Responsible Innovation in ICT for an ageing society - Delphi Exercise

1. INTRODUCTORY NOTES

While answering the survey questions you can go back and forth through your answers at any time using the navigation buttons at the bottom of the page.You can access the questionnaire multiple times (information will be saved). When you click the [done>>] button on the last page, the survey will be closed.

Please note that the information you provide will be kept confidential and not shared with third parties, data privacy and confidentiality will be guaranteed. Analysis of collected data will only be done on anonymized groups of respondents and reports will contain data in aggregate terms.

The survey questionnaire is divided in the following parts:

- **Awareness on Responsible Research and Innovation (RRI)**
- **Measures for Integration of Responsible Research and Innovation into the Value Chain**
- **Responsible Governance**
- **Inclusion of RRI dimensions in the ICT for ageing society area**
- Demographic Information

Answering all 26 questions (mostly checkboxes) will take some 20 minutes. Feel free to use also the optional open fields to provide additional information and comments.

For any information on the survey, write to: survey@responsible-industry.eu

You can start to compile the questionnaire, thank you for your valuable contribution!

2. Awareness on Responsible Research and Innovation (RRI)

Definition of RRI:
"RRI is an inclusive approach to research and innovation (R&I), to ensure that societal actors work together during the whole research and innovation process. It aims to better align both the process and outcomes of R&I with the values, needs and expectations of European society." (European Commission, 2013).

1. The concept of RRI as given above is relatively new and rapidly evolving. Have you been aware of the RRI prior to this survey?

◯ Yes

◯ No

2. Do you know if the government of your country has taken any measure to implement the adoption of the RRI principles?

◯ Yes

◯ No

(optional) If yes, could you list/describe some of these measures?

3. Are you aware of initiatives carried out by your company/organization to ensure that research and innovation are done responsibly?

- ◯ Yes
- ◯ No

(optional) If yes, could you list/describe some of these initiatives?

4. Have you been personally involved in these initiatives?

- ◯ Yes
- ◯ No

(optional) If yes, what is your role in these initiatives?

3. Measures for Integration of Responsible Research and Innovation into the Va...

In the following we refer specifically to Research and Innovation (R&I) in the domain of ICT (Information & Communication Technologies) for an ageing society.

5. Please indicate on a scale of 1 (very low risk) to 5 (very high risk) the level of societal and ethical risk in the following technologies for an ageing society.

	1	2	3	4	5
Health monitoring through "sensing systems" *(e.g. wearable or implantable sensors for daily monitoring of physiological parameters)*	◯	◯	◯	◯	◯
Real time monitoring of the user life-style through "sensing systems" *(e.g. environmental sensors for surveillance applications at home)*	◯	◯	◯	◯	◯
"Reasoning systems" for medical data analysis *(e.g. detection of trend anomalies in vital signs to alert caregivers or family members)*	◯	◯	◯	◯	◯
"Reasoning systems" for privacy-sensitive data analysis *(e.g. noise analysis for activity recognition)*	◯	◯	◯	◯	◯
"Action enabling technologies" *(e.g. automatic control through actuators, artificial muscles)*	◯	◯	◯	◯	◯
Machine to machine "communication systems" *(e.g. transmission of medical data from the user smartphone to care management portals)*	◯	◯	◯	◯	◯
Transmission of data to a third party *(e.g. transmission of personal data from the user's smart phone to e-service portals)*	◯	◯	◯	◯	◯
Public Data Storage and Analysis *(e.g. cloud computing)*	◯	◯	◯	◯	◯
Human-machine interaction *(e.g. robotics)*	◯	◯	◯	◯	◯
Brain-computer interface	◯	◯	◯	◯	◯
Social Networking Techniques (e.g. location based social networks)	◯	◯	◯	◯	◯

Other (please specify the technology and risk level)

6. Which of the following domains are most susceptible to ethical and societal risks in the design and development of ICT products for an ageing society? Please indicate up to 3 options.

- [ ] Environment
- [ ] Health
- [ ] Personal Safety
- [ ] Social Safety
- [ ] Social Isolation
- [ ] Justice, access and equality
- [ ] Individual rights and liberties *(privacy, rights to freedom of movement, etc.)*
- [ ] Autonomy, authenticity and identity *(free will, ability to have one's own thoughts and make one's own decisions, to develop social identity)*
- [ ] Integrity and dignity
- [ ] Bodily integrity *(self-determination of human beings over their own bodies)*
- [ ] Dual use of developed technologies

Other (please specify)

4. Measures for Integration of Responsible Research and Innovation into the Va...

7. At what stage of the value chain would you address the potential societal risks and ethical issue? (More than one option can be indicated)

- [ ] Early planning stage/Agenda setting
- [ ] Basic technology research
- [ ] Proof of concept
- [ ] Prototype demonstration
- [ ] Product development, engineering and testing
- [ ] Go to market
- [ ] Along the entire value chain

Other (please specify)

8. Which department within the company/organization should be responsible for this task? (More than one option can be indicated)

- [ ] Management
- [ ] Planning
- [ ] Research & Development
- [ ] Production
- [ ] Marketing
- [ ] Sales
- [ ] Legal
- [ ] CSR (Corporate Social Responsibility)
- [ ] I do not know

(optional) Could you please specify which role the responsible department(s) should play in RRI?

