



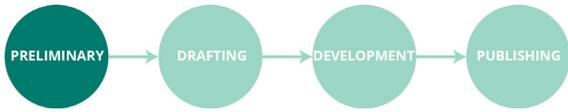
Creating data visualisations in the EEA — a handbook

Data visualisations are a central element in the EEA's communication of trusted and actionable knowledge on the environment and climate. Paired with high-quality analytical text and built upon reliable data sources, data visualisations offer a unique way to present **complex scientific knowledge in an accessible format**.

Because data visualisations are so powerful in their **communicative ability**, it is important that they are generated, quality assured and presented in a way that builds upon experience and expertise in content, technical detail and communication technique. This handbook provides a generic approach to ensuring that the EEA's data visualisations meet all these needs.

At the same time, no two data visualisations are alike, and the generic process will likely need to be considered and adapted for each individual case.



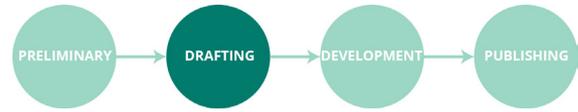


Preliminary stage

In this first step, the general need for a new or revised data visualisation will be defined.

1. Identify a **need** for a data visualisation or collection of data visualisations.
2. Define the **audience** for the data visualisation and the context in which it will be presented.
3. Develop a preliminary description of the **message(s)** or story to be communicated by the data visualisation.
4. Identify which **tool(s)** may be considered to develop the data visualisation.

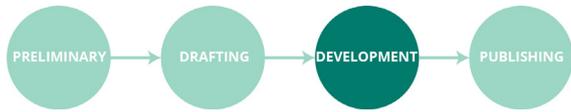
These steps should be taken **in collaboration with COM experts**, who can advise on the best ways to reach the targeted audience, on the suitability of the messages and of the tools.



Drafting stage

Because data visualisations often include complex combinations of visual elements, text and other details, arriving at the final expression often **requires many iterations**. Drafting outside of the final IT tool — even on paper or a (digital) white board — can be time-saving. Remember to include individuals with different areas of expertise and perspective in the drafting team.

1. Establish a drafting team consisting of thematic, technical and communications experts.
2. Based on the preliminary description of the message(s) or story to be communicated, begin sketching the components of the data visualisation. This does not need to be created in the IT tool (excel, tableau, etc.) in which the final visualisation will be created but should take into account the potential functionalities of the tools available.
3. In iterative rounds in the drafting team, and drawing on experts beyond the team for input, review and revise the sketch of the storyline.
4. Once the sketch has been revised adequately, finalise the choice of tool in which the visualisation will be created and identify the specific data sources required for each element in the visualisation.



Development stage

Once the details are ready, development of the visualisation in the relevant IT tool can proceed rather rapidly. However, with the format change and potential restrictions of the IT tool, **iterative development and review** is often necessary.

1. Based on the visualisation tool and data sources identified in the drafting stage, prepare the data for inclusion in the visualisation. For some data sets, this may be simple (uploading in an excel file) while for others, extensive data 'wrangling' will be necessary. When preparing data, keep in mind if the visualisation should be updated in future when new data become available, and include this in the data preparations.
2. Once the data are ready, begin developing the sketched visualisation in the relevant tool. Make sure the visualisations are being developed to be compatible with the medium where they will be included (size of the website page, responsiveness, etc.) Iterative rounds of development and adjustment will likely be necessary, and again, remember to share the visualisation with others during drafting, for feedback.
3. Draft text to accompany the data visualisation if relevant.
4. Send the final version of the visualisation and accompanying text to language editing.
5. It can be very valuable to create a short description of the visualisation, how it was developed and how it should be maintained – especially if responsibility for the visualisation will be handed over to other colleagues later on.



Publishing stage

At this stage, it's mostly possible to enjoy the fruits of your labour, but while this can be the least intensive part of the process, it can also be the one that takes the longest. Most **data visualisations have to be maintained**, and planning for this is important.

1. With the data visualisation developed and edited, it is ready for insertion in the context where it will be available to its audience. This is likely to be a report or a website.
2. Once published, it can be valuable to track the use of the visualisation to determine whether further adaptation or development may be necessary in future iterations.
3. Remember to maintain a team, however passive, after the visualisation has been published. Data visualisations are often living elements of websites that regularly require updates of the technical platform or the messaging, and having a team of owners can facilitate this updating as necessary.