



## D8.3 FIRST ONLINE SURVEYS

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## Executive summary

Deliverable D8.3, First online surveys, is not formally a report. This document complements the online resources, mainly questionnaires and reports, that are already available and will be produced in the context of the activities of Work Package 8 and of other Work Packages.

Given the explicitly exploratory nature of the first stages of the Project, by Month 5 the first test version of small scale (about 200 responses) survey on the social perception of Digital DIY and a test questionnaire on Digital DIY in SMEs of the crafts and agricultural sectors have been prepared.

The main statistical results of the first survey are reported here.

These surveys will be further developed and will be also used as bases for all the others to follow.

Revision history			
Version	Date	Created / modified by	Comments
0.0	26/05/15	FKI	First, incomplete draft.
0.1	27/05/15	LIUC	Extensions and fixes.
0.2	28/05/15	LIUC	Extensions and fixes.
0.3	29/05/15	FKI, LIUC	Extensions and fixes.
1.0	31/05/15	LIUC	Fixes after comments by TB members. Approved version, submitted to the EC Participant Portal.



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## 1. Scope and objectives

In general, the surveys of WP8, possibly run in collaboration with other WPs, have a twofold purpose. On one hand, they contribute to collection of data about the Digital DIY phenomenon, as interpreted in its two main complementary dimensions of mindset and activity, about how and how much it is practised, or not, in the several components of society. On the other and, we may say, most important hand, they need to directly favour the larger dissemination activity of which they are part.

As a consequence of this second purpose, and of the fact that the definition itself of what Digital DIY is is not complete at this time, its construction being one of the activities of the Project, in this stage the questionnaires and the surveys are to be used as samples, tools to engage other stakeholders, so that they can increase the quality of the successive surveys, and contribute to the overall dissemination of the Project activities.

This document describes two surveys:

- an already ran small scale (currently about 200 responses) survey on the social perception of Digital DIY;
- a test questionnaire on Digital DIY in SMEs of the crafts and agricultural sectors.

These initial surveys, and other sample ones, will be used as bases for more stable and larger scale ones to be run in Months 9/10 (September/October 2015) of the Project.

### 1.1 Survey evolution procedure

Different events may cause the future surveys to be modified, for example:

- changes of Project characteristics;
- changes in techniques or tools.

Any partner may request changes, but each change shall be analysed and approved by the Project Steering Board.

### 1.2 Terms and acronyms

WP	Work Package
SME	Small/Medium Enterprise
DIY	Do It Yourself
DiDIY	Digital Do It Yourself
ABC	Atoms-Bits Convergence

## 2. The surveys

### 2.1 A survey on the social perception of Digital DIY

A first test survey has been put online and run during the month of April 2015 by LIUC and ABACUS. It has been explicitly presented and addressed in particular to high school (and partly



university) students, with the aim of acquiring information on their perception of Digital DIY. The presentation has been made in the context of classes or workshops on creativity or the role of technology in innovation, so that some bias may be expected in favour of DIY, and possibly Digital DIY itself.

After data cleaning, the currently available valid responses are generally over 200.

The questionnaire is currently accessible at the URL:

<https://docs.google.com/forms/d/1jU55u9OR52VSsba7AN0kd4KIKVGNVWKYD0VqE9Z-hRI/viewform>

The questionnaire is intentionally short, and organized into two sections, “What’s your opinion on...” and “You are...”. It has been designed with an exploratory aim. It is more analytically presented in Annex 1:

- A1.1 contains the English translation of the text of the questionnaire;
- A1.2 contains the basic statistical data on the responses;
- A1.3 contains some initial considerations drawn from the available data, intended as hypotheses to test and suggestions to better explore.

## ***2.2 A survey on Digital DIY in SMEs of the crafts and agricultural sectors***

At the URL:

[https://docs.google.com/forms/d/1\\_0mxCsdJ96FfJ2t5-kgkUf\\_2c2NB4opM\\_f5zPRHSq0w/viewform](https://docs.google.com/forms/d/1_0mxCsdJ96FfJ2t5-kgkUf_2c2NB4opM_f5zPRHSq0w/viewform)

a development version of a survey is available, which after testing and improvement will be taken into production, and will become the production version.

The topic chosen for this survey is related to Task 8.2 of the Project, which includes the study of, among other things, the “*level of knowledge and usage of DiDIY in EU SMEs, crafts and agriculture sectors*”. With respect to the original formulation, after some analysis the topic has been slightly changed to “*level of knowledge and usage of DiDIY in EU SMEs of the crafts and agriculture sectors*”.

The reason of this clarification, i.e., the reason to begin with such SMEs, is what is defined in the Project Proposal as “ABC”, that is the “widespread availability of digital devices that support the Convergence of physical (“Atoms”) and informational (“Bits”) components”.

SMEs completely focused on *production* of physical objects, as those in crafts and agriculture sectors, could and should experience both the benefits and the challenges brought by the ABC dimension of DiDIY both earlier and more strongly than those, for example, in the tourist, law and other immaterial services sectors, hence the decision to start from them.