9. Who should be involved in the identification and evaluation of the potential societal risks and ethical aspects in the R&I of ICT products for ageing society? (More than one option can be indicated)

- [ ] Policy makers
- [ ] Legislators
- [ ] Public bodies
- [ ] Ethics Committees
- [ ] Research Funding Bodies
- [ ] Professional Associations
- [ ] Company and Industry Associations
- [ ] Civil Society Organizations (e.g. patients groups, users' associations)
- [ ] Consumer Organizations
- [ ] Educational Institutions
- [ ] Research Organizations
- [ ] Individual Researchers
- [ ] Practitioners
- [ ] End Users
- [ ] General Public
- [ ] I do not know

Other (please specify)

5. Measures for Integration of Responsible Research and Innovation into the Va...

10. Which procedures should be used to identify and evaluate in advance the societal risks and ethical aspects of R&I ? (More than one option can be indicated)

- [ ] List of moral values/principles
- [ ] Precautionary Principle
- [ ] Participatory Agenda Setting
- [ ] Risk Assessment Procedures
- [ ] ESIA: Environmental and Social Impact Assessment
- [ ] Ethical Assessment
- [ ] Anticipatory Technology Assessment
- [ ] Pilot studies for evaluating different scenarios
- [ ] I do not know

Other (please specify)

11. How would you involve the general public and other relevant stakeholders to identify and evaluate the potential societal risks and ethical aspects of R&I? (More than one option can be indicated)

- [ ] Brainstorming events
- [ ] Focus groups
- [ ] Citizen's juries
- [ ] Workshops
- [ ] Formation of networks including researchers, funders, policymakers, individuals and user committees
- [ ] I do not know

Other (please specify)

12. Which approach should be adopted by the engaged public and stakeholders in developing ethically acceptable and socially desirable ICT products/systems? (More than one option can be indicated).

- [ ] Crowd-sourcing
- [ ] Prototype trial
- [ ] Participatory design
- [ ] Human-centered design
- [ ] Human-driven design
- [ ] I do not know

Other (please specify)

6. Responsible Governance

13. Which tools would you suggest to implement the adoption of Responsible Research and Innovation concept in ICT for an ageing society? (More than one option can be indicated)

- [ ] Existing Management Standards *(e.g. ISO standards, such as ISO 26 000 Social Responsibility, the AA1000SES Stakeholder Engagement Standard, etc.)*
- [ ] Codes of conduct/Principles
- [ ] Global Initiatives *(e.g. UN Global compact)*
- [ ] In-house management systems *(e.g. quality, environmental, health & safety)*
- [ ] New ad-hoc tailored tools *(e.g. modification of existing management standards)*
- [ ] I do not know

(optional) Please detail what specific tools should be used, how would you modify existing ones, any other tool

14. Who should be involved in the development of a governance framework for responsible research and innovation in ICT for ageing? (More than one option can be indicated)

- [ ] Policy makers
- [ ] Legislators
- [ ] Public bodies
- [ ] Ethics Committees
- [ ] Research Funding Bodies
- [ ] Professional Associations
- [ ] Industry Associations
- [ ] Industries
- [ ] Educational Institutions
- [ ] Research Organizations
- [ ] Individual Researchers
- [ ] Civil Society Organizations (e.g. patients groups, users' associations)
- [ ] Consumer Organizations
- [ ] End Users
- [ ] General Public

Others (please specify)

15. Do you think that a governance framework for implementation of RRI principles in developing ICT for ageing should be (more than one option can be indicated):

- [ ] Voluntary
- [ ] Legally binding
- [ ] Regularly monitored and evaluated through audit procedures
- [ ] Regularly reviewed by ethics committees

7. Responsible Governance

16. What could be effective incentives/measures to stimulate companies/organizations to comply with RRI principles? Please indicate on a scale of 1 (very ineffective) to 5 (very effective) the level of usefulness.

	1	2	3	4	5	I do not know
Integration of RRI into research funding through evaluation criteria	◯	◯	◯	◯	◯	◯
Availability of ethical funds *(i. e. funds where the choice of investment is influenced by ethical criteria)*	◯	◯	◯	◯	◯	◯
Support for crowd-sourcing *(i. e. crowd outsourcing)*	◯	◯	◯	◯	◯	◯
Requirement to integrate RRI into public procurement tenders and contracts	◯	◯	◯	◯	◯	◯
Issue of a RRI certification mark *(increase of trust in the products, discharge of legal liability, etc.)*	◯	◯	◯	◯	◯	◯

Other (please specify)

17. Which key performance indicators would you suggest to measure the effect of RRI implementation in the domain of ICT for an ageing society?
Please specify on a scale of 1 (very low importance) to 5 (very high importance) the level of importance.

