# Environmental Dimension

**Forms:**

| To whom | Form | Description |
|---|---|---|
| Interviewer | Guiding question | Questions in plain language questions, with examples and with check boxes not to forget anything |
| Interviewer | Key points of interview | To help with notes taking and to guide final questions. **Print from the PPT file in this folder.** |
| Interviewee | Interview questions | To help to visualize and go back to previous points |

**Instructions:**
1. Explain the purpose of the interview and ask the interviewee to sign then consent form
2. Hand out to the interviewee the "Interview questions" form
3. Ask questions in "Guiding questions" form
4. During the interview, make notes on "Key points of interview" form. <u>Make sure it is readable</u>, as interviewee will see it
5. Thank the interviewee and make yourself available to answer any further questions

**Please print the forms for the respective dimension and take them with you to the interview.**
**Print "KEY POINTS OF INTERVIEW".**

**ENVIRONMENTAL DIMENSION** (Interviewer copy. Tick questions as you advance in the interview.)

| Specific Questions | Remind participants to consider... |
|---|---|
| MATERIAL AND RESOURCES<br>[  ] Think about the **equipments** and **supplies** that are part of the system. Which materials may be consumed to **produce** them?<br>[  ] What about to **use** the system? For example, supplies.<br>[  ] Does the system change the way people **consume material**? For example, encourage people to buy more? | [  ] different types of material, e.g., raw materials, recycled materials.<br>  Say, for example: *you mentioned packaging. What is this made of?*<br>[  ] the consumption of material by the **user, beneficiary (person or institution)** * or any other **person or institution that might be affected** by the system.<br>  Say, for example: *you mentioned the system does not increase the consumption of material. What about his institution? What about other people or institutions that do not directly interact with the system?*<br>*a beneficiary does not necessarily use the system, but may benefit from it. E.g. a baby for a monitoring device. |
| SOIL, ATMOSPHERIC AND WATER POLLUTION<br>[  ] Think again about the **equipments** and **supplies** that are part of the system. Does **producing** them generates **waste** or **emissions**?<br>[  ] Does the system itself produces **waste** or **emissions**?<br>[  ] Does the system influence how much **waste** or **emissions** people or institutions generate?<br>[  ] Or, alternatively, does it promote (or impair) **recycling**? | [  ] hazardous waste, solid waste, emissions, wastewater, hardware components, etc.<br>  Say, for example: *you mentioned the systems does not increase emissions, but can it create other kinds of waste like solid waste or wastewater?*<br>[  ] waste and emissions generated by the **user**, by the **beneficiary** (person or institution)**,** or by **any other person or institution that might be affected** by the system.<br>  Say, for example: *you mentioned that the system promotes recycling among its users. Can it affect the waste generated by other people or institutions that do not directly interact with the system?* |
| BIODIVERSITY AND LAND USE<br>[  ] Can the system impact the **plants** or **animals around it**?<br>[  ] What about **elsewhere**?<br>[  ] Can the system change the **size, use, of composition of the soil around it?** For example, by **occupying** land or by converting land into **cropland**?<br>[  ] What about **elsewhere**? | [  ] the animals, plants and soil affected by the **user**, by the **beneficiary** (person or institution)**, or by any other person or institution that might be affected** by the system.<br>  Say, for example: *you mention how the system does not change the way company uses land. Can it affect the way other people or institutions that do not directly interact with the system use land?* |
| ENERGY<br>[  ] Does the system affect the **production of energy**?<br>[  ] What about the **use of energy**? E.g. enables or encourages less energy consumption or consumption from renewable sources.<br>[  ] Does the energy to **run the system hardware** comes from **renewable energy sources**? | [  ] *the energy consumption of its **user**, its **beneficiary** (person or institution) or any **other person or institution that might be affected** by the system.*<br>  Say, for example: you mention how the system encourages the user to be always connected, spending more energy. *Can it affect the energy use by other people or institutions that do not directly interact with the system?* |
| LOGISTICS AND TRANSPORT<br>[  ] Does the system affects the **need for movement** of **people** or **goods**?<br>[  ] Does the system affect the **means** by which **people** or **goods** move?<br>[  ] Does the system affect the **distance** that **people** or **goods** move? | [  ] *the transportation of its **user**, its **beneficiary** (person or institution) or any **other person or institution that might be affected** by the system.*<br><br>**Turn sheet** |

| | Say, for example: *you mentioned how the systems help to reduces the travel distance of goods the company sells. Can it affect the distance and means of transport for other people or institutions that do not directly interact with the system?* |
| --- | --- |

