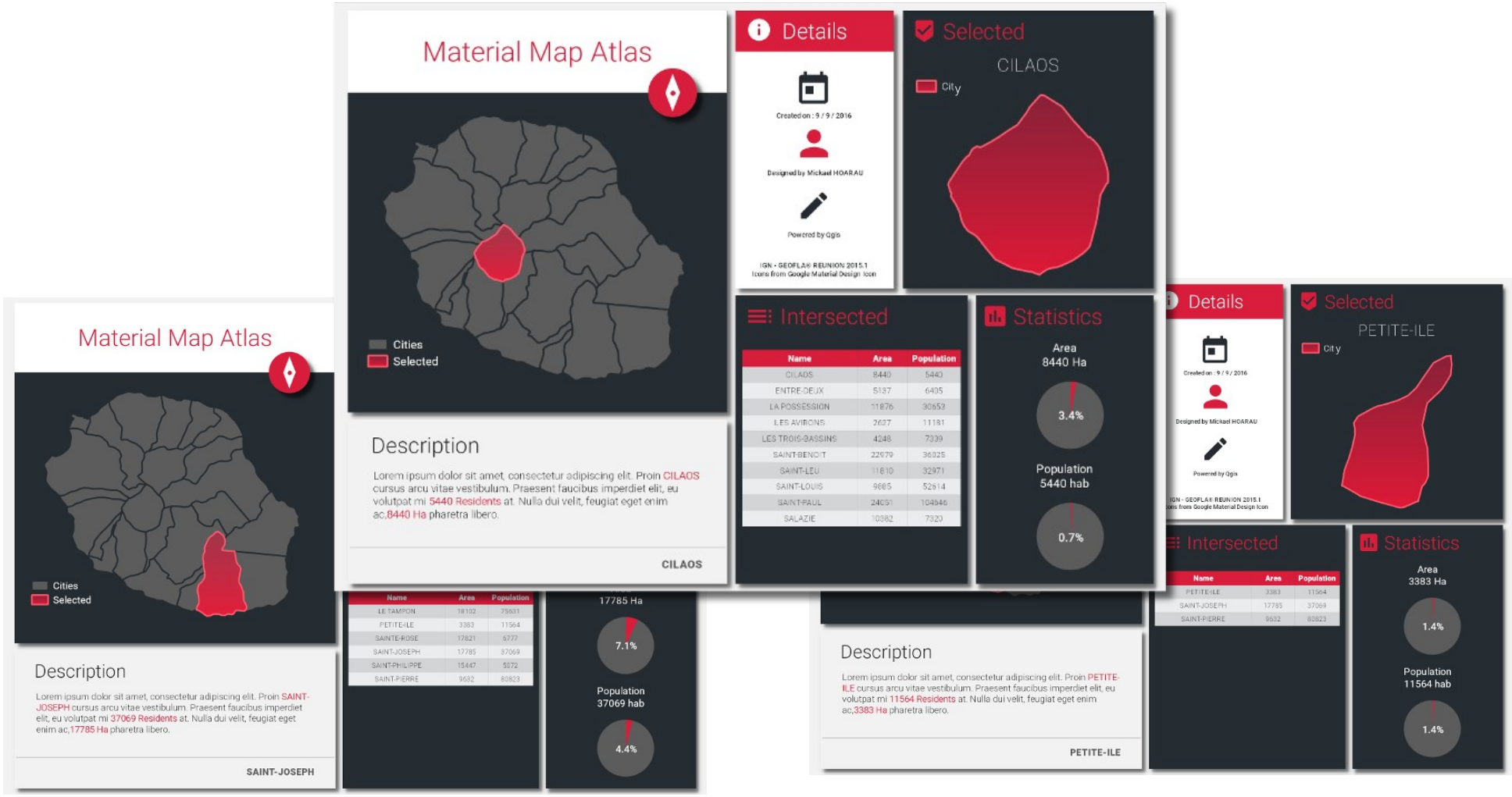
Material Design Atlas

With Qgis Composer



Summary

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=0B37RnaYSMWAZbVlBT1dndVNuSkE

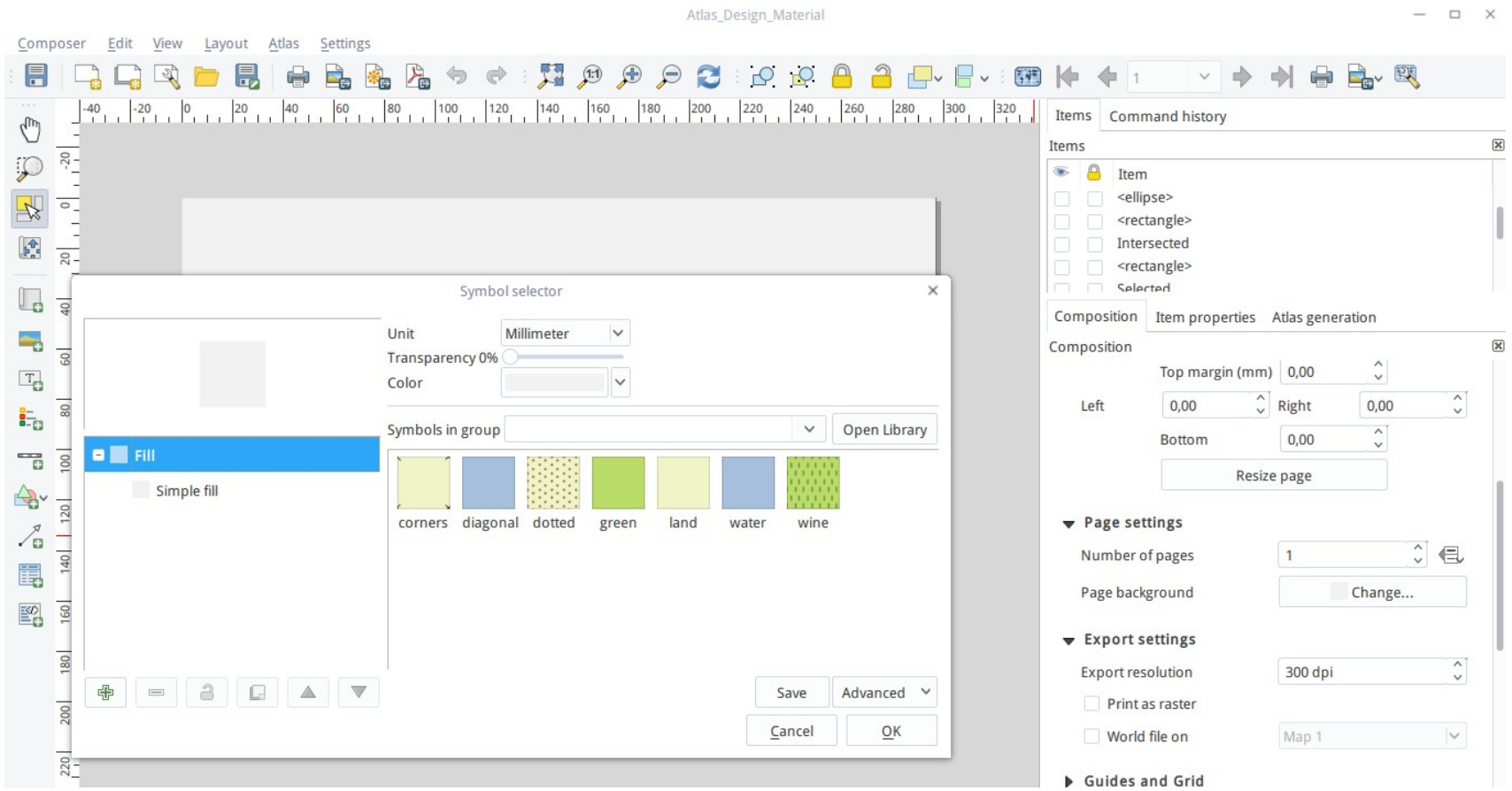
And always use roboto fonts corresponding to your taste.

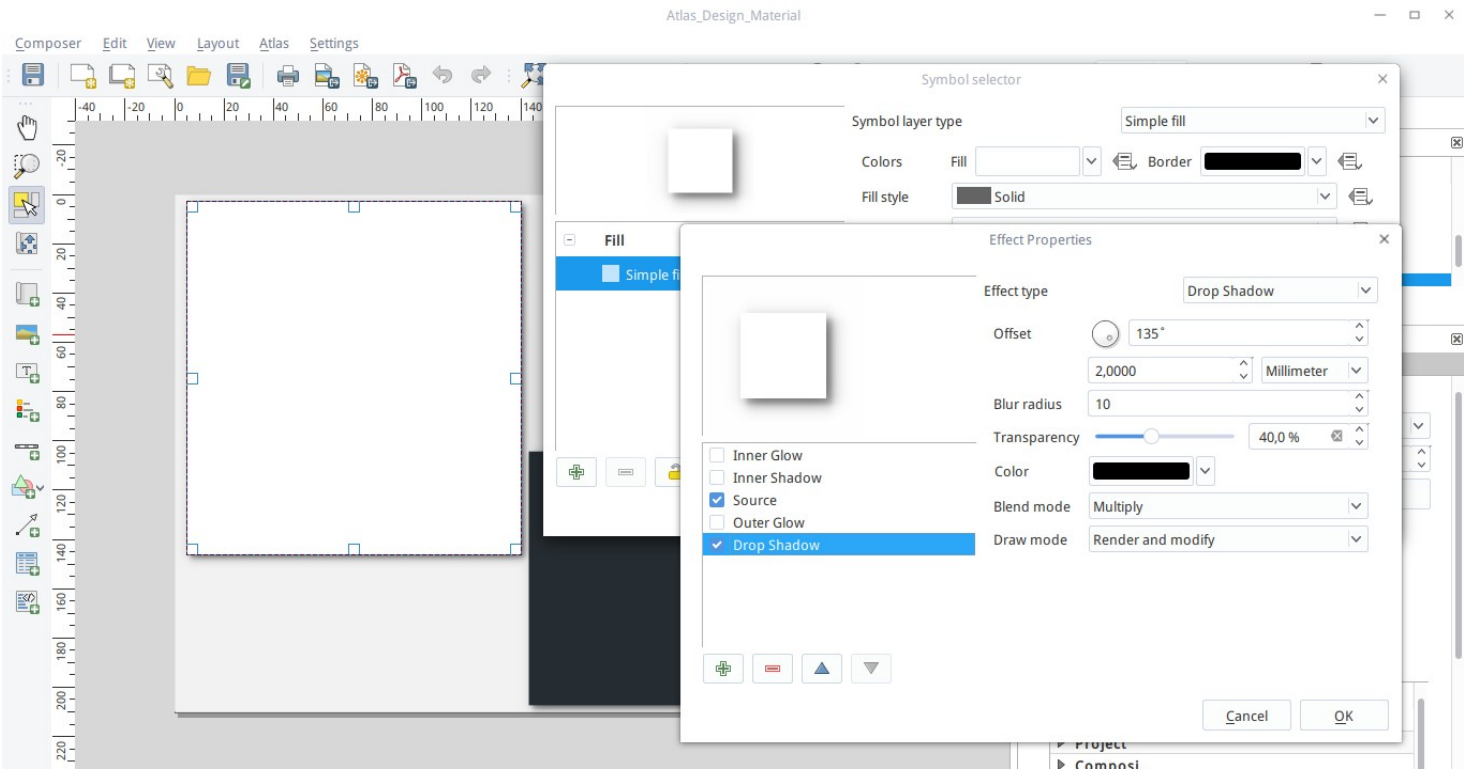
PART 1 - Design Cards

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 :

