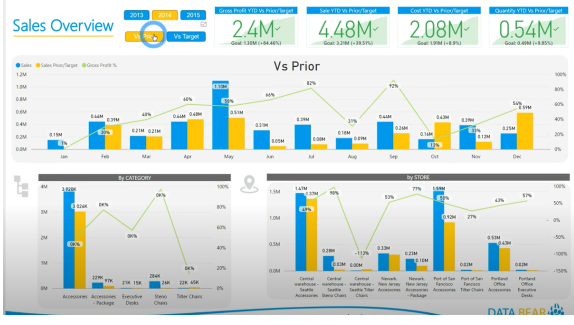# *Ordered list of components for four dashboards*

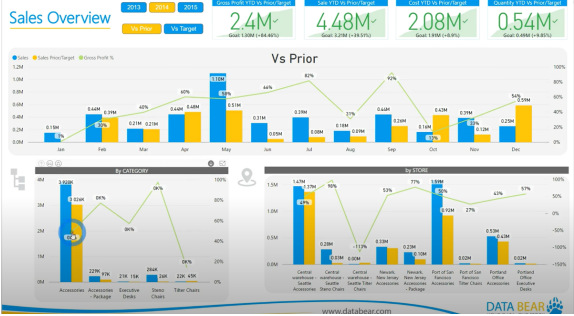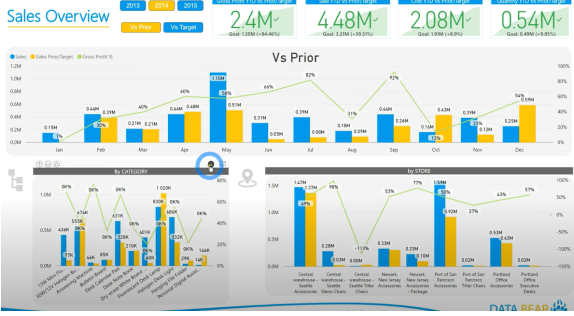Extracted components and interactions based on four different means. The first one extracts the ordered list of components for a sales dashboard using a video, the second is based on a programmed guided tour, the third dashboard outlines how a passive human narrated dashboard was explained, and lastly, we provide the ordered list of components of observation from an interactive onboarding with a human presenter.

Type of Onboarding	Dashboard Content	Link to Onboarding
Video	Sales	Link
Programmed Guided Tour	IPCC Atlas	Link
Passive human-narration	Corona	Link
Interactive onboarding with human presenter	Collaborator's Dashboard	-

Sales Dashboard Explanation: Video (Link)

Onboarding Steps	Screenshots	Ordered List of Component
Dashboard: Sales Overview **(Purpose explanation)** Let's look at our interactive sales overview report.		(Dashboard Purpose)
Clicks on a filter: *Vs Prior* This interactive report allows you to view the data from the perspective of either "*versus target*" or "*versus prior*" and has been designed to provide a rapid overview of sales performance across		(Filter) (Data)

"months", "categories", "products" and "stores".		 (Interact)
Clicks on a bar to show cross-highlighting in another filter Further value from this report can be found in the ability to through cross highlighting isolate values attributed to a particular dimension		 (Bar Chart) (Element: Bar, Type: Click) (Element: Another chart, Action: Cross-Highlighting)
Deselects the bar, hover over to another chart and activate the drill-down on the highest value bar and see the representation thereof within the other charts		 (Bar chart) (Element: Visual Frame, Type: Drill-down)

Hovers overs the "Accessories" category for example, for the "*categories*" chart, it is apparent that for the year 2014 accessories was the top-performing category.		 (Element: Bar, Type: Hover-over) (Data: Time, Type: Maxima)
Clicks on the drill-down on "Accessories" category to rapidly obtain further insight as to which products and locations this performance can be attributed to, we simply activate the chart to drill down and click on the accessories category		 (Element: Bar, Type: Drill-down)
Deselects the drill-down and click on the highest bar to perform cross-highlighting Let's now deactivate the drill down and select the top-performing product "fluorescent desk lamps"		 (Element: Bar, Type: Deselect Drill-down) (Element: Bar, Type: Click)

