Wicked Problems Plaza E-waste – educational guide

Wicked problem: E-waste produced by smartphones

1. Introduction

In this class, a group of max 30 students will work on the wicked problem of e-waste. You will look at the problem from different perspectives, and go from problem orientation to potential solutions. The approach consists of brainstorming, stakeholder roleplay and dialogue methods. Students will learn how to critically assess a present-day problem and will understand why such problems cannot easily be solved.

By way of preparation, you will ask the students to read the E-waste infosheet, in which the problem is shortly explained and 4 possible solutions to the problem are presented. In this infosheet students will also find information about the stakeholder roles and an exercise in order to prepare themselves for the stakeholder dialogue. At the beginning of the class you will shortly recap this information, for example by means of the E-waste PowerPoint presentation, during which you can enlarge on the wickedness of the problem. You can also explain the method and practical exercises that the students will be involved in, such as the stakeholder-triangle. In this way the class will truly consist of a combination of thinking, listening, and in a later stage, talking and acting.

Below, you will find a script that can help you to structure the class. This can help you to prepare the practical exercises and to gain more insight in the WPP methodology. You can also choose to start with the equity space, instead of the interest space, but make sure you do a recap after the second space. And you can adapt the tools to the needs of the specific group and the time allocated for the session. Some of the practical exercises in the script are explained in detail under the script.

2. Script

When and what	Content/questions	Who	How long?	What do you need?
Preparing the class	• Reading the infosheet about the wicked problem and preparing the stakeholder roleplay	Student	One week in advance	'E-waste' Infosheet, attachment 1a Internet connection to find more information about the wicked problem and the stakeholder
9.00-9.30 Introduction	• What is a wicked problem? • Why is e-waste wicked? • What is the WPP and what will we do today?	Teacher	30 min	• E-waste Powerpoint presentation about wicked problems by professor Van Tulder, attachment 1b • flipchart/blackboard to take notes
9.30-10.00 Interest space	Positioning in the stakeholder triangle	all	30 min	Tape, paper and sufficient space to move around. See chapter 3.1 for an elaboration
10.00-10.30 Equity space	• Why are you here?	Personal intervie	30 min	Coffee, light music.

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	• In what way do you work on a solution for the problem? Or why not (yet)? Write keywords on post-its	ws in pairs		
10.30-10.45 Short recap	Reading the post-its and earlier insights of the interest space.	All		Flipchart
10.45-11.15 Efficiency space 3 'solutions'	• What works and what does not work in this solution? • Why does this solution not yet completely solve the wicked problem? • How can we upgrade the solution in order to better address the wickedness of the problem?	4 sub-groups	10 min 10 min 10 min	4 flip charts, markers, post-its, 'E-waste' info sheet with the four solutions.
11.15-11.30 Short pitches	Short pitch of the new upgraded solution, q&a with other groups	4 sub-groups	4x3 min	
11.30-12.00	• What did I learn today? • What can I do with these learnings?	all	30 min	

