Qlik Meetup Austria 5

Images with the Map Chart

2021-03-22

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Qlik LEAD WITH DATA

Agenda

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Overview

02 QLIK GEOANALYTICS
Basics

03 DEMO
Vectorized images

04 WORKSHOP
How to vectorize Images

How to build exciting dashboards?

Use of images

Criteria of a good dashboard

- Data
- Message
- Performance
- **Look**

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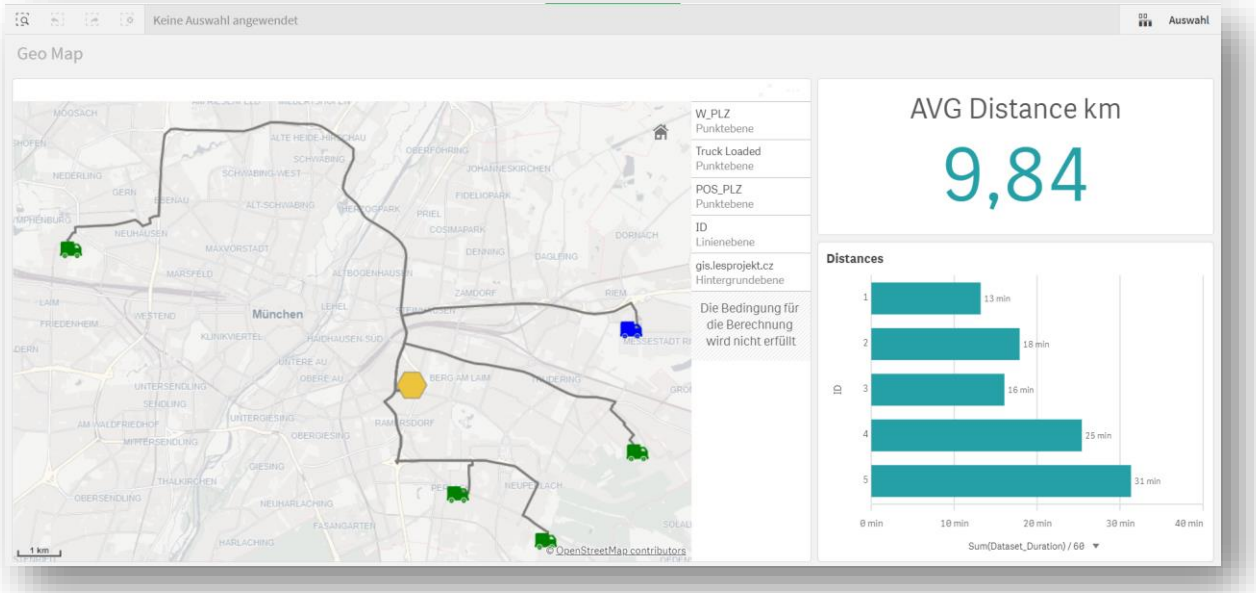

How to build exciting dashboards?

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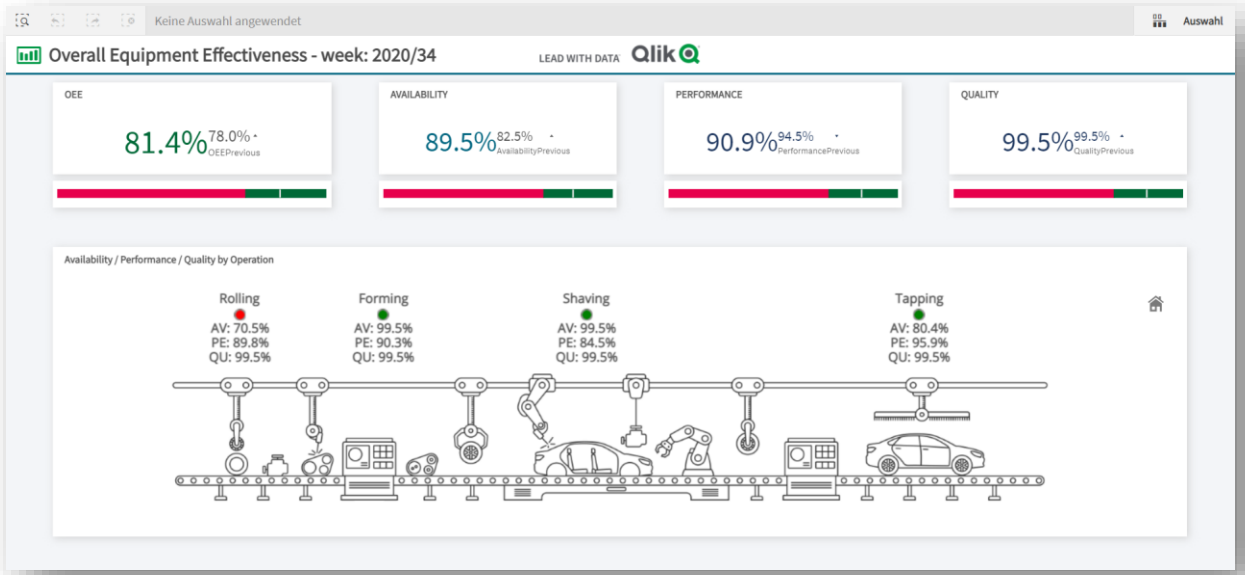
- **Look**



