

# The Need for Diversity in Surveying

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## ***Opportunity. Inclusion. Potential.***

These are just a few inspiring words that can sum up the benefits of diversity in the workplace.

Surveying has long been the domain of white men. But there are many other voices that are interested in having a seat at the surveying table.

Diversity is more than just an office that's made up of half men and half women. It's about cultivating talent across the social spectrum.

Anna, Hasmitha, Roxanne, and David are four surveyors who are proud to represent diversity in surveying. On a recent episode of the Geoholics Podcast, they teamed up to discuss the importance of prioritizing diversity in the surveying profession today.



## ***Diverse surveying voices***

Anna Rios is an RPLS and president Aerios Geo LLC in Georgetown, Texas. She's been in the surveying profession for nearly 20 years.

Hasmitha Rayasam was born in India and moved to the US to obtain her master's degree from Boston University in remote sensing and geospatial science. Hasmitha is a Project Scientist for Satelytics, in Perrysburg, Ohio .

Roxanne Nimmer is a professional survey and is currently semi-retired. She was the fourth native New Mexican female to be registered in the state. Surveying since the 1980s, she's seen much negativity and injustice through the years—but sees room for hope today.

David Acosta, also of New Mexico, is part-owner of a survey company called Construction Survey Technologies. Inc. (CSTi).

Each of the four surveyors identifies with a diverse group, such as female, Hispanic, Indian, or multiple labels. And each one believes in the positive power of further promoting diversity across the profession.

## ***The power of diverse perspectives***

Diversity isn't just a checkbox or a buzzword. It's an asset.

The more diverse perspectives that your company can offer, the better work you can do, and the more effectively you can complete complex projects and serve a diverse set of clients.

When a profession or a company is not diverse, it's the equivalent of not seizing its full potential.

"If we don't become diverse, we're just really bottle-necking who we are and also the path that somebody could take coming in," David said. "If we don't diversify, then we're just really pinching ourselves down to only being able to do specific things by specific people."

He recalled attending a meeting a year or so ago in Orlando for the NSPs chapter. Looking around the room, he quickly realized he was one of the few Latinos in the group.

It was a wake-up call to the important fact that when you don't see your image reflected in existing leadership, you feel like you don't have a viable pathway to success. And that's demoralizing.

Diverse leadership is important because the citizens of today are global citizens, and surveyors play an important role in land development, city planning, and landscaping.

"If all those spaces we live in are being studied and planned by men, it is obviously being designed for men," Hasmitha said.

She recalled seeing a picture of a woman with a baby stroller not being able to use a sidewalk under a flyover, because the stroller didn't fit in there. "She had to walk on the road, which also had cars passing by at really high speed," Hasmitha said.

A more diverse and inclusive approach would have taken a mother's experience into account, and perhaps lent to a more inclusive sidewalk design with the ramp.

According to Anna, diversity comes back to the idea of creating opportunity: most specifically, the opportunity to increase the stagnating surveying workforce.

"There's opportunity with diversity to bring new fresh ideas, new perspectives, creativity, open dialogue, solutions to all kinds of problems," Anna said. "When people with different backgrounds work together, they each bring their own experiences to the table and that can bring great value and opportunity to the profession."

We all know that we need more surveyors. It's possible that the profession can gain a lot of that missing workforce simply by reaching out to some of the underrepresented groups that may not have been introduced to surveying in the past.

## ***Overcoming gender stereotypes***

Diversity encompasses more than gender, but gender stereotypes are a big elephant in the room.

It's easy to assume that rampant gender stereotypes are a thing of the past, but that's simply not true.

In Arizona, less than 5% of registered surveyors are women.

Geoholics host Kent Groh recalled an episode of the podcast where two Arizona female surveyors were interviewed.

One of the women shared a recent phone call she took from a male caller. He said that he wanted to talk to the registered professional surveyor. She said: that's me. The man didn't believe her.

When Roxanne started surveying several decades ago, the field was almost purely made up of "grumpy old white men."

"It was a big struggle to try to get licensed. It was constantly having to prove myself. Pay differentials were huge between myself and a male just starting out. Back then, it's like, what can you do? There wasn't a lot of pathways. You either had a job, or you didn't."

Today it's progressively getting better, but Roxanne thinks it's still not where it needs to be.

Hasmitha has also experienced stereotyping firsthand. While studying geomatics and petroleum engineering in college, she was essentially told that field jobs were for men.

