The Ethics Canvas

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Introduction

- **Integration of Ethics in Research & Innovation (R&I) settings is underdeveloped** and often restricted to:
    - <u>Academia:</u> ethics clearance
    - <u>Industry:</u> meet legal requirements

- Growing impacts that technological innovations have on our society bring along increasing importance to reflect on **ethical implications**

- Increasing need for research and innovation teams to articulate and reflect their ethical values during the **design of applications**

- **Reputational concerns** are rising at an organisational level

- **Ethic Canvas** is a **new methodology** for identifying, evaluating and resolving **ethical impacts** during **R&I** stages:
  - Formation of knowledge and concepts
  - Design of the technology
  - Prototyping and testing
  - Integration of R&I outcomes into society

- **Foster ethically informed technology design** by engaging R&I teams with the ethical impacts

- Transform affordances of *Business Model Canvas* into an *Ethics Canvas*

- **Collaborative brainstorming tool** with two aims:
  - Help teams identify, discuss and articulate possible ethical impacts
  - Bring about *pivots* in the design

- Because new technologies have a **profound impact** on the way we live, on the **relations we have**, on the **political processes we engage in**.

- For your application innovation?
  - First: because it is good for the image of your business (instrumental goal)
  - Second: because it actually improves the service you provide! (substantive goal)
  - Third: because it is the *good* thing to do, it contributes to your idea of a better society and being a good person (normative goal)

- The neutrality thesis: technologies are *instruments* that we can use to attain our own goals.
  - "People kill people"
- The determinism thesis: technologies *dictate* everything we do, they determine who we are.
  - "Guns kill people"
- The co-shaping thesis: technologies and humans together "construct" our social world.
  - "Gun-men kill people"

- Changes in individual **behaviour**

- Relationships between **individuals**

- Relationships between **collective actors**

- **Relationships** *between* individuals and collectives

- Impact in the **public sphere**

- Impact of technology **failure**

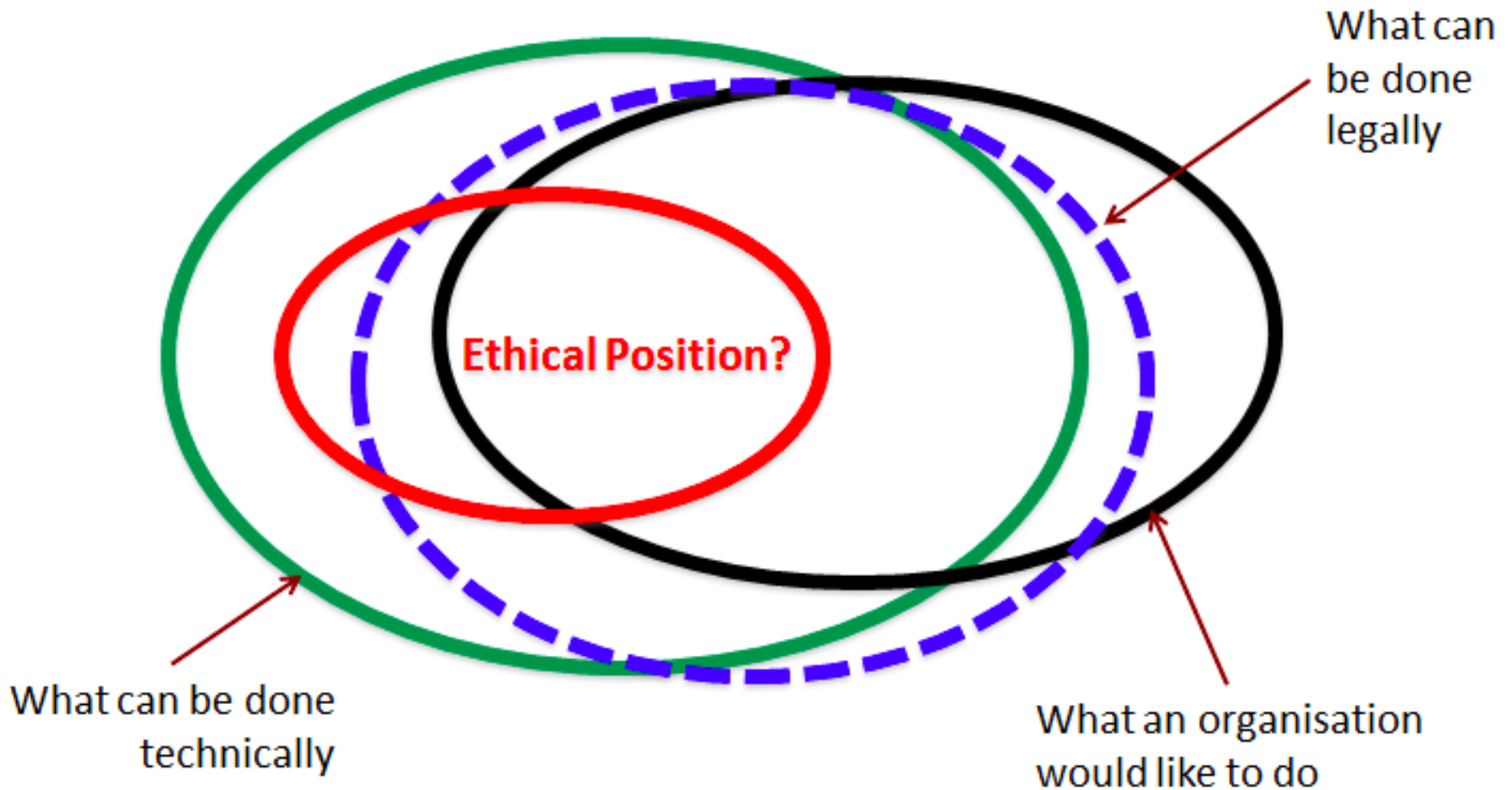- Impacts on the **environment** and production processes

