



New Tools Steadily Growing With Surveyors

The surveyor's kit contains a mix of tools, with laser scanners on the rise.

By Perry A. Trunick

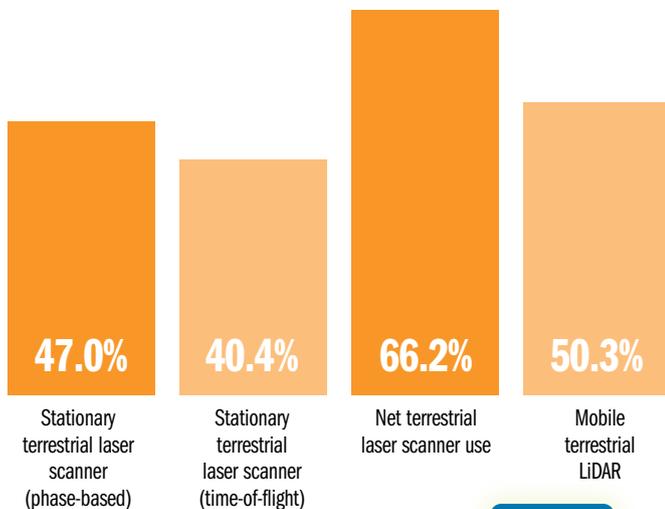
POB recently asked senior executives and geospatial and survey leaders about their experiences with laser scanning and geographic information systems (GIS). The study found that GIS tools have become nearly as commonplace as GNSS. Only 1.7 points separated the percentage

using GPS/GNSS and those using GIS tools (84.8 percent and 83.1 percent, respectively). A similar relationship exists between total stations and laser scanners. In this case, the percentage is a little wider (3.8 percent), but roughly two-thirds of respondents use total stations and laser scanners.

Total stations have a longer history in surveying circles, so it is a testament

to the relatively rapid rise of laser scanning and imaging tools that they have topped 60 percent. This is more apparent when looking at how long respondents reported using laser scanning and imaging — 76 percent say they have used the tools for less than 10 years. Based on the respondents' own projections, laser scanning and imaging tools will be in nearly every surveyor's kit. Whether or not they are using laser scanning and imaging equipment today, 97 percent say by next year they will be.

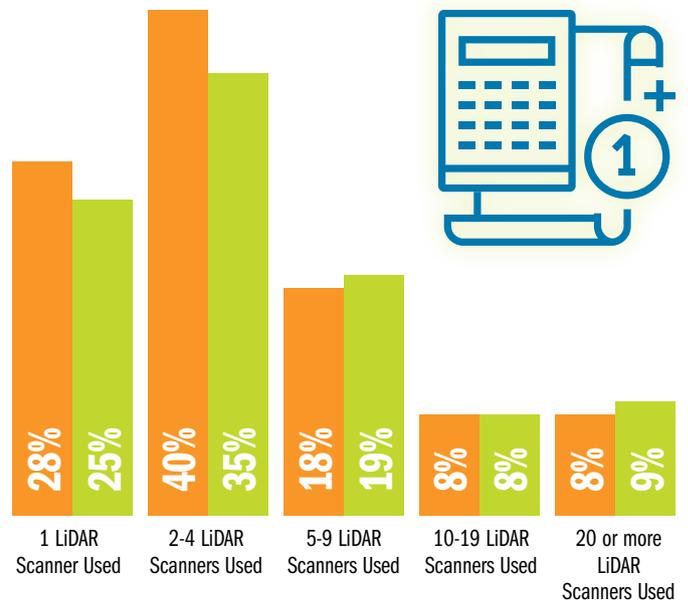
Currently Using Laser Scanning/Imaging



Over two-thirds of respondents use terrestrial laser scanners. The number using phase-based scanners vs. time-of-flight is a little higher, but they remain close. Just over half of respondents use mobile terrestrial LiDAR.



