Project no. 732027

VIRT-EU

Values and ethics in Innovation for Responsible Technology in EUrope

Horizon 2020

ICT-35-2016
Enabling responsible ICT-related research and innovation
Start date: 1 January 2017 – Duration: 36 months

D1.1
Management and Quality Plan

Due date: February 28 2017

Actual submission date: February 28 2017

Lead beneficiary: ITU

Project Consortium

Beneficiary no.	Beneficiary name	Short name
1 (Coordinator)	IT University of Copenhagen	ITU
2	London School of Economics	LSE
3	Uppsala Universitet	UU
4	Politecnico Di Torino	POLITO
5	Copenhagen Institute of Interaction Design	CIID
6	Open Rights Group	ORG

Dissemination Level

PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	
EU-RES	Classified Information: RESTREINT UE (Commission Decision 2005/444/EC)	
EU-CON	Classified Information: CONFIDENTIEL UE (Commission Decision 2005/444/EC)	
EU-SEC	Classified Information: SECRET UE (Commission Decision 2005/444/EC)	

Dissemination Type

R	Document, report	X
DEM	Demonstrator, pilot, prototype	
DEC	Websites, patent filling, videos, etc.	
O	Other	
ETHICS	Ethics requirement	

Management and Quality Plan

VIRT-EU

Values and Ethics in Innovation for Responsible Technology in Europe

Date: February 2017

Contents

Abstract

The Management and Quality Plan is the "handbook" of the project to be used on a daily basis, and a common reference document to researchers and managers. It will be continuously updated in order to regularly improve the project practices. It is established by the Coordinator and agreed on by the participants in order to detail explicitly and formally all management aspects, the tools to be used in the project, agreed rules, methods, means to be applied or used for managing.

This document is the key reference within the organisational structure when looking for operational rules. All participants must use it for all aspects of management, project control, communication mechanism, and documentation or quality assurance within the project.

This project Management and Quality plan will be set up as repository of useful information, to be used by the project participants on a daily basis. It will consist of a main document with the basic information and reference to specific documents (annexes) available through the internal website accessible by all partners. It will include:

- The project directory, with the names and contacts of all participants, in particular the project managers and the WP leaders, the maps and locations of partner's sites;
- The table of all next meetings of the project, at the level of the WP;
- The templates of documents, forms and files;
- The updated summary table of person-months for each WP and each partner;
- The scope and objectives of the Project;
- The allocation of work by partner across the work packages as presented in the WP description;
- An overview of the management organisation and the management entities: individual functions as well as teams;
- A description of the Project management tools and the management and reporting mechanisms, and the communication rules;
- A description of the rules for the organisation of management meetings;
- A description of the risk management process.

The project website is located at https://virt-eu.nexacenter.org/

The project workspace and repository (intranet) is set up in Podio: https://podio.com/itu/virt-eu

The project discussion space is set up in RocketChat: https://virt-eu.itu.dk

Disclaimer Statement

The IT University of Copenhagen cannot be held responsible for any errors or omissions. The handbook does not replace the European Commission Horizon 2020 documentation and the contents are provided for information and guidance only.

The Consortium

The project directory, with the names and contacts of all participants, in particular the project managers and the WP leaders, the maps and locations of partner's sites; This section will be updated as partners make necessary hires to ensure project success throughout the project timeline.

VIRT-EU consists of 6 partners:

1. The IT University of Copenhagen (ITU)
2. London School of Economics and Political Science (LSE)
3. Uppsala Universitet (UU)
4. Politecnico di Torino (POLITO)
5. Copenhagen Institute of Interaction Design (CIID)
6. OPEN RIGHTS GROUP (ORG)

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3. UPPSALA UNIVERSITET (UU), SANKT OLOFSGATAN 10 B, UPPSALA 751 05, Sweden
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   Post-doctoral associate, Davide Vega D'aurelio, Email: davide.vega@it.uu.se
   Researcher, Roberto Interdonato, Email: roberto.interdonato@it.uu.se

4. POLITECNICO DI TORINO (POLITO), CORSO DUCA DEGLI ABRUZZI 24, TORINO 10129, Italy
   Scientific members:
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Francesco Ruggeiro, Email: francesco.ruggiero@polito.it
Pasquale Pellegrino, Email: pasquale.pellegri165@edu.unito.it

5. Copenhagen Institute of Interaction Design (CIID) APS, TOLDBODGADE 37B, KOBENHAVN 1253, Denmark
   Scientific members:
   Annelie Berner, Email: a.berner@ciid.dk
   Raffaella Rovida, Email: r.rovida@ciid.dk

6. OPEN RIGHTS Group (ORG) 12 DUKE S ROAD, LONDON WC1H 9AD, United Kingdom,
   Scientific member:
   Javier Ruiz, Email: javier@openrightsgroup.org

Meetings

The <u>whole</u> Consortium will meet at least five times. At the Kick-off meeting, at the three project reviews (M6, M20 and M38) and at the final meeting with the Advisory group during the Design Challenge event (M32).

