Data Ethics Canvas theodi.org/dataethics

Data Ethics Canvas
User guide | Facilitator guide

This document includes:

- ➔ The Data Ethics Canvas
- ➔ User guide
- ➔ Facilitator guide

Data Ethics Canvas

Title	Description	Comments #1	Comments #2	Actions and decisions	Responsible	Date
1. Data sources	Name/describe key your project's data sources, whether you're collecting data yourself or accessing via third parties. Is any personal data involved, or data that is otherwise sensitive?					
2. Rights around data sources	Where did you get the data from? Is it produced by an organisation or collected directly from individuals? Was the data collected for this project or for another purpose? Do you have permission to					

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

	use this data, or another basis on which you're allowed? What ongoing rights will the data source have?					
3. Limitations in data sources	Are there limitations that could influence your project's outcomes? Consider: • bias in data collection, inclusion/exclusion, analysis, algorithms • gaps or omissions in data • provenance and data quality • other issues affecting decisions, such as team composition					
4. Ethical and legislative context	What existing ethical codes apply to your sector or project? What legislation, policies, or other regulation shape how you use data? What requirements do they introduce? Consider: the rule of law; human rights; data protection; IP and database rights; anti-discrimination laws; and data sharing, policies, regulation and ethics codes/frameworks specific to sectors (eg health, employment, taxation).					
5. Your reason for using data	What is your primary purpose for collecting and using data in this project? What are your main use cases? What is your business model?					

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

	Are you making things better for society? How and for whom? Are you replacing another product or service as a result of this project?					
6. Positive effects on people	Which individuals, groups, demographics or organisations will be positively affected by this project? How? How are you measuring and communicating positive impact? How could you increase it?					
7. Negative effects on people	Who could be negatively affected by this project? Could the way that data is collected, used or shared cause harm or risk individuals being re-identified? Could it be used to target, profile or prejudice people, or unfairly restrict access (eg exclusive arrangements)? How are limitations and risks communicated to people? Consider: people who the data is about, people impacted by its use and organisations using the data.					

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

8. Minimising negative impact	What steps can you take to minimise harm? How could you reduce any limitations in your data sources? How are you keeping personal and other sensitive information secure? How are you measuring, reporting and acting on potential negative impacts of your project? What benefits will these actions bring to your project?					
9. Engaging with people	How can people engage with you about the project? How can people correct information, appeal or request changes to the product/service? To what extent? Are appeal mechanisms reasonable and well understood?					
10. Communicating your purpose	Do people understand your purpose – especially people who the data is about or who are impacted by its use? How have you been communicating your purpose? Has this communication been clear? How are you ensuring more vulnerable					

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

	individuals or groups understand?					
11. Openness and transparency	How open can you be about this project? Could you publish your methodology, metadata, datasets, code or impact measurements? Can you ask peers for feedback on the project? How will you communicate it internally? Will you publish your actions and answers to this canvas openly?					
12. Sharing data with others	Are you going to be sharing data with other organisations? If so, who? Are you planning to publish any of the data? Under what conditions?					
13. Ongoing implementation	Are you routinely building in thoughts, ideas and considerations of people affected in your project? How? What information or training might be needed to help people understand data issues? Are systems, processes and resources available for responding to data issues that arise in the long-term?					

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

14. Reviews and iterations	How will ongoing data ethics issues be measured, monitored, discussed and actioned? How often will your responses to this canvas be reviewed or updated? When?					
15. Your actions	What actions will you take before moving forward with this project? Which should take priority? Who will be responsible for these actions, and who must be involved? Will you openly publish your actions and answers to this canvas?					

User guide

What is the Data Ethics Canvas?

The Data Ethics Canvas is a tool for anyone who collects, shares or uses data.

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

Data Ethics Canvas theodi.org/dataethics

It helps identify and manage ethical issues – at the start of a project that uses data, and throughout.

It encourages you to ask important questions about projects that use data, and reflect on their responses. These might be:

- What is your primary purpose for using data in this project?
- Who could be negatively affected by this project?

The Data Ethics Canvas provides a framework to develop ethical guidance that suits any context, whatever the project's size or scope.

