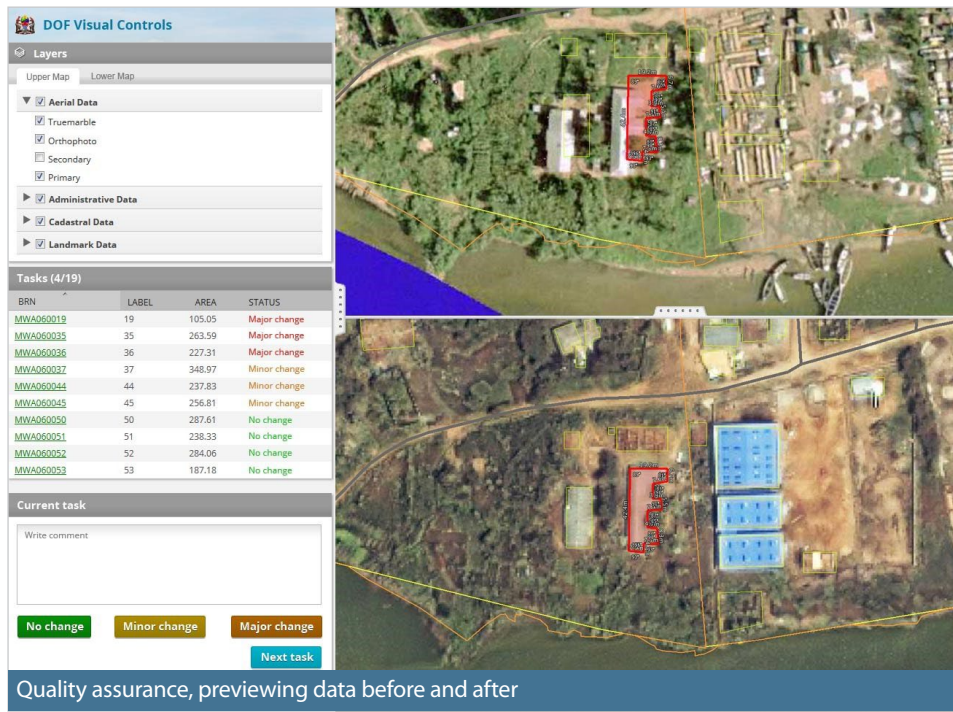


4. Quality assurance

Due to importance of quality of results it is necessary to double-check collected data - either fully (100% check) or random samples (e.g. 20% random). Tools assist managers to do the quality control fast and efficiently, confirming or rejecting individual records and specific sets.

Automatically generated statistics pinpoint problematic workers and indicate which areas may need to be re-visited.

The devices also permit examining each collector's performance and quality (number of correct records collected by day).



DOF Visual Controls

Layers

Upper Map Lower Map

Aerial Data

- Truemarble
- Orthophoto
- Secondary
- Primary

Administrative Data

Cadastral Data

Landmark Data

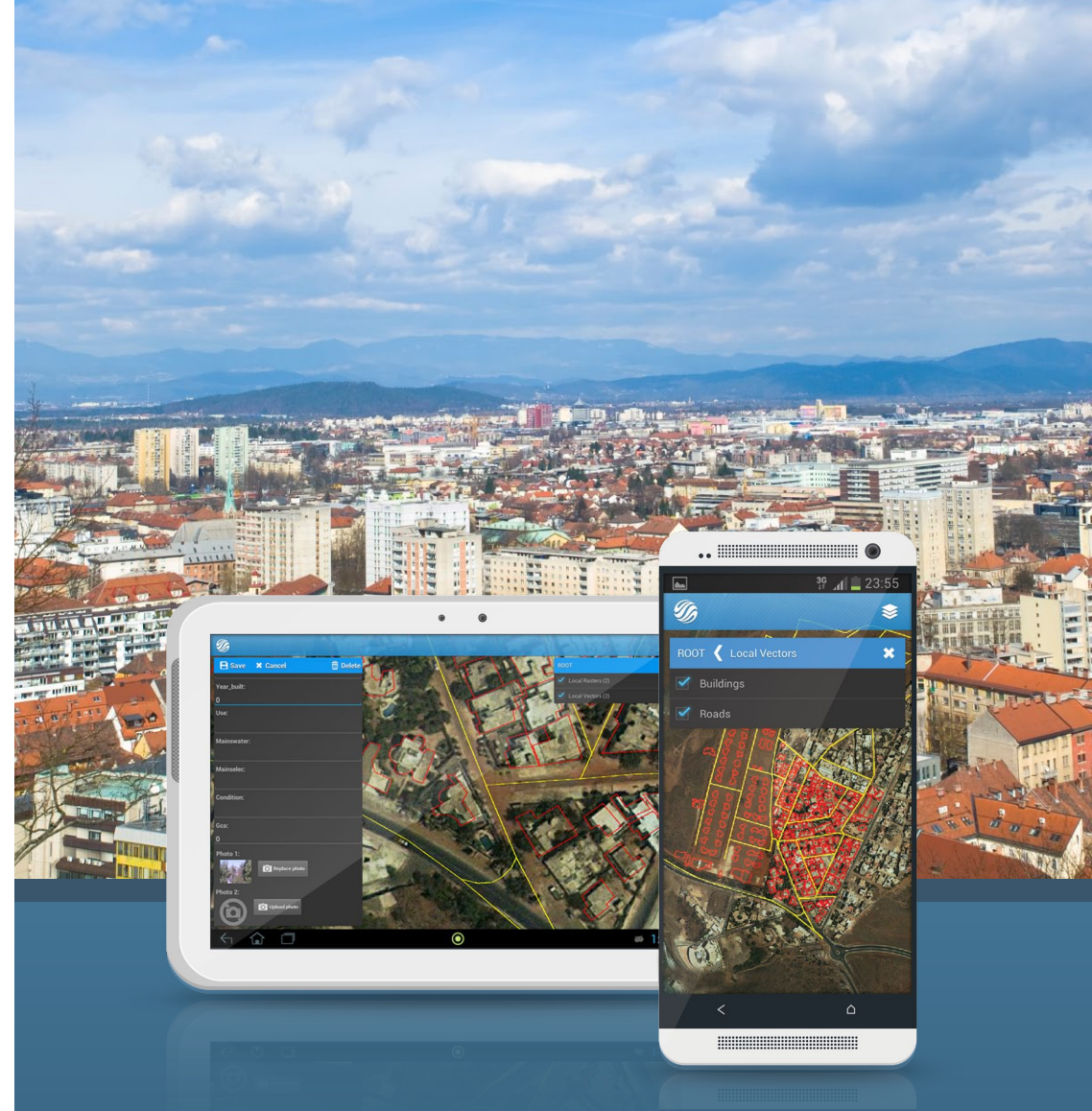
Tasks (4/19)