The survey at the URL mentioned above will be used as a basis for discussion on how to prepare the production one, by working together, with all the organizations mentioned in D8.2, Dissemination and Sustainability Plan, and that are stakeholders in the field covered by the survey.

### **2.2.1 Target groups**

The study of the level of knowledge of SMEs in the crafts and agricultural sectors can best be done by addressing relevant associations in these sectors. Each country has federations of farmers, associations of craftsmen, etc. These organisations tend to have experts and/or working groups or



commissions on technology who will give us an insight in the level of knowledge within that sector. Other targets maybe schools of arts and crafts to find out what is being taught and what is popular among its learners.

### 2.2.2 Survey Development Methodology

As anticipated in Section 1, the primary function of the surveys in WP8 is to favour general dissemination of the Project goals, work, and results. For this reason, the survey described in Section 2.2 of this document, as well as all the others which will follow as part of the WP8 activities, are more qualitative than quantitative ones, which would be not in the scope of this WP.

More in detail, the surveys of WP8 are not expected to obtain a really representative sample of society, nor large number of respondents, but will follow a qualitative methodology. Much more in line with the mission of WP8, that is dissemination and sustainability, will be the quality, as well as the complementarity, of such respondents. Using the case in Section 2.2 as example, for a practical description of the general methodology that will also be followed in other WP8 surveys, its respondent which may be divided (as far as the survey activity is concerned!) in two classes:

- *DiDIY flag-bearers*, that is people already actively involved in the maker/hacker communities practising DiDIY, who provide real-world, already working examples of both the mindset and the activity;
- *DiDIY beneficiaries*: these include, but are not limited to, associations and federations (rather than their individual members) of farmers, craftsmen, SMEs in other sectors of the economy, but also teacher, students, etc.

Involving in the preparation of the survey in Section 2.2 the first category will help make sure that the main points of DiDIY technologies are presented in the survey, even if only as reference material linked by the survey itself. Involving representatives of the “beneficiaries” will help us to make sure that also their point of view and practical needs, are covered. But in making this happen, they shall also gain a good, practical understanding, from their point of view, of the risks and opportunities of DiDIY for their own profession or category.

Summing it up, both categories of respondents will work with us as co-developers of the survey itself, and in so doing they will also acquire enough knowledge of the overall goals of the project (and of DiDIY itself, if they need it) to spread knowledge about it in all their communities, associations and so on, in the most effective way. At the same time, even the “final users” of the whole process, that is the people who will actually answer the survey prepared in this way, may get (and, in turn, disseminate!) a good understanding of what DiDIY is all about.

All this should happen, and have a positive effect for the Project, regardless of how representatives the survey results will be, in and by themselves.



## **Annex 1: A survey on the social perception of Digital DIY**

### ***A1.1 The questionnaire***

Part 1: What's your opinion on...

#### 1.1. Building something with her/his own hands...

- is a satisfaction
- is useless, a waste of time
- helps developing individual independence
- is boring
- is saves money
- is a hobby
- develops her/his own competences
- is reassuring
- reduces wastes
- joins technology and art
- is for nerds makes her/his own aspirations concrete
- is useful to find a job

(each of the previous question allows choosing one of the following responses: I don't know / false or immaterial / sometimes / usually / true!)

#### 1.2. What's your first thought about DIY with digital tools?

- It is really only a game
- Good ideas will save the world
- Better leave it to professionals
- It is a way to earn quickly a lot of money
- Today you cannot be entrepreneur without technology
- Eventually an active use of technology
- There is a good amount of exhibitionism
- It is useful to find a job

(each of the previous question allows choosing one of the following responses: I don't know / I don't agree / partly / almost true / yes!)

#### 1.3. Internet of Things is...

- only a fashionable expression



- a good idea but nothing new
- an incremental evolution
- a revolution
- let's talk about it in a few years
- I don't know

(one of the previous responses can be chosen)

1.4 Write two adjectives or expressions by which you would describe a maker (a “digital craftsman”)

Part 2: You are...

2.1. You are... (woman / man)

2.2. How old are you?

2.3. Your education is mainly... (humanistic / scientific-technological / artistic / technical-professional)

2.4. What is your competence about...

- software systems to create and manage websites
- hardware and software systems to produce digital audio / video
- 3D scanners and printers
- prototyping boards (Arduino, Raspberry Pi, etc)

(each of the previous question allows choosing one of the following responses: I have no idea of their existence / I know that they exist / I have used them sometimes / I use them regularly)

### ***A1.2 Basic statistical data on the responses***

(all data are percentages on the total valid responses)





