EasyMap

Quick Start
in Version 11.1

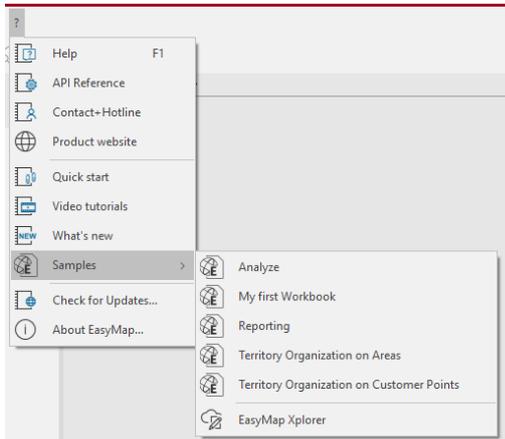# Content

1. First Steps in EasyMap 11.1

Welcome to EasyMap! This Quick Start introduces new users to the functionality of EasyMap by guiding you through the basic tasks.

After the successful installation of EasyMap, you will find a number of demo and exercise files. All Data and maps which are relevant for this exercise are CAN BE FOUND IN THE MENU ? → SAMPLES.

These files demonstrate selected EasyMap functionalities and analysis tools. To open one of these files, just click on it.
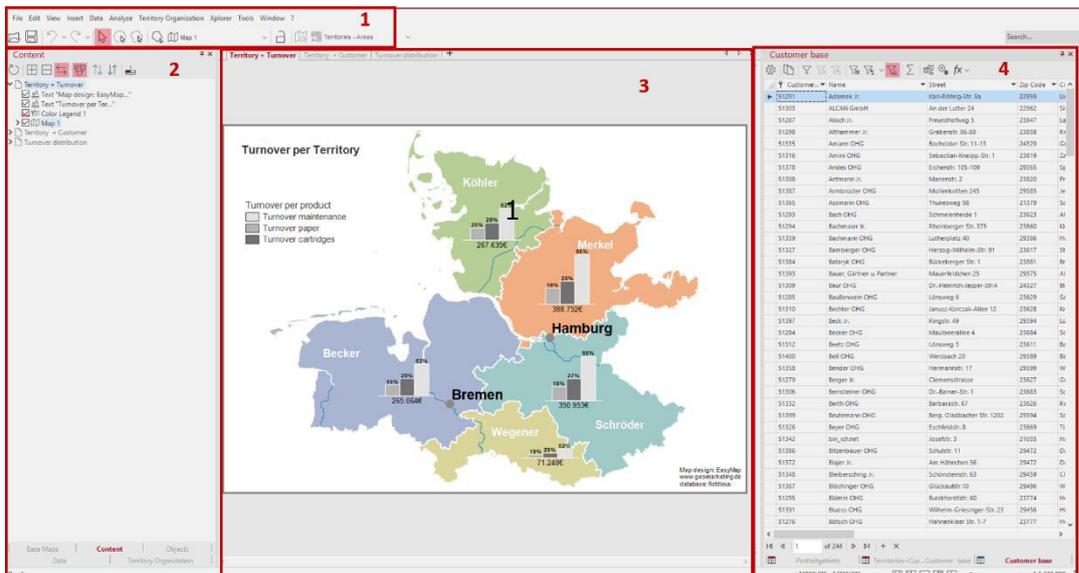
Illustration: EasyMap program window (main menu + toolbar [1], navigation window [2], map window [3], and data window [4])

In the SAMPLE called **"MY FIRST WORKBOOK",** the navigation window [2] is placed on the left side and the data window [4] are placed on the right side of the EasyMap program window. The navigation window provides the following elements and navigation options at the bottom: BASE MAPS, CONTENT, ANALYSES and OBJECTS. Additional navigation windows would appear when and where appropriate. You can use the tabs below the navigation windows to toggle. You can also open the navigation windows by clicking the appropriate command and adjust the arrangement of the windows in the WINDOW menu.

To get started with EasyMap, please launch the software and open the sample MY FIRST WORKBOOK.EMPX. The following MAP SHEETS are enclosed in the workbook:

- Territory + Turnover
- Territory + Customer
- Turnover distribution

This sample workbook offers an excellent opportunity to find out more about the program by yourself. For a firsthand experience, please open the **TERRITORY + TURNOVER** map sheet.

Please note that EasyMap offers a zoom automatism function: the more you zoom in, the more details will be displayed on the map. However, not all map content will be enlarged according to the scale of the map. For example, location markers may still be displayed at the same size, regardless of the scale of the map.

Use this sample exercise to find out how to modify the data, observe the impact of your modifications on the analyses' outcomes, or figure out how to import or link additional data. For all EasyMap analyses, data is an essential input factor. For your convenience, various data tables are already enclosed in the **SAMPLE** workbook **MY FIRST WORKBOOK**, which means that you do not necessarily need to link or import any data to the workbook. Please consult the chapter **ANALYSES: DATA BASIS FOR AN ANALYSIS** in the User's Manual for more detailed information.

Take time and explore how to modify properties of the elements yourself!

Every layer listed in the **CONTENT** navigation window also has **PROPERTIES.** These **PROPERTIES** can be modified by using the appropriate commands found in the layers' context menus. Right-click on a layer to open its context menu! In the following two examples this will be demonstrated:

Sheet Color

To change the color of the sheet "Territory + Turnover", open its context menu and choose **PROPERTIES.** Refer to **STYLE** on the tab **COMMON** and choose a color fill.

Contour Shadow of the Area

To modify the shadow around an area displayed in the map, proceed as follows: Open the context menu of the area layer (i.e. **POSTLEITGEBIETE – AREAS,** in this example), and click on **PROPERTIES**. Open the **FILL STYLES** tab and change **SHADOW COLOR** and **SHADOW SPACING.** Please note that no shadow will be displayed if **SHADOW SPACING** is set at 0.0 pt.

Modifying an Analysis

The **PROPERTIES** of an analysis may also be changed. You may change, for example: The symbols, colors, sizes, and the labeling of the **SYMBOLS** in an analysis.

Visibility

The **CONTENT** Control Navigation Window offers three options for the visibility of objects depending on the **SCALE RANGE** in a map layer. You simply check the box beside the layer to choose the desired option. The three options are:

☑	Always visible
☑	Scale-dependent visible
☐	Invisible

The Visibility options may also be modified in the **SCALE RANGE** window.

2. Exercises Dealing with Typical User Examples

We would like to assist you to create a new map starting from start. All necessary steps on how to generate your own map are described in the following paragraphs:

If you have any questions or need any help, please do not hesitate to contact us:
Phone: +49 (0) 228 95 91 40 (service hours: Monday to Friday 9 - 12 p.m., 2 - 5 p.m.)
E-mail: **hotline@geomarketing.de** (available even outside hotline service hours).

We are always happy to help!

For beginners, we recommend our software training courses on learning how to optimally work with EasyMap.

Before we get started with the exercise, please check if all relevant base maps and data have been installed. All necessary base maps and sample files are supplied with EasyMap.

The exercises in this **QUICK START** manual are based on the base map "POST2-D.ltg". This can be found in the following directory **…\...\LUTUM+TAPPERT\DIGITAL MAPS**

The base map is installed in this directory unless you explicitly chose a different one during the installation process.

The data used in the **QUICK START** exercises is found in the delivered zip file.

By practicing the following exercises, you will understand the basic functionality of EasyMap.

In exercise 1, 5, and 6, the base map and data are inserted manually. This always needs to be done first in order to create a map. For all other exercises, the relevant base map and data are already provided in the prepared EasyMap workbook. After completing exercise 1, which provides the basic knowledge, you may proceed to any of the other exercises. Thus, you can pick an exercise that corresponds to tasks that you typically solve.

Please be aware that exercise 5, 6 and 7 are available only with the EasyMap *DistrictManager Edition*.

The first exercise guides you through the complete procedure of creating a thematic map displaying data. This simple exercise is based on a single sheet, map, and table.

Exercise 1: Area Shading – Turnover per two-digit Postcode

About the exercise:

In this first exercise, your task is to do an **AREA SHADING** analysis, that is, color shading the areas corresponding to the regional turnover achieved. Before you can conduct the analysis, you need to insert the required base map and import the table with the relevant data. The last step of this exercise deals with adding topographic layers to the map and creating a legend to explain elements of the final map.

Basically, to create a thematic map, these four steps must be followed:

Step 1: Insert the base map

Step 2: Import or link external data

Step 3: Define the analysis tool

Step 4: Insert the legend and design your map

If EasyMap version 11.1 is not already running, launch EasyMap now. However if it is, Create a new workbook. Click **FILE** on the main menu, and choose **NEW** or click the the button **EMPTY WORKBOOK** at the splash screen. A new EasyMap workbook will be opened.

Step 1: Insert the Base Map

When creating a new map, it is recommended to insert the appropriate base map as the first step.

- Click the [>] on the left side of **DEMO MAPS** in the **BASE MAPS** navigation window.
- Then click the [>] left side of **DEUTSCHLAND, POSTLEITZONE 2**.
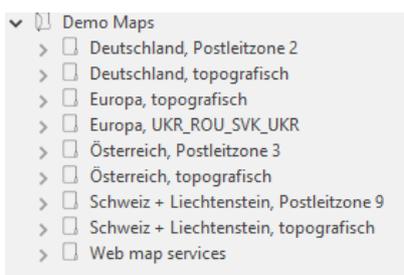

Illustration: Choosing the base map

- Click **10 POSTLEITREGIONEN** (see illustration above) and drag this **BASE MAP** to the right, dropping it onto ´Sheet 1´ (using drag and drop).

- A pop up window titled ´**Insert topographic content**´ will appear asking if you also want to insert the corresponding topographic content. Please select ´**Yes**´. The base map will be displayed on the worksheet along with all the related topographic layers. See the **CONTENT** navigation window for the list of all layers that has been inserted.

Step 2: Import Data

In order to color shade post code regions according to turnover, EasyMap needs the "Customer Base" data.

- Import the "Customer base" data from the "Sample data.xls" Excel file. Click on the **DATA** menu and click the **IMPORT...** command (see illustration below).
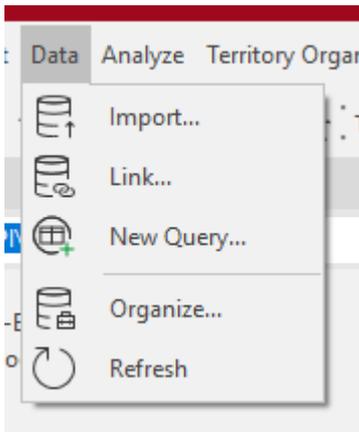

Illustration: Data / Import menu

- Select Microsoft Excel worksheet, next, File name = "Sample data.xls" (this file is supplied with EasyMap). Click **NEXT**.

- Select the "Customer base" table in the **IMPORT DATA** dialog box and click **NEXT.**

- In the next step (= **COLUMN SETTINGS**), you have the option to define the **DATA TYPE** for all columns; please change the data type of the column "Customer ID" from **TEXT** to **KEY** with five digits; next, select the data type **POSTCODE (GERMANY)** for column **POSTCODE**, then select **KEY** with two digits for column **PC2**. Make sure that columns which shall be used for calculations are assigned the data type **NUMBER**. All other settings should remain the way they are. Finally, click on **FINISH**.
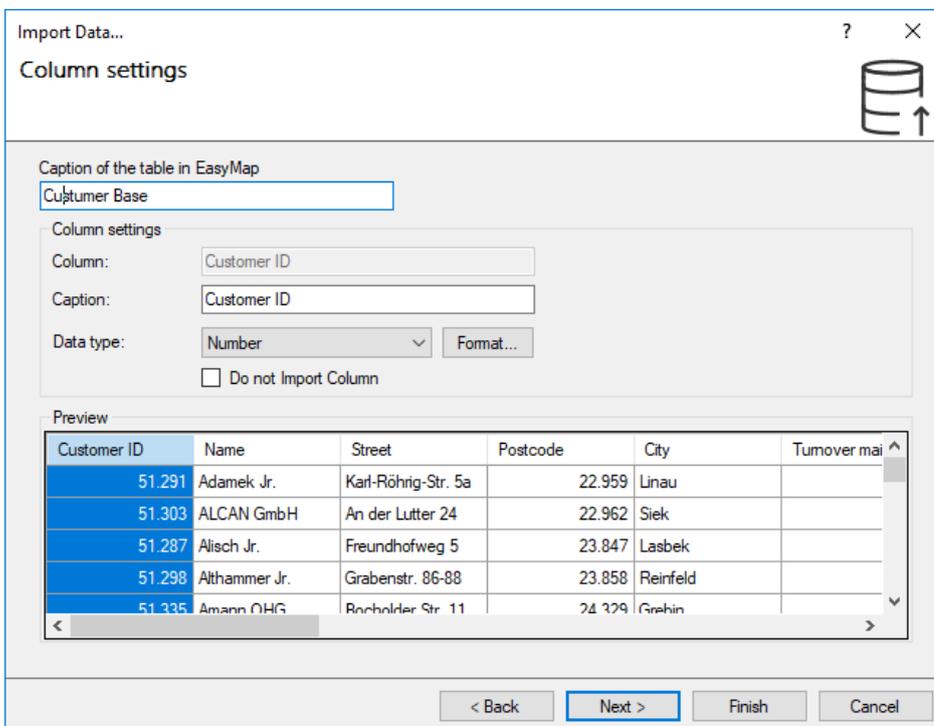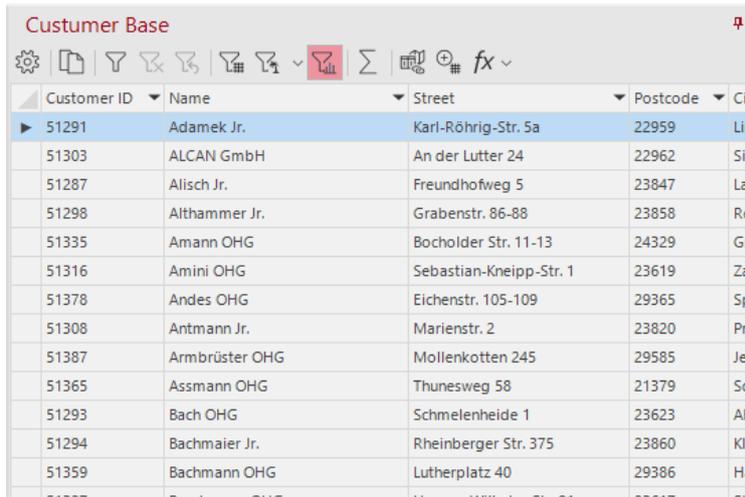

Illustration: Import wizard – Column Settings

The **TABLE** window opens on the right of the map window and shows the imported data "Customer base" of a fictional company.

