Summary of the context and overall objectives of the project

Do-It-Yourself (DIY) is a long-standing phenomenon, characterized by individual activity to create, repair, and modify objects. It typically occurs outside of companies and without the support of paid professionals. People engage in DIY sometimes with economic justifications, but also driven by personal satisfaction, interest in extreme customization, or social reputation. In a context of industrialisation, that separated producers and users, DIY is a means for individuals to recover their autonomy by the productive and creative use of their skills and time.

Information processing technology is widespread today, embedded in computers, smartphones, 3D printers, home automation systems, etc., changing the role of DIY and the way DiYers operate. To designate this emerging socio-technological phenomenon of DIY enabled and reshaped by digital tools we coined the term “Digital Do-It-Yourself” (DiDIY).

The most important features of DiDIY are:

- DiDIY is both an activity and a mindset, hence with both object-related and subject-related components;
- the distinction between users and producers of artefacts is becoming fuzzy and new opportunities and threats emerge;
- DiDIY-related technologies and social practices amplify the creativity and skills of individuals who now can afford to develop digitally self-made objects;
- what an individual produces could be the outcome of contributions from a community of developers sharing their ideas in a spirit of open knowledge.

DiDIY is a human-centric phenomenon, evolving thanks to the widespread availability of affordable technological tools and the growing number of DiDIYers operating in communities, which further lowers the barriers to new entries and thus makes DiDIY increasingly attractive.

In this dynamic context the Project aimed at developing a body of knowledge to better understand the social impact of DiDIY, to produce and disseminate information, models and guidelines to support education and policy making on DiDIY. The idea is that DiDIY has the power to improve our society, but to this goal it would benefit from the input of a cultural strategy rather than being driven solely by the market and technology.

The subject is acknowledged to be multidimensional, and as such studied, by analysing how DiDIY is reshaping organization and work, and education and research, and by exploring how it is impacting on creative society and legal systems, and is changing creative design and ethics. The development of a systemic interpretation and relevant guidelines for policy makers was the challenge for the multidisciplinary research team.

Work performed from the beginning of the project to the end of the period covered by the report and main results achieved so far

The Project has produced several valuable results including:
a Knowledge Framework on DiDIY, that harmonises languages, basic concepts, and research methodologies and proposes a structured interpretation of the phenomenon and a rich set of research questions, aimed at guiding future analyses;

- the analysis on how DiDIY is reshaping organization and work, and education and research, developed through a multidisciplinary perspective, from a review of the relevant literature to interviews with several stakeholders;

- the exploration of some of the many dimensions of the phenomenon, including the impact of DiDIY on creative society, on laws, rights and responsibilities, on ethics, developed in particular through case studies and video interviews with leading persons on the culture and ethos of DiDIY;

- a Simulation Framework on DiDIY, aimed at providing a dynamic characterisation of DiDIY-related phenomena, to be exploited also to investigate what-if questions on several aspects of the complex phenomenon;

- a toolkit to support the organisation and management of co-design processes, including techniques and tools to unlock people’s creativity and help them to work collaboratively;

- a collection of policy patterns synthesising the guidelines obtained from the research.

A rich documentation has been published, including a brochure, some factsheets, a vocabulary of DiDIY, a Creative Society Digital DIY Manifesto, a free online course of introduction to DiDIY.

**Progress beyond the state of the art and expected potential impact (including the socio-economic impact and the wider societal implications of the project so far)**

The phenomenon of DIY has been relatively neglected in social studies to date, despite its emergence as a significant practice and movement over several decades, and its potential for driving improvements for individuals, schools, companies, organisations, and society as a whole. Digital tools have allowed a new emphasis of collaboration and open sharing within (Di)DIY, but before this Project this was rarely studied in a systematic way.

The Knowledge Framework highlights the human-centric nature of DiDIY and systematically analyses and interprets it by taking into account the main dimensions of involvement in DiDIY, the components of such involvement, the necessary conditions of what DiDIY is and the multiple interpretations of what DiDIY may be, analysed using the four core perspectives of the Project: DiDIY in organisation and work, in education and research, in creative society, and in laws, rights and responsibilities.

The Project integrated contributions from a range of academic disciplines and showed that:

- (in organisation and work) digital technologies are transforming the concept of DIY by exploiting knowledge sharing within communities into new configurations of Digital Do-It-Together in which functional roles blur – this research could identify ways to achieve better individual and organizational performances by studying the features leveraging on, or conflicting toward, DiDIY within several different organizational domains;

- (in education and research) DiDIY is largely a bottom up phenomenon, related to the flow of skills and knowledge between stakeholders, the steps of learning processes and the outcomes, and the technology involved in learning processes – this research could indicate ways of improving the uptake of teaching/research tools as well as raise citizens’ expectations about the potential of DiDIY by mapping what is going on in different countries in different environment;

- (in creative society) DiDIY influences, alters, or empowers the dynamics of makers’ relationship to digital technologies, and it enables DiDIY communities to meet the challenge of local, social, and environmental problems in a new way – this research could help guide communities towards the creative resources they need for tackling problems, with a consequent impact upon policy making regarding support for DiDIY initiatives;

- (in laws, rights and responsibilities) current legal systems are challenged by and provide challenges to the emerging culture of DiDIY, as in the case of the “right to repair” which is needed in order to make production less environmentally damaging – this research could influence the formulation of future policy and legal measures by developing a clear overview of the main challenges and policy recommendations that fit with the new paradigm.

The research has shown that DiDIY-related phenomena can be effectively modelled and simulated, capturing the activity of making so to explore “what if” scenarios on the impact of DiDIY, in order to better understand the effect of: different licensing laws/systems on its growth; sharing and communication structures concerning how makers interact and organise themselves; how the development of makerspaces/fablabs could facilitate the development of DiDIY. This understanding improved the
Knowledge Framework, the Simulation Framework, and the policy recommendations.

Related information

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