Summer 2017

Cultivating the Technology Ecosystem: An Interview with Skip Newbury

Sheila Martin
Portland State University

Cultivating the technology ecosystem:

An interview with Skip Newbury

by Sheila Martin

Above: participants in TAO's Experience Oregon Tech event in Southern Willamette Valley. Photo by Athena Delene.
Above right: Skip Newbury.

Skip Newbury is President and CEO of the Technology Association of Oregon (TAO). He is a frequent speaker on technology trends and topics, economic development, public-private partnerships and civic innovation. Before joining the TAO, Skip served as an economic development policy advisor to Portland Mayor Sam Adams, where he helped create Portland's first comprehensive economic development strategy in 16 years, recognizing software as a key industry cluster.

Sheila: Please tell us about your role in the tech community in the Portland region.

Skip: The Technology Association of Oregon serves as a tech trade association for Oregon and Southwest Washington. We work with over 430 tech and tech-enabled companies. And by tech-enabled I mean companies that are using technology or developing technology in some interesting ways that drive innovation.

Our vision is to create a world class, inclusive innovation economy in the region that's powered by tech. We work with companies in several ways to create a vibrant technology community and add value to their business.

Our first focus is on the business, regulatory, and policy environment in which companies operate. That includes looking at the inputs to growth—primarily capital and people.

Second, we focus on the regulatory environment as it relates to technology development. And through that lens we evaluate a number of different policies and legislative initiatives and decide whether we want to get involved on behalf of the technology community.

The other thing that we do is connect companies and employees within the region through professional development. This involves supporting different communities of interest, or peer groups that are organized around different functional areas in a tech company. This is done in service of the larger goal of strengthening organizations. And to do so we need to be able to focus on individuals and then look at the ways that they work together within companies.

Our professional development is less focused on individual skills like communication skills or leadership training. TAO is more focused on training for different development methodologies, whether it's Agile or Waterfall or, we might talk about how companies address the inherent tension between IT and marketing—customer success versus development. How do you get them to come together? Are you compressing the chasm between the two? There's a lot of work that we do in that space.

We are operating five labs that are focused on areas where the technology industry locally is having an outsized impact on the region's economy. The labs are focused on providing the leadership to improve the overall environment and the competitiveness of the companies within it.

The labs engage in policy related initiatives or program design that helps inform and reinforce the events and programming. For example we've developed workforce initiatives where we've connected companies to faculty in a university that are interested in developing an internship program, and we've helped the companies connect with the university to figure out whether it makes sense to do an internship or align curricula or design a new program.

The five labs include cyber security; smart city, smart infrastructure; talent and culture; digital health; and augmented virtual reality and gaming.

We also have been doing a fair amount of the work you would expect an association to do—PR and storytelling. We provide visibility to the companies by describing their activities and the trends they are a part of.

One way to think of the TAO is that we focus on macro-level problems and macro-level solutions on behalf of companies as a collection. And some of what we do within that work is connecting companies that otherwise wouldn't know that the other exists. We provide a connection that helps companies and workers get out of their silos.

Sheila: We've been doing a series of articles about workforce issues. In the last issue we looked at the history of women in trades. And, in previous work we've looked at the diversity, or lack thereof, in a number of industries, especially what we call high opportunity occupations.

We're curious about the challenge that high tech companies face in Oregon regarding their employment needs. Can you tell us about some of the obstacles they face and how you're helping to address those?

Skip: Yes, we are focused on the need to fill positions that are available in tech. We recently completed an economic impact study of the industry since the recession. At the end of the recession we found that companies added about twenty thousand jobs in Oregon since the recession—a significant growth in that period of time.

The question is whether we are graduating sufficient numbers of, for example, computer science and engineering grads. Those new grads are not sufficient to meet the junior talent hiring needs of the companies—even if we assume that everyone who's graduating with a computer science or electrical engineering degree stays in the State, which is not true. A lot of them find employment elsewhere. So we're still a little bit short in terms of meeting the need presented by the increase in new jobs being created in tech.

And so, companies are doing two things to make up for the shortfalls. At a more senior level, companies may be, in some cases, poaching from one another, resulting in a zero sum game. But they're also importing talent, and right now Oregon is doing reasonably well on the talent importation. Just as, on a whole, Oregon was the number one place for people to move to, according to certain studies over the last three years in a row.

"...we focus on macro-level problems and macro-level solutions on behalf of companies as a collection."

"... right now Oregon is doing reasonably well on the talent importation."