Original source

The Data Ethics Canvas is based on the Ethics Canvas, a higher-level framework for assessing the ethical implications of any project, developed by the ADAPT Centre for Digital Content Technology. The ADAPT Centre's Ethics Canvas is itself based on the original Business Model Canvas by Alex Osterwalder.

The ODI's theory of change

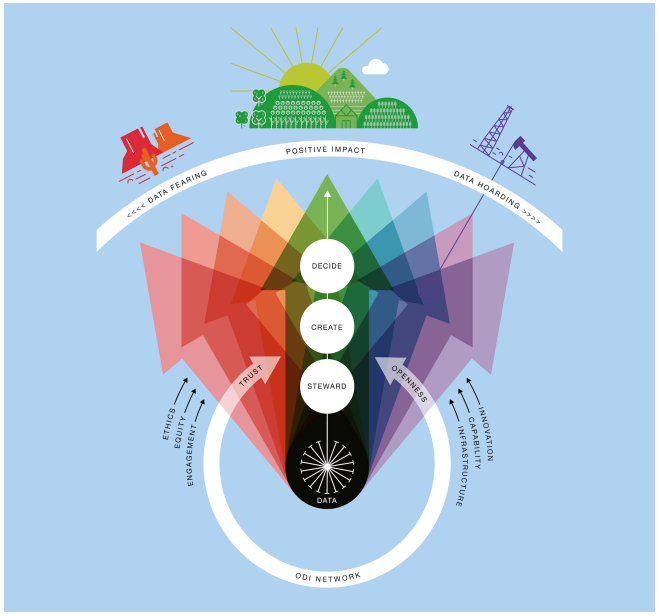
We want people who steward data, and people who create things with it, to act in ways that bring about positive impacts.

Ethical use of data helps to improve trust, and bring about the best economic and social outcomes.

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

Data Ethics Canvas theodi.org/dataethics

We want to avoid a future where data is feared or hoarded. We want data to work for everyone.



Find out more at:
theodi.org/theory-of-change

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

Data Ethics Canvas theodi.org/dataethics

What is data ethics?

The Open Data Institute defines data ethics as: ***'A branch of ethics that evaluates data practices with the potential to adversely impact on people and society – in data collection, sharing and use'.***

Data ethics relates to good practice around how data is collected, used and shared. It is especially relevant when data activities have the potential to impact people and society, directly or indirectly.

For example, an automated data model might make decisions about whether someone is eligible for a mortgage, or what insurance they can be offered. And decisions about what data to collect – and what to exclude – might affect groups in a society.

Data ethics should be addressed at all stages:

- Stewarding data – collecting it, maintaining it and sharing it
- Creating information from that data – in the form of products and services, analysis and insights, or stories and visualisations
- Deciding what to do – informed by information from multiple sources along with experience and understanding

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

Data Ethics Canvas theodi.org/dataethics

Why use this tool?

Improve project planning

The canvas helps you to consider potential risks and impacts from the start of your project. It prompts debate about project objectives, intention and impact, and helps you consider wider ethical issues, relevant laws and regulation.

Grow impact and trust

Using the canvas, you can design better products and services while addressing bias. It helps you examine the impact that your data activities can have, and mitigate harmful impacts for people and communities.

Complement other ethics guidelines

The canvas helps to tease out risks around a project, without predisposing an outcome. It illustrates how one type of data activity can have many outcomes and consequences, depending on context, purpose and organisations involved.

Manage data ethics in the long-term

The canvas guides how you manage and discuss data ethics, and how you develop ethical frameworks and guidance around your project. It also helps you raise awareness of data issues in your organisation.

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

Data Ethics Canvas theodi.org/dataethics

Before you get started

Think about who to involve

We recommend involving people with a range of perspectives – from people within your organisation (if you have one) to people who may be impacted by your project.

Get leaders onboard

Engage senior people in the process of completing the canvas, to support any decisions or changes that might emerge.

Consider data literacy

You could run an introductory session about data ethics and key terms before completing the canvas, to help people understand the context.

How to use this tool

You can start anywhere on the canvas and complete the sections in any order.

For each section, take time to consider your answers. It helps to note them on sticky notes and stick them to the sections as you go. Where you can, share and discuss your responses with others.

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

Data Ethics Canvas theodi.org/dataethics

When you have completed the canvas, outline next-steps and ensure there is a person responsible for each action. Share notes about the discussion more widely if you can.

