

# Arizona companies primed for growth as Phoenix becomes national semiconductor hub

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Getty Images; Thongchai Thapthong / EyeEm

Here's an example of a semiconductor wafer.

Just last week Intel announced a [\\$20 billion investment](#) to build two new semiconductor factories in Chandler and [last year](#) Taiwan Semiconductor Manufacturing Company announced plans to create a \$12 billion facility in Phoenix.

These international giants have garnered national attention, but Phoenix is home to many other semiconductor companies as well. NXP, ON Semiconductor, Microchip and Broadcom all have employees here.

These large chip-producing companies employ thousands themselves, but they can't do their work without support from ancillary support companies.

Take Pure Wafer, for example, the country's largest producer of silicon wafer reclaim products. Semiconductor fabs use hundreds of thousands of wafers each month, but not all of those wafers will be sliced up and used as computer chips.

Pure Wafer makes recycled "sacrificial wafers" used during machine testing and maintenance, which are essential in ensuring quality production of the final chips. The company is based in San Jose, California, but CEO Mark Borowicz said the company does its highest quality manufacturing at its Prescott facility.

Pure Wafer, which employs 250 people, works with TSMC, Intel, Nvidia and many others. Borowicz said the company has been growing steadily for years and the Covid-19 pandemic boosted business even more.

“Now with TSMC and Intel talking about adding factories in Arizona, that just steps it up even more for us. So we'll be looking at even doubling down on what we've been doing and growing even more.”

## **Big effort, small product**

Semiconductor fabs require technology that is sensitive on the scale of nanometers, far smaller than the width of a human hair.

That level of specificity means that all the components in and around the fabs need to be highly specialized. From air filters screening inbound air to the way that the protective "bunny suits" are cleaned, all aspects of the process need to be tightly controlled to ensure the microscopic elements of the computer chips are pristine.

Given the presence of so many semiconductor companies in the Valley, these specialized ancillary services are already here and they're primed for more business as TSMC hits the stage.

“You're gonna see a lot of the local businesses grow tremendously to support it. And I think you'll see other businesses coming in to support it,” Borowicz said. “I think it's thousands, if not tens of thousands, of jobs it'll bring in.”

Most semiconductor manufacturing happens in Asia, so Borowicz said it's natural to assume that some companies will expand internationally and come to Arizona; [Some TSMC suppliers](#) have already announced such plans.

## **Promoting local companies**

Last year Borowicz had the idea to promote local semiconductor service companies, like Pure Wafer, to TSMC directly.

“I think that's where Arizona can really show a lot of strength to TSMC, to go ‘You don't need to bring all these people from the outside. They're already here doing this, you just don't know, because you haven't been in the area.’ So I think that's still an opportunity for growth and strength for Arizona and pull that together.”

Borowicz said that he's been talking with the Arizona Commerce Authority about developing a list of local companies that TSMC could do business with.

The ACA did not immediately return a request for comment on this story.

“When you know all your vendors and you're gonna build another factory, they [TSMC] just pull from the same list,” Borowicz said. “In Arizona, they don't have that list to pull from. So, I think

it behooves the state to give them that list and say, 'Here's all the people that support the industry today. They can easily support you also.'”

Borowicz said Phoenix is becoming a technology hub for semiconductors, and companies will see greater economies of scale (and thus more reason to move here) as more businesses set up shop.

Another big name potentially slated to enter the Valley is Samsung, which is reportedly [considering sites](#) in Austin, Texas, Upstate New York and Goodyear for its new plant.

It is difficult to explain the minute scale at which semiconductor fabs operate, and it is similarly difficult to describe the massive economic impact that the semiconductor industry will have on Phoenix.

The fabs themselves will create [thousands of jobs](#), ancillary services will employ thousands more and all of those people will need places to live, places to eat, health care, roads to traverse and items that require computer chips to function.



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