Review Break
Game Rules

> A card game for discovering stakeholders' values related to your product or service.

Introduction

Early reflection in the innovation process can help to avoid that technologies fail to embed in society. Or help that their positive and negative impacts are better governed at a much earlier stage. The European Commission favours this early reflection and wants the following anchor points to be reflected in the product dimension (Schomberg, 2011).

The should be:

- Ethical acceptable (in compliance with the EU charter on fundamental rights),
- Sustainable and ,
- Socially desirable (as aimed at in the Treaty of the EU, such as quality of life, equality among men and women etc.

This game is aimed to facilitate this early reflection and has integrated these anchor points in the value cards. The game is based on the Judgement Call by Stepanie Ballard (2019) and adapted to smart farming and food with the help of discussions on ethical issues in IOFH2020 during 2019.

N.B. It is advised that someone acts as game leader. The game leader is acquainted with the rules and the course of the game and prepares the materials that will be used. The game leader can act as discussion leader him/herself or appoints someone for this job.

Rules of the game

In this cooperative game a mixed team of your company writes reviews from different stakeholder perspectives about a product or service that is being developed. These reviews generate a discussion in which concerns are highlighted. The group is a winner when it has rich discussions and considers next steps. A varied team consists of product developers, engineers, someone from sales and marketing, and people from the finance and human resource department etc. The variety in the group is useful for writing rewriting reviews from different stake-holder perspectives. Make sure that each participant has enough information about the envisaged product or service, i.e. how the technology will be applied.
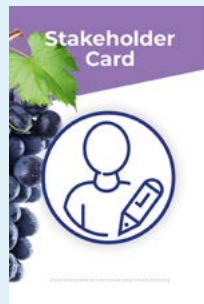
What do you need?

Playing Cards

Value Card **Transparency** Stakeholder's right to know about how people behave, businesses operate and digital services work.	**Rating Card** **2** ★★☆☆☆	**Stakeholder Card**	**Discussion starter** Does any of the stakeholder concerns surprise you? Why?	**Game steps** 1 Choose a scenario, product, service or Use Case 2 Identify relevant stakeholders 3 Draw a hand (yellow, blue and purple card) 4 Write reviews 5 Collect reviews, reshuffle and read them 6 Discuss with the team
Ethical value cards	Rating cards	Stakeholder cards	Discussion starter cards	Game steps cards

Additionally you need

- White board/ flip chart
- Index cards
- Pens/pencils for each player

Course of the game

1 Choose a scenario/ product/ service/ Use Case / Innovation Experiment

2 Identify relevant stakeholders

3 Draw a hand (yellow, blue and purple card)

4 Write reviews (considering the rating value, ethical concern, and stakeholder)

5 Collect reviews, reshuffle and read them

6 Discuss with the team

1. Choose a scenario

As a first step choose a product or service to write the reviews about. Below, when we write 'product', also services are included. The game will have more impact if teams discuss their own product, but they can also choose to play a scenario not related to their current work. In any case, teams can explore real-world implications of the application or technology they are developing.

Examples of a product scenario:
- 'GPS and temperature sensor to tracking during wine transport'
- 'Drone images to identify crop disease'
- 'AI analytics to do yield prediction of crops'

The scenario is put on the white board/ flip chart.

2. Identify relevant stakeholders

Together, list the stakeholders related to the scenario. There are three types of stakeholders. See explanation below. Write them on the white board/ flip chart. Prepare the stakeholder cards according to this list: put aside the stakeholder cards which are not relevant and write additional stakeholders on the blank stakeholder cards.

'Stakeholder' can refer to individuals (e.g. end user, consumer, farmer) or to groups or organisations (governments, animal welfare organisations, insurance companies).

There are three type of stakeholders:

- Direct stakeholders

  o   *They interact directly with the technology/ product and can include end users, tech service providers, engineers, hackers, livestock.*

- Indirect stakeholders

  o   *They do not interact directly with the technology/product but are affected by its use. E.g. families of end users,*

- Excluded stakeholders

  o   *Those who cannot use the technology. Reasons for exclusion can include physical, cognitive, social or cognitive constraints. For example, in some cases, farmers with old management support systems not apt for the new technology.*

See for example the stakeholders in the product scenario 'GPS and temperature sensor tracking during wine transport' in Figure 2.

Figure 2.

Example: stakeholders in the scenario 'GPS and temperature sensor tracking during wine transport'

- Winemaker/ seller
- Transport company
- Wine trader
- Insurance company
- Hacker
- Consumer
- Retailer

3. Draw a hand

You can play two or three rounds. For each round draw a hand.

Each player receives:

- one rating card (blue),
- one stakeholder card (purple) and
- one ethical value card (yellow).

You can put these cards in front of you, open on the table. You will write a product review from the point of view of the stakeholder in your hand, considering the rating value and ethical value also in your hand. Scores indications are explained in Figure 3.

Figure 3.

Rating cards and score indications for the stakeholder.

★   very negative

★ ★   negative

★ ★ ★   neutral

★ ★ ★ ★   positive

★ ★ ★ ★ ★ very positive

4. Write reviews (2 or 3 rounds)

The combination of the three cards in your hand gives a frame to write the product review. Use the Index card to put down the review. In the header put the number rating stars (left) and the ethical value (right). See the examples in Figure 4.