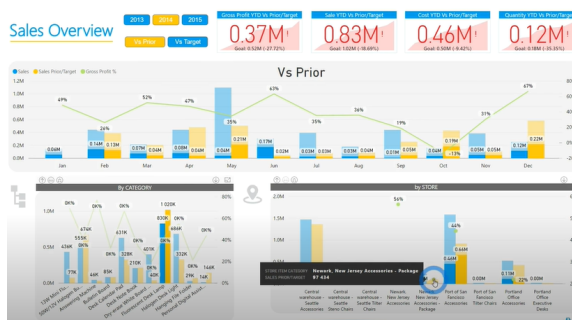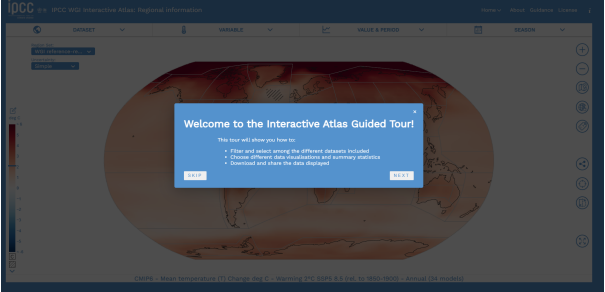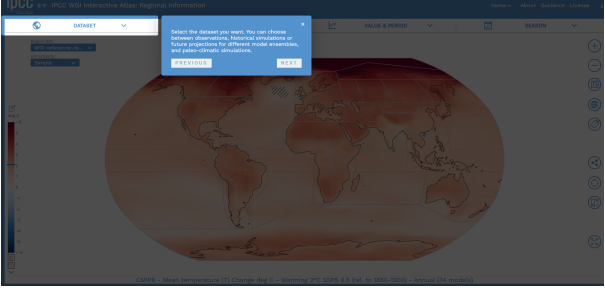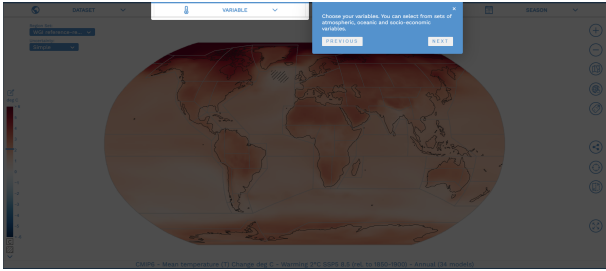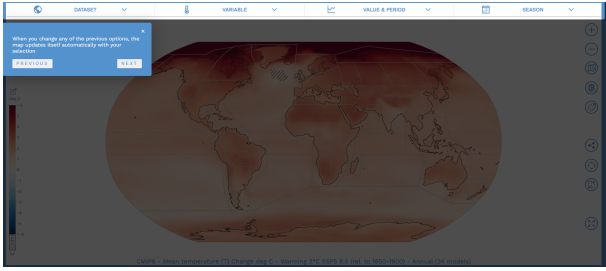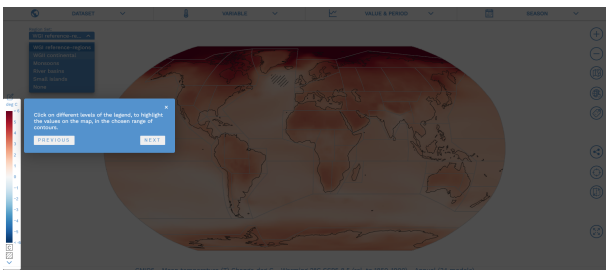|		
Explains tooltip information of the other chart Scanning the top chart sales by month, we can see the top and bottom performing months for 2014. The chart also allows us to compare this product performance to that of the previous year. (doesn't actually show the comparison)		 (Bar chart) (Element: Visual Frame, Type: Hover-over) (Field: Time, Type: Tooltip)