Qlik GeoAnalytics Overview

Value Added Products

Mapping vs. Geo-analysis

Mapping

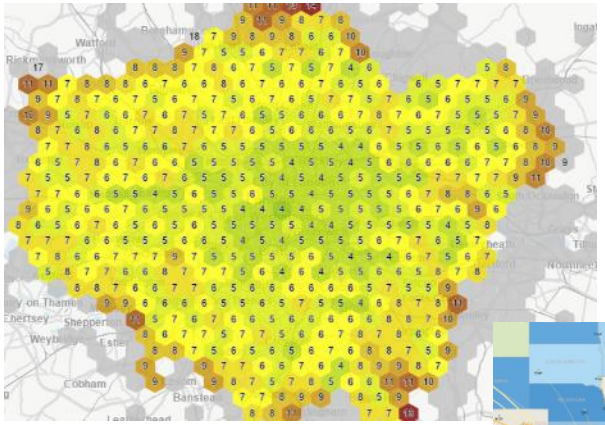
The visualization of location-based data

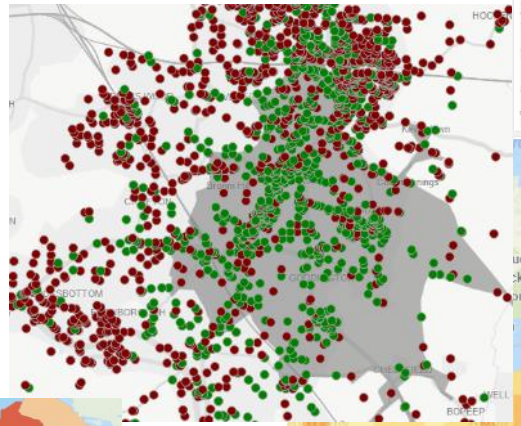
Geo-Analysis

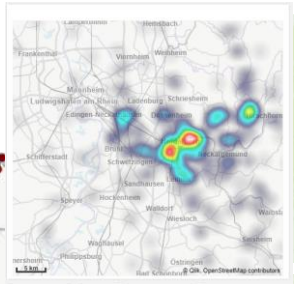
The analysis of location-based data

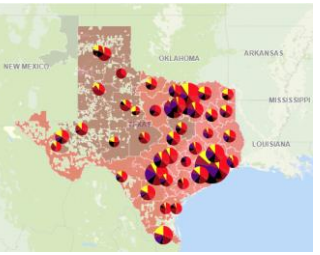
High performance, interactive mapping

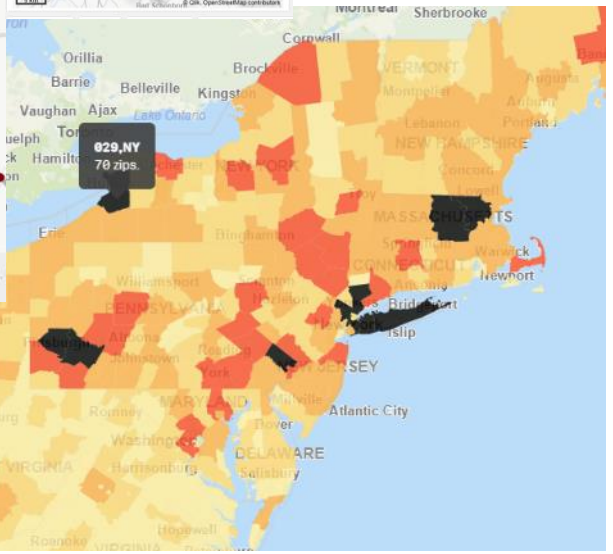
- Multiple geo and visualization layers
- Easily create many kinds of maps
- Integrated location library