	1	2	3	4	5	I do not know
Economic *(market penetration, profit, turnover, access to financial support)*	◯	◯	◯	◯	◯	◯
Organizational *(use of human resources, team cooperation, gender equality…)*	◯	◯	◯	◯	◯	◯
Strategic *(competitive advantage, customer satisfaction…)*	◯	◯	◯	◯	◯	◯
Societal *(product sustainability, desirability, acceptability and safety, effect on quality of life and health of customers…)*	◯	◯	◯	◯	◯	◯
Scientific and Technological *(degree of innovation in products and systems, product quality and reliability)*	◯	◯	◯	◯	◯	◯

Other (please specify)

8. Responsible Governance

18. In your opinion, which are the most critical barriers to inclusion of RRI discourses in ICT industry?

(Please indicate up to 3 options)

- [ ] Lack of sufficient resources
- [ ] High extra costs for management
- [ ] Excessive bureaucratic burden
- [ ] Concern for possible slow-down in the speed of innovation
- [ ] Lack of clear EU/national regulations
- [ ] Potential conflict between Open Access to data and Intellectual Property Rights
- [ ] Scarce awareness of the RRI concept
- [ ] Insufficient education and training in ethics of research and innovation
- [ ] I do not know

Other (please specify)

19. In your opinion, which could be the most remarkable benefits deriving from inclusion of RRI discourses in ICT industry?

(Please indicate up to 3 options)

- [ ] Enhanced quality of ICT products
- [ ] Improved matching of ICT products with societal needs
- [ ] Higher acceptability of ICT products
- [ ] Better market penetration
- [ ] Better corporate image
- [ ] Favored access to financial support
- [ ] Benefits for humankind

Other (please specify)

20. In your opinion, should the overall corporate investment strategy and practices be aligned with the RRI principles?

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neither agree nor disagree
- ◯ Agree
- ◯ Strongly agree

Other (please specify)

9. Inclusion of RRI dimensions in the ICT for an ageing society area

21. To what extent do you agree or disagree with the following statements:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The desirability and acceptability of ICT products/systems for ageing society would be increased by engagement of the general public at different stages of research and innovation	◯	◯	◯	◯	◯
RRI issues should be part of the training and education at all levels, from secondary school through to doctoral training	◯	◯	◯	◯	◯
RRI issues should be considered an aspect of continuous professional development for researchers and innovators	◯	◯	◯	◯	◯
Free online access should be guaranteed for the results of publicly-funded research projects *(e.g. European projects involving both academic and industrial partners)*	◯	◯	◯	◯	◯
Companies developing new ICT products/technologies should always communicate where and how these new products/technologies are being used	◯	◯	◯	◯	◯

22. Which tools are more effective for the public to receive information and form their opinion on new ICT products/technologies and their potential impact? (More than one option can be indicated).

- [ ] Internet
- [ ] Social media
- [ ] Science sections in national newspapers
- [ ] Specific articles in popular science magazines
- [ ] Dedicated television programs
- [ ] Science festivals
- [ ] Education initiatives (e. g. courses at Universities and other HD Institutions)
- [ ] I do not know

Other (please specify)

10. Inclusion of RRI dimensions in the ICT for ageing society area

23. Which measures/initiatives would you suggest to enhance the incorporation and progress of ethical dimensions in research and innovation at an industrial level?

- [ ] Ethics review of projects and activities
- [ ] Ethical assessment of research and innovation plans at early phase
- [ ] Ethical standards
- [ ] Codes of ethics and ethical guidelines
- [ ] Ethics education
- [ ] Debates at the workplace on ethical aspects of programmes, activities and products
- [ ] I do not know

Other (please specify)

24. Did you encounter and discuss any ethical issue in your daily work?

- ◯ Yes
- ◯ No

(optional) If yes, please specify

25. Do you agree on the need to promote gender equality in all research areas (including ICT) to increase the European potential for science and innovation? ***(e.g. through initiatives to ensure that promising female scientists do not drop out of research)***

- ◯ Yes
- ◯ No
- ◯ I do not know

(optional) If yes, would you like to suggest some initiatives to promote gender equality in research and innovation?

26. Are there any other additional remarks, comments or references you would like to add?

11. Demographic data

The following data are necessary for internal statistical purposes only.

27. To which of the following stakeholder groups does your organization belong?

- ◯ **Research Institutions**
  (universities, governmental research institutes, national laboratories, public and private research centers, etc.)
- ◯ **Industry**
- ◯ **Policy Related Institutions**
  (policy makers such as government departments and agencies, R&D governing bodies, regulatory and standards agencies, technical and ethical committees, trade unions, technology assessment/health technology assessment policy advisors, etc.)
- ◯ **User/practice**
  (public sector service organization, social security system, care organizations, consumer, patient/public health, environmental, labor associations and organizations, Non-governmental organizations (NGOs))

Other (please specify)

28. Size of the organization (number of employees):

◯ < 10 ◯ < 50 ◯ < 250 ◯ ≤ 1000 ◯ > 1000

29. In which Country is your organization located?

30. What is your role in your organization?

31. If you would like to modify the data we have used for sending you the questionnaire, please fill the fields below. This will allow us to inform you on the results of the survey and propose you the second (and final) Delphi survey.

Name and organization	
Email	

II Round - Delphi Exercise on Responsible Innovation in ICT for an

1. Introductory notes

This questionnaire is the second round of the Delphi Exercise of the FP7 EU-funded Responsible Industry Project, which aims to find out how ICT industry for an ageing society can work together with societal actors and integrate principles and methodologies of Responsible Research and Innovation (RRI) into research and innovation processes.

Based on the 1st round results, the 2nd round aims to **collect in-depth, practical indications in order to design an implementation plan for RRI** (including strategic and operative actions at different levels) to support industry in developing ethically acceptable and socially desirable ICT products, systems and services.

