



D7.2 PROPOSED GUIDELINES FOR SOCIAL ADOPTION OF DIDIY

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Disclaimer

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Executive summary

Deliverable D7.2, Proposed guidelines for the social adoption of DiDIY, has been prepared as a summary document that collates and synthesizes issues concerning the social adoption of DiDIY, and presents proposed guidelines for social adoption of DiDIY. The deliverable lays out the foundational issues previously identified as affecting social adoption of DiDIY, such as changes in technology, the mindset, and practices of DIY, and cultures of everyday making and participation. DiDIY is described as a phenomenon that is grassroots, emerging, complex, locally diverse and globally connected. The deliverable calls for locally appropriate policy responses, to support and meet the needs of this diverse grassroots phenomenon, as it develops and grows.

The DiDIY Project has developed a set of guidelines which outline parameters that would ensure a positive enabling environment in which DiDIY can flourish. This synthesis of guidelines has been previously published in D5.4 as the “Creative Society Manifesto” and is included here. The deliverable goes on to give four examples of “policy patterns”, designed to address specific aspects of the social adoption issues identified. Two of these deal with access to makerspace facilities: to promote the gender balance in DiDIY and mitigate the impact of the patchy provision of DiDIY facilities. Two others deal with funding and sustainability within maker spaces: the tunnel vision in terms of the makerspace funders’ objectives and generating income via providing courses using makerspace facilities. Sitting alongside this deliverable, policy recommendations for DiDIY can also be found in D7.3, DiDIY related education processes, and D7.4, DiDIY related policy recommendations.

Revision history			
Version	Date	Created / modified by	Comments
0.1	06/06/17	UOW	First, incomplete draft.
0.2	10/06/17	UOW	Extensions, fixes, etc. First distribution to SB.
0.3	16/06/17	UOW	Extensions, fixes, etc.
0.4	26/06/17	LIUC	Fixes and layout revision.
0.5	27/06/17	MMU	Extensions, fixes, etc.
0.6	27/06/17	LIUC	Extensions, fixes, etc.
1.0	30/06/17	LIUC	Approved version, submitted to the EC Participant Portal.



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1. Introduction

This deliverable has been prepared as a summary document that collates and synthesizes issues concerning the social adoption of DiDIY, and the Project proposed guidelines for social adoption of DiDIY. The research from which these issues emerge are previously published deliverables associated with research undertaken for the Project by Work Packages 2-6. This deliverable is the result of work undertaken to complete Task 7.2 which states:

Task 7.2. Synthesis of guidelines for social adoption of DiDIY (Leader: UoW)

- Collation of social adoption issues, arising from results of WPs 2-6;
- Synthesis of social adoption issues.

In accordance with the formal Task 7.2, a review of published deliverables from Work Packages 2-6 was undertaken. This looked at previously submitted deliverables in relation to ‘social adoption’ of DiDIY, excluding adoption in formal institutionalized settings such as large-scale business, industry, work and education, which are remit of WP3 and WP4. DiDIY within larger scale business, industry, work and education, and the related policy issues, are covered by other deliverables.

1.1 Social adoption

The term “social adoption” is interpreted as meaning how DiDIY practices have been (and will be) taken-up by individuals, DiDIY related-organisations and communities within society at large, outside the formal institutional settings of work and education. The range of issues that may affect the ‘social adoption’ of DiDIY was established by reviewing the previously published reports from WPs 2, 5, and 6, and covers the various ways in which DiDIY is manifested in wider society, including any issues identified that may affect adoption with regard to:

- how DiDIY is conceptualized and perceived;
- the opportunities and facilities for DiDIY activity;
- principles and practice of access to DiDIY technologies, support and open business models;
- the support, funding and regulatory environment for DiDIY;
- the legal framework;
- rights and responsibilities.

1.2 Deliverables within the scope of the review

The following documents were reviewed and issues that were identified at the outset of the project in relation to social adoption were collated.

WP2 – Creating and maintaining a shared knowledge framework on DiDIY

- D2.2 Foundational Interpretation of DiDIY
- D2.4 Knowledge Framework – Revised version

The following documents contain research carried out during the course of the Project, from which social adoption guidelines have been developed.

