POB POINT OF BEGINNING TOP 100

The second annual *POB* Top 100 companies list is out, and it shows Top 100 companies earned a combined $50 billion — $5 billion of that from land surveying and geospatial services.

In 2015, *POB* responded to industry requests to develop a Top 100 companies list for the land surveying, mapping and geospatial space. With a lot of hard work and cooperation from professional associations, the *POB* Top 100 was reported in the September 2015 issue. With equal effort and cooperation from the professional associations, the second annual *POB* Top 100 has now been compiled and is presented here.

Questionnaires sent to companies asked a series of questions about the services the companies provide in order to establish the appropriateness of their inclusion in the *POB* Top 100 database. Though geospatial services are often implied among the offerings of civil engineering firms, *POB* asked specific questions about those capabilities before getting to revenues.

With geospatial companies identified, the number crunching began. Once again, topographical, boundary and utilities surveying were the most common types of geospatial work performed. And, 87 percent of the companies performed geospatial services in-house, with the remaining 13 percent subcontracting some geospatial services.

As the *POB* Top 100 gains a foothold, the base of respondents is evolving. This is reflected in some of the percentages on company size. The 2015 study had 83 percent of companies in the 49-or-fewer employee size, while the 2016 study had 69 percent in the same categories. The median number of full-time employees, therefore, shifted from nine in 2015 to 20 in 2016. This is more likely due to the inclusion of additional larger companies, not dramatic growth. However, the percentage of companies reporting one to five part-time employees topped 50 percent in 2016, up from 44 percent in 2015.

THE ELEPHANT IN THE ROOM

At roughly $30 billion in total revenues, it shouldn't come as a surprise that Bechtel is also a top earner when it comes to geospatial revenues. The company, which traces its roots back to 1898, claims over 25,000 "extraordinary projects" in 160 countries on seven continents. But, top to bottom, there is a tremendous amount of diversity among the companies performing land surveying, mapping and geospatial services. In fact, a top-to-bottom comparison has many pitfalls.

Of the *POB* Top 100 companies, 33 reported 100 percent of their revenues come from land surveying, mapping and/or geospatial services. A couple of those firms had higher geospatial revenues than larger multi-discipline companies that reported much smaller percentages of revenues from geospatial services. That's one reason why this year's ranking doesn't use a strictly numerical ranking based on geospatial revenues. This is intended to introduce a bit of fairness in how companies are compared, but it also provides some new opportunities in discussing some of the differences and similarities of the companies within a category and comparing across categories.

Among those companies looming large in geospatial revenues, Larson Design Group actively lists 3D scanning, GIS/asset management, and survey among its services. While this takes some of the guesswork out of the review and selection process for some prospective clients, it also establishes some of these large firms as direct competitors for conventional land survey and geospatial services provided by much smaller regional firms.

Employee-owned KCI Technologies Inc. falls into this space, but presents yet another, slightly different face. Founded roughly 100 years after Bechtel, KCI claims over 1,000 employees working from offices in 12 states. Among its career opportunities, it counts internships, including surveying and GIS. So, without declaring any one company better than another, variety is the spice of life among the big civil engineering firms when it comes to surveying and geospatial services.

SPECIALTY AND BOUTIQUE SHOPS

Is it appropriate to call a company with over $10 million in geospatial revenues "small?" That might meet some Census Bureau or other definitions for reporting, but when it comes to companies earning 100 percent of their revenues from surveying and geospatial services, that's probably a mid- to large-sized firm. In fact, a couple of these firms earn more geospatial revenue than their larger, multi-discipline counterparts.

Examples include Quantum Spatial Inc., which proudly trumpets its claim as the "largest, most technically advanced, full-service geospatial service provider." Timmons Group celebrates its formation over 60 years ago as an engineering and surveying firm, which it still is today. The aptly named Topographic Inc. claims registration in 20 states.

In addition to core competencies and multi-state operations, the *POB* Top 100 are also major users of new and developing geospatial technologies.

When *POB* launched the Top 100 Companies in 2015, companies reported their top geospatial revenue sources were boundary surveying, engineering design and topographic surveying. GIS and utilities surveying followed, and then 3D data acquisition and data management and 3D modeling.

