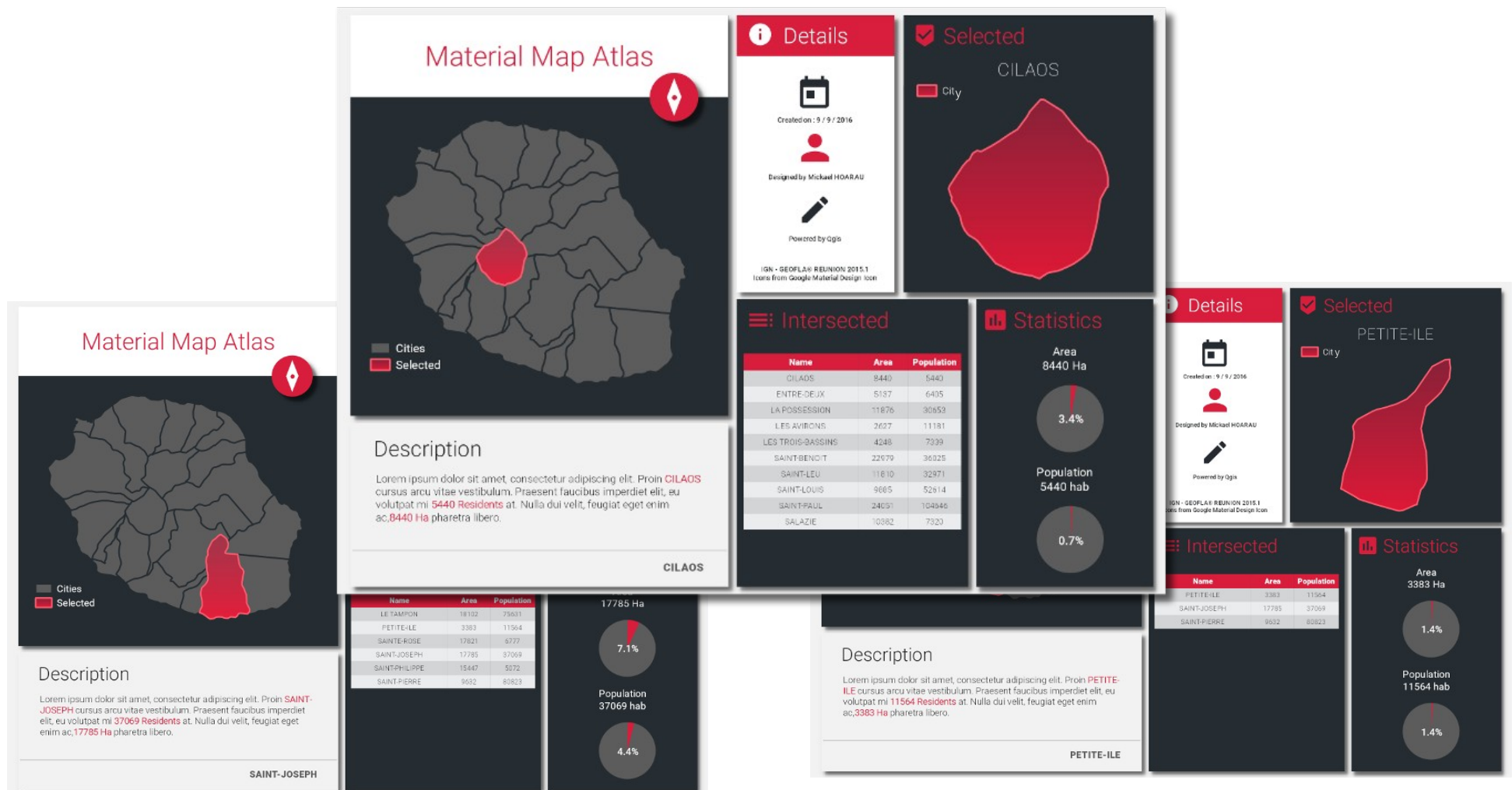


# Material Design Atlas

## With Qgis Composer



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## Requirements :

In this tutorial I'm using GEOFLA® Communes from IGN that can be downloaded here : <https://www.data.gouv.fr/fr/datasets/geofla-communes/>

*You can use another, but remember to make correspond attributes with all expressions.*

I recommend to use :

Google Fonts that you can find at <https://fonts.google.com/?query=roboto>

Google material Icons : <https://github.com/google/material-design-icons>

Or download separately from : <https://design.google.com/icons/>

For colors :

#d91e3d 

#f2f2f2 

#262d32 

For css in part 6 (for pie charts) : <https://drive.google.com/open?id=0B37RnaYSMWAZbVIBT1dndVNuSkE>

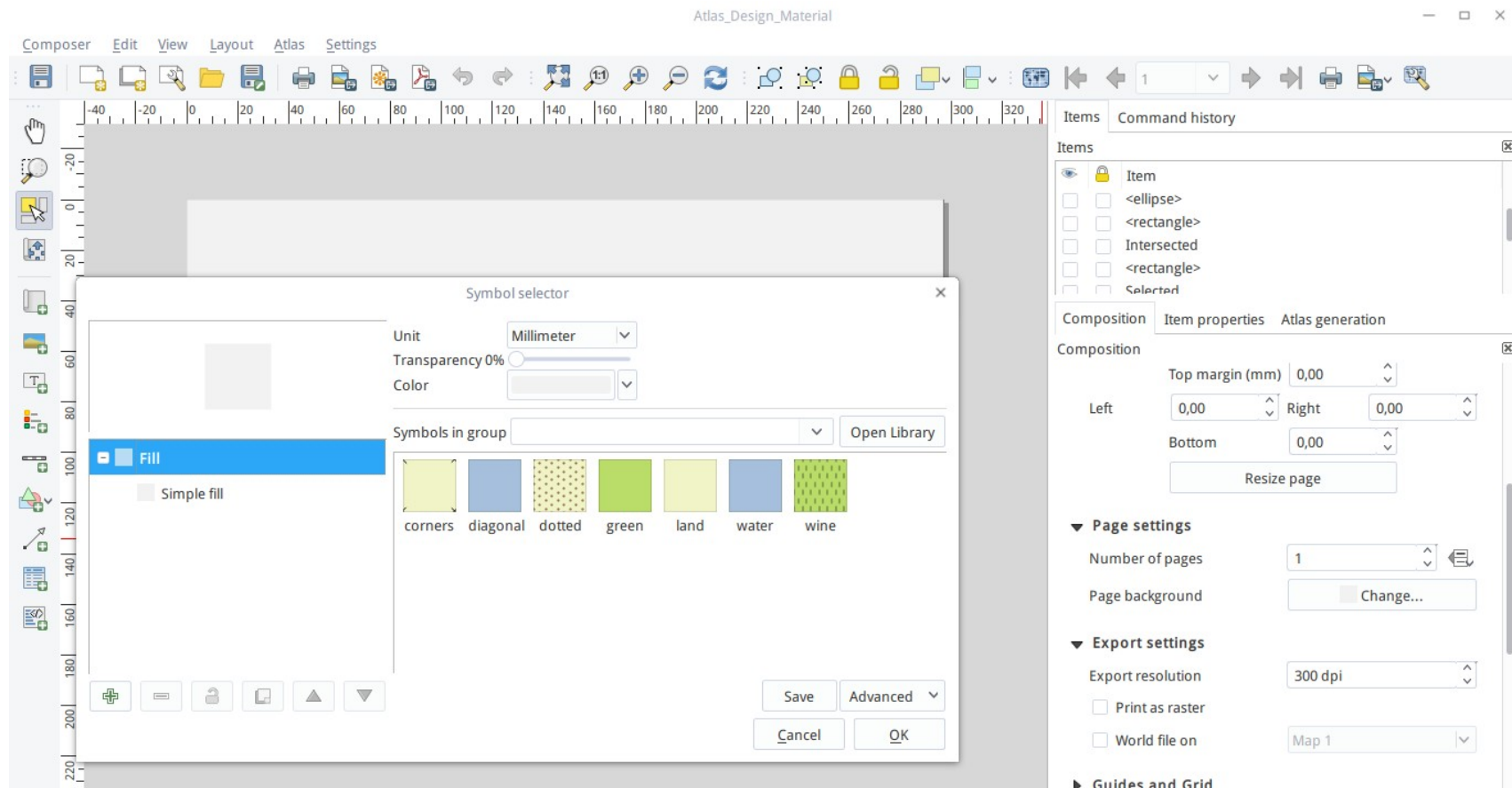
And always use roboto fonts corresponding to your taste.

