REPORT

Recruitment and Informed Consent Procedures

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Confidentiality: Public

HELIOS Recruitment and Informed Consent Procedures

Project name	Grant agreement #
HELIOS	825585
Author(s) & Contributors	**Pages**
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Keywords	**Deliverable identification code**
ethics, recruitment, consent	D2.10

Summary

Ethics is a vital part of research for all projects funded by the European Union. The HELIOS project will carry out research involving work with human beings and will generate data, therefore ethical procedures need to be followed. Despite the project will avoid interaction with vulnerable groups, it is important to go over all the procedures when interacting with users, to assess the best way to recruit and involve them into the project activities from an ethical responsible perspective, and also to protect their data. As already mentioned , no vulnerable groups will be involved in the project, still many languages are spoken in Europe, and to guarantee full understanding of all the ethical requirements information, translation into the language of the end user will be guaranteed in different steps. These are some of the profiles that will be involved in the project for testing purposes:

- Teachers and students
- Artists
- Scientists
- Journalism professionals

Human participants who will take part in different tests will be volunteers for social or human sciences research. No physical interventions on study participants will be performed.

Interaction with users will take place at different stages: First to interact with users (mostly students from VTT's subcontractor, Escola Massana -hereinafter also MASS-) to define disruptive use cases through interviews. This will be followed by more interviews and discussions with researchers, students and selected members of the general public. These activities will take place in TCD[1] and serve to understand the needs and challenges of the public towards Social Media. In cases in which a survey, questionnaire or a research interview takes place informed consent from the interviewee will be required. This first period will be continued by a more hands-on set of activities. First, T4.6 and T7.2 will conduct lab experiments at UPV to determine the cognitive-emotional neurometrics and to run the first lab tests with users in preparation for trials and pilots. From M12 until M34 UAB will take the lead of the trials and pilots. Tests and pilots will take place in different locations, mostly in the Switzerland and Barcelona areas, spread between UAB campus and Escola Massana's facilities. All participants in these activities will be volunteering. In general, the approach to be followed will be common in all the different scenarios, and summarised it is: informing participants of the activities, letting them know their rights regarding their data when getting involved, and then signing and informed consent. It is important to stress that any user can abandon the participation in the activities at any moment.

Confidentiality	Public

Barcelona, 09/04/2019

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Distribution

Public website

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1. Introduction

1.1 Why interacting with humans?

HELIOS will develop a decentralized social media platform that will address the dynamic nature of human communications in three dimensions: contextual, spatial and temporal. To achieve this objective it is necessary to design a solution with and for people, capable to answer to new needs and deliver innovative services taking HELIOS' disruptive approach. Thus the project put special attention to the design methodology: [2]*continuous design/testing/feedback gathering methodology, ranging from traditional information gathering through surveys/interviews/focus group, to the co-creation workshops (WP2, WP4 and WP7) and the pre-release testing task forces activities will maximize the value added by the involvement of all the relevant actors refining the ICT tools using input gathered during the entire lifespan of the project.* Therefore, humans will be involved in several steps of the project and according to current regulations, they need to be "protected" throughout the whole process.

While in D2.2, D2.3 and D2.4 all legal aspects of the project and the application will be covered, this deliverable (D2.10) focuses in the description of a) The procedures and criteria that will be used to identify/recruit research participants and b) Informed Consent Procedures that will be designed for the participation of humans.

UAB has lead this task in previous EU funded projects like DTV4ALL, HBB4All or the ongoing H2020 ImAc. The European Commission proved to be satisfactory in this regard with all projects.

Research ethical framework and regulations

The HELIOS project will carry out tests within all the relevant national, EU and international ethics-related requirements and professional codes of conduct. They will also consider the Articles 21 & 23 of the Charter of Fundamental Rights of the European Union in this respect.

The Universitat Autònoma de Barcelona (UAB), has an Ethical Commission on Human and Animal Research to supervise the experimentation on human and animal beings in compliance with the European directives 86/609/CEE, 91/628/CEE and 92/65/CEE, and will seek its advice any time the consortium considers it appropriate.

Ethics is an integral part of research and is given a high priority in EU funded research[3]. HELIOS will comply with existing regulations and codes of conduct. Some of the most relevant documents are the following.