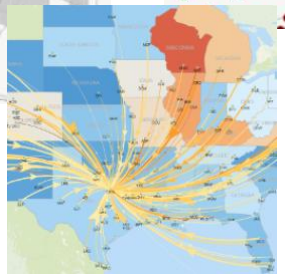






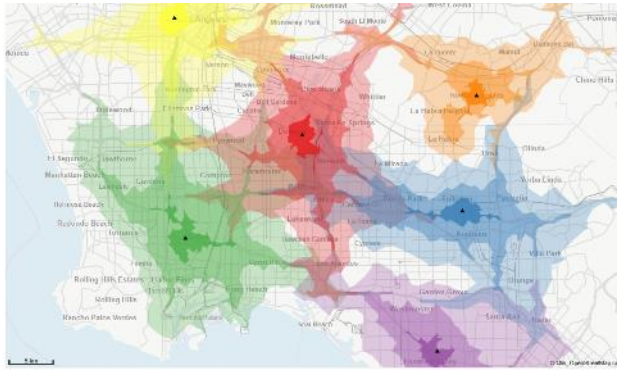




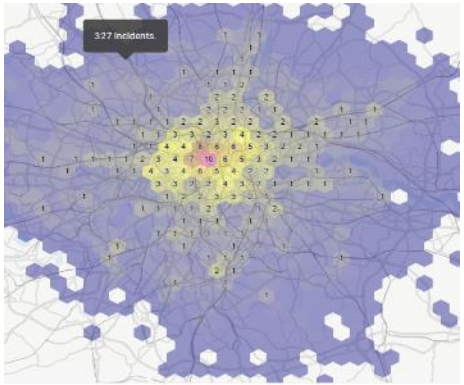


Geospatial operations

Geometric operations - Within, Intersects, Dissolve



Aggregating operations - Binning, Cluster



Route operations - TravelAreas, Closest

Mapping / GeoAnalytics Architecture

QS Standard

Maps, Geo data

Cloud

Geo Server

QGA Base

Maps, Geo data

Cloud

Maps, Geo data
+ Geo operations

Geo Server

20k rows/load
400 routes/load
50K lookups/load

QGA Enterprise

On-premise

Maps, Geo data
+ Geo operations

Geo Server

Unlimited rows/load
Unlimited routes/load
Unlimited lookups/load

GeoAnalytics Basics

GeoJson - Encoding geo data

Point

Coordinate:

[30, 10]

LineString

Coordinates:

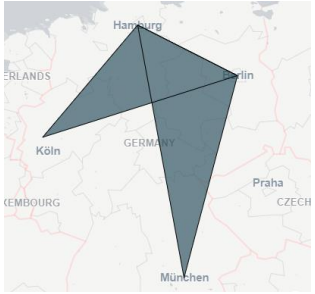
[[30, 10], [10, 30], [40, 40]]

Polygon

Coordinates:

[[30, 10], [40, 40], [20, 40], [10, 20], [30, 10]]

Polygons / Lines



Coordinates:

[

[[35, 10], [45, 45], [15, 40], [10, 20], [35, 10]],

[[20, 30], [35, 35], [30, 20], [20, 30]]

]

Coordinate system:

- Standard: WGS-84

Geo data sources

QGA Location DB

All features

#Points and areas

6.97M ▲ 15.16k Prev ver

Areas

#Areas

171.5k ▲ 54 Prev ver

Places

#Places

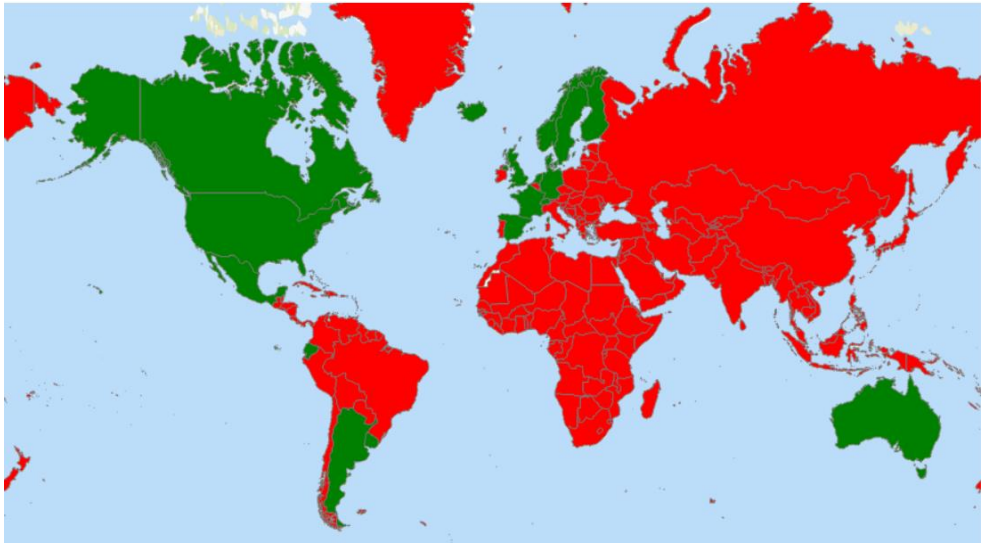
4.76M ▲ 11.22k Prev ver

Sources

#Sources

46

E.g. Coverage for ZIP Code area



Geo data sources

External data sets

- File - Formats:
  - GeoJSON
  - GML/WFS
  - ESRI Shape
  - ESRI JSON
  - DXF

Geo data sources

Qlik GeoCoding

- Address to point conversion
- Point to address conversion
- The service is provided through Qlik GeoAnalytics Connector

Qlik GeoAnalytics Operations

Geometric	Aggregations	Routing	Lookup
• Within • Intersect • Intersect Most • Simplify • Spatial Index • Dissolve	• Binning • Cluster	• Routing • Travel Area • Closest	• IP Lookup • Names Area Lookup • Names Point Lookup • Point to Address lookup* • Address Point Lookup* • Load

Qlik Sense build-in Geospatial functions

Geometric operations

Aggregation Functions

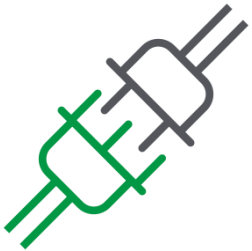
- GeoAggrGeometry
- GeoBoundingBox
- GeoCountVertex
- GeoInvProjectGeometry
- GeoProjectGeometry
- GeoReduceGeometry