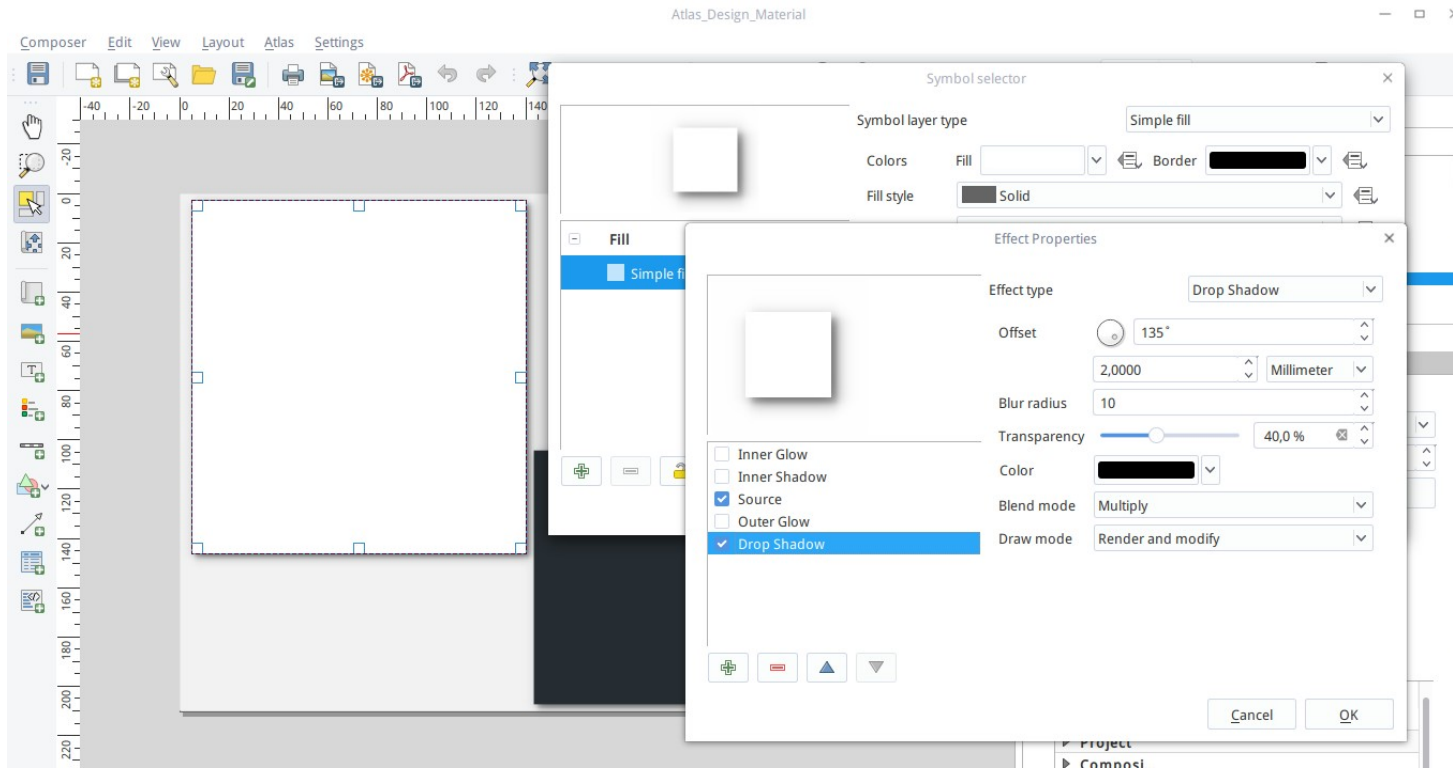
# PART 1 - Design Cards

# Add a Grey background

Change background color to Grey color to make white card visible and use for example these colors :

#f2f2f2





## Add Material Design Cards

Create box with ***add rectangle***, without border but draw effect :

Use drop shadow

- Offset 2 Millimeter

- Blur radius to 10

- Transparency to 40 %

Use white or dark Grey fill colors :

White : #ffffff



Dark Grey : #262d32



## PART 2 – Configure Layer

# Set your layer style for different views

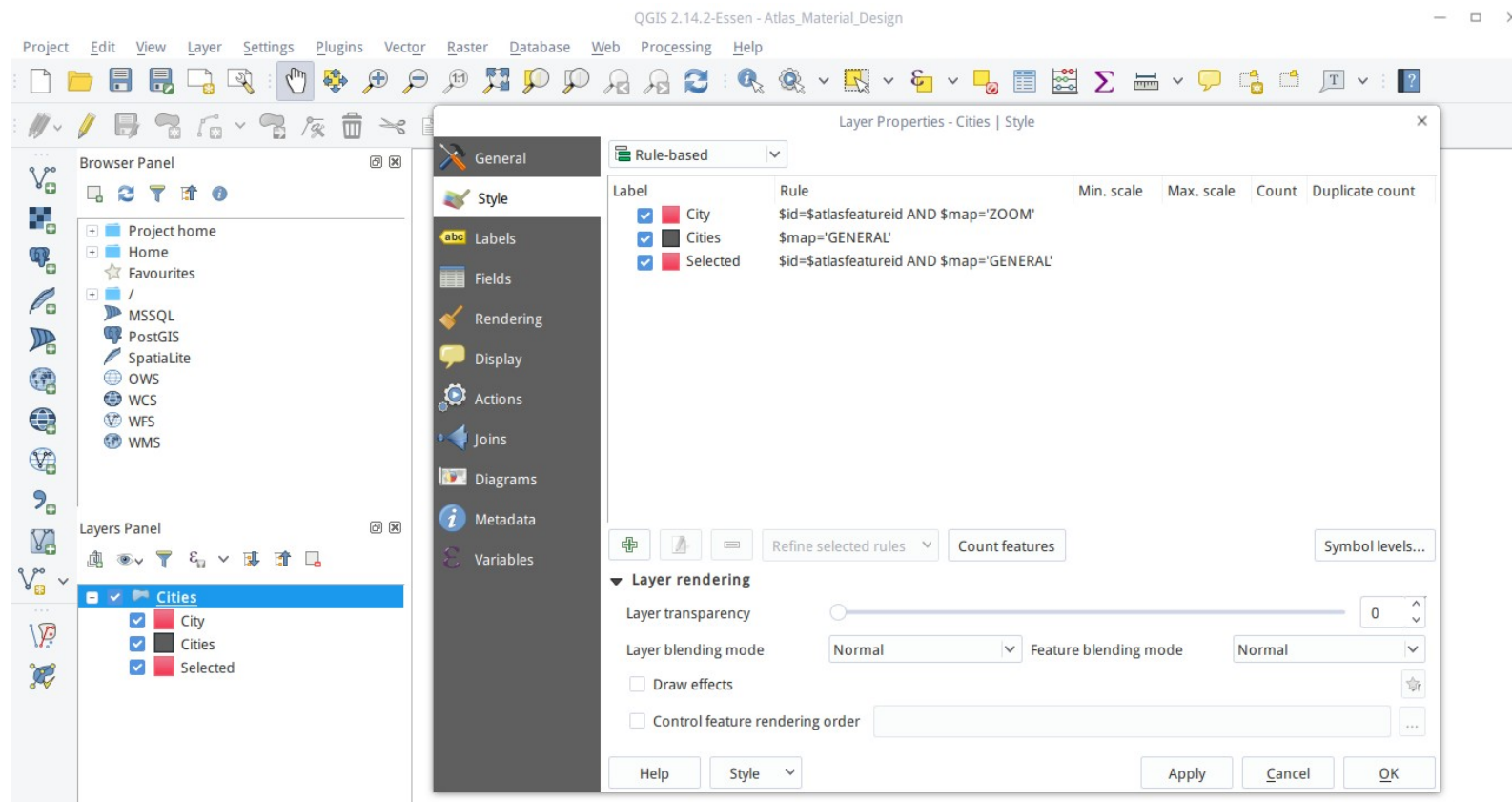
Set a *rule-based* style with these settings for example :

For « ZOOM » view only set your style with : **\$id=\$atlasfeatureid AND \$map='ZOOM'** (In example « City »)

For « GENERAL » view for all features in layer set your style with : **\$map='GENERAL'** (In example « Cities »)

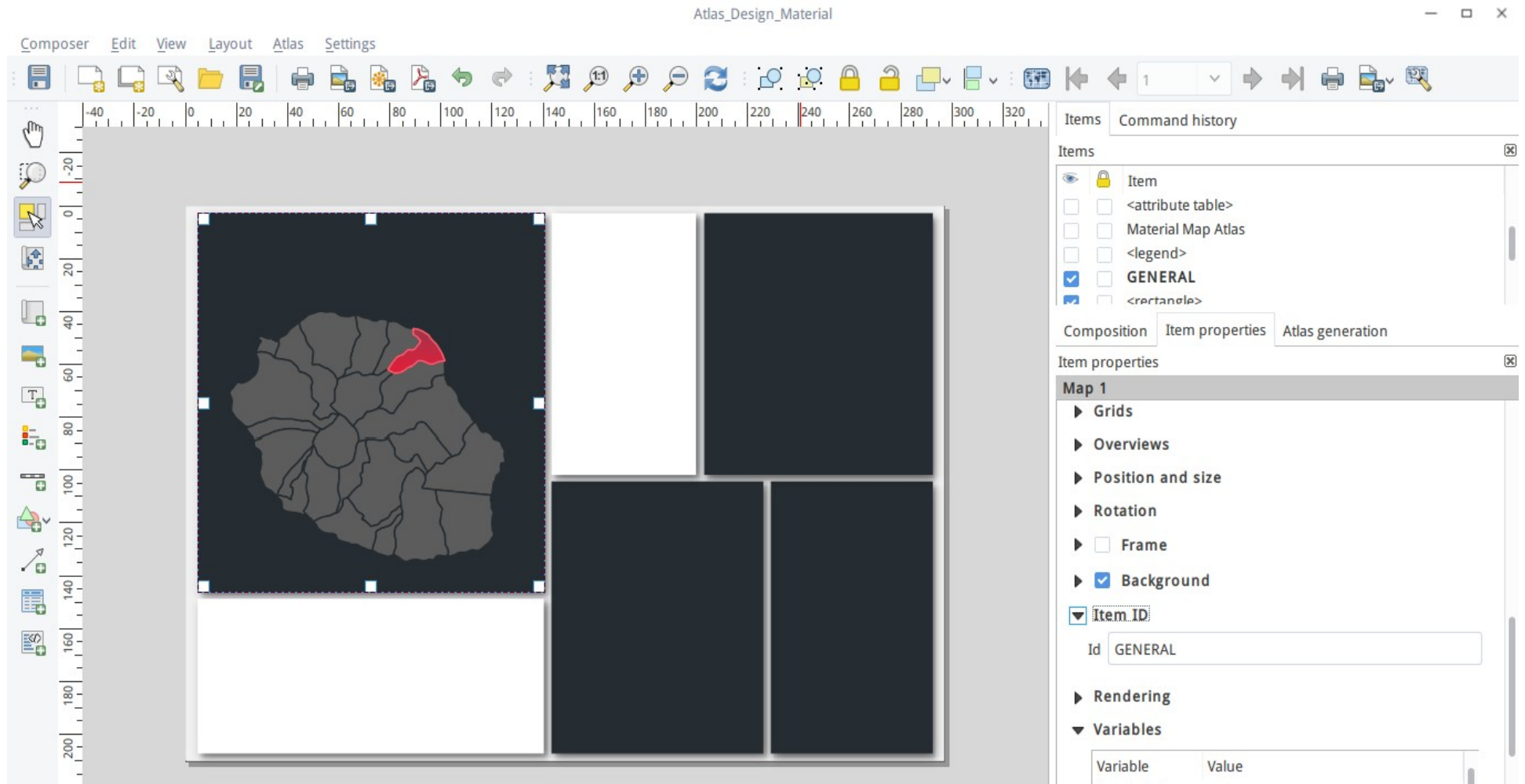
For « GENERAL » view but the selected feature by atlas set your style with : **\$id=\$atlasfeatureid AND \$map='GENERAL'** (In example « Selected »)