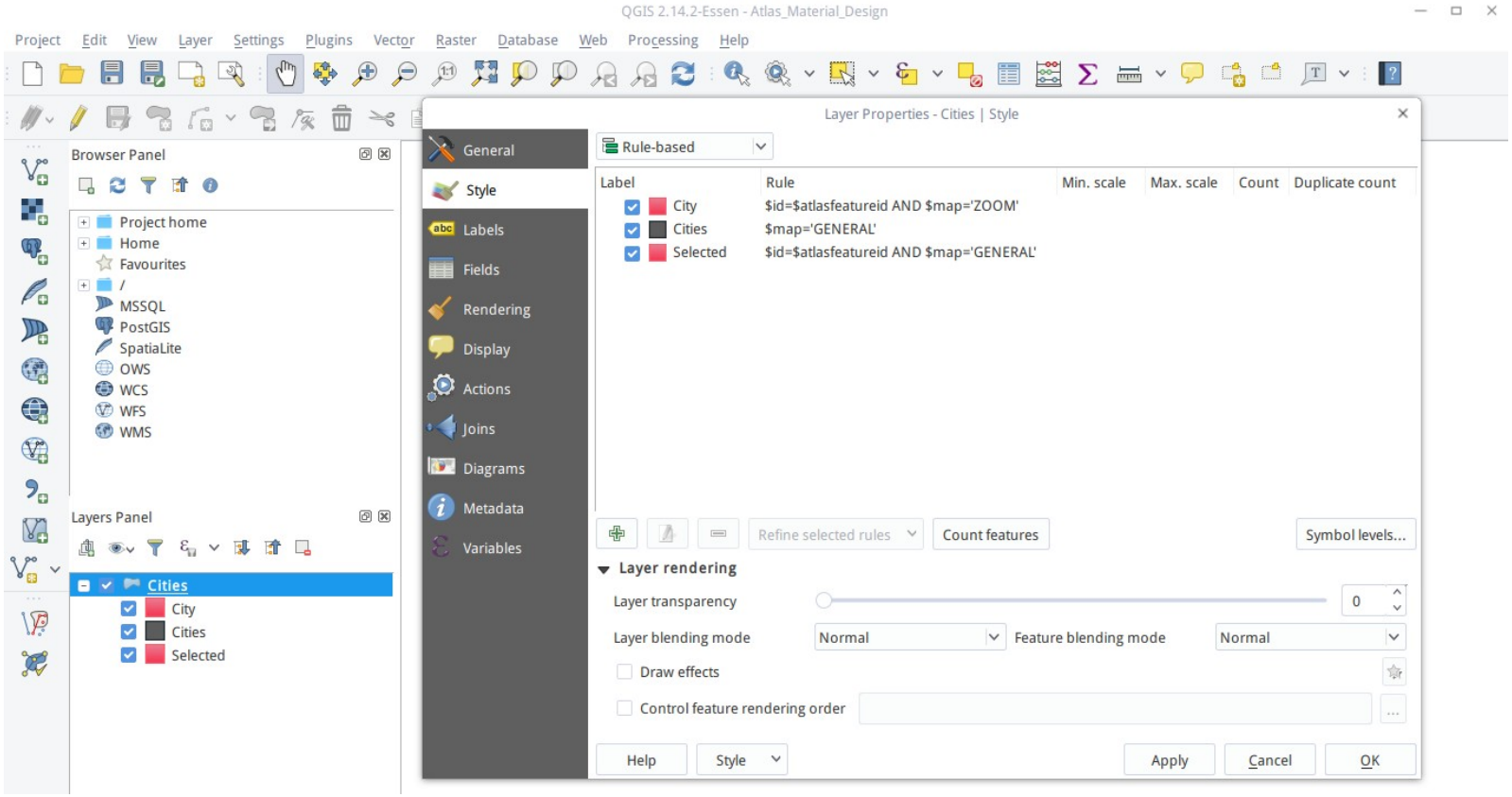
White : #ffffff Dark Grey : #262d32

PART 2 – Configure Layer

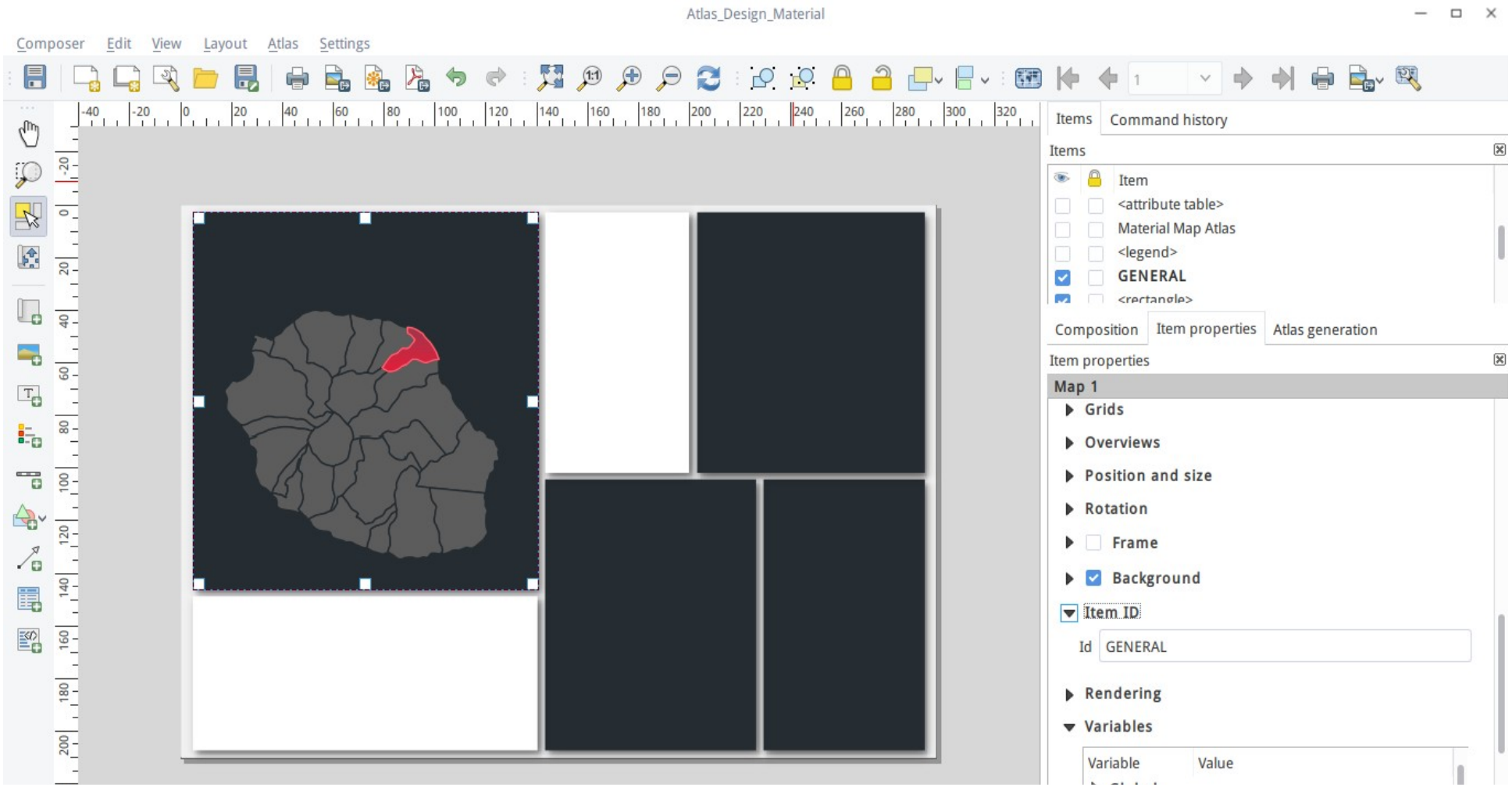
Set your layer style for different views

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



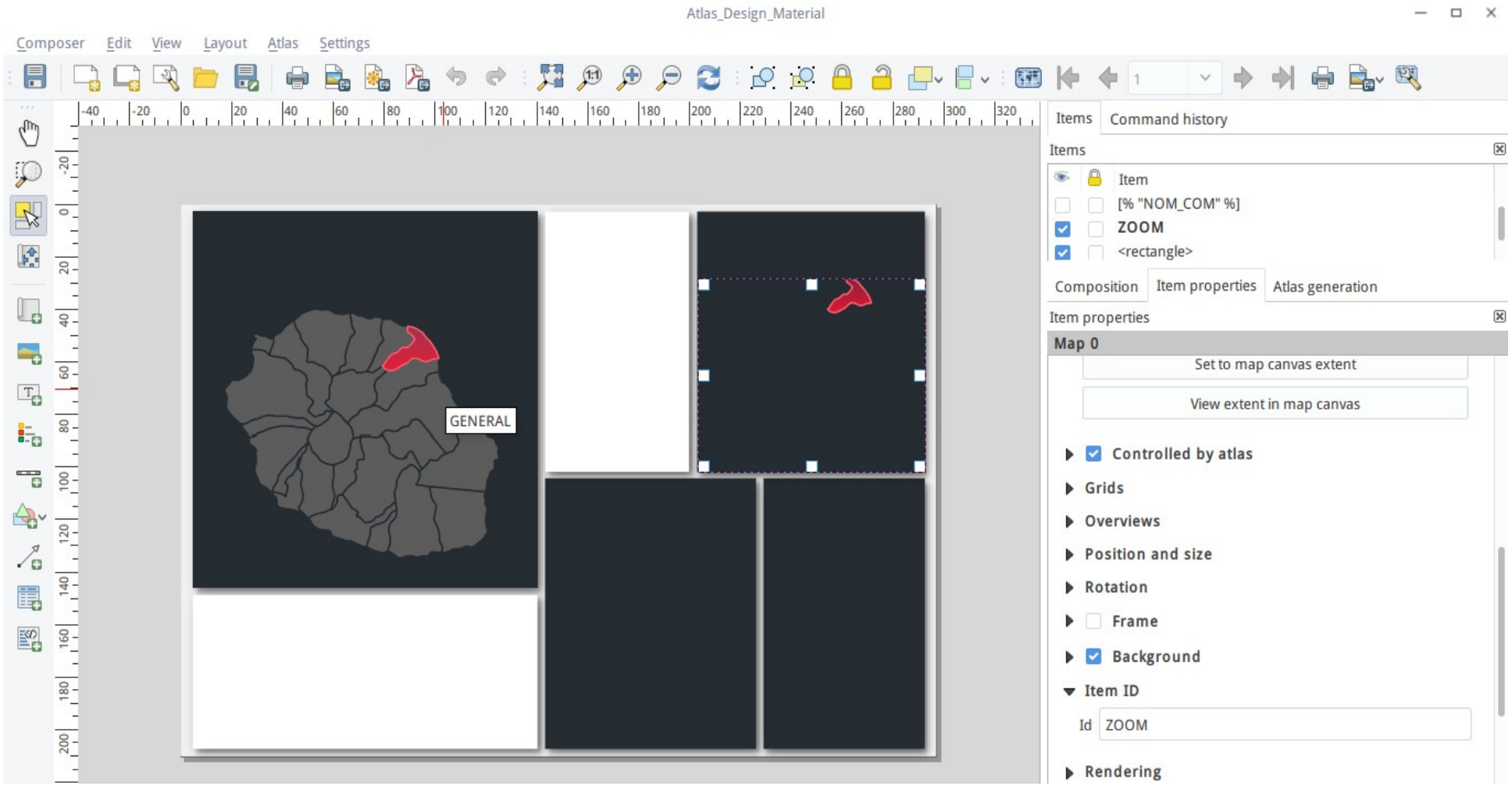
PART 3 – Map & Zoom



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.



