Manual: Create your own Datawalk







This manual, developed by the Knowledge Centre Data & Society, gives you all the information and tools you need to design your own Datawalk tailored to your objectives, target audience and environment.



Datawalks in a nutshell

A Datawalk is a guided walk with a focus on 'data'. In 2021 and 2022, the Knowledge Centre Data & Society, the research centre imec-SMIT, VUB and the citizen science project amai! organised several Datawalks. The methodology was developed by Alison Powell and was used in the SPECTRE project, among others.¹

The Datawalk method can be used for several purposes. The Knowledge Centre Data & Society developed this manual to make the approach better known and introduce more people to the concept of Datawalks. This allows interested parties to design, organise and supervise a Datawalk themselves.

 The SPECTRE project explored how to actively involve all stakeholders, particularly citizens, in making our cities 'smart'. The Datawalk method was used as an inclusive way of gauging citizens' opinions and interests on the collection of personal data in public spaces. The aim was to better understand their subjective perception of the risks involved. Their responses were then shared with the administrators of smart cities.

Who is this manual aimed at?

This manual is aimed at anyone who wishes to develop a Datawalk in a 'smart' city or municipality, such as:

L

- \rightarrow employees of (city) services focused on participation,
- → project managers of smart cities,
- \rightarrow 'data protection officers' (DPOs) of the city or municipality,
- \rightarrow civil society organisations seeking hands-on learning about data collection in the city
- ... and many more.

How is the manual structured?

The manual is structured as follows: In the first part, we explore what a Datawalk is and what you can use it for. In the second part, we go through the steps you can use to develop a Datawalk yourself, and in the third part, we give you tips on how to organise the Datawalk effectively. In the fourth part, we discuss a number of tools you can use to create a Datawalk: the data sources-card set and an info sheet on personal data in smart cities. In parts five and six, you will find references, more info and the colophon.

Table of contents



What is a Datawalk?



Create your own Datawalk

Organise and guide your Datawalk



Resource: data source cards and info sheet



References and more info



What is a Datawalk?



2. For a brief summary of what a Datawalk is, have a look at the dedicated 'brAlnfood' page on the website of the Knowledge Centre Data & Society: https://dataen-maatschappij.ai/en/ publications/brainfood-willyou-join-a-datawalk

7

A Datawalk or a 'Walkshop' (as it is sometimes called) is a guided walk through the city in which participants gain an insight into how the digital world is connected to their physical urban environment. During the walk, particular attention is paid to the collection and use of data: which data is collected and processed, and to what extent does it involve personal data?²



Why organise a Datawalk?

You can organise a Datawalk for several reasons:

- → To make participants aware of 'smart' applications in the city.
- → For participants to help co-create and shape policies in the smart city.
- → To encourage participants to critically reflect on the use of personal data and on their personal preferences in this regard.
- → To identify participants' perceptions about potential societal risks arising from the use of personal data, and to gain an insight into how they would like to see those risks mitigated.

Datawalks are a great way to involve citizens in policymaking in smart cities. They can be used to inform citizens, encourage them to think along or critically reflect on the way their (smart) city or municipality is organised and how (personal) data fits into the equation.

Datawalks as a way to start the debate

3. To find out more about this, read the policy brief by Jonas Breuer, Ine Van Zeeland and Jo Pierson on the use of Datawalks as part of a data protection impact assessment. https:// smit.vub.ac.be/policy-brief-57walkshops Datawalks are very effective to informally record how citizens perceive technologies in the city or municipality and what risks they see associated with them. For example, a Datawalk can make a valuable contribution to a data protection impact assessment (DPIA) in smart cities or municipalities.³

Citizens' concerns, perceptions and expectations can become risks for projects in smart cities or municipalities. Indeed, ambiguity can result in distrust. Openness and involvement in decision-making can prevent negative perceptions at an early stage and enable more targeted interactions between public administrations and citizens.





Seek inspiration in the data source cards

A Datawalk takes participants past different **data technologies** or **data sources**. In this manual, we define these as services in a smart city that collect or process (personal) data in order to provide a service to (a specific group of) users in the city, or to improve existing services. This manual includes a set of data source cards to inspire you as you develop your very own Datawalk. The cards can also be used during the walk itself. Data technologies or data sources can also be referred to as 'smart services' and 'smart solutions' during the Datawalk.