Don't worry about the map that has disappeared





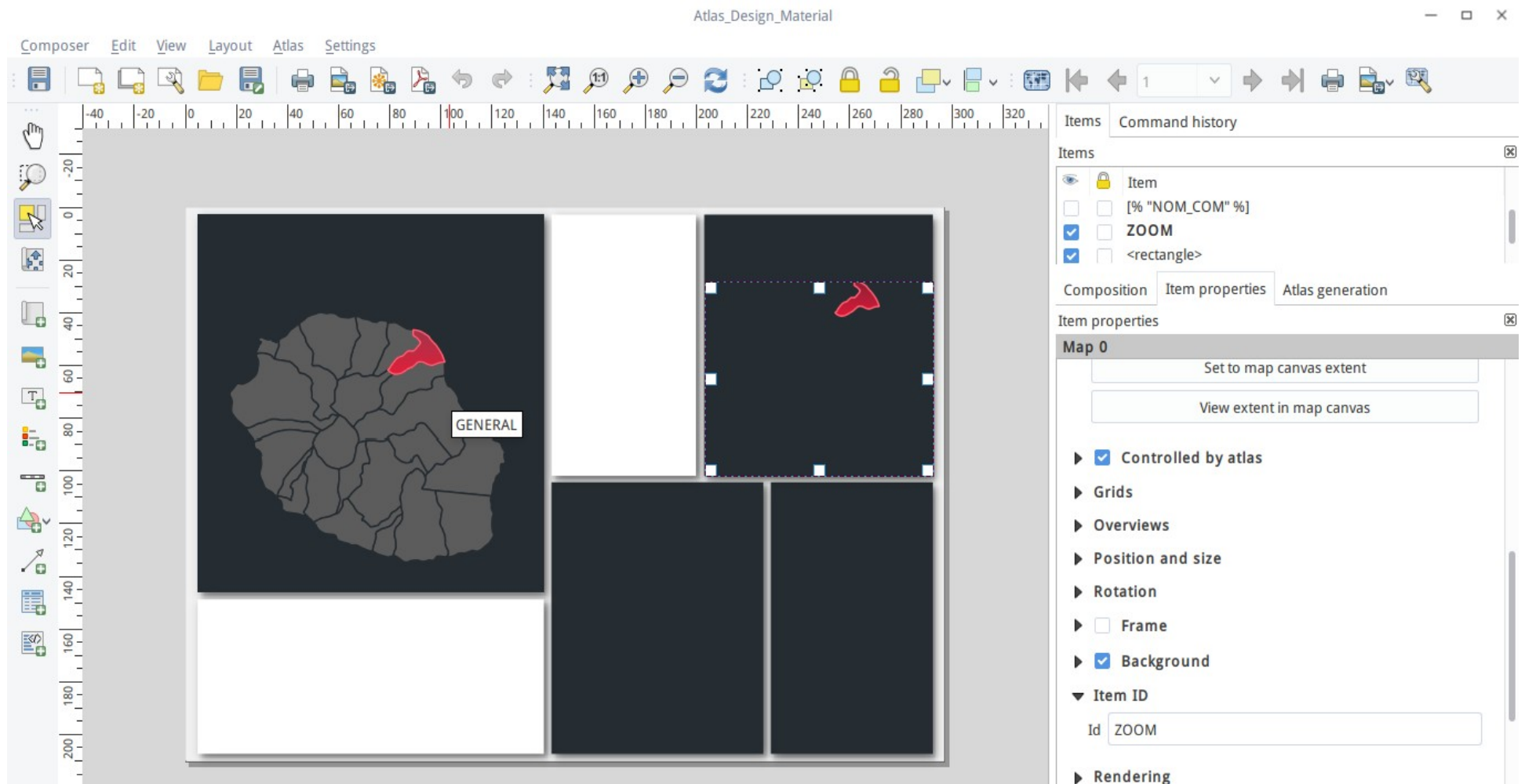
## PART 3 – Map & Zoom



## Add a map into the map box

Add a map with *add new map* with the same size of the map box.

Set *Item ID* to « GENERAL » according to layer setting  
Then change map background if needed and set the map position correctly.



## Add another map into the Zoom box

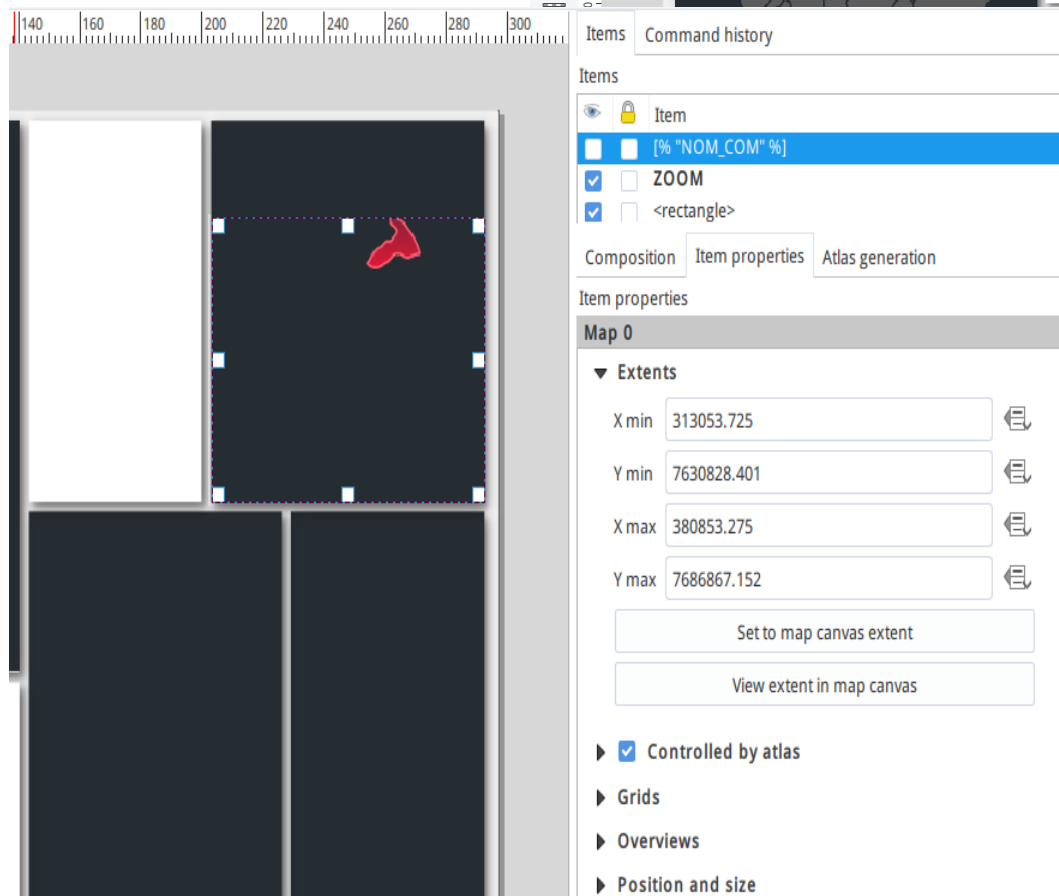
Add a map with *add new map* with the same size of the map box.

Set *Item ID* to « ZOOM » according to layer setting

Then change map background if needed and set the map position correctly.