Tips

- Use the ODI's online template to record your notes and actions
- Complete the canvas in a group with a range of people
- Be sensitive to any power dynamics that might be in the room

What next?

Completing the Data Ethics Canvas is a starting point for transforming how your team or organisation handles data. To get the most of the tool, we recommend the following:

- Share your notes and actions from completing the canvas as widely as you can, particularly with people a ected by how your project collects, shares or uses data
- Review progress made towards your actions
- Monitor the ongoing impact of your work on individuals, groups and society
- Review and update your answers on the canvas, eg quarterly or at project milestones
- Run a retrospective or evaluation at the end of your project, to review your answers on the canvas and inform future work

You can share feedback, thoughts and ideas about the Data Ethics Canvas with the ODI at research@theodi.org.

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

The Data Ethics Canvas is also available at theodi.org/data-ethics-canvas.

Facilitator guide

Use this guide if you are facilitating a Data Ethics Canvas workshop.

- **Columns 1 and 2** reflect the canvas; **column 3** contains the extra facilitator guidance.

Topic	Description	Facilitator guidance
1. Data sources	Name/describe key your project's data sources, whether you're collecting data yourself or accessing via third parties. Is any personal data involved, or data that is otherwise sensitive?	Consider the various data types you plan to collect, process and use, including: • open data • personal data • sensitive data • anonymised data • operational data • third party data eg from social media, web-scraping or statistics you will be re-processing Make sure you know the provenance and lineage of the data (origins of data, and how and why it was collected), especially when data is from an outside source.

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

		When working with multiple sources, it could be helpful to conduct a data inventory to help you identify, organise and describe the different data sources you collect, access and maintain. See this ODI guide for advice on conducting a data inventory[1].
2. Rights around data sources	Where did you get the data from? Is it produced by an organisation or collected directly from individuals? Was the data collected for this project or for another purpose? Do you have permission to use this data, or another basis on which you're allowed? What ongoing rights will the data source have?	Check what rights you have to use data produced by other organisations, and whether any type of licence applies. Individuals may have rights over the data, or be contributing data that might identify or impact other individuals. As well as legal rights, consider the expectations of individuals and how comfortable they would feel with proposed data uses. For instance, data obtained from public sources eg social media sites or through web scraping should be used responsibly. Also, if you are planning to reuse or re-purpose data that you have collected from individuals but for a different use, you may need to go back and ask for permission or reassess your plans. Finally, there might be conditions around what you can and cannot do with third party data, or how it needs to be attributed. Check ODI's 're-users' guide'[2] for more advice.
3. Limitations in data sources	Are there limitations that could influence your project's outcomes? Consider: • bias in data collection, inclusion/exclusion, analysis, algorithms • gaps or omissions in data • provenance and data quality • other issues affecting decisions, such as team composition	Bias – whether intentional or not – always exists. It can be encoded into data. Sometimes biased behaviour can lead to illegal discriminatory practices. However, actively counteracting societal bias is often thought of as fair, for example positive discrimination policies to counter under-representation of certain groups. Making encoded bias and other limitations visible will help you identify those impacted, understand the consequences, and consider mitigations as necessary.

[1] The ODI (2018), 'How to create a data inventory', https://docs.google.com/document/d/12-L0F27JJ8n8MCFH5u5ZzEXeid_eXq60ANR5QOks-xs/edit#heading=h.59snqzr8wx76

[2] The ODI (2013), 'Re-user's guide to open data licensing', https://theodi.org/article/reusers-guide-to-open-data-licensing/

