TRACKING TRENDS IN 3D SURVEYING

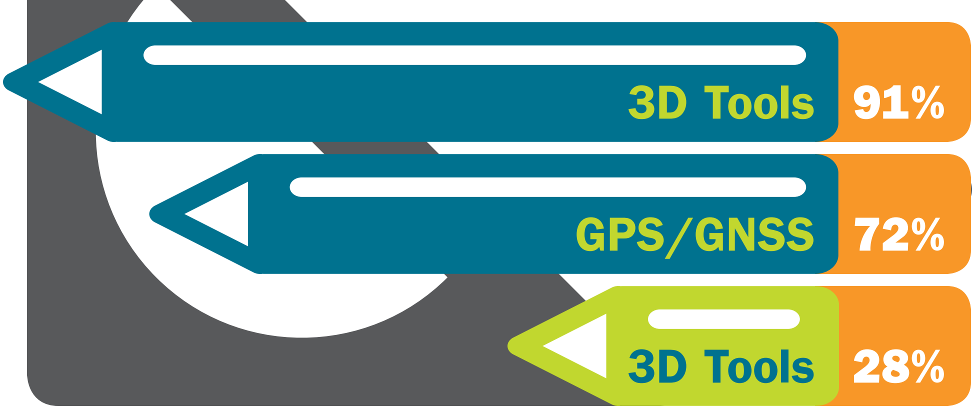
As the tools of the profession continue to evolve, more surveyors are venturing into 3D technology. Our latest market study shows how far.

Adoption cycles for new technologies often accelerate, slow, and then regain momentum. Early adopters may be seen as the risk takers, but many have just recognized the potential value a new technology or process can offer. As the cycle moves towards greater maturity, other drivers emerge. In 3D surveying, it is the market demand for 3D services that keeps things moving forward.

To identify trends in 3D surveying, BNP Media's market research division again worked with the editorial staff of POB magazine to develop and conduct a detailed market study. As with past studies, this fourth annual study showed the majority of respondents — over 80 percent of all participants — either approve or recommend their companies' equipment purchases. And what did we learn from them? Despite the speed of adoption, many professional surveyors feel the profession risks being left behind if it does not move faster. Read on and, as always, let us know what you think. For the full results of the study, please go to www.pobonline.com.

Traditional Tools

Once again, surveyors report a strong preference for traditional tools. Over 90 percent are using total stations. There was a slight drop from last year, but not a statistically significant change. A slightly larger gap emerged for GPS/GNSS from year to year, but again, over 70 percent of respondents report using GPS/GNSS. Some of the change may be absorbed into the 28 percent who now report using 3D tools, up slightly from 2015. Some of the interesting results are in what tools are being used.



3D Tools Used

Modeling software continues to lead the list of tools used, increasing from 58 percent in 2015 to 66 percent in 2016. A more dramatic rise occurred in phase-based stationary terrestrial laser scanners, nearly doubling from 19 percent in 2015 to 37 percent in 2016. An interesting anomoly appears in aerial LiDAR systems, falling from 48 percent to 23 percent. Training may play a part in which tools enjoy greater adoption and use in the field.

66%	Modeling Software
54%	Point cloud data
37%	Phase-based stationary terrestrial laser scanners
31%	Photogrammetric cameras
31%	Time-of-flight stationary terrestrial laser scanners
23%	Aerial LiDAR
20%	Terrestrial mobile LiDAR

Training for 3D an Issue

Half of the users of 3D technologies and a third of non-users don't believe there is adequate availability of 3D education sources and training. Respondents continue to report colleges and universities are not adequtely training the next generation of surveyors to apply 3D technology correctly. Professional societies and organizations fare only slightly better, and the general view is that courses are just not readily available.

	USERS		NON-USERS	
	DISAGREE	AGREE	DISAGREE	AGREE
Professional societies adequately addressing challenges	53%	17%	25%	19%
Adequate availability of 3D education courses	51%	19%	35%	13%
Colleges and universities adequately training next generation	56%	12%	16%	18%

Increasing Training Uptake

Though professional surveyors have issues with the availability of training, they are increasing their pursuit of training in 3D technologies. Over half of respondents in 2015 said they would take up training in the next year, and that appears to be reflected in the increase in users responding that they took training in the past year — up from 27 percent in 2015 to 41 percent in 2016.

	USERS		NON-USERS	
	2016	2015	2016	2015
Took training in past year	41%	27%	9%	14%
Planned training for next year	56%	50%	29%	36%

Demand & Demand Drivers

Demand for 3D services is growing, according to half of respondents, with one-fifth saying demand is growing rapidly. One of the interesting views is the perception of what is driving that demand. Though improved technologies and lower costs relative to the capabilities of the technology remain top drivers, they are reported less as the "biggest" driver. Rising dramatically is the increased use of 3D in consumer markets (film and video games, for instance). The consumer market factor jumped from 3 percent in 2015 to 17 percent in 2016.

Demand growing rapidly	20%
Demand slightly growing	50%
No change in demand	28%
New technology/improved 3D capabilities driving demand	46%
Democratization of technology (smaller, cheaper, faster)	32%
Increased use of 3D in consumer market (film, video game)	17%