The stakeholder card indicates the stakeholder perspective from which you write the re-view. As an example, if you draw the 'hacker' stakeholder card, you would write a review from the perspective of someone trying to exploit the system. The ethical concern card in-dicates the ethical concern you should consider in your review. For example if you draw the 'accounta-bility' card, consider how the stakeholder thinks that you as tech service provider showed to be accountable or not accountable for how the product operates. Or for the so-cial impact. Note that the five star review of the hacker means that this stakeholder is very positive on the chance to hack the system. Use at least four lines to write the review. Sign your card with the stakeholder you represented.

Figure 4. Example: reviews in the scenario 'GPS and temperature sensor tracking during wine transport'

★ ★ ★ ★ ★ **Privacy**

When we were informed that the winery wanted to use the gps tracking system, we were afraid it could reveal information about the where abouts of our operations, but we were assured that the system secures our log data and does not keep them longer than necessary (i.e. after the delivery is accepted and paid). Also data Will not be available to other companies. We made a contract for this with the winery.

- Transport company

Fig 4 (continued). Example: reviews in the scenario 'GPS and temperature sensor tracking during wine transport'

★ **Inclusiveness**

The general idea behind the system is ok, because wine Conditions transport is more secured, but the additional Costs for me are too large to join the system. Also, now that there is more transparency there are more Issues during transport, and it is not yet clear who will handle them – I do not have so much time to be involved!

- Wine trader (small)

When you have written your review, discard your hand and draw another one for another round. Each player should write 2-3 reviews. It is important that each review is written readably.

N.B. When playing for the first time: consider doing one round and go to steps 5 and 6 to learn how the game works and then start with playing another round.
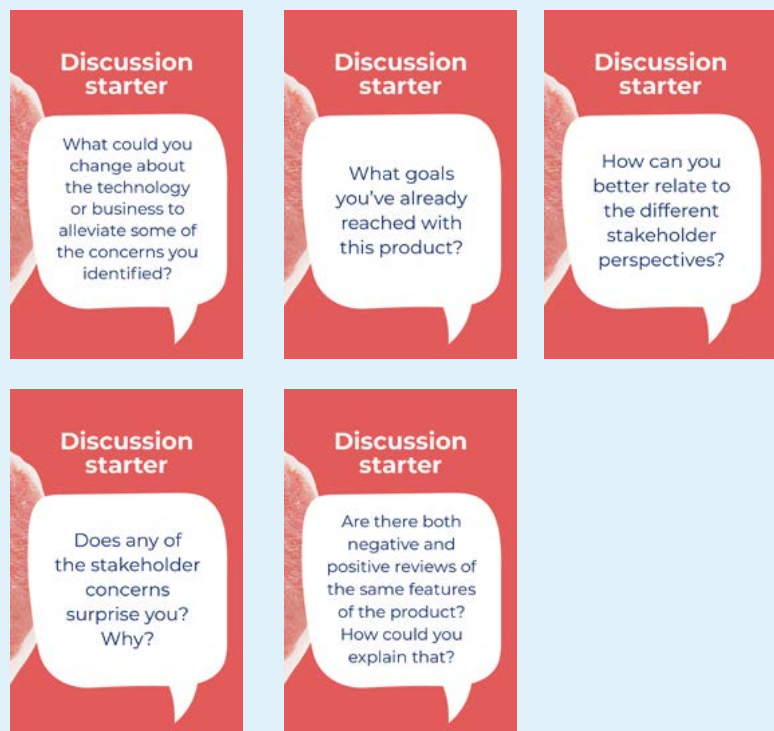
5. Collect reviews and read them
Once all reviews are completed, have one player to collect, shuffle them and redistribute them. Take turns to read the reviews aloud. Listen for the themes to emerge. Together they should provide the a holistic picture by providing multiple perspectives of the same product/technology. After all the reviews have been read, discuss them.

6. Discuss with the team

The reviews are discussed with the group. The questions to start the discussion are on the discussion starter cards that are handed over to the discussion leader. Figure 5 gives an overview of the discussion starters.

Figure 5. Questions to start the discussion

Discussion starter

What could you change about the technology or business to alleviate some of the concerns you identified?

Discussion starter

What goals you've already reached with this product?

Discussion starter

How can you better relate to the different stakeholder perspectives?

Discussion starter

Does any of the stakeholder concerns surprise you? Why?

Discussion starter

Are there both negative and positive reviews of the same features of the product? How could you explain that?

At the end of the game, the written review cards could be given to the person(s) who is responsible for the further development of the envisaged product or service.

Next steps?

The insights gained from playing the game can be included by the tech developers in the further design and development of the product or service. Next to adapting the design or the technology, also the environment or context in which the technology will be used could be changed. For example, a farm that is going to introduce robots will make adjustments for the safety of its employees in the stables, provide training courses or introduce new work procedures. The environment can be adjusted in different ways: physically, socially or legally (through new agreements). When adapting the environment, it is primarily up to organizations and stakeholders to arrange what is necessary. In some cases the government could have a responsibility to act. For example to support the uptake of new technology with subsidies or support innovation to take away barriers for adoption.

References

- Schomberg, R. von (2011), Introduction in R. Von Schomberg (ed.), Towards Re-sponsible Research and Innovation in the Information and Communication Technolo-gies and Security Technologies Fields. EU publications Office 7-15.

- Ballard, Stephanie (2019), Judgment Call – the Game. Using value senstive design and design fiction to surface ethical concerns related to technology.

Comments? Suggestions?

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