WP5 – Exploring the impact of DiDIY on creative society



- D5.2 Social impact of DiDIY
- D5.3 Relationship between DiDIY and social change
- D5.4 DiDIY for positive social change (a.k.a. DiDIY Manifesto)
- D5.6 Institutions and creative DiDIY

WP6 – Exploring the impact of DiDIY on laws, rights and responsibilities

- D6.1 Dominant legal challenges and solutions practised
- D6.2 Report on ethical impact for regulation
- D6.3 Legal practices of DiDIY hardware technologies
- D6.5 Use of open standards and collaboration tools
- D6.6 Creative design and laws, rights and responsibilities

This deliverable pulls together a brief account of the social adoption issues referred to at the outset of the Project and gives a synthesis of guidelines for considering these issues. It gives four examples of ‘policy patterns’ but does not offer further specific ‘policy’ recommendations, which is the remit of D7.4, DiDIY related policy recommendations.



2. How DiDIY was conceptualized and perceived at the outset of the Project in relation to social adoption

A review of how social adoption of DiDIY was framed at the outset of the Project within WP2 was undertaken and the following aspects were noted.

2.1 *The digital aspect*

Deliverable 2.2 lays out some key distinctions between analogue and digital communications which underpin the way in which recently developed digital capabilities have fuelled the DiDIY phenomenon. It argues that it is not digital information processes themselves that are novel but that recent advances in microelectronic components and devices have allowed the previously inefficient processes of digital encoding to become technologically affordable. The way in which information processing has become a function of hardware (rather than the domain of animal, particularly human ‘wetware’) is identified as the ‘critical novelty’ that has led to the widespread diffusion of communications networks, sharing of information in open formats, and cultures of digital collaboration and innovation.

In this way digital communication, now employing almost complete separation between information and physical supports, and coupled with modern computers, results in fast, error free and scalable processing of digitally coded information. The result is that current digital capabilities allow information to flow much more freely than was previously the case, and for it to be freely encoded and recombined within physical systems such as 3D scanners and printers. The prevalence of information accessible on websites, through online communities, and encoded within design databases and digital manufacturing technology software, is a foundational aspect that potentially enables the widespread social adoption of DiDIY. Digital information sources, networks and technologies are affordable, accessible and widely distributed in ways that did not previously exist.

2.2 *The DIY aspect*

A second foundational aspect identified as affecting social adoption of Digital DIY is the historical and cultural background of DIY itself, which provides an ethos, mindset and practices informing the DiDIY phenomenon. D2.2 details the history and background to DIY and discusses how social practice theories and accounts (Pantzar & Shove, 2005; Reckwitz, 2002; Warde, 2005) have been used to identify and analyse important elements of practice, for example examining how DIY products and practices co-evolve over time. (Watson & Shove, 2008). D2.2 discusses how *materials* changes such as the availability of new raw materials, sources of information, tools and spaces can be identified as components of change, enabling adoption of DiDIY. *Competences* are affected by digital capabilities which, for example, may lessen the need for manual skill or provide new learning resources such as online tutorials. *Meanings* include long standing motivations for DIY carried through into DiDIY such as personal satisfaction, and the expression of identity and personal independence, empowering individuals and communities.



2.3 Foundational interpretations in relation to social adoption (outside work and education)

These changes (in digital and DIY) taken together are presented as pre-conditions for the development of DiDIY as a technological, social and cultural phenomenon. Developments considered emblematic of the growth of this phenomenon include the proliferation of new devices operating at the interface between atoms and bits, freely converting and re-converting information into physical forms or informational artefacts, back and forth. Another expression of the growth of DiDIY is the social phenomenon of the promotion of sharing cultures, online and offline, from new collaborative platforms to commons-based peer production structures. The potential, for amateurs that are committed to producing something themselves, to reshape the relationship between production and consumption is identified as characteristic of DiDIY, as is the opportunity to generate innovation. Social adoption may be affected by multiple influences from societal structures (networks, institutions, markets, laws and social norms) to emergent cultures and a theoretical explanation of dimensions and elements, that could be considered in relation to the complexities of DiDIY, and intended to inform the integrative modelling of the DiDIY phenomenon is set forth.