There's also a demographic trend where a lot of the more mature tech hubs on the West Coast, like Silicon Valley for example, are overheating. It's becoming unaffordable, even for highly paid tech folks. And, they're looking at the quality of life they enjoy and they say, we think we can probably do better. And so there's been a bit of an exodus of tech talent to more affordable, more desirable places to live where there's still opportunities to either work remotely for Silicon Valley-based companies or there's enough local companies that are interesting career-wise where they're willing to make the leap.

There's still a pay differential between Portland and Silicon Valley, depending on the job. That differential can be as high as twenty to twenty-five percent. But even though Portland tech wages are lower, they can have stronger purchasing power when you take into account the higher quality of life and somewhat lower expenses for housing, food, travel, etcetera, than in the Bay area. What we're worried about beyond the near term is the population pressures and strained infrastructure here. Over time, if more isn't done to improve our infrastructure, whether its transportation systems or affordable housing stock, there is a chance that our quality of life, which is seemingly our competitive advantage right now relative to places like Silicon Valley, will start to erode and we'll become less competitive.

And similarly, we're also paying attention beyond the near term to things like migration trends. Longer term, most successful tech hubs have been able to grow their own talent base. And so, tech companies here are paying attention to the fact that they need to both have a focus on continuing to recruit people in, but also they can't ignore the need to create a local talent base looking at mid- and long-term opportunities.

Companies are also beginning to recognize the need to start pretty early on. You can intervene in high school with some success, but the earlier you intervene the better the chances of someone pursuing a career and getting the skills that they need as they move through the school system and then post-graduation into either community college, four year degrees, or directly into employment.

There's a number of different avenues. And companies are looking at how they can play a role in helping to influence peoples' career decisions earlier on. Part of that is inviting the students in and developing stronger relationships with local schools so that they can invite them into tech companies for tours or job shadow days, or sending employees from tech companies into the schools to do sessions. It's demystifying and making more accessible and human the idea of working in tech. So, there are some of those efforts underway.

There's also, I think, recognition on the part of the companies of the need to advocate for certain types of programs within higher education that can better prepare students to hit the ground running upon graduation. Also helping to advocate for more resources at the state level to help the universities to educate more students. The tech industry is starting to see some success nationally in the last four to five years of raising awareness around STEAM fields. This is especially important as the bulge of people coming through the K-12 system right now hits higher ed. This bulge of people coming through will be looking for opportunities to pursue degrees after high school. Are we going to be ready for that? Do we have the resources for public schools to do what needs to be done at the higher ed level? I think that's all a big question mark. And so, companies are starting to think about these things in ways that maybe they haven't in the past.

Tech companies are also becoming more aware of demographic shifts in the marketplace and the consumers of technology. This is not just happening in Oregon; it's a national phenomenon. And those trends are towards greater diversity. Companies recognize that their competitive advantage in the marketplace is all premised on the speed with which they can develop new products and then deploy them into the marketplace. But, with that speed there also has to be the calibration of their tech and their solutions with what the market wants.

And, to the extent companies are able to compress the time and the precision with which they're able to deliver solutions to the marketplace, they're going to be ahead of their competitors. That means they need people that understand a customer base and also have the

technical skills to develop the products that those customers want.

And so if you're a company that has a relatively homogenous development, customer support, and marketing workforce you're in trouble. Because you're not going to necessarily have the ability to anticipate and also recognize what the market needs. Companies are starting to look differently at design elements and user experience, and how people from a cultural standpoint approach technology. And so, even from a purely capitalistic standpoint, companies recognize that having a diverse workforce matters.

We are also aware of research that shows how diversity fosters innovation. Companies looking to stay ahead of the curve and ahead of their competitors are challenging themselves to promote more diversity in background, thought, leadership, and perspective, because it will generate innovation.

Many of these companies are under a lot of short-term pressure to provide a return to their venture capital investors. They are trying to grow as fast as they possibly can in as short a period of time as possible. And, they're trying to effectively fill positions with people who can hit the ground running immediately. And yet they recognize the medium- and short-term need to invest in diverse talent development. How do they reconcile that with their board and investors who are saying, no, no, forget about that. We'll worry about that later when we hit the next milestone. Instead focus on delivering on sales and product delivery. And you need people that can do this yesterday, so—

Sheila: Because having that narrow focus is what gets people pointed in the right direction and moving. But in the longer term it's the investment in talent development that will lead you toward that end, right?

Skip: It could. Yes, it could. And so, there's a couple of different competing schools of thought there. Like how soon can a company realistically focus on some of these longer term issues in a way that's meaningful and substantive without it being a drain on where they're trying to get in the short term.