Charter of Fundamental Rights of the European Union[4]

This document gathers the fundamental rights to be shared, fostered and protected by every Member State of the European Union. The first draft was created by the European Convention in 2000 and was solemnly proclaimed by the European Parliament, the Council of Ministers and the European Commission during the same year. However, it was not legally binding until

[2] Annex 1 - Description Of Action (part B) - section 1.3.9.1
[3] http://ec.europa.eu/research/swafs/index.cfm?pg=policy&lib=ethics. Retrieved 16/08/2018
[4] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012P/TXT&from=EN. Retrieved 16/08/2018

the entry into force of the Treaty of Lisbon, on 1st December 2009. The Charter contains 54 articles divided in seven titles: dignity, freedoms, equality, solidarity, citizens' rights, justice and general provisions governing the interpretation and application of the Charter. This Charter must be abode by Member States when applying European Union law.

The Charter sets the starting point for any research or action conducted within the context of the European Union. Every article needs to be taken into consideration in order to develop a study within an ethical framework, such is the case of any project supported and funded by the European Union. There are certain specific articles that are of high importance when developing the methodology to conduct a research in Social Science. For example, Article 8, Title II (European Parliament, Council and Commission, 2012), on Protection of personal data, which literally states that:

1. Everyone has the right to the protection of personal data concerning him or her.
2. Such data must be processed fairly for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Everyone has the right of access to data that has been collected concerning him or her, and the right to have it rectified.
3. Compliance with these rules shall be subject to control by an independent authority.

Also, in relation to HELIOS project, the Article 26, Title III on integration of persons with disabilities needs to be considered when defining the general vision of the project and its entire development (European Parliament, Council and Commission, 2012): “The Union recognises and respects the right of persons with disabilities to benefit from measures designed to ensure their independence, social and occupational integration and participation in the life of the community.”

Any action taken within HELIOS project needs to be compliant with all fundamental rights enshrined in this Charter.

European Code of Conduct for Research Integrity[5]

The Code of Conduct for Research Integrity was created by the European Federation of Academies of Sciences and Humanities and has been recently revised and republished in 2017. This document contains a set of rules to self-regulate academic research through European territories and it is designed to be used across all scientific fields, without distinction. It includes the principles to preserve research integrity, a list of good practices and some guidelines about violations of research integrity (the most serious being fabrication, falsification and plagiarism) and procedures to be followed in the event of those violations.

According to this Code of Conduct, the principles to preserve research integrity are (ALLEA, 2017):

- **Reliability** in ensuring the quality of research, reflected in the design, the methodology, the analysis and the use of resources.

[5] http://www.allea.org/wp-content/uploads/2017/05/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017.pdf. Retrieved 16/08/2018

- **Honesty** in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair, full and unbiased way.
- **Respect** for colleagues, research participants, society, ecosystems, cultural heritage and the environment.
- **Accountability** for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts.

The document describes good research practices in various contexts: research environments; training, supervision and mentoring; research procedures; safeguards; data practices and managements; collaborative working; publication and dissemination, and reviewing, evaluating and editing.

Among other good practices and recommendations, the document establishes:

"*Researchers handle research subjects, be they human, animal, cultural, biological, environmental or physical, with respect and care, and in accordance with legal and ethical provisions.*" (ALLEA, 2017: 6)

An explicit mention of ethical practices is also made under the section "*Violations of Research Integrity*", where the document states:

"*It is of crucial importance that researchers master the knowledge, methodologies and ethical practices associated with their field. Failing to follow good research practices violates professional responsibilities. It damages the research processes, degrades relationships among researchers, undermines trust in and the credibility of research, wastes resources and may expose research subjects, users, society or the environment to unnecessary harm.*" (ALLEA, 2017: 8). **This document is highly relevant for all researchers participating in Horizon 2020 funded projects, since it has become a reference document.**

Specific guidance on social sciences and humanities[6]

The interdisciplinary inherent in Social Science and Humanities (SSH) research hinders the elaboration of clear patterns to develop an ethical framework to be followed by every researcher in this field. The methodologies vary from one discipline to another and the ethical implications also differ. This discussion has been held for many years in international fora, worldwide and within the European Union. On a document which provides specific guidance for the SSH field, it is stated that the basis to ensure an ethical research is provided by the following tools: informed consent, data protection and privacy, and impact of the research results (European Commission, 2010).

The document acknowledges that "while in some instances, the research activity itself could produce psychological discomfort or harm, in most cases the biggest risk in SSH research relates to the disclosure of a person's identity and insufficient protection of private information which may then lead to discrimination or stigmatization" (European Commission, 2010:9).

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6 http://ec.europa.eu/research/participants/data/ref/fp7/89867/social-sciences-humanities_en.pdf. Retrieved 16/08/2018

Ethics in H2020 projects

Ethical compliance is seen as fundamental in research projects funded by the European Union. As explained in http://ec.europa.eu/research/swafs/index.cfm?pg=policy&lib=ethics, ethics is dealt with in the Horizon 2020 legislation at various levels. There is also a specific Ethical Appraisal Procedure in Horizon 2020 projects.

