



FabLab Coventry - Technology, Community, and Collaboration with Coventry City Council

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FabLab Coventry is a community-based digital fabrication hub that uses technical workshops, design innovation, qualification access and entrepreneurial development at the interface of technology and citizen research to empower local residents. Since its inception in 2016, FabLab at Coventry University worked collaboratively with Coventry City Council to create a space where community members could gain new skills and qualifications, promoting social integration through technology, creativity, and community collaboration.

The idea for FabLab Coventry emerged in 2014 as part of a wider community engagement initiative at Coventry University. Led by Sinead Ouilon, the project responded to feedback from more than 3,000 local people, many of whom expressed interest in gaining access to the university's digital technologies like 3D printing and laser cutting. The FabLab's mission was to bridge this gap, offering digital fabrication tools, technical skills training, and an open space for learning and creativity.

Coventry's history as a manufacturing hub left many residents with technical skills but limited employment opportunities following the decline of industrial jobs. FabLab responded by offering opportunities for the local community to update their technical skills for the digital age, particularly those made redundant following the 2011 economic crash. With the support of Coventry City Council, FabLab established a centre where technology and social purpose intersected, providing a platform for marginalised groups to gain new skills and improve their employability.



FabLab's Mission and Offerings

FabLab Coventry was established in 2016 with an initial investment of £40,000 and one staff member, in an old shop provided by the City Council which was refurbished with the help of local volunteers. By 2023 the FabLab had moved to a larger facility with £200,000 worth of technical equipment and a team of thirteen staff members. Over 7 years it had actively engaged with over 14,000 local Coventry residents, students, Entrepreneurs, creatives and SMEs.

The space offered various digital and practical workshops, covering skills such as CAD design, 3D printing and more traditional skills such as carpentry. Local residents could engage with digital fabrication tools like laser cutters while also learning more traditional practical skills like DIY and woodworking. FabLab Coventry's core mission was to support local residents in acquiring digital and practical skills while building confidence in a welcoming, informal environment, where the kettle was always on. Workshops were designed to cater to all skill levels, allowing participants to explore technology at their own pace, with support from knowledgeable technical instructors, many of whom were female, helping to engage underrepresented groups like women, migrants, refugees, and young people excluded

from formal education. The lab also offered entry-level qualifications such as Digital Fabrication Level 1 and 2, helping participants gain skills in high demand by employers.

Digital Skills
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Collaborating with Coventry City Council

The strong partnership between FabLab Coventry and Coventry City Council was instrumental to the FabLab's growth and success. The council not only provided the initial space but also collaborated on funding applications, securing external support for projects such as the £4.3 million Migration Friendly Cities initiative. This project, funded by the European Commission, aimed to integrate migrants into Coventry's economy and community through digital skills training and language support.

One of FabLab Coventry's major focuses has been supporting refugees and asylum seekers. Many individuals in these groups come with technical making skills but lack the English language proficiency to integrate those skills into the UK labor market. To address this, the FabLab team developed programmes such as English for Carpentry and English for 3D Modelling, combining language instruction with technical training. This unique approach allowed participants to gain practical skills while also improving

their English, making it easier for them to transition into employment or entrepreneurship. The mobile FabLab initiative also allowed instructors to bring digital fabrication tools to refugee centres in Birmingham and Wolverhampton, providing skills training on-site. The team also set up an Eco Furniture Factory in Wolverhampton, through a partnership with the Birmingham, Wolverhampton and Coventry City Councils. This flexible collaborative approach allowed FabLab Coventry to respond flexibly to community need, and their work extended to other marginalised groups, including the long-term unemployed, school-excluded youth and care leavers.

Technology for Social Good

Although FabLab Coventry was a technology space, the use of technology was driven by its commitment to social good with a focus on using technology as a means to engage, educate, and empower the local community. The FabLab offered a comfortable, informal and welcoming environment, so participants could feel relaxed and learn at their own pace. This approach was key to overcoming a fear of technology that many community members initially expressed. In some cases, participants arrived with little or no experience with technology, but after engaging in the lab's activities, they gained the skills and confidence to work with advanced tools like laser cutters and 3D printers.



Laser cut design (detail)
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The flexibility of the space was another important factor in its success. Because the FabLab was located in a retail centre, it attracted people from all walks of life. Whether they came in out of curiosity or were referred by partner organisations, participants could explore a wide range of activities, from woodworking to digital design. The lab's emphasis on practical, hands-on learning allowed individuals to demystify technology and see its value in their everyday lives.