BRN	LABEL	AREA	STATUS
MWA060019	19	105.05	Major change
MWA060035	35	263.59	Major change
MWA060036	36	227.31	Major change
MWA060037	37	348.97	Minor change
MWA060044	44	237.83	Minor change
MWA060045	45	256.81	Minor change
MWA060050	50	287.61	No change
MWA060051	51	238.33	No change
MWA060052	52	284.06	No change
MWA060053	53	187.18	No change

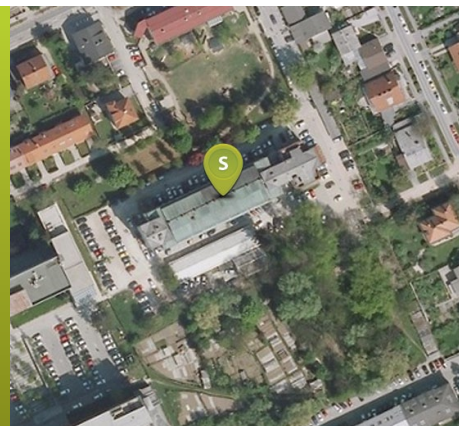
Current task

Write comment

Quality assurance, previewing data before and after



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FIELD DATA COLLECTION



Here we discuss professional mass data capture for an important purpose, not small apps/social media, where individuals/groups can upload located pictures or comment for others in the group to see and comment on.

This professional, important field data collection system commonly involves dozens (if not hundreds) of people covering large, sometimes remote areas, gathering data about properties, owners and the environment. Hence efficiency and quality is of highest importance. Since quality of the data impacts efficiency (e.g. repetition of the visits, inaccurate and unusable data etc.).

The focus of our field data collection system is therefore on:

- 1 management of all individual tasks to achieve highest efficiency
- 2 optimization of the process to reduce time required for data entry
- 3 instant validation and reduction of many errors on data entry
- 4 thorough control based quality assurance

SYSTEM MODULES

1. Task management

Project team supervisors can create “work-packets” containing a set number of properties to be visited and allocate them to field workers one-by-one or in sets.

They can then monitor the productivity, progress and quality of each worker.

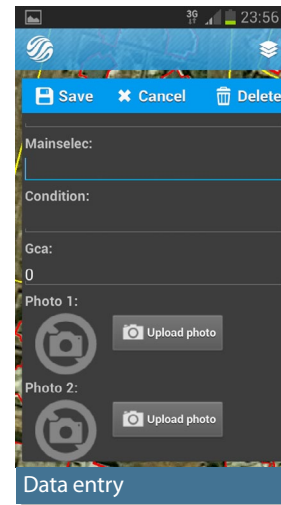


2. Mobile-based field data collection

The field data collection system is based on Android mobile devices (tablets and phones) capable of efficient data entry (text and photos) and basic location measurements using on-board GPS.

Main features of the system are:

- » Mapping functionality, carrying high-resolution imagery and vector data of streets and buildings, to help with navigation.
- » Editing of spatial features to support digitization of new building outlines, schemes etc.
- » Synchronization of pre-populated data to/from mobile devices for off-line use (including spatial data e.g. raster maps and vector graphics).
- » Geo-specific? based triggers to assure locational quality.
- » GPS-assisted measurements of field boundaries.
- » Use of all available location sensors for data acquisition (GPS position, bearing, incline).
- » Support of Bluetooth-connected devices (e.g. external GPS units, portable printers).
- » Forms embedded with photographs, sounds and locations taken from device sensors.



3. Validation and quality assurance

The system validation and quality assurance includes:

- » Use of business rules and code lists to speed-up data entry and prevent typing errors.
- » One-to-many relationships (e.g. buildings and units) are supported by the data models.
- » Tracking of operators to help with billing.