As for the 1st round, there are four sections in the questionnaire:

1. **Awareness on Responsible Research and Innovation (pg. 1)**
2. **Integrating Responsible Research and Innovation into the Product Value Chain (pg. 3-8)**
3. **Responsible Governance (pg. 9-12)**
4. **Inclusion of RRI dimensions in the ICT for ageing society area (pg. 13-17)**

To help inform you, each question begins with a very brief summary of relevant results that emerged from the 1st round. Both yes/no questions (to verify convergence on 1st round) and open, qualitative, questions are included.

We would appreciate your opinion on all topics but please feel free to focus your input and advice purely on the areas you consider most relevant to your vision and expertise.

Most of the questions are qualitative in nature, seeking your opinions. The time it will take for completion is dependent upon the number of open questions you decide to answer.

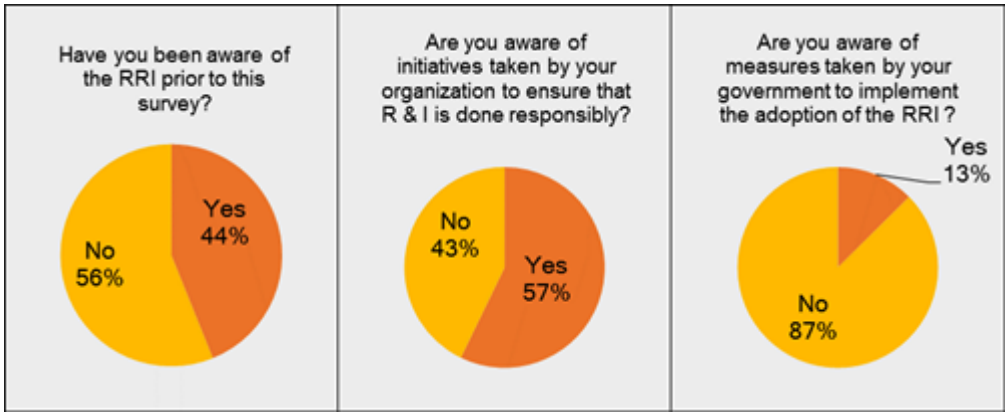
You can go back and forth in the questionnaire as you wish. Even if you skip questions, please navigate to the last page and close the questionnaire with the 'end' button (this will inform us that you selected the questions, but did not abandon the survey).

All participants will receive the final report of the Delphi Exercise.

II Round - Delphi Exercise on Responsible Innovation in ICT for an

2. Section 1: Awareness on Responsible Research and Innovation (RRI)

In the first round of this Delphi consultation, 44% of the respondents stated that they were aware of the concept of RRI as formulated by the EC in its official documents. A higher percentage (57%) were aware of initiatives undertaken by their organization to ensure that research and innovation (R&I) are conducted in a responsible manner, but very few (13%) were aware of measures taken by their government to implement the adoption of RRI principles.



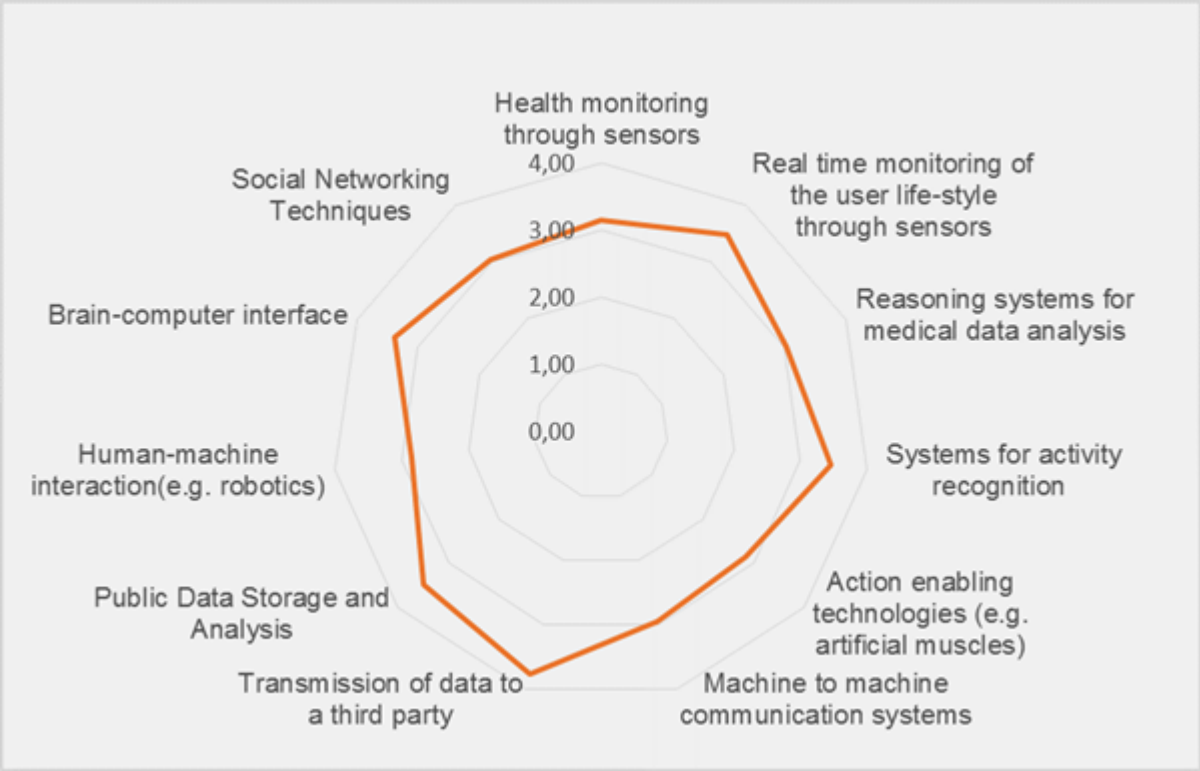
1. Given that the concept of RRI is still unfamiliar to many, do you agree on the need to improve the communication and dissemination of RRI principles and policies?

