

## **A Study of Member Motivations and Activities in Hackerspaces and Repair Cafés**

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A new wave of grassroots organisations are emerging that provide space for people to actively experiment with, modify, make and fix products in 'community workshops', like Makerspaces and Hackerspaces, focussed on making and Repair Cafés, focussed on fixing. This predominantly urban phenomenon has been facilitated by new and affordable technologies, particularly the advent of cheap computing and digital fabrication devices, such as 3D printers, the use of social media as a means of sharing information and the principles and products of 'open source'.

The growth of these 'community workshops' has been rapid, with for example Hackerspaces increasing from fewer than 20 in 2005 (Baichtal, 2012) to 1035 active Hackerspaces today (Hackerspaces, 2014).

The growth of the Maker movement has been hailed as the new industrial revolution and to have the potential to herald a new post-consumer, more sustainable approach to production and consumption through local peer production and the development of innovative products and services that are fit for purpose and longer-lasting (Anderson, 2012).

Increasing product longevity is one of the central considerations of circular economy thinking (Ellen McArthur Foundation, 2012) and also one which the newly emergent Fixer movement appears to embrace. The 'fixer economy' has existed for a long time eg car repair, but new organisations are helping product owners to repair and maintain consumer products. The Repair Cafés Foundation, founded in the Netherlands in 2010 provides support to a network of over 400 active Repair Cafés around the world (Repair Café Foundation, 2014). Each Repair Cafe offers a free meeting place for people to bring products in need of repair and to work together with volunteer fixers, to mend broken items. In addition, a number of companies and social enterprises are emerging to help consumers and users repair a wide range of products.

This paper documents the demographics, interests, and motivations of members of Hackerspaces and Repair Cafés around the world. It records the activities undertaken in these community workshops and members opinions on how they expect their organisations to change in the next five years. Particular emphasis is placed throughout the work on understanding the importance of environmental, social and economic drivers as motivations for participation and of the activities undertaken.

Research was undertaken through online global survey in May 2014, of members of Hackerspaces (95 respondents from 16 countries) and Repair Cafés (158 respondents from 8 countries) and participant observation in the UK, from March to June 2014. Both Hackerspaces and Repair Cafés are largely undocumented phenomena, indeed the authors believe this work to be the first published research survey on global Repair Cafés.

Results are presented and discussed in the paper and a new classification of Makers, Hackers and Fixers is proposed. Conclusions are presented on the future direction and influence of these grassroots movements on business and society with particular emphasis on the implications for eco-innovation and the move towards a more circular economy.

In addition, the business models of companies in the Fixer space are analysed and key lessons are presented for new business start-ups and existing businesses.