Create your own Datawalk

9

ξ



Steps

- \rightarrow Clearly define the aim of your Datawalk.
- \rightarrow Define the target audience of your Datawalk.
- \rightarrow Gather information on data sources in your city.
- → Determine which data sources you want to cover on the walk.
- → Think about the questions you want to ask participants.
- \rightarrow Plot the route.
- \rightarrow Prepare the walk.



Clearly define the aim of your Datawalk

Ask yourself why you are organising a Datawalk: do you want to raise more awareness, encourage participants to creatively think about policy-making in smart cities, or rather incite critical reflection? This will largely determine which data sources you will and will not cover, and in what way you will engage with participants.

Define the target audience of your Datawalk

Once you have established your goals, you need to define your target audience, which may include any citizen or a specific demographic, experts or city administrators, data protection officers etc. Different participant profiles can result in different insights. However, keep in mind that you may need to adjust your preparation a little.

Who you include depends on the goals the organisers and organisations involved have in mind. The target audience also determines how and through which channels you will communicate about your event.

Gather information on data sources in your city or municipality

The biggest challenge is to gain an overview of the 'smart city' applications along the route of your walk. Seek inspiration from our set of data source cards, which provide an overview of technologies that may also be present in your city or municipality. Keep in mind this is not an exhaustive list.⁴

For each data source, look for a visual clue. Generally these are the sensors that collect the data or the location where the services are delivered. In certain cases, it may be difficult to find a clear visual landmark or it may be located too far from your route. In that case, look for alternatives (e.g. a 'regular' waste bin rather than a 'smart' waste bin).

4. You will find more information on how to set up and use these data source cards in part 4 of this manual.

- → Explore yourself. Take a good look around: which data sources can you identify yourself in your area? Look for cameras, mobile phone masts, sensors and other digital, 'smart' services. Try to find out who owns these services: are they government-owned or private initiatives?
- → Contact the local authorities. Look for the relevant authorities and officials within the city or municipal departments. Often, the data protection officer (DPO) or any other official responsible for data protection is a good starting point. Ask if they can provide you with information about sensors and cameras in public spaces. Ask which data is used and collected, how it is processed and for which purpose. To do so, you can for instance invoke your right of access.
- → Contact the private entities that manage personal data and provide services in smart cities. Ask how they handle personal data and what their data policy is. Here too you can invoke the right of access.
- → Some projects and initiatives announce where their sensors are located themselves. A number of initiatives, often citizen science projects, have a website with a directory where you can find the location of their sensors. You can integrate these into the walk.

Determine which data sources you want to put in the spotlight even further on the walk

Is your city or municipality missing a particular data source or do you have a specific focus for your walk? Feel free to integrate additional data sources into your walk. To do so, you can use the data source cards (and possibly develop an additional card).

Once again, look for a **visible clue**. That way, you prevent your walk from turning into a presentation rather than a guided tour.

Think about the questions you want to ask participants

During a Datawalk, you may not only want to inform participants, but also engage in dialogue with them about the data sources. After all, a guided tour becomes more engaging for participants when they are actively involved. The questions you will ask participants greatly depend on the aim of your Datawalk. However, avoid turning the conversation into an *interrogation*: open-ended questions which do not have a right or wrong answer only - are the best way to keep the conversation going.

Questions to raise awareness

Is the aim of your walk to **raise** more **awareness** among the participants? Then you can ask them if they know the example, if they have seen the data source in other places, what their experiences with it are, how they think a specific technology works, etc.

Questions to discuss smart city policies

Do you aim to inspire participants through the Datawalk and use it as a starting point for them to think about smart city policies? If so, during the walk, try to find out more about what they consider important, what they expect from a smart city, and how technology can support this. You can also ask participants how they already use the data source in their daily or professional lives today. You could also end this type of Datawalk with a co-creation session with the participants. (More on this in Part 3.)

Questions to encourage critical reflection

Is the aim of your Datawalk to **encourage critical reflection on personal data** among the participants? Perhaps you want to find out how they subjectively **assess the associated risks**? Then, be sure to explain the meaning of personal data, find out how participants view privacy and how important they consider their privacy. Communicate how personal data can and cannot be collected and processed through certain services and ask for their opinions. For this, you can make use of the info sheet on personal data in smart cities (part 4).

These questions will prevent one-way communication during the walk and these moments of interaction will also allow the participants to process the information more actively. They will also help you achieve your goals for the Datawalk, so prepare them thoroughly.

