

How to convert an image to a clickable map

Fireside Chat

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qlik  LEAD WITH DATA™



Using images in Qlik Sense

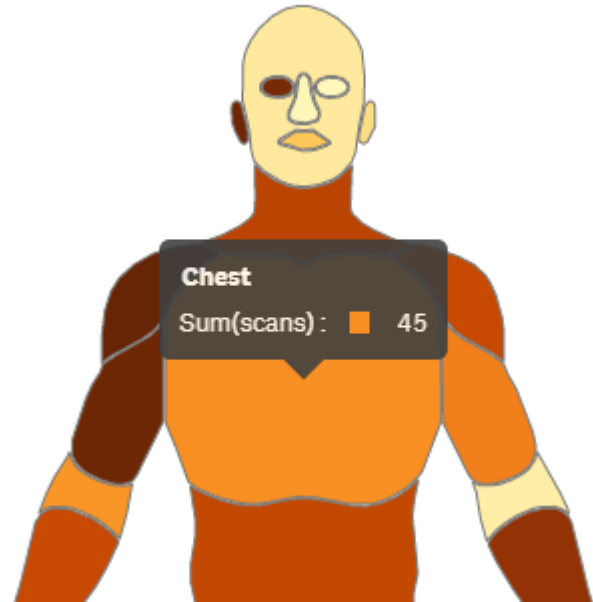
Converting arbitrary image to clickable and colorable map

Why?

Customer loves custom visualizations. A picture says more than a 1000 words. An interactive chart based on a picture says more 1000 x 1000 words.

How?

The map chart can do anything, it has more functions than any other Sense chart.



High level workflow

Using Qlik Sense, Qlik GeoAnalytics and open source tools

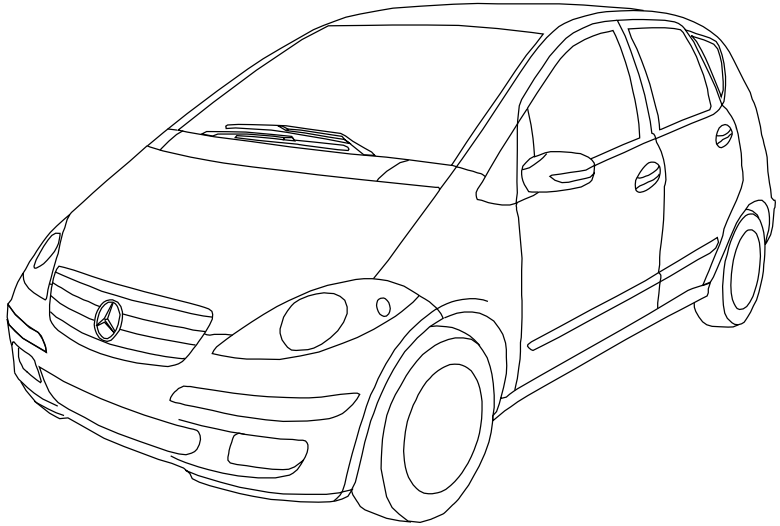
- Find a suitable image, the hardest part by far.
- Bucket fill areas, I prefer Inkscape.
- Vectorize and Simplify, QGIS is useful.
- Load into Sense.
- Done!