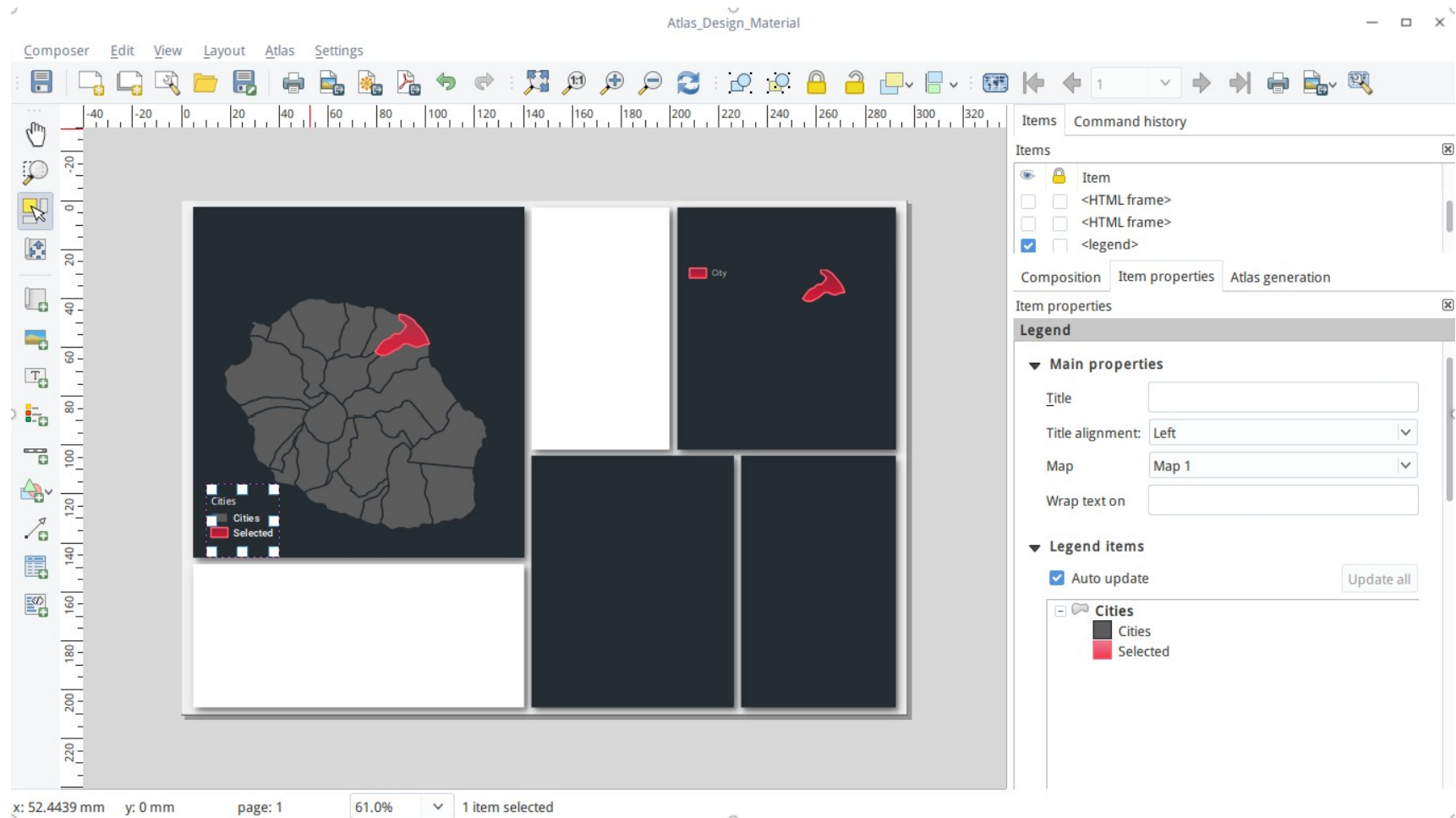
# Add Atlas functionality

In *atlas generation tab*, check *generate atlas* and set *coverage layer* with your layer



## Add Atlas functionality to Zoom

In *Item properties tab*, check *controlled by atlas*

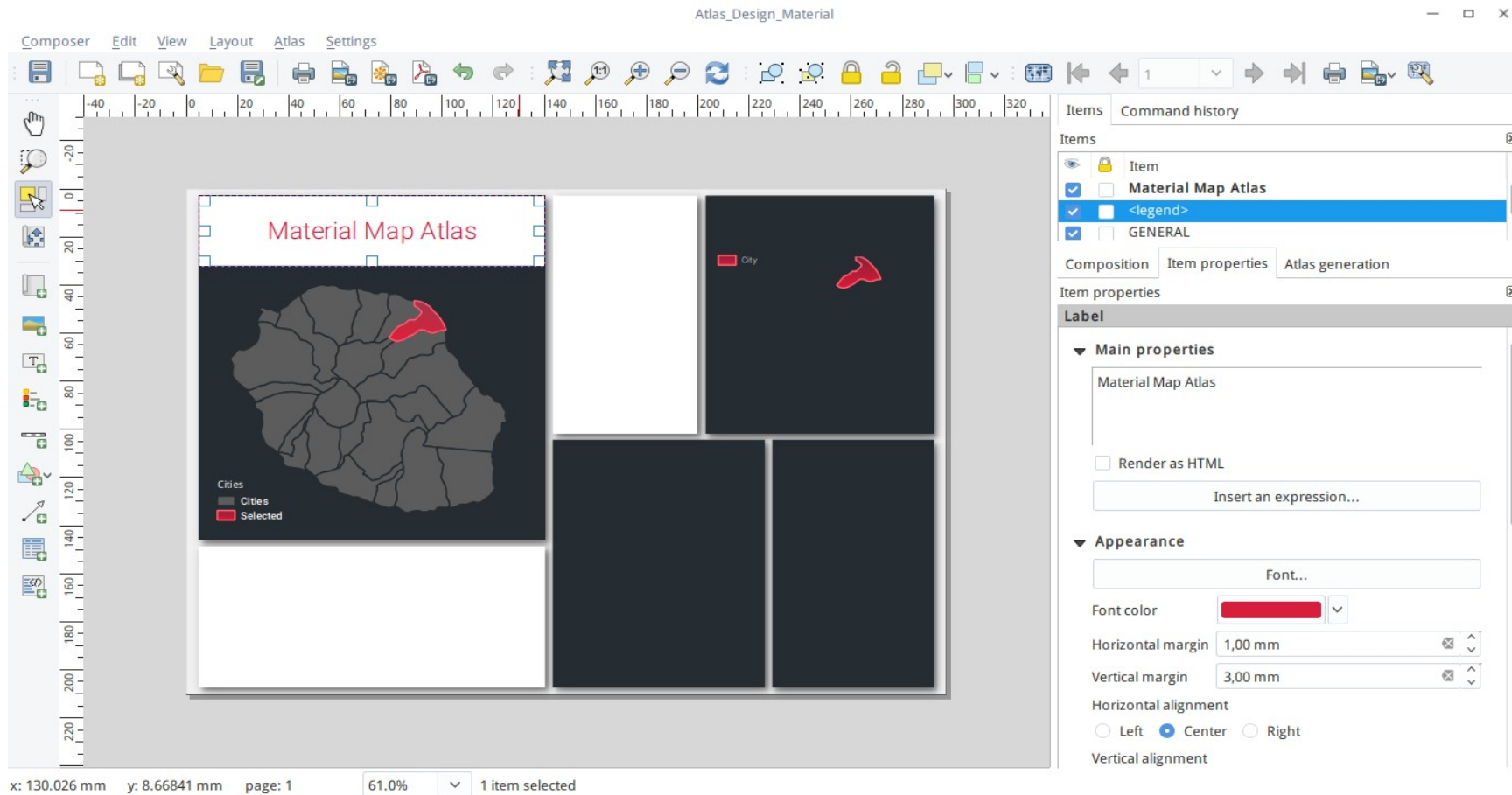


## Add Legend

Add a legend with *add legend*, select the *Map* according to the map and then check *Auto update* and *Filter legend by map content*.

Remove background color from legend set the font color to white.

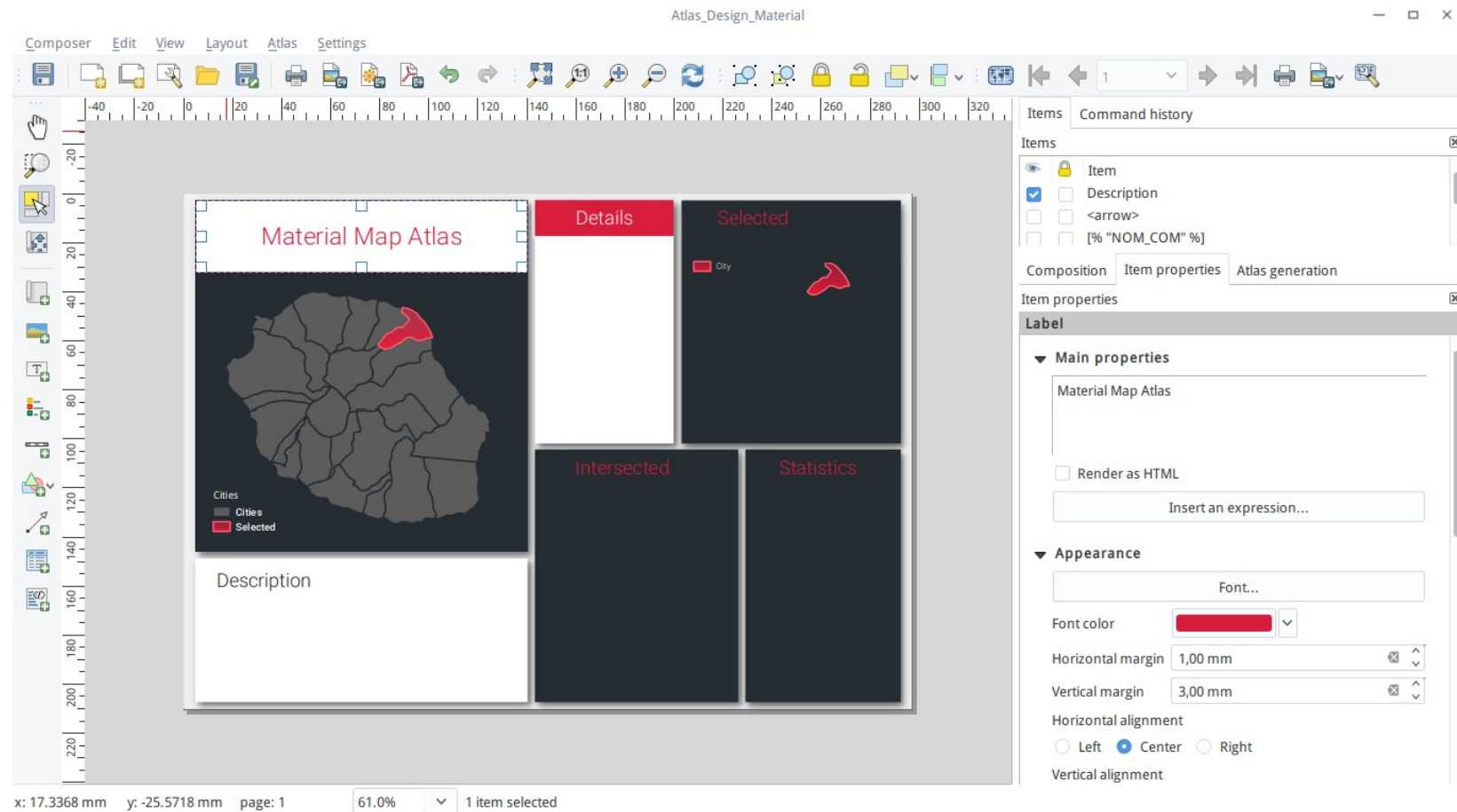
## PART 4 – Title & Text



## Add fixed title

Add a fixed title with **add text** with the same width of the map box.