You will find some inspirational sample questions for specific data sources in part 4 of this manual.

Plot the route

Build your walk around what is **visible** along the way. Think about the story you want to tell with the walk: how are you going to facilitate the discussion, step by step? Make sure you start from something visible every time, otherwise your guided walk risks resembling a presentation rather than a tour.

Starting for the selected data sources, create a **practical sequence** of the selection to easily combine and discuss the data sources in the walk.

Don't make the walk too long, neither in distance nor in duration.

- → In terms of **distance**, aim for a maximum of 1.5 to 2 km. Ideally, the data sources should be close to each other so that you have suffient time to explain the data source and engage in conversation.
- → As for the duration, make the walk a maximum of 1.5 hours long. Select a number of data sources or discuss multiple data sources combined if you don't have enough time to cover everything. For less essential data sources; you can choose to just briefly mention them.
- → Make sure you end the tour in a (sheltered) place where you can have a follow-up discussion. This will give you the opportunity to answer any questions the participants may still have or to take a closer look at the ideas that came during the walk.



Prepare the walk

In addition to the route, also prepare the following:

- → A good introduction tailored to the group you are taking on your Datawalk. Your participants will probably already have an idea of what the Datawalk is about from prior communication. Nevertheless, explain the concept again in the introduction. Also introduce yourself, the organisation you are involved with and your motivation for organising the Datawalk.
- → Think about the key idea for each stop. Presumably, you stumbled on a lot of information in the preparation phase. However, keep things short for the participants and do not overload them with an unstructured heap of information at each stop. Think in advance what you want to share and what the key message is for each stop. Based on this, elaborate on your story step by step.
- → Think about where you will **stand** at a particular stop. Where is it safe to stop with the group while keeping your topic of conversation within sight?
- → If you are also thinking of drawing up a report of your participants' ideas and attitudes, think about how you will **capture** this **data**. You could appoint an extra person to take notes during the walk, or consider scheduling a follow-up workshop after the walk to take a closer look at the ideas or attitudes of the participants.
- → Create a small flyer for the participants. Include the route of the walk, your contact details and possibly more information with some background about the Datawalk.

Organise and guide your Datawalk



The preparation you made based on the steps in part 2 gives you a solid foundation to successfully complete your Datawalk. In this part of the manual, you will find practical tips that can help you set up a successful Datawalk.

We will not focus on practical matters linked to the organisation of any event, such as registrations or room reservations, and so on. We will focus more specifically on aspects that are unique to Datawalks.

Who should you invite?

Tips for selecting participants:

- → From the outset, carefully consider the composition of the group. For instance, including a decision-maker (e.g. a local politician) in a group of citizens creates a very different dynamic compared to a group made up of citizens only. However, this needn't be a disadvantage, depending on the (research) objectives of the walk. But it is important to understand that any decision you make regarding the composition of the group can have an impact on the outcomes.
- → Choose a communication channel geared to your target audience. Open registrations offer the advantage that participants volunteer and are intrinsically motivated to participate in the walk. The downside is that you will often only reach people who already have prior knowledge on the subject, and who usually also have a similar socio-economic background. If you are looking for a specific target group or, by contrast,

for a good mix of profiles, you need to monitor access to the Datawalk more closely and recruit participants in a targeted way, for example by collaborating with organisations that can reach your preferred target group.

Tips on the **group size** and the **number of guides** per group:

- → Carefully think about the group size. In excessively small groups, there is a risk that participants will interact too little or that their opinions will lack diversity. In turn, excessively large groups may feel intimidating for participants and perhaps prevent them from sharing their opinions. We recommend a group size of 8 to 12 people per guide.
- → Would you like to keep track of what your participants share during the Datawalk? Then consider having 2 guides for each group. One person can act as an actual guide while the other keeps track of what participants say.



During the Datawalk...

Tips to introduce the Datawalk:

→ As we explained above, at the start of the Datawalk take a moment to briefly explain the concept once again. Also introduce yourself, the **organisation** you are involved with and your **motivation** for organising the Datawalk.

- → Are there multiple guides for each group? Then introduce everyone and also briefly explain what each person will be doing.
- → Would you like to keep track of what participants say during the Datawalk? Then inform them of your intentions and clearly state what you will do with the **data you collect**. Ask for permission to collect this data and ask the participants to sign an informed consent form before you start your walk.