Image

A stilistic line drawing is optimal

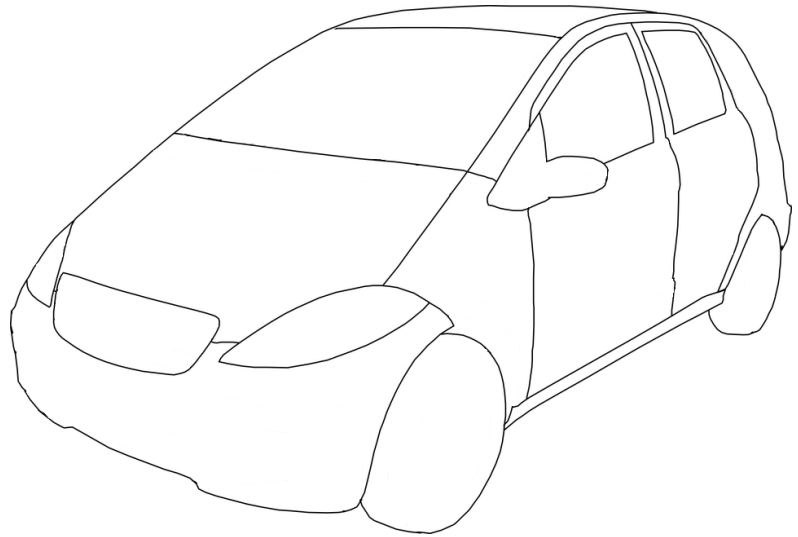
- Most images has way too many details to look good.
- Pruning most likely necessary.
- I used a drawing shared by OCAL from clker.com for this example
- <http://www.clker.com/clipart-15657.html#>



Pruning image

Removing unnecessary details

- Load in your favorite image editor (Paint, Photoshop, Gimp)
- Remove redundant lines
- Try create large chunks, will look clearer later when rendered.
- Export as PNG



Bucket fill

Using lines as boundaries

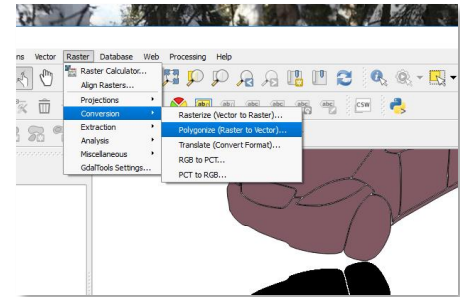
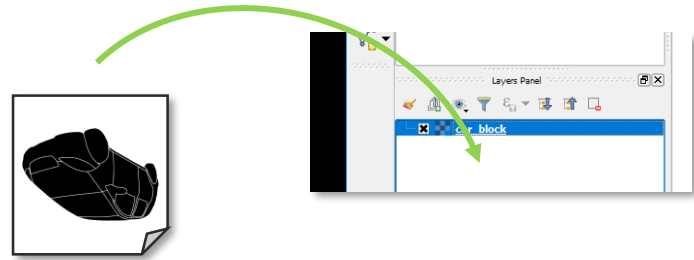
- Load in favorite draw tool, I use Inkscape
- Flip vertical, easier to do it now than later
- Use image as mask, bucket fill area by area.
- Remove the image
- Export as PNG



Vectorize

Convert to objects from image

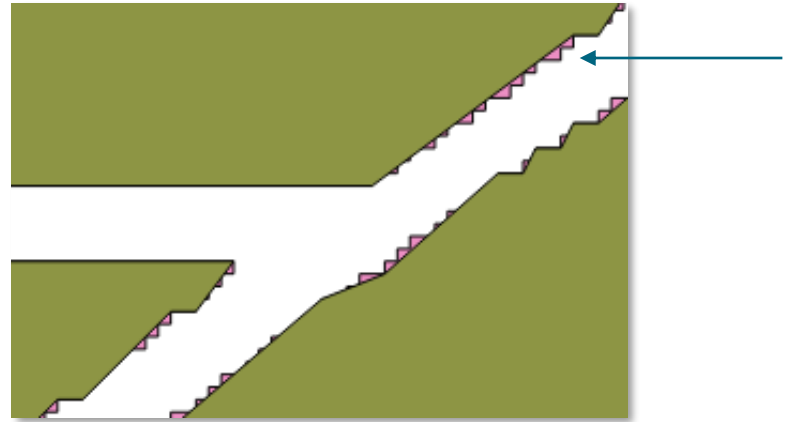
- Load in favorite GIS editor, I like QGIS. Drag image to Layers panel.
- Choose coordinate system EPSG:3857, other can work too.
- Vectorize
(Raster → Conversion → Polygonize)