Overlaying those responses with the companies' experience with various technologies yields an expected outcome. Top technologies employed include GPS, total

POB'S TOP COMPANIES

3DS	***	100%
Acklam, Inc.	**	
Aerial Services, Inc.	**	
Aero-Graphics, Inc.	**	100%
AES Consulting Engineers	**	
Albert A. Webb Associates	**	
All County Surveyors	**	100%
Amec Foster Wheeler	**	
Applied Field Data Systems, Inc.	**	100%
APS Survey & Mapping LLC	**	
Atlantic	**	100%
Avioimage Mapping Services, Inc.	***	100%
Ayres Associates	**	
Banning Engineering	**	
Baxter & Woodman	**	
Bechtel	*	
BL Companies	**	
BME Associates	**	
Bowman Consulting	*	
Brown & Phillips, Inc.	**	100%
BSC Group, Inc.	**	
Cardno, Inc.	*	
christopher consultants, ltd.	**	
Cinquini & Passarino, Inc.	**	100%
CivilSurv Design Group, Inc.	**	100%
Clark Land Surveying, Inc.	**	
Coast Surveying, Inc.	**	100%
Col-East, Inc.	**	100%
Consolidated Land Services, Inc.	**	
Dewberry	*	

FOOTNOTES

Source:	2016 *POB* Top 100 Study, July 2016 © 2016 BNP Media
*	Companies with over $10 million in land surveying, mapping, and geospatial revenues in calendar year 2015.
**	Companies with over $1 million, but under $10 million in land surveying, mapping, and geospatial revenues in calendar year 2015.
***	Companies with under $1 million in land surveying, mapping, and geospatial revenues in calendar year 2015.
100%	Companies with 100% of their revenues coming from land surveying, mapping, and geospatial services.

stations, magnetic locators, robotic survey equipment and data collector/controllers. Lasers – especially 3D scanners – fall a little further down the list. Aerial LiDAR and UAVs in general were less common but on the rise when it comes to technologies the companies expected to be using within the next five years.

The 2016 Top 100 companies questionnaires were in the field before the Federal Aviation Administration (FAA) issued revised rules for commercial UAV users. That said, the companies expected to see significant increases in use of aerial technologies. While just 14 percent of companies reported using UAVs in the 2015 study, 52 percent expected to be using them within five years.

As might be expected in just one year, the top technologies in use didn't change.

There is interesting movement in use of laser technologies and UAVs, however. In 2015, *POB* Top 100 companies reported the following use of some selected laser technologies currently or within the prior year: laser handheld scanners 38 percent, laser rotating level 30 percent, HDS 3D laser scanner 34 percent. UAVs were in use by 20 percent of the companies.

For 2016, each of these technologies were in increased use by *POB* Top 100 companies: laser handheld scanners 45 percent, laser rotating level 35 percent, HDS 3D laser scanner 45 percent. And, interestingly, UAVs were currently in use or had been used within the past year at 44 percent of the companies.

Comparisons need to be done cautiously, based on the different mix of companies answering the two studies, but a quick look at some other rapidly evolving or moderately established technologies (among them various forms of LiDAR) the story is the same.

From the perspective of mature technologies with widespread adoption (i.e. GPS), those technologies remain in use while the newer and maturing technologies appear to be joining them in the land surveyor's toolkit.

ON THE JOB

When it comes to getting the work done, crew sizes aren't increasing. The median average crew size is still two, and companies of all sizes don't vary much in that respect.

POB'S TOP COMPANIES

Direct Dimensions, Inc.	**	
Dokken Engineering	**	
DPK Consulting, LLC	**	100%
Engineering Design Source, Inc.	**	
Environmental Design International, Inc.	**	
Epic Scan	**	100%
EPS Group, Inc.	**	
Erdman Anthony Engineering Services	**	
ESP Associates, P.A.	*	100%
F3 & Associates	**	
Fagerman Technologies, Inc.	**	100%
Firmatek	**	
Frank Surveying Co, Inc.	**	100%
Gayron de Bruin Land Surveying and Engineering, PC	**	100%
GHD	*	
GPA Professional Land Surveyors	**	100%
GSC Surveying, Inc.	***	100%
Gustin, Cothern & Tucker, Inc.	**	
Heritage Surveying	**	
Hubbard Engineering	**	
Hyatt Survey Services, Inc.	**	100%
James W Sewall Company	**	
Javier E Bidot & Associates, PSC	**	100%
JPH Land Surveying, Inc.	**	100%
Kapur & Associates, Inc.	*	
KCI Technologies, Inc.	*	
Kennon Surveying Services, Inc.	**	100%
Keystone Aerial Surveys, Inc.	*	100%
KLJ	*	
KMA Consulting Engineers Inc.	**	
Landpoint	*	
Langan Engineering and Environmental Srevices, Inc.	*	
Larson Design Group	**	
LDSI, Inc.	**	100%
Lemke Land Surveying, LLC	**	
Lochsa Surveying	***	