Tips while guiding:

- → As we mentioned above, limit yourself to one key idea or topic per stop and start from a visible landmark. This will enable you to give the participants information in a structured and manageable way.
- → Allow the participants to take the floor. Resist the temptation to only speak yourself. Ask questions and allow your audience to actively process the information. You will find more tips on which questions to ask in parts 2 and 4 of this manual. It may sometimes be useful to incorporate a moment of silence. This allows participants to organise their thoughts and it may give them the space they need to take the floor. Ideally, let participants have their say as early as during the introduction. That way, from the start they will feel that their input is appreciated.
- → Tailor your tone and language to your target audience. Get a feel for your target audience and tailor your words and the tone of the tour to them. It is often appropriate to avoid jargon or overly technical language. Look for synonyms. For example, do not talk about 'data technologies' but rather about 'smart solutions'

or 'services in smart cities'. If you do use a technical term, explain it so that everyone understands it.

- → What's in it for them? Always keep your participants' perspective in mind. Similarly, if you use the Datawalk as a scientific method to collect data, always look at your methodology from the participants' point of view. What is their motivation to participate? How can you possibly capitalise on that even more so that they also look back on the experience in a positive way?
- → Avoid reading from a script (or reduce this to a minimum). Study in advance what you want to share with the group at each stop and what you want to discuss. By reading from a script, you create distance between you and the participants and you take momentum out of the walk. Be as spontaneous as possible, even though this may be less nuanced than a written speech. The advantage is that spontaneous speeches sound more natural to the participants.
- → Practise. Ideally, test your Datawalk with a group of people you trust. This way you can test whether your timing is right, whether the stops are practical, where your story is still missing some information or where you are trying to share too much in one place. You will also instantly feel more confident about the actual event.
- → Arrange the formalities at the start. Are you collecting data during the Datawalk? If so, when you start, make sure that you have all the paperwork ready, such as the informed consent forms. Being organised is the best way to avoid surprises at a later stage.



Resources



Data source cards

This manual includes a set of data source cards for the Datawalks. You can use this overview when preparing for your Datawalk or during the Datawalk itself, to explain or illustrate a service (if it is not available in the city, for example).

It is important to engage with the participants during a Datawalk. Above, we already shared some general guidelines for a smooth dialogue. Below, you will find an overview of sample questions to keep the conversation going for specific data sources. The actual content of the dialogue of course depends on your target audience and the objectives you hope to achieve with the Datawalk.



Data source: Monitoring cameras in public spaces (non-ANPR)

Sample questions aimed at **co-creation**:

- → These types of cameras are now mainly aimed at monitoring or tracking crowds in the streets. Where would you want this technology to be used?
- → Using algorithms, you can also record behaviours on camera, with or without privacy protection. What would you want this technology to be used for?

Sample question aimed at **critical reflection** on (personal) data:

→ What is your opinion on automatic recognition of persons or certain behaviours through camera images taken by the police or the city authorities in public places through so-called 'object recognition algorithms'? Would it be acceptable for you, for example, to identify suspicious behaviour (such as illegal dumping of trash) or suspicious persons through this technology and alert the police?

Data source: Automatic Number Plate Recognition cameras (ANPR cameras)

Sample questions aimed at **co-creation**:

- → ANPR cameras can record the location and time of each passing vehicle in a database. What could we use this information for?
- → By enabling recognition via algorithms on camera images, you can identify a wide variety of objects, texts or even behaviours. What else could this add value to?

Sample questions aimed at **critical reflection** on (personal) data:

- → ANPR cameras can record the location and time of each passing vehicle in a database. How do you feel about this possibility and when would you want the technology to be used?
- → There is a strict legal framework in place for the use of ANPR cameras. How does that affect how you look at this technology?

Data source: Private security cameras

Sample question aimed at **co-creation**:

→ In your opinion, where do these types of cameras offer the greatest added value?

Sample question aimed at **critical reflection** on (personal) data:

→ How would you feel if your neighbour across the street installed a smart doorbell with a camera, which also captures images of your house?

Data source: Telecommunication masts

Sample question aimed at **co-creation**:

→ By linking the location of a city's visitors with other information, you can learn a lot about the people who visit your city. What additional information would you like to gather and why?

Sample questions aimed at **critical reflection** on (personal) data:

- → How do you feel about your location being used to shape the city's policy? This personal data is anonymized and aggregated, and combined with other data sources.
- → For what purposes would you agree to share your data in this way? And for which ones wouldn't you?