- ◯ No, there is no need for improvement
- ◯ I do not know
- ◯ Yes, there is a need for improvement

If “Yes”, which initiatives would you suggest to improve awareness on RRI?

3. Section 2: Integrating Responsible Research and Innovation into the Product...

Stakeholders responding to the first consultation indicated that all of the Information & Communication Technologies used for the development of products/systems/services for an ageing society are risky from an ethical and/or societal point of view, with a risk level between 2.8/5 (medium) and 3.8/5 (high).
The highest perceived risk was for Transmission of data to a third party (3.8/5), followed by other technologies for data management, such as Data Storage (3.5/5) and Data analysis (3.5/5).



2. In your opinion, are current regulatory frameworks adequate to address these risks?

- ◯ Yes
- ◯ I do not know
- ◯ No

3. If not, please indicate all possible gaps and shortcomings (multiple options are allowed):

- [ ] Insufficient in terms of safety of ICT-based medical devices, including implantable sensors
- [ ] Insufficient in terms of specific legislation on e-Health, including mobile-Health, practices
- [ ] Insufficient in regulating responsibility and liability in case of wrong use of personal data
- [ ] Insufficient in regulating responsibility and liability in case of failure of ICT products/systems/services
- [ ] Lack of provisions for quality monitoring of ICT products/systems/services for elderly and/or people with disabilities
- [ ] Insufficient provisions for protection of vulnerable consumers such as elderly and/or people with disabilities
- [ ] Insufficient in terms of personal data protection
- [ ] Need for a single pan-European regulation for personal data protection
- [ ] Need for rules on personal data protection that are valid for all companies, regardless of their establishment, inside or outside Europe

Are there any others you can think of? Please specify below

II Round - Delphi Exercise on Responsible Innovation in ICT for an

4. Section 2: Integrating Responsible Research and Innovation into the Product...

The domains most susceptible to ethical and societal risks in the design and development of ICT products/systems/services for an ageing society were identified as:

- **Individual rights and liberties (privacy, rights to freedom of movement, etc.) (49%)**
- **Personal safety and health (48%)**
- **Autonomy, authenticity and identity (41%)**
- **Social isolation (28%)**
- **Integrity and Dignity (26%)**

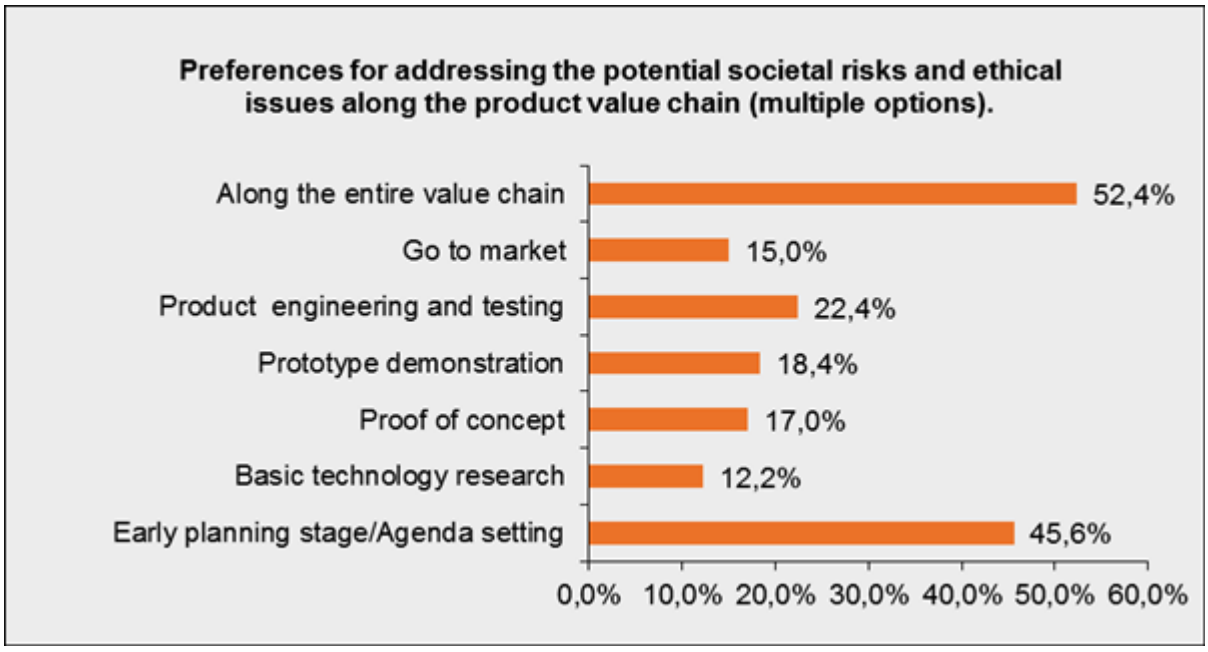
4. Which initiatives/measures would you recommend to address risks in these domains? Please rank in priority order those that you consider most important in the following list.