FabLab Coventry also became an accredited qualification centre, offering entry-level AIM qualifications in areas like digital fabrication and carpentry. At the time, there was no access to these qualifications available in the city, so local young people were not able to access the engineering and design courses offered by their local Higher Education Institution, Coventry University. So by offering access to entry-level digital fabrication qualifications, FabLab created a throughput of new local talent into this design and maker sector. FabLab also supported the home learning community for parents who had decided to home educate, and they worked very closely with the Looked-After Children team at the Council and provided training sessions for care-experienced children and care leavers. One programme, the Home Project, taught care-experienced young people digital making skills, enabling them to design and create furniture for their new independent homes.

The FabLab was a member of the Coventry Open Research Lab, part of the Living Lab approach that promotes citizen social science and community-driven research. This open innovation environment fosters trust between the university, the council, and local residents, empowering them to shape the research agenda and drive change within their own communities. The Living Lab model enables FabLab to embed technology in community engagement, using tools like 3D printers and e-textiles to inspire creativity and innovation. However, the focus remains on health and wellbeing, with arts-based practices and creative making used to demystify technology and help participants feel at ease. Through its position within the Open Research Lab, the FabLab was also able to run a Citizen Social Science programme, which enabled participants to conduct their own research projects on topics important to them. This initiative provided a platform for marginalised individuals to share their experiences and contribute to the University's social science research programmes.

Outcomes and Achievements

The collaboration between FabLab Coventry and the Coventry City Council has had a tangible impact on the local community. Over the years, the FabLab has engaged with more than 16,000 participants, offering them the opportunity to gain skills, qualifications, and confidence. Many of these participants have gone on to start their own businesses, secure employment, or pursue further education.

FabLab engaged with 1,936 participants during the 2022-23 period, with a particular focus on supporting vulnerable groups such as people with disabilities, long-term health conditions, and those from ethnic minority backgrounds. Some key highlights include:

- 375 individuals engaged in project-funded activities.
- 96 sessions delivered, covering both digital fabrication and practical skills.
- 75kg of fabric and 270kg of timber upcycled through eco-friendly workshops.
- Collaborate to Train initiative: A project aimed at supporting micro, small, and medium-sized enterprises, achieving 200% student engagement and helping 80% of participating businesses develop new products.

EcoPreneur Course

FabLab also promoted social enterprise, helping participants from marginalised communities or immigrants to explore entrepreneurial pathways. Many have started small businesses, leveraging the skills they learned at FabLab to create products, start businesses, and integrate into their new communities

As part of the GILL¹ project the technical skills instructors at FabLab designed a programme to support female ecopreneurs, using resources secured from a funded project. In September 2023, FabLab welcomed a group of participants supported through the Asylum, Migration, and Integration

¹ Funded by the European Union (GILL, 101094812). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the European Research Executive Agency can be held responsible for them. This project is co-funded by UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [grant number 10049511]

Funded Project (AMIF), known as MyCoventry. The purpose of this series of workshops was to provide these individuals with the opportunity to learn and develop their entrepreneurial skills. By taking part in a showcase, they were able to advertise and promote the maker support services available through FabLab. This initiative aimed to empower these individuals and help them integrate into the Coventry community by equipping them with the necessary tools and resources to start their own businesses.

Programs such as Succeed and Your Vision Your Future, funded by the European Social Fund, also provided targeted support to unemployed youth and older individuals over 50, helping them gain essential skills and find pathways back to employment. These programs have directly supported unemployed participants into education or work.

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Participant Success Stories

FabLab's impact is best seen in the stories of the individuals it has supported. Participants like Chiara, an artist seeking to develop her game design skills, found FabLab to be a welcoming space to explore creative and technical challenges. Through workshops like Sculptris and Inkscape, she gained the skills and confidence to pursue her game fabrication ambitions.

Ryan, a participant with learning disabilities and on the autism spectrum, attended carpentry workshops at FabLab. Initially nervous, Ryan's confidence grew as he gained hands-on experience with tools and developed new skills in a supportive environment. He now feels more prepared to pursue a career in woodworking.

Other participants, such as Henry, an entrepreneur, used FabLab's digital jewellery-making sessions to develop new products for his upcycling business. His company has grown, and Henry continues to return to FabLab for additional support as his business expands.

Legacy

It was the collaborative backbone of FabLab Coventry that allowed it to succeed in combining community-focused technology training and social integration, providing vital services to vulnerable groups while driving economic integration and personal empowerment. Through its collaboration with Coventry City Council and the Living Lab approach, FabLab created a space where local residents could engage with technology, develop new skills, gain qualifications, integrate more fully into their local communities or expand their businesses. FabLab has delivered social impact through an emphasis on accessibility and inclusivity, combined with its use of technology as a tool for engagement, empowerment and social good.

The team will be re-developing FabLab, on a smaller scale going forward and are closed for now. However, the Citizen Social Science and Open Research Living Lab are ongoing through the Coventry Health Determinants Research Centre and the HORIZON Gender Innovation Living Lab.

Further Information:

Website: <https://www.coventry.ac.uk/research/areas-of-research/peace-and-security/>

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