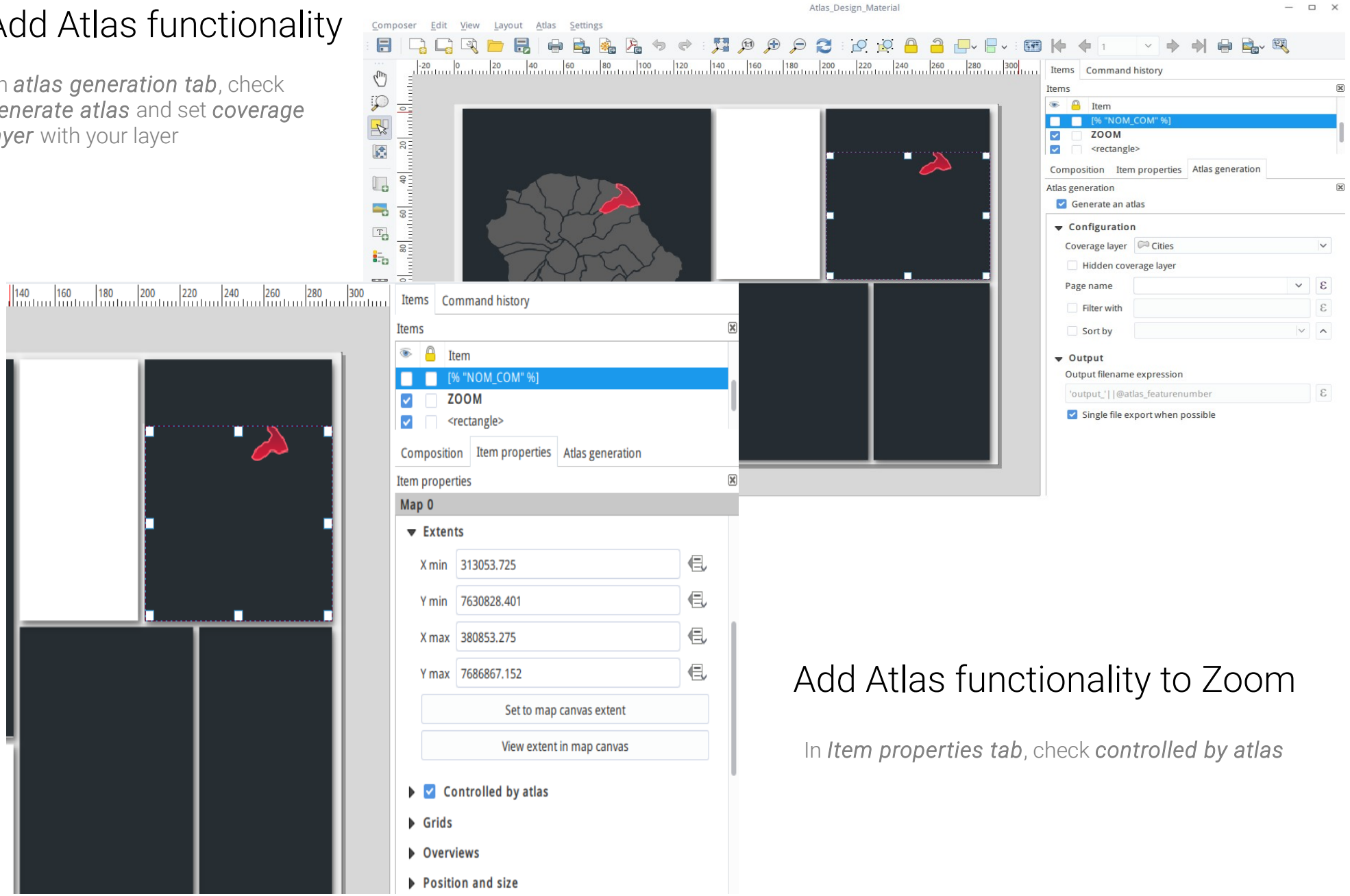
Add another map into the Zoom box

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.

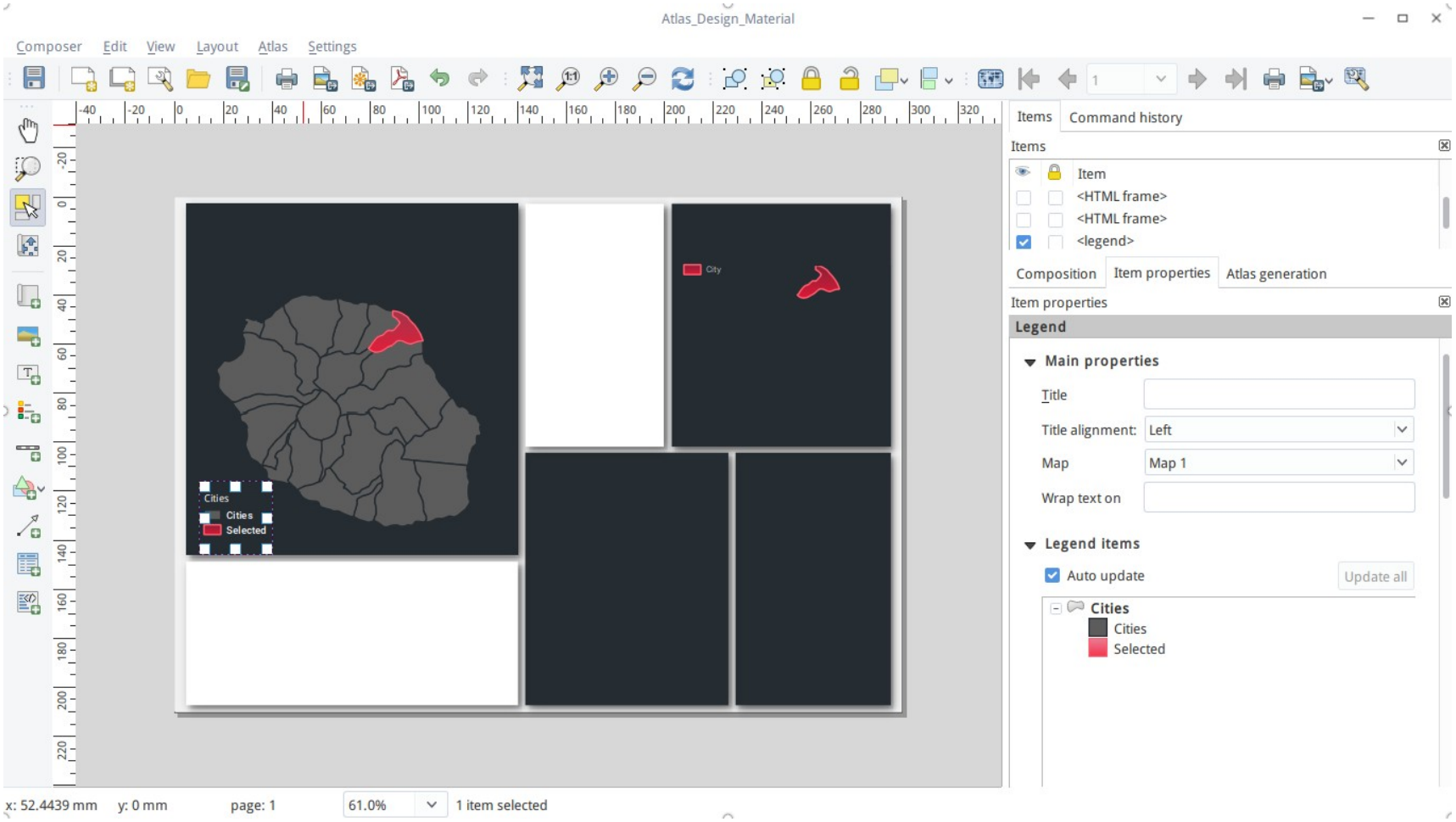
Add Atlas functionality

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*

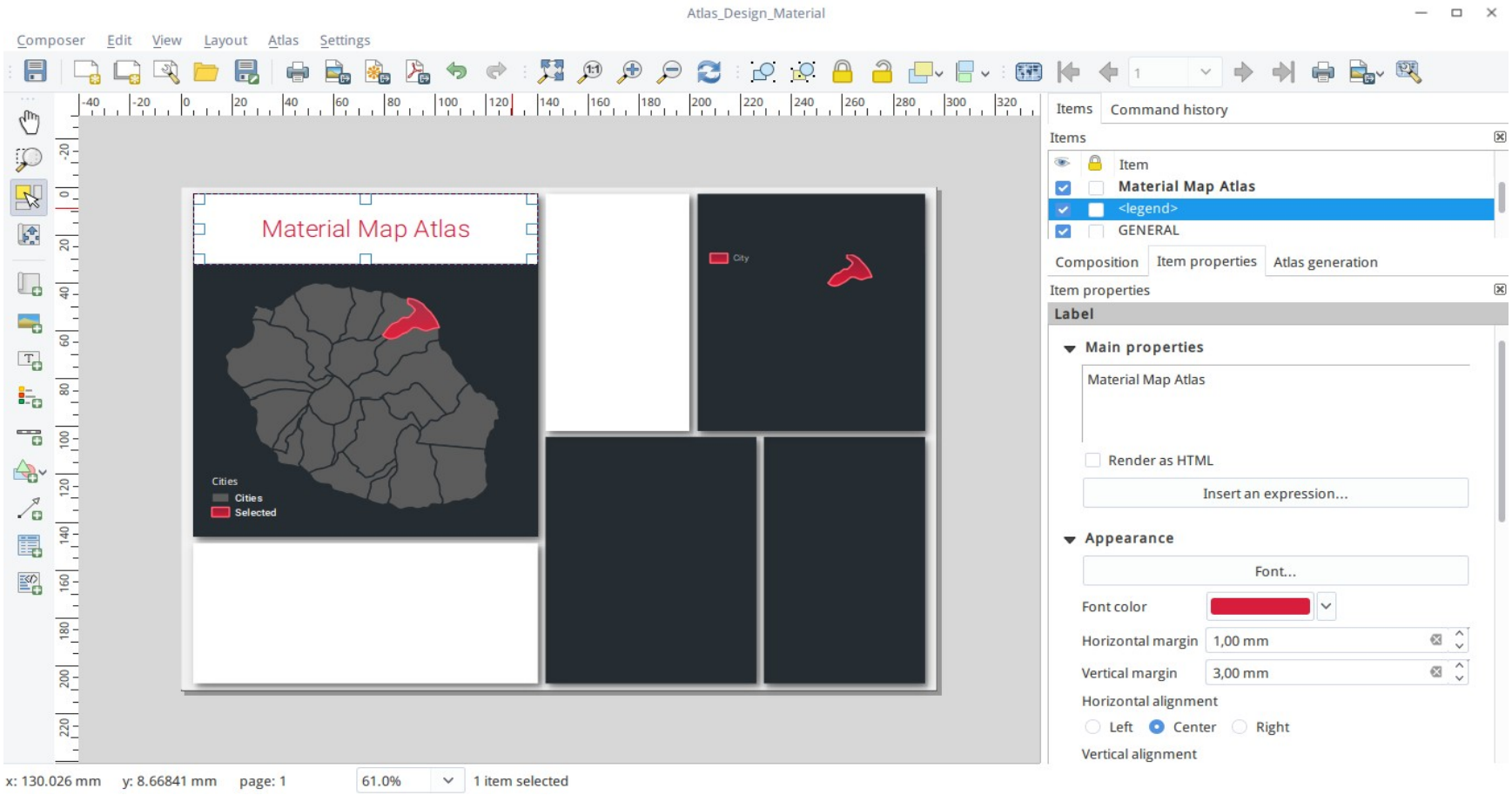


Add Legend

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.