Explain tooltip information of another chart From the item location, we can see the distribution of our top-selling product across store locations.		 (Bar chart) (Element: Visual Frame, Type: Hover-over) (Field: Time, Type: Tooltip)
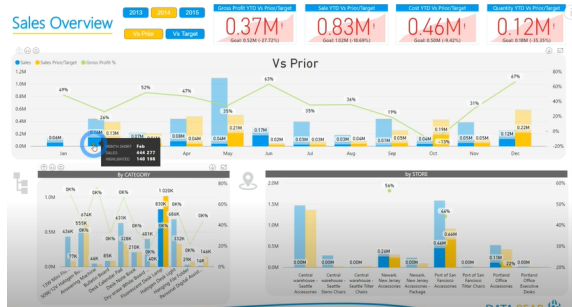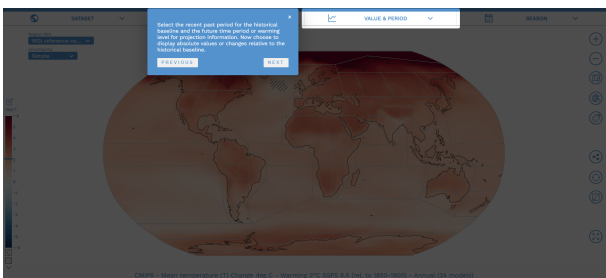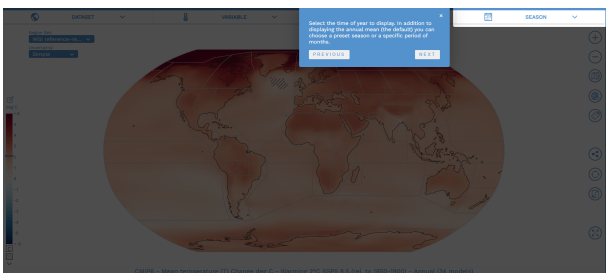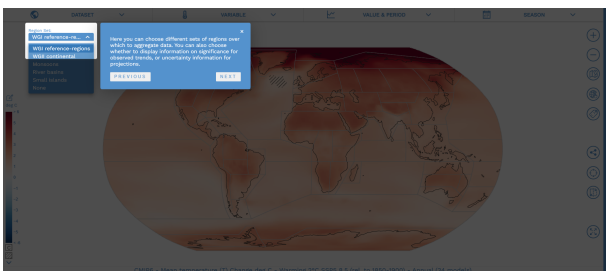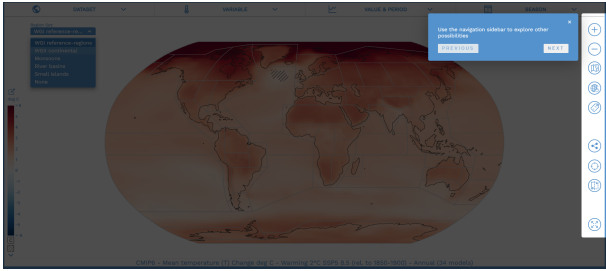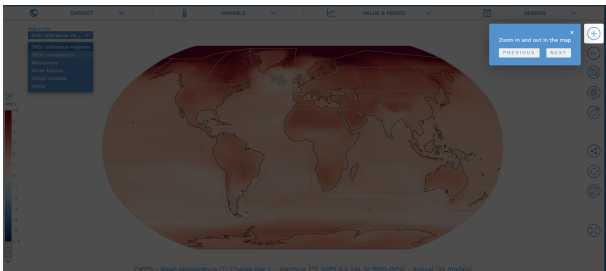
Explain KPI and present an insight from last and current year's values (derived insight) From the KPI cards above we noticed that even though this is the top-selling product for 2014, when compared to the previous year's performance, it achieved negative growth (derived insight)		(KPI) (Data: Performance, Type: Fact)