The Horizon 2020 Rules for Participation determine that proposals cannot contravene ethical principles and that the Commission shall systematically carry out ethics reviews for proposals (Article 14).

The Horizon 2020 Regulation of Establishment, establishes in Article 19 (Ethical principles) that:

"All the research and innovation activities carried out under Horizon 2020 shall comply with ethical principles and relevant national, Union and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols. Particular attention shall be paid to the principle of proportionality, the right to privacy, the right to the protection of personal data, the right to the physical and mental integrity of a person, the right to non-discrimination and the need to ensure high levels of human health protection."

HELIOS ethical committee

UAB has an Ethics Committee on Animal and Human Experimentation CEEAH (http://www.uab.cat/web/ethics-committee-on-animal-and-human-experimentation-1of 345735628829.html).

CEEAH was set up by the UAB Governing Board on 25 January 2001, and is responsible for lending support to the scientific research performed at the UAB. This committee evaluates animal experimentation procedures (through the Ethics Committee on Animal Experimentation: CEEA) and procedures that involve experiments or research with humans, and it trains and advises research staff on the ethical dimension of their work. For example, the CEEAH was behind the ruling of the Governing Council on 30 January 2013, which approved the Code of Good Practice in Research: a set of recommendations to ensure rigour, honesty and responsibility in research carried out at the UAB. The CEEAH has been a member of the Network of Ethics Committees in Universities and Public Research Centers in Spain (RCE) (http://www.ub.edu/rceue/) from its beginnings.

The CEEAH will be in charge to assess all procedures to be conducted in HELIOS and validate them from an ethical point of view. UAB will be in charge to collect all the data necessary to process it through the CEEAH and communicate the result, as well as to provide with the necessary version of the informed consent.

1.2 Overall methodology for involving users in research activities

Having users involved in research activities requires a set of steps to be accomplished. Depending on the project, different typologies of users are involved. Thus, it is necessary to prepare project-tailored procedures to protect them, their privacy and to ensure that ethics rules are followed. In **section 5** of this document a description of the process is provided. The following list is the generic methodology to be followed in any project to get ethical clearance

from UAB's ethic committee, inform users involved in the research activities and gather their consent.

1. Adapting HELIOS template for informed consent for any test.
2. Draft information about the test, taking into special consideration to secure that participants are not subjected to any form of coercion. Details of recruitment, inclusion and exclusion criteria and informed consent procedures. Determine the level of vulnerability, including the possibility of dealing with persons with disabilities, and how appropriate efforts are going to be taken to ensure fully informed understanding of the implications of participation.
3. Send forms to UAB to be sent to UAB's Ethical Committee (CEEAH).
4. Take into consideration the population aimed, and given the project objectives, end users should have access to informed consent and clear instructions regarding their data, etc.
5. Details of the procedures for taking into consideration an effective communication.
6. When applies, to provide details about the information given to end users travelling to the testing facilities regarding adapted public transport, etc.
7. When applies, to detail facilities and adaptation to users, especially with people with disabilities.
8. To inform of the right of refusal, and withdrawn at any stage.
9. Data protection and consents will follow local/national EU data protection laws. EU privacy law should be also respected as specified in relevant sections.
10. Users will provide voluntarily their consent.

2. Events

2.1 Concept design activities

These activities will kick-start the conception of Use cases that will be later used to guide all technical implementation. The chosen methodology is the design fiction and will be conducted by MASS, in collaboration with other partners.

Definition of the activity

MASS will take care of drafting and gathering user requirements through 'Design Fiction' methodology. This is a critical and speculative design method that consists in the definition of preferable futures, located at the intersection between possible futures and plausible futures. In this definition, different scenarios are proposed, sufficiently heterogeneous to identify in a holistic manner the specifications that may be required for the platform. The scenarios contain the usability requirements for people and the degree of connectivity of the objects involved. The definition phase ends with the construction of a briefing that must be checked from the technological sphere before proceeding to its implementation. The catalyst for innovation is the imagination projected onto future scenarios. The process that goes from individual imagination to collective empathy develops in different iterated cycles.

Based on Escola Massana's educational program "Massana Permanente" (http://www.escolamassana.cat/en) its educational infrastructure will be used to run the different phases of this process. These steps are defined as an open cycle for university students and students of higher vocational training of the centre and teachers specializing in applied methodology and communication to collaborate and work together.