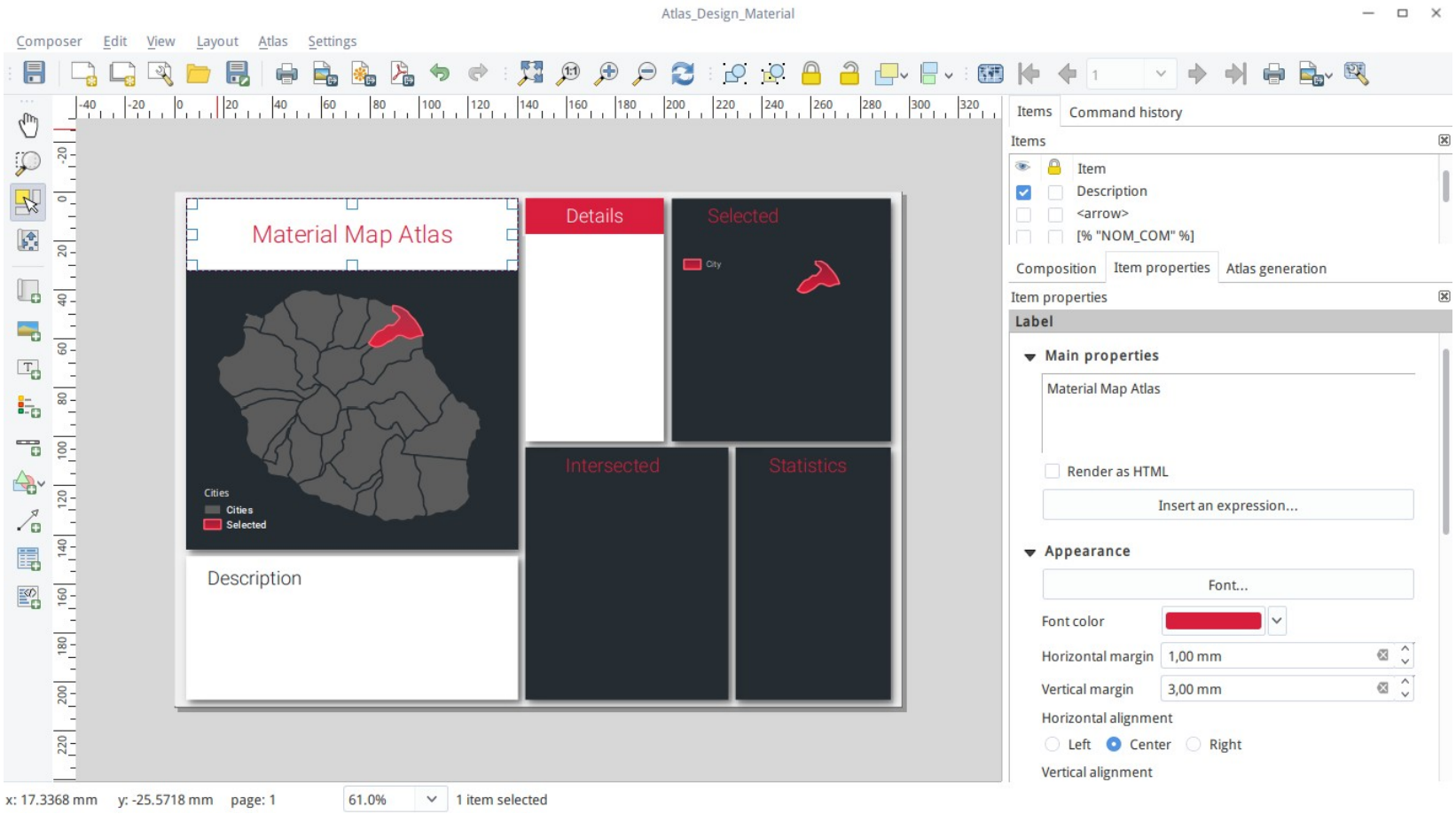
PART 4 – Title & Text



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 an center then set background to white.



Add other fixed titles

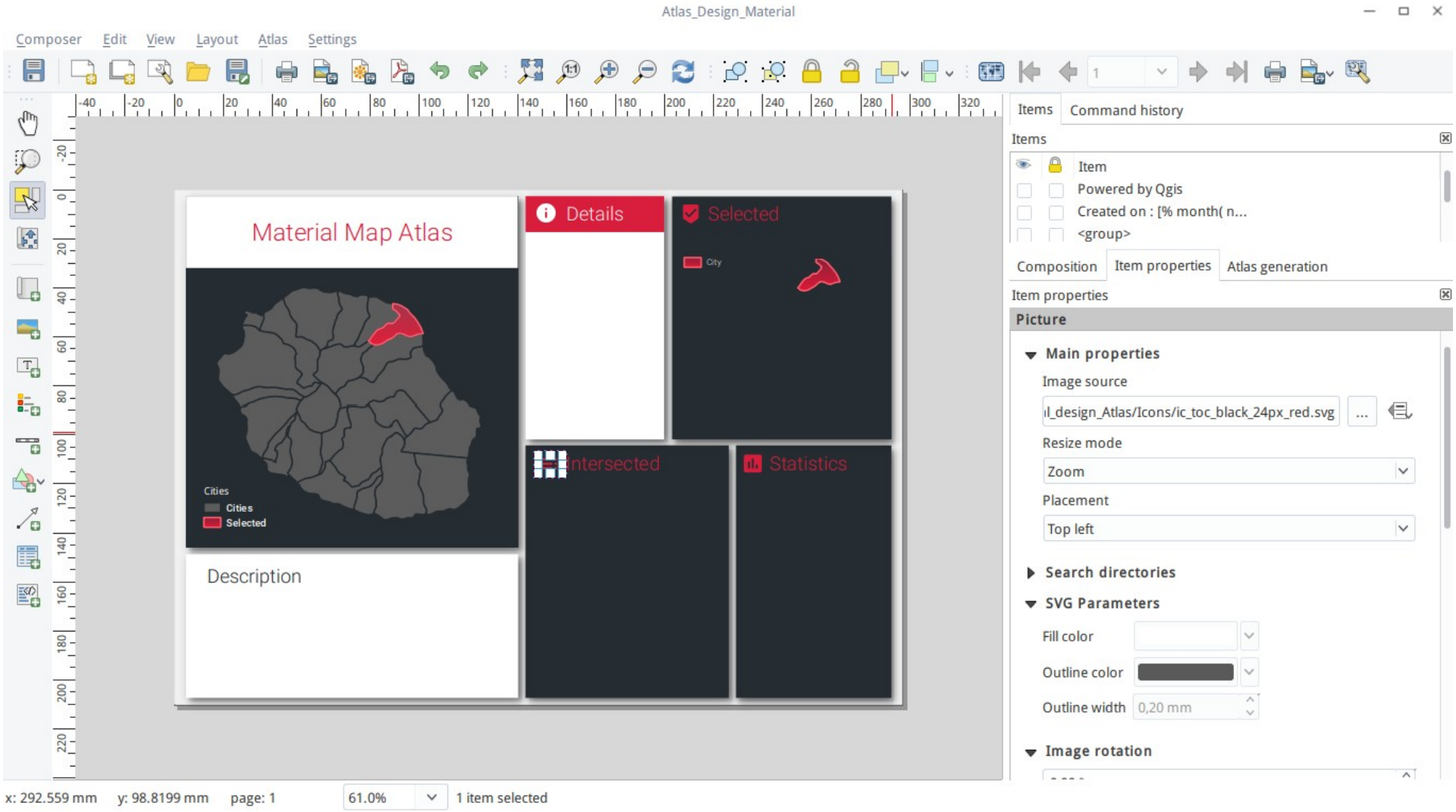
Add a fixed title with ***add text*** .

Set colors and background according to the boxes.