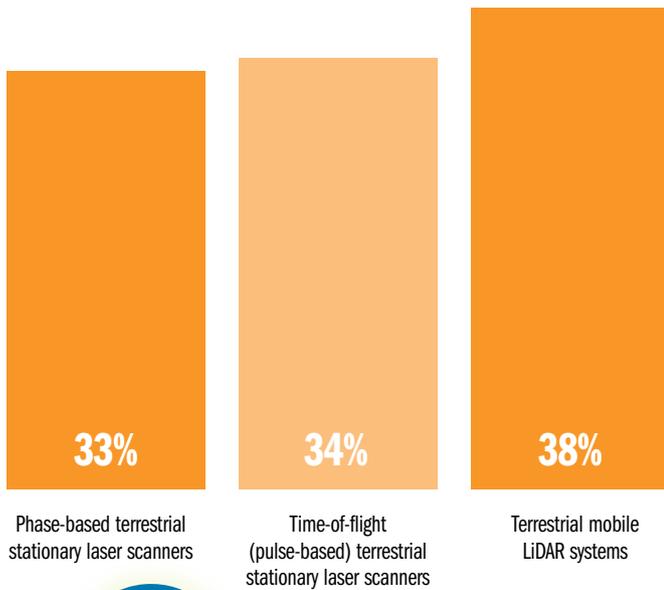
Number of LiDAR Scanners Used



■ Current
■ Next 1 yr

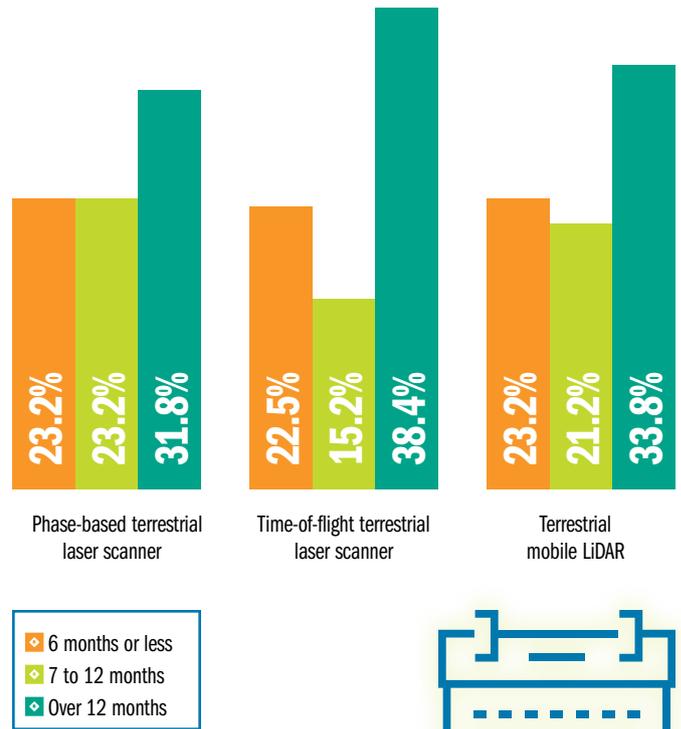
Most respondents use between two and nine LiDAR scanners. There is little change in the number of units they expect to be using a year from the study.

Recent Scanner Purchases



The numbers of recent scanner purchases by type are consistent. A third of respondents have purchased phase-based scanners and 34 percent have purchased time-of-flight scanners. Nearly 40 percent purchased mobile LiDAR systems.

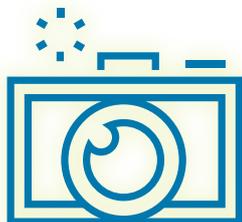
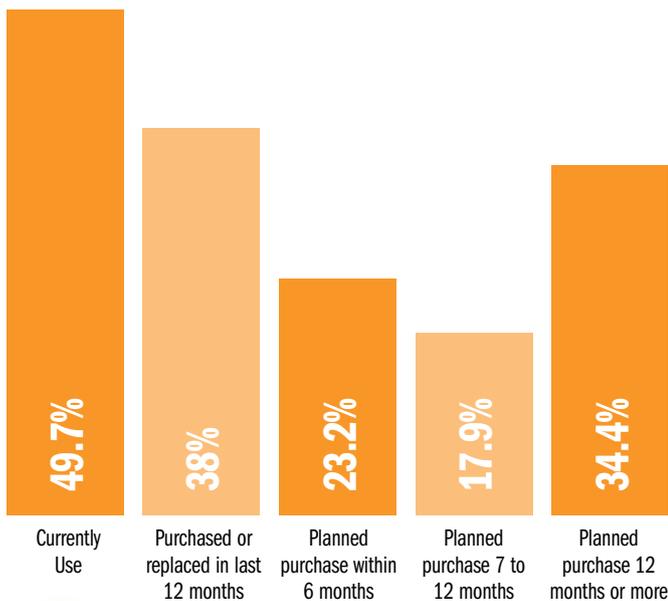
Purchasing Plans Next 12 Months



Though roughly a third of respondents made purchases in the past 12 months, their planned purchases of laser scanning and imaging systems are strong.