These will be the kind of activities to be performed during the concept design phase:

- **Introductory session**. This is a session directed by the teachers involved in the project in which the bases of HELIOS will be identified for the definition of use cases. The content of the session will consist on the definition of the core concepts of the platform, the identification of the main concerns involved in the new model of communication, and the location of contexts for the definition of use cases.
- **Work sessions**. This is the main kind of creative session that will consist on different activities: collective brainstorming for the consideration of future scenarios; roleplay actions for the identification of HELIOS implications in agents' activities; storytelling of the use cases.
- **Reporting sessions**. This is a session for the summary and written communication of the results of the *work sessions*.
- **Prototyping sessions**. This is a session for conceptualization, rapid-prototyping and storytelling of selected use cases. The creative languages involved can be diverse (models, audiovisual creations, oral and written presentations, etc.)

Calendar of activities

- PHASE 0 - ENROLMENT

12/02/19 - Launch public call to attract students for the research team.
15/02/19 - Public presentation of HELIOS project at Massana School.
28/02/19 - Final selection of the students participating in the research team.
Action required: Approval of ethical consent + requirements from project partners

Deadline: 28/02/19

- PHASE 1 - USE CASES

07/03/19 - Introductory session of the research team led by leading researchers.
14/03/19 - Intensive work session with the research team [1st pack of 5 use cases].
21/03/19 - Intensive work session with the research team [2nd pack of 5 use cases].
28/03/19 - Intensive work session with the research team [3rd pack of 5 use cases].
04/04/19 - Intensive work session with the research team [15 use cases review].
11/04/19 - Report of 15 use cases to project partners

Action required: Selection of 3 use cases

Deadline: 25/04/19

- PHASE 2 - PROTOTYPING

25/04/19 - Analyze and design actions to develop prototypes of 3 user cases.
02/05/19 - Report of 3 use cases to project partners
08/05/19 - Thessaloniki meeting - Presentation of use cases / feedback
09/05/19 - Thessaloniki meeting - Presentation of use cases / feedback
17/05/19 - Prototype [3 use cases].
24/05/19 - Prototype [3 use cases].
31/05/19 - Prototype [3 use cases].
06/06/19 - Delivery prototypes.
13/06 - 20/06/19 - Drafting and delivery Initial Concept Report.

2.2 Organic social graph creation

This task investigates the ad-hoc and organic creation of non-intrusive social networks creation without requiring user interventions.

Definition of activities

To achieve this objective, sensors technology, which includes, depending on the configuration of the environment, NFC, Bluetooth Wi-Fi, 5G and others are investigated. This research may include user studies in relation to smartphone usage to create ad-hoc social networks. The key feature of proximity is addressed. This task will investigate the use of IoT devices and smart environments to ensure the ad-hoc networks are labelled correctly, aligned with the context in which they were created.

Calendar of activities

This activity will start in month 6 of the project and will be reported in month 24.

2.3 Define relations between mobile sensors and neuro-behaviour responses

This activity is part of T4.6 and intends to understand the link between user's behaviour when using the mobile phone and HELIOS services.

Definition of the activity

The activity will determine the cognitive-emotional neurometrics that can be employed to study user responses, based on physiological gold standard sensors as brain response (EEG), heart rate variability (HRV), skin conductance (EDA) and eye tracking (ET). Moreover, these

unconscious responses will be used to correlate this info with more ecological measuring obtained from mobile phone sensors. These correlations will allow to infer the cognitive-emotional states of the users using mobile phone sensors.

Calendar of activities

Since the period for this task will not start until M8 of the project, no reliable information can be provided now. However, it is expected to perform the first trials, involving 30 subjects, between M10 and M12.

2.4 Lab tests

Before HELIOS services are validated with real users a set of tests will be conducted in lab conditions. Technical data extracted from the mobile devices, will be combined with personal interviews to provide initial user's feedback to the development teams.

Definition of the activity

Lab tests refer to the evaluation of technologies and services developed during the project. In this case, technologies and services developed at the platform are under their later stages. At these final stages of development, tests need to be performed in a real situation but keeping a supervised condition, that let define several tasks to be completed by reduced samples of participants. These reduced groups will let an agile methodology with iterative tests.

During these tests, several metrics from user interaction will be synchronized with tasks defined. Specially measures that could be obtained in real conditions, like mobile phone sensors, will be validated as good indicators of the platform. These tests will study metrics that can be obtained from mobile phone like: speech analysis, voice analysis, facial coding, contextual info. Also, participant explicit responses regarding tasks decisions, perception of usability, usefulness and presence and individual interview will be collected. This layer of metrics will be later analysed and reported to developments teams to help to update final versions of technology and services to be validated finally in T7.3 and T7.4.

These activities will be conducted by UPV in their facilities.

Calendar of activities

At this stage, there is not a clear calendar of activities defined for the trials, since the period for trials will not start until M9 of the project. It is expected that some iterations will be conducted to validate the different use cases. D7.1- Validation operation plan (UAB, M08) will provide a more detailed calendar of activities.