PART 5 – Icons

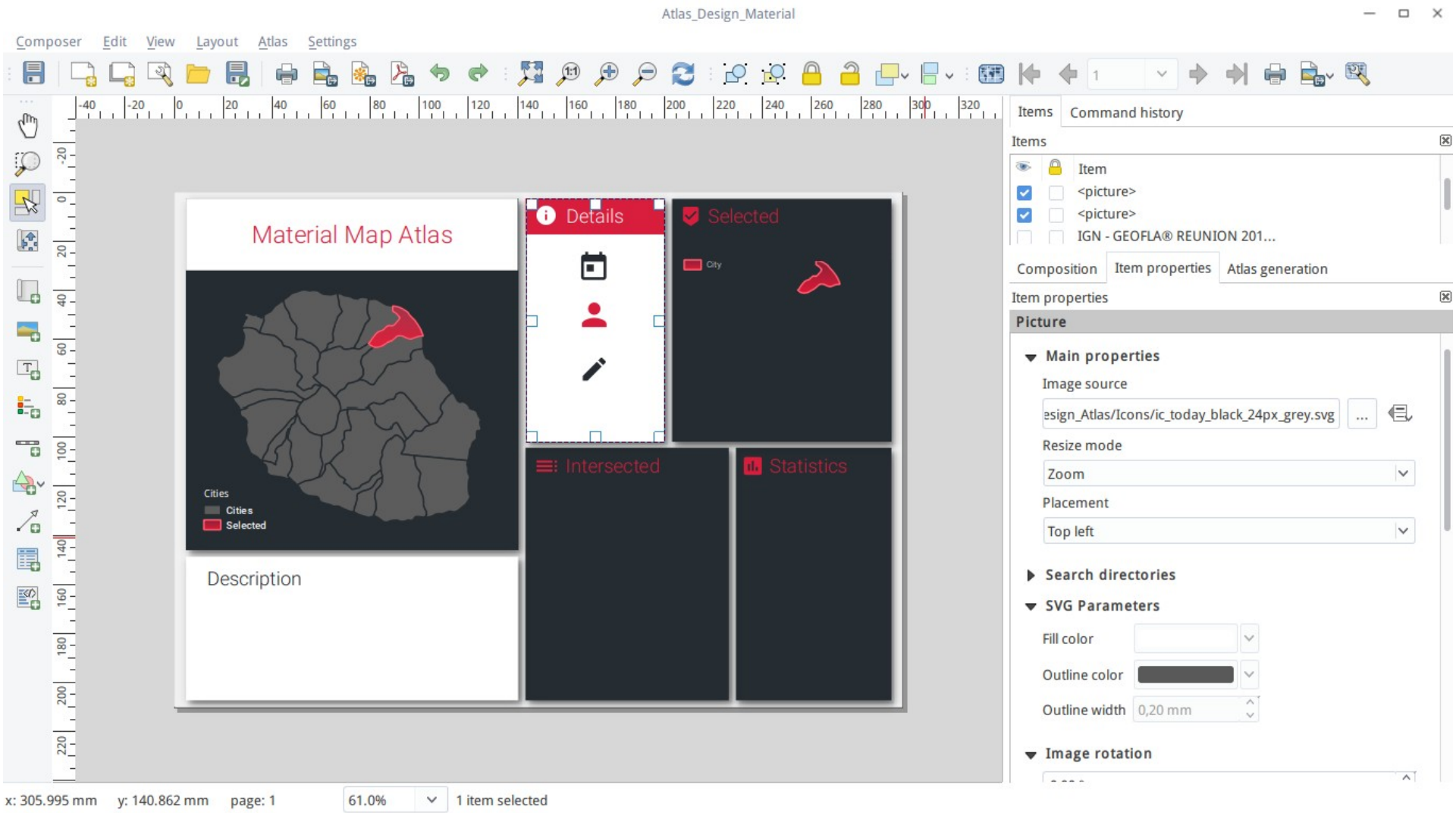
Add icons

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



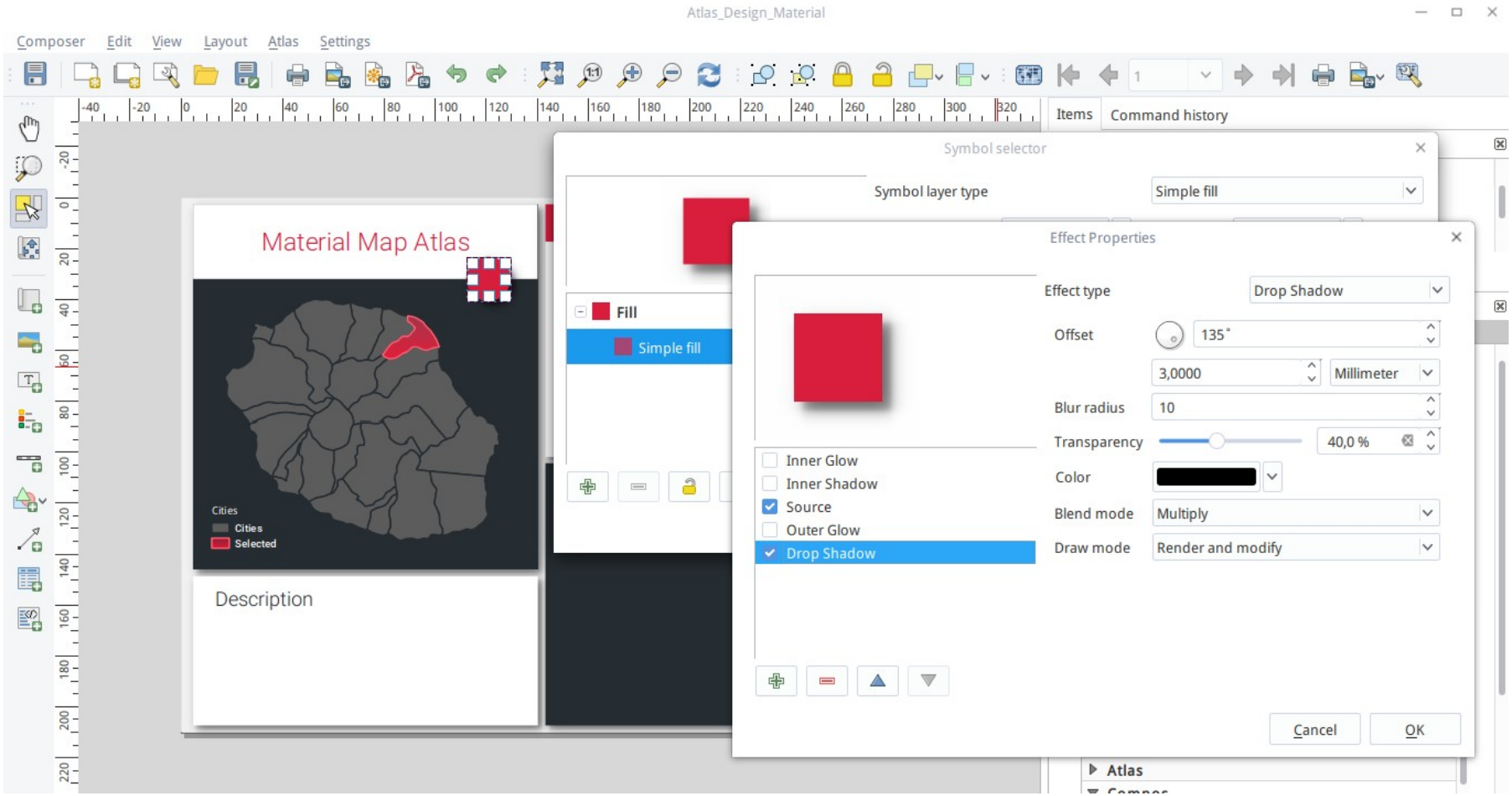
Add icons (continued)

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



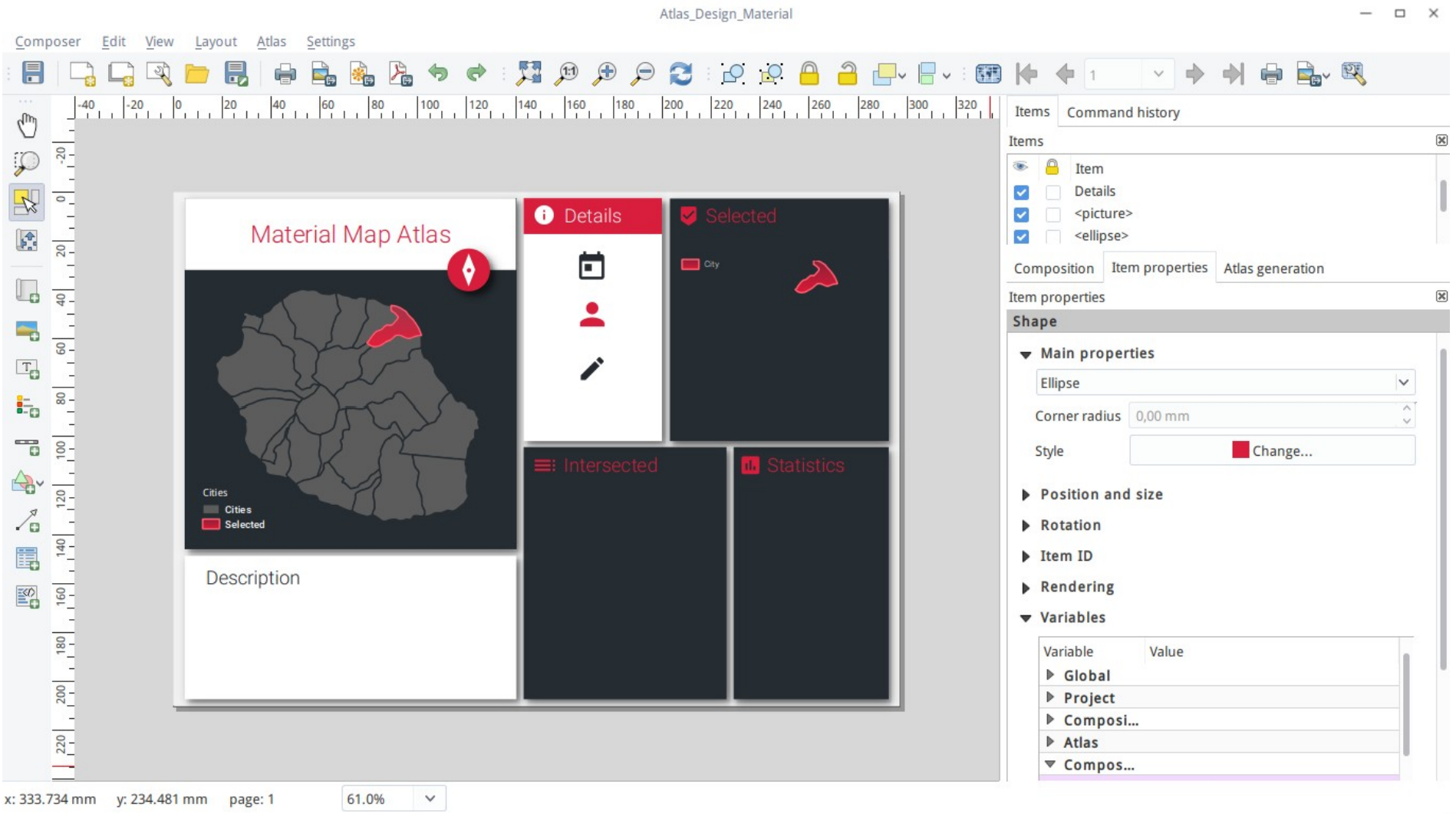
Add map icons

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



Add map icons (continued)

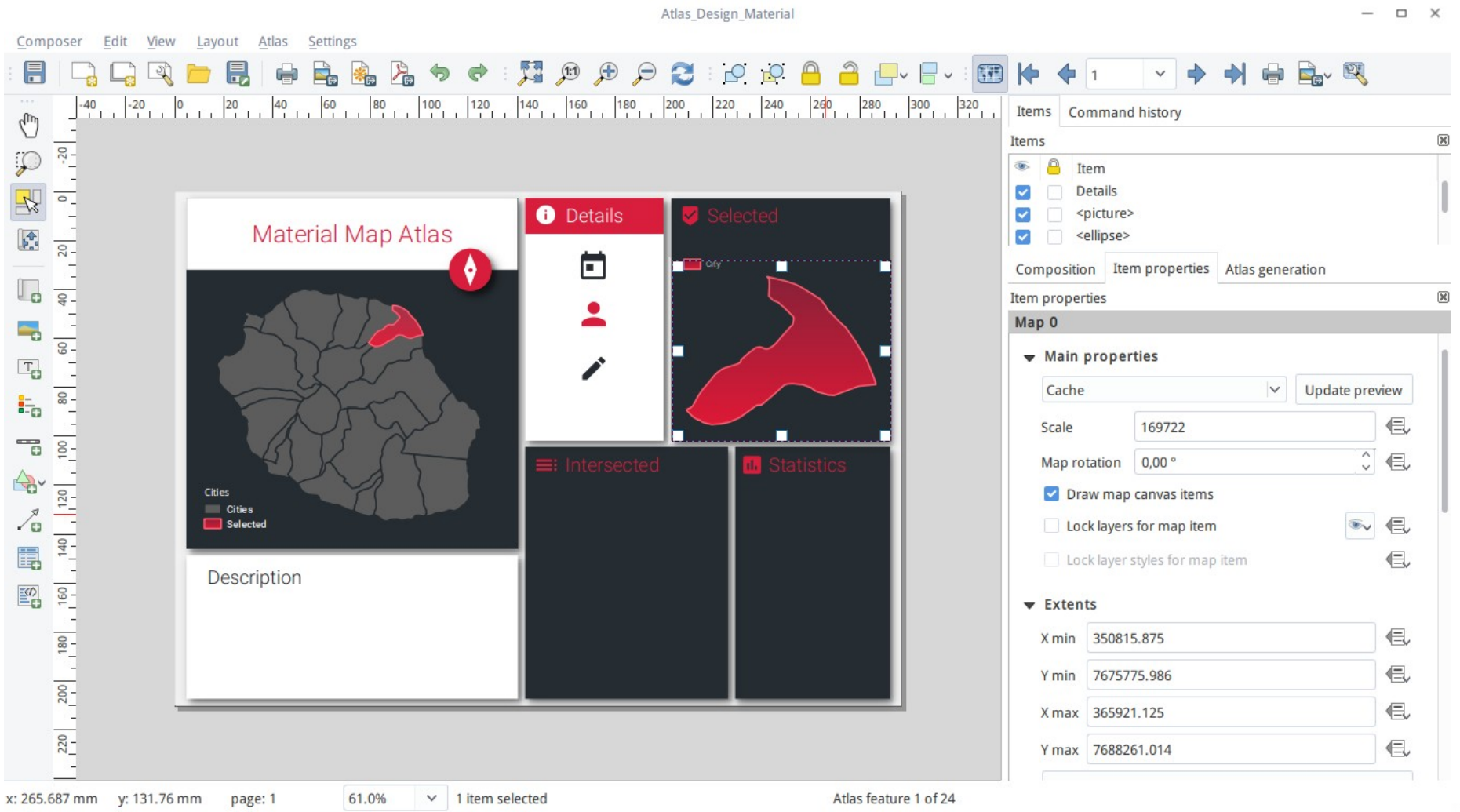
Add map icons with ***add image*** and put them on details card.
Get them aligned to center.



