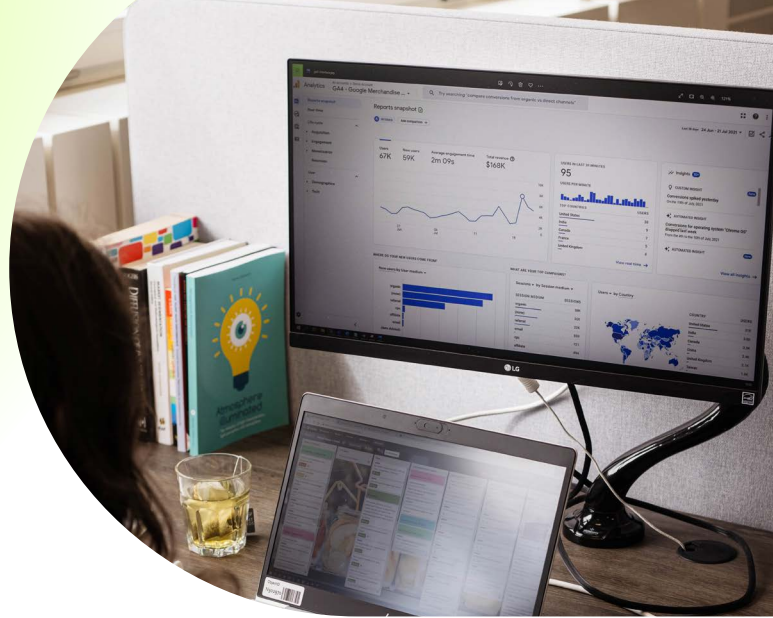


6 steps from data to insight using process mining



By using process mining, you can visualise the actual paths taken on your website. Follow these six steps to make your (online) customer journeys insightful.

1 Determine your goal

First, check which data you need in order to answer your research question. Different types of traffic are present on your website, such as exploratory users and users with high purchase intent. When creating your segments, you need to take note of this.

It may be interesting to compare different groups (segments). This allows you to understand how a journey of an exploratory user differs from the journey of someone proceeding to a purchase.

2 Determine your level

How specific or generic do you want to map a journey? You can visualise an 'average' flow of your website to gain insight into the most common pain points. It is then not immediately traceable who is experiencing these pain points.

3 Collect the data

To use process mining, you need at least the data belonging to the following variables :

- ii ID (e.g. a visitID)
- ii Action (e.g. a page)
- ii Timestamp

You can also create your own segments. Depending on your goal, you can select certain users in these segments. Consider new users or users of a specific campaign.

The data to make these journeys insightful using process mining, you can extract from your analytics tool, for example Google Analytics or Adobe Analytics.

The next page lists some methods to get the data you need through Adobe Analytics and Google Analytics.

You can make a choice based on how often you do this and what knowledge you have.

Google Analytics (GA)

Only when you have set up your own collection of customerid, sessionid and timestamp data can you extract this from GA.

With GA, you only have the customerid, sessionid and timestamp not available by default. You could then still extract these data from Big Query.

Depending on your situation, you can choose a suitable approach.

GA

Custom Report

If you have limited data, you can easily export your data via a custom report. You do this by creating a custom report with, for example, the following variables; ID – Page – Timestamp - Page views. In this step you also choose the preferred segment (see step 1).

Reporting API

You may also choose to retrieve the data via the Reporting API. While this involves more work in setting up, it will pay off later by making it easier to extract more data from the tooling and use it for other purposes.

There are also plugins for this such as Analytics Edge in Excel.

BigQuery

For GA 360 users, there is still the option to access the data via BigQuery.

Via BigQuery, you have access to, for example, sessionId, visitorId and other identifiers that you store.

Adobe Analytics (AA)

Adobe also does not give you standard access to the data you need at the right level of detail. In your implementation For this, you will also have to include several elements

By default, Adobe does not have timestamps available and you will always have to implement them yourself.

AA

Workspace

Based on limited data, export a table from Adobe Workspace to perform the analysis with.

Adobe API

You may also choose to unlock the data via the Adobe Analytics API V1.4 by using, for example, a package in R or Python.

Reportbuilder in Excel

You can already export quite a bit more data with Report builder. However, it has a maximum of 2 dimensions excluding granularity.