Illustration: Successfully imported "Customer base" table

Step 3: Define the Analysis Tool

We are now at the stage, to color shade each region according to its turnover data imported in the previous step. Thus, the analysis tool AREA SHADING is used.

- Click ANALYZE on the main menu and select the command AREA SHADING.

In the first step EasyMap needs to know, which data table shall be used as input for the analysis. Also, EasyMap needs to know, on which map the analysis results shall be displayed and which data column can be used to join data to be displayed the map.

Thus, select:

- DATA FROM TABLE... = "Customer base"

- VISUALIZE IN MAP...= "Sheet 1 / Map 1"

You must also specify which column of the table contains the AREA ID of the corresponding map layer. EasyMap will use this column to properly assign the turnover figures to the respective areas. Please specify:

- ID COLUMN: "PC2" (two-digit postcode of the postcode regions)
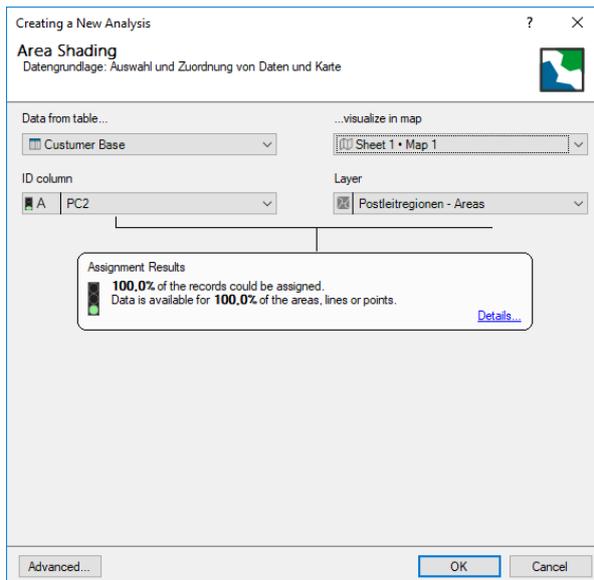
- LAYER: "Postleitregionen – Areas"

Illustration: Choosing the input data

- Click **Ok**.

The analysis properties which are dependent on data can be defined by these steps,

select the **Column** on the tab Color, which the area shading is to be based on, that is:

- **Column =** "Total turnover"

With regards to **Aggregation**, you can make a decision as to how EasyMap deals with when one area has multiple data lines. As there is only one line assigned to each area in this exercise, the aggregation mode is of no relevance in this case. Thus, the default should be maintained, therefore:

- **Aggregation = Sum**

Now you may choose from different types of area shading. In this sample exercise, the best-suited option is the default type **Classified**. Thus, you need to specify only the **Count** of Classes and the type of **Classification**:

- **Count = 3**

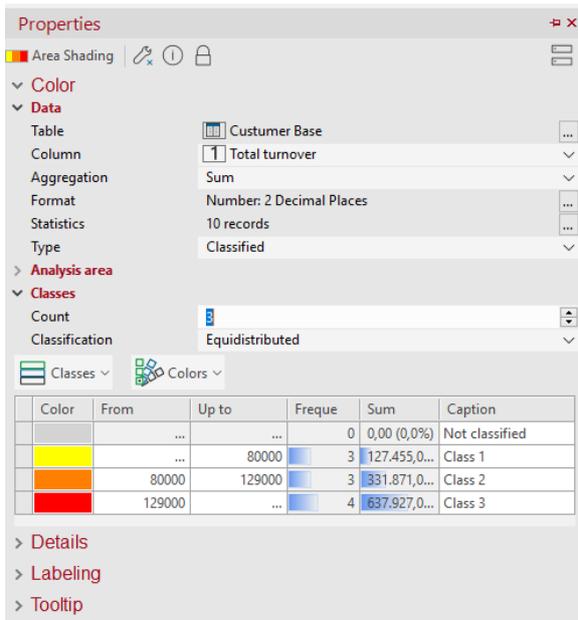- **Classification = Equidistributed**

Illustration: Setting the Properties of the Area Shading

EasyMap now displays the colored regions according to its turnover data in the map.

Step 4: Insert the Legend and Design your Map

The last step of this exercise is to insert a legend and further design the map. As there are multicolored regions displayed in the map, a COLOR LEGEND should be inserted in order to read the map.

EasyMap offers two ways for that. This can be done either using the menu INSERT → LEGEND ELEMENTS → COLOR LEGENDS option or you insert the Legend via the OBJECTS navigation window.

If you use the menu INSERT, choose LEGEND ELEMENTS and COLOR LEGEND command, put the cursor over the map (the cursor will appear in the form of a plus sign!), then draw a rectangle to show EasyMap where you want the legend to be placed. The legend will then automatically be inserted.

If you want to use the OBJECTS navigation window to insert the legend, follow these steps:

- Click the tab OBJECTS at the bottom of the navigation window.

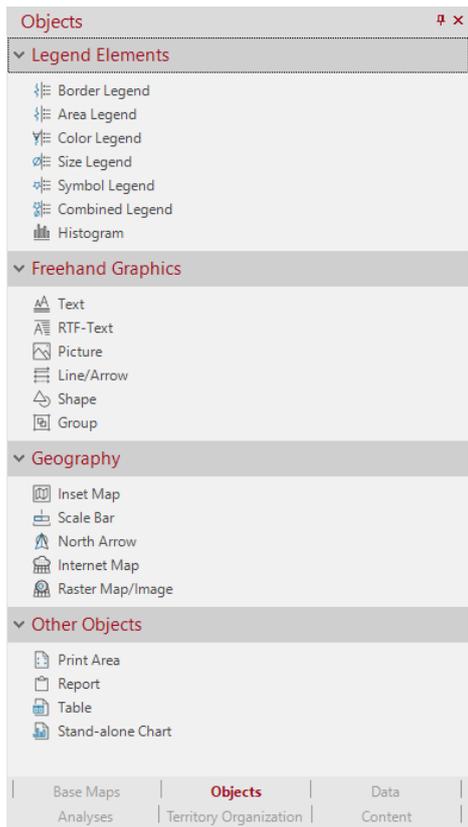- Pull the COLOR LEGEND onto the right of the sheet using drag and drop.

Illustration: Objects navigation window

As a result, the legend appears next to the map. In order to change the legend header, proceed as follows:

- Double-click the legend, select the **Settings** tab.

- Replace the **Content** containing the text macro in the **Header** category with "Turnover"

You may also position the legend anywhere you like by clicking the legend, keeping the left mouse button pressed and moving it to the desired position (drag and drop).

Refining the Map Layout

EasyMap offers various options to customize a map to perfectly match your needs.

- Click the **Content** tab in the navigation window.

By ticking the checkbox below Map 1, you can simply change the visibility of the topography layers. Try different combinations of the layers and then decide which combination of layers suit your needs.

The following selections are possible:
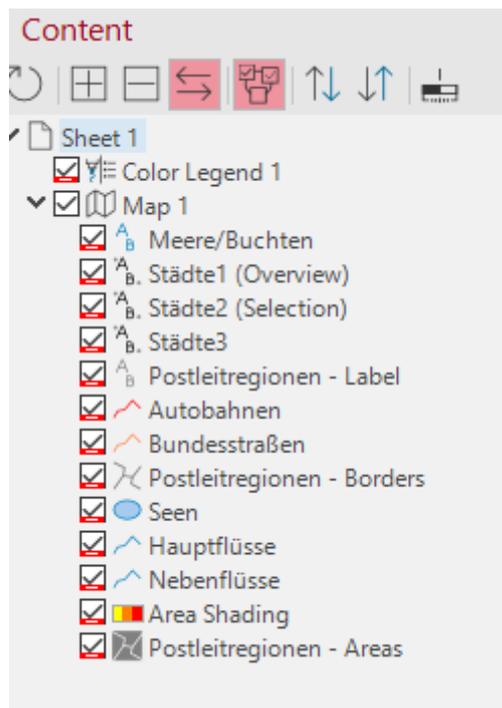
Illustration: Possible selection of layers

If you have strictly followed the instructions of the exercise, your map should look similar to the map below:
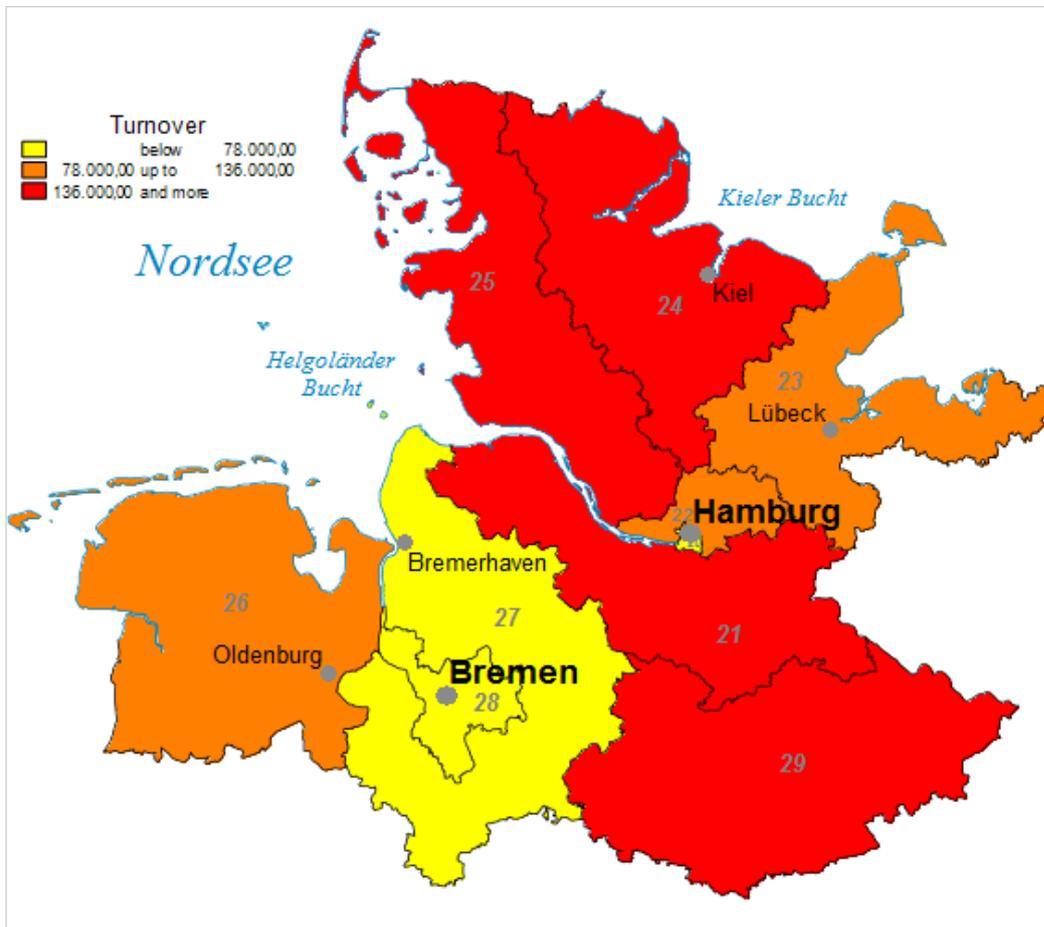
Illustration: Area Shading visualizing turnover figures

Congratulations on your first self-made map in EasyMap 11.1!

Important Learnings from Exercise 1:

- Base maps can simply be inserted using drag and drop.

- Data may easily be imported or linked using a wizard (help feature) of the software.
- Analysis such as AREA SHADING can be applied.

- A legend explaining an analysis can be inserted.

- The display of a map may be modified by making layers visible or invisible according to your preference.

Exercise 2: User–Defined Area Labeling

About the exercise:

After you have learned how to custom design a map with topography layers in the first exercise, you will now learn in this exercise, how to label areas in the map with different options. Your task is to label the individual areas with their names as well as with the regional turnover figures.

In EasyMap, you can easily label areas with their corresponding **AREA NAME** and/or **AREA ID** (e.g. postcode) for all digital maps provided. Furthermore, area bound data can be added to the name of the area.

Step 1: Open the EasyMap file

Open the workbook "Exercise 2.empx", which is delivered in the zip file.

This EMPX file comes with the base map "Postleitregionen – Flächen" and the imported data table "Customer base".

Step 2: Add Area Names

The areas (polygons) in the map are by default labeled with a 2-digit postcode. Your task is now to remove the 2-digit postcodes and to show the area names instead.

Thus take the following steps:

- Click the [>] next to "Sheet 1" and second the [>] next to "Map 1" in the **CONTENT** navigation window.

- Double-click the "Postleitregionen –Labels" layer.

- Switch to the **AREA LABELING** tab.

- Open the **TEXT MACROS** drop-down menu and choose **DATE > NAME**.

EasyMap now shows "[Name][DefaultLabeling]" in the text-edit field.

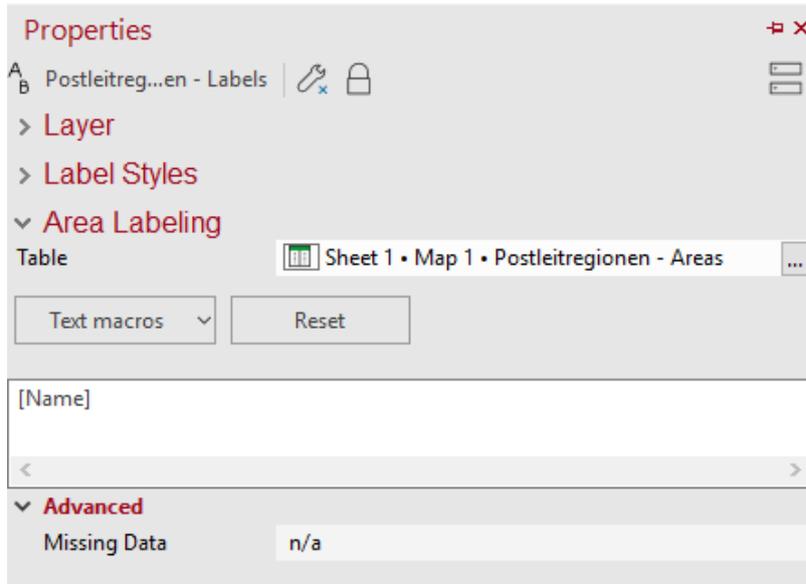Delete "[DefaultLabeling]" so that just "[Name]" remains.