PART 6 – Dynamic Blocks

Activating atlas

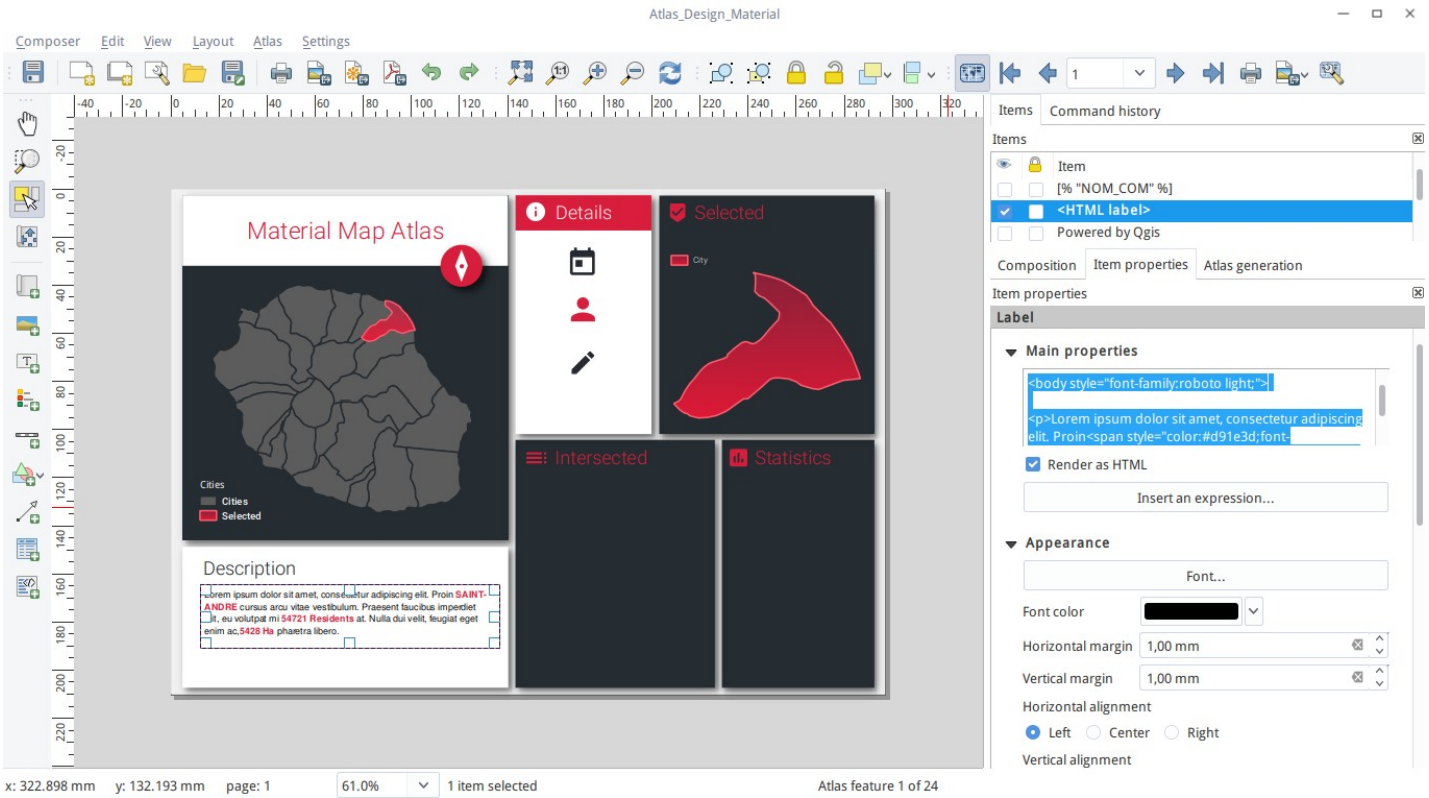
Now it's time to activate Atlas preview feature and see some things changing. Then we'll add some dynamic blocks to see them change in real-time.
Click on Atlas preview on atlas toolbar.



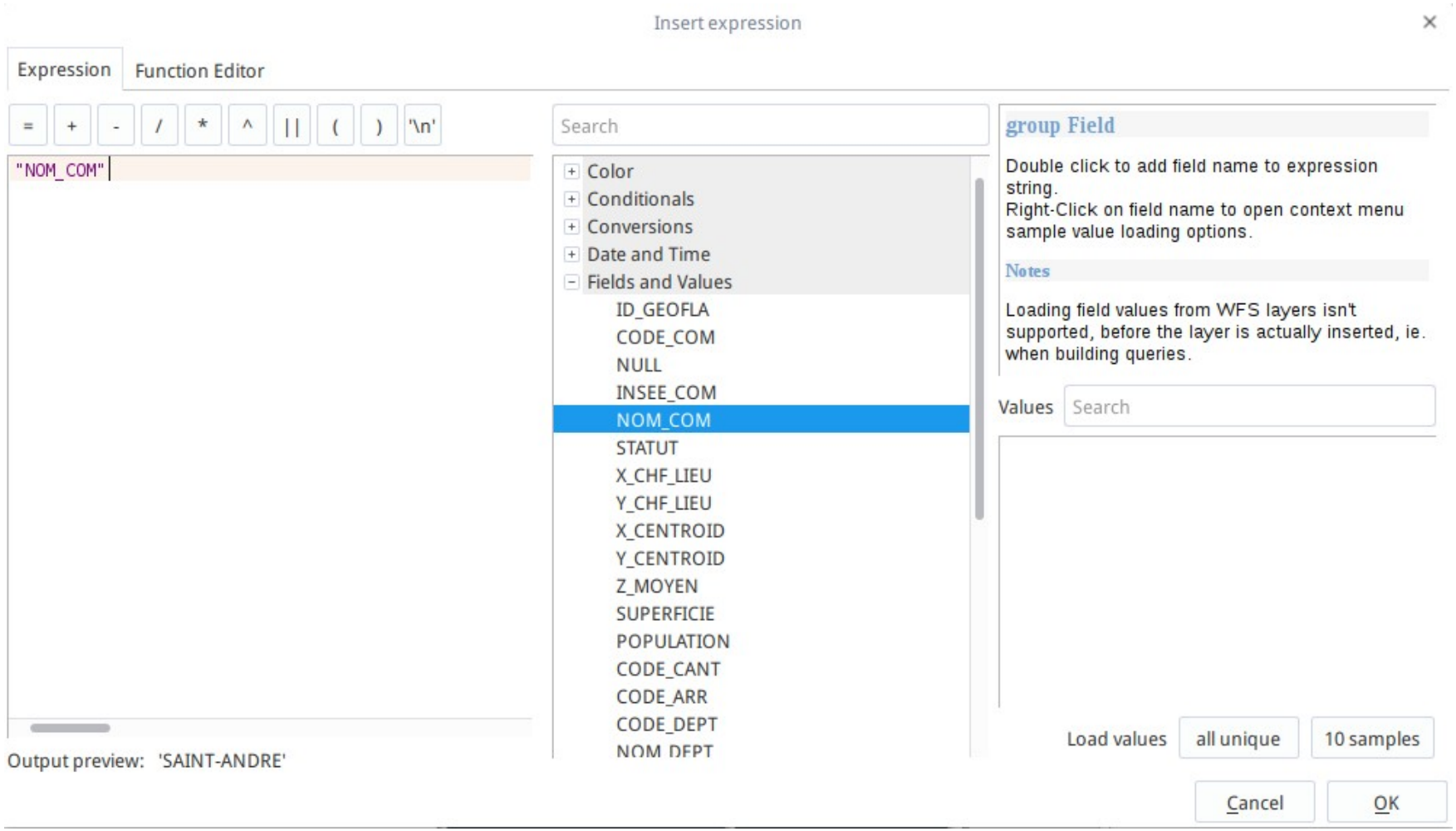
Add description

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 :

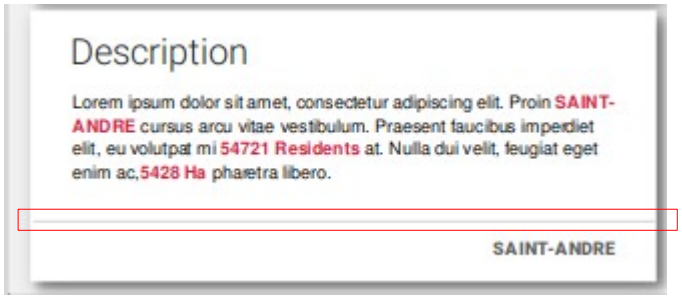
```
<body style="font-family:roboto light;">
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin<span style="color:#d91e3d;font-weight:bold;">
[% "NOM_COM" %]</span> cursus arcu vitae vestibulum. Praesent faucibus imperdiet elit, eu volutpat mi <span
style="color:#d91e3d;font-weight:bold;">[% "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>
```

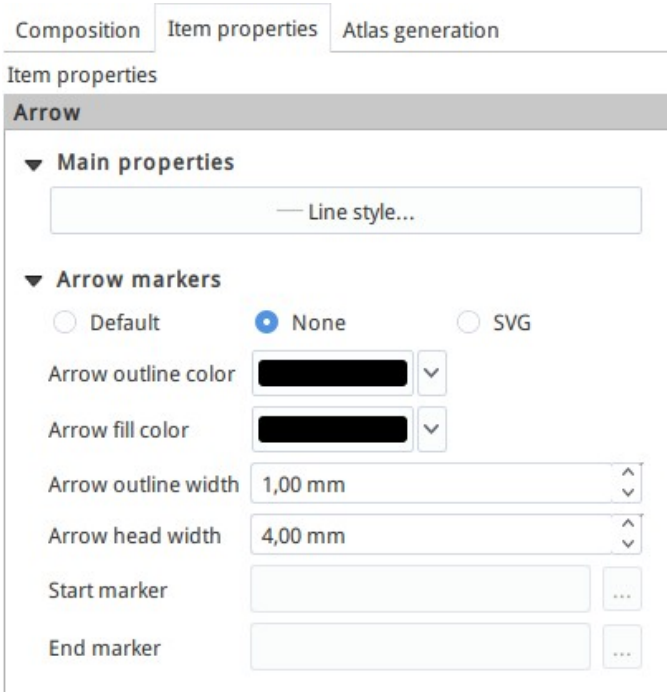


To insert Qgis expressions like [% "NOM_COM" %] in your text just click on Insert an expression and then in *Fields an Values* double-click on NOM_COM (or your attribute name if different) and then *OK*



