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# FILLING THE NEED FOR SURVEY SPEED

**Timely investments in new solutions help surveyors address the demand for increased accuracy and efficiency within tight budgets.**


Clients have always wanted rapid, accurate and complete surveys, but now that they know what's possible with the newest technologies, their expectations on all fronts have increased. Today, they ask for even greater accuracy, faster turnaround and lower costs. The bottom line is that whatever industry clients are in, from transportation to utilities to construction, they are facing more pressure to ratchet up project requirements.

In the architecture, engineering and construction markets, building information modelling (BIM) has fueled an upsurge in client needs. Surveying professionals are on the line to meet the tight tolerances that an efficient BIM process demands. Because comprehensive data produced quickly and accurately is necessary for successful BIM projects, it's not surprising that many building designers and contractors now require point clouds captured by laser scanning as part of the project deliverables. Clients in other industries are also tightening their specifications. After all, they too are working with limited budgets and shortened project cycles and cannot afford inaccuracies that lead to cost overruns.

Fortunately, while technology is driving higher client expectations, it also empowers surveying and engineering firms to meet and exceed those requirements. Staying on the leading edge can provide a large payoff in productivity and profitability.

## **EMPLOYING THE LATEST SOLUTIONS TO MEET CLIENT NEEDS**

At SANDIS, a professional services corporation that specialises in civil engineering, traffic engineering, land surveying, 3D scanning and BIM preparation, the entire team understands the importance of accuracy. "There is little point in measuring unless the objective is to provide the exact coordinates of a point," says Laura Cabral, associate principal and survey manager. High-tech equipment is just one element necessary to satisfy customers' needs for efficiency and accuracy. To increase sales and profitability while achieving the best results for



clients, surveyors must choose the right technology, hire and train skilled professionals to collect data, and follow best practices for data collection. That is why the company employs detail-oriented, experienced field and office surveyors and invests carefully in only the most trusted technology.

SANDIS has used Leica Geosystems total stations exclusively for more than 25 years and, more recently, the Leica ScanStation C10 and P40 laser scanners. This year, to improve client service, SANDIS purchased 15 Leica CS20 controllers featuring Leica Captivate software. The CS20 field controllers enable accurate electronic distance measuring and display the 3D data captured on the screen. They include radio and antenna for long-range robotic total station control, a GNSS receiver, a laser metre and a camera. The Captivate 3D field software works with a variety of measurement instruments, including total stations and scanning total stations, to create realistic 3D renderings. This capability gives surveyors the flexibility to switch quickly, for example, from GNSS to a total station. The fully integrated system increases the speed and quality of data transfer to and from the office, enabling SANDIS to provide fast, high-quality service.

Technology assists the company in another way as well. Located in Campbell, California, SANDIS

primarily serves clients in the San Francisco Bay Area, Silicon Valley and Sacramento. In these regions, development booms have stoked the demand for surveying crews. As new projects begin every week, it's often an uphill battle to find skilled and experienced technicians. The firm's state-of-the-art surveying solutions make it possible for SANDIS to collect more data with fewer field personnel. Crews can document more jobsites in a week and increase the accuracy of the jobs they complete.

These benefits have had a profound impact on business success. "With the Leica CS20 field controllers, we saw increased productivity and quality of both our field and office operations," says Ken Olcott, the firm's president. "Our crews work on hundreds of large, technical and complex projects. Whether we are laying out piles for a new NFL stadium or setting embeds for a Silicon Valley high-tech campus, we need to be precise and timely. We are only as good as our last survey. The Leica Geosystems' total stations, CS20s and Captivate software allow us to maintain a great track record."

#### RAISING THE BAR ON SURVEY EXCELLENCE

Investing in the latest technology helps the firm meet its clients' current needs. Since the market

does not stand still, however, company associates are always looking ahead to what clients might need in the future. They already see more requests for thorough day-to-day updates on projects. When steel is erected, for example, or a large piece of structural concrete is installed, clients want meticulous details on how the structure differs from the original design. SANDIS has the technology and expertise available to provide this information, thereby empowering the project manager to provide the best information to subcontractors so they can make plans accurately in a virtual environment, minimising errors and waste.

While monitoring these trends, SANDIS also stays in touch with representatives from its technology provider to learn how the latest solutions dovetail with market needs. SANDIS has also expanded its industry coverage with the acquisition of Bryant Surveys Inc., a specialty steel erection survey firm, and CTS, Inc., a leader in laser scanning, point cloud post-processing and BIM preparation.

All of these strategies enable the firm to delight its clients with accuracy, efficiency and value. "Our clients deserve the highest level of value and quality," says Cabral. "Using the latest surveying solutions helps us be more efficient in the field and office and raise the bar on the level of excellence we provide in all of our projects."

## HxGN LIVE

Hear about SANDIS' experience surveying construction in Session 9055 Surveying the NBA's Greenest Arena 1:30 p.m. Tuesday, 14 June in Convention Centre 202A.

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