From the outset of the Project the social adoption of DiDIY was clearly located within the historical context of fostering and encouraging everyday creativity (Gauntlett, 2011). The roots of DIY were identified in the ideas and writing of John Ruskin and William Morris, whose philosophy inspired the Arts and Crafts movement. They advocated that people have the tools to share, communicate and connect, and highlighted the importance of things made by non-professional people and acknowledged the power of making itself. The more recent embrace of DIY media production witnessed by widespread engagement with user-generated content posted to internet community platforms is viewed as an example of a significant shift towards (or back towards) active rather than passive modes of behaviour, embracing diversity of creative activity and personally meaningful outputs. DiDIY is facilitated by this wider shift away from passive ‘consumer cultures’ towards ‘cultures of participation’ (Fischer, 2013).

From the perspective of laws, rights and responsibilities the immediate observation that DIY – Do It Yourself – is often more accurately described as DIT – Do It Together, or DIWO – Do It With Others, as it typically involves building on ideas and projects developed by groups of people, places the legal barriers and incentives to social adoption in a community context. Social adoption relates to the way in which proprietary knowledge and tools are being ‘commonised’ and accessed through the internet at no marginal cost, as soon (and as long), as the commons is maintained by its community. Weakened IPR – intellectual property rights – and potential policy changes needed to facilitate legal social adoption of DiDIY practices, were highlighted as issues early in the Project.

The role of professional designers is called into question if DIYers are innovating products themselves. The Project foundational research acknowledged that “the self-design and production of the DIY practice reshape the definition of professional design” raising questions of the feasibility of user participation in the design process, co-creative practice and consumers personalizing products though design mechanisms ranging from hacks, to modular systems and deliberately incomplete products.

The final foundational perspective relating to social adoption issues is that of ethics. Here the direct and indirect impacts and potential threats from DiDIY are highlighted, including consequences flowing from the ability to reproduce physical items, which could range from impacts on consumer



safety and property rights, to undermining industries and jobs. Ethical challenges relating to it becoming harder to control distribution and use of objects that are now legally restrained (from 3D printed weapons to synthetic biology) were raised and finally, the impact of DiDIY on ethical norms such as privacy of information and the undermining of intellectual property rights were raised.

2.4 The Knowledge Framework

D2.4 sets out a more developed and systematic account of the DiDIY phenomenon within a Knowledge Framework (KF). The KF examines the ways in which individuals can be engaged in DiDIY, from DiDIY as a cognitive process, to individual and group practices to the wider societal context. It draws distinctions in types of practice, for example between DiDIY as an activity and as a mindset, each reinforcing the other and progressively creating a socio-technological system. The KF delineates the scope of DiDIY, identifying core components and the range and extent of definitions of practice, within distinct fields of the DiDIY Project such as organization and work, education and research, creative society, laws, rights and responsibilities. A series of dimensions and aspects are modelled and the extended metaphor of a building under “rapid and largely undirected construction” is employed to illustrate DiDIY.

DiDIY is described as a phenomenon that is:

- grassroots;
- emerging;
- complex;
- locally diverse;
- globally connected.

DiDIY is fundamentally understood within the KF as a grassroots phenomenon based in a culture and practices of DIY but responding to the structural change in information processing capabilities and the blossoming of diverse digital affordances that this structural change has brought about. It must therefore be recognized that these foundational observations serve to contextualize the social adoption of DiDIY as taking place within a rapidly changing emerging phenomenon that is both global (though locally adopted and innovated in multi-faceted and diverse ways by individuals and groups) and potentially broad-based and widespread. It is characteristic of DiDIY to exhibit local diversity of practice but global connectivity inspiring practice and promoting communities of interest where feedback, support and collaboration can occur. A strongly shared ethos drives the phenomenon.

The core ethical values are identified in the KF as:

- the value of sharing and helping others;
- the reputation economy (trust, transparency, demonstration of skills);
- equal rights of access and participation (equity);
- participants do not need to obtain permission (free-as-in-freedom, autonomy).

DiDIY is therefore rooted in technological, social and cultural structures operating largely independently from government and policy initiatives. Policies can, of course, encourage or impede further DiDIY development. Social adoption guidelines need to take into account this deep-seated autonomous and diverse nature of DiDIY and consider local practice in a local context and respond to local need. For example, funding frameworks (such as support for innovation) will not be



consistent across EU geographical domains and just as DiDIY will be locally manifested, so funding responses will need to be locally appropriate.