Enter your title set color to **#d91e3d** then align to middle and center then set background to white.



## Add other fixed titles

Add a fixed title with *add text* .

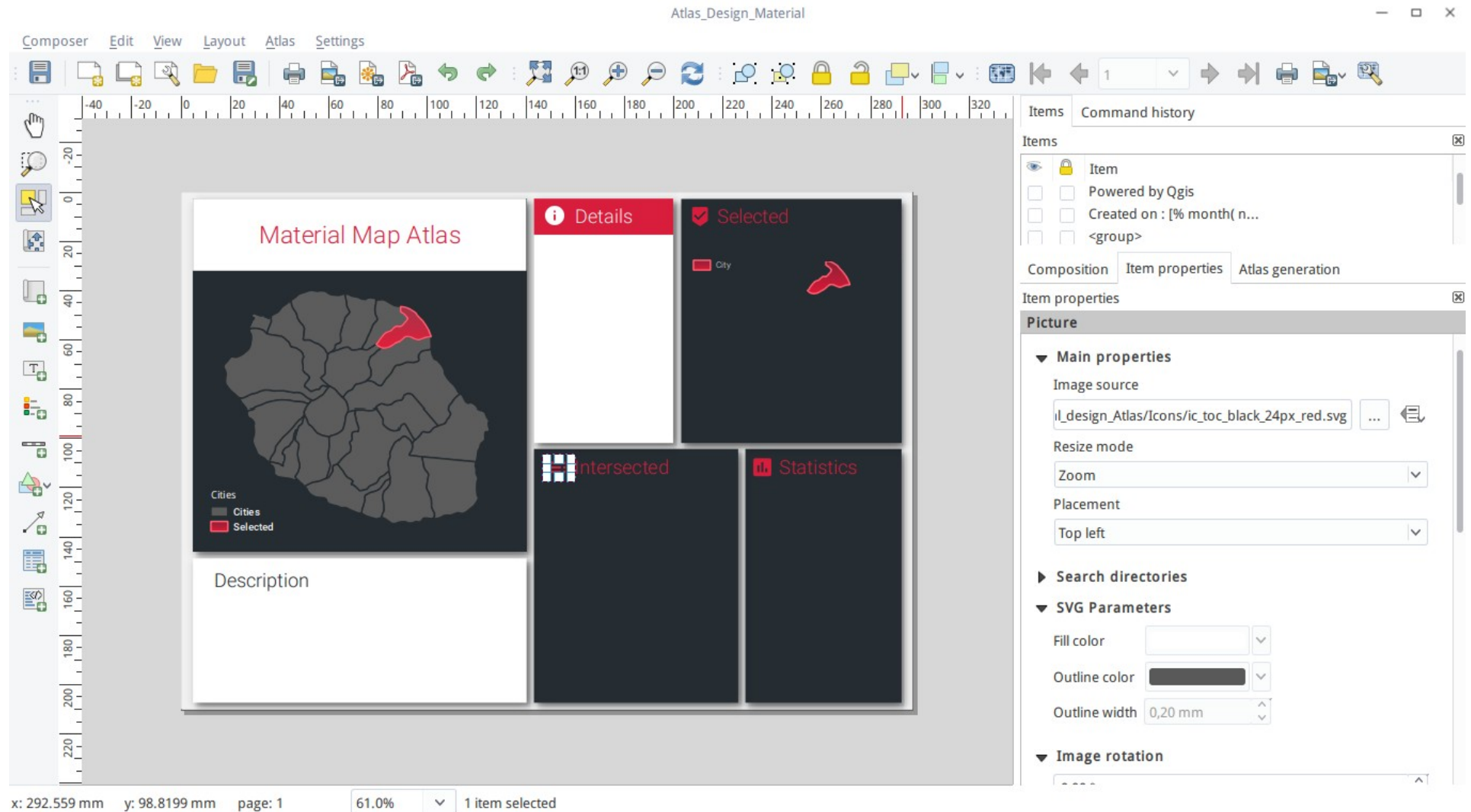
Set colors and background according to the boxes.



# PART 5 – Icons

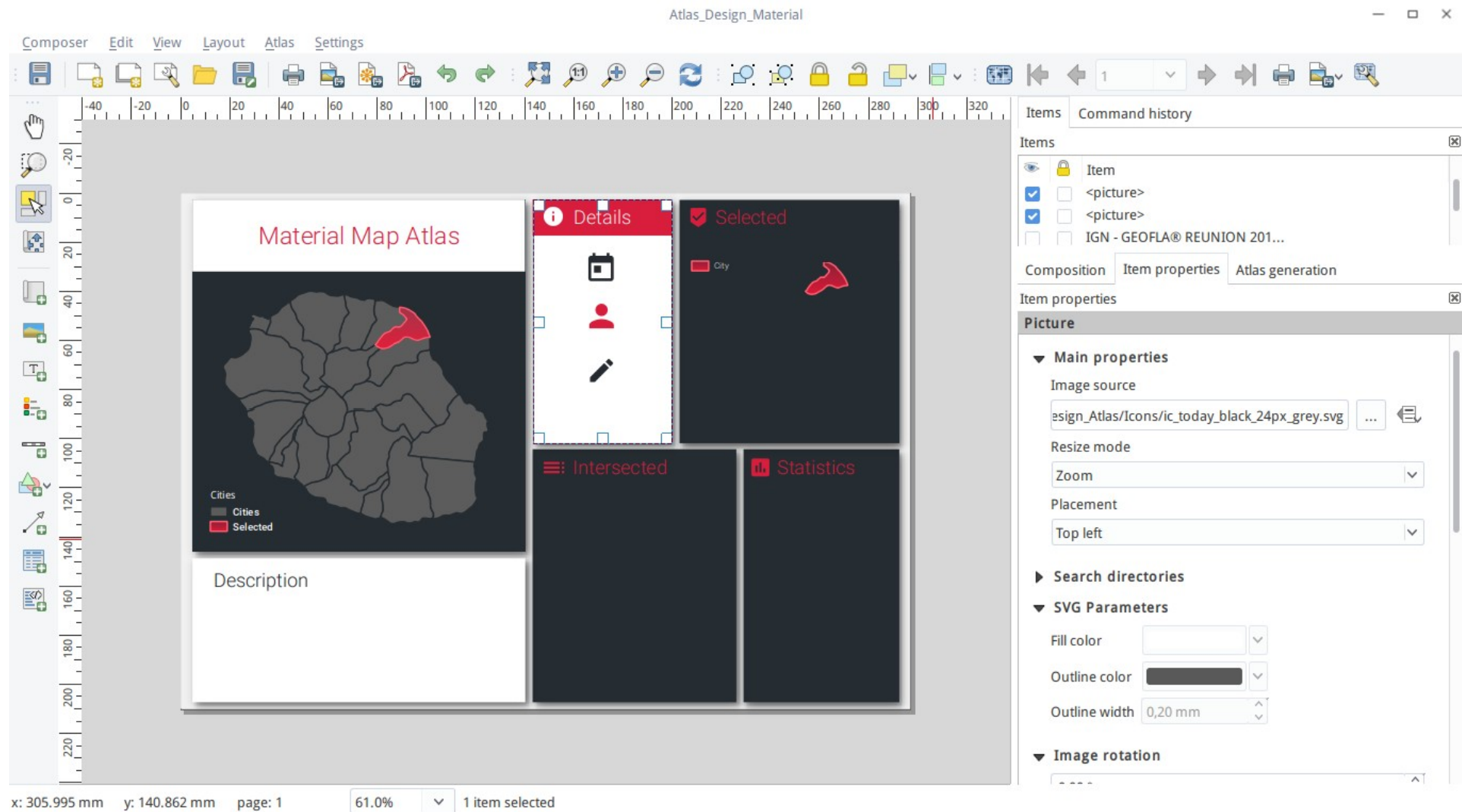
## Add icons

Add some icons with *add image* and put them next to the cards title.