2.5 Trials

Once HELIOS services can be considered mature and functional, short tests with real users in almost real conditions will be organised. The objective here is to evaluate, now with more focus on the user perception of the services, HELIOS first deployments.

Definition of the activity

Trials are defined for this project as unsupervised real life validation in closed controlled conditions. The approach for this project is to perform validation in as many steps of development and UX as possible. The aim is to learn from the iteration, and avoid going for open piloting with risks that may deem invalid an open pilot – which means a large effort in preparation and coordination.

Calendar of activities

At this stage, there is not a clear calendar of activities defined for the trials, since the period for trials will not start until M12 of the project. It is expected that some iterations will be conducted to validate the different use cases. D7.1- Validation operation plan (UAB, M08) will provide a more detailed calendar of activities.

2.6 Pilots

This is the final step of evaluation. Large number of users involved in validation activities in real conditions.

Definition of the activity

Pilots will be open and unsupervised validation, with large audiences. Pilots will be the final step of previous testing iterations. Pilots are still to be defined since the Use cases, in which developments will be based on, will be delivered in M06 (June'19). Based on initial discussions, pilots will take place in different locations: Barcelona (UAB/MASS) and Switzerland (STXT).

Calendar of activities

Since the period for trials will not start until M18 of the project, no reliable information can be provided. some iterations will be conducted to validate the different use cases. D7.1- Validation operation plan (UAB, M08) will provide a more detailed calendar of activities.

3. The procedures and criteria used to identify/recruit research participants

3.1 Concept design activities

It will be launched a public call at Massana School for the recruitment of the students research team. The call will be launched through the school internal bb, and spread with a poster campaign at the main hall of the school. This call will be preceded by a public session at the School in which HELIOS project will be presented by the coordination team. After this session, interested students will be asked to fill a paper form in which they will describe the current status of their studies. This form will be accompanied by a motivation letter. Both will be delivered to Helios coordination at Massana. The criteria for the selection of participants will take into account the maturity of the studies achieved, the ability to work in teams, the relationship with ICTs, and the skills for the communication of new ideas.

After that, a commission will evaluate the proposals in accordance with these criteria, and will proceed to select 15 students

3.2 Organic social graph creation

TCD will recruit students and scientist with TCD for this task. The students will be mostly Computer Science students that can use this activity for their Computer Science Course related project activities.

3.3 Define relations between mobile sensors and neuro-behaviour responses trials

UPV has an internal database of volunteers. These database has been collected through an online form where the subjects have given their consent and have shown interest in participate in scientific studies. A call will be launched to the database including the conditions of the experiment (e.g. sensor used, time duration, etc.). The subject interested in participating will be asked to fill a form with demographic info. It will be used to select the participant according to the final target that depends on the user cases derives from WP2.

3.4 Lab test

The Lab test will use the same methodology as T4.6 (Define relations between mobile sensors and neuro-behaviour responses trial).

3.5 Trials

Once HELIOS services can be considered mature and functional, short tests with real users in almost real conditions will be organised. The objective here is to evaluate, now with more focus on the user perception of the services, HELIOS first deployments.

Barcelona trials

UAB's Smart Campus is an abstract facility designed to run experiments at UAB's campus in Cerdanyola del Vallés. Within this campus, there is a rich diversity of students involved in associations of different nature. Based on the use cases that will be defined in WP2, UAB will contact this associations and collectives to engage users in the trials. All the contact will be conducted through these organisations. Info sessions will be organised to explain the activity and recruit volunteers to collaborate during the trials. Approaching trials in that way might be relevant since communities are already "real" human networks and interaction between users will be more natural and fruitful. For this activity, no vulnerable users will get involved in the pilots.

The Switzerland

STXT operates the national Exchange platform of SRG called Shared Content. This plattform today has two types of users. On the contribution side it is used by Journalistic professional editors. On the distribution side, the system is used by professional print publishers. Within the Helios project, the users on the contribution side will be alternated towards a defined group of semi-professionals users called Citizen Journalists. Based on the refined use cases that will be defined in WP2, STXT will contact theses citizen to engage them as users in the trials. For the first step in a closed trial, a small group is addressed first to refine the workflow and UI of the system. In addition, also to define additional functionality of the system if needed. Info sessions will be organised to explain the ecosystem and recruit volunteers to collaborate during the trials. For this trials, no vulnerable users will get involved.

3.6 Pilots

This is the final step of evaluation. Large number of users involved in validation activities in real conditions.