Further meetings are expected and bi-monthly consortium meetings via Adobe Connect will be scheduled to ensure the coherence and quality in fulfilling the work packages.

Templates of documents

Template of front page for deliverables is available on the shared document repository

Table of person-months for each WP and each partner

The total personnel effort planned amounts to 257 person-months (PMs). See distribution on WP and partners below in section "The allocation of work by partner across the WPs".

The scope and objectives of the project[1]

The VIRT-EU consortium (4 universities, 1 SME and 1 NGO) leverages a strong collaboration of SSH and ICT research approaches to provide new knowledge of and methods for how responsible innovation and technological development should be fostered to produce new connective devices and networked services supporting fairness and ethics in the future digital culture of Europe. We will produce cutting edge mapping of the online networks of the developer communities as a new way to understand the dynamics of innovation in the network economy, paying attention to how people within this developer community become ethical subjects. Finally, we will develop a

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[1] Taken from the VIRT-EU Grant Agreement pp. 123-124

foundational framework of assessment and actionable tools based on our knowledge of the ethical practices of the developer community. Thus VIRT-EU aims to address the complex interrelationship between human and technological networks and to achieve the following objectives:

- Empirically identify how local culture and network society influence the understanding and movement of particular social values among *technology developers* and how local difference and networked commonalities can influence the development of ethical subjects from a virtue ethics perspective, using data mining, social network analysis (SNA), qualitative inquiry and design methods. (WP 2 & 3)

- Develop a Privacy, Ethical and Social Impact Assessment (PESIA) framework shaped by state of the art legal research and empirical data, to enable developers and other societal stakeholders to reflect upon, evaluate and take into account not only the data protection, security and privacy aspects of new technologies but also the ethical and social concerns embedded within that challenge autonomy and freedom. (WP 2, 3 & 4)

- Systematically consider and implement the PESIA framework by co-designing self-assessment tools with technology developers, who may not be able to anticipate the future use of their projects and their clients and partners, grounded in existing developer practices and based on quantitative, case study and design research that identifies how ethics operate as process. (WP 3, 4 & 5)

- Leverage expert civil society partners to engage SMEs, makers, advocates and other stakeholders in implementation of co-designed tools and processes working towards alignment with the changing European data protection landscape in order to build collective and social resilience in an age of individual subjectivity (WP 5 & 6)

VIRT-EU's research design and empirical context will make strong contributions to on-going responsible ICT-driven research and innovation through integrating qualitative and quantitative analysis of distributed technology developer communities of practice. We acknowledge that developers construct ethical positions through their actions, and will develop new assessment frameworks that intervene in relation to these actions. We will also use our knowledge of ethical positions to make these assessment frameworks relevant, useful, and appropriate for developers, linking scholarship and advocacy on data protection to observations of developer ethics. Focusing on how developers see the world for which they design tells us a great deal about the potential futures of new technologies, and identifies how to transform their design to alter their impact. In order to understand how these ideas are developed and come about we must also understand the social practices of innovation and more specifically the networked relational practices involved. The implications for everyday policy and practice are significant: research on 'default settings' suggests that technology designs can set expectations for what is acceptable ethical behavior even if individuals do not necessarily use them that way.

Our project leverages the understanding of networked relational dynamics among technology innovators to enable ethical reflection that will help respond to concerns about privacy, security

and data practices, and hence to concerns about limited personal autonomy. Our research establishes a crucial baseline for future work that seeks to proactively impact the design and up-take of new technologies and contribute to responsible research and innovation through alternate approaches. The novel methods, frameworks and tools produced by VIRT-EU can also be extended and applied to other innovation communities throughout the network society more broadly and come at a time when attention to ethics is urgently needed not at the end of innovation processes but as a guiding perspective throughout. Inspired by a desire to define European values in relation to data privacy and ethics at a time of expanded collection and processing of personal and sensing data, we expect the Privacy, Ethical and Social impact self-assessment tools and scenarios that we will develop based on our ethical framework to intervene in today's trajectory of limited personal and collective autonomy.