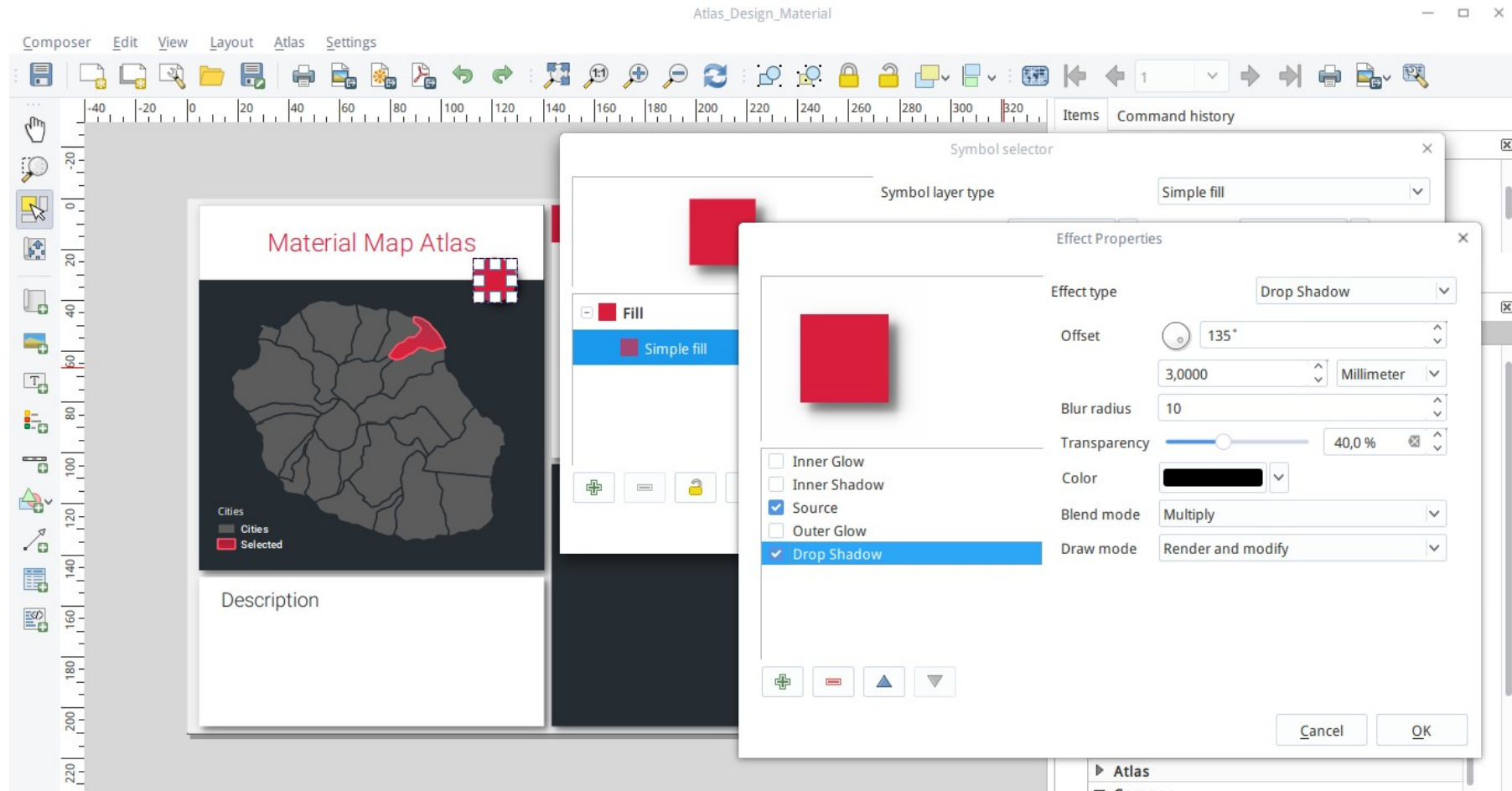
## Add icons (continued)

Add other icons with *add image* and put them on details card.



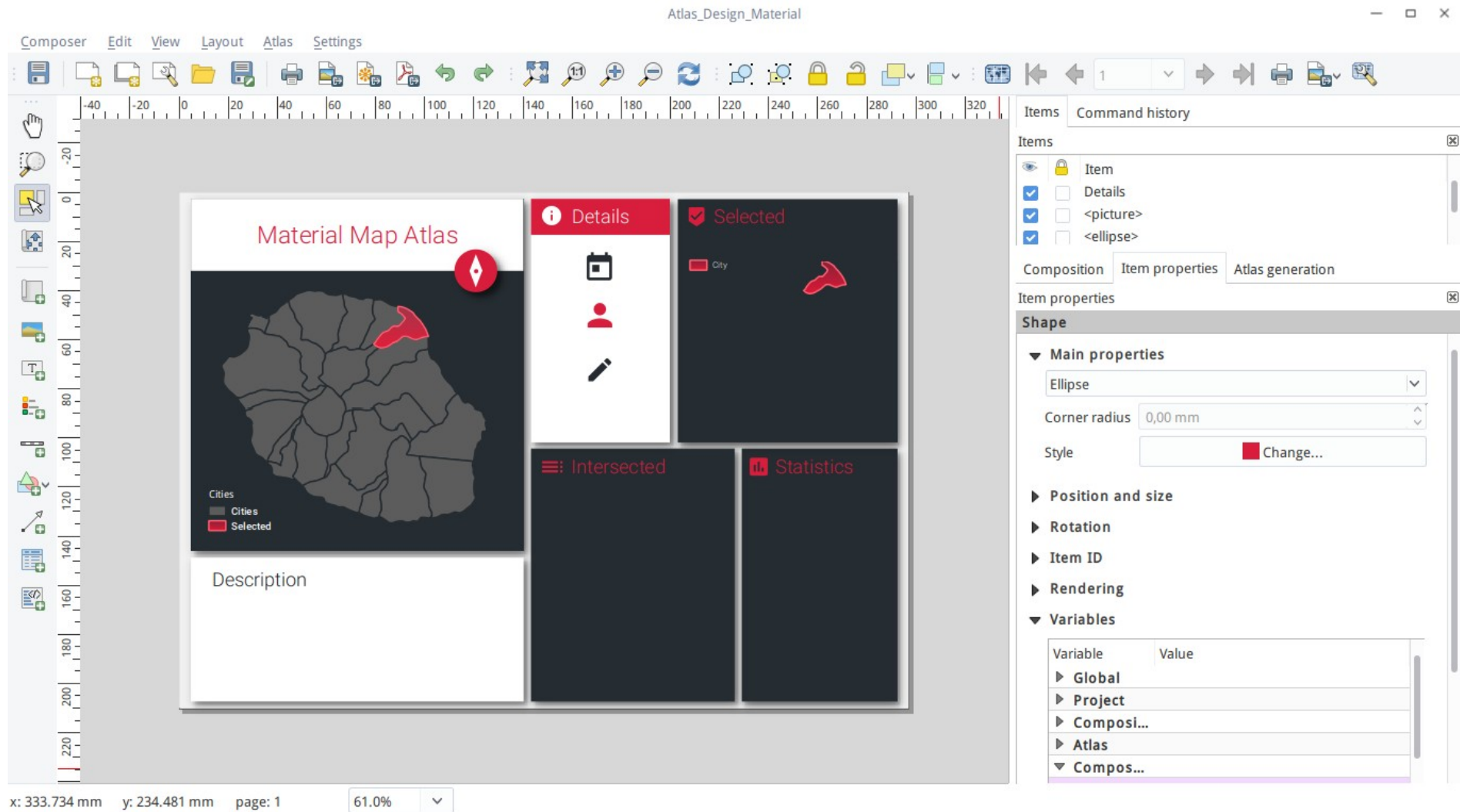
# Add map icons

Add circle background for map icon with *add eclipse*, then set color and add *draw effect*.



## Add map icons (continued)

Add map icons with *add image* and put them on details card.  
Get them aligned to center.

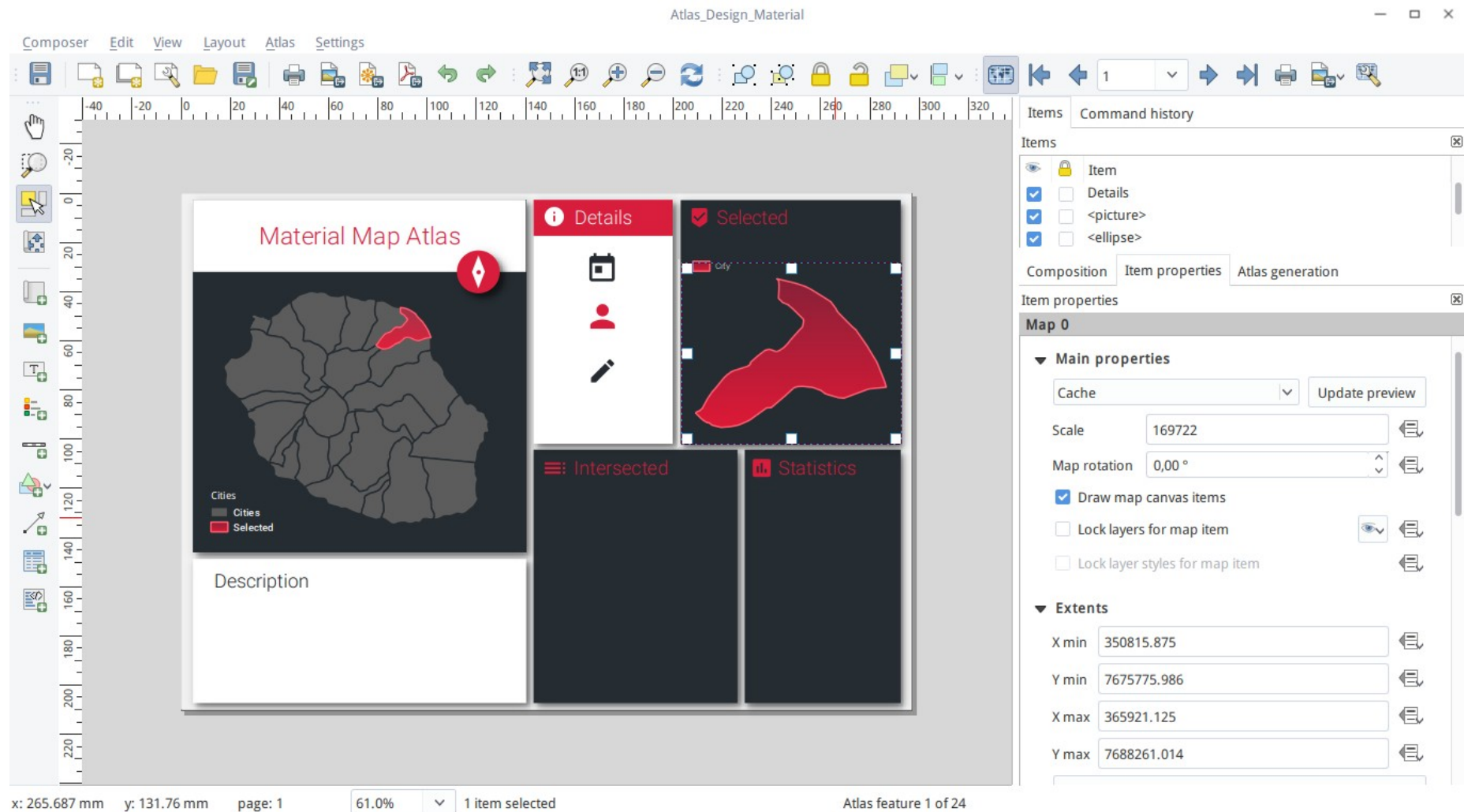


# PART 6 – Dynamic Blocks

# Activating atlas

Now it's time to activate Atlas preview feature and see some things changing. Then we'll add some dynamic blocks to see them change in real-time.