Most of the work being done is in the private sector. This is true of large and small companies, though the type of work may be different for a company with 10 or fewer employees vs. a large company with 250 or more full-time employees. What's interesting is that all sizes of companies report low percentages of work for the federal government (6 percent for micro companies, 10 percent for small companies, and 13 percent for medium and large companies). Percentages on state government and local government work are also in narrow bands from smallest to largest companies.

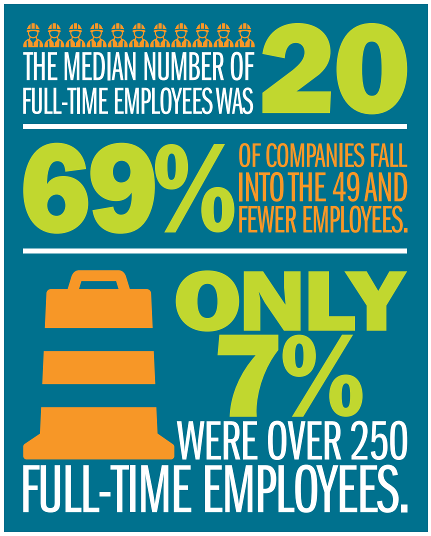
The volume of work certainly affects total geospatial revenues. Micro companies (with fewer than 10 employees) reported median geospatial-specific revenues of $362,500. For small companies (10 to 49 employees) that figure was $2.5 million. And medium and large companies reported $16.3 million in geospatial revenues.

NEXT STEPS

While the *POB* Top 100 is still in its start-up and growth phase, it has established a benchmarking process for identifying companies with significant land surveying mapping, and geospatial services capabilities. As more companies are identified and complete questionnaires in successive years, the volume of data represented will allow for more depth in the analysis of the profession and trends affecting companies, their use of technology and their growth.

One more goal of increased participation is to use the *POB* Top 100 database to examine trends in different segments. For instance, what can be learned from looking at those companies that report 100 percent of their revenues come from geospatial services? How does that differ from large, multi-discipline companies?

Ultimately, to move the *POB* Top 100 from an "interesting report" to a tool for the profession will require increasing involvement from those in the profession. If your company participated in the 2016 *POB* Top 100, thank you. If your company did not participate, please contact *POB* to be added to the distribution list for questionnaires for the 2017 *POB* Top 100. As the database grows, *POB* looks forward to providing not only more lists – Top Regional, Top 100 Percent Geospatial, etc. – but also greater insights and networking opportunities.



POB'S TOP COMPANIES

Maser Consulting P.A.	*	
McKim & Creed, Inc.	*	
Meridian Engineering, Inc.	**	
Metro Engineering & Surveying Co., Inc.	**	
Mott MacDonald	*	
Northwest Consultants, Inc.	**	
Parker Land Surveying, LLC.	**	100%
Pickett and Associates, Inc.	**	100%
PPG Industries	*	
Precision Measurements, Inc.	**	
Quantum Spatial, Inc.	*	100%
R&R Engineers - Surveyors, Inc.	**	
Rice Associates, Inc.	**	100%
Souder, Miller & Associates	**	
SPACECO, Inc.	**	
Spicer Group, Inc.	**	
Stantec	*	
Stouten Cramer, Inc.	**	100%
Surdex Corporation	*	
Syserco	*	
TerraSond Limited	*	100%
The Engineering Groupe, Inc.	**	
Timmons Group	*	100%
Topographic, Inc.	*	100%
Uintah Engineering & Land Surveying	*	
Wallace Montgomery & Associates	*	
Wantman Group, Inc.	*	
Wenck	**	
WestLAND Group, Inc.	**	
Westwood Professional Services	*	
White Shield, Inc.	**	
WHPacific, Inc.	*	
Williams Energy	*	
Wilson & Company	**	