Mapping how the developer community designs for data collection, management, and reuse is key for increasing fairness, compliance to legal provisions, and safety in the use of future technologies. We will identify ways to bridge gaps and to help support the needs of European developer networks. VIRT-EU leverages design research and policy analysis to guide our investigations, to analyse and intervene in these networks of innovation, and to translate research outcomes to relevant stakeholders. VIRT-EU focuses on *fostering technological development* of IoT devices and services that align the values embedded in these technologies with those of their imagined users, supporting fairness and ethics in the future of sustainable techno-social innovation in Europe. We will develop actionable tools to encourage reflection among developers on the relationship between technological innovation and societal concerns, to enable a self- assessment of ethical and social impact of envisioned technologies as well as to bridge potential gaps in developers' knowledge and understanding of current EU legal frameworks and policies related to privacy and data protection.

The allocation of work by partner across the WPs

The Work-package Leader is nominated on the basis of their technical expertise to ensure the high level of knowledge in the dedicated WP. His/her tasks will be:

- To monitor the progress of the scheduled work within the work-package in terms of technical achievement and planned deliverables.
- To manage WP meetings that will be organised every 3 months and more often if necessary, and to report to the STM and project coordinator on all matters related to the work performed within the work package (planning, costs).
- To collect the information needed to prepare interim and periodic progress reports and to consolidate these inputs and ensuring overall coherence.
- To review and approve the WP deliverables

Work effort across WPs

- *WP1*, Lead Irina Shklovski
  Total effort 20 PM.
  Distribution: **ITU lead 15 PM**, LSE 1 PM, UU 1 PM, Polito 1 PM, CIID 1 PM, ORG 1 PM
- *WP2*, Lead Alison Powell
  Total effort: 43 PM.
  Distribution: ITU 10 PM, **LSE lead 10 PM**, UU, 10 PM, POLITO 6 PM, CIID 3 PM, ORG 4 PM
- *WP3*, Lead Matteo Magnani
  Total effort: 58 PM.
  Distribution: ITU 20 PM, LSE 12 PM, **UU lead 15 PM**, CIID 9 PM, ORG 2 PM
- *WP4*, Lead Alessandro Mantelero
  Total effort: 36 PM.
  Distribution: LSE 2 PM, **POLITO lead 28 PM**, ORG 6 PM
- *WP5*, Lead Irina Shklovski
  Total effort: 39 PM.
  Distribution: **ITU lead 9 PM**, LSE 8 PM, UU 3 PM, POLITO 5 PM, CIID 9 PM, ORG 5 PM
- *WP6*, Lead Annelie Berner
  Total effort: 34 PM.
  Distribution: ITU 8 PM, LSE 8 PM, UU 3 PM, POLITO 2 PM, **CIID lead 9 PM**, ORG 4 PM
- *WP7*, Lead Alessandro Mantelero
  Total effort: 27 PM.
  Distribution: ITU 3 PM, LSE 1 PM, UU 1 PM, **POLITO lead 19 PM**, CIID 1 PM, ORG 2 PM

Overview of the management organization

In order to ensure strong project management and effective decision-making within the project, the partners have defined a management structure to specifically address the scope of the challenges presented in the proposal – paying due attention to proper coordination and monitoring of the R&D work, communication between the partners, as well as broad dissemination of the project results. The project management structure for the VIRT-EU project is based on the model set out in the DESCA Model Consortium Agreement. The model is reflected in the Consortium Agreement (CA).

Organizational structure

The organisational structure of VIRT-EU is comprised of the following Consortium Bodies to ensure a clear and balanced distribution of power and responsibilities:

- A **General Assembly (GA)** as the ultimate decision-making body of the consortium for strategic decisions impacting on the project and its external relationship, in particular with the European Commission. All partners in VIRT-EU will be members of the GA, which is chaired by the Coordinator.

- A **Coordinator** as an intermediary between the European Commission and the consortium, representing the GA, and overseeing day-to-day management of the project (WP1) and the execution of all R&D work packages in the project.

- A **Dissemination Manager (DM)** to formulate and execute a dissemination and communication plan and coordinate communication and dissemination activities for VIRT-EU (WP7), reporting to the Coordinator.