3. An elaboration of some of the tools.

3.1 Interest space

Aim: Introduction of participants and their positions and interests

3.1a Stakeholder triangle

This practice can be used in the interest space. Before doing this exercise, it is useful to give some explanation of the triangle in the introduction, for example with the PowerPoint presentation that we provided in attachment 1b.
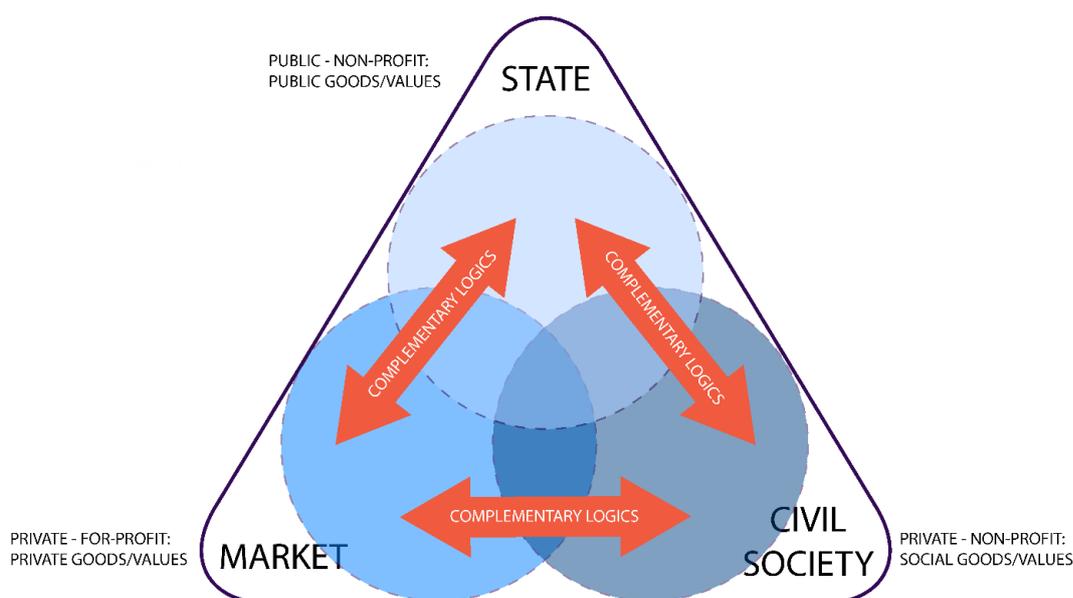
This information sheet is part of the WPP education guide and developed by the Partnerships Resource Centre at RSM Erasmus University, EcoCampus, Flemish government and Catapa,a Flemish NGO working on sustainable development with a focus on mining issues.

Create a triangle on the floor with tape, rope or markers, make it as big as possible (preferably 3x3 meter). Put post-its/paper on the 3 corners and write 'civil society', 'market', and 'state' on them.

Round 1: position-based negotiation

Ask participants to take a position in the triangle. Which stakeholder role do they represent and in which corner do they belong (civil society, company, government, or somewhere in between?). This position represents your primary stake.

A question you may use: 'from which role/position do you want to take steps in order to solve the problem of e-waste?

Ask some participants why they are in that position. Who do they represent? Which role do they also have (e.g. consumer, parent, concerned citizen)?

How does it feel to be put in one corner? How do you feel now that you are representing a sector?

Who is still missing in the triangle? Which stakeholder should have been there and why are they not here? How can they be represented?

Round 2: interest based negotiation

Select three participants per corner; e.g. Congolese government, the government of Flanders and European government in the 'State' corner. 'Phone company', 'recycling company' and 'Congolese mine employer' may be in the 'Market' corner while the 'Communities' corner may be populated by CATAPA, Congolese mineworker and phone consumer. Or any other choice that guarantees diversity. This will result in the presence of 9 persons per corner in the triangle. The others step out of the triangle and watch what will happen. Ask the 3 groups: what kind of action do you want to take? What is your interest in taking that step?

For example: the government of Flanders may say: 'I will subsidise the recycling of phones'. This will make the recycling company happy, so they both do a step towards the middle. The phone company may be less happy and might take a step back. The other parties are not influenced by this statement. Then another player will propose another action, to which people will react by taking steps forward or backwards.
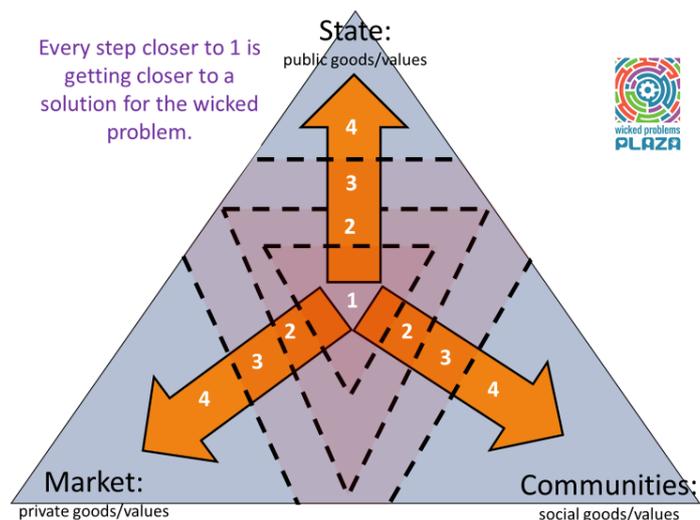
The triangle above gives an indication about the amount of steps that parties can take in order to come closer or less close to each other. You can use the PowerPoint beforehand to explain these steps.