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

		Bias can creep into your project anywhere decisions are made about the data to collect, the training data to use, and the analysis model. This includes a product design team's decision to include (or fail to consider) a particular group's perspective eg the elderly. Bias can be hard to detect, so it helps to be upfront about your project's limitations ie who is not represented, whether and where you have used proxy data, and your basis for making assumptions. Convening people with different perspectives and backgrounds within your team, and through external engagement. might also help to flag potential limitations and address sources of bias.
4. Ethical and legislative context	What existing ethical codes apply to your sector or project? What legislation, policies, or other regulation shape how you use data? What requirements do they introduce? Consider: the rule of law; human rights; data protection; IP and database rights; anti-discrimination laws; and data sharing, policies, regulation and ethics codes/frameworks specific to sectors (eg health, employment, taxation).	Are you, or members of your team aware of any legal requirements or ethical frameworks that might apply to the collection, processing and use of data in your project? If working with personal data, you need to be aware of requirements within your context eg in the GDPR in the EU. Also think beyond traditional data protection laws and consider the broader social outcomes of your project, and how they could impact on people and human rights. For example, could certain analysis models or automated decision-making lead to discrimination against particular groups? Or would your project reduce access to services for more vulnerable customers? Beyond regulations, there may be other frameworks or codes of practice you should consider. Many of these apply to specific sectors eg financial regulations, medical association codes, or guidelines for statisticians. If in doubt, consult with your legal team or other subject-matter expert for advice.
5. Your reason for using data	What is your primary purpose for collecting and using data in this project? What are your main use cases? What is your business	Be clear about what you are trying to achieve with your project. Think about the benefits to yourself or your organisation, and the benefits or impacts on broader society.

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

	model? Are you making things better for society? How and for whom? Are you replacing another product or service as a result of this project?	Especially when planning to collect personal data, you need to be able to explain your intention and what you plan to do with the data e.g how long you will keep it. The data should be relevant to what you are trying to achieve. If you are unsure about what business model is right for you, or how data can help your objectives- see ODI's guide to AI business models[3], and policy design patterns[4].
6. Positive effects on people	Which individuals, groups, demographics or organisations will be positively affected by this project? How? How are you measuring and communicating positive impact? How could you increase it?	
7. Negative effects on	Who could be negatively affected by this project?	Different types of risks occur at different points in the data lifecycle[5] eg during data collection, sharing, or use. When identifying risks, it could be helpful to

[3] The ODI (2018), 'The role of data in AI business models', https://theodi.org/article/the-role-of-data-in-ai-business-models/
[4] The ODI (2017), 'Policy design patterns that help you use data to create impact' https://theodi.org/article/policy-design-patterns-that-help-you-use-data-to-create-impact/
[5] Open Data Watch, 'The data value chain: Moving from production to impact', https://opendatawatch.com/publications/the-data-value-chain-moving-from-production-to-impact/

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

people	Could the way that data is collected, used or shared cause harm or risk individuals being re-identified? Could it be used to target, profile or prejudice people, or unfairly restrict access (eg exclusive arrangements)? How are limitations and risks communicated to people? Consider: people who the data is about, people impacted by its use and organisations using the data.	break your project down into these various stages or even to isolate specific data flows. There are particular risks when you are working with personal data, or thinking about publishing anonymised data as open data. See this UKAN guide to anonymisation[6] and ODI project[7] which contains some examples of risks which may arise, and how they can be managed. The ODI's data ecosystem mapping tool[8] can also help you to visualise where particular risks may arise.
8. Minimising negative impact	What steps can you take to minimise harm? How could you reduce any limitations in your data sources? How are you keeping personal and other sensitive information secure? How are you measuring, reporting and acting on potential negative impacts of your project? What benefits will these actions bring to your project?	The ODI is developing various tools to help you minimise risk during the data lifecycle – especially when working with personal data. See 'Managing the risk of re-identification' project[9].
9. Engaging with people	How can people engage with you about the project? How can people correct information, appeal or request	Has someone in your team been appointed to respond to requests or feedback?

[6] UKAN 2019, 'Anonymisation decision-making framework', https://ukanon.net/ukan-resources/ukan-decision-making-framework/
[7] The ODI (2018), 'Managing the risk of re-identification', https://theodi.org/project/rd-broaden-access-to-personal-data-while-protecting-privacy-and-creating-a-fair-market/
[8] The ODI (2018), 'Creating ecosystem maps for open data', https://theodi.org/article/creating-ecosystem-maps-for-open-data/
[9] The ODI (2018), 'Managing the risk of re-identification', https://theodi.org/project/rd-broaden-access-to-personal-data-while-protecting-privacy-and-creating-a-fair-market/