- A **Management Support Team**, who assists the Coordinator by providing legal, contractual, financial, ICT and administrative support.

External bodies

In addition to the Consortium Bodies, an external *Advisory Group (AG)* with the participation of stakeholders from industry, advocacy, and academia will provide relevant data input, feedback and recommendations to the consortium.

The management structure of VIRT-EU is illustrated below:
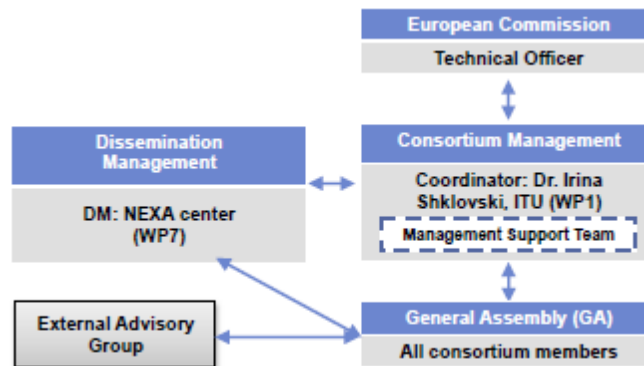
Advisory Group

VIRT-EU's multi-stakeholder advisory board has extensive experience in academia, technology innovation, technology policy and advocacy, innovation, and large-scale technology enterprises. The board includes leading innovators and thinkers from Europe and North America.

Academic Advisors:

- Professor Mireille Hildebrandt, Vrije Universiteit Brussel (BE)
- Professor Lilian Edwards, University of Strathclyde Glasgow (UK)
- Professor Ian Brown, Oxford University (UK)
- Professor Ann Light, Northumbria University (UK)
- Professor Jon Crowcroft, Cambridge University (UK)
- Professor Paul Dourish, University of California, Irvine (US)
- Dr. Seda Gürses, Center for Information Technology & Policy, Princeton University (US)
- Dr. Suchana Seth, Data & Society Research Institute and Microsoft Research (US)
- Dr. Gina Neff, Oxford Internet Institute (UK)

Practitioner Advisors:

- London Innovators Advisor –Alexandra Deschamps-Sonsino (UK)
- Large Enterprise Advisor – Dawn Nafus, Intel Corp. (US)
- Maker Advisor – Amanda Williams, co-Founder, Fabule (Canada)
- Speculative Design Advisor – Simone Rebaudengo (China)

Internet of Things/Socio-Technical Innovation Advisors:

- Dr. Srdjan Krco, IoT Forum, DunavNET.eu (RS)
- Mark Pous, theThings.io (ES)
- Rob van Kranenburg, Internet of Things Council (BE)
- Tomaž Vidonja, ICT Technology Network Institute & Living Bits & Things (SL)

As part of the membership the VIRT-EU advisory board will be available for consultation throughout the project. They have committed to participate in two online conferences in November 2017 and November 2018. Project funding includes travel support for the advisory board for two in-person meetings.

Description of project management tools, reporting and communication rules

Management tools

The **Coordinator** acts as the sole interface between the Consortium and the European Commission in all contractual matters. She will perform all tasks assigned as described in the Grant Agreement and CA, namely representing the GA, overseeing day-to-day management, monitoring project progress, coordinating efforts, launching corrective actions and necessary interventions and assuring overall project's delivery on objectives. She also oversees external project communications and administers legal, contractual and financial issues. The Coordinator is assisted by a **Management Support Team**. As a guiding principle, the Coordinator's responsibilities are restricted to activity coordination and she is not entitled to act or make legally binding declarations on behalf of the Consortium or any other partner unless explicitly specified by the Consortium.

Our consortium has appointed **ITU** to fulfill the task of Coordinator. ITU has extensive experience from a large number of innovation projects and has a strong support team to assist the Coordinator in her management task.

The scientific progress at the Work Package level is tracked by the WP leaders/Technical Manager on a monthly basis via Podio. Every 3 months the WP leader will estimate effort in PM for the relevant WP.

Reporting

The project start date is 1 January 2017 (=M1) and the project length is 36 months. M36 being December 2019.

Reporting period 1: runs from M1 to M18.

Reporting period 2: runs from M19 to month 36.

