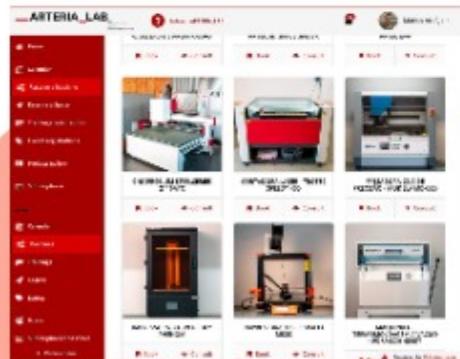


OUR WHY

_ARTERIA_LAB was created to foster the experimentation, prototyping and transdisciplinary research in the intersection of art, science, design and technology. We develop projects where academic knowledge is used to respond to societal challenges through participatory processes.

_ARTERIA_LAB has a maker space open to both academic and external community, aiming to empowering people to bring their ideas and concepts to life through digital fabrication, collaboration, learning, and sharing. The use of _ARTERIA_LAB makerspace is always tied to a capaciteve approach, where users are guided every step of the way to complete their projects. We provide a variety of equipment, which combined with creativity, allows for the creation of almost anything.

EQUIPMENT



- 3D printing
- 3D scanning
- Laser cutting
- Waterjet Cutting
- CNC routing
- Vinyl cutting
- Vacuum forming
- Plastic recycling



_ARTERIA_LAB



UNIVERSIDADE DE ÉVORA



BUSINESS MODEL

_ARTERIA_LAB was originally funded by the European Comission through the Interreg/POCTEP program. The maintenance of _ARTERIA_LAB, both infrastructure and human resources, are deeply dependent of European projects, although we can count with the general budget of the university to secure two permanent positions. As an infrastructure of a public university, _ARTERIA_LAB is subject to all purchasing, contracting and invoicing rules of the Portuguese State.

The use of equipment is free for members of the academy, working on academic projects. For personal projects and external users, we charge a fee to cover consumption and human resources time.

RESEARCH

_Arteria_lab collaborates in several fields of research, and provides support for PhD students and researchers wanting to use our equipments to develop scientific experiences, to archive 3D versions of scientific and heritage objects, and to print models of the objects for educational purposes.

EDUCATION

_ARTERIA_LAB develops educational and training activities in different levels and for different publics, as higher education, advanced training, schools and creative industries entrepreneurs. _ARTERIA_LAB is part of the Transform Places of Learning community within the New European Bauhaus strategy.

Being located in the same campus as the School of the Arts, the main users of the maker space turn out to be undergraduate and masters students in visual arts, design and architecture. They can learn how to use the digital fabrication machines to produce prototypes and academic works.

ARTS + ENTREPRENEURSHIP

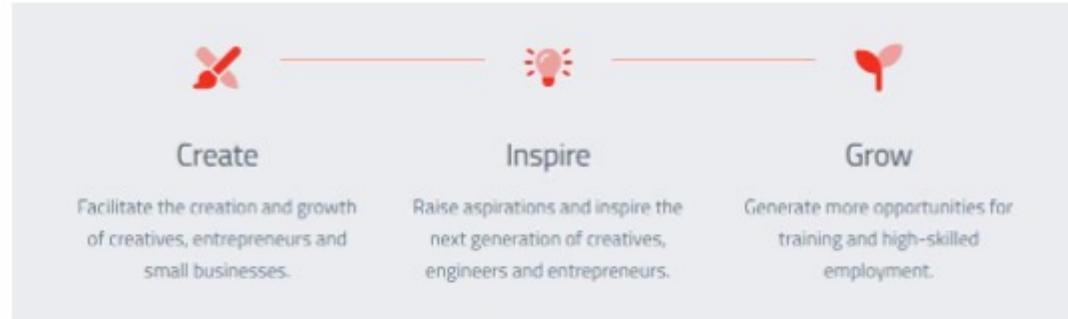
_ARTERIA_LAB helps artists to create using digital fabrication technologies available in our maker space. As the students, artists also learn how to use the equipments, and some of them are already autonomous in the use of the machines, which responds to our goals of training.

CO-DESIGN + PARTICIPATION

_ARTERIA_LAB coordinates and is actively engaged in several European projects designed to combine education, co-design and community participation. Our projects aims to empower young people and community members to be active citizens in their cities. Our projects are based in areas such as placemaking, urban regeneration and co-creation for responding to societal challenges.