The KF reports that the growth in engagement with online communities has broadened the boundaries of DIY and cites evidence from two platforms: Instructables and Thingiverse, presenting data that shows a very marked increase in the registration of new users, and very similar patterns of strong growth in the publication of new projects since 2013. The data is used to conclude that “both DIY and DiDIY are spreading to new audiences and domains and this is happening, increasingly, in the form of DiDIY”. Despite this evidence of strong growth in online participation it is also recognized within the research that DiDIY is still a niche activity that is not currently widely socially adopted, in the sense that it is not routinely adopted as a way to make products by the general public, or currently able, for example, to challenge the supremacy of mass market manufacturing.

The final version of the KF, updated and adapted in the light of the Project research, D2.5, is to be published at the end of the Project. This version will include a full list of research questions and how they have been addressed.

2.5 Social adoption issues within WP5-6

D5.2 considers indications of the role that DiDIY can play in:

- fostering creativity, creative agency and creative opportunities to engage with technology;
- supporting the sharing of knowledge and skills and providing access to knowledge
- networks;
- fostering community engagement and social inclusion;
- promoting entrepreneurship and new business start-ups;
- promoting well-being and personal satisfaction;
- providing a pathway towards a positive environmental agenda such as circular economy;
- resilience.

These themes are discussed drawing on evidence gathered from 14 case studies of DiDIY related activities and projects, detailed in D5.2.

D5.3 is a report into two series of workshops in which 135 makers took part. The evidence from both of these reports informed the development of D5.4, also known as the Creative Society Manifesto – this document is a set of broad guidelines concerning social adoption of DiDIY.

As well as drawing on evidence from D5.2 and D5.3 the Creative Society manifesto includes guidelines that were generated as a result of the work undertaken within WP6, Exploring the impact of DiDIY on laws, rights and responsibilities, and the Transversal Tasks on ethics and design. For example, this research considered social adoption issues with regard to:

- principles and practice of open business models;
- the support, funding and regulatory environment for DiDIY;
- the legal framework;
- rights and responsibilities.

D5.6, Institutions and creative DiDIY, investigates the ethical issues raised by the indirect impact of DiDIY on the value of professionalism, on traditional institutions and regulatory mechanisms. It



considers how to deal with the potential risks that DiDIY products might present in terms of safety and liability, building on the research in D6.1, Dominant legal challenges and solutions practised. It concludes by emphasizing the need for further reflection and discussion on these issues, and the importance of avoiding exaggerating the regulatory challenges presented by creative DiDIY in light of the current evidence.

D6.3, Legal practices of DiDIY hardware technologies, reviews a series of hardware projects following an open business model. Open Business Models can be understood as those models that encourage sharing of knowledge under open licenses, from free to some rights reserved. This report looks at licensing, revenue models, modes of production, governance, impact and other aspects in cases ranging from electronics to community networks.

D6.2, Report on ethical impact for regulation, reports on the ethical evaluation of DiDIY activities in the present and near-future, in particular whether these activities need to be guided by new policy regulations of some kind. The concerns are grouped in broadly two areas: Challenges to rights (in particular intellectual property rights and consumer rights) and physical risk (in particular product safety and legally limited artefacts like weapons). At this stage, the tentative conclusion is not to recommend new governmental policy or laws, but a) self-regulation in the DiDIY community and b) a continued close look of policymakers at the technological developments because the potential for highly disruptive changes that demand policy intervention is significant.

This research has informed the development of the guidelines on social adoption contained in the Creative Society Manifesto, reproduced below. Final detailed policy recommendations will be given in D7.4, DiDIY-related policy recommendations.



3. The identification and collation of guidelines on social adoption

These broad issues of social adoption are, among others, the subject of in-depth research fully explored in the Deliverables detailed above. This report draws together *guidelines* concerning social adoption arising from those deliverables. The term ‘guideline’ has been interpreted as meaning a general rule or principle. Guidelines by their nature are not binding and are not a matter of enforcement, they are intended to establish the broad parameters of a positive enabling environment in which DiDIY can flourish. These guidelines have been drawn together as a Creative Society Manifesto, previously published as D5.4.

3.1 Creative Society Manifesto



The Digital DIY Project has developed a Creative Society Manifesto that identifies and explores 5 key areas and 12 key aspects, based on our research findings, that need to be considered for society to reap the full benefits of digital DIY. These are the project guidelines for social adoption.