Barcelona Pilot(s)

The approach for the pilots is different from the trials. Pilots require larger number of users involved in testing the app. The objective, at this moment in the project, is to align the pilots with large scale-events taking place at the Smart Campus. There are different options that might be interesting: local celebration named "festa major", the marathon, arts and e-games fest, are some examples that will be assessed as potential events to collaborate with for the pilots. Initial contacts at UAB propose to inform users through internal mailing, newsletters and social networks, inviting students and UAB staff to participate in the pilot. For this activity, no vulnerable users will get involved in the pilots.

Moreover, UAB and MASS are willing to collaborate in order to move the pilots to other locations, reaching other profiles of users and different use cases. Once UC are clear, MASS and UAB will explore the opportunities offered by MASS within their facilities and its users. In that case, contact will most probably replicate the one presented in 4.1.

The Switzerland pilot

Based on the performed trials, as described STXT will alternate the Shared Content platform (Content Exchange hub of SRG). According to the knowledge collected in the trials a larger group of citizen Journalists (semi-professionals users) will be addressed via a standard

procedure and via raising awareness using the social media channels of SRG and STXT. These volunteers are than enabled to use the system and it will open up towards the distributions side, the print publishers' re-distribution.

The pilot will then be presented to a larger audience via conferences and fairs to further exploit the idea of the public central Exchange platform for news and information involving Citizen Journalists. In addition, additional refining is continuously performed by the Shared Content project team.

4. Informed Consent Procedures designed for the participation of humans

4.1 A common approach

Despite users might have different roles throughout the multiple activities that will be organised within HELIOS, approaching users willing to participate needs a framework. This have to set the terms of EU and international ethical rules and professional codes of conduct, to guide project partners in their activities. To create this *framework*, UAB outlined a tailored process for HELIOS, adapted according to the nature of the project. The overall approach is to create generic rules and guidelines for those partners involved in human research, that will be updated and re-assessed as activities have more details that might impact in the ethical management.

1) **Gathering information for the ethical committee:** Any partner who identifies the potential need to interact with partners, has to contact UAB and provide the information as shown in table 1.

Table 1 – Information gathering for the Ethical Committee

Section	**Specific questions**
1.- Name of the project	
2.- Description of the project	Area of activity in which humans interact
3.- IP of the project within UAB	
4.- Objectives of the experimentation with humans	Describe main objectives that are to be achieved in this experimentation
5.- Methodology of the experimentation procedure	Briefly describe the methodology used, justifying the data, biological samples and / or behavioral responses obtained from people under experimentation
6.- Information regarding the people participating	Samples of the informed consent
7.- Compensation	
8.- Storage and management of the data gathered	
9.- Feedback (to participants)	
10.- Data logging	

2) **Ethical committee validation (monthly):** Based on the inputs provided, UAB team will work with the ethical committee (CEEAH) to evaluate whether the activities follow the ethical rules and codes of conduct. Since HELIOS scope of activities is wide, several interactions with the ethical committee might take place. The process for obtaining the ethical clearance is done through an online form, which asks for the information shown in the table above. In case an activity is not following the approach of the previous ones, and such approach might have impact on the ethical management, a new instance (procedure) with the ethical committee will be opened and treated separately. So far, this is not expected to happen.

3) **Acceptance and activities:** Once all the information is provided, the ethical committee will process it and provide a verdict, with observations if needed. Based on the results HELIOS partners will be allowed to start contacting users following the procedures already validated.

   All participants in tests will be given a detailed information sheet and an informed consent form (See D2.11). Both documents will be written in terms participants can understand. They describe the aims, methods and implications of the research, and any risks or discomfort that may happen. Participation in HELIOS tests will always be voluntary and participants will explicitly be informed that they can refuse to participate or withdraw their participation at any time without any consequences. Steps will be taken to ensure that participants are not subjected to any form of coercion and alternative communication means will be provided if necessary. Participants will be informed that they can request additional information about the project results in case they are interested.

   Consent forms will be produced and approved in English, and then translated into the other languages of the project.

   The procedures that will be followed to obtain informed consent are:

   - Participants will be welcomed
   - Participants will be informed about the project and the specific test in which they are involved (information sheet, see Annex I), in an appropriate format according to their needs and the approved models of UAB's ethical committees
   - Participants will be requested to give their consent.

   The consent form and information sheet should be included on a single piece of paper (both sides, if needed).

4) **Amendments:** This is a side-step of the process in which the ethical commission entails HELIOS partners to amend or adjust any information previously provided. The process for amendment is normally used when unforeseen modifications of the activities takes places. Then, it is not necessary to reset the whole process and start from scratch (starting a new procedure). At this stage, partners might send an official email informing of any relevant modification. The ethical committee will evaluate such modifications and endorse the need of an amendment or to start a new process.