Illustration: Dialog box for user-defined labeling

The name for each area would now be displayed on the map. You may have noticed that some of the area names overlap with the default city labels or city points (e.g. Hamburg-Nord and Hamburg). This overlap can either be corrected manually or automatically. The different ways of positioning texts and diagrams are described in Step 4 (=Arranging Area Labels) of this exercise.

Step 3: Using Data as Area Labels

This exercise deals with customizing the map by displaying numerical data as text on the map, thus, the turnover figures of the company should be displayed for each area after completing the following steps. The required "Customer base" table used in this exercise has already been imported. How to import data is demonstrated in Exercise 1, step 2.

To display turnover figures as additional information to each area, follow the next steps:

- Double-click the "Postleitregionen–Labels" layer in the **CONTENT** navigation window.

- Switch to the **AREA LABELING** tab.

- Start on a new line in the text edit field and type "Turnover:" (see illustration below).

- Click **APPLY,** drag the **PROPERTIES** dialog box to the side to have a look at your map. The text "Turnover:" is added below each area name on the map.

To add the actual turnover figure to each area, select the table that contains the essential data.

- In the same **PROPERTIES** dialog box, click ⌗, in the category of Table, choose **EXTERNAL DATA**; then select **CUSTOMER BASE**. Close the Window with **OK.**

- Now you can select "Total Turnover" on the drop-down menu **TEXT MACROS > DATA > TOTAL TURNOVER** and **SUM** as aggregation mode (next to **SUM)**.

The user-defined labeling should be displayed as in the illustration below:
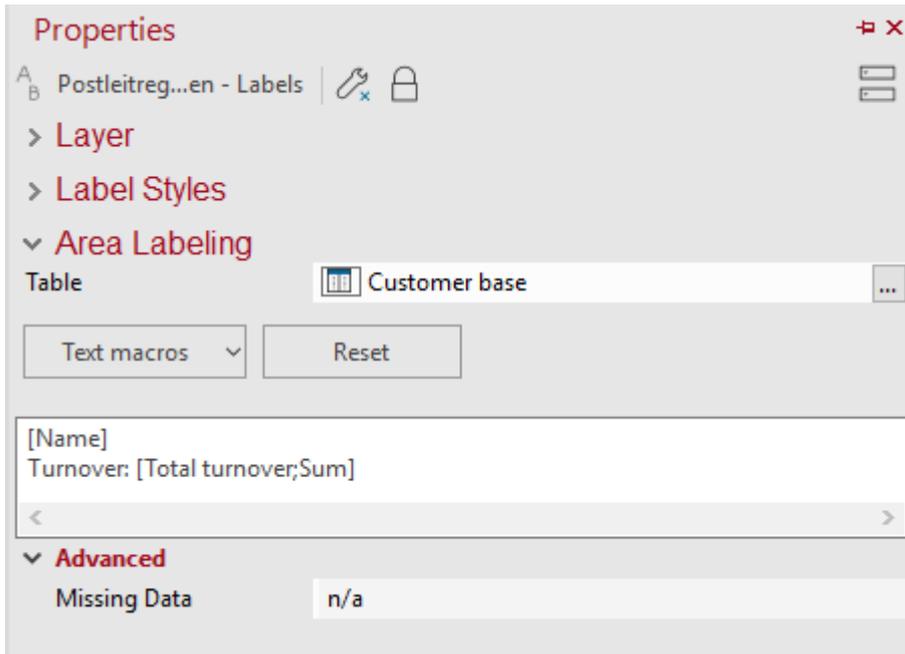
Illustration: Completed settings for the user-defined labeling

The turnover achieved per area is now displayed on the map. You may have noticed that the map has become overcrowded due to the additional texts. You will learn how to resolve this in the next steps.

Step 4: Arranging Area Labels

There are several options available to avoid overcrowding on a map. One of them is to simply scale down the text of the area labels. To do this, follow these steps:

- In the **Content** navigation window, double-click the layer "Postleitregionen – Labels".

- Select the **Label Styles** tab.

- Select all **Available styles for elements of this layer** together by keeping the Ctrl key pressed.
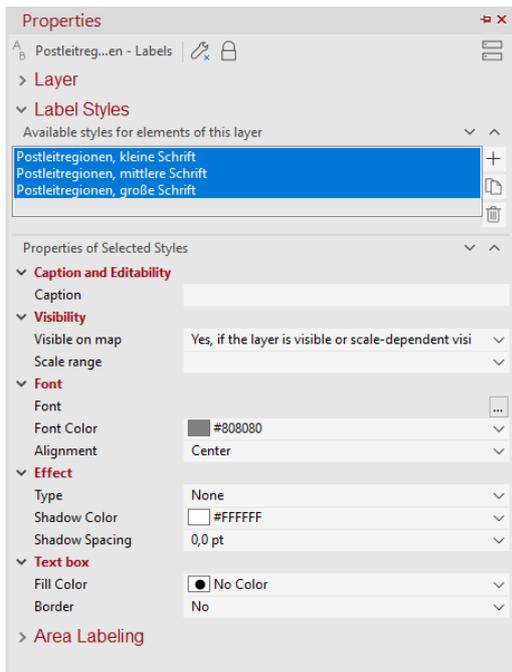
Illustration: Changing the font properties

- Activate the second **Font** line and a button with three dots would appear at the right end of this line.

- Click this button and select **Font size** 9pt in the separately opened dialog window, including font type and style.

- Click **OK** to apply all modifications.

The size of the labeling shown in the map is reduced and some overlappings have disappeared.

Another option is to arrange the text labels on the map manually. Try this with the text label of **Oldenburg**.

- Select the area text "**Oldenburg**" with a left-click.

A dashed frame appears around it. Move over the selected area text with the cursor, it would change into an arrowed cross.

- Keeping the left mouse button pressed (using drag and drop), you can now move the selected area label to a better position, so that other area labels are not covered anymore.

Another way of avoiding overlapping text is by rearranging the city names differently from the city points. Try to rearrange the name of the city "Hamburg" in a different position than its original point:

- Double-click "Hamburg" on the map.

- Choose the **Style** tab.

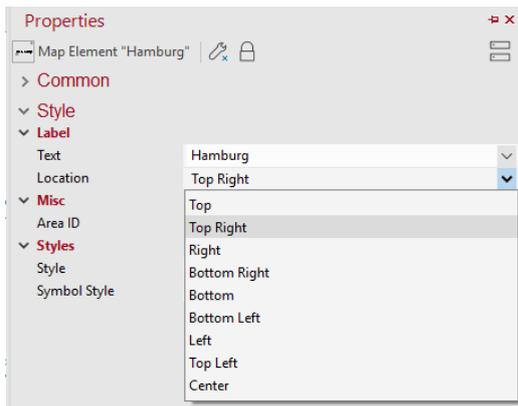- Select **Location = Bottom right** in the **Label** category.

Illustration: Positioning of the map element "Hamburg"

The city name "Hamburg" is now positioned at the bottom right side in relation to the city point. Do the same to other overlapping map elements to optimize their label position.

If you followed the instructions of this exercise, your map should look similar to this one:

Illustration: Map after Exercise 2 is completed

Important Learnings from Exercise 2

- Data can easily be used as labeling on the map.

- Area labels can be moved within the map and be positioned clearly with one click.

- Each Area names' position can be adjusted via the **PROPERTIES** dialog.

Exercise 3: Representing Customer Locations

About this exercise:

Your task is to display customer locations on the map. As you only have the postcodes of the customers available, you can display customer locations via their postcodes.

Step 1: Open the EasyMap file

Open the Exercise 3.empx file.

This EMPX file has the base map of the 5-digit postcode areas. This base map is required to represent the locations according to their five-digit postcode. Additionally, the file contains the imported "Customer base" data table.

Step 2: Mapping Customer Locations

To display the customer locations on the map, follow the next steps:

- Open the **ANALYZE** menu and select the **SYMBOLS...** command.

- Select the **SUB TYPE** = **LOCATION BASED** in the upper part of the dialog window.

Note: color, size, and shape of the symbols will be the same for all symbols visualized in the map. The analysis **SUB TYPE** defines how the data will be displayed in the map. Provided that the **LOCATION BASED** sub type is activated, each data record available in the input data table with a correct postcode will be displayed by a separate symbol on the map.

- Choose the input **DATA FROM TABLE...** = "Customer base"

- **...VISUALIZE IN MAP** = "Sheet 1 / Map 1"

- **IDS CONTAINED IN COLUMN** = "Postcode"
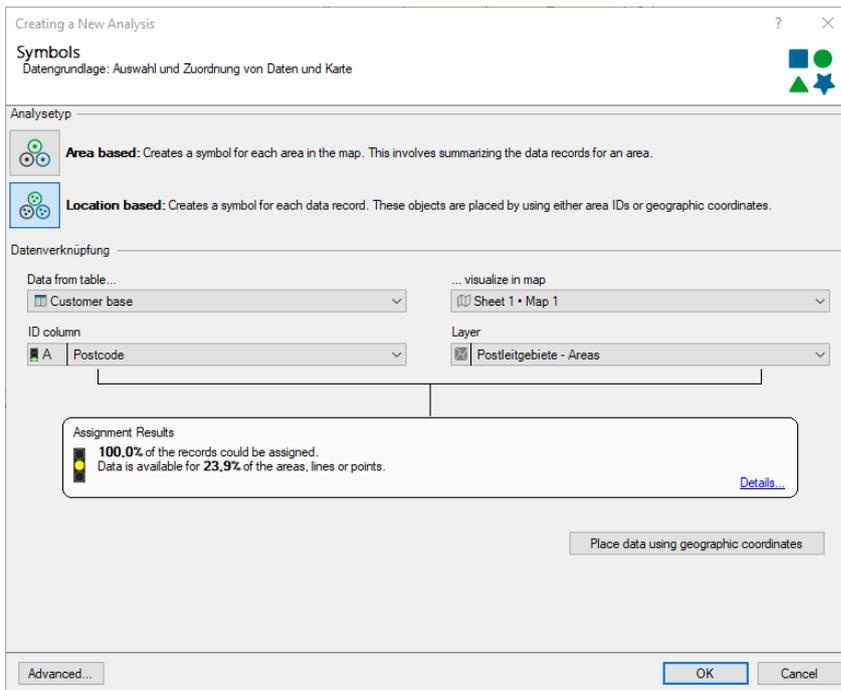
- **LAYER =** "Postleitgebiete – Areas"

Illustration: Choosing the input data

The upper row in the **ASSIGNMENT RESULTS** info box reveals the percentage of the data records which were assigned to an area (here: 100.0 %, i.e. all data records were assigned properly). It is assured that a 100% result can be achieved. The other value indicates how much area data is available (here: in 23.9 % of postcode areas at least one customer can be found).

Choose the option to **PLACE DATA USING GEOGRAPHIC COORDINATES** for location based analyses. Thus, the coordinate information (two columns containing coordinates) need to be provided in your data table.

- Click **OK**.

In the second step, define the analysis' **PROPERTIES**. The following parameters can be modified here: symbol style, color, and size of the symbols.

- Select circle as symbol, green as color, 0,2 cm as size then Click **FINISH**.

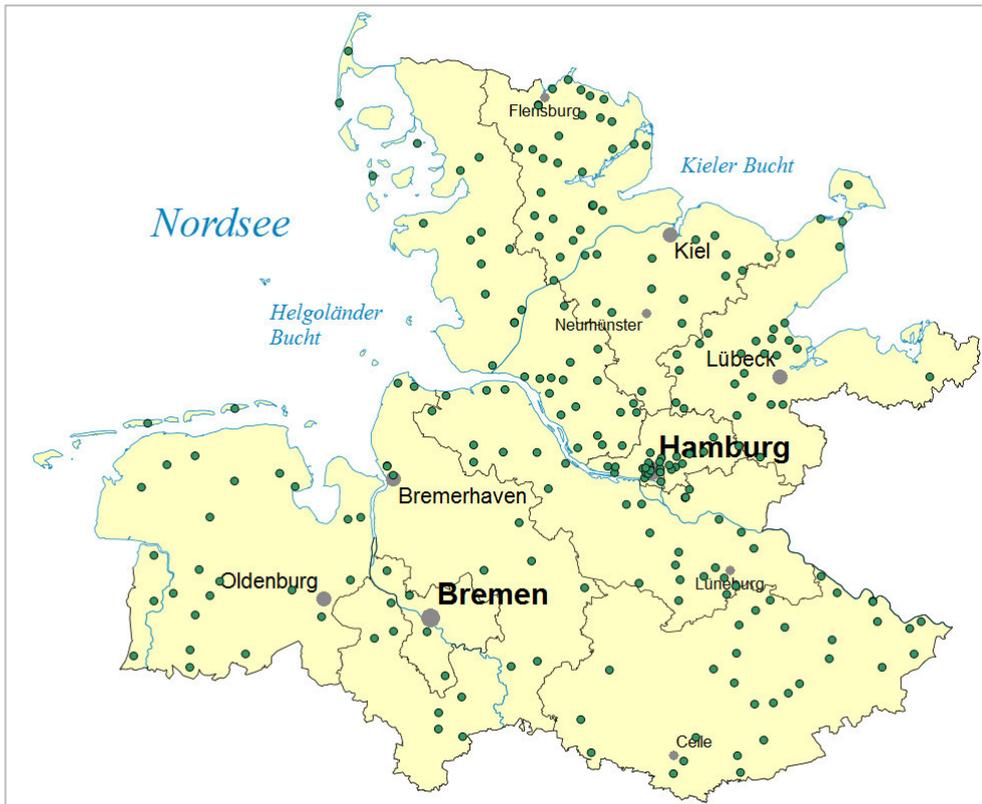Thus, symbols are added for each customer location in your map:

Illustration: Mapping customer locations

If you want to adjust the analysis properties, click on **WINDOW** on the main menu and choose `analyses`. The **ANALYSES** navigation window would appear, switch to this tab by clicking it. Then click [+] by map1, next, double click the `uniform symbols` to open its drop down menu, you can now reassess the corresponding analysis settings in **PROPERTIES**.

