

Time for Change

How mobile surveying laid the ideal foundation for a conversion project



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UK survey firm Archidata turn to rapid handheld mobile mapping for time-limited conversion project

In a fast-moving world where time is of the essence, companies are constantly searching for technologies that will not only give them the edge over their competitors but also have a positive impact on their bottom line.

This is evident in the building sector where one of the biggest challenges for architects and structural engineers is how to carry out fast, accurate surveys and produce plans & models in the minimum of time.

This was the challenge facing Archidata, a specialist land and building survey company based in the UK.

With plans in place to convert eight former business units into sixty-two residential apartments, Archidata were tasked to undertake the site survey.

The project required laser-scan data of the existing structure to find the precise positions of the structural steel frame and overhead steels which could then be handed over to the architect, to allow designs for the residential units.

Initially, Archidata used Bluetooth laser disto measurements to



The survey team had just 1 hour on site to undertake the full survey

collect the dimensional data, prior to the units being stripped out. However, once the high-level steel structure was exposed, it was clear that a new method was required to accurately survey the structure.

Relying on traditional techniques alone meant it would have taken a whole day's work to measure a single unit – far longer than the hour allocated by the developer, who wanted to avoid the survey work clashing with construction workers on-site.

'It was then that we decided to re-survey the site using the mobile, handheld GeoSLAM ZEB-REVO device,' says company director, Rob Mclean. 'This was based on the premise that we needed a fast and accurate survey technique that would

provide 3D data in the minimum of time. It was for this reason we turned to GeoSLAM, a market leader in 3D mobile mapping technology.'

With time-saving a major priority, the demand for fast and efficient 3D models is greater than ever before. This is where flexible, easy-to-use, handheld 3D laser scanners come to the fore. The added benefit is that anyone can build a highly accurate 3D model of any indoor, underground or difficult to access environment within minutes. This point is particularly appealing because it means that those staff members who are not familiar with the technology will not require extensive training but will soon feel at home with an easy-to-use, handheld "go-anywhere" scanner such as the ZEB-REVO.

An added benefit is that it requires just one operative instead of the two-person team normally required for a 'traditional' tripod survey. As a result of these attributes, companies are taking on projects that would otherwise have proved too difficult or too costly when using traditional survey equipment alone.

'We found that with an indoor range of up to 30 metres, the exposed structure was easily within reach of the handheld scanner,' adds Rob. 'Also, because the scanning was so quick, the time on site was reduced down from one day with traditional methods, to just 1 hour with the ZEB-REVO. Just as importantly, this did not come at the cost of accuracy. The contractor was so impressed with the results from the mobile scanner, they decided to repeat the same methodology across the remaining two units.'

The development of Simultaneous Localisation And Mapping (SLAM) technology means that survey equipment no longer needs to be static, but instead, can be hand-carried, allowing for a rapid, mobile form of 3D data collection.

Scanning at speeds ten times faster than traditional surveying methods, the ZEB-REVO is fast becoming the surveyor's tool of choice.



Mid-demolition with exposed steelwork

About Archidata

Based in East Sussex, UK, Archidata specialises in supplying topographical land surveys, measured building surveys, and BIM services for architects, construction professionals, self-builders and private individuals.

Founded and managed by director Rob Mclean, Archidata works closely with clients all over the UK and beyond to understand their requirements. They enjoy a challenge and think outside the box to provide leading-edge survey solutions for any situation.

From fast and exact one-man robotic topographical land surveys to state-of-the-art 3D laser scan surveys for BIM and complex historic listed buildings, they support the design, planning, development and construction processes by collaborating with their clients and providing exactly what they need for their specific project.

“Time on site was reduced from one day with traditional methods to just 1 hour with a ZEB-REVO”

Rob Mclean, Director, Archidata

About GeoSLAM

Headquartered in the UK, GeoSLAM is the global market leader in “go-anywhere” 3D mobile mapping technology.

Our unique handheld technology is highly versatile and adaptable to all environments - especially spaces that are indoor, underground or difficult to access, providing accurate 3D mapping without the need for GPS.

Our technology is easy to use and within minutes' customers can build a highly accurate 3D model of their environment. GeoSLAM was founded in 2012 as a joint venture between CSIRO (Australia's National Science Agency and the inventors of Wi-Fi) and 3D Laser Mapping.

Serving the surveying, engineering, mining, forestry, facilities and asset management sectors, GeoSLAM has an expanding network of over 70 distributors, with a presence in 50 countries across 6 continents.

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