   If the ethical committee considers that there is no need to restart the process, then the amendment process starts. The additional information provided will be added and all the documentation updated accordingly. Otherwise, the ethical committee will contact the project representatives to inform about the need to postpone any interaction before the official confirmation, or otherwise if it is possible to continue with all related activities as scheduled and defined.

In the following sections, it will be provided all the information available at this point, used by the ethical committee to evaluate to correctness of HELIOS research activities with humans. As already explained in section 5.1 - 4), as soon as more information is available from partners organising the activities with humans, the "ethical" documentation will be progressively updated. To avoid repetition, section 5.2 will provide just core information on the different activities.

4.2 Concept design activities

Objectives: The aim of the user tests carried out in HELIOS is to obtain quantitative and qualitative data about the user experience in relation to the interaction and consumption of media content in social networks. The information gathered from users will be used to determine the optimal parameters for user experience and to provide feedback to project partners in order to customize and adapt existing technologies, and prepare new developments.

Methodology: Two phases are planned: first, the design and definition of the HELIOS platform and second, the analysis of the prototype. In the first phase, participants will collaborate in the definition of the platform through their contributions in six work sessions, between 2 and 4 hours in length, in which they will use the facilities, technical resources and workshops of creation of the Escola Massana. In the second phase, same participants will use the HELIOS developed platform during six working sessions, between 2 and 4 hours in length, and they will be asked about their experience through various questionnaires measuring usability, usefulness, immersion of the platform and their general opinion and preferences. At the same time, demographic, behavioural and attitudinal information towards technologies will be collected. Besides, these sessions will be recorded in video.

Participants will be recruited through Escola Massana in an open call for their students (over 18 and who have to participate in both phases of the study). We will assign a random code for each participant at the beginning of their participation, only used for their identification into project, and each one will receive a session calendar that have to follow.

Is it expected to anonymise data: YES. Personal data collected will be confidential during the project. At the beginning, participants will get a random code, only used for their identification into project, and each one will receive a session calendar that have to follow.

Is it expected to store data? Which security measure will be taken to protect such data: YES. Physical data, documents, permissions and information consents will be stored at our office in MRA 126, in the safe repository locked. In addition, we will upload the raw data to the Nebula server (nebula.uab.cat) of Universitat Autònoma de Barcelona (UAB). The Nebula server complies with the relevant EU legislation and is characterized by high security standards. The server is physically located within the IT campus facilities and has high levels of detecting intrusion and protection against fire or abnormal environmental conditions. The security is overseen by the UAB Security Officer.

Note further that we will remove any information that allows directly or indirectly identifying individuals or firms.

Note that the data will not include personal information (e.g., names and personal id numbers) that allows users to identify individual and firms.

4.3 Organic social graph creation

Objectives: The objective of this activity is to define, create and manage a social graph from its inception phase to its more mature usage. For this research, specifically the inception phase is of importance. The main objective here is to ensure a social graph can be created with as little as possible friction. Therefore, sensor technology will be utilised in a confined testing space within TCD.

Methodology: The research methodology is explorative and based on Action Research in which continuous feedback loops refine the process. Students therefore who will be working on this activity will be aware of the need of constant feedback based interaction for the study.

Is it expected to anonymise data: YES.

Is it expected to store data? Which security measure will be taken to protect such data: The data is only stored on the device of the user and there it will be encrypted.

4.4 Define relations between mobile sensors and neuro-behaviour responses trials

Objectives: The objective is to determine the cognitive-emotional neurometrics that can be employed to study user response and correlate them with more ecological measuring obtained from mobile phone sensors.

Methodology: The subject will be asked to complete specific tasks involving Helios prototypes and others social networks. This task will try to take the subjects to different cognitive-emotional states (e.g. security and trusty states, and insecurity and untrusted states). The subject's direct behaviour will be recorded using ecological mobile measurement, i.e. click patterns, routes, times of responses or workflow. Moreover, the unconscious behaviour of the user will be measured using eye-tracking, facial recognition, electroencephalogram, skin conductance and heart rate variability. The ecological measurement and the unconscious responses will be correlated using statistical techniques.

Is it expected to anonymise data: YES. Personal data collected will be confidential during the project. At the beginning, participants will get a random code, only used for their identification into project, and each one will receive a session calendar that have to follow.

Is it expected to store data? which security measure will be taken to protect such data: YES. Physical data, documents, permissions and information consents will be stored at UPV, in the safe repository locked. We will upload the anonymized raw data to the NAS of i3B-UPV. The server is located in the institute for Research and Innovation in Bioengineering of UPV and includes all the security protocols derived from UPV IT standards. In addition, the server complies with the relevant EU regulations.