The analysis type **UNIFORM** used in this exercise creates symbols with the same size, symbol, and color. This is the easiest way to generate locations in the map.

To investigate qualitative differences of locations, EasyMap offers two ways of generating different symbols according to the input data. Thus, there are two **ANALYSIS TYPES**:

1. The analysis type **BASIC** creates proportional symbols varying in size, symbol, and color depending on the values or attributes of a single data column. For example, A-customers (with high turnover level) can be presented as red dots in size 0,3, B-customers (with medium turnover level) as blue squares in size 0,2 and C-customers (with low turnover level) as yellow triangles in size 0,1.

2. If you want to differentiate the symbols even further, you can make use of the **COMPLEX** analysis type creating proportional symbols. Size, symbol, and color can independently be controlled by three different data columns in this case. You can then, for instance, scale the symbols according to the achieved turnover, represent A-, B- and C-customers in different colors and visualize the customers' branch by different symbol shapes.

The **LOCATION BASED** sub type is not only used for postcodes, it can also be applied to different area structures, e.g. districts, municipalities, or federal states.

Step 3: Executing a Query

The previous section dealt with how to visualize customer locations as symbols based on a separate table. In EasyMap, analyses can be based on the query output you create. Queries allow you to generate tables according to user-defined criteria.

In the following paragraphs, a table based on the "Customer base" would be used to generate a query containing only A-customers. This query would serve as a basis for a subsequent **AREA SHADING** analysis, coloring all postcode areas only an A-customer is located in.

- Execute the **NEW QUERY...** command on the **DATA** menu

- The **ADD TABLES** dialog window pops up (you can also call up this window by clicking the **ADD TABLES** command on the **QUERY** dialog window)

- Select and add the table "Customer base" from the **EXTERNAL DATA** tab by either double-clicking the table or activating the **ADD** button. Consequently, the selected table as well as its columns are displayed in the **QUERY** dialog window opened in the background

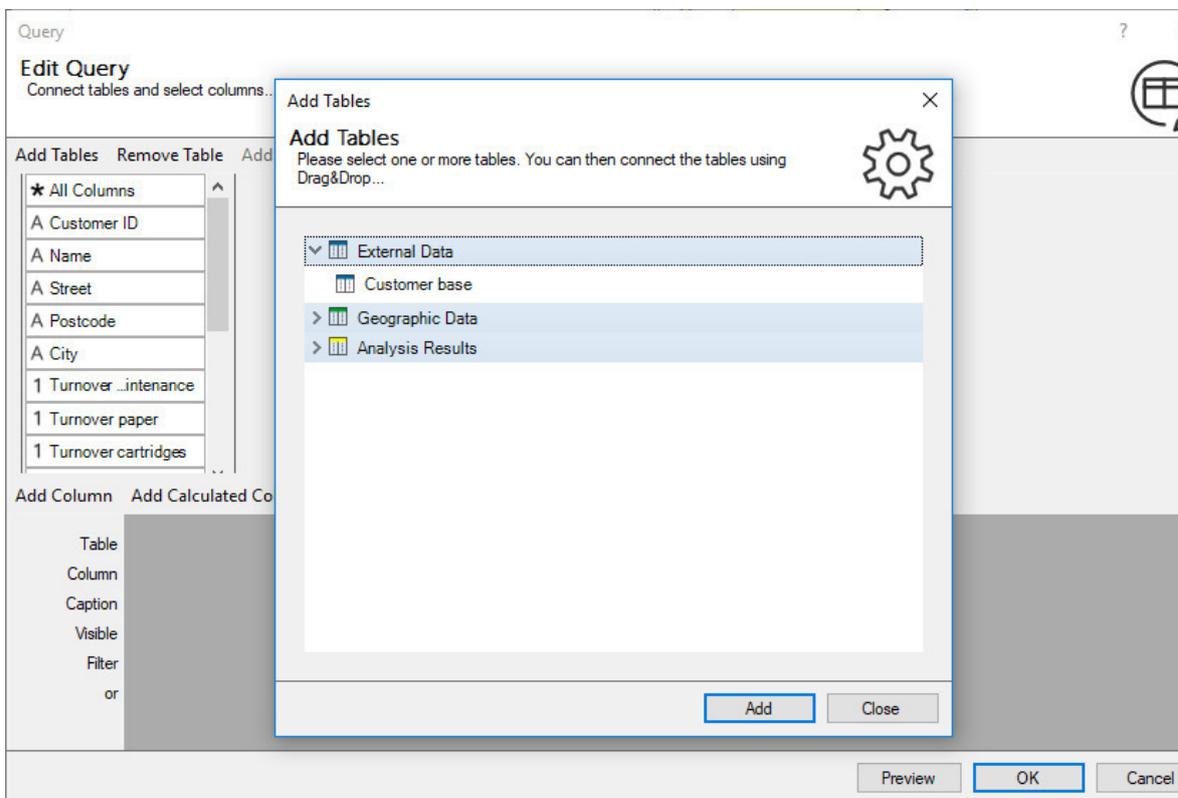- **CLOSE** the **ADD TABLES** dialog window then

Illustration: Query – Add Tables

In the next step you need to add the relevant columns from the table. You do this by double-clicking the respective columns.

- Double click the columns "Customer ID", "Postcode", and "Customer category" to add them to this Query.
- For filtering customers assigned to category "A", enter "A-Customer" as filter criterion for the column "Customer category" (**FILTER**). Ensure that, the criterion chosen is written in quote. (Observe the illustration below)
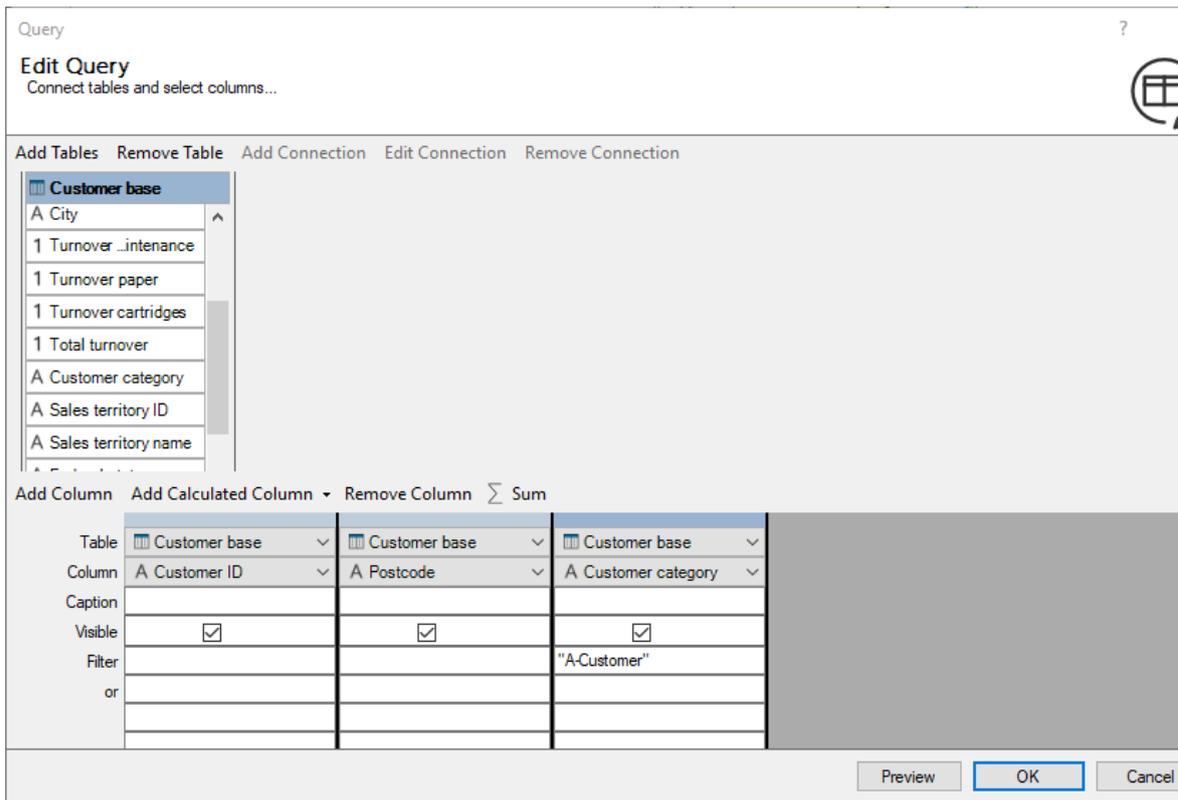
Illustration: Defining the filter criterion "A-Customer" for the query

After clicking **OK**, you need to enter a name for the query. Please enter the name "A-Customers" and confirm with **OK**.

EasyMap automatically opens the data window containing the table with the query output. This table is ready to be used in analyses now.

Visualizing the Filtered Query Output as an Analysis

Creating an analysis on the basis of a query output works similar to an analysis based on imported or linked data tables (see exercise 1). Follow the next steps to visualize filtered Query output as analysis:

- Execute the **AREA SHADING…** analysis command on the **ANALYZE** menu.

- Select **DATA FROM TABLE…** = "A-Customers"

The "A-Customers" table is listed in the **QUERIES** group.

- **VISUALIZE IN MAP… =** "Sheet 1 / Map 1"

Select the area **ID** of the corresponding map layer, this ensures that EasyMap properly assigns the turnover figures to the respective areas.

- **ID COLUMN**: "Postcode"

- **LAYER**: "Postleitgebiete – Areas"
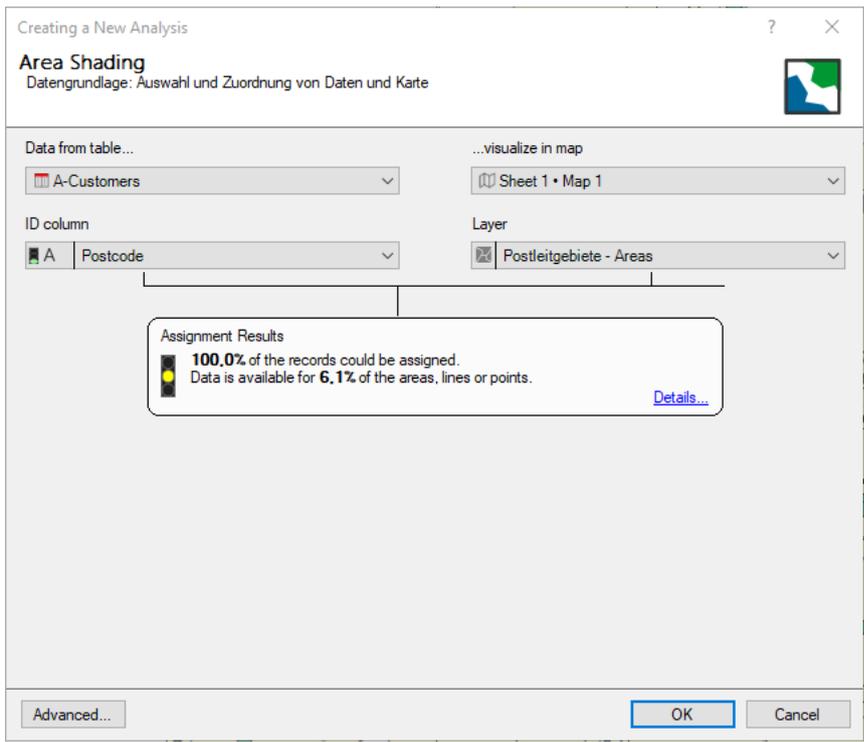
Illustration: Choosing the input data

- Click **OK**.

In the next step, you need to define the display options of the analysis as follows:

- **COLUMN =** "Customer category"

- **CLASSIFICATION = ATTRIBUTE**

- Choose pink as color for the "A-customers".