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





Then just add a text with Qgis expression, in example just [% "NOM_COM" %]

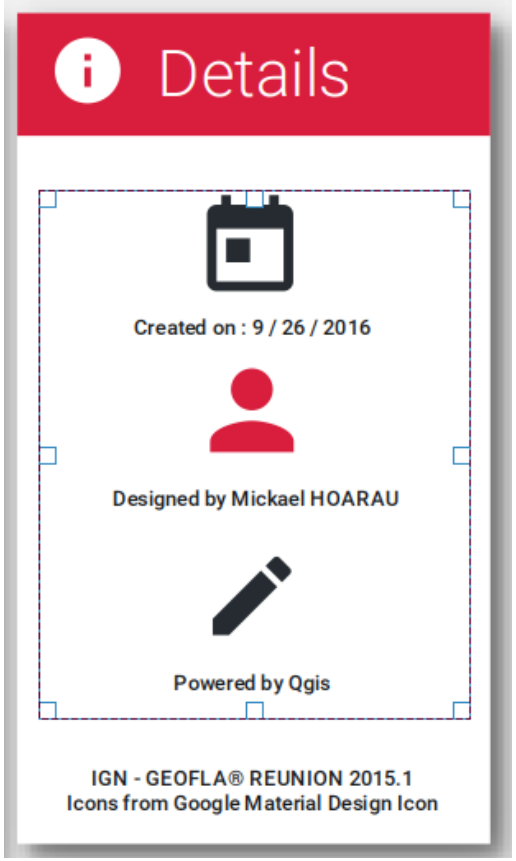
Add details

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')%]
```

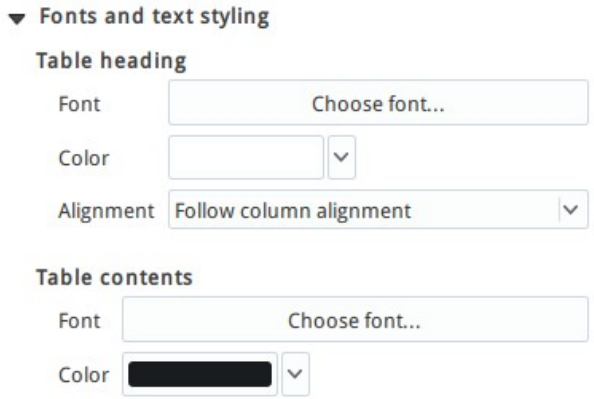
And for the others add the text corresponding to your project.



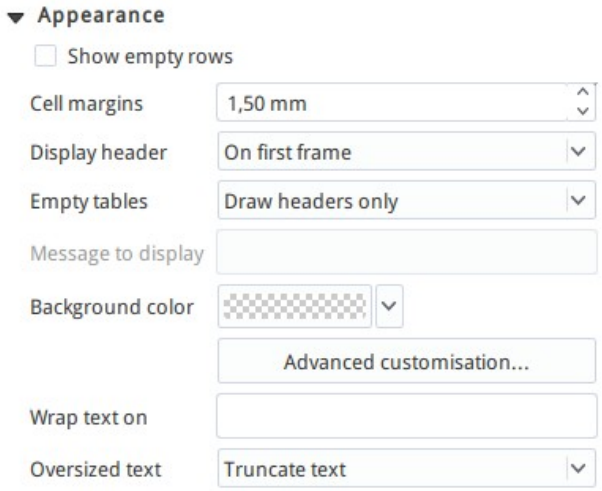
Add attribute table

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

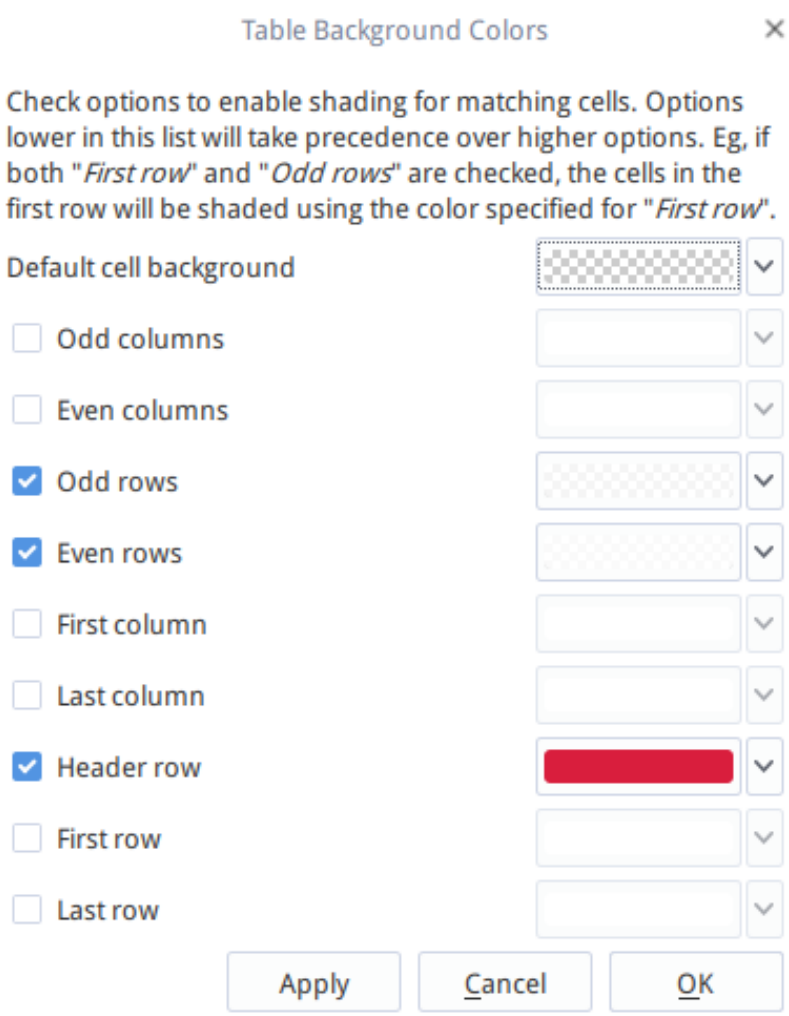
- Set *Maximum rows* corresponding to your layer (Here at least 30)
- Check *Show only features intersecting atlas feature*
- Uncheck *Show grid*
- Use google roboto fonts
- Set fonts like this :



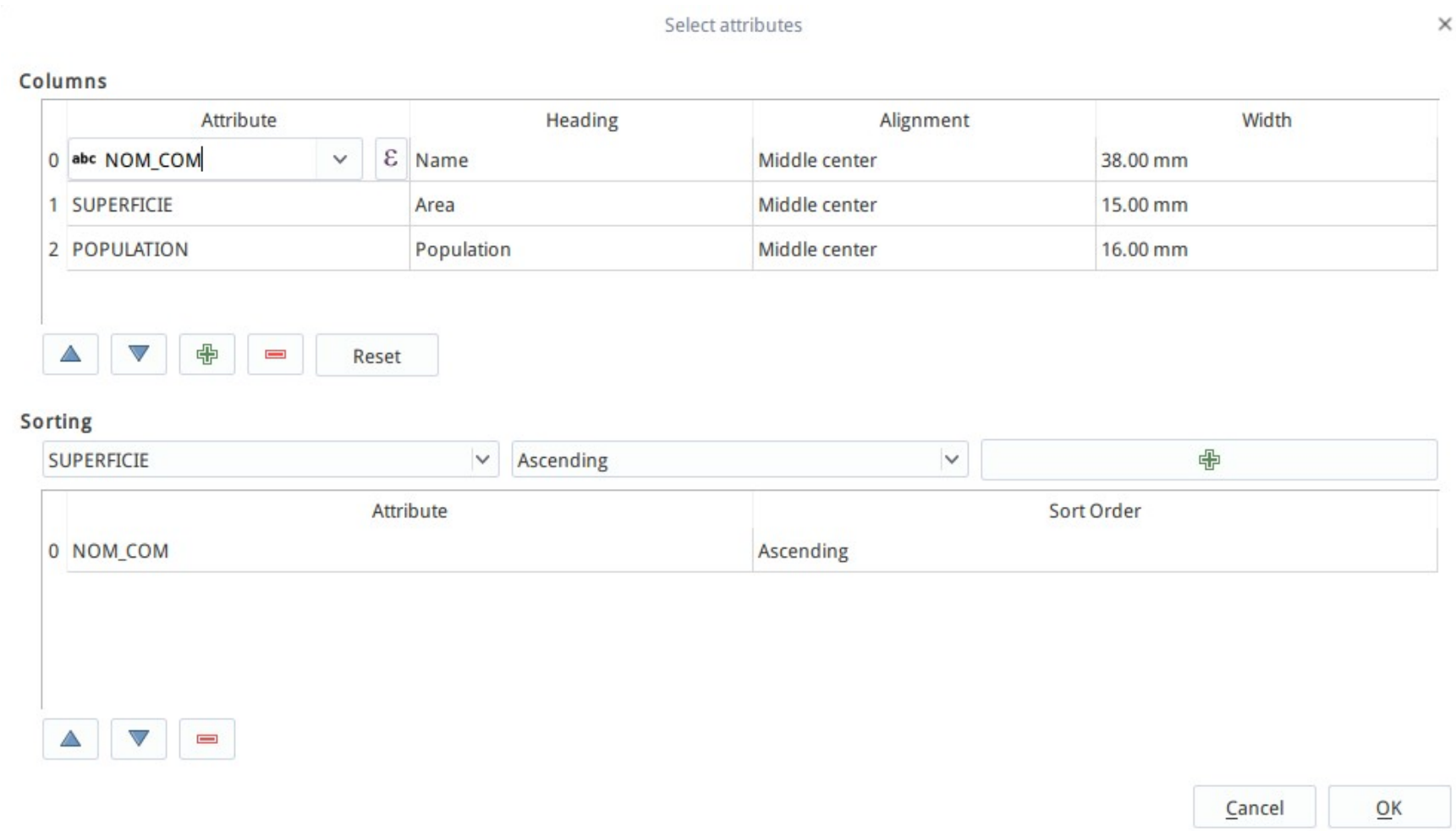
- Appearance settings like this :



- Use these color settings :



- And set attributes like this :



Add Statistics

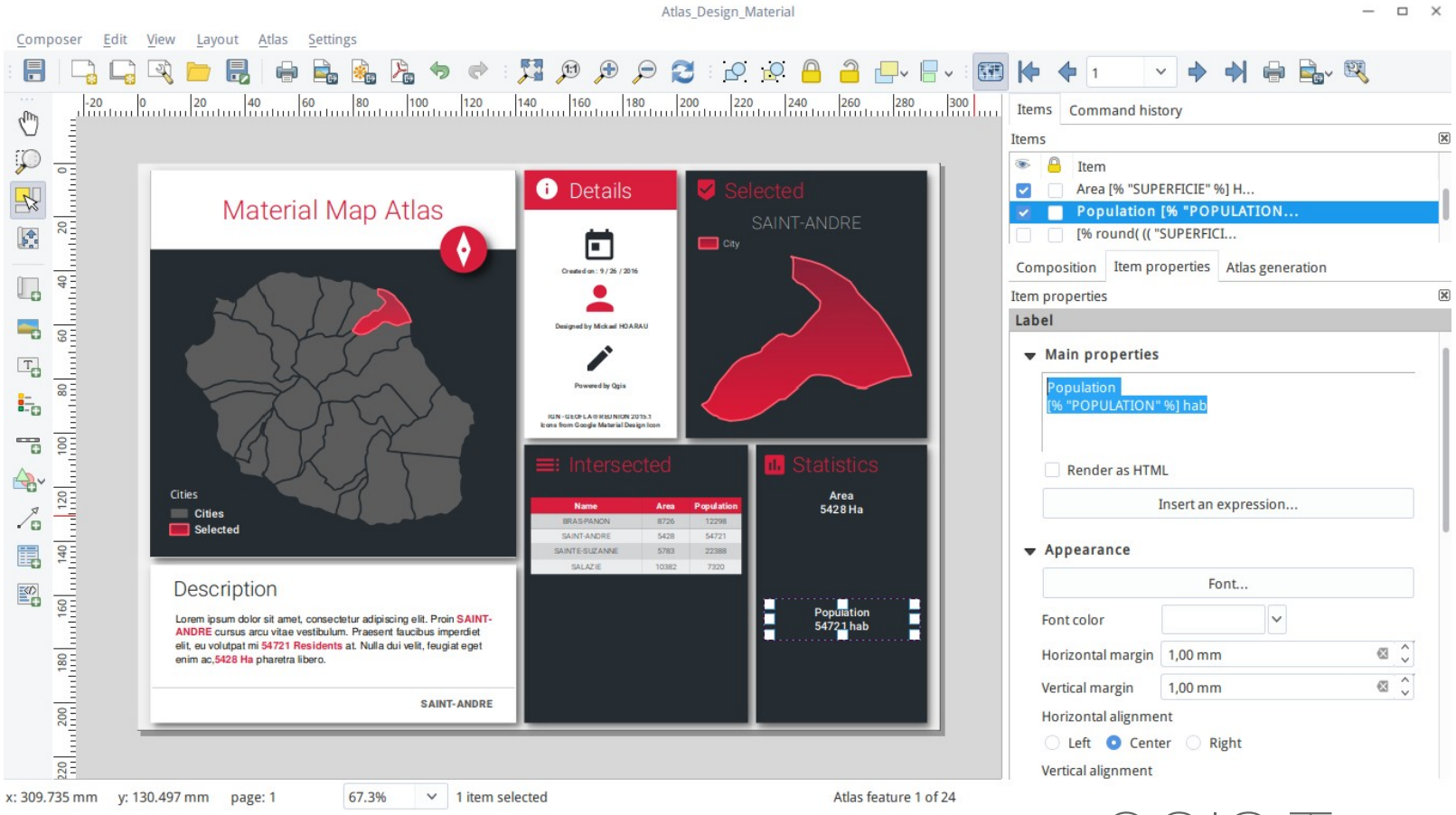
First, add some html labels with ***add HTML frame*** with for example these codes to adapt to your project :