Non-aggregation Functions

- GeoGetBoundingBox
- GeoGetPolygonCenter
- GeoMakePoint
- GeoProject

GeoAnalytics Installation

Qlik Sense Enterprise On Windows

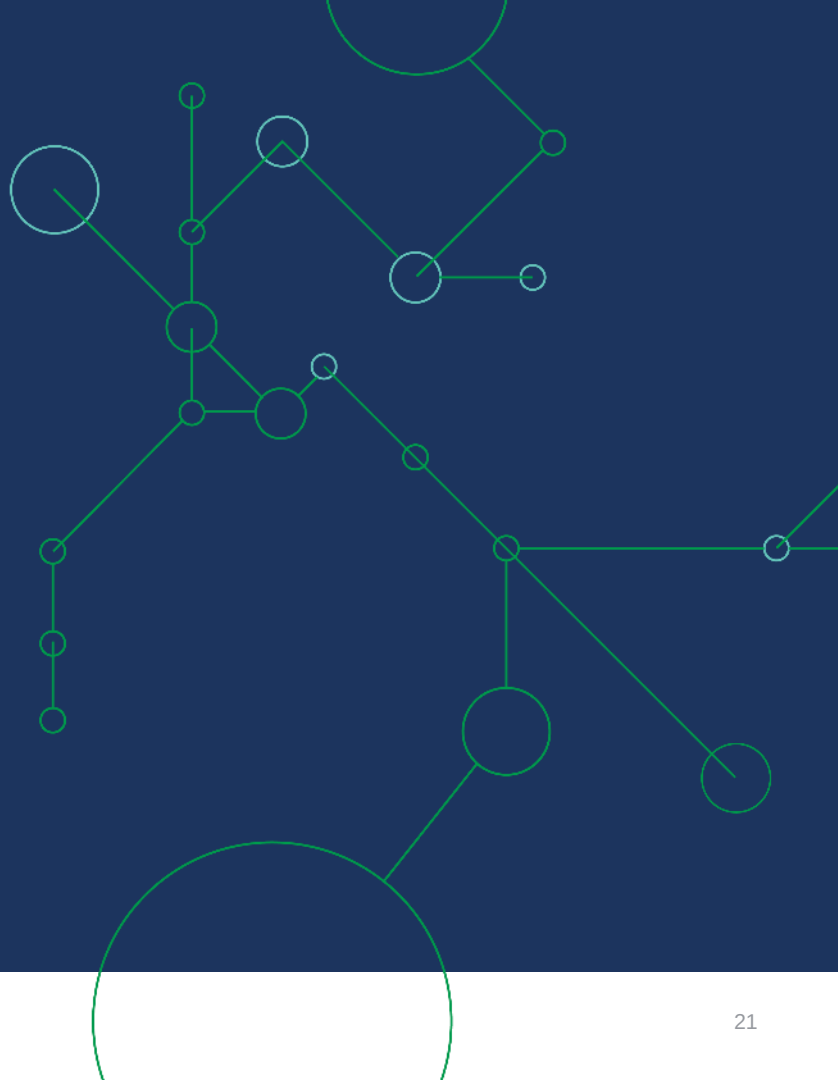


QGA Connector

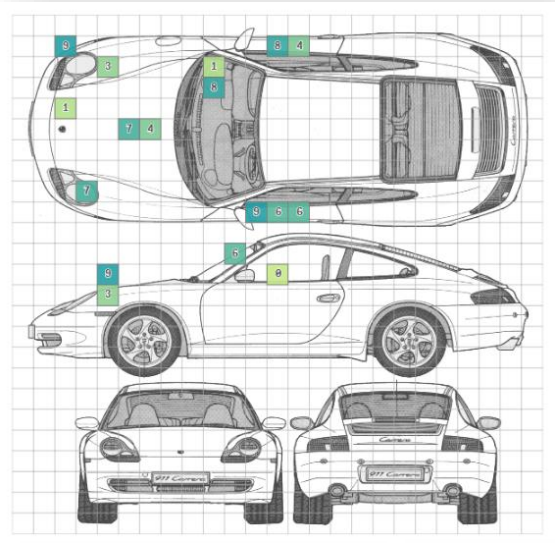
Qlik Sense Enterprise SaaS

SSE – Server Side Extension for Qlik Sense **GeoOperations**

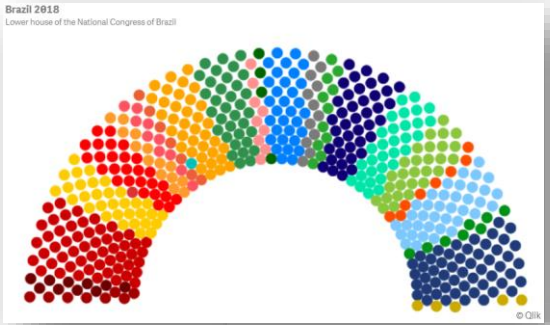
What else?

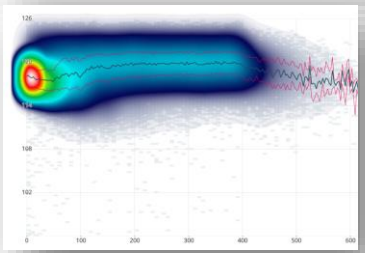


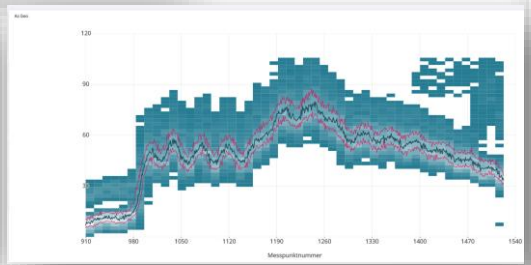
What else?