Click on Atlas preview on atlas toolbar.





# Add description

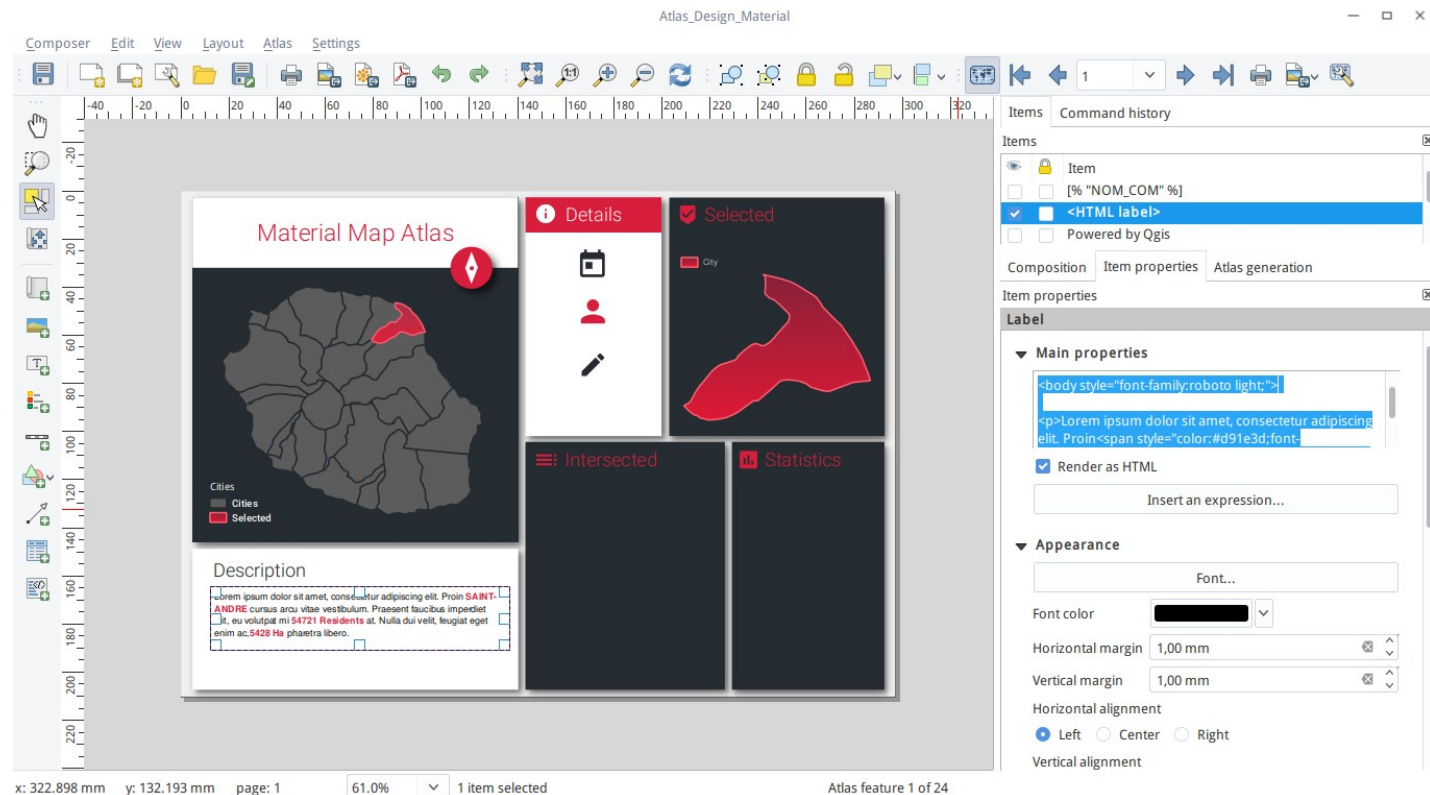
Add an html description with **add HTML frame** and remove background.

In example, I use some « lorem ipsum » with Qgis expressions and html language to get dynamic description. You can use and adapt this code to your needs and attributes name :

```
<body style="font-family:roboto light;">
```

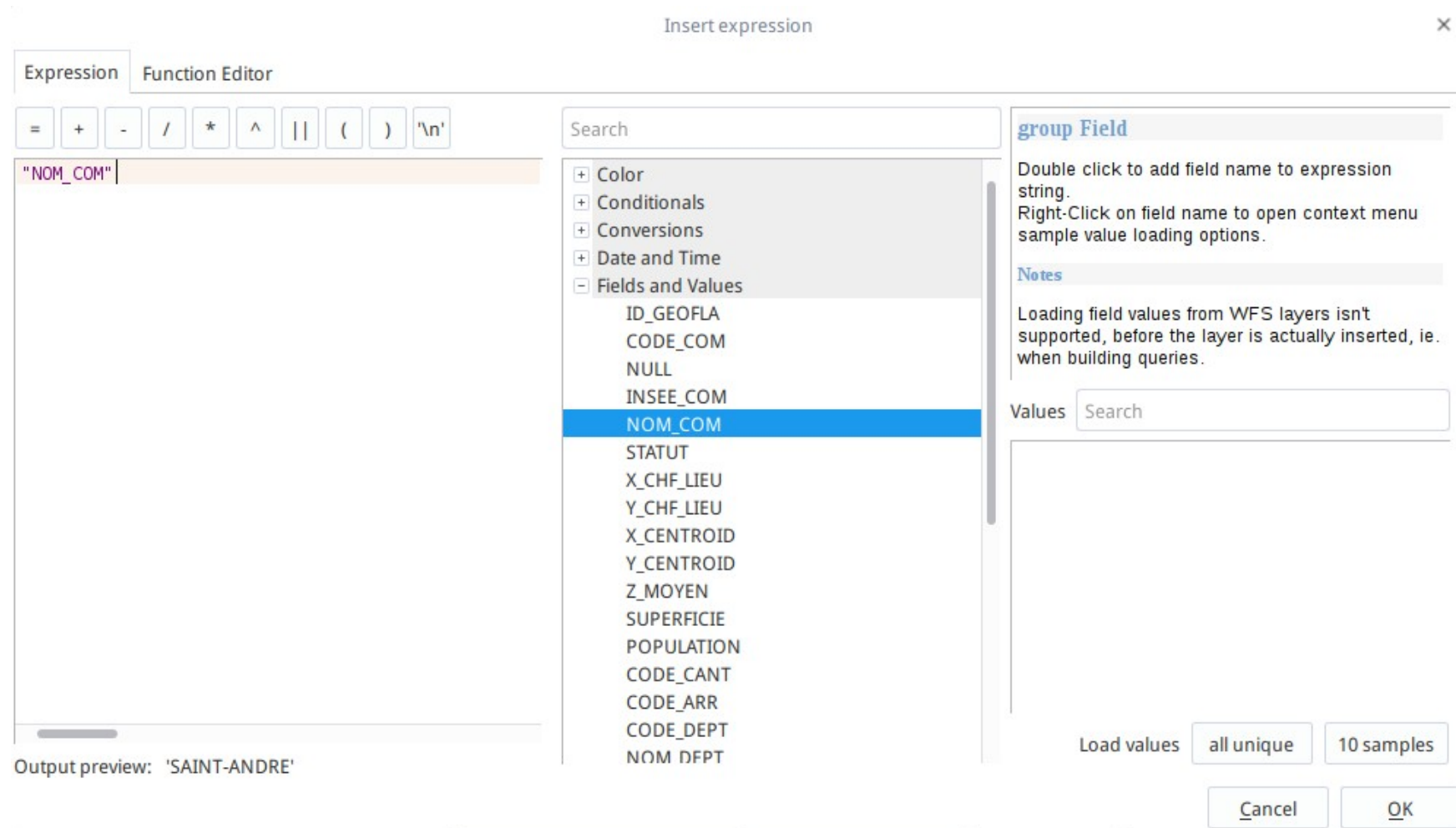
```
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin<span style="color:#d91e3d;font-weight:bold;">[% "NOM_COM" %]</span> cursus arcu vitae vestibulum. Praesent faucibus imperdiet elit, eu volutpat mi <span style="color:#d91e3d;font-weight:bold;">[% "POPULATION" || ' Residents'%]</span> at. Nulla dui velit, feugiat eget enim ac,<span style="color:#d91e3d;font-weight:bold;">[% "SUPERFICIE" || ' Ha'%]</span> pharetra libero.</p>
```

```
</body>
```





To insert Qgis expressions like [% "NOM\_COM" %] in your text just click on Insert an expression and then in *Fields an Values* double-click on **NOM\_COM** (or your attribute name if different) and then OK



Add some details to Description card like simple arrow with *Arrow markers* to *None* and set *Line style* to Grey



Composition   Item properties   Atlas generation

Item properties

Arrow

▼ Main properties

— Line style...