☐	Informed consent on the use of ICT products and services
☐	Data protection through 'Privacy by design' and 'Privacy by default' methodologies
☐	Right to be forgotten when personal data are no longer needed
☐	Ethical analysis of ICT products/services for an ageing society
☐	Measures to enhance accessibility to ICT services/goods for people with impairment
☐	Regular assessment of a person's status and how ICT products and services impact his or her Quality of Life
☐	Avoid social isolation through excessive replacement of human contacts with technologies

5. Are there any others you can think of? Please specify below

5. Section 2: Integrating Responsible Research and Innovation into the Product...

Stakeholders responding to the first consultation have expressed their preference for addressing the potential societal risks and ethical issues along the entire value chain, from planning to marketable ICT products (52%). However to address risks at the early planning stage seems also to be an adequate option in many cases (46%).



6. Could you please indicate the pros and cons of these two options making reference to specific issues such as the type of the developed product/technology?

Risks and ethical issues addressed along the entire value chain (pros/cons)

Risks and ethical issues addressed at an early planning stage (pros/cons)

6. Section 2: Integrating Responsible Research and Innovation into the Product...

Participatory design (68%) and Human centered design (54%) were considered the most useful tools for developing ethically acceptable and socially desirable ICT products/systems. These approaches are both at the design stage like Human Driven Design (33%) and are preferred to the Prototype trial (31%) which comes at a later stage in the value chain.

Concerning the procedures to be followed for risk analysis, the most adequate were considered to be:

- **Ethical Assessment (59%)**
- **Risk Assessment Procedures (55%)**
- **Pilot studies for evaluating different scenarios (52%)**

7. Do you think that the recommended approaches are adequate?

- ◯ Yes, they are adequate
- ◯ I do not know
- ◯ No, there are some insufficiencies

Please, elaborate on your answer

7. Section 2: Integrating Responsible Research and Innovation into the Product...

Stakeholders responding to the first consultation have indicated:

- **Research & Development (59%)**
- **Management (57%)**
- **CSR (40%)**
- **Legal (36%)**

as the most apt departments/functions for addressing the issues related to societal and ethical risks in R&I.

8. Could you indicate what should be the main tasks of these departments/functions in addressing societal and ethical risks (if appropriate, please make a distinction between SME's and large enterprises)

8. Section 2: Integrating Responsible Research and Innovation into the Product...

With respect to involvement in the identification, evaluation and assessment of risks, the groups that received the most votes were:

- **Ethics Committees (80%)**
- **Civil Society Organizations, like patients groups, users' associations (62%)**
- **End Users (56%)**
- **Policy Makers (54%)**
- **Research organizations (50%)**
- **Consumer organizations (48%)**
- **Legislators (45%)**
- **Industry (30%)**

Some respondents suggested that all societal actors should be involved to comply with RRI principles.

Stakeholders should preferably be involved through:

- **Creation of Networks including researchers, funders, policymakers, individuals and user committees (65%),**
- **Focus groups (62%)**
- **Workshops (47%)**

9. For each of the risk assessment stages, please indicate below who should be involved

	Hazard identification	Decide who might be harmed and why	Evaluate the risks and decide on precautions	Regularly review and update the risk assessment
Ethics Committees	☐	☐	☐	☐
Civil Society Organizations	☐	☐	☐	☐
End Users	☐	☐	☐	☐
Policy Makers	☐	☐	☐	☐
Research organizations	☐	☐	☐	☐
Consumer organizations	☐	☐	☐	☐
Legislators	☐	☐	☐	☐
Industry	☐	☐	☐	☐

Do you have any comment on the particular roles and responsibilities of the different stakeholders?

9. Section 3: Responsible Governance

In the first consultation, the most appropriate tools for implementation of RRI concepts in the industry of the ICT for an ageing society were considered to be:

- **Codes of Conduct (CoC)/Principles (52%)**
- **Existing Management Standards (40%)**
- **In-house management systems (37%)**
- **Global Initiatives (27%)**
- **New ad-hoc tailored tools (27%)**

CoC/Principles was the clear preference of industry representatives (68%), as well as research organizations (50%), and end-users (44%). However, both existing management standards and new ad-hoc tailored tools were the preference of policy makers (50% each).

10. Following these indications, do you agree that the responsible governance framework should be implemented with a combination of Code of Conduct and other voluntary measures like existing standards and/or Global Initiatives?

- ◯ Yes, I agree
- ◯ I do not know
- ◯ No, I do not agree

Please, elaborate on your response

10. Section 3. Responsible Governance

Concerning the development of a governance framework for RRI in ICT industry, opinions varied about who should be involved. The preference of respondents were for:

- **Policy makers (72%)**
- **Ethics committees (63%)**
- **Civil society organizations (56%)**
- **Legislators (51%)**
- **Research organizations (50%)**
- **End users (44%)**

11. Do you agree that all the indicated societal actors should contribute to develop a governance framework for embedding RRI into the innovation processes?