For society to reap the full benefits of Digital DIY there is a need:

[In the interests of sharing, learning and inspiration:]

- To promote opportunities for a thriving circuit of sharing, learning and inspiration in all Digital DIY cultures
- To explore alternate forms of creative platform – online, offline, and interlinked – which offer new opportunities to make, share, connect, include and inspire

[In the interests of widening access:]

- To support growth of community making in a diverse range of locations, and attract people of different backgrounds and interests



- To diversify notions of ‘making’ to include a greater range of tools, practices and interests (and therefore more radically diverse ‘makerspaces’)
- To consider creating spaces and facilities for making in library, museum, school, and other civic developments

[In the interests of economy, business and entrepreneurship:]

- To value the Digital DIY spirit of innovation, invention and entrepreneurship, and support grassroots and entrepreneurial initiatives
- To support new business models based in sharing of knowledge, collaborative making and circular economy
- To support education, learning and continuing professional development which will enhance collaborative and entrepreneurial traits in employees

[In the interests of well-being and sustainability:]

- To enable more people to experience the enhanced well-being reported by makers, associated with close social interaction, creative problem-solving and greater creative confidence
- To embrace and enhance the role of Digital DIY in realising sustainable futures

[In the interests of our rights and responsibilities:]

- To use open standards to drive innovation, and ensure that regulations on product safety and intellectual property do not stifle creativity
- To make responsible use of Digital DIY, respecting other citizen’s rights, increasing meaningful participation, and contributing to positive societal development

The full Creative Society Manifesto which includes explanatory notes on each of these points is available in D5.4.



4. Example Policy Patterns

Policy Patterns are documents that drill down into more specific policy areas using a standard template to put forward the problems identified, solutions and sources of contextual information. The DiDIY project has chosen to produce a DiDIY related Policy Pattern Wiki, set-up online so that the DiDIY community has a collaborative space to develop appropriate policy responses and solutions, in tune with the DiDIY ethos of sharing and collaboration.

These policy patterns are put forward as an evolving community resource. The DiDIY project team have seeded this resource with some initial policy patterns. The four examples of policy patterns below touch upon the social adoption issues of widening access outlined within the guideline above. The full range of policy patterns are available at <http://didiy.referata.com/wiki>.

4.1 Two policy patterns concerning broadening participation to DiDIY

4.1.1 DiDIY “not spots”

Title	DiDIY “not spots”: the uneven geographical spread of communal DiDIY facilities such as makerspaces.
The problem is...	Some local areas lack any makerspaces or Fab Labs and so those living there may have no access to DiDIY technology and support through communal making facilities.
The proposed solution might apply when...	A community that is not served expresses an interest in gaining access and can demonstrate that there is sufficient support, engagement and capability within a local grass-roots network.
The solution proposed is...	That support and funding for local makerspaces be made available in under-served areas where there is demand in innovative ways, e.g through partnerships with existing universal community networks and civic facilities such as libraries, community centres, or schools. Innovative funding partnerships and models are considered, piloted and supported by local authorities, local enterprise partnerships and other funding bodies.
The expected outcome is...	Better access to DiDIY facilities among a broader public and more even distribution of makerspaces between urban and rural areas.
Other information...	An alternative might be that under-served communities are catered for by outreach and mobile projects from major DiDIY facilities based in urban centres. It may also be possible for established successful makerspace facilities to set up new spaces under their name to enable easier initial opening of new ‘franchised’ spaces based on previously acquired knowledge and established leadership. However, makerspaces are generally very diverse in character and need to respond to local situations and communities.
Rationale	DiDIY community making facilities can provide important pathways and opportunities for individuals to gain skills, experience improved well-being, and grow creative confidence. They can also potentially provide entrepreneurial and environmental benefits. Communities that want, and can support, access to these opportunities should be supported to acquire