**1.1. Building something with her/his own hands...**

	is a satisfaction	is useless, a waste of time	helps developing individual independence
I don't know	2	6	4
false or immaterial	0	61	2
sometimes	8	31	17
usually	16	2	37
true!	73	1	40

	is boring	saves money	is a hobby
I don't know	4	9	4
false or immaterial	33	12	6
sometimes	47	46	31
usually	8	18	37
true!	8	15	21

	develops her/his own competences	is reassuring	reduces wastes
I don't know	4	14	15
false or immaterial	0	15	15
sometimes	11	38	41
usually	35	19	18
true!	50	14	11

	joins technology and art	is for nerds	makes her/his own aspirations concrete
I don't know	6	7	6
false or immaterial	7	38	2
sometimes	33	28	29
usually	32	14	30
true!	22	13	33

Number of valid responses: Q1 207 Q2 179 Q3 206 Q4 208 Q5 206 Q6 206 Q7 207 Q8 207 Q9 207 Q10 207 Q11 178 Q12 205



**1.2. What's your first thought about DIY with digital tools?**

	It is really only a game	Good ideas will save the world	Better leave it to professionals
I don't know	9	6	4
I don't agree partly	42	4	41
almost true	38	20	30
yes!	9	30	15
	3	40	9

  

	It is a way to earn quickly a lot of money	Today you cannot be entrepreneur without technology	Eventually an active use of technology
I don't know	26	6	11
I don't agree partly	21	12	5
almost true	35	26	24
yes!	13	29	35
	4	26	25

  

	There is a good amount of exhibitionism
I don't know	12
I don't agree partly	32
almost true	33
yes!	14
	10

Number of valid responses: Q1 204 Q2 205 Q3 205 Q4 178 Q5 204 Q6 204 Q7 205

**1.3. Internet of Things is...**

only a fashionable expression	5
a good idea but nothing new	6
an incremental evolution	35
a revolution	21
let's talk about it in a few years	22
I don't know	10

Number of valid responses: 206

<b>2.1. You are...</b>		<b>2.2. How old are you?</b>		<b>2.3. Your education is mainly...</b>	
woman	30	from 13 to 16	20	humanistic	12
man	70	from 17 to 19	57	scientific-technological	59
		20 or more	23	artistic	6
				technical-professional	25

Number of valid responses: 2.1 200 2.2 203 2.3 200



**2.4. What is your competence about...**

	software systems to create and manage websites	hardware and software systems to produce digital audio / video
I have no idea of their existence	3	2
I know that they exist	49	30
I have used them sometimes	39	56
I use them regularly	10	13

	3D scanners and printers	prototyping boards (Arduino, Raspberry Pi, etc)
I have no idea of their existence	3	21
I know that they exist	76	41
I have used them sometimes	18	21
I use them regularly	4	17

Number of valid responses: Q1 200 Q2 199 Q3 199 Q4 199

***A1.3 Some initial considerations from the data***

This Section contains some initial considerations obtained from the available data and intended as hypotheses to test and suggestions to better explore.

As mentioned above, the questionnaire has been proposed in particular to high school (and partly university) students, with the aim of acquiring information on their perception of Digital DIY. The presentation has been made in the context of classes or workshops on creativity or the role of technology in innovation, so that some bias may be expected in favour of DIY, and possibly Digital DIY itself. More data will be required to validate the hypotheses that follow.

In reference to question 2.4, “What is your competence about...”, there seem to be important differences in the diffusion of use:

I have used sometimes or I use regularly...	
hardware and software systems to produce digital audio / video	69
software systems to create and manage websites	49
prototyping boards (Arduino, Raspberry Pi, etc)	38
3D scanners and printers	21

where technological tools that are more explicitly ABC, such as Arduino boards and 3D printers, seem to be still less used than purely software tools, such as content management systems to manage websites, and systems based on off-the-shelf hardware, such as smartphones and cameras as acquisition devices for digital audio and video.

Moreover, the information of the very existence of 3D scanners and printers seems to be widespread, much less common the one of prototyping boards:

I have no idea of the existence of...	
prototyping boards (Arduino, Raspberry Pi, etc)	21
3D scanners and printers	3



In reference to question 1.3, “Internet of Things is...”, an interesting difference appears in correlation with gender:

<b>1.3. Internet of Things is...</b>	women	men
an incremental evolution	30	37
a revolution	27	19

Women seem to be more inclined than men to think of IoT as revolutionary instead of an incremental evolution.

In reference to question 1.1, “Building something with her/his own hands...”, it is interesting that a very high number of responders (73%) agreed that it is a satisfaction, that it is not a waste of time (61%), and that it develops her/his own competences (50%), and also that only sometimes it is boring (47%) and saves money (46%), thus seemingly emphasizing the dimension of DIY as a mindset.

In reference to question 1.2, “What’s your first thought about DIY with digital tools?”, similar hypotheses seem to emerge: it is not only a game (79%), and it should not be reserved to professionals (72%), also because “good ideas will save the world” (70%).

In reference to question 1.4, “Write two adjectives or expressions by which you would describe a maker (a “digital craftsman”)”, of the more than 100 different adjectives or expressions that have been proposed, in a total of more than 360, in the free form question, the first three most chosen are “creative” (67 times), “innovative (25 times), and “smart” (24 times), thus seemingly emphasizing the dimension of Digital DIY as a mindset.