- ◯ Yes, I agree
- ◯ I do not know
- ◯ No, I do not agree

Please add your comments and specify below if other groups should be involved:

11. Section 3: Responsible Governance

Most of the respondents (59%) to the first consultation think that the governance framework for implementation of RRI principles in the domain of ICT for an ageing society should be regularly reviewed by Ethics Committee and/or regularly monitored and evaluated through Audit Procedures (56%).

12. Are there any further measures that you would suggest for monitoring and assessing the compliance with the RRI principles, including the ethical dimension? If so, please describe them below.

12. Section 3: Responsible Governance

Results from our first questionnaire indicate that 32% of the respondents believe that a governance framework for implementation of RRI principles in the domain of ICT for an ageing society should be legally binding, whilst 23% believe it should be voluntary. The remaining 45% of the respondents did not clearly indicate their opinion on this delicate matter.

13. Do you think that some specific aspects of the RRI governance framework should be legally binding? If so, could you tell us which ones?

13. Section 4. Inclusion of RRI dimensions in the ICT for ageing society area

The most critical factors limiting the inclusion of RRI discourses in the ICT for an ageing society were considered to be:
• Scarce awareness about the RRI concept (45%)
• Insufficient education and training in ethics of research and innovation (42%)
• Lack of clear EU/national regulations (40%)

The inadequacy of ethics education was also confirmed by the high the percentage of respondents (87%) who agreed on the need to consider RRI issues as an aspect of continuous professional development for researchers and innovators, and the 70% who believed that RRI issues should be incorporated into training and education at all levels.

14. Do you agree on the need to promote a culture of social and ethical responsibility in research and innovation?

◯ No, I do not agree

◯ Yes, I agree

if "no", please explain your reasons
If "yes", please indicate possible initiatives and/or measures

14. Section 4. Inclusion of RRI dimensions in the ICT for ageing society area

Most of the respondents (72%) agree that

- *"Free online access should be guaranteed to the results of publicly-funded research projects (e.g. European projects involving both academic and industrial partners)"*

A lower but still high percentage of respondents (58%) agree that

- *"Companies developing new ICT products/technologies should always communicate where and how these new products/technologies are being used."*

15. Can you think of any possible barrier or limitation to transparency and openness in the dissemination of results and communication on new products?

◯ No

◯ Yes

Please specify below

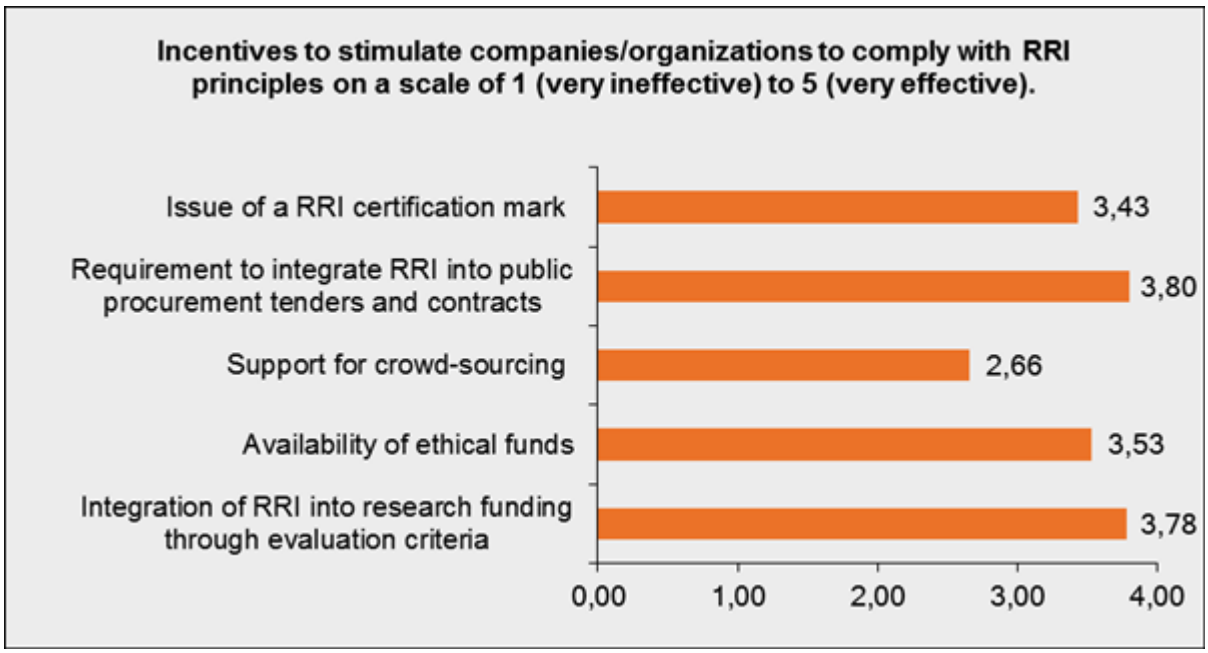
15. Section 4. Inclusion of RRI dimensions in the ICT for ageing society area

The alignment of the overall corporate investment strategy and practices with RRI principles is favourably regarded by the great majority of the respondents (73%). This is considered to be a strategic decision and a factor favouring RRI inclusion in industry.