IPCC WGI Interactive Atlas: Regional information ([Link](#))

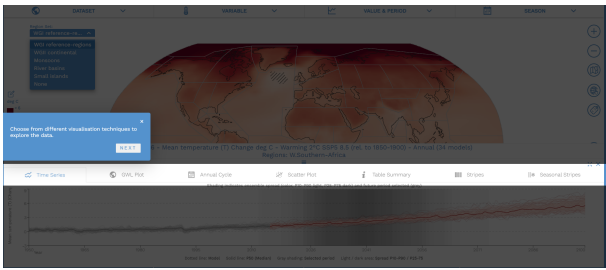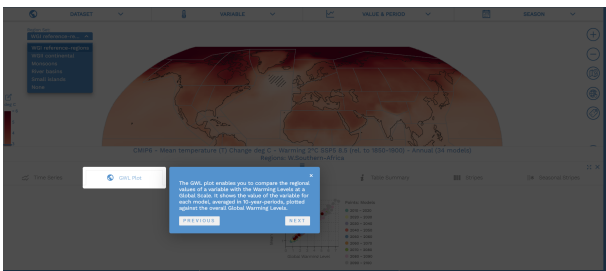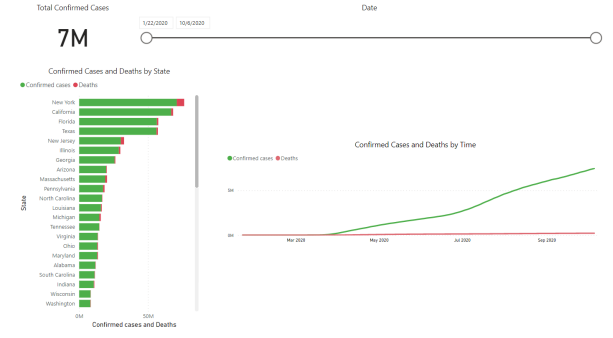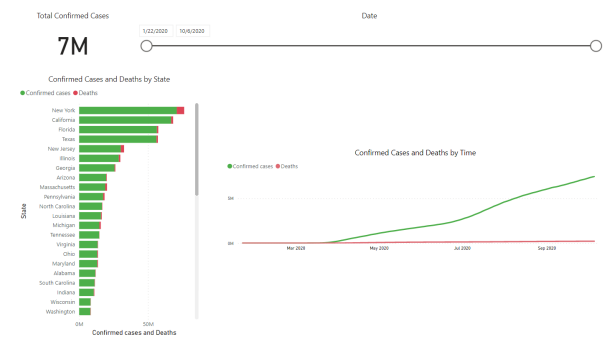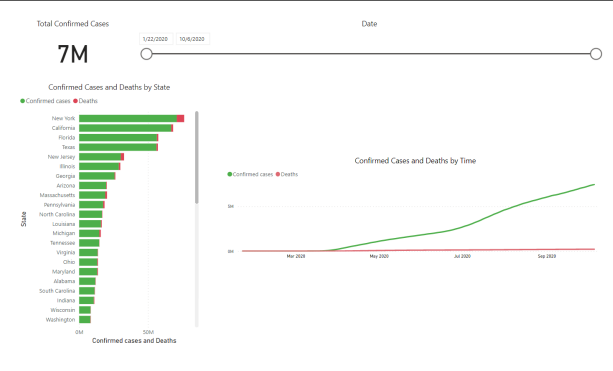| Onboarding Steps	Screenshots	Component
Dashboard: Regional information.		(Dashboard Purpose)
Select a dataset Select the dataset you want. You can choose between observations, historical simulations or future projections for different model ensembles, and paleo-climatic simulations.		Dashboard Authoring Phase

Choose variables		Dashboard Authoring Phase
Choose your variables. You can select from sets of atmospheric, oceanic and socio-economic variables.		

Select past period		(Time Filter)
Select the recent past period for the historical baseline and the future time period or warming level for projection information. Now choose to display absolute values or changes relative to the historical baseline		(Data) (Interact) (Element: Time, Type: Click)

Select the year		(Time Filter)
Select the time of year to display. In addition to displaying the annual mean (the default) you can choose a preset season or a specific period of months.		(Data) (Interact) (Element: Time, Type: Click)

Explain cross-filtering When you change any of the previous options, the map updates itself automatically with your selection		 (Cross-Filtering)
Set more filters from the drop-down: Here you can choose different sets of regions over which to aggregate data. You can also choose whether to display information on significance for observed trends, or uncertainty information for projections.		 (Set filters) [ ] (Data) (Transformation)
Explain legend interaction: Click on different levels of the legend, to highlight the values on the map, in the chosen range of contours.		⋮ (Legend) (Interact) (Element: Legend, Type: Click)

Summarize other interaction possibilities Use the navigation sidebar to explore other possibilities		 (Array of Interactions) (Element: all elements, Type: all types)
Explain each interaction in detail: Zoom in and out in the map		 (Interaction) (Element: Map, Type: Zoom)
Guide the user to pick a visualization to continue the analysis: Choose from different visualisation techniques to explore the data.		Traversal strategy applied and shown
Description of each visual along with an insight: The GWL plot enables you to compare the regional values of a variable with the Warming Levels at a Global Scale. It shows the value of the variable for each model, averaged in 10-year-periods, plotted against the overall Global Warming Levels.		 (Visual) (Data: Line Chart, Type: Fact)

Corona Dashboard Explanation

Onboarding Steps	Screenshots	Component
Data This dashboard shows the number of confirmed cases and deaths from 1/22/2020 until 10/06/2020.		 (Dashboard Purpose)
General Dashboard and Visuals The dashboard contains 4 visuals. The first one is called KPI and shows the total number of confirmed cases in Millions.		 (KPI)
Time Slider Second, a global filter is displayed to select a time period. Start and end date are outlined in squared boxes as well as indicated by the length of the horizontal line.		 (Time Slicer) (Data)

Bar Chart
General
Third, a stacked bar chart shows the number of confirmed cases and deaths by state.