Examples

Examples

What can be done legally

What can be done technically

What an organisation would like to do

Ethical Position?

- Levels of practising ethics on responsible R&I (Brey, 2000):

  - *Disclosure*: exploration and identification of ethical impacts

  - *Theoretical*: frameworks to evaluate the impacts

  - *Application*: moral deliberation to overcome negative impacts

- We aim to address the neglected *disclosure level* with a methodology:

  - Keep pace with **volume and speed** of innovation

  - **Accessible** to non-ethicist

    - R&I teams have an important perspective

    - R&I teams position to implement pivot to mitigate negative impact

  - Enabling a **collaborative** process

- Making ethics part of the process of research and innovation
- Reflective tool for "Value sensitive design":
  - What kind of values do we want to inscribe in our application? (our vision of the Good Life)
  - How can we operationalise these values?
  - How can we "design" technologies and their applications accordingly?
- "Narrative" approach:
  - Involving the innovator (you!)
  - Assumption: we recognise ethical problems by talking about them in a creative way – "creating narratives"

- *Business Model Canvas* (BMC) is a brainstorming tool that analyses how business value is created, delivered and captured

- Developed by Osterwalder & Pigneur, 2010.

- Open Source (Creative Commons) – strategyzer.com

- Nine building blocks describing business in a holistic manner

- Printed canvas and online versions available

- <u>Fulfills our two aims</u>:
  - Highly **accessible** to people without specialised knowledge
  - Allows participants to engage in **collaborative** reflection

Key Partners 🔗

Who are our Key Partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?

MOTIVATIONS FOR PARTNERSHIPS
Optimization and economy
Reduction of risk and uncertainty
Acquisition of particular resources and activities

Key Activities ✔️

What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue streams?

CATEGORIES
Production
Problem Solving
Platform/Network

Key Resources 🏭

What Key Resources do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?

TYPES OF RESOURCES
Physical
Intellectual (brand patents, copyrights, data)
Human
Financial

Value Propositions 🎁

What value do we deliver to the customer?
Which one of our customer's problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?

CHARACTERISTICS
Newness
Performance
Customization
"Getting the Job Done"
Design
Brand/Status
Price
Cost Reduction
Risk Reduction
Accessibility
Convenience/Usability

Customer Relationships ❤️

What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?

EXAMPLES
Personal assistance
Dedicated Personal Assistance
Self-Service
Automated Services
Communities
Co-creation

Channels 🚚

Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

CHANNEL PHASES
1. Awareness
   How do we raise awareness about our company's products and services?
2. Evaluation
   How do we help customers evaluate our organization's Value Proposition?
3. Purchase
   How do we allow customers to purchase specific products and services?
4. Delivery
   How do we deliver a Value Proposition to customers?
5. After sales
   How do we provide post-purchase customer support?

Customer Segments 👥

For whom are we creating value?
Who are our most important customers?