Data source: Smart bin

Sample question aimed at **co-creation**:

→ Which other applications and services can you think of that could be made more efficient through digitisation? In what way? What technologies could be useful?

Sample question aimed at **critical reflection** on (personal) data:

→ How do you feel about linking your personal data to your waste production (type of waste, amount)? What could be advantages or disadvantages?

26

Data source: Magnetic parking sensors

Sample question aimed at **co-creation**:

→ With relatively simple sensors, you can find out a lot about parking habits in a privacy-friendly way and partly remedy problems such as parking pressure. Which challenges do you face when looking for parking? What information collected by sensors could be of use? What other insights can this information provide?

Sample question aimed at **critical reflection** on (personal) data:

→ This solution does not use personal data. How do you feel about this technological solution compared to the ANPR cameras used in some parking garages?

Data source: Weather stations for citizen science

Sample question aimed at **co-creation**:

→ There are a lot of initiatives where citizens can help collect data to inform and guide policy-making. Examples in Belgium are Curieuzeneuzen⁵, Telraam⁶ and the Leuven.cool⁷ project, which relies on weather stations installed at citizens' homes to get a more detailed picture of the weather in the city. Where are we still missing data to improve policy-making? How could citizens help with this?

Sample questions aimed at **critical reflection** on (personal) data:

- → Would you be willing to have a (public) weather station installed in your garden? Why or why not?
- → Would it make a difference to you who collects and processes the data for you to join these types of projects or not? Would you rather participate in a government-led or a private initiative?

5. Heat and drought measurement: https://curieuzeneuzen.be/

6. Detailed traffic counts: https://telraam.net/en/whatis-telraam

7. https://www.leuven.cool/

Data source: Shared mobility

Sample question aimed at **co-creation**:

→ Companies offering shared mobility have a lot of travel data on their users. What could you learn from this data?

Sample questions aimed at **critical reflection** on (personal) data:

- → Companies offering shared mobility solutions do not derive their income solely from renting vehicles. They also make money from selling big data on transport needs and flows. What do you think about them trading this (anonymised) information?
- → Would you be willing to pay more if you were guaranteed that your personal data will not be shared?

Data source: Public Wi-Fi

Sample question aimed at **co-creation**:

→ Often multiple Wi-Fi hotspots can be found throughout the city. As you move through the city, you connect to different hotspots. For what additional purposes can the information about the Wi-Fi hotspots you connect to be used?

Sample questions aimed at **critical reflection** on (personal) data:

- → How would you feel if your location and therefore also your route through the city could be deduced from the Wi-Fi hotspots you connect to?
- → How do you feel about sharing your personal data to access a public Wi-Fi network for free? Do you think the provider should be allowed to collect information about the websites you visit while connected to their Wi-Fi network?

Data source: Parcel machine

Sample question aimed at **co-creation**:

→ This solution requires a smartphone. How can we ensure that services requiring a smartphone do not exclude citizens who do not have a smartphone or are not comfortable using it?

Sample question aimed at **critical reflection** on (personal) data:

→ Parcel machines that work with an app on your mobile phone can collect information about the time when you picked up your parcel. How do you feel about such information being tracked and analysed?

Data source: Traffic counters

Sample question aimed at **co-creation**:

 \rightarrow What would you use information on traffic flows for?

Sample question aimed at **critical reflection** on (personal) data:

→ Traffic counters can analyse traffic in different ways. Weight sensors, for example, can distinguish between cars or trucks. ANPR cameras can identify vehicle types through number plates. How important do you think it is to consider your privacy in traffic counts and in the analysis of this data? Which risks can you identify?

Data source: Acoustic sensors

Sample question aimed at **co-creation**:

→ Acoustic sensors are often used to report that certain sound levels have been exceeded. Sound recognition algorithms can be used to identify certain sounds. What sounds would you use this algorithm for?

Sample question aimed at **critical reflection** on (personal) data:

→ How would you feel about the city installing an acoustic sensor near your home? Is there anything you would worry about?

Data source: Parking meters

Sample question aimed at co-creation:

→ What insights can data on the brand and model of a users' vehicles bring? And what about the place the visitors are from? What can we use this information for?

Sample question aimed at **critical reflection** on (personal) data:

→ How would you feel about the location of your vehicle, based on where you park, being accessible to the police in certain circumstances? What about use for commercial purposes?