Change the **COLOR** by double-clicking the color field of the **VALUE** "A-Customer" and the **FILL PROPERTIES** dialog pops up. Any color of the RGB range can be chosen.
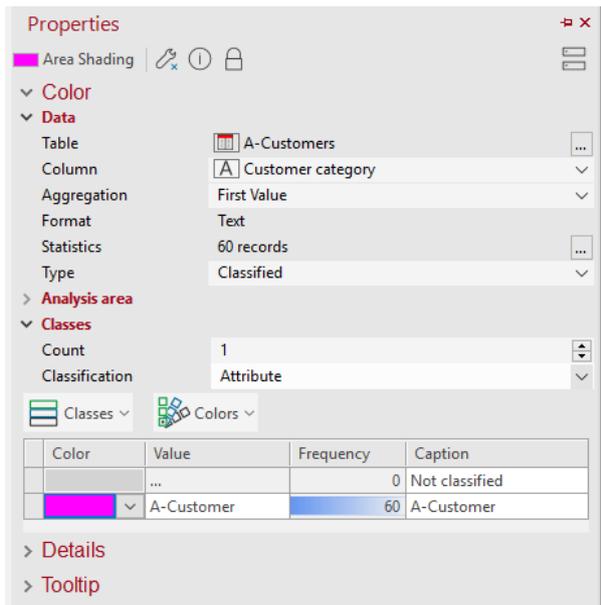

Illustration: Setting the Area Shading Properties

EasyMap now highlights all areas A-customers are contained in:
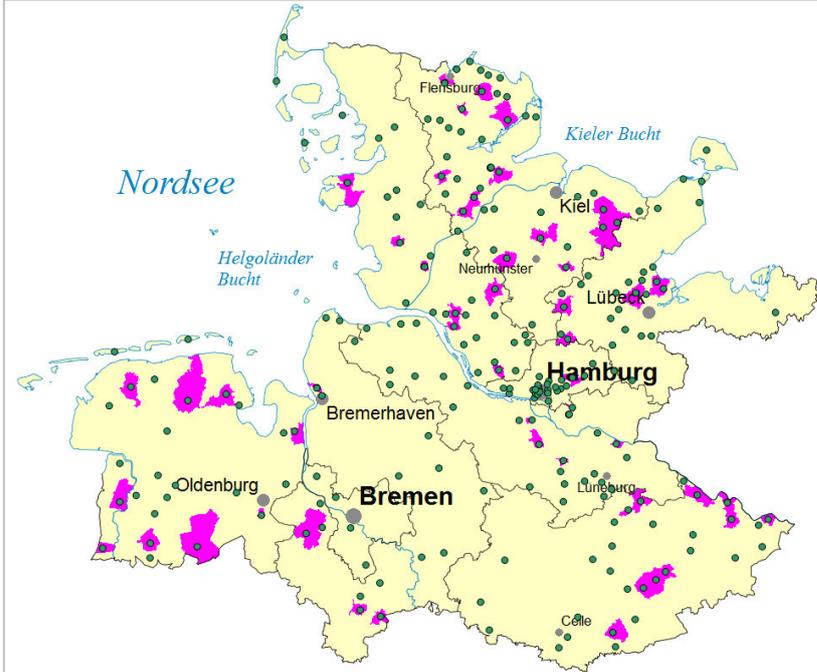
Illustration: Highlighted postcode areas containing A-customers (Area Shading)

Follow the next steps if you would like to modify the **QUERY**:

- Switch to the **DATA** navigation window, click on **QUERIES**, right click on the context menu for the respective query ("A-Customer") then click the **PROPERTIES...** command and the common **EDIT QUERY** dialog window opens up.
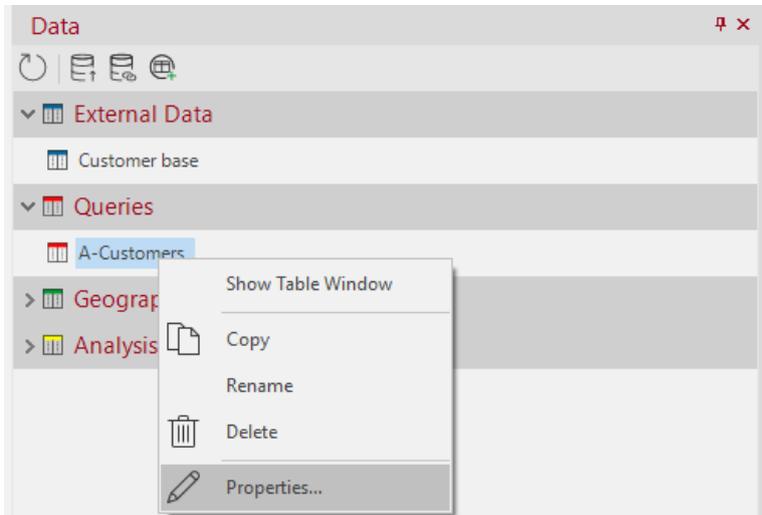

Illustration: Context menu for the query – in the Data navigation window

Important Learnings from Exercise 3

- Customer locations can easily be displayed on the map via postcodes, Lat/Lon coordinates or other area IDs.

- The color, size, and shape of symbols can freely be chosen and combined.

- Analyses can be executed based on queries.

- Queries can be edited and extended.

Exercise 4: Pie Charts

About this Exercise:

In this exercise, your task is to display the turnovers of three products (paper, cartridges, and maintenance) as pie charts in the corresponding postcode regions. The data table provided contains one record per customer, including its five-digit postcode. In order to aggregate data of all customers for each two-digit postcode region, it is necessary to add the two-digit postcode to the data table first.

Step 1: Open the EasyMap file

Open the workbook "Exercise 4.empx", which is delivered in the zip file.

Step 2: Create a Substring Column

The pie charts are supposed to relate to postcode regions in the table "customer base"; but there is only the five-digit postcode available. Therefore, the two-digit postcode needs to be calculated and insert it into the table as a new data column.

The number of the postcode regions can be derived from the five-digit postcode, which are its first two figures. This means that another column would be created from "customer base" table the containing only the first two digits of the five-digit postcode.

Click the *fx* ⌄ button at the top of the table window.

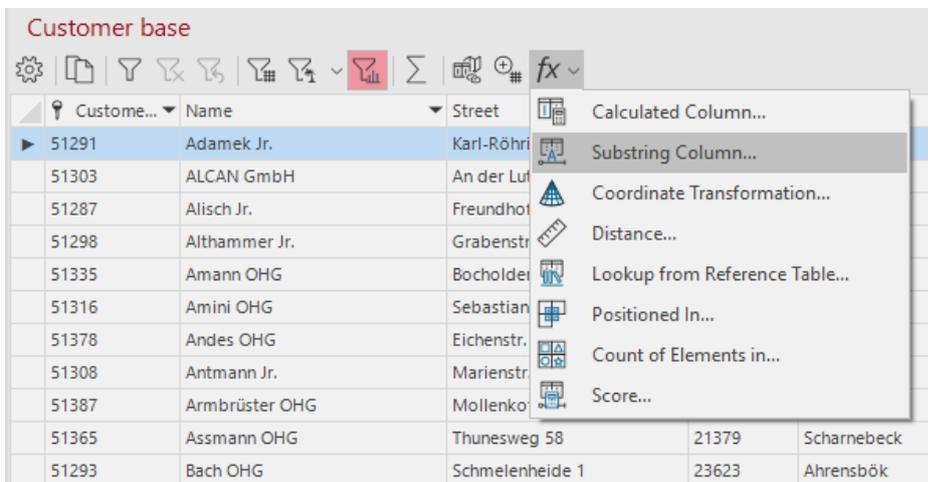- Select the function **SUBSTRING COLUMN…** .

Illustration: Substring column function

Now the column containing the postcodes has to be selected:

- **SOURCE, COLUMN** = "Postcode"

Next, define which partial content should be copied to the new column. As only the first two digits are required, choose:

- **SUBSTRING, TYPE = LEFT**

- **SUBSTRING, LENGTH = "2"**

Enter a proper column caption for the newly created substring column first:

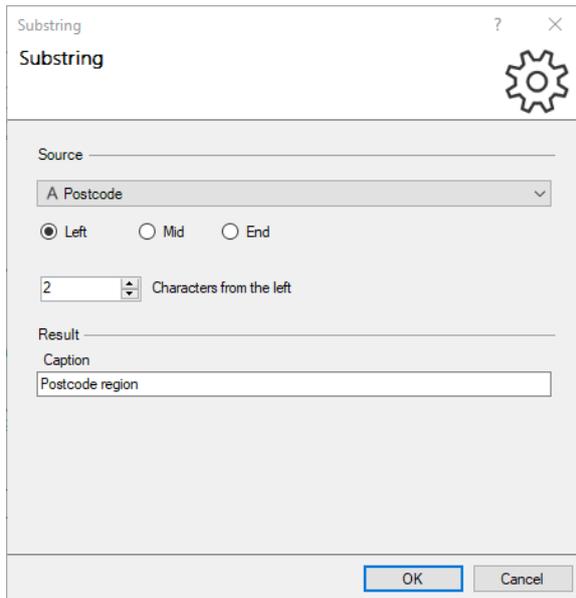- **CAPTION** = "Postcode region"

- Click **OK** to finish.

Illustration: Substring settings

EasyMap creates a new column at the right end of the table and names it "Postcode region".

Step 3: Visualizing Data as Pie Charts

The table now contains all necessary information for creating the **PIE CHARTS** analysis.

- Click **ANALYZE** on the main menu then choose **PIE CHARTS.**

- Select the **ANALYSIS TYPE = Pie CHART**

- Click **NEXT >**

The next steps are to define the appropriate input data. Please select the following:

- **Sub TYPE = AREA BASED**

- **DATA FROM TABLE... =** "Customer base"

- **VISUALIZE IN MAP... =** "Sheet 1 / Map 1"

- **ID COLUMN =** "Postcode Region"

- **LAYER =** "Postleitregionen – Areas"
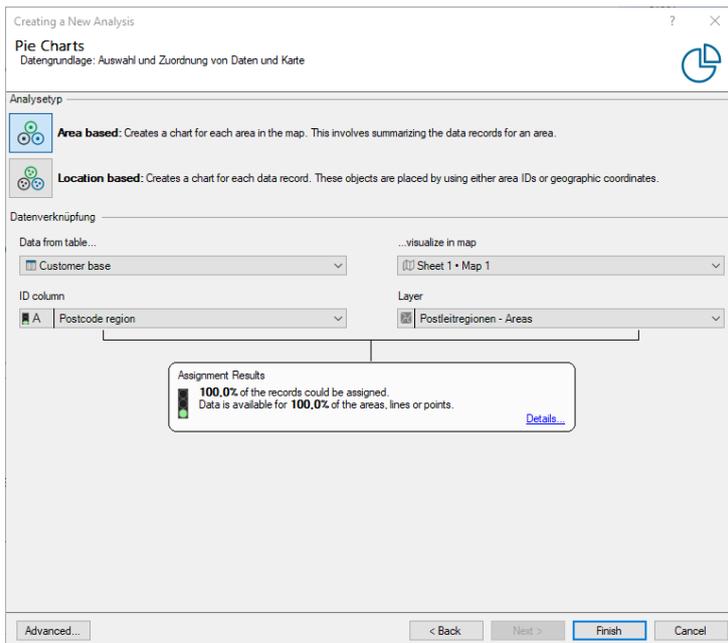
Illustration: Choosing the input data

- Click **FINISH.**

To define the **PROPERTIES**, please select:

- **SEGMENTS, COUNT = 3**

Make sure the column **CAPTION** "Turnover maintenance" is assigned to the first, the column "Turnover paper" to the second, and the column "Turnover cartridges" to the third sector.
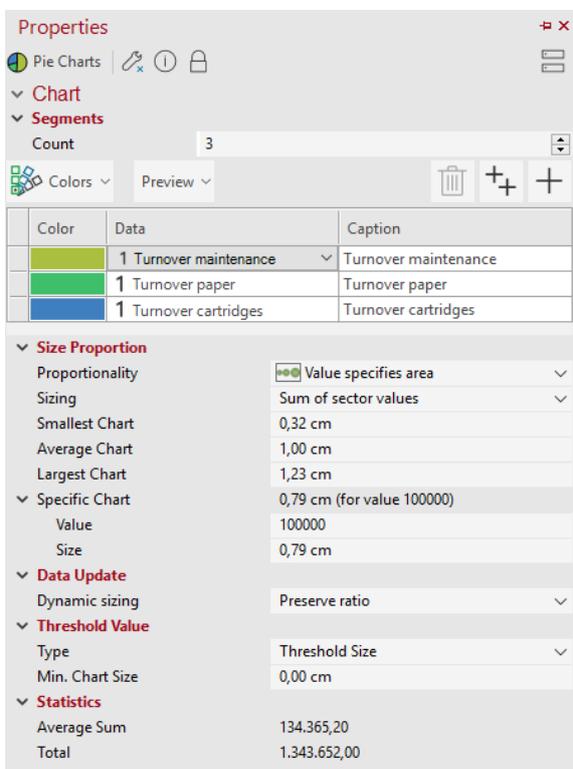

Illustration: Pie Charts analysis properties

EasyMap now shows a pie chart for each postcode region. If you want to adjust the settings of the **PIE CHARTS** analysis, click on **WINDOW** on the menu to retrieve the Analyses window, switch to the tab and double-click the **PIE CHARTS** analysis in the **ANALYSES** navigation window.

Here the **DETAILS** tab offers various options to edit the analysis related to the display style and labeling of the charts. The **CHART SIZE**, for instance, may be edited on the **CHART** tab – **SIZE PROPORTION** category on the right.

At this stage your map should look like the following one:
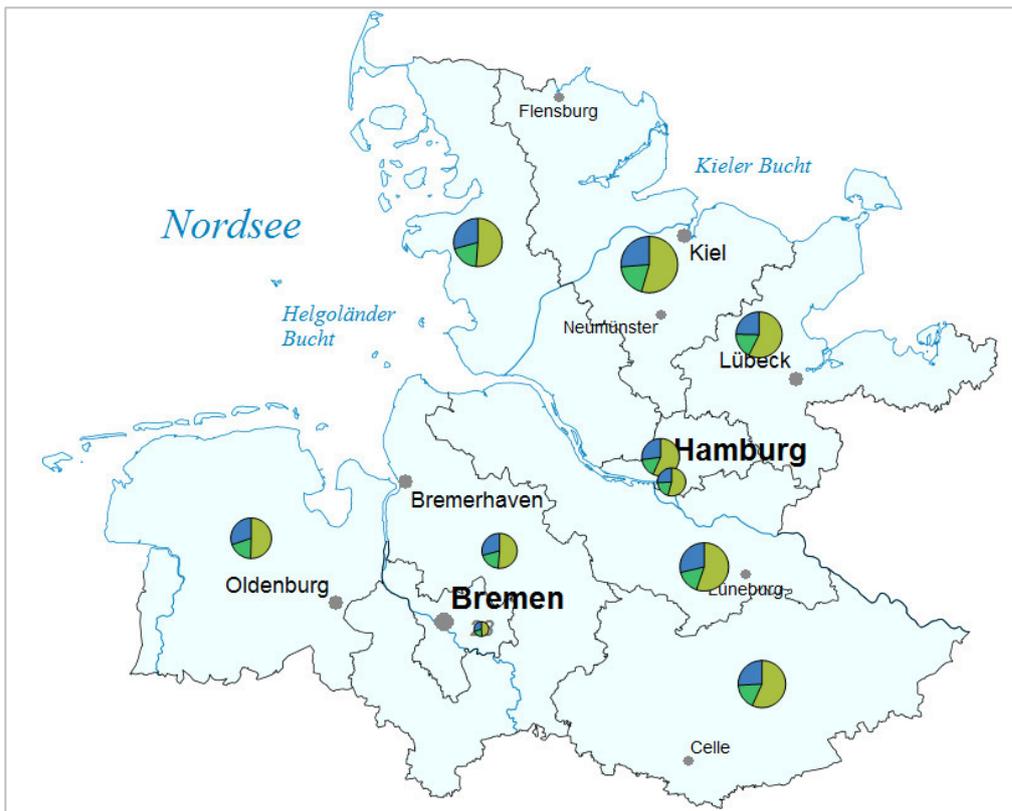
Illustration: Turnover pie charts per postcode region

Important Learnings from Exercise 4

- EasyMap has the ability to extend imported tables with CALCULATED COLUMNS that can serve as area IDs or numerical data values for analyses.