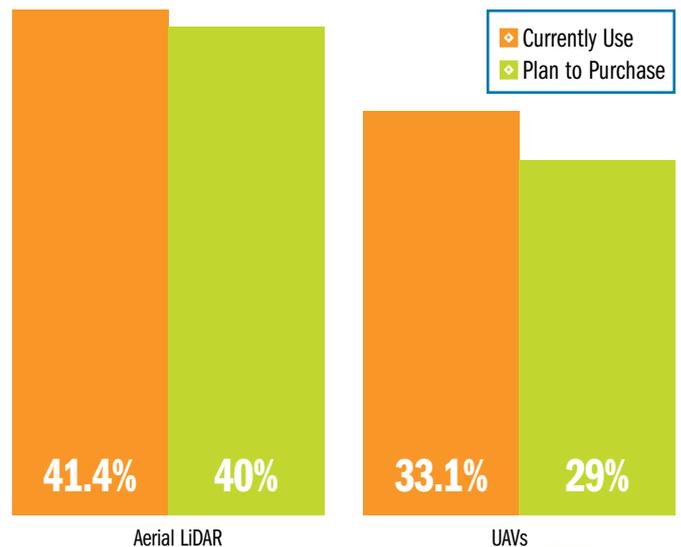


Photogrammetric Cameras



Photogrammetric camera systems still show a strong role in surveying and mapping. While there is a lot of spending taking place relative to laser scanners, current use, recent purchases and planned purchases of photogrammetric cameras are robust.

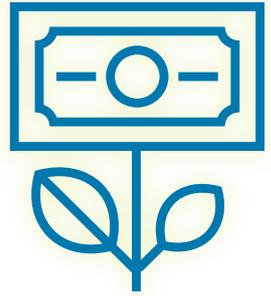
Aerial Imaging



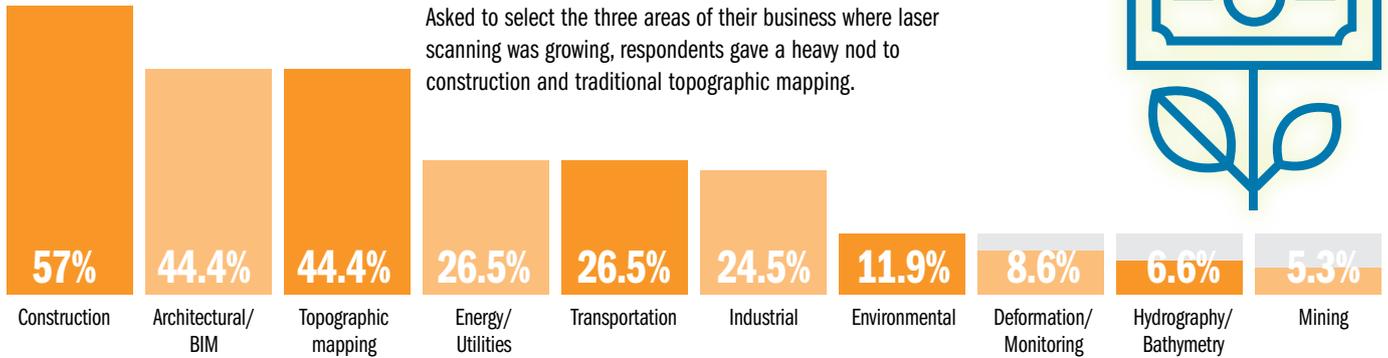
Aerial imaging tells an interesting story. Over 40 percent of respondents are currently using aerial LiDAR, and 40 percent say they plan to purchase aerial LiDAR equipment in the next 12 months. Though all of these units may not be destined for UAVs, one-third of respondents are currently using UAVs and nearly 30 percent say they plan to purchase a UAV in the next 12 months.



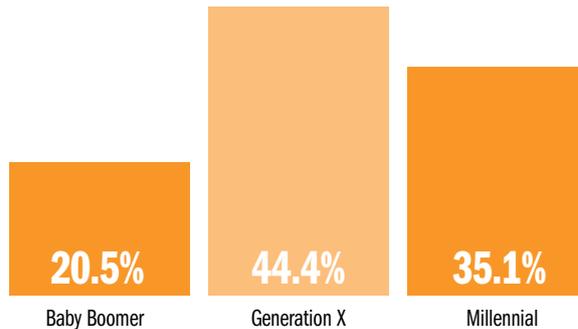
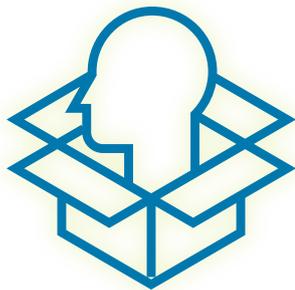
Strongest Growth for Laser Scanning



Asked to select the three areas of their business where laser scanning was growing, respondents gave a heavy nod to construction and traditional topographic mapping.



What Generation?



In addition to conventional demographic groupings, respondents were asked to indicate which generation they fell into. Generation X (after 1961) and Millennials (after 1982) were well represented.

eBee X

Map **without limits**

“ I immediately felt comfortable flying the eBee X and the senseFly Aeria X camera is phenomenal. As for that material on the body, I can't believe how strong it is! ”

— Scott Hiebert, CEO, *Green Aero Tech*

The eBee X is the fixed-wing drone for all your mapping needs. Designed to boost the quality, efficiency and safety of your data collection, it has a camera to suit every job, the accuracy and coverage to meet every project's requirements, and can work virtually every type of site.

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Meet every project's requirements

Multi-Purpose

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