<div align="center">

**Finishing Questions**

</div>

**[    ]** During the interview,  use template to take notes of TOPICS and KEY POINTS raised.
  *Sample key points. " MATERIALS: user encouraged to shop",  " SOIL: depletes soils from nutrients","BIODIVERSITY: increase cropland", " ENERGY: user save energy", " LOGISTICS: reduced travel distance "*

**[    ]** Then say:
  *Let's take this scenario to the extreme: imagine that many people worldwide are using this or similar system for many years or decades. Think about how one thing may lead to another. We call this a chain of effects.  For example, if the system encourages people to buy more clothes, companies will produce more, generating more jobs in the developing world, but also creating  greater environmental damage.*

**[    ]** Show the list of key points captured, and ask:
  *Looking at these key points you mentioned during the interview.  Can you think of  chains of effects for **some of these key points** in the extreme scenario above?*
**[    ]** Encourage the interviewee to think about as many chains of effects as he or she can.

<div align="center">

Is there any **other issue** that is relevant to the **environment** that the system may affect?

</div>

**Evaluation Questions:**

- Background of the interviewee
    a. Age
    b. Gender
    c. Profession
    d. Expertise
    e. Education
- Were the questions easy to understand?
- Have the questions been useful for triggering **relevant** discussions on the possible effects of software system in the society / the individual / the environment / the economy / its own ability to endure ?
    a. Why or why not?

**ENVIRONMENTAL DIMENSION** (Interviewee copy )

| Specific Questions | Final Questions |
|---|---|
| MATERIAL AND RESOURCES<br>[   ] Think about the equipment that are part of the system. Which materials may be consumed to **produce** the system?<br>[   ] What about to **use** the system? For example, supplies.<br>[   ] Does the system change the way people **consume material**? For example, encourage people to buy more? | [   ] Extreme scenario:<br><br>● Imagine that many people worldwide are using this or similar system for many years or decades.<br><br>● Think about how one thing may lead to another.<br><br>● For example, if the system encourages people to buy more clothes, companies will produce more, generating more jobs in the developing world, but also creating greater environmental damage.<br><br>[   ] Looking at this list of key points you mentioned during the interview, can you think of a chain of effects for some of these key points in the extreme scenario above? |
| SOIL, ATMOSPHERIC AND WATER POLLUTION<br>[   ] Think again about the **equipments** and **supplies** that are part of the system. Does **producing** them generates **waste** or **emissions**?<br>[   ] Does the system itself produces **waste** or **emissions**?<br>[   ] Does the system influence how much **waste** or **emissions** people or institutions generate?<br>[   ] Or, alternatively, does it promote (or impair) **recycling**? | |
| BIODIVERSITY AND LAND USE<br>[   ] Can the system impact the **plants** or **animals around it**?<br>[   ] What about **elsewhere**?<br>[   ] Can the system change the **size**, **use, of composition of the soil around it?** For example, by **occupying** land or by converting land into **cropland**?<br>[   ] What about **elsewhere**? | |
| ENERGY<br>[   ] Does th<br>e system affect the **production of energy**?<br>[   ] What about the **use of energy**? E.g. enables or encourages less energy consumption or consumption from renewable sources.<br>[   ] Does the energy to **run the system hardware** comes from **renewable energy sources**? | |
| LOGISTICS AND TRANSPORT<br>[   ] Does the system affects the **need for movement** of **people** or **goods**?<br>[   ] Does the system affect the **means** by which **people** or **goods** move?<br>[   ] Does the system affect the **distance** that **people** or **goods** move? | |
| Is there any **other issue** that is relevant to the **environment** that the system may affect? ||