Public communication requirements:

Information on EU funding — Obligation and right to use the EU emblem[2]

Unless the *Agency* requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must:

(a) display the EU emblem and

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[2] Grant Agreement article 29. Section 29.4 Information on EU funding – obligation and right to use the EU emblem

(b) include the following text:

"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 732027".

When displayed together with another logo, the EU emblem must have appropriate prominence. For the purposes of their obligations under this Article, the beneficiaries may use the EU emblem without first obtaining approval from the *Agency*. This does not however give them the right to exclusive use. Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

European Union Logo

The EU provides a graphics guide to the European emblem: http://publications.europa.eu/code/en/en-5000100.htm

Internal rules

Include the VIRT-EU logo on promotion or dissemination of the projects results where appropriate:

Rules for the organization of management meetings

All meetings will begin with nominating one participant to take detailed minutes. Meeting minutes will then be approved by all members within a week of the meeting and filed in the project document system stored on a secure OwnCloud server run by ITU. Task assignments agreed upon in the meeting will be made via Podio by the coordinator.

Description of the risk management process

Risk management and contingency planning will be implemented proactively in the project. In general, we will apply the Risk Mitigation, Monitoring and Management (RMMM) method, which attempts to anticipate risks before they become an actual problem. Accordingly, any potential risks are identified and listed. The probability and impact of each risk is prioritised according to importance through the use of a risk table followed by a plan for the management of potential risks. The coordinator will act as the overall responsible for continuously carrying out risk

management, including the implementation of effective procedures for risk identification and mitigation, to minimize any potential negative effects.

The main risks associated with each project phase have been assessed and are listed in the table below. Moreover, the partners have outlined actions to mitigate risk and/or a contingency plan for each identified risk. Finally, after the completion of each work-package there will be a risk assessment of the results achieved to verify the way ahead or correct the action route in accordance with any alternatives identified.

Description of Risk	Level	Proposed mitigation measures
User participation risks		
Difficulty in gaining entry into the IoT communities at selected field sites (WP2, 3)	Medium	The consortium consults with the multi-stakeholder advisory board as entry into communities relies on pre-existing contacts. Field sites are selected based on quantitative data analysis and presence of pre-existing contacts that would welcome researchers into the community
Difficulty in attracting industry participants for co-design and workshops (WP3, 5)	Medium	The consortium leverages relationships developed in the course of qualitative research in WP2 and WP3 as well as consults with the IoT industry members of the multi-stakeholder advisory board.
Difficult in attracting participants for design challenge (WP6)	Medium	Discussions of the design challenge event will continue with participants throughout qualitative fieldwork. Consortium will devote resources on publicising the event via social media and methods commonly accepted in communities under study. Engagement with external institutions such as the Alan Turing Institute and the Open Data Institute will ensure greater publicity.
Management risks		
A partner withdraws from the project (All)	Low	The consortium checks whether the tasks of the partner can be handled by other project partners (thus rearranging budgets), or if a new partner needs to be found.
An employed team member leaves the project leaving his/her task unassigned (All)	Medium	First the partner must try to find a replacement. If no replacement can be found, the unassigned tasks can be moved to other project partners (thus rearranging budgets). If the unassigned tasks are significant enough, another partner may be found.
Work package or task takes substantially more time than planned (All)	Medium	Other tasks, depending on the delayed task, need to be rescheduled. Resource allocation of the involved tasks may be rearranged to secure project goals and milestones.
Technical risks		
Technical problems during data collection phases (WP2 + WP3)	Medium	Consistent planning during the data collection phases, willingness to provide extra resources if needed. While the consortium has already extensive knowledge of data collection from social media changes in the data-access policies of online services may result in replacing some planned data sources with similar online social network sites.
Data corruption and/or data loss (All)	Medium	Data encryption and limited access to the data under NDA agreement. Regular backups. Data will be mainly static, so easy to safeguard.
Technical difficulties to scale multiplex network analysis to large online networks (WP3)	High	Forward planning of analysis phases. Willingness to provide extra resources, or computational power if needed. The development of fast approximate analysis algorithms is already planned to deal with

		this. Some analyses can be performed on selected subsets of the data, reducing their complexity.

Risk management will be conducted by the partners with the participation of consortium management.

Technical infrastructure for project management.

Given the nature of the project the consortium will rely on open source technical tools as much as possible. Thus the file storage, data management and internal communication tools will be open source, installed and maintained on a research server by the ITU team. All external communication and dissemination tools will be maintained and managed by the POLITO team as the main dissemination partner.