**CEN** 

CWA 17145-2

WORKSHOP

June 2017

## **AGREEMENT**

ICS 03.100.02; 03.100.40

**English version** 

# Ethics assessment for research and innovation - Part 2: Ethical impact assessment framework

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its Members.

This CEN Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Con	tents	Page
Europ	pean foreword	4
Intro	duction	6
1	Scope	7
2	Terms and definitions	
	Ethical impact assessment framework	
3	- C /	
4 4.1	Conduct an ethical impact assessment threshold analysis  Objective	13
4.1 4.2	Who performs the threshold analysis	
4.2 4.3	Design and complete the threshold analysis questionnaire	
4.3 4.4	Review of the threshold analysisReview of the threshold analysis	
5	Ethical impact assessment plan	
5.1	Objective	
<b>5.2</b>	Assess the scale of the EIA	
5.3	Review and approval of the EIA plan	
5.3.1	Who reviews and approves the EIA plan	
5.3.2	Communication of the review	
6	Ethical impact identification	18
6.1	Objective	18
6.2	Procedure	
6.3	Foresight for ethical impact identification	19
6.4	Document the identified ethical impacts	
7	Ethical impact evaluation	21
7.1	Objective	
7.2	Procedure	
7.3	Select methods and perform activities for ethical impact evaluation	
7.4	Assess whether and how ethical principles are threatened or benefitted	
7.5	Identify value conflicts and propose ways of resolving them	
7.6	Present and discuss the ethical impact evaluation with stakeholders	
8	Remedial actions	24
o 8.1	Objective	
8.2	Procedure	
8.3	Collect information about remedial actions	
8.4	Formulate and implement design interventions	
8.5	Formulate recommendations	
8.6	Present the recommendations for remedial actions	
9	Review and audit of the EIA	26
9.1	Objective	26
9.2	Procedure	
9.3	Who performs the review and audit	
9.4	Review and audit criteria	
9.5	Intermediate review and audit	
9.6	Final review and audit	27
9.7	Presentation of the review and audit results	27

Anne	ex A (informative) Ethical issues for the threshold analysis questionnaire	29
<b>A.1</b>	General	29
A.2	Overview of ethical impacts	29
A.3	Design and complete the threshold analysis questionnaire	30
Anne	ex B (informative) Technology-scale ethical impact assessment	31
Anne	ex C (informative) Technology readiness level (TRL) methodology	32
Anne	ex D (informative) Foresight methods	33
D.1	General	33
<b>D.2</b>	Foresight methods for small-scale EIAs	33
<b>D.3</b>	Foresight methods for medium-scale EIAs	33
<b>D.4</b>	Foresight methods for large-scale EIAs	34
Anne	ex E (informative) Methods for ethical impact analysis	35
<b>E.1</b>	General	35
<b>E.2</b>	Ethical impact conceptual analysis	35
<b>E.3</b>	Ethical impact empirical analysis	35
Bibli	ography	37
	Ethical impact empirical analysis	5
		3

## **European foreword**

CWA 17145-2:2017 was developed in accordance with CEN-CENELEC Guide 29 "CEN/CENELEC Workshop Agreements – The way to rapid agreement" and with the relevant provisions of CEN/CENELEC Internal Regulations - Part 2. It was agreed on 2017-05-22 in a Workshop by representatives of interested parties, approved and supported by CEN following a public call for participation made on 2015-08-01. It does not necessarily reflect the views of all stakeholders that might have an interest in its subject matter.

The final text of CWA 17145-2:2017 was submitted to CEN for publication on 2017-05-24.

A list of the individuals and organisations that supported the technical consensus represented by the CEN Workshop Agreement is available from the CEN-CENELEC Management Centre. These organisations were drawn from the following economic sectors industry, universities, civil society organisations, technology boards, European organisations.

Among the organisations and representatives who developed and approved CWA 17145-2:2017 are the following:

<ul> <li>Associazione Italiana per la Ricerca Industriale (AIRI), Italy</li> </ul>	Andrea Porcari
<ul> <li>Austrian Agency for Research Integrity (OeAWI)/European Network of Research Integrity Offices (ENRIO), Austria</li> </ul>	Nicole Foeger
— Bio Save Group, Serbia	Aleksandar Antovic
— Center for the Promotion of Science (CPN), Serbia	Dubravka Vejnovic
<ul> <li>Danish Board of Technology, Denmark</li> </ul>	Lise Bitsch
	Rasmus Nielsen
— Danish Standards (DS), Denmark	Signe Annette Bøgh
	Katrine Bergh Skriver
European Union of Science Journalists' Association (EUSJA)	Daniela Ovadia
	Dino Trescher
— Helsińska Fundacja Praw Czlowieka, Poland	Zuzanna Warso
	(Helsinski Foundation of Human Rights)
<ul> <li>— Institute for advanced studies, Austria</li> </ul>	Erich Griessler
	Robert Braun
<ul> <li>Lingköping University, Centre of applied ethics (LIU), Sweden</li> </ul>	Göran Collste
	Johanna Romare
<ul> <li>National Cyber Security Centre, the Netherlands</li> </ul>	Jeroen van der Ham
<ul> <li>Scientific Research Centre of the Slovenian Academy of Sciences and Arts, Institute of Philosophy (ZRC-SAZU), Slovenia</li> </ul>	Rok Benčin
— The Castlegate Consultancy, Belgium	Diane Whitehouse
Trilateral Research Ltd, United Kingdom	David Wright
	Rowena Rodrigues