Mass Market
Niche Market
Segmented
Diversified
Multi-sided Platform

Cost Structure 🏷️

What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

IS YOUR BUSINESS MORE
Cost Driven (leanest cost structure, low price value proposition, maximum automation, extensive outsourcing)
Value Driven (focused on value creation, premium value proposition)

SAMPLE CHARACTERISTICS
Fixed Costs (salaries, rents, utilities)
Variable costs
Economies of scale
Economies of scope

Revenue Streams 💰

For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

TYPES
Asset sale
Usage fee
Subscription Fees
Lending/Renting/Leasing
Licensing
Brokerage fees
Advertising

FIXED PRICING
List Price
Product feature dependent
Customer segment dependent
Volume dependent

DYNAMIC PRICING
Negotiation (bargaining)
Yield Management
Real-time-Market

INDIVIDUALS

Individuals Affected

Personal Behaviour

Personal Relations

ORGANISATIONS

Organisations Affected

Behaviour in Organisation

Relations in Organisation

Ethics Canvas

Project Title:

Authors:

Date:

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SOCIETY

Environment

Economy

Culture and Politics

Ethics Canvas

Project Title:

Date:

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Individuals Affected

- Which types of individuals might be affected by your project?
- Think of users, non-users, employees, gender, culture,...

Behaviour

- How do the daily activities of these individuals change?

Relations

- Informal relations affected
- Formal relations affected

Your Team's Ethical Values

- What are your core ethical values?
- Think about the ways in which you want to better the lives of individuals and society?

Support/Objections

- How does your project affect either support of objections amongst organisations/groups?

Public Sphere

- How does your project impact the public sphere?
- How does your project impact the public perception of the problem you try to solve?
- Think of government involvement, changing conduct of people in public places like schools, hospitals,...

Organisations/Groups Affected

- Which organisations or groups might be affected by your project?

Resources

- What human or non-human resources does your company, project and users need?
- What ethical impacts does the supply chain of the resources/infrastructures you use have?
- Think of environmental impacts due to energy use or labour exploitation due to outsourcing of labour.

Social Conflicts

- How does your project cause social conflicts?
- Think of inequalities between groups of people/ or between employer and employee .

Ethics Canvas

Project Title:

Date:

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Individuals Affected

Identify the types or cathegories of individuals affected by the product or service, such as men/women, user/non-user, age-category, etc.

1

Changes in Individual Behaviour

Name problematic differences in individual behaviour such as differences in habits, time-schedules, choice of activities, etc.

5

Changes in Individual Relations

Name problematic changes in relations between individuals, such ways of communication, frequency of interpersonal contact etc.

6

Social Conflicts

Capture possible social conflicts that could be caused by the project, such as labour conflicts, minority/majority conflicts, ethnic conflicts, etc.

11

Resolving ethical impacts

Select the four most important ethical impacts you discussed.

Identify ways of solving these impacts by changing your project's product/service design, organisation or by providing recommendations .

12

Organisation or Group Interests

Identify relevant ethical interests that other organisations or groups might have in your project; such as environmental, privacy, justice interests.

7

Public Sphere

Discuss how the general perception of somebody's role in society can be affected by the project, e.g. people behaving more individualistic or collectivist, people behaving more or less materialistic.

8

Organisations and Groups Affected

Identify the collectives or communities, e.g. groups or organisations, that can be affected by your product or service, such as environmental and religious groups, unions, professional bodies, competing companies and government agencies, considering any interest they might have in the effects of the product or service.

2

Products and Services provided

Name the different types of products and services that your project will provide

3

Impact of product or service failure

Capture the potential negative impact of your product or service failing to operated as intended, e.g. technical or human error, financial failure/receivership/acquisition, security breach, data loss, etc.

9

Impact of resource consumption

Capture possible negative impacts of the consumption of resources of your project, e.g. climate impacts, privacy impacts, employment impacts etc.

10

Resources needed

Capture the consumption of energy, raw materials, human resources, financial capital, social capital (trust, tolerance,...), marketing capital (reputation, brand,...), privacy and personal data needed by your product or service.

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The Ethics Canvas

- Canvas current version: **1.8**

- Web version:

https://ethicscanvas.org

- License: **Creative Commons Attribution Non-Commercial 3.0 Unported**

- Open-source: **https://github.com/calvodea/ethics-canvas**

- We can use the Ethics Canvas as tool for **capture and reflection of ethical implications** on R&I settings

- We promote a **reflective**, **unmediated**, **easy-to-use** and **self-service** approach to the analysis of ethical issues by researches / developers

- We applied an **iterative, usability-driven** approach to the design of the ethics canvas

- We tested it in classroom settings with **promising results**

- We made it **available to the community:** ethicscanvas.org

Thanks for your attention!

Any questions or feedback?

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