Reading the Chart
Each bar represents a data item.
Green bars show the number of confirmed cases per state in descending order and red bars the total number of deaths.
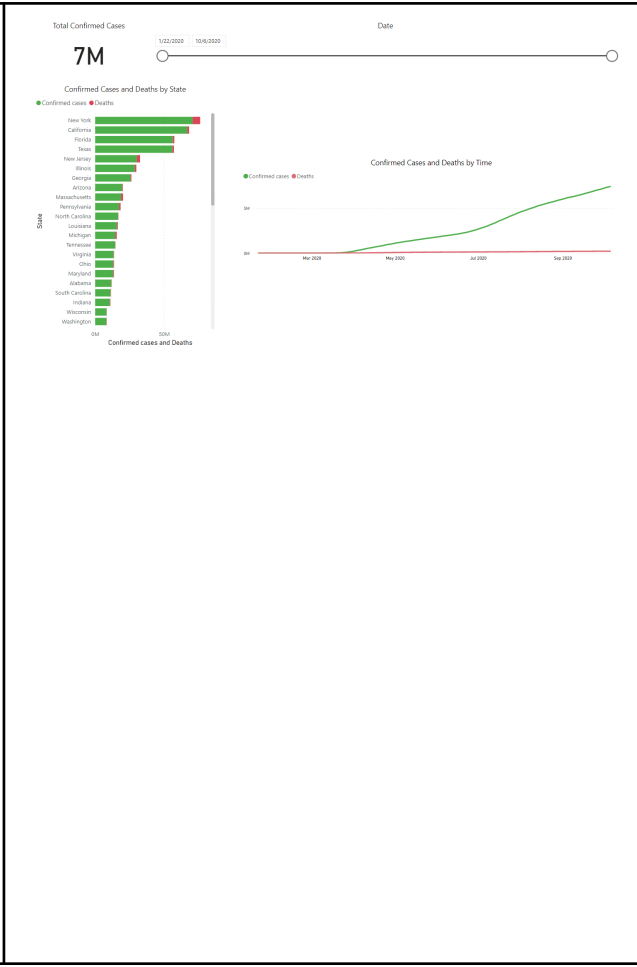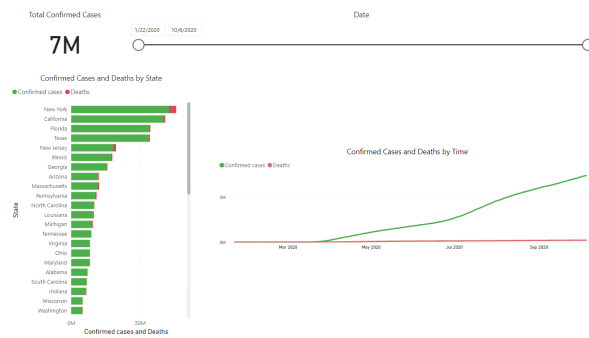The height of each bar shows the number of confirmed cases in Mio. in addition to the number of deaths (x-axis).
The vertical position of each bar represents the state (y-axis).

Using the Chart
Most confirmed cases occur in New York, whereas the lowest number is recorded in Vermont.
The three states with the highest confirmed cases are New York, California, and Florida.

(Bar Chart)

(Data: Cases Chart, Type: Maximum)

Line Chart

Similarly, the green line outlines the number of confirmed cases per day and the red line indicates the number of deaths per day.

Consequently, the highest number of confirmed cases was recorded on 10/06/2020.

General

The line chart shows the number of confirmed cases on a daily base from 1/22/2020 until 10/06/2020.

Reading the Chart

Each line represents a data item.

Similar to the bar chart, green lines show the number of confirmed cases per state in descending order and red lines the total number of deaths.

The x-axis equidistantly displays the time range (on a daily basis).

The height of each line shows the number of confirmed cases in Mio. in addition to the number of deaths (y-axis).