— University of Bath, School of Management, United Kingdom

— University of Twente, the Netherlands

Konstantinos Iatridis

Philip A.E. Brey Philip H. Jansen Wessel Reijers

It is possible that some elements of CWA 17145-2:2017 may be subject to patent rights. The CENCENELEC policy on patent rights is set out in CEN-CENELEC Guide 8 "Guidelines for Implementation of the Common IPR Policy on Patents (and other statutory intellectual property rights based on inventions)". CEN shall not be held responsible for identifying any or all such patent rights.

The Workshop participants have made every effort to ensure the reliability and accuracy of the technical and non-technical content of CWA XXX, but this does not guarantee, either explicitly or implicitly, its correctness. Users of CWA 17145-2:2017 should be aware that neither the Workshop participants, nor CEN can be held liable for damages or losses of any kind whatsoever which may arise is a preview seneral about the from its application. Users of CWA 17145-2:2017 do so on their own responsibility and at their own

### Introduction

The increasing pace of technological developments such as genetic technologies, geo-engineering, ICT and synthetic biology has been stimulating questions and discussion on the desirability and governance of their societal impacts. Ethics assessment and ethical impact assessment help ethicists to investigate ethical challenges. Ethics assessment and ethical impact assessment help researchers, policy makers and relevant stakeholders to deal with the ethical impacts of research and innovation.

The need for agreed methods for ethics assessment and ethical impact assessment arises out of the increasing focus on responsible research and innovation in policy contexts and in collaborative efforts by researchers, as well as from new legal regulations for research and innovation at the European level. The European Commission, has been a driving force behind the development of ethics assessment and impact assessment practices, by incorporating the need for responsible research and innovation in its framework programmes.

The SATORI (Stakeholders Acting Together On the ethical impact assessment of Research and Innovation, <a href="www.satoriproject.eu">www.satoriproject.eu</a>) research project, funded by the European Commission, developed a framework for common basic ethical principles and joint approaches and practices with the objective of harmonizing and improving ethics assessment practices of research and innovation.

The SATORI project developed a framework based on research into existing practices. These research findings are the basis of this CWA. This CWA consists of two parts.

Part 1, outlined here, makes recommendations for the composition, role, functioning and procedures of ethics committee. Organisations can use part 1 to strengthen and/or improve the ethics assessment of their research and innovation projects. Ethics committees include, but are not limited to, research ethics committees, institutional review boards, ethical review committees, ethics boards, and units consisting of one or more ethics officers. Part 1 of the CWA is applicable to all ethics committees, regardless of their size, scope or research and innovation area.

Part 2 provides researchers and organisations with guidance on ethical impact assessment; a comprehensive approach for ethically assessing the actual and potential mid- and long-term impacts of research and innovation on society. Researchers and ethics committees will find this information useful as it describes ethical impact assessment at different stages of the ethical assessment. Part 2 is applicable to all researchers and innovators, regardless of the context they are working in or their research and innovation area.

## 1 Scope

This CEN Workshop Agreement (CWA) sets requirements and provides guidelines for ethics assessment of research and innovation.

The CWA aims to improve the quality of ethics assessment and harmonize ethics assessment practices.

The CWA consists of two parts:

- part 1 Ethics committee; Part 1 provides recommendations for the ethics committees on practices and procedures;
- part 2 Ethical impact assessment framework. This part provides a practical, policy-oriented guide for researchers and ethics assessors on the different stages of the ethical impact assessment (EIA) process.

Both parts of the CWA are of interest to organisations or agents involved in performing, commissioning or funding research and innovation, and therefore have a responsibility to address ethical issues.

The focus of the CWA is on ethics assessment, not on ethical guidance.

## 2 Terms and definitions

For the purposes of this document the following terms and definitions apply.

#### 2.1

## Delphi survey

method for estimating future measures by asking a group of experts to make estimates, recirculating the estimates back to the group, and repeating the process till the numbers/answers converge

[SOURCE: Global Foresight Glossary, 2013]

#### 2.2

#### design intervention

deliberate action aimed at bringing about changes in the design of the R&I project and its outcomes in order to resolve identified ethical impacts

#### 2.3

## ethical impact

impact that concerns or affects human rights and responsibilities, benefits and harms, justice and fairness, well-being and the social good

### 2.4

#### ethical impact identification

use of foresight methods to describe different future applications of research and innovation (R&I)

[SOURCE: adapted from SATORI deliverable 4.3.1.2]