**Summary:** The OpenStreetMap (OSM) community has over 1 million active contributors, around 50,000 of which are active each month. OSM is used in various scenarios and by Mega-Corporations as well as by humanitarian actors. Academics use the OSM data set in their research as supplementary data set, as well as study it as a primary research subject. Data quality and fitness-for-purpose have been a research focus of many scientists for more than a decade now and, with the increasing importance of OSM, are becoming even more relevant.

**The Problem**
- Most studies on OSM data quality are limited to small spatial extent and coarse temporal resolution → difficult to replicate or transfer the results to other regions
- Ideal: calculate data quality measures on a global context in a fine spatial and temporal resolution.
- Regular data updates → monitor improvement of OSM dataset

**OSM Dictionary: What is...**

**...Fitness for Purpose?**
Quality of geodata often can not be assessed generally. It depends on the specific use case which of the many aspects of data quality is important (Completeness of data/attributes? Accurateness?)

**...Intrinsic data quality measures?**
Saturation measures can be used to determine the completeness of the map → the development of the data set over time can be evaluated
The Results

- Quantitative statistics provide an overview of the status quo of OSM in arbitrary regions, and the temporal development of the data.
- Intrinsic data quality measures can be calculated easily.
- OSM data extraction allows to analyse OSM map features in GIS software and to use it for applications such as machine learning.
- In-depth analysis of the contributions to the OSM data provides insight into the map-making process, the users behind it and their interactions.

The Solution: O h s o m e

- Intrinsic methods for quality assessment
- In depth data analysis of spatio-temporal statistics of the OpenStreetMap data set
- Big Data technologies: apply methods up to global coverage
- Fine temporal resolution: possibility to investigate short time events (e.g. during disaster response)

OSM Buildings 2020

**FIGURE:** The figure illustrates the mapping of buildings in Africa in the year 2020.