Using the Chart

The first confirmed case was recorded on the 01/22/2020 and the first death on the 02/05/2020.
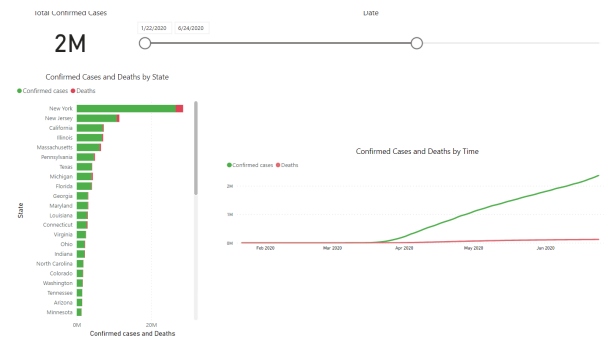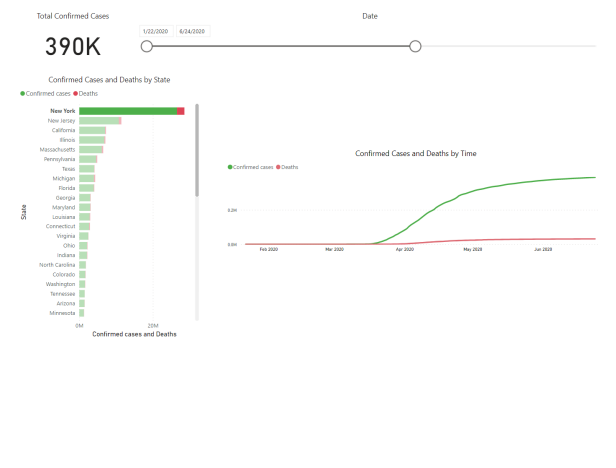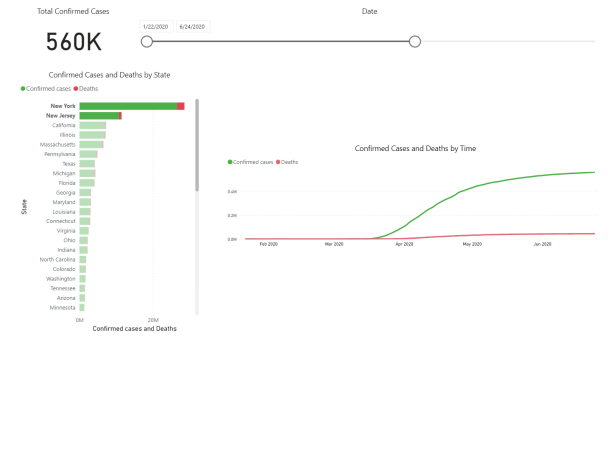
The number of confirmed cases is higher than the number of deaths.
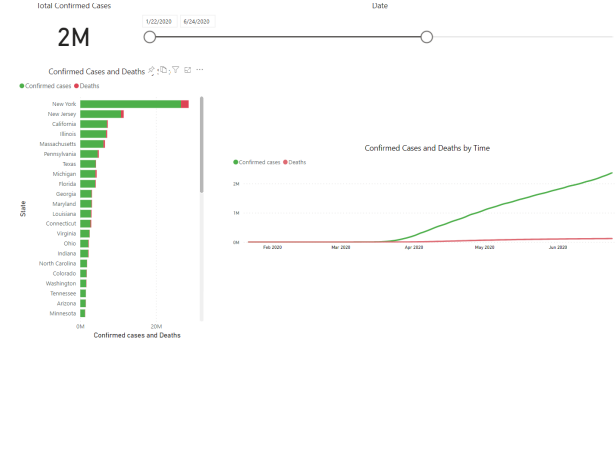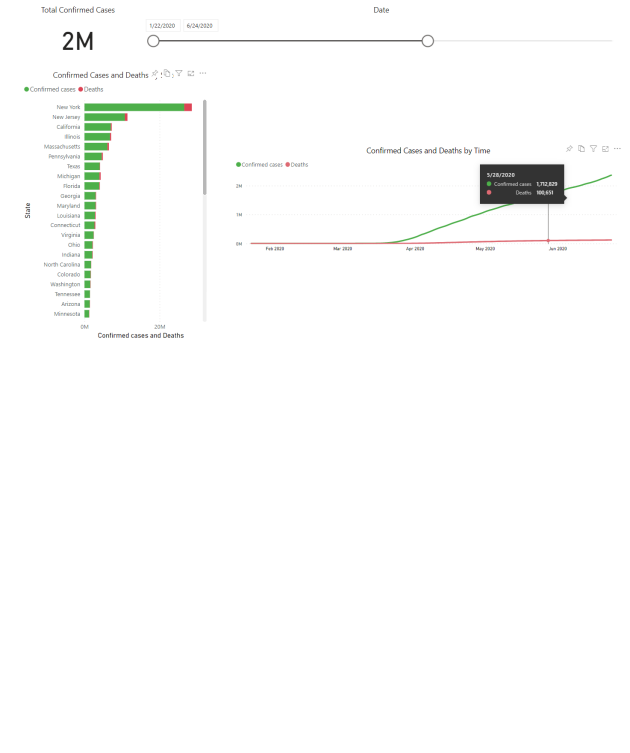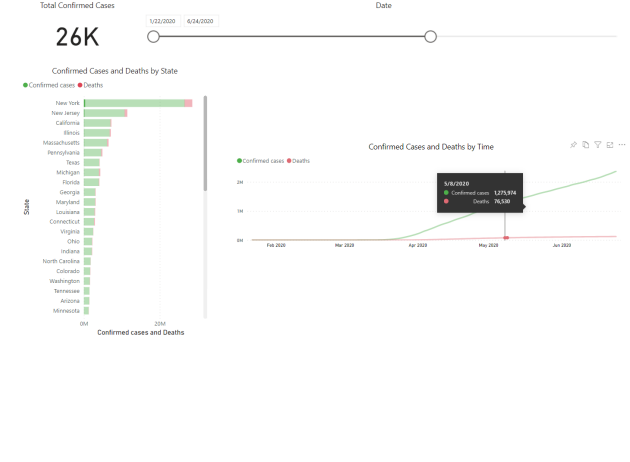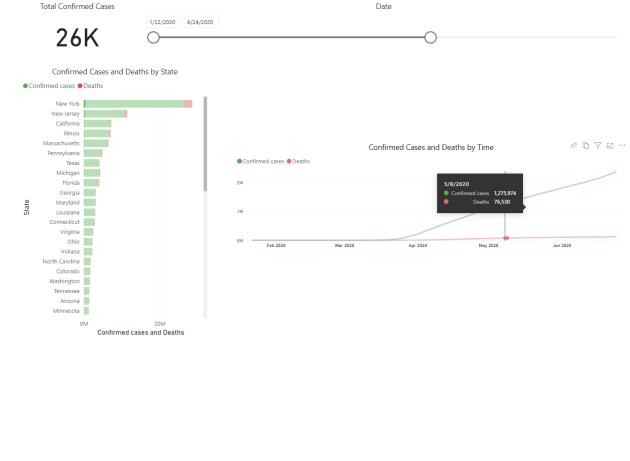
(Line Chart)