	them.
Significant influencing factors	DiDIY and making are grass-roots phenomenon and should be a response to local need, rather than imposed from outside. Facilities need to be rooted in a strong community with dedicated staff and volunteers to be sustainable. The level of engaged support and the community's ability to sustain a making facility would be a consideration in setting-up new makerspaces. Makerspaces require substantial commitment and funding for kit, they need suitably adapted premises, as well as requiring considerable organizational input. There are significant costs associated with the need for skilled technicians and staff to enable equipment to be used in safe and productive ways.
Evidence/Examples	Innovative ways to fund artist's studios or other collective working spaces may provide examples. D5.2 highlights case studies of a range of makerspace facilities in the UK.
Related Patterns	Tunnel vision in terms of funders' objectives,
Links to further resources	Links to further resources on makerspace access, funding, remit. Creative United, (July 2016), Making Space, report into funding artist studios and spaces in London: Executive Summary available at: https://gallery.mailchimp.com/f460d188717952a71c76f6315/files/Making_Space_Executive_Summary_FINAL.01.pdf Dellot, B. (2015). Ours to Master: How makerspaces can help us master technology for a more human end. London: RSA. https://www.thersa.org/discover/publications-and-articles/rsa-blogs/2015/11/8-key-take-aways-from-our-new-report-on-makerspaces Nesta (2015). Top findings from the open dataset of UK makerspaces Nesta.org.uk. Available at: http://www.nesta.org.uk/blog/top-findings-open-dataset-uk-makerspaces

4.1.2 Promoting gender balance in makerspaces

Title	Promoting gender balance in makerspaces
The problem is...	Unequal representation of men and women within makerspace membership. Research indicates that makerspaces are more often attended by men. It would be desirable to have as many women as men taking part in DiDIY activities as this would indicate that the social, learning, creative and economic opportunities of DiDIY are open to as many individuals as possible.
The proposed solution might apply when...	Makerspaces are more often set-up and led by men and may not have facilities, programs and social activities that are as attractive to women.
The solution proposed is...	Commitment to the awareness and implementation of equal access for women and girls to education opportunities. Within makerspaces a deliberate promotion of greater female participation by developing an inclusive vision which may include: activities of particular interest to some women, cultural programmes to enable women to feel comfortable within the makerspace environment for example providing access to



	training exclusively for women, celebration of positive imagery and inspiring examples of women active in Digital DIY, encouraging all members to be aware of inclusive behaviour and conduct, promoting equality of access through activities within the makerspace and in how the makerspace is represented in the public domain.
The expected outcome is...	Women and girls will be fully able to access and pursue their making interests. Women and girls benefit from increased social, learning and creative activities and economic opportunities provided by DiDIY. DiDIY within makerspaces will flourish and benefit from diverse projects and programmes that are relevant to all sections of society. Makerspaces serve as an example of equality of access within the wider cultural context.
Other information...	
Rationale	This is an effective way of increasing the impact of DiDIY.
Significant influencing factors	Growing awareness of the need to provide equal opportunity to women and girls. Society loses out on potential creative opportunities and solutions if women and girls are less able to access DiDIY.
Evidence/Examples	Some makerspaces have made a commitment to equality of access as demonstrated through leadership programme and projects. For example: coding for girls, inspiring female role models, physical environments that encourage collaborative working and skill sharing.

4.2 Two policy patterns concerning financial sustainability and funding for makerspaces (and therefore access to DiDIY facilities)

4.2.1 Tunnel vision in terms of funders' objectives

Title	Tunnel vision in terms of funders' objectives
The problem is...	That potential funding bodies often have specific targeted objectives in terms of their funding remit (e.g. youth employment, or innovation) and only fund partner organisations, facilities or projects that fall 100 per cent within their dedicated remit. These do not map well onto DiDIY spaces/projects. The dynamic of makerspaces/Fab Labs is that they work in a multi-dimensional manner, with the synergy coming from the achievement of many kinds of goal simultaneously.
The proposed solution might apply when...	Where makerspaces want to engage in local re-generation and socially beneficial activities, for example, with dis-advantaged or specific target groups, and require outside funding to fulfil this need and carry out this work.
The solution proposed is...	That funding bodies make special arrangements that recognize communal making facilities and DiDIY making projects are valuable sites for socially beneficial outcomes they may be interested in, from entrepreneurship to well-being, and that makerspaces often meet many disparate and integrated community needs, working, for example, inter-generationally and with a variety of community participants and groups. Partnerships between funding bodies with different but overlapping