```
Area
```

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

```
Population
```

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



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 :

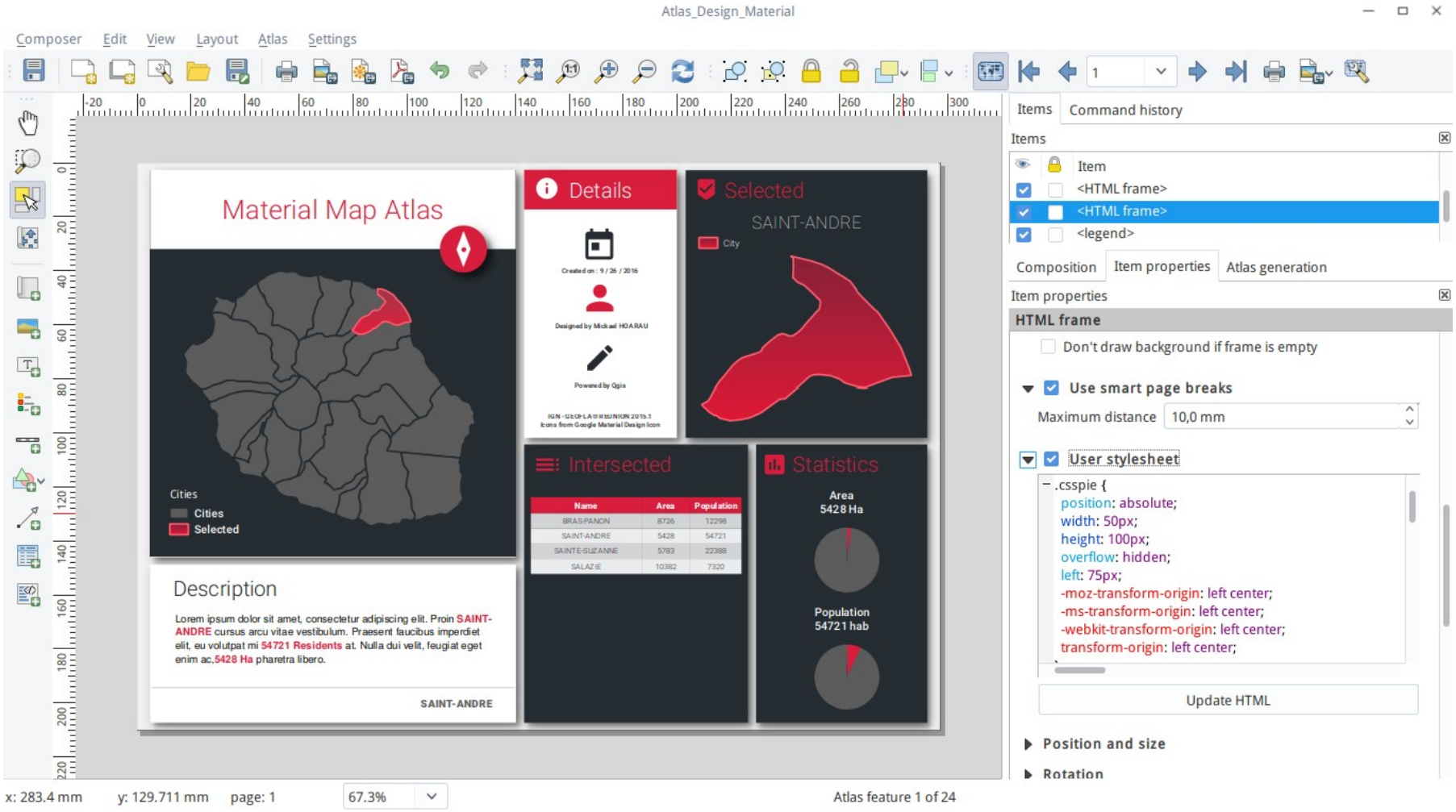
```
<div class="demo-wrapper">
<div class="csspie" data-start="0" data-value="[% to_int(  ((  "POPULATION" *100 )  /  833944  ) )
%]"></div>
<div class="csspie big" data-start="[% to_int(  ((  "POPULATION" *100 )  /  833944  ) )%]" data-
value="[% (100 - to_int(  ((  "POPULATION" *100 )  /  833944  )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



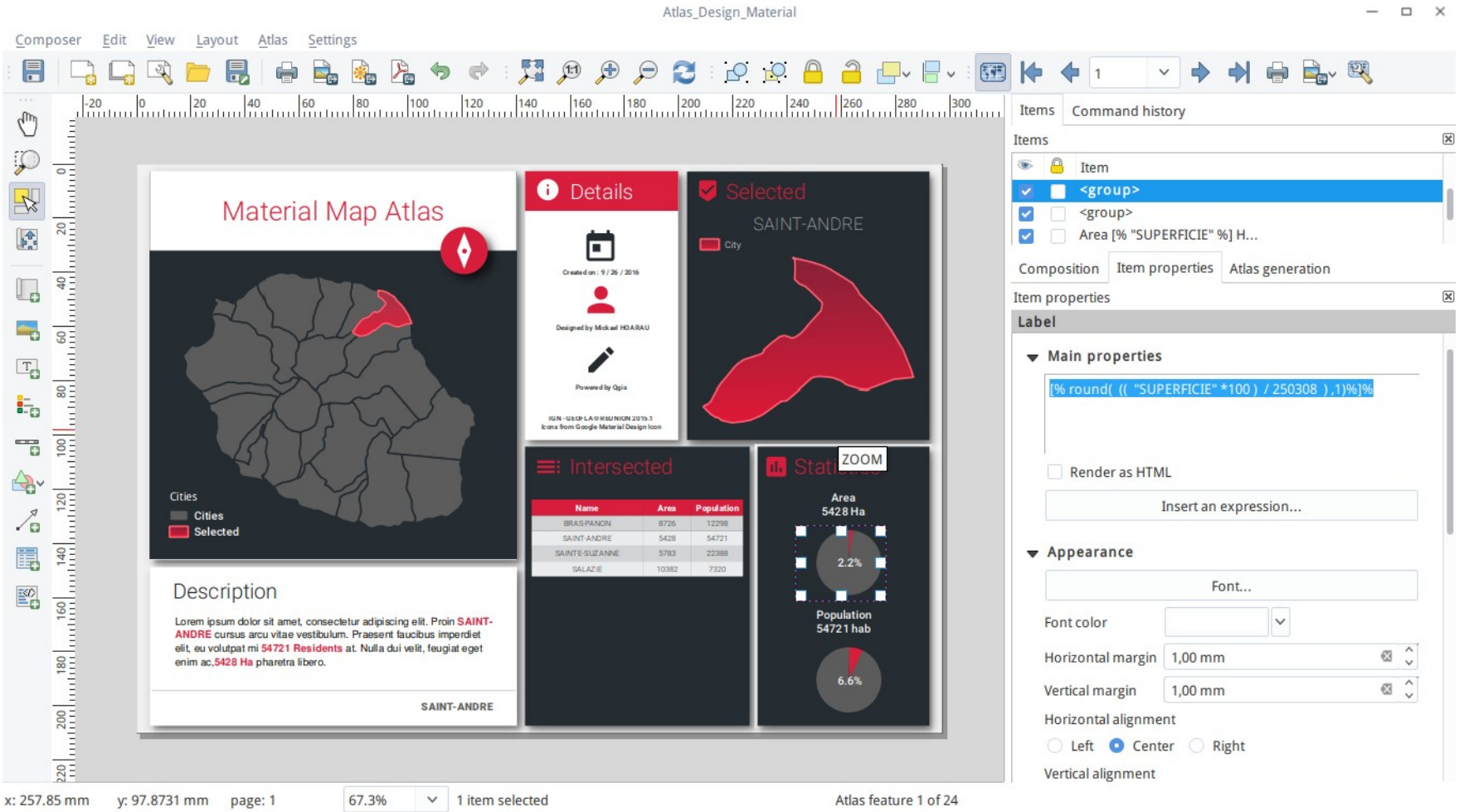
To finish add text labels over pie charts using Qgis expressions.

For area :

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

For population :

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



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