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

	changes to the product/service? To what extent? Are appeal mechanisms reasonable and well understood?	Consider the mechanisms available for people to provide feedback and if they are accessible eg can people without access to smartphones or with lower levels of literacy engage with you? If you are planning to publish any of your data, see this ODI guide for tips on how to engage with reusers[10].
10. Communicating your purpose	Do people understand your purpose – especially people who the data is about or who are impacted by its use? How have you been communicating your purpose? Has this communication been clear? How are you ensuring more vulnerable individuals or groups understand?	Be transparent not only about purpose for data collection, but also about the research design, analysis tools, and algorithms you are using. Engaging with stakeholders throughout the process and factoring in their expectations can help reduce risks later on. Do not only communicate benefits. Communicate potential risks and harms too. This will help people meaningfully engage with you. Make sure you are communicating in short and accessible sentences ie not lengthy disclaimers and consents. Your communications should be developed and tested with people. This case study about the failed use of AI to improve school bus schedules in Boston[11] illustrates what can happen if you fail to properly communicate your project design, and intended benefits and outcomes to affected groups.
11. Openness and transparency	How open can you be about this project? Could you publish your methodology, metadata, datasets, code or impact measurements? Can you ask peers for feedback on the project? How will you communicate it internally?	Being open about your plans and progress can help to build trust. Multiple perspectives, especially from users, can help to to improve your product/service. However, there might be cases where full disclosure is limited by legitimate interests, eg confidential information, or commercial interests. At the ODI we encourage organisations to be as open as possible, and we encourage teams to share learnings from working with the Data Ethics Canvas.

[10] The ODI (2013), 'Engaging with reusers', https://theodi.org/article/engaging-with-reusers/
[11] Wired (2018), 'What the Boston school bus schedule can teach us about AI', https://www.wired.com/story/joi-ito-ai-and-bus-routes/

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

	Will you publish your actions and answers to this canvas openly?	Refer to these openness principles for organisations handling personal data[12] for more ideas.
12. Sharing data with others	Are you going to be sharing data with other organisations? If so, who? Are you planning to publish any of the data? Under what conditions?	Are there conditions or agreements covering data sharing which might affect your project? When accessing or planning to share data with other organisations, this might be governed by an agreement or an industry code of practice. See the ODI's guide on data sharing agreements for more detailed advice on what to consider when sharing data between organisations.
13. Ongoing implementation	Are you routinely building in thoughts, ideas and considerations of people affected in your project? How? What information or training might be needed to help people understand data issues? Are systems, processes and resources available for responding to data issues that arise in the long-term?	Are there any areas where data literacy is lacking within your organisation, within target users, or people affected by this project? For example, do people understand about the sample selection, or how to interpret a data visualisation? If working through the Data Ethics Canvas has revealed a need for capacity building, the ODI open data skills framework[13] can help you to identify where skills might be needed, and by whom, to help achieve your purposes. Have you thought about how you plan to manage and govern data issues in the long term? It could be helpful to create a data management plan, setting out how you plan to store, secure or destroy data; different roles and responsibilities; and how you will resolve issues. See the ODI's checklist on developing a data management plan[14] for further guidance.

[12] ODI (2016), 'Openness principles for organisations handling personal data', https://theodi.org/article/openness-principles-for-organisations-handling-personal-data/
[13] The ODI (2016), 'Open data skills framework', https://theodi.org/article/open-data-skills-framework/
[14] The ODI (2018), 'Developing a data management plan: a checklist', https://docs.google.com/document/d/1SWeYHx9tERY2BZYgPbktVLQRVmZeUtKzaeq3bm4CeQk/edit#heading=h.brvqjjeck50k

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.

CC BY SA

14. Reviews and iterations	How will ongoing data ethics issues be measured, monitored, discussed and actioned? How often will your responses to this canvas be reviewed or updated? When?	As you make any changes to your product/service design, go back and review responses in the canvas. You might need to make some updates based on new information eg sources of data, or risks. Reviewing and updating the canvas can be built into agile team processes, or a team reflection exercise. See how ODI partner the Co-op has been using the Data Ethics Canvas in its product design processes.
15. Your actions	What actions will you take before moving forward with this project? Which should take priority? Who will be responsible for these actions, and who must be involved? Will you openly publish your actions and answers to this canvas?	Make sure you have a clear idea of the actions and decisions your team will take after working through the canvas, and who will be responsible.

This document is provided to help you complete the Data Ethics Canvas. Please make a copy for your own use. The guide is openly licensed under CC-BY-SA licence: you can alter, use and share and use your copy as you wish. Please send us your feedback.