"We had a lot of oil and gas companies come in looking for geologists or field engineers. And they would just say, 'yeah, we're looking to hire five men to work on the rig.' It was just taken as a fact that women wouldn't be interested in this drilling opportunity or geologist opportunity," she said.

Hasmitha knew that a desk job wasn't her only option. But she felt like she had to fight for the opportunities that landed at the feet of the men around her.

In Anna's home base of Texas, only 3% of surveyors are female. In the past 20 years, only 15 new Texan women have been licensed.

Anna was supremely lucky in that the first person she worked for when she became a surveyor was the very first woman surveyor ever licensed in the state of Texas. It gave her the role model and inspiration she needed to keep going.

"That's where I got my inspiration. So I think when it comes to stereotypes, it's very important to create that visibility. Because I saw her as a surveyor. And because I saw her, I felt maybe this is something I can do," Anna said.

"It's important to realize how you treat people impacts whether or not they stick around in the career in surveying. We really can't afford to lose anybody," Anna said. "So if there's a woman that's working in the field, we need to be supportive and encouraging, and we need to understand their background and their differences and support that."

## ***Diversity starts with leadership***



If diversity inroads are going to happen in surveying, it's important that diversity is promoted from the top down.

Transformative change needs to begin with leadership. It will require changes in company culture, education, and accountability.

"If the leaders of the company are not following what they say and not implementing their goals and their values for the culture of their company, then they're going to run into problems," Anna said.

In surveying, it's all too easy to have a disconnect between the office and the field.

When disagreements often get hashed out in the field and away from view, it's hard to know what's happening. That's why it can be helpful to have

education surrounding diversity and inclusion.

"It's important to educate people that there are certain things that it's not helpful to say. And I think a lot of it is when you bring people with different backgrounds, sometimes individuals don't know what to say or how to say it. They say the wrong things and they hurt others feelings, or they make them feel less because they're different. But that individual may not know what they're saying is hurtful," Anna said.

When dialogue is kept open between employees, it can help keep a safe and inclusive company culture alive.

"If you're looking at a top-down approach, I do believe that the leaders of a company need to actively concentrate on inclusivity at each step, like for making space for women," Hasmitha said.

This starts at the hiring process, and continues through to the experience that women and minorities have once they are officially hired.

"I've been fortunate enough to work with a lot of different people from all over the world throughout my career. And you have to take into account that what you know and what they know are two different things," Roxanne said.

It all boils down to the importance of communication, and working in harmony with coworkers up and down the chain of command.

There have to be communication lines open in both directions: from the top-down, and also from the bottom up.

## ***The importance of outreach***

If we're going to achieve the goal of a more diverse and inclusive profession going forward, then we need to wrap that goal into our outreach efforts.

Anna is currently busy organizing the Woman's Surveyor Summit, while David is the NSPS diversity committee chair.

There is lots of positive movement and energy already happening within the surveying world. The challenge now is to keep that momentum moving forward.

David believes that the key lies in enhanced outreach to kids and teens.

"I've done a lot of outreach over the last two years from middle schools, high schools, colleges STEM nights, things of that nature. It's just a matter of getting out there and promoting surveying," he said. "It's a little intimidating sometimes to get started. But we just have to do it."

He described a recent middle school STEM event that he attended, where he noticed one of the parents eyeing his display table full of drones.

“He came over to talk to me, and it turns out he was wanting to get into surveying. He was already working for a surveying outfit, but he was wanting to pursue it more. So I was able to have a talk with him and get him to go sign up for some classes. So you never know who you're going to inspire,” David said.

Even if you're talking to a roomful of girls and women, the outreach is worth it. Is it any different than talking to a roomful of boy scouts? In both cases, it's likely that zero children in the room know what a surveyor is and what you do, until you tell them.

Hasmitha added that it would be helpful to reach out to university student groups that are already busy focusing on diversity. She currently is part of an organization called Graduate Women in Science and Engineering, which works to organize networking and outreach events on campus for undergrads and grad students.

“We invite professionals from the field to come and talk to us and help us learn. And I feel that if companies and women in leadership positions also actively reach out to us through maybe local universities or on LinkedIn, we could make this a two-way approach and increase diversity in STEM,” she said.

She also joked that if you want to gather a crowd, just organize an event that advertises free food.

All jokes aside, what's clear is that it's difficult for a profession to resonate with you when you feel like you're the only diverse person in the room.

Actively seeking out diversity, fostering inclusive workplaces, and conducting strategic outreach events should be on every surveying professional's radar.