

## 5.4 Quality Assurance Tools

**Quality Assurance** is the process by OpenStreetMap contributors check data to ensure that all information uploaded to OSM meets high standards for usage and to prevent vandalism.

As OpenStreetMap is a free and open platform that anyone can use and edit, it is critical to the sustainability of open data and OSM that everyone participates in the quality assurance and quality control process – from field data collection to data cleaning to long-term maintenance of existing OSM data.

While quality assurance can be and should be performed at all stages of a mapping campaign, several tools exist to assist with quality assurance during the data cleaning and upload process as well as monitoring data after uploading.

The following are Quality Assurance tools commonly used in the HOT workflow. A detailed overview of these and other QA tools can be found at the Quality Assurance Tools Wiki. Different tools check for different errors and issues. If you want to:

- Check for attribute completeness, use MapCampaigner.
- Check for potential vandalism, use OSMCha.
- Check for contributions and upload issues by individual user, use OSMCha.
- Check for tagging issues, use Osmose AND JOSM Validation.
- Check for geometry issues, use Osmose AND JOSM Validation.

### MapCampaigner

MapCampaigner is a tool developed by HOT to monitor attribute completeness for predefined areas of interest (AOI). Based on your data model, the tool checks and highlights any map features that are missing pre-defined tags within your AOI, and allows team validators to download and fix those features.

### OSMCha

### Osmose

Osmose is a tool that monitors multiple quality control issues in OSM. These include issues with feature geometry (such as overlapping buildings/nodes, incomplete features, and duplications), and also common tagging issues (such as missing, unsuitable or poorly formatted tags). More information about Osmose can be found at the Osmose OSM Wiki Page.

Note: to properly use this tool and view errors, you will need to use the Google Chrome internet browser. Firefox, Opera, Safari, and other browsers may not display the information correctly.

### Steps to correct key issues identified by Osmose

1. Open JOSM on your computer.
2. Navigate to <http://osmose.openstreetmap.fr> in the Google Chrome internet browser.
3. Use the zoom, pan, and search features on the map to navigate to your area of interest.
4. Use the left panel to toggle common issues on and off.
5. Identified issues will appear in the map as pins matching the icons from the issues panel. Click on each pin to learn more about the object and associated issue(s).
6. In Osmose, locate the 'Export' button at the top of the page. Click 'Export', then 'JOSM'.
7. Fix the issues identified then re-upload to OSM.

### Training Materials