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RigelMap:
High-precision
Survey Integration Solution

As new technologies emerge with the promise to increase productivity and efficiency, costing is one of the most important criteria in a project life cycle. Construction companies are seeking more effective and cost-efficient methods to complete their work as accurately as possible.

Overview

Located in Alta, Norway, GeoNord is a professional surveying company that specializes in land surveying, marine surveying and pelagic surveying. It mainly provides customized solutions for large Nordic multinational construction companies.

Challenges

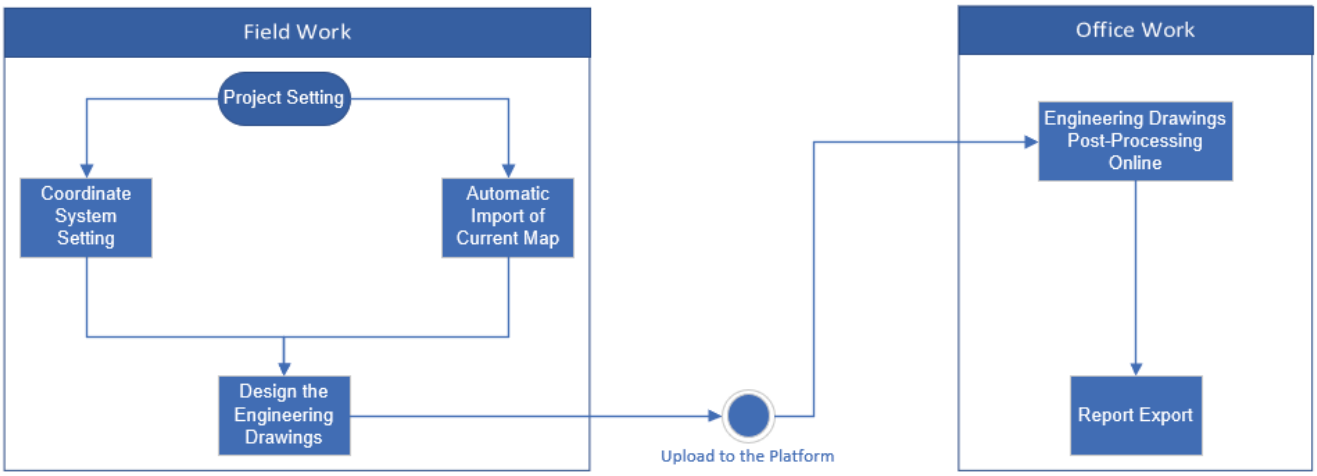
Data collecting is an important part of the construction process and it will make or break the success of a project. In the past, surveyors often encountered the following problems:

1. The traditional surveying method is complicated when operating. Usually, the surveyor will use a total station to measure the building area, and cross-reference the pavement height; and then they will draw it down, cutting and filling the surveying area in the drawings. Besides, in order to confirm the building area during the construction of the project, the surveyors are always required to be on site.
2. When drawing the municipal planning map, surface features collection and attribute evaluation will need a large number of professionals. If any wrong result of the features occurs during the internal verification, the whole process will be repeated and the surveyors need to rework.
3. Due to geographical restrictions in northern Norway, most of the population lives in cities and towns, but they are far away from each other. When the surveyors encounter problems that require assistance during the operation, the technical support team may spend the whole day to drive to the site but 20 minutes to solve the problems.

All in all, the traditional surveying method needs a great deal of time and manpower, which will increase the cost of the projects.

Solution

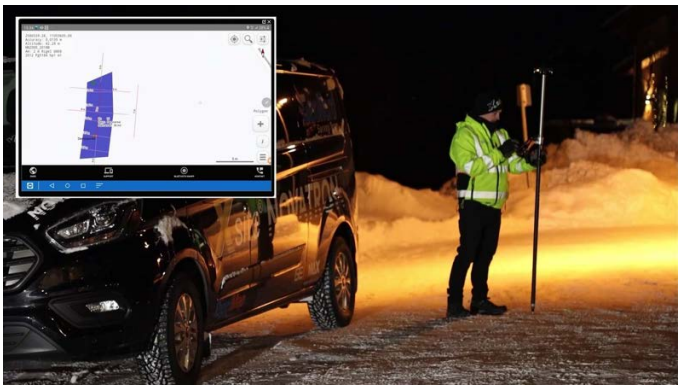
The GeoNord company developed a SaaS system with the cloud operation function, named RigelMap, able to meet 95% measurement needs of customers. This platform offers an online cloud operation solution with 5cm accuracy for engineering construction that integrates the functions of project setting, automatical import of the current map and coordinate system conversion, engineering drawing design and post-processing of drawings.



RigelMap Solution

Application

RigelMap can automatically construct points, lines and polygons according to the user's current situation, and attach attributes and photos. Users in the office who use the cloud platform can receive the data from field workers and modify the data's shape, attributes and others online. After a single field collection, an accurate map report can be exported.



Field Work

Rigelmap can work as a database. All georeferenced axes, figures, and images can be imported into the drawing library. The Android GIS handheld device can obtain all drawings from the system and use it in all types of measurement and digitization work.

When surveyors encounter problems, they only need to log in to the RigelMap account on the web and refer the problems online. The professional technical personnel can immediately obtain information in the office and solve the problems online through the platform, which can greatly save time and manpower.

Office Work

One of the key points to finish the municipal projects is whether the collectors are experienced in surveying and mapping. However, in a pilot city in Norway, the operation personnel did not have much experience. In this case, the operation personnel used the combination of flat panel and Hi-Target Qbox8 to collect the location information and assign the attributes, while the professional personnel corrected the attributes of the objects online in the office and completed the description of most of the municipal management maps, which greatly improved efficiency.

Feature Attributes

Product Information

Working with Qbox8

Product - Hi-Target Qbox8

1. Hi-Target Qbox 8 is a high-precision GNSS receiver with compact and exquisite design as well as it can be applied in different solutions.
2. Integrated with a professional RTK engine, it performs 2 cm accuracy, aiming at powering up your GIS application with precise and reliable positioning. Its industry rugged and lightweight design increases portability and service life. Its compact and exquisite
3.Dual-mode Bluetooth makes it compatible with any mobile devices.

With this one-click GNSS receiver, your fieldwork will be more convenient and easier.

RigelMap Device

Product - Android GIS handheld device

Working on data collection, attribute import, layer management and information retrieval for cadastral objectives

*Thanks to our strong partner—**GeoNord** for the data and photos to make this case study presented.*