- All diagrams can easily be positioned on the map via postcodes, Lat/Lon-coordinates or other Area IDs.

- The color, size, and labeling of the diagram can be easily modified.

Exercise 5: Creating a New Territory Structure

About the exercise:

EasyMap *DistrictManager Edition* has the function of generating and visualizing territory structures. In the following steps, how to create, visualize and evaluate a new territory structure is described.

Before we begin, please note that exercise 5, 6 and 7 can only be performed in EasyMap *DistrictManager Edition.* In the installation process of the trial version, you have the option of choosing one of the two editions. In this instance, select the *DistrictManager Edition* option.

However, if the EasyMap demo version has already been installed, you can check the version installed and if it is not the EasyMap *DistrictManager Edition* option, you can change it. To do this, click **"?"** on the EasyMap main menu, then on the item **ABOUT EASYMAP**. Next, click on **SHOW LICENSE DETAILS** then **CHANGE LICENSE.** Then click on **DEMO VERSION** and select the **EASYMAP DISTRICTMANAGER EDITION**. Afterwards restart EasyMap in the selected Edition.

Step 1: Insert a Base Map

Open a new workbook:

- **FILE > NEW > EMPTY WORKBOOK**

First insert a map onto Sheet 1 from the **BASE MAP** navigation window.

- Using the drag and drop functionality, drag the following map from the **DEMO MAPS** folder and drop it onto sheet 1: **DEUTSCHLAND, POSTLEITZONE 2 / 982 POSTLEITGEBIETE**. Insert also the topographic content.

Step 2: Planning Mode

To create a territory structure, switch the **PLANNING MODE** on.

- **TERRITORY ORGANIZATION** menu > **PLANNING MODE**

The **TERRITORY ORGANIZATION** navigation window is opened and all relevant commands related to organizing a territory structure are enabled.

Step 3: Creating a New Territory Structure

- Click **TERRITORY ORGANIZATION** on the main menu bar.

- Click on the **CREATE NEW TERRITORY STRUCTURE…** to activate it.

This command opens a wizard which guides you through the steps of creating your own territory structures.

The first step of the wizard allows you to specify the layers of your territory structure. The foundation of a structure is the building block layer. This is the layer the territory structure is based on, which means that it is on that, that the other layers converge on. You may add an additional superior hierarchy layer by clicking the **INSERT ADDITIONAL LEVEL** button . Afterwards you may edit the layer' name in the respective text edit field. In this exercise, however, we create a territory structure comprising of one layer only. The properties of the wizard (help feature) are set as follows:
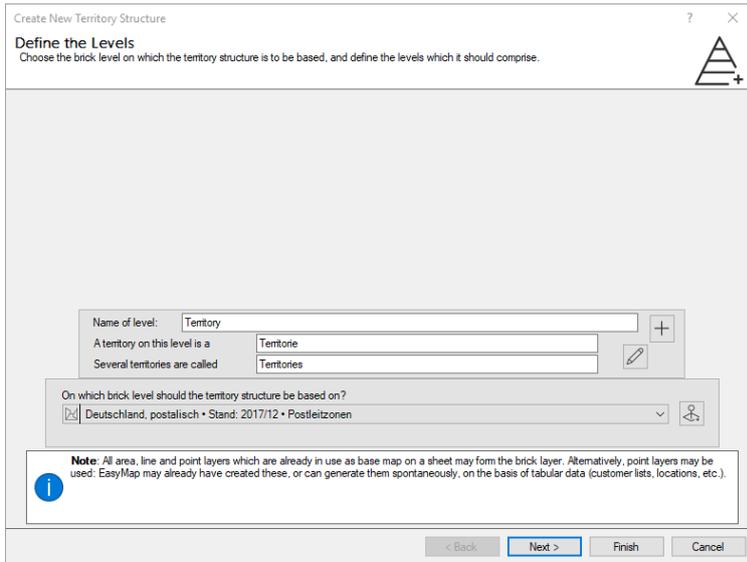
Illustration: Wizard – Create New Territory Structure

- **ON WHICH BUILDING BLOCK LAYER IS THE TERRITORY STRUCTURE BASED?** = "Demo Maps • Deutschland, Postleitzonen • Postleitgebiete"

- **NAME OF LEVEL** = "Territory"

- Click **Next**

Which leads us to the next step…using Basic Data.

Step 4: Using Basic Data

BASIC DATA contains information such as area IDs and names, and may be used for naming and analyzing data easily. So you can use for example, the names of the sales reps who are responsible for a certain territory, to further describe territory structure.

- Choose **YES** and the dialog window offers further setting options.

- Access the "Sample data" Excel file by clicking the **LOAD TEMPORARY DATA…** button.
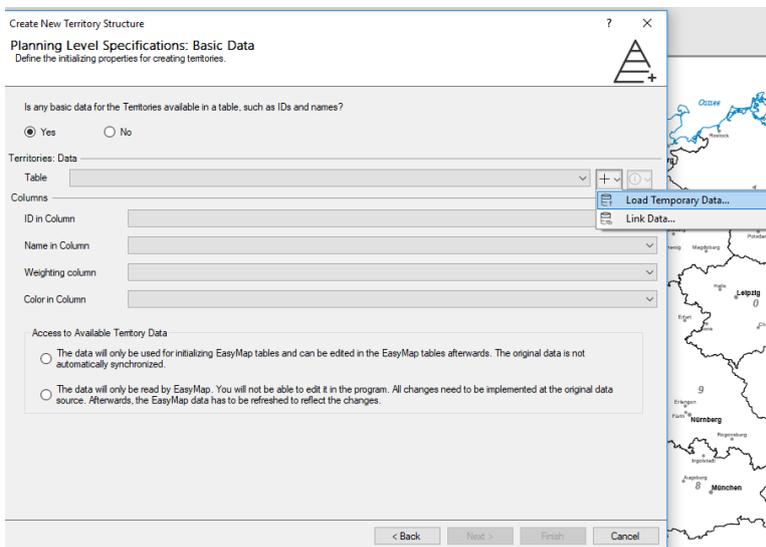
Illustration: Basic data - Load Temporary Data…

- Thus, select **MICROSOFT EXCEL WORKBOOK >** "Sample data.xls" **> NEW WINDOW >** "Sales territories" and click **NEXT**.

- Define the columns according to the explanations in exercise 1 / step 2.
  That is in this case, choose **TABLE** as Sales Territories, **ID IN COLUMN** as Territory ID; **NAME IN COLUMN** as Name and **COLOR IN COLUMN** as Color.

- Click **FINISH** to close the **IMPORT** help feature.

Below is what the **CREATE NEW TERRITORY STRUCTURE** dialog window should display:

Illustration: Wizard after selecting the table as basic data

- Click **NEXT**.

This brings us to the next step **PLANNING LEVEL SPECIFICATIONS.**

Step 5: Using an Assignment Table

An **ASSIGNMENT TABLE** is composed of two columns containing both complex and simple information. An **ASSIGNMENT TABLE** ensures a balance of the information which is assigned to each territory.

The "Sample data" Excel file comes with an assignment table. Simply choose the second radio button on the **PLANNING LEVEL SPECIFICATION : ASSIGNMENT TABLE** dialog window.

- **THE POSTLEITGEBIETE -> TERRITORIES ASSIGNMENTS ARE PROVIDED IN A TABLE.**

- Access the "Sample data" Excel file by clicking the **LOAD TEMPORARY DATA…** button in the **DATA** category first. Select **MICROSOFT EXCEL WORKBOOK >** "Sample data.xls" **> NEW WINDOW >** "Assignment Table".

- Define the columns according to the explanations in exercise 1 / step 2.

- Click **FINISH** to close the **IMPORT** wizard.

The table's content, i.e. the "Postcode" and "Territory ID", is listed as follows in the CREATE NEW TERRITORY STRUCTURE dialog window below. After that click next to go to the next step:

Illustration: Wizard after selecting the assignment table

The assignment result as well as the number of areas data is available for should be 100 %.

Step 6: Finishing the Process of Creating a New Territory Structure

Confirm all preset settings for the visualization of the territory structure on "Sheet 1 + Map 1".

- Click **FINISH** and the territory structure is visualized on the map.

Illustration: Final status of the territory structure – Visualization of the territories

A new table is automatically created for each level of your territory structure. The **CONTENT** navigation window lists the layers of the "Territory" level, such as the **LABELS**, **BORDERS,** and **AREAS**. Edit the layer's **PROPERTIES** activating the appropriate command in the context menu.

Important Learnings from Exercise 5

- The EasyMap *DistrictManager Edition* allows you to generate territory structures.

- You may also use your basic data and assignment tables provided in external data sources.

- Territory structures can be visualized in maps.

Exercise 6: Analyzes of Territory Organization

About this Exercise:

A new function added to the District Manager EasyMap Edition is to perform regional and Location analysis. The analysis of **Core Areas** shows the spatial distribution of Data. The analysis **Zonation Of Distance**, **Catchment Areas** and **Level Of Supply** refer to locations. They help in answering the question of how favorable or unfavorable a sales point is located. Below is how a district zonation analysis functions using the example of **Catchment Areas**.

Please note that exercises 5, 6 and 7 can only be carried out in the EasyMap *District Manager Edition*. For more details, see the Introduction to exercise 5.

Step 1: Open Map

Open the workbook "Exercise 6.empx", which is delivered in the zip file.

The sample exercise is based on the territory structure created in Exercise 5. The distribution areas which were expanded to locations will serve as starting points for the **Catchment Areas** analysis. The data for the analysis is based on the imported Table „Customer base".

Step 2: Edit Worktables to include Supplementary data

Work tables need to be edited to accommodate supplementary data. Area and location analyzes require a data set as a base, which is found in **WorkTables**. This is what the territory structure queries is based on. Thus **WorkTables** combine basic data, assignments, and additional data per territory or location layer in one common table.

It is necessary to attach additional data from the table „customer base" to the worktable to perform the analysis. To do this, follow these steps:

- Make the query "postal codes" visible from the data window.

- Left clicking on the **Edit Query** button ⊕ in the header of the query.

You are now in the dialog box for adding additional data.

- First left click on the **Add Table** button... +.

The table "customer base" should appear. If it does not pop up automatically, you can select it from the drop-down list.

In the lower part of the dialog box, all columns of the table are listed.

If you want to remove a column from the selection, click in the box to the left of the column name and again on the **Delete Selection** button 🗑 to remove from collection. Holding down the left mouse button, makes it possible to select multiple columns simultaneously.

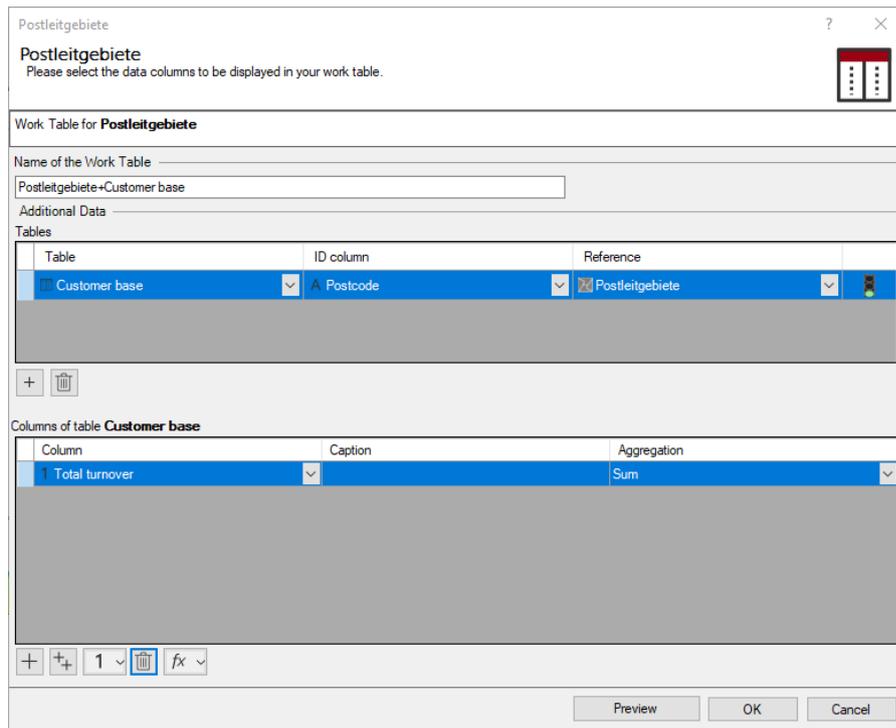- Select all columns except "Total Turnover" and delete from the list.

Illustration: Wizard for adding extra data

- Click **Oκ** to finish.

The query "postal codes" which was previously extended by the column "Total Turnover" was renamed to "postal codes + customer base" accordingly.

All is now set to create a location analysis.

Step 3: Perform a Location based Analysis

To present an analysis of the territorial organization in the map, take the following steps:

- Open the menu **TERRITORY ORGANIZATION** and select **ANALYZE** from **CATCHMENT AREAS.**

However, if you only have the **START PLANNING MODE** in the **TERRITORY ORGANIZATION** menu option available click on that menu and all functions are available to you.

In the first step of the wizard, you are prompted select the layer on which the analysis is to be based on.

- Select the layer "sales territories" and confirm your selection then click **NEXT**.

In the next step of the analysis, choose the **DATA BASE**. Please proceed as follows:

- **DATA FROM TABLE...** = Postleitgebiete+Customer Base"

- **DISPLAY IN MAP** = "Sheet 1 / Map 1"

- **ID COLUMN** = "Area ID"

- **LAYER** = "Postleitgebiete - Areas"

After you have made all the settings, you can proceed to the last step in the wizard.

- Click on **OK**.