Body map
Number of scans
500 m


Brazil 2018
Lower house of the National Congress of Brazil
© Qlik






January
February
March
April
May
June
July
August
September
October
November
December
© Qlik

Demo

Workshop

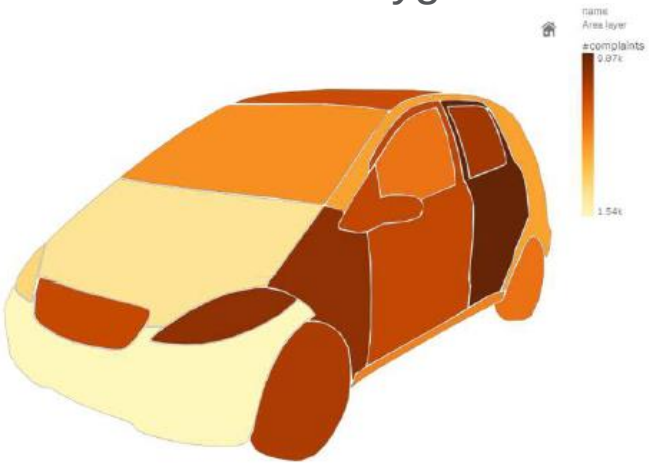
Workshop

5 Steps to get it

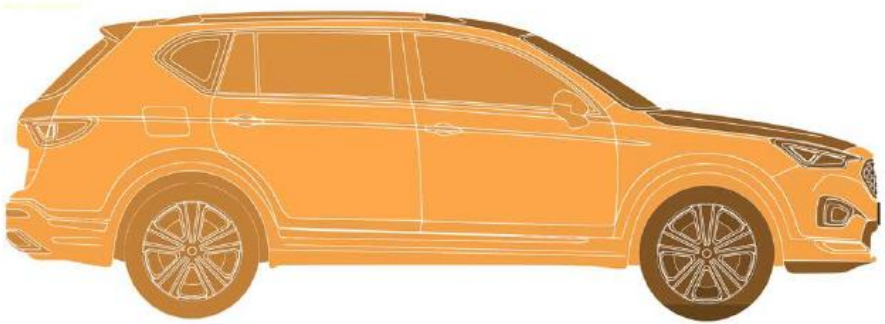
- Get the right image
  - From Google or customer
  - Create it with PPT
- Create SVG in Inkscape to vectorize
  - Click on polygons
  - Draw polygons
- Convert SVG Path to SVG Polygons
  - https://betravis.github.io/shape-tools/path-to-polygon/
- Load and Transform the SVG in Qlik Sense
- Create a Map

Limits of Polygons vs SVG Paths

Vectorized Polygons



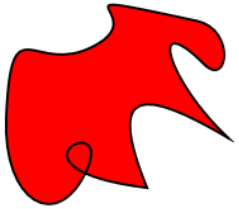
SVG



Limits of Polygons vs SVG Paths

Converting SVG Path to Polygon

Here we see an SVG `<path>` element using Bézier curves:



We can very simply convert this to a `<polygon>` by sampling the path at regular intervals, using `getPointAtLength()`:

Qlik Maps vs SVG Extensions

Qlik Map	SVG Extension
The process is slow and complex	The process is very agile
Standard feature. Support several layers. No possibility to use SVGs.	Extension support?
Need to keep all the geospatial coordinates in the data model	Read the SVG through an external url
Map only supports polygon	The extension support Path SVGs

Links

- https://github.com/mihael-dev/GeoExamples
- https://community.qlik.com/t5/Qlik-Sense-Documents/Top-10-Visualization-tips-QlikWorld-2020/ta-p/1679607
- https://community.qlik.com/t5/Qlik-Sense-Documents/Top-10-Viz-tricks-Part-2/ta-p/1642330
- https://community.qlik.com/t5/Qlik-Sense-Documents/Top-10-Viz-tips-2020-part-IV/ta-p/1769697

https://www.qlik.com/us/products/qlik-geoanalytics