Data Warehouse

Through Data Warehouse, you have the ability to extract both aggregated data and non-aggregated data. This thus also allows you to load the visitorID, visitNumber, and the necessary eVar/prop identifiers yourself. You do need an FTP server for this.

In addition, you must also have a timestamp defined in a prop (or eVar at the hit level), because DataWareHouse has data at the hour level by default. If you want to extract large amounts of data, you have to do this via an FTP export. Export to mail has a maximum of 50 MB.

4 Tool or code?

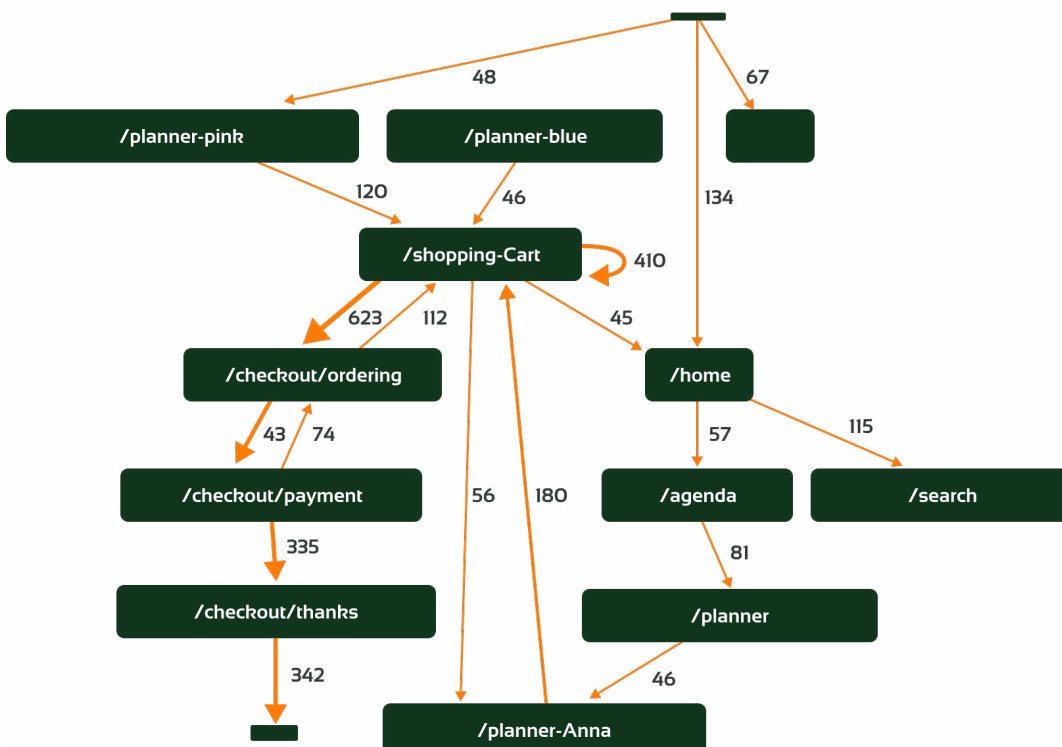
When you have collected and prepped your data, you can start process mining. There are several process mining tools you can use.

An example of a process mining tool is ProM Lite. This is a process mining tool of the Eindhoven University of Technology. The advantage of this tool is that it is free to use, has great functionality and is open source. The downside is that this tool is not very user-friendly.

Other options are Disco and Celonis. These tools are more user-friendly, but expensive. Finally, you can work with packages in R/Python. The choice depends on your own situation. We have worked with ProM Lite.

5 Process mining in ProM Lite

The ProM Lite tool offers many functionalities. This tool enables you to convert a CSV file (download GA) into an XES file. You can then use the XES file for 'Heuristic Mining'. Heuristic Mining is a technique that can be used to visualise common behaviour. You can then choose a 'Directly-follows' graph. The output looks like this:



6 Profit - process mining insights

As you can see, the tool provides you with an instant visual overview of the most frequently visited paths on the website. The tool also has an option where you can specify how many times a particular path must have been followed before it is included in the visualisation. In ProM Lite, this is the 'Frequency' bar. This makes it possible to analyse the paths people take at a very detailed level. It allows you to clearly see which unexpected routes people take.

Zooming out a little more gives you a good idea of which paths are more frequently taken. This will help you to learn more about where you can make the most impact.

You can thus use the visualisation from ProM to show which actual routes are followed on your website. A valuable insight if you want to map and/or optimise the online journey.



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