In **COMPARABILITY OF TERRITORIES** you have a choice between **GLOBAL EVALUATION (ABSOLUTE)** and **TERRITORY-BASED EVALUATION (BY PERCENTAGE).** Evaluations with absolute numbers are for comparison of districts with each other. When using percentages, the catchment area zones of the locations mean that a certain percentage of the potential present in the corresponding district can be reached. This valuation variant is more suitable for individual appraisal of each district.

- Select here **GLOBAL EVALUATION (ABSOLUTE)**

Use the **COLUMN** to color shade in the map. Select here:

- **COLUMN** = "Total Turnover"

Finally, you only need to determine the **COUNT** and the type of **CLASSIFICATION**:

- **COUNT** = 4

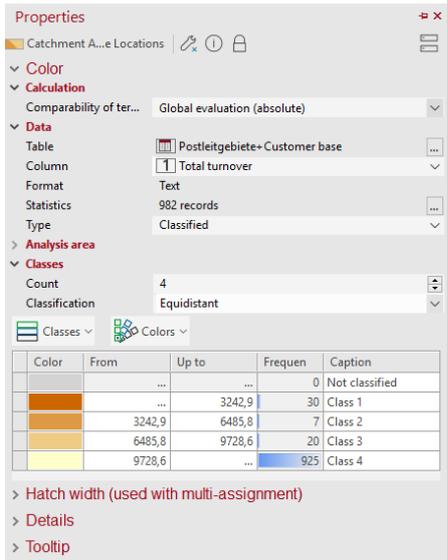- **CLASSIFICATION** = Equidistant

Illustration: Properties of the analysis

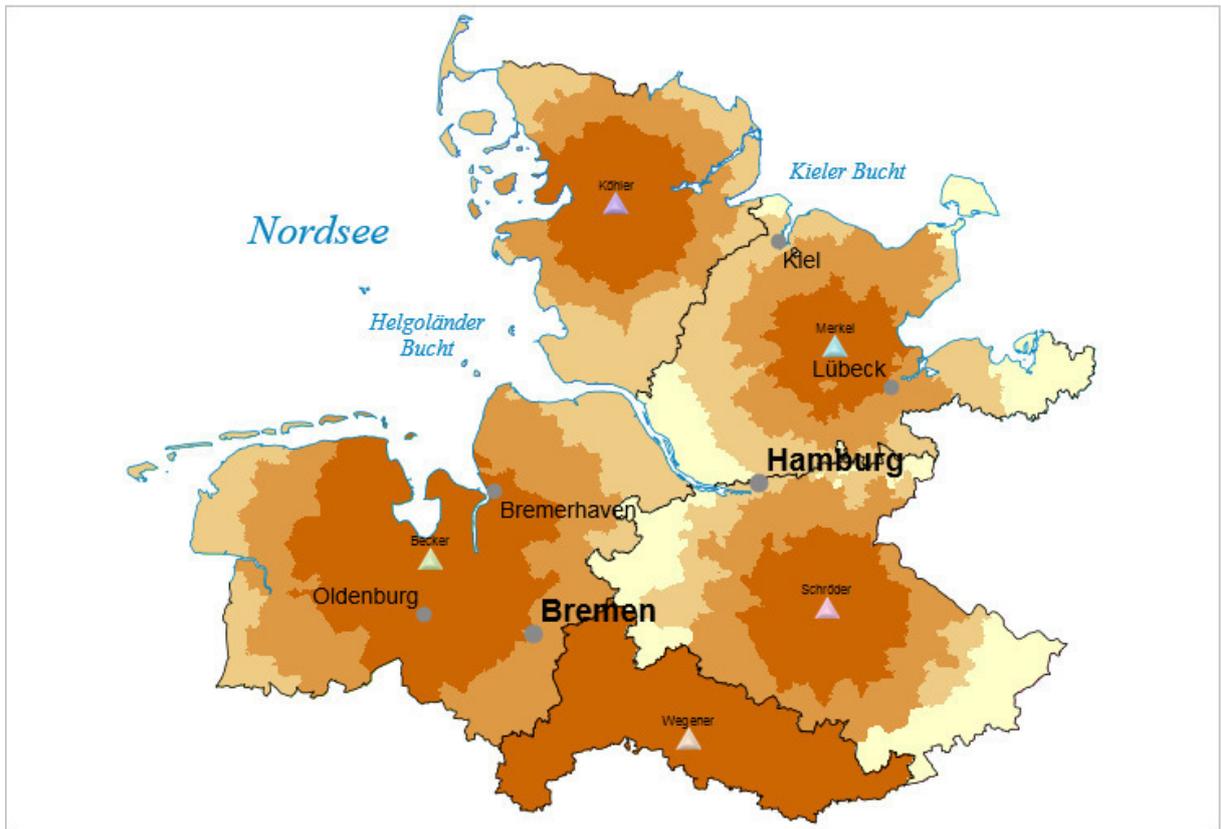EasyMap displays the analysis based on your settings in the map

Illustration: Area shading of turnover

The colored map shows significant differences in the evaluation of the areas. Wegener area is particularly noticeable, since only the deepest shade of the classification is found there, suggesting a potential weak area. In comparison, the areas Köhler or Merkel classification have more varied color shading showing that they are good choices of location and that a potential exists.

Important Key Learnings in Exercise 6

- Area and location analyzes need work tables as a data source.

- How to attach supplementary data to a work table.

- How to perform an analysis of CATCHMENT AREAS.

Exercise 7: Territory Structure Based on Points

About this exercise:

In the EasyMap *DistrictManagerEdition*, (from Version 10.1) a point layer (for example, the coordinates of locations, addresses of customers, target groups etc.) can be used as a Base map for territory structure. In the following paragraphs, how to create a point layer and its basic functionality is explained.

Please note that exercises 5, 6 and 7 can only be carried out in The EasyMap *DistrictManager Edition.* For more details, see the introduction to exercise 5.

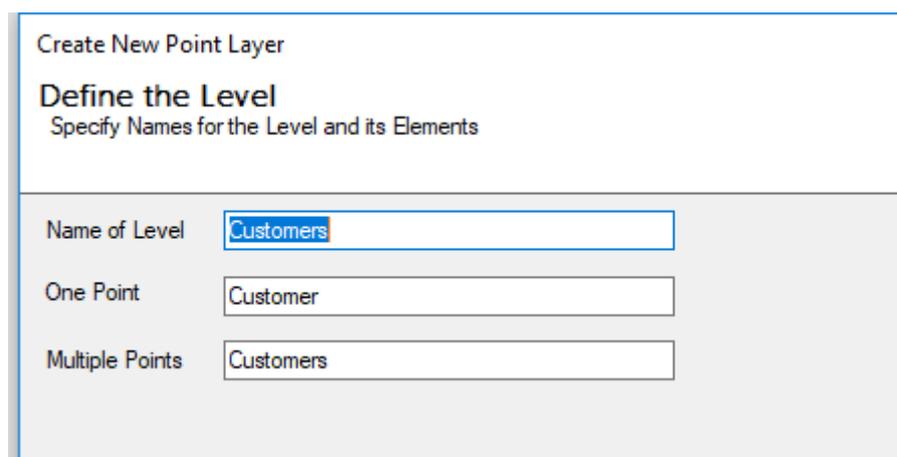### Step 1: Insert a Base Map

Go to **File > New > Empty Workbook**

- Using the drag and drop function, drag the **Base Map** from the **Demo Maps** folder dropping it onto the Sheet 1: **Deutschland, Postleitzone / Postleitgebiete** from the navigation window

Step 2: Create New Point Layer

To create a new point layer, switch the **Planning Mode** on.

- Click **Territory Organization** on the main menu > **Start Planning Mode** and the **Territory Organization** navigation window is opened.
- Activate the **Create New Point Layer...** ⚓ button in the **Territory Organization** navigation window or the appropriate command in the menu **Territory Organization.**

A wizard pops up which guides you through the steps of generating your territories. Define the name of the level as well as its elements. "Customers" is the default caption.

Illustration: Define Level

Next, select the data the point layer is to be based on:

- Access the excel sheet "Sample data.xls" by clicking the **Load Temporary Data...** button in the **Table** line.

- Select "Customer base" table.

- Define the columns according to exercise 1 / step 2.

- Click **FINISH** for closing the **IMPORT** window.

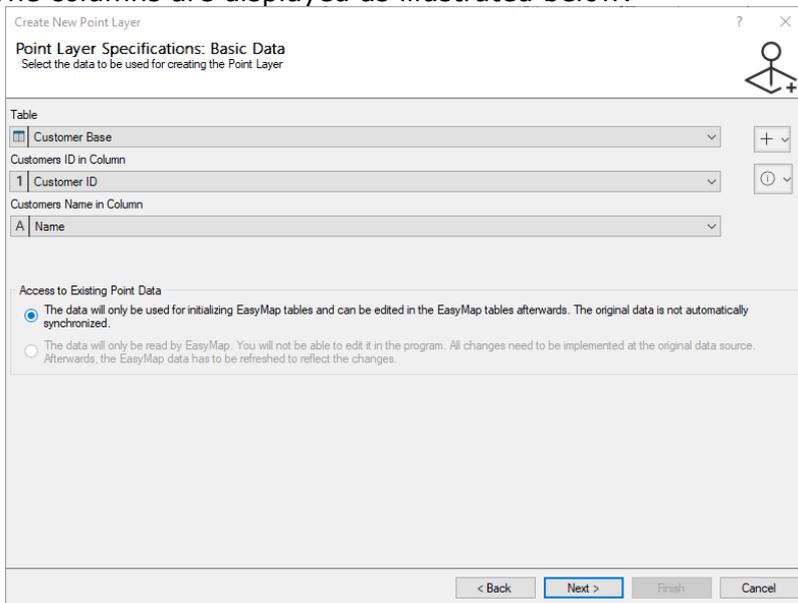The columns are displayed as illustrated below:

Illustration: Select the data to be used for creating the Point Layer

- **NEXT**, the "Customer base" table provides two columns with geographic coordinates. Thus, you may choose the second option offered in the dialog window **GEOREFERENCE THE DATA BY USING THE SPECIFIED GEOGRAPHIC COORDINATES**.

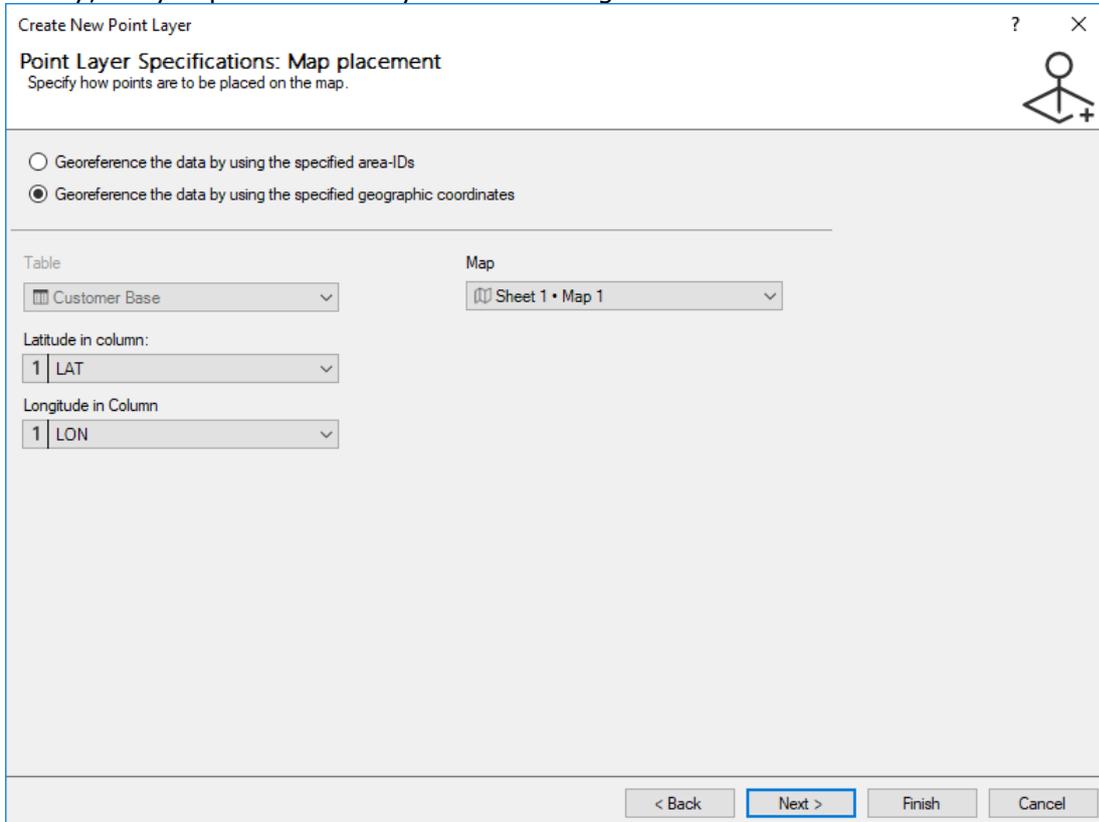Usually, EasyMap automatically choses the right columns:

Illustration: Positioning by geographic coordinates

- **NEXT**, confirm the default setting for inserting the new point layer in "Sheet 1 + Map 1".

- Click **FINISH** and the points should be visualized on the map.

The map's content that will be displayed will be too much. To change this,

- Switch to the **CONTENT** navigation window

- Right click on the "Customer-Points" layer to open its context menu and click on **PROPERTIES**.

- Switch to the **AREA LABELING** tab and delete the text "[DefaultLabeling]" in **USER-DEFINED LABELING**.

Your map should now look like the map illustrated below:

Illustration: Visualization of points on the map

Step 3: Create a New Territory Structure

To create a new territory structure, you need to find which customer is assigned to which sales representative. The point layer representing your customers is the basis for the creation of a new territory structure.

Thus, proceed as follows:

- Activate the **CREATE NEW TERRITORY STRUCTURE…** button in the **TERRITORY ORGANIZATION** navigation window.

Define the level's **PROPERTIES** as illustrated below then go to the next step (please make sure that the newly created building block layer "**Customers**" is chosen):

Illustration: Create New Territory Structure – Define the Levels

You may use basic data, such as IDs and colors, for the territories here provided that your tables provide that kind of data.