Data source: Charging stations for electric vehicles

Sample question aimed at co-creation:

→ In what ways could data on the brand and type of vehicle of the users of charging stations in your area be useful? And what about the place the visitors are from? What can we use this information for? Sample question aimed at **critical reflection** on (personal) data:

→ How would you feel about the location where you charge your vehicle, and the location of the charging station, being accessible to the police in certain circumstances? What about use for commercial purposes?



What are your rights over your personal data in the smart city?

Smart cities use a lot of data, including personal data. Personal data refers not only to names and address details, but any data that could potentially identify a person. This includes number plates, camera images, phone numbers, e-mail addresses, location data, IP and MAC addresses of personal devices (such as smartphones), bank account numbers etc. Processing this data entails risks. Whoever uses this data needs to comply with a number of laws that protect users. Below we explain the main principles. This is useful background information when developing and guiding a Datawalk⁸.

The right to information

If your personal data is being processed, you need to be informed. Both the General Data Protection Regulation (GDPR) and other laws (such as the Camera Act in Belgium) prescribe which information you must receive. For example, you need to be provided with information on which data is collected, who collects the data, for what purpose (the reason/aim), and who you can contact if you have any questions about the data processing.

It is not always easy to provide this information. A sign can be hung under a camera, but how do you inform persons about the processing of mobile phone data collected in public spaces, for example? This illustrates how the right to information is not always easy to put into practice. As a citizen in the city, it can be difficult to find the right information.

Consent

Many people think that a processor of personal data has to ask data subjects for consent every time. Nothing

8. This text was taken from the info sheet 'Wat zijn je rechten over je persoonsgegevens in de slimme stad?' ('What are your rights with re-

gard to your personal data in the smart city?') published by the Knowledge Centre Data & Society and the SPECTRE project. could be further from the truth. Your personal data may be processed without consent in the following cases:

- → If there is a legal obligation to do so (think of tax purposes).
- \rightarrow If it serves a public interest (such as public safety).
- \rightarrow For a legitimate interest of a private party (such as preventing fraud or theft).
- \rightarrow If it is necessary for the performance of a contract (for example an internet subscription).
- \rightarrow If it is of immediate vital importance (for example in case of an accident on the street).

In all other cases, your permission is required.

Re-use of data

Personal data collected for one purpose should not simply be reused for another. If the other purpose is directly linked to the original one, it may be possible to reuse the same data. For example, you can reuse e-mail addresses collected for a survey to inform participants about the results of the survey. In all other cases, data subjects must be informed of the new purpose.

If the original processing required consent, then consent must first be sought again. For data collection in the smart city specifically, it is in some cases even necessary to first consult with the citizens' representation in the municipal council once again.



Differences between public and commercial spaces?

In cities and municipalities, public and commercial spaces sometimes blend together imperceptibly. Indoor shopping centres, for example, are commercial spaces where the rules may partly differ from those applicable on public roads. There, cameras are not used to ensure public safety, but, for example, to prevent theft and fraud. Shops and shopping centres are often equipped with sensors, such as Wi-Fi trackers, which can also be used for marketing purposes. So there is a difference in how your personal data is used.

What can you do yourself?

If you have questions about how and why your personal data is processed, you can ask the data controller. Indeed, the right to information requires that contact details are always listed when personal data is collected and processed, for example on an information board in an area monitored by cameras.

You can usually also invoke other rights, such as the right to access the data collected about you, the right to correct that data, and the right to have that data destroyed. Deadlines are set for these rights, which the data controller must comply with.

You can also talk to politicians and policy makers about the processing of personal data in the smart city.

References and more info



More background information about Datawalks

- \rightarrow SMIT Policy brief Datawalks
- → SPECTRE website
- \rightarrow brAlnfood: Will you join a Datawalk?
- → Report Data-Date: Privacy in Smart Cities (Dutch only)

