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Customise your offering

Andy Beckerson looks at how new tools, and the options for using them, can be exploited to add greater value to surveying services

In last month's column I tackled the subject of 'Expanding your Offering 'as a way of opening up new revenue streams. In this month's column it seems logical to look at another way we can achieve this, namely through customising our offering. By striving to deliver a more unique product or service, tailored to specific customer requirements or niche markets, we can add value to our services.

As geospatial professionals, we are largely concerned with identifying physical features and giving them some form of geographically referenced location to enable analysis to take place, a progression that can be broken down into *Collect, Process, Model and Analyse.* By looking at each of these four distinct phases, we can assess how best to customise our deliverable and offer a better customer service.

Collect

Data is today available from many sources and for some geospatial organisations this is their area of focus. The main task for each working day is how to collect more data, of the right quality, and how to be more productive.

Technology and technique are key elements in the collection of this data and there are multiple options available to the surveyor, either through an existing portfolio of owned instruments, through equipment hire or, in the areas where the hardware would be of high cost, through a contractor providing services; an option which means UAS, long range 'time of flight' laser scanning and vehicle mounted mobile scanning systems are no longer technologies restricted to cash rich organisations.

Process

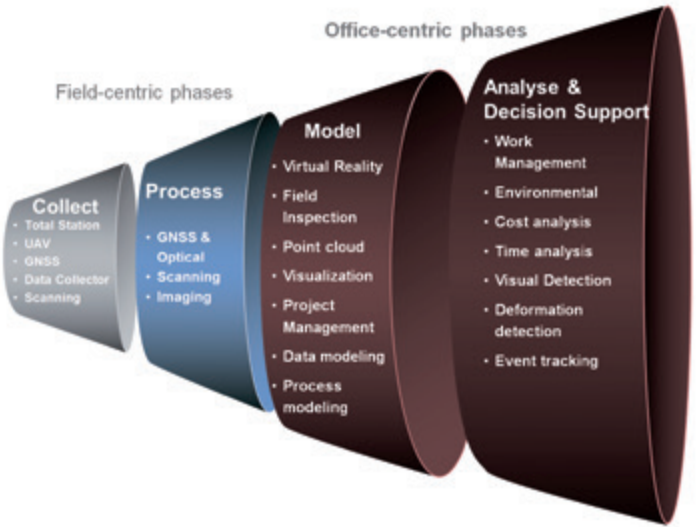
Converting the 'raw' collected data into something much more useable and desirable is again a core focus for most geospatial companies. Here the attention is on the automation of the software that processes the collected data, whether that data be from a traditional survey instrument, a crowd sourced SAAS* product or a vehicle mounted mobile scanning system collecting 3D point clouds and images.

Whilst almost every survey company is equipped to process the data they collect, when we come to the Model and Analyse phases there would appear to be fewer and fewer companies who specialise in these markets. Does this represent potential opportunity to customise what we offer our customers?

Model

Here we can use different techniques to display the modelled data. We are all familiar with the 'fly through' of 3D rendered data sets and when they are really good, they are hugely impressive! But how many of us use simulations to reconstruct actual events?

Visual Statement is a company that writes simulations for use in specialist forensic investigations and accident reconstruction. While this is a highly specialised area of application, its approach is a particularly useful example of how to add value in the model phase.

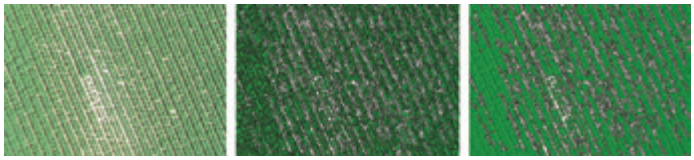


Trimble SketchUp model integration

This company has also gone down the route of integration with SketchUp, a former Google product. SketchUp is rapidly evolving into a 3D modelling tool which can be used in many industries, from construction and engineering to landscape architecture and urban planning. Low cost and simple to use, it delivers fantastic 3D models and also allows us to produce GIS deliverables from LEO** satellite imagery.

Analyse

Analysing our data can turn maps and positions into intelligent data with which to make better decisions and avoid costly mistakes. Here we could be using work management to better organise mobile workers and their resources to deliver both improved customer service and lower operating costs; we could be looking at a collaborative 3D model to avoid clash detection during the design of complex buildings before any contractors arrive on site; we could be estimat-



Ecognition Essentials is used to check the percentages of plant and soil as the potato crop grows

Visual Statement's EdgeFX diagramming and animation software integrates seamlessly with SketchUp, allowing a user to browse millions of models in SketchUp's 3D Warehouse then download and import a model directly into EdgeFX. Models are imported into the scene exactly to scale for ultimate accuracy

ing building quantities to reduce avoidable waste; we could be planning that the right technicians are available at the right time of the project; we could be performing common remote sensing tasks such as forestry monitoring, agricultural yield assessment and land cover mapping and monitoring.

In the UAS market, the arrival of Trimble's eCognition Essentials earlier this year is a key indicator of the direction of travel. Where object-based image analysis was once a highly complex task with a steep learning curve, this latest software can now easily transform image data into usable intelligence thanks to the hard coding of all the standard rules of land use and identification. Such software can create polygons, identify shapes, map them and link them for export as a GIS-ready layer – rules no longer have to be created, they already exist.

This new approach is already being applied in a range of diverse applications, from research into tropical medicine to agriculture, the result being that those involved are able to offer their customers a truly customised service by taking the data one step further; in short, providing answers rather than maps.

The tools are now in place for us to collect, process model and analyse data to provide information that is specific to a client's needs and applications. In 2015 we need to understand how and why positions are used and apply that knowledge to improve our clients' business. If we can do that, we are in an excellent position to deliver something significantly more useful to our customers.

* Software as a Service ** Low Earth Orbit