Clean up

The objects are too "jagged", let's simplify

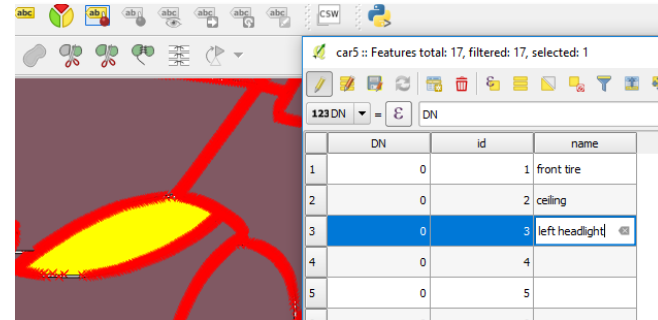
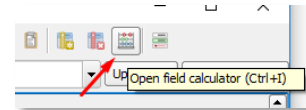
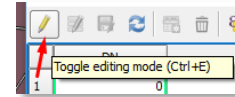
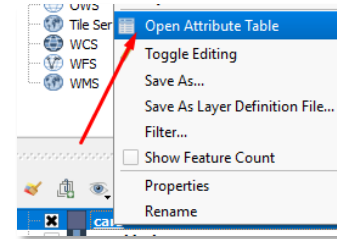
- Continue in QGIS
- Simplify
(Vector → Geometry Tools → Simplify)
- Tolerance 2.0 was ok for my image.



Add attributes

Setting id and adding names, continue in QGIS

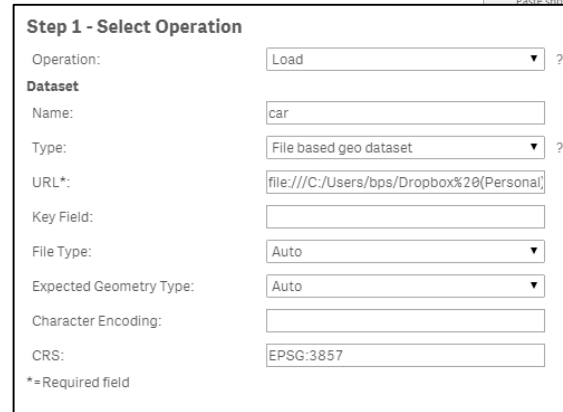
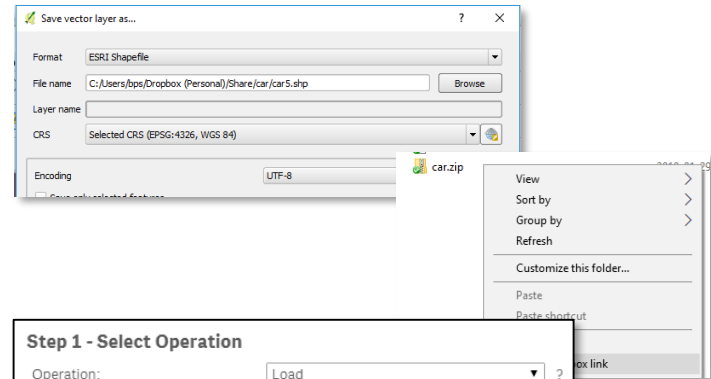
- Continue in QGIS
- "Open Attribute table".
- Switch to edit mode.
- Select all rows (Ctrl-a)
- "Open field calculator"
- Add field "id" integer, formula "rownum".
- Add new field name, string, 100 chrs.
- Go row by row, fill in name