More general background information on personal data and smart cities:



data-en-maatschappij.ai/en/tools/datawalk-handleiding



| •• | •• | • | • • | • | • • | • • | • | •• | • | • • | •• | • | • | • • | •• | • | • | • | • | • • | • | • | • | •• | • | • | •• | • | • | • • | •• | • | • • | •• | • | • | • | •• | • | • | • • | • • | • | • | • |
|----|----|-----|-----|-----|-----|-----|---|-----|---|-----|----|---|---|-----|----|---|---|---|-----|-----|---|---|---|----|---|---|-----|---|---|-----|-----|---|-----|-----|---|---|-----|----|---|---|-----|-----|---|---|---|
| •• | •• | • | • • | • | • • | • • | • | •• | • | • • | •• | • | • | • • | •• | • | • | • | • | • • | • | • | • | •• | • | • | •• | • | • | • • | • | • | • • | • • | • | • | • | •• | • | • | • • | • | • | • | • |
| •• | •• | • | • • | • | • • | • • | • | •• | • | • • | •• | • | • | • • | | • | • | • | • | • • | • | • | • | •• | • | • | •• | • | • | • • | • • | • | • | • • | • | • | • • | •• | • | • | • | • • | • | • | • |
| •• | •• | • | • • | • • | • • | • • | • | •• | • | • • | •• | • | • | • • | | • | • | • | • • | • | • | • | • | | • | • | •• | • | • | • • | • • | • | • • | • • | • | • | • • | •• | • | • | • • | • • | • | • | • |
| •• | •• | • | • • | • | • • | • | • | •• | • | • • | •• | • | • | • • | | • | • | • | • | • • | • | • | • | •• | • | • | •• | • | • | • • | • | • | • • | • • | • | • | • | •• | • | • | • • | • | • | • | • |
| •• | •• | • • | • • | • | • • | •• | • | •• | • | • • | •• | • | • | • • | | • | • | • | • | • • | • | • | • | •• | • | • | •• | • | • | • • | • • | • | • • | • • | • | • | • | •• | • | • | • • | • • | • | • | • |
| •• | •• | • | • • | • | • • | •• | • | •• | • | • • | •• | • | • | • • | •• | • | • | • | • • | • | • | • | • | •• | • | • | •• | • | • | • • | • • | • | • • | • • | • | • | • • | •• | • | • | • • | • • | • | • | • |
| •• | •• | • • | • • | • | • • | • • | • | •• | • | • • | •• | • | • | • • | | • | • | • | • • | | • | • | • | | • | • | • • | • | • | • • | • | • | • • | • • | • | • | • • | •• | • | • | • • | • • | • | • | • |
| •• | •• | • | • • | • | • • | • • | • | ••• | • | • • | | • | • | • • | | • | • | • | • | | | • | • | | • | • | | • | • | • • | •• | • | • • | | • | • | • | | • | • | • • | | | • | • |



| •••• | • • • • • • • | | | ••••• | • • • • • • • • • • • • |
|-----------|---------------|---------------------|---------------------|-----------------------------|-------------------------|
| •••• | • • • • • • • | | | • • • • • • • • • • • | •••••• |
| •••• | | | | •••••• | |
| •••• | • • • • • • • | • • • • • • • • • • | | • • • • • • • • • • • • | • • • • • • • • • • • • |
| •••• | • • • • • • • | | | •••••• | |
| •••• | | | • • • • • • • • • | • • • • • • • • • • • | • • • • • • • • • • • • |
| •••• | | | • • • • • • • • • • | ••••• | |
| •••• | | | | •••••• | |
| • • • • • | | | | | |

S



Colophon

Z

This manual is a publication of the Knowledge Centre Data & Society and the research group imec-SMIT, VUB.

The following persons contributed to the development of this manual: Pieter Duysburgh, Michiel Vaes, Jonas Breuer, Ine van Zeeland and Jonne van Belle.

The design of the manual and the data sources were created by Toast Confituur Studio (toastconfituur.be).

We would like to thank the smart city departments of the cities of Leuven and Brussels (CIBG) for their efforts in developing the Datawalks methodology.

The SPECTRE project is financed by FWO. Research Foundation – Flanders – FWO reference number S006318N.

This manual is available under a CC BY 4.0 licence and may therefore be shared and edited without seeking our permission, as long as you credit us as the source or author and indicate whether any modifications have been made.

Knowledge Centre Data & Society

The Knowledge Centre Data & Society is the central hub for the legal, social and ethical aspects of data-driven applications and AI applications. It is part of the Flemish AI plan.

imec-SMIT, VUB

The research group imec-SMIT, VUB conducts fundamental and applied research into innovation, policy and socio-economic challenges linked to data and media. To this end, imec-SMIT, VUB carries out user research, policy research and economic business analyses using qualitative and quantitative methods. Good luck and enjoy creating your very own Datawalk! Do you have any suggestions or ideas to further fine-tune the Datawalk methodology? Let us know via



info@data-en-maatschappij.ai