CASE STUDY: LEIGH WORKS

Our mission is to **create** a community of entrepreneurs and creatives. **Inspire** the next generation of professionals. **Grow** talent, jobs and opportunities in the local community.



OUR WHY

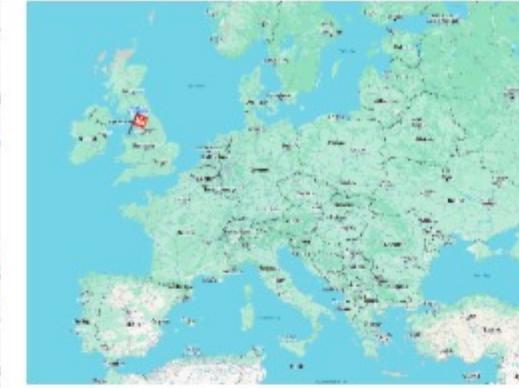
We are a professional space providing high quality, paid for, business services but we're not all about the bottom line. The majority of our profit is reinvested into the space or community projects that share our goals. Because we operate for the benefit of the local community, we can keep our prices low making us more accessible to a wider range of people.

EQUIPMENT

- 3D printing
- 3D scanning
- VR headsets
- Laser cutting
- CNC router
- Electronics lab
- Mig welder
- Circular saw
- Table saw
- Mitre saw
- Bench sanders
- Power tools
- Hand tools
- Plotter
- Vinyl Cutter



PROUD TO BE IN LEIGH, UK



BUSINESS MODEL

Provide high quality, low cost, professional space for all.

Access to technology and equipment
High-end labs, studios, conference rooms, AV equipment, 3D printers and more. Made accessible through fair and flexible pricing.

Support, advice and mentoring
Help setting up and growing your business, advice on funding, mentoring and support from our expert partners.

Working with local schools and colleges to inspire, educate and raise aspirations.

- Work placements
- Careers days
- Teacher training
- Apprenticeships
- T-levels and BTECs
- School projects

Develop an innovative community and bring opportunities to Leigh.



People who help us deliver our mission
We work with many different partners, including local businesses, community groups, schools and colleges, to help us deliver our mission.

Leigh Works
Proper goods have provided us with a great and fun to develop our new 200,000 space.

Leigh Growth Hub
Leigh Growth Hub provides regular and on-demand support to help businesses grow.

STEM
STEM Ambassadors connect our projects with local schools to inspire young people in STEM.

Leigh Works Business Hub
Leigh Works Business Hub is a great way to connect with local businesses and make our goal of supporting the town centre.

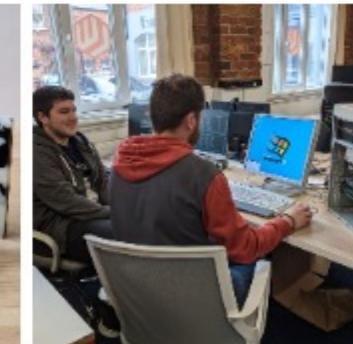
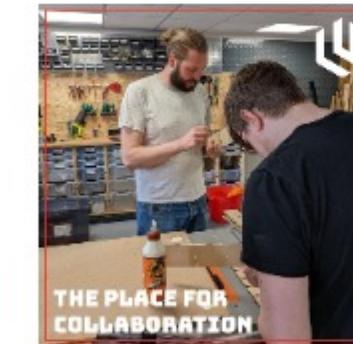
Leigh Works
Leigh Works provides a range of STEM activities for students and staff, including a range of apprenticeships through Leigh Skills College.

University of Salford
The University of Salford provides placements and a range of industry projects for the sustainability of various courses.

Leigh Works
Leigh Works provides a range of STEM activities for students and staff, including a range of apprenticeships through Leigh Skills College.

COMMUNITY

A network of peers to collaborate, innovate, share knowledge and experience. To attract new business, create opportunities and facilitate upskilling. Creating high-skilled jobs, retaining talent and generating investment in our town.



OUR FUTURE

We have been operating since 2019, and in 2023 we took the leap to become a social enterprise. Our new space opens later this year, and we're looking forward to being able to make a bigger impact in our community.



HOPE THAT HELPS!

This toolkit was created from the ideas and collaboration between 15 hubs visiting The Making Rooms in Blackburn England for the European Creative Hubs Network.



SUGGESTIONS?

If you spot any issues in this toolkit or you want to contribute to make it better, please let us know <email>, and do check back as we hope to develop this resource further with new ideas!

OTHER TOOLKITS

There are loads of other resources out there for makerspaces, below are some of our favourites