▼ Arrow markers

☐ Default   ☒ None   ☐ SVG

Arrow outline color

Arrow fill color

Arrow outline width

Arrow head width

Start marker

End marker

Then just add a text with Qgis expression, in example just [% "NOM\_COM" %]



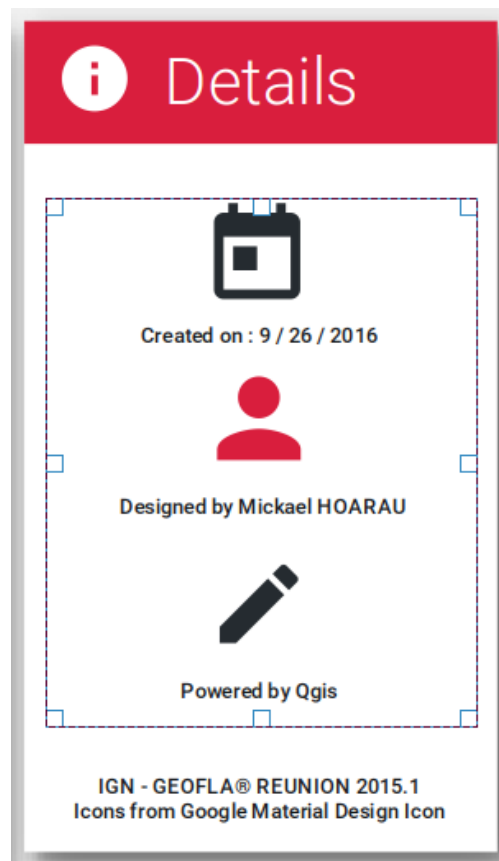
## Add details

With the same method before, add an html description with *add HTML frame* and remove background.

For your date you can add this code :

```
Created on : [% format_date( now() , 'MM/dd/yyyy')%]
```

And for the others add the text corresponding to your project.



# Add attribute table

Add an attribute table with *add attribute table* and select the right layer. Then use these settings :

- Set **Maximum rows** corresponding to your layer (Here at least 30)
- Check **Show only features intersecting atlas feature**
- Uncheck **Show grid**
- Use google roboto fonts
- Set fonts like this :

▼ **Fonts and text styling**

**Table heading**

Font

Color  ▼

Alignment  ▼

**Table contents**

Font

Color  ▼

- Appearance settings like this :

▼ **Appearance**

☐ Show empty rows

Cell margins  ^ ▼

Display header  ▼

Empty tables  ▼

Message to display

Background color  ▼


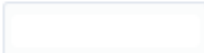
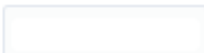

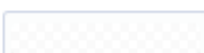
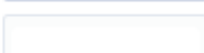
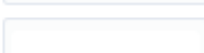

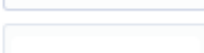

Wrap text on

Oversized text  ▼

- Use these color settings :

Table Background Colors ✕

Check options to enable shading for matching cells. Options lower in this list will take precedence over higher options. Eg, if both "First row" and "Odd rows" are checked, the cells in the first row will be shaded using the color specified for "First row".

Default cell background		▼
<input type="checkbox"/> Odd columns		▼
<input type="checkbox"/> Even columns		▼
<input checked="" type="checkbox"/> Odd rows		▼
<input checked="" type="checkbox"/> Even rows		▼
<input type="checkbox"/> First column		▼
<input type="checkbox"/> Last column		▼
<input checked="" type="checkbox"/> Header row		▼
<input type="checkbox"/> First row		▼
<input type="checkbox"/> Last row		▼

Apply Cancel OK

- And set attributes like this :

Select attributes

×

Columns

	Attribute	Heading	Alignment	Width
0	abc NOM_COM	Name	Middle center	38.00 mm
1	SUPERFICIE	Area	Middle center	15.00 mm
2	POPULATION	Population	Middle center	16.00 mm

▲

▼

+

−

Reset

Sorting

SUPERFICIE

Ascending

+

	Attribute	Sort Order
0	NOM_COM	Ascending

▲

▼

−

Cancel

OK

# Add Statistics

First, add some html labels with *add HTML frame* with for example these codes to adapt to your project :

Area

```
[% "SUPERFICIE" %] Ha
```

Population

```
[% "POPULATION" %] hab
```

The screenshot shows the QGIS Atlas Design tool interface. The main canvas displays a map of Saint-André with a red polygon highlighting a specific area. The interface includes a top menu bar (Composer, Edit, View, Layout, Atlas, Settings) and a toolbar with various design tools. The right-hand panel shows the 'Items' list with 'Population [% "POPULATION..." %] hab' selected. Below this, the 'Item properties' panel is visible, showing the 'Label' section with the expression '[% "POPULATION..." %] hab' and the 'Appearance' section with font settings.

Material Map Atlas

Details

Created on: 9/26/2016

Designed by Mickael HOASAU

Powered by Qgis

SAINT-ANDRE

Selected

City

Intersected

Name	Area	Population
BRAS-PANON	8726	12298
SAINT-ANDRE	5428	54721
SAINT-SUZANNE	5783	22388
SALAZIE	10382	7320

Statistics

Area  
5428 Ha

Population  
54721 hab

Description

SAINT-ANDRE

Population [% "POPULATION..." %] hab

Font..

Font color

Horizontal margin 1,00 mm

Vertical margin 1,00 mm

Horizontal alignment

Left Center Right

Vertical alignment

Then **add HTML frames** with this code for area :

```
<div class="demo-wrapper">
<div class="csspie" data-start="0" data-value="[% to_int( (( "SUPERFICIE" *100 ) / 250308 ) )
%]"></div>
<div class="csspie big" data-start="[% to_int( (( "SUPERFICIE" *100 ) / 250308 ) )%]" data-
value="[% (100 - to_int( (( "SUPERFICIE" *100 ) / 250308 ) ))%]"></div>
</div>
```

In this example I'm calculating a percentage, with fields and sum of all values (**250308**) for dynamically give sizes to the pie.

Then ccs sheet will make all the rest. (Css sheet in source)

And this code for population :

```
<div class="demo-wrapper">
<div class="csspie" data-start="0" data-value="[% to_int( (( "POPULATION" *100 ) / 833944 ) )
%]"></div>
<div class="csspie big" data-start="[% to_int( (( "POPULATION" *100 ) / 833944 ) )%]" data-
value="[% (100 - to_int( (( "POPULATION" *100 ) / 833944 ) ))%]"></div>
</div>
```

In this example I'm calculating a percentage, with fields and sum of all values (**833944**) for dynamically give sizes to the pie.

Then ccs sheet will make all the rest. (Css sheet in source)

I'm using **to\_int()** to get integer value corresponding to css rules. But later I will use decimal values for labels.



Then copy and past css in source in *user style-sheet* to get this :

Atlas\_Design\_Material

Composer Edit View Layout Atlas Settings

Items Command history

Items

- ☒ Item
- ☒ <HTML frame>
- ☒ <HTML frame>
- ☒ <legend>

Composition Item properties Atlas generation

Item properties

HTML frame

- ☐ Don't draw background if frame is empty
- ☒ Use smart page breaks
  - Maximum distance 10,0 mm
- ☒ User stylesheet
 

```

      .csspie {
        position: absolute;
        width: 50px;
        height: 100px;
        overflow: hidden;
        left: 75px;
        -moz-transform-origin: left center;
        -ms-transform-origin: left center;
        -webkit-transform-origin: left center;
        transform-origin: left center;
      }
      
```

Update HTML

► Position and size

► Rotation

x: 283.4 mm y: 129.711 mm page: 1 67.3% Atlas feature 1 of 24

Material Map Atlas

Details

Created on: 9 / 26 / 2016

Designed by Mickael HOARAU

Powered by Qgis

SAINT-ANDRE

Selected

City

Intersected

Name	Area	Population
BRASPANON	8726	12298
SAINT-ANDRE	5428	54721
SAINT-SUZANNE	5783	22388
SALAZIE	10382	7320

Statistics

Area 5428 Ha

Population 54721 hab

Description

SAINT-ANDRE

SAINT-ANDRE

To finish add text labels over pie charts using Qgis expressions.

For area :

```
[% round( (( "SUPERFICIE" *100 ) / 250308 ) ,1)%]
```

For population :

```
[% round( (( "POPULATION" *100 ) / 833944 ) ,1)%]
```

The screenshot displays the QGIS Atlas Design Material interface. The main canvas shows a map atlas layout for Saint-Andre. The layout includes a main map area, a details panel, and a statistics panel. The details panel shows the city name, creation date, designer, and power source. The statistics panel shows a table of intersected areas and a pie chart of population distribution.

**Material Map Atlas**

**Details**

- Created on: 9 / 26 / 2016
- Designed by Mickael HOARAU
- Powered by Qgis
- IGN - GEOPORTAL / IGN 2015-1 Icons from Google Material Design Icons

**Selected**

SAINT-ANDRE

City

**Intersected**

Name	Area	Population
BRAS-PANON	8726	12298
SAINT-ANDRE	5428	54721
SAINTE-SUZANNE	5783	22388
SALAZIE	10382	7320

**Statistics**

Area 5428 Ha

Population 54721 hab

2.2%

6.6%

**Item properties**

**Label**

**Main properties**

[% round( (( "SUPERFICIE" \*100 ) / 250308 ) ,1)%]

☐ Render as HTML

Insert an expression...

**Appearance**

Font...

Font color

Horizontal margin 1,00 mm

Vertical margin 1,00 mm

Horizontal alignment

☐ Left ☒ Center ☐ Right

Vertical alignment

Now you can export your atlas with *export atlas to PDF* in atlas toolbar drop-down !

# Well Done !

You've got a materialized atlas ready map

*This tutorial is proudly created with open source softwares like Qgis, inkscape and LibreOffice.  
Thanks to Anita Graser for her help and for her amazing book « Qgis Map Design ».*

Mickael HOARAU  
<https://twitter.com/Oneil974>