(Data: Cases Chart, Type: Maximum

Time Slider When reducing the time period, all other visuals will be affected. Thus, when reducing the selected time from 10/06/2020 to 06/24/2020, the number of confirmed cases will be reduced from 647 Mio. to 115 Mio. Also the number of the confirmed cases for the state of New York shows a new value of 26,553,018.		(Time Slicer) (Cross-filtering) (Bar Chart) (Data: Cases Chart, Type: Maximum
Bar Chart Hovering a green bar shows the number of confirmed cases for one state and hovering a red bar the respective number of deaths.		(Bar chart) (Element: Bar Type: Hover-over) (Field: Time, Type: Tooltip)

|		
Clicking on a bar, selects only one state and adapts the KPI and the line chart respectively. Consequently, when clicking on the bar of the state New York, the visual with the total number of confirmed cases is reduced to 27 Mio. and the line chart shows the development of the confirmed cases and deaths only for New York.		(Bar chart) (Element: Bar Type: Click)
A second state can be added to the analysis by Ctrl+Click on a second bar.		(Bar chart) (Element: Bar Type: Ctrl-Click)
To deselect one or more states, click on the highlighted bar again or on a white area within the visual.		(Bar chart) (Element: Bar Type: Deselect)

Line Chart As with the bar chart, hovering a data point can display the daily number of confirmed cases and deaths.		(Line chart) (Element: Point Type: Hover-over) (Field: Time, Type: Tooltip)
Clicking on a data point selects both, the confirmed cases and deaths for a selected time stamp.		(Line chart) (Element: Point Type: Click)
The visual with the number of confirmed cases, but also the bar chart adapts to the selection. In the case of the bar chart, selected data points are represented with high opacity and non-selected data points are represented by highly transparent areas. As with the bar chart, additional time points can be selected by Ctrl+Click and deselected by clicking on a white area within the visual.		(Line chart) (Element: Point Type: Ctrl-Click)