Load into Qlik Sense

Export the layer and load into Sense with GeoAnalytics

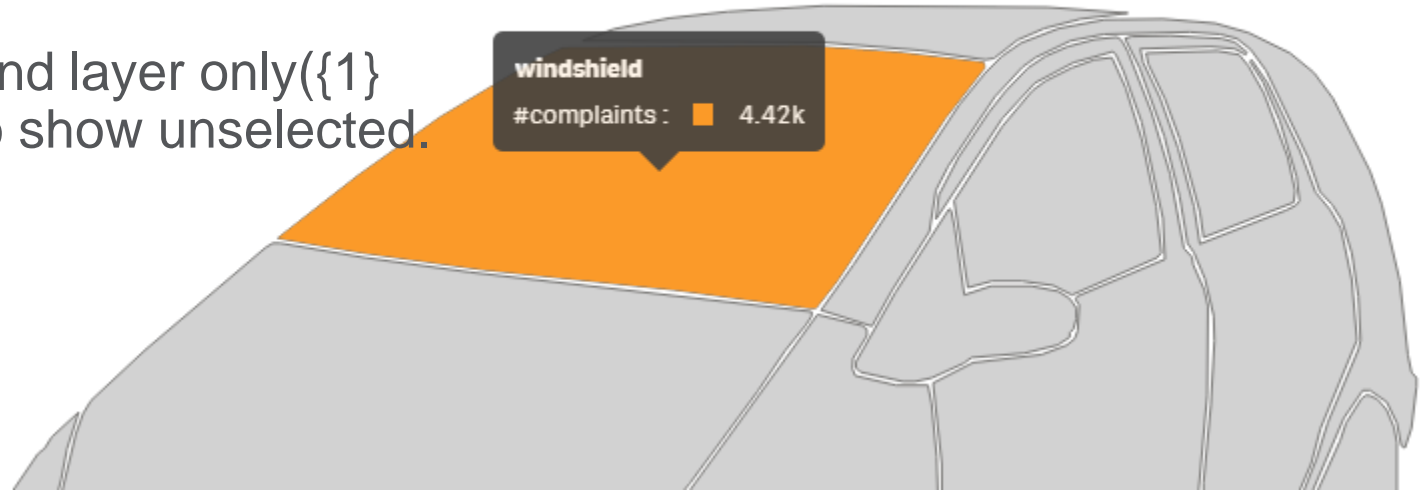
- Save as shapefile in QGIS
- Store in dropbox folder, zip files together (local file requires QGA Plus).
- Get shareable link, replace www with dl
- QGA Connector "Load"
- (Export to KML in QGIS is an option, QGA not required but then all attributes are lost...)



Build app in Sense

Use data loaded

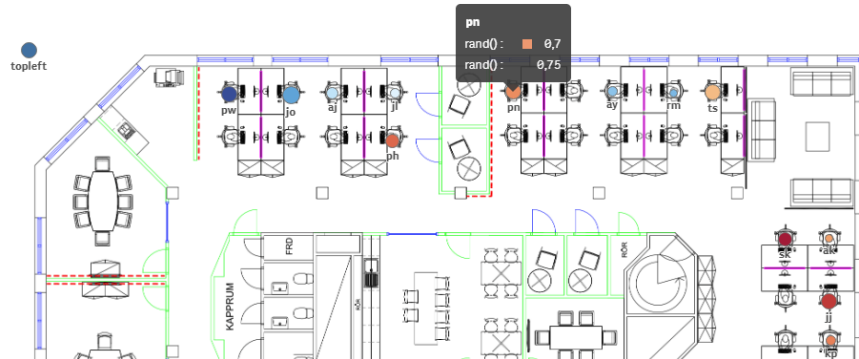
- Add area layer, dimension: name, Location field: Geometry
- Using Name as dimension makes selection and popups readable.
- Make a second layer only({1} Geometry) to show unselected.



Other options

Alternative approaches

- Load CAD files, *if* the source is good enough...
- Convert from SVG to GeoJSON,
- Christof Schwarz TMS
<https://www.youtube.com/watch?v=4uWImNm95n8>,
<https://github.com/ChristofSchwarz/qs-GeoObject-BackgroundImg>
- Wait for Qlik Sense April 2019, plain image backdrop is coming



Links

To more information

- Qlik www.qlik.com
- Draw program www.inkscape.org
- GIS Editor www.qgis.org



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