4.5 Lab tests

Objectives: The objective is to evaluate the technologies and services developed, and the indicators of trust/performance of Helios using ecological measurement in lab environments.

Methodology: The methodology of UX analysis involves analysis of interfaces, interactions, easiness, accessibility, factors which increase the trust/performance and the type and quantity of info presented. Moreover, the unconscious behaviour of the user will be measured using eye-tracking, facial recognition, electroencephalogram, skin conductance and heart rate variability. Finally, think aloud and questionnaires will be used to measure the subjective responses of the users.

Is it expected to anonymise data: YES. Personal data collected will be confidential during the project. At the beginning, participants will get a random code, only used for their identification into project, and each one will receive a session calendar that have to follow.

Is it expected to store data? Which security measure will be taken to protect such data: YES. Physical data, documents, permissions and information consents will be stored at UPV,

in the safe repository locked. We will upload the anonymized raw data to the NAS of i3B-UPV. The server is located in the institute for Research and Innovation in Bioengineering of UPV and includes all the security protocols derived from UPV IT standards. In addition, the server complies with the relevant EU security practises.

4.6 Trials

Barcelona trials

Objectives: Trials are activities with humans taking place *in unsupervised real life, with validation and evaluation purposes, in closed controlled conditions.* These are small pilots with a reduced group of users that voluntarily will follow indications to test and assess the (functional) developments with specific purposes. It can be considered a testing environment, which is close to real conditions. At this moment, there are no specific objectives yet defined.

Methodology: So far, UAB (and MASS, who might take also part in the trials) have not yet defined the whole workflow for trialling. The objective will be to recruit voluntary users through their own networks (UAB's & MASS staff and students database), organise information sessions and explain the trialling process. A certain period of time will be delimited for users to try the services. Afterwards, it is expected to distribute online surveys and conduct some interviews to gather more insights of their experience.

Is it expected to anonymise data: YES.

Is it expected to store data? Which security measure will be taken to protect such data: YES. Following the same previous procedures.

Swiss trials

Objectives: The trials are based on the productive System called "Shared Content" that is in use by professional publishers. The trial with the citizen Journalists however take place in a closed controlled environment. This is a small group of people specially educated to use the system and to test it.

Methodology: The approach has yet to be defined and agreed between MASS and STXT.

Is it expected to anonymise data: YES.

Is it expected to store data? Which security measure will be taken to protect such data: YES, All Swiss data laws will be followed and the data stored is kept to the absolute minimum. The user will be informed when creating an account.

4.7 Pilots

Barcelona pilot 1

Objectives: Pilots are *open and unsupervised validation, with large audiences* that will take place by the end of the project, once solutions are mature. The final objective is to evaluate in real conditions (or the closest) the final services deployed in a large-scale event (still to be defined). Evaluation will be quantitative and it is also expected to do it in a qualitative manner.

Methodology: At UAB, it is expected to identify a large-scale event (300+ people) taking part in an event (most probably a one day or two event), i.e. UAB's running race or similar. The initial ideas are to make a call-to-action through UAB's communication channels inviting people to collaborate with HELIOS and test the new services. Then, there will be a registration and

information process (TBD) followed by the event. Right afterwards, there will be surveys and if possible, interviews with a sample of users involved.

Is it expected to anonymise data: YES.

Is it expected to store data? Which security measure will be taken to protect such data: YES. Following the same previous procedures.

Barcelona pilot 2

Objectives: Same as in 5.5.1 but with other users and taking place at MASS facilities. The final objective is to validate more use cases.

Methodology: The approach has yet to be defined and agreed between MASS and UAB.

Is it expected to anonymise data?: YES.

Is it expected to store data? Which security measure will be taken to protect such data: YES.

Swiss pilot

Objectives: In the pilot phase, STXT will alternate the Content Exchange hub of SRG. In this pilot, a larger group of semi-professionals users will act as citizen Journalists. They will be addressed via a standard procedure in line with the ethical rules of the project. STXT will raise awareness using the social media channels of SRG and STXT.

The volunteers are than enabled to use the system and it will open up towards the distributions side (publishers).

Methodology: The approach has yet to be defined and agreed between MASS and STXT.

Is it expected to anonymise data: To be defined.

Is it expected to store data? Which security measure will be taken to protect such data: YES, All Swiss data laws will be followed and the data stored is kept to the absolute minimum. The user will be informed when creating an account about what data exactly will be stored and how they are treated within the pilots. The exchange hub follows all security protocols derived from SRG IT standards. In addition, the Cloud service complies with the relevant EU and Swiss data protections laws.