Collaborator's Dashboard

As this onboarding was performed directly on a dashboard to our collaborator, we cannot show the actual dashboard. However, we anonymised the data and below you can find a sketch showing the components of the dashboard.
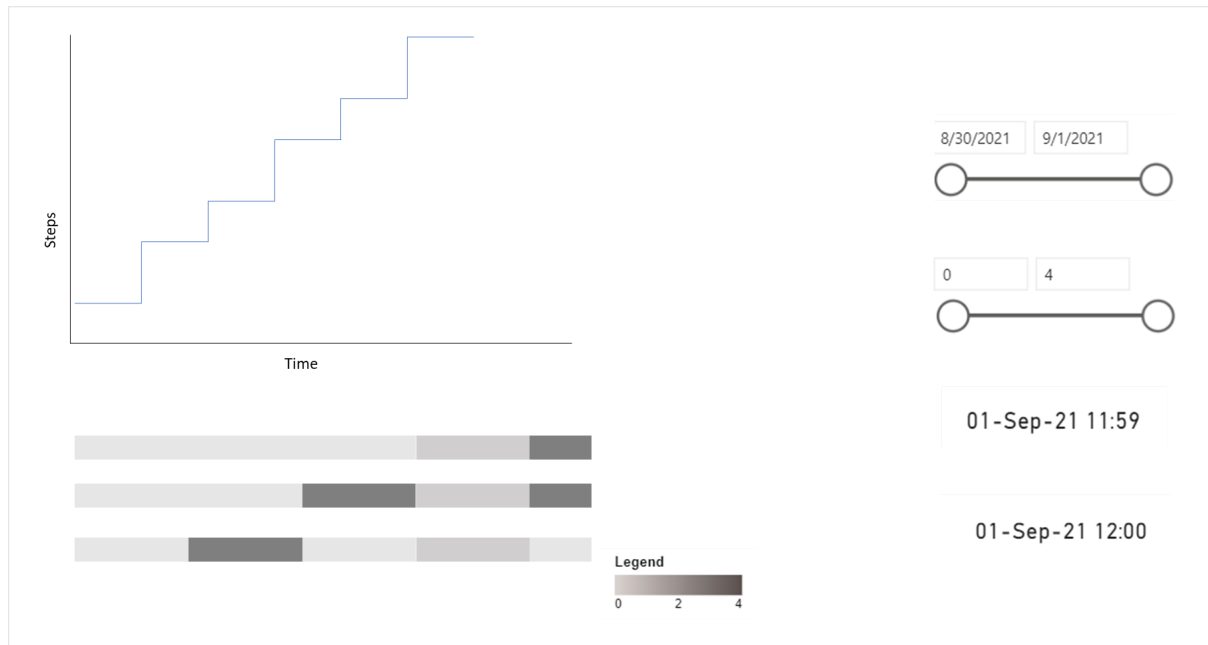
Onboarding Steps	Component
Data In the industry, there is planning, for a given time period, and other parameters which need to be monitored	(Dashboard Purpose)
Line chart explanation Shows the events over time	(Visual)
Explanation of heatmaps Explaining the reasons behind every heatmap	(Visual)
Time period interaction Select the last two days	(Time Slicer)

	[ ] (Data)
KPI explanation The time stamps are explained	ⅠⅠ�ₗ (Visual)
Interact with filter Filter for specific number	▽ (Filter) ◉⭢ (Interact)
Insight explanation for line chart Explanation of specific event which occurs beyond the filtered point	⋰⋱ (Data: Event, Type: Outlier)
Interact with user to explain specific insight Heatmap explanation beyond a certain number **User reply** Interesting how the production planning changed from this point **Presenter uses filter**	⋰⋱ (Data: Heatmap, Type: Fact) ▽ (Filter)
User question: Annotates the line chart and asks has the filter affected it as well **Presenter: Yes**	▽ (Filter)
User question: Does it affect other visuals **Presenter: Yes, hovering over the visual shows the filters applied, to explain cross-filtering**	◉⭢

	(Element: Table, Type: Hover) (Element: Another chart, Action: Cross-Highlighting/Filtering)