The main drivers for inclusion of RRI discourses into ICT for an ageing society were identified as:

- **Improved matching of ICT products with societal needs (75%)**
- **Higher acceptability (59%)**
- **Benefits for humankind (48%)**

According to the stakeholders responding to the first consultation, all the proposed incentives were considered incentives of medium/high efficacy (between 2,7/5 and 3,8/5) to stimulate companies/organizations to comply with RRI principles.



16. Thinking particularly about what is important for industry, can you say more about motivating factors and incentives for the inclusion of RRI principles and practices?

- ◯ No, nothing to add
- ◯ Yes, something to add

Please, specify below.

16. Section 4. Inclusion of RRI dimensions in the ICT for ageing society area

Most of the respondents (79%) agreed that ***"Desirability and acceptability of ICT products/systems for ageing society would be increased by engagement of the general public at different stages of research and innovation"*****.**

Stakeholders responding to the first consultation indicated :

- **Internet (68%)**
- **Social media (54%)**
- **Educational television programs (49%)**

as the most effective tools to inform the general public on new ICT products/technologies and their potential impact.

17. Are there specific actions that you would suggest to improve societal engagement and public trust in ICT products for an ageing society?

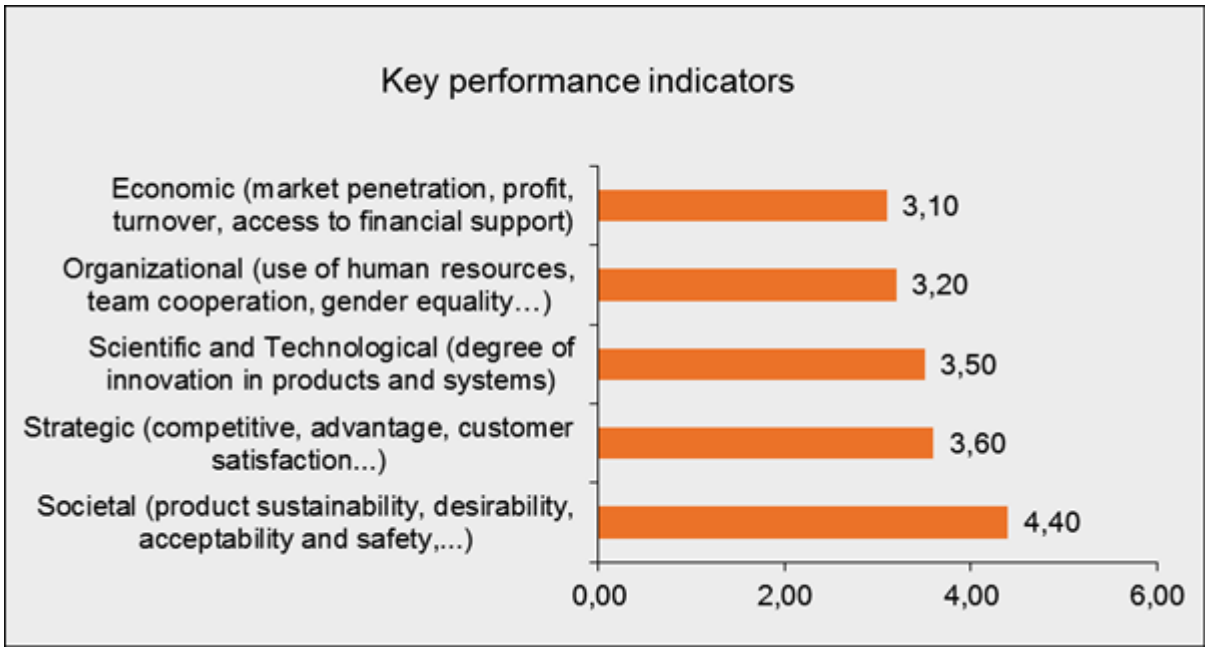
◯ No

◯ Yes

Please specify below

17. Section 4. Inclusion of RRI dimensions in the ICT for ageing society area

The most significant performance indicators were considered those that are societal related (i.e. product sustainability, desirability, acceptability and safety, effect on quality of life and health of customers...) with a level of importance of 4.4/5, but also all the other proposed performance indicators were judged of medium/high weight (between 3.1/5 and 3.6/5).



18. Do you think that the use of these performance indicators could be an appropriate instrument to evaluate the impact of RRI inclusion on R&I (Research and Innovation)?

- ◯ No
- ◯ Yes

If “No”, please explain your reasons.
If “Yes”, please indicate how you would implement the use of the performance indicators.

18. Conclusions

19. Please include below any further comments or observations that you would like to make that have not been addressed by the previous questions.

20. Would you like to be included in the list of stakeholders' that contributed to the Delphi Exercise?

(analysis of collected data will only be done on anonymized groups of respondents and reports will contain data in aggregate terms. The list of contributors will be included as annex of the Implementation Plan and you will receive a draft of the report prior to official publication)

- ◯ Yes
- ◯ No
- ◯ I will decide once received the draft report and in case I will inform you

Please include here the precise name and affiliation you like to be included in the report

Thank-you very much for taking the time to complete this questionnaire.
You will receive the draft and final versions of the Implementation Plan on RRI in ICT for an ageing society and you will be informed about the next phases of the Responsible Industry Project.