The "Sample data.xls" that is used in this exercise contains this information on the "Sales territories" spreadsheet. Thus, in the dialog window:

- Activate **YES** and access the "Sample data.xls" by clicking the **LOAD TEMPORARY DATA...** button in the **TABLE** line.

- Select "Sales territories" table here.

- Define the columns according to exercise 1 / step 2.

- Click **FINISH** to close the **IMPORT** wizard.

The **PLANNING LEVEL SPECIFICATION** window should look as illustrated below:
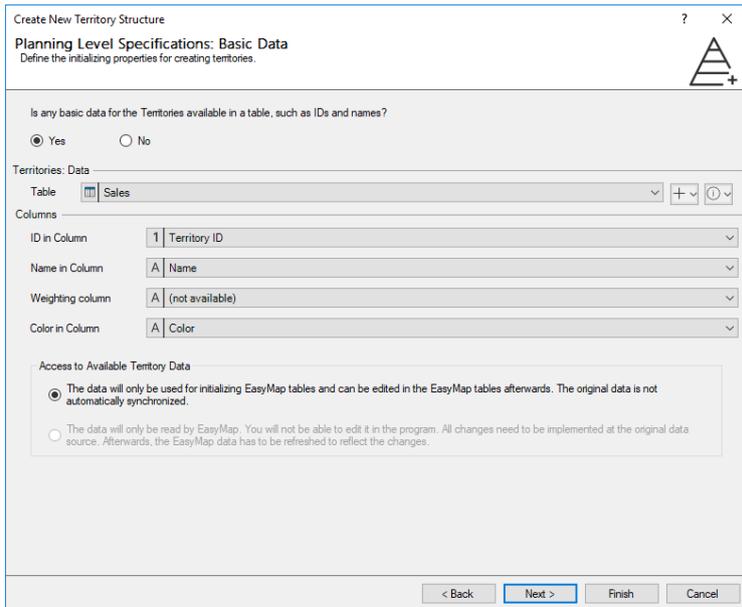
Illustration: Selection of basic data

- **NEXT** then, define the assignment between the customers and territories in the newly opened dialog window.
- As this assignment is provided in one of the sample data tables, choose the second radio button **THE CUSTOMERS → TERRITORIES ASSIGNMENTS ARE PROVIDED IN A TABLE.**

- Access the "Sample data" Excel file by clicking the **LOAD TEMPORARY DATA...** button in the **DATA** category first and select "Customer base" table here. Then proceed as normal concerning the column settings. Close the **IMPORT DATA...** wizard by confirming all settings with **FINISH**.

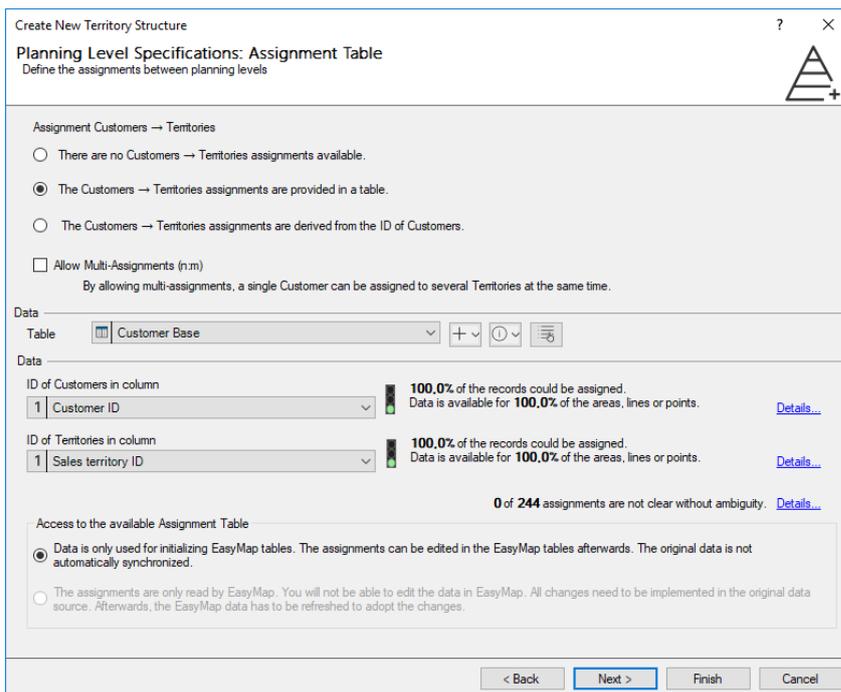The dialog window should look as illustrated below:

Illustration: Defining the Customer→ Territories assignments

Territory symbols that show which customer is assigned to which territory is displayed. (See illustration below). Deactivate the visibility of the "Territory – borders" layer in the **CONTENT** navigation window for a clearer view.
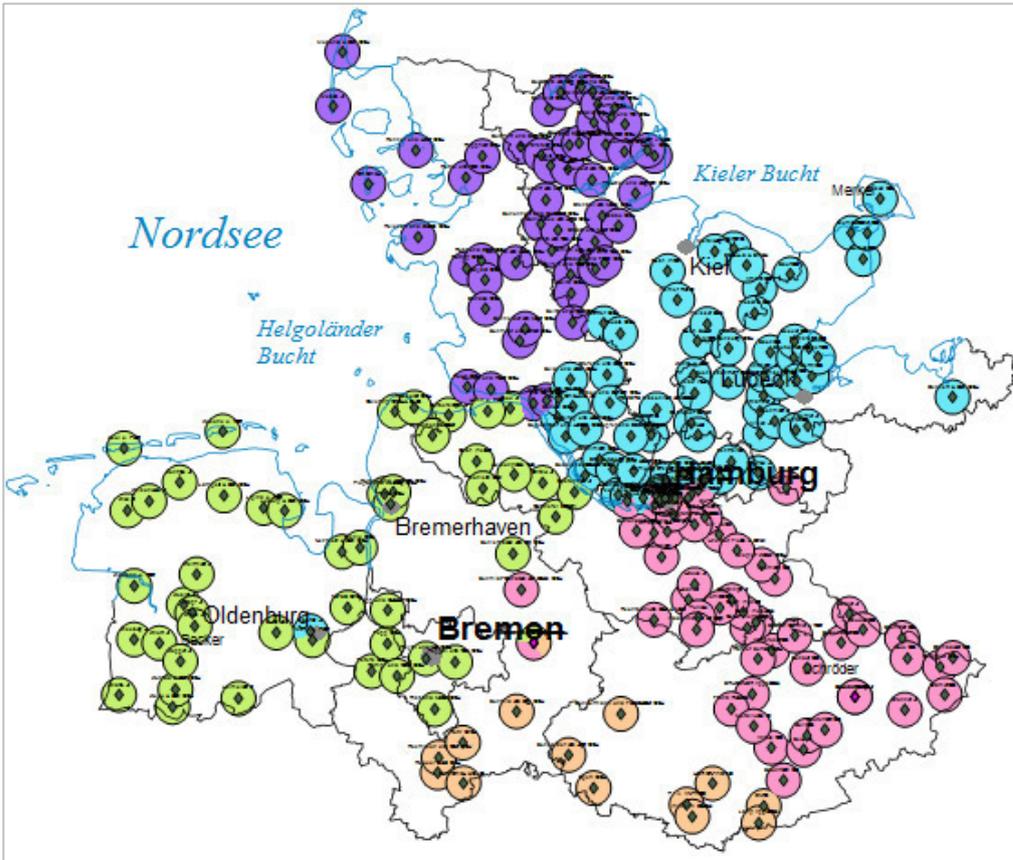

Illustration: Customer symbols revealing their assignment to the territories

The following illustration shows how territory symbols look like in cases where symbols in the same position are assigned to different sales reps.
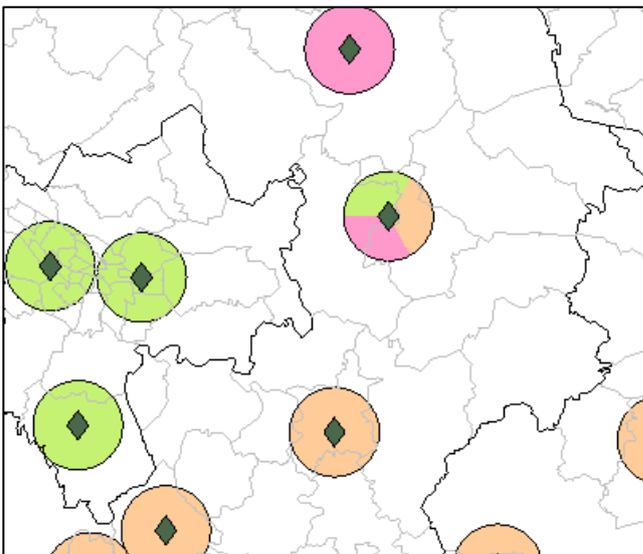

Illustration : Territory symbols' display style – same position but different sales reps' assignment

For highlighting all customers that share identical positions as well as the same territory assignment, a comfort function may be used that is based on an EasyMap analysis tool.

Proceed as follows:

- Right-click the "Customers" layer in the **TERRITORY ORGANIZATION** navigation window for opening the layer's context menu and activate **EDIT / DISPLAY CUSTOMERS WITH IDENTICAL LOCATIONS…**

Select the following settings in the dialog window:

- **ONLY SHOW ITEMS WITH DIFFERENT ASSIGNMENTS = NO**

- **DISPLAY AS ANALYSIS = YES**
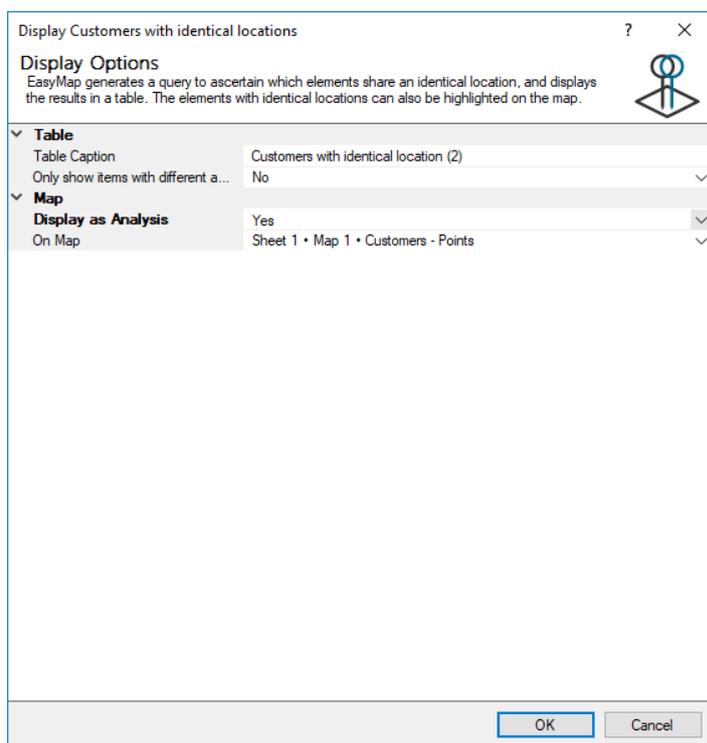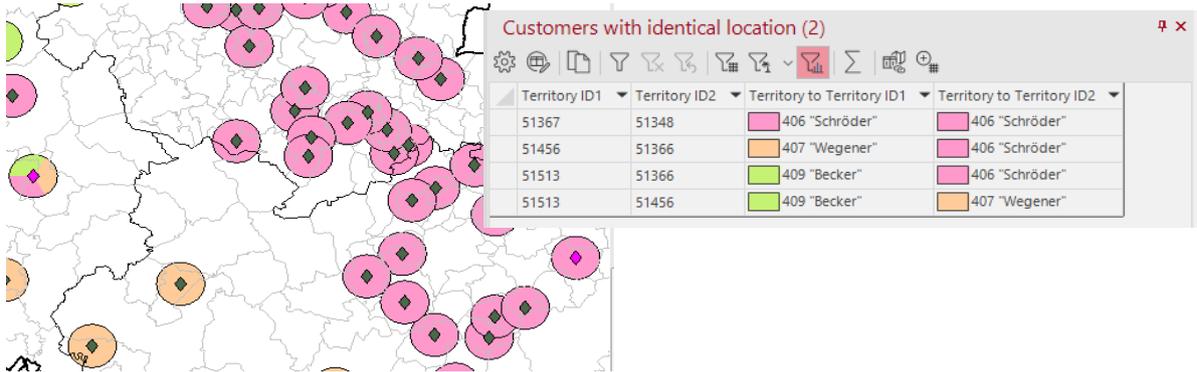
- Then Click **OK.**

Illustration: Display Options of customers with identical positions

Pink diamonds are displayed to represent customers located on the same spot.
Illustration: Highlighting customers sharing the same position

A table in the **DATA** window lists all customers that share the same position which is very convenient for analyzing purposes.

This highlighting display style is achieved on the basis of a **SYMBOLS** analysis, all analysis' editing options are still available.

Important Learnings from Exercise 7

- **A POINT LAYER** may be used as a base map.

- A territory structure can be created on the basis of a point layer.

- There are various style options for territory symbols being in the same position but assigned to different sales representatives.

Well Done!

This Quick Start aims at providing a first impression of the **EasyMap** *Standard* **Edition** as well as *DistrictManager Edition*. It does not demonstrate all functionalities of EasyMap. It only shows the basic Functionalities through the set exercises.

If you have any questions or if you need help, please do not hesitate to contact us by

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In addition, we offer software trainings to demonstrate how to optimally work with EasyMap.

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Appendix

The base maps and some of its layer captions are not translated in EasyMap. Please, find below all relevant translations for such captions in the table:

LEVEL (GERMAN NAME)	LEVEL (ENGLISH NAME)
Postleitzone	1-digit postcode zone
Postleitregionen	2-digit postcode regions
Postleitgebiete	5-digit postcode areas
Postleitzone 2	Postcode zone 2, comprising Niedersachsen
Autobahnen	Superhighways
Bundesstraßen	Highways
Hauptflüsse	Major rivers
Nebenflüsse	Minor rivers
Seen	Lakes
Städte3	Cities3
Städte2 (Auswahl)	Cities2 (Selection)
Städte1 (Übersicht)	Cities1 (Overview)
Meere	Sea

Appendix