After each step, you can ask the students outside the triangle to comment on what they see. They can also recommend steps in order to change the field. Also, you can make them wonder what the current reality looks like.

Round 3: collective vision based negotiation

How can the parties come to an ideal solution? How can the students who are outside of the triangle convince the insiders to make everyone come to the middle (the so-called partnering space?). How can we make sure that parties will not only shake hands, but also hug each other?

3.2 equity space
Aim: use this space as a time for personal reflection and connecting to the heart.

Personal interviews in pairs: let participants interview and listen to each other as they discuss personal questions for reflection. Ask the students to pair up with a stakeholder they are not very familiar with, to sit somewhere comfortably and get a cup of coffee. As a teacher you explain the questions and the exercise right at the beginning. Every stakeholder asks 2 questions to the other within a 15 minutes' time frame, after which they change roles. The questions are: 'Why are you here?' and 'In what way do you work on a solution for the problem? Or why not (yet)? The interviewing stakeholder does not interrupt the other with new questions or his/her own answers (even agreeingly nodding is an answer). The interviewer listens carefully to what the other says and will write this down in keywords on a post-it. The interviews finish after 30 minutes and the stakeholders give their post-it to the other for validation. They then copy all the keywords on the flipchart.

3.3 Recap: The teacher then gives the students 5 minutes to read the post-its in silence. Next, students may comment on what they have read. Ask them if and in what way the new information that has been gathered in this space, is similar or very different from what they learnt in the interest space. Have a short discussion about this, for 10 minutes max. Then move on to the next space.

3.3 efficiency space
Aim: This is the most active part of the Wicked Problems Plaza in which participants will work on potential solutions. It involves a lot of brainstorming and creative out-of-the box thinking. Still, it also involves a critical assessment of the feasibility of approaches. And it approaches the question of the efficiency of current approaches and why they are not yet working.

Brainstorming: Divide the group of students into 4 subgroups, preferably with an equal share of stakeholders (CSO, market, government). Let them take place near a flip-chart and give them markers and post-its. Also hand them the E-waste infosheet again and tell the subgroups which solution they will work on. The students will get 30 minutes for brainstorming, and will concentrate on three questions. They will have to pitch their answer to the third question. Explain to them that out of the groups one person will pitch the new solution, in only 3 minutes. You will give them the first question right at the beginning, the second one after 10 minutes, and the third one after another 10 minutes. With the last question, tell them again about the expectations for the pitch. If needed, they can make a separate flip-chart paper with keywords for the pitch. The three questions are:

- What works and what does not work in this solution?
- Why does this solution not yet completely solve the wicked problem?

● How can we upgrade the solution in order to better address the wickedness of the problem?

Pitches: Ask the pitcher to explain the answer to the final question in just 3 minutes. Preferably they 'sell' their new solution to the other groups. After 3 minutes, ask the other 3 groups to ask questions about this new solution. This should be done in only 2 minutes. Keep a strict timing, in order to make it a vivid space. After each round of pitches and q&a thank all the stakeholders for their good work and let them applaud each other.

For more information on the method, tools etc, visit https://www.rsm.nl/prc/what-we-offer/wicked-problems-plaza/