And so what we've seen is that a lot of the larger companies have taken more of a leadership role. They've reached a certain threshold in their development and their size where they have some resources internally to devote to, for example, bringing on some more junior people than they could otherwise when they were younger and smaller.

Interns and apprentices require a fair amount of oversight. So, how big do you need to be before those junior hires, or interns or apprentices don't become a drag on your more senior people where you're trying to ship a product immediately? Where do you find the balance?

Sheila: So how does that overlap with the work that you do in supporting companies either with their own internal processes or with external policy issues?

Skip: We have a talent and culture lab that's right now looking at really a three part focus. They are companies that care about getting professionals in front of kids as early as they possibly can so that they can inspire them to pursue a tech related education and training and then careers. The secondary focus is filling positions today, and ensuring a strong environment in those companies.

The third objective of this talent and culture lab is to understand how to retain people over time and grow them within the company. That requires a culture that's welcoming and inclusive, and a structure that defines a clear career trajectory for people as they enter the company and then grow within. Are there resources you're able to provide in terms of training and educational opportunities while on the job?

And for smaller companies, and maybe even some medium-sized companies, what we're trying to do collectively as a community is look at things like apprenticeship programs and staffed internship programs where potentially there's a community resource that can help take the burden off of individual companies to have the infrastructure that they need internally to work more with some of the junior talent. And that way it becomes less of a drain on their more senior resources.

"... if you're a company that has a relatively homogenous development, customer support, and marketing workforce you're in trouble."

And we're serving a role in pulling together a variety of different resources and public sector entities and higher ed entities that are all trying to solve different pieces of the talent development continuum. We're minimizing the number of competing meetings and outreach efforts. We're helping to coordinate and align these different initiatives. And that is helping companies to see the full picture. So even if companies are not ready to commit to the full picture today, they are aware of the variety of resources available. We need to help support those too in the appropriate time. And, it's a way for us to provide more efficiency on the part of the companies.

Sheila: So do you have thoughts about the importance of international talent in the Portland region?

Skip: Yeah. We know that Oregon and the Portland region is one of the whitest mid-sized or large cities in America. And at the same time, though, we're starting to see greater diversity. I think for a long time now there have been some interesting anchor institutions, like Intel and Nike, that have attracted a more diverse and international workforce. And then you've got a number of other companies that are probably smaller and not quite as large a brand as those that also have a pretty diverse workforce.

Just look at Beaverton. It is one of the most diverse communities in Oregon. And that's a reflection in part of the large concentrations of companies that attract international talent. So there's definitely some great assets in the region already there. But I think there's also recognition that we need to do far more.

And if you look at the success that Boston has had as an economy, a regional economy, but also as a tech hub, it's in large part driven by the incredibly diverse—and in large part international—student body population that oftentimes chooses to stay there after graduation and to work there. And so if you look at things like rates of entrepreneurship there is evidence pointing to the important role that immigrant families play in that.

And so as we start to imagine the kind of a future we want to have here as a tech or innovation hub, it's important for us to think

about how we are attracting international students and professionals, and what we are doing to create a culture or a community that's welcoming and attractive over the long haul to them and to their families.

Sheila: What about the federal policy aspects of international immigration? Have you taken any positions on that?

Skip: Yeah. As an association we're part of a grassroots network of regional independent tech associations throughout the US and Canada. And we, as a collective group—fifty-four different regions and associations are part of it—decided to issue a statement, I think it was two days after the President's Executive Order on immigration just saying that we have concerns about this approach as an industry. I mean, tech relies—not just in Oregon, but in other markets too—heavily on people from all different backgrounds and nationalities.

And so making sure that we have a policy that is open and welcoming is not only part of what tech wants to see but I think a lot of the people that we talk to at the companies that we represent have this notion of the United States as a place where people who are at their company or founded their company came here because it was quote/unquote "the land of opportunity" and it was open. And for whatever reason they saw barriers in their own countries and saw this place as the one where they were going to make it. And I repeatedly hear that.

Just today I was talking to a startup founder who is still in the green card status. He said that he wouldn't have been able to get the opportunities that he's had just in the last year here with a startup if he were still in India. And so there's definitely concern—and that's putting it mildly in some cases—with the direction the Administration is going on immigration issues.

Sheila: Is there anything you'd like to add?

Skip: No. I think that sums it up. Thanks.

Sheila: Thank you for sharing your thoughts, Skip.