	objectives are set-up, for example bringing together local consortia of university, commercial, school and craft groups and so on. Alternatively, specific funding bodies could be set-up that specialize in promoting makerspaces recognizing their integrated socially beneficial outcomes.
The expected outcome is...	Funders become more open to providing funding to facilities that are less than one hundred percent dedicated to their specific outcomes.
Other information...	A step towards the solution may be that research is undertaken that explores the value of integrated communal making facilities in the context of specific streams of public funding for social benefit. Research could potentially develop a perspective and methodology that enables funders to account for specific outcomes within a wider context, and therefore become more open to outcomes and measurements of success that form part of a broader range of targets.
Rationale	Makerspaces potentially provide an integrated and community route to addressing a range of local and environmental problems and where they are doing socially beneficial work they should be eligible to attract public funding, if appropriate.
Significant influencing factors	Makerspaces often have significant volunteer and community engagement and can be sites for community cohesion and improvement. A vibrant mixed community ethos of sharing and knowledge transfer is often part of their success. They are generally not set-up to fulfil a single measured objective or as a dedicated service for a single external funding body. Whilst they may depend on voluntary engagement and support they also need significant funding and professional expertise to operate in a safe and productive way. They often find it difficult to find a financially sustainable business model from membership fees alone.
Evidence/Examples	D5.2 reports on case studies of makerspaces in the UK.
Related Patterns	DiDIY “not spots”.
Links to further resources	<p>Links to further resources on makerspace access, funding, remit. Creative United, (July 2016), Making Space, report into funding artist studios and spaces in London: Executive Summary available at: https://gallery.mailchimp.com/f460d188717952a71c76f6315/files/Making_Space_Executive_Summary_FINAL.01.pdf</p> <p>Dellot, B. (2015). Ours to Master: How makerspaces can help us master technology for a more human end. London: RSA. https://www.thersa.org/discover/publications-and-articles/rsa-blogs/2015/11/8-key-take-aways-from-our-new-report-on-makerspaces</p> <p>Nesta (2015). Top findings from the open dataset of UK makerspaces Nesta.org.uk. Available at: http://www.nesta.org.uk/blog/top-findings-open-dataset-uk-makerspaces</p>



4.2.2 Generating income from courses at makerspaces

Title	Generating Income from Courses at Makerspaces
The problem is...	How to get makerspaces to be economically viable.
The proposed solution might apply when...	Makerspace management is interested in developing one strand of activity as a commercial venture. There are people who work in the makerspace who are sufficiently competent and are available for running courses. Good facilities exist for running courses. There is demand and not too much competition in the local context.
The solution proposed is...	Running paid courses using the resources of the Makerspace.
The expected outcome is...	Generated income contributes to make the makerspace economically self-sufficient. Running courses is quite time consuming and can use space and facilities needed by regular members.
Other information...	
Rationale	Makerspaces generally have people with expertise and the resources can be under utilised. There is interest in learning how to use these tools, which provides an opportunity for generating revenue from running them. Involving new people through courses may drive membership. How far can commercial activities be accommodated within the DiDIY ethos?
Significant influencing factors	Competition for internal resources among members. Improving competences possibly generating new projects. Contributing to the local economy by providing access to training.
Evidence/Examples	
Related Patterns	Alternative patterns include: Consultancy; Cafe; Individual programmes; Hosting public events; Hiring facilities for corporate events; Public money through grants and awards; Incubator programmes.



5. Conclusion

DiDIY is an emerging phenomenon. It is not therefore easily targeted by universal social adoption guidelines since the DiDIY phenomenon is complex, grassroots, locally diverse and globally connected. For example, D5.2 reports on a number of UK-based DiDIY related case studies and describes a diverse range of DiDIY activities and facilities. It concludes that a key element is the vibrant and diverse maker culture often sustained by voluntary participation, for example in makerspaces. D6.3 reports on a series of hardware projects following an open business model. These kinds of facilities and projects, in some cases, could potentially benefit from policy initiatives, such as financial or other public support but it would need to be framed in a local and specifically targeted way, understanding the specific remit of the project involved.

DiDIY is fundamentally a grass-roots phenomenon and therefore its adoption is largely a matter of impetus and motivation stemming from the participants themselves and their voluntary actions. The growth of internet resources, accessible technologies and maker spaces, for example, has taken place swiftly and organically over the last few years without very much formal institutional funding or public sector support. Further, more broad-based social adoption, may benefit from public support but this is likely to continue to be support of a locally diverse and grass-roots nature in response to particular situated initiatives to address local problems.

The broad social adoption guidelines contained in the Creative Society manifesto are therefore aimed at encouraging an understanding of the high-level benefits of DiDIY and establishing a positive enabling framework that allows innovation and grass-roots initiatives (many of which may be entirely new manifestations of DiDIY) to be valued and considered in a positive light.



6. References

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