

## Founders



### Orion Correa of Gecko Robotics, LLC

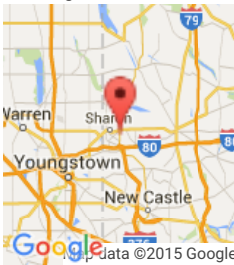
[Gecko Robotics](#), a startup that provides inspection services for boilers in power plants, helps coal-fired plants eliminate the forced outages caused by bursts in combustor tubes.

#### Company



[Gecko Robotics LLC](#)

[geckorobotics.org](http://geckorobotics.org)  
3580 Innovation Way  
Hermitage, PA 16148



The company actually got its start as a college engineering project. Two of the participating students, Orion Correa (originally from Seattle, Wash.) and Jake Loosarian (from western Pennsylvania), both electrical engineers, took the project and ran with it. They'll be bringing their services to market before the end of the year, and already have a customer lined up.

Traditionally, boiler inspections had to be done by power plant employees, climbing on scaffolding and risking injury. This cost time and increased liability issues. Gecko Robotics uses a climbing robot hooked up to a video camera and manipulated by technicians who stay safely on the ground.

#### What inspired you to found Gecko Robotics?

This was initially our senior engineering project -- myself and Jake and two others who were on our team. It had been an ongoing project from the mechanical (engineering) side for two years before us, sponsored by [Scrubgrass Generating Company in Kennerdell, Mercer County]. The company was looking for a robot that could climb up the boiler walls and take a camera up to look around for cracks or flaws, without having to set up scaffolding. The mechanical engineers had designed the system, and we went in and did all the electronics as part of our design project.


As we were going through that process and talking to different people, we realized that this could be a viable product. Jake and I decided we wanted to make a go of it, and spin off a company from this.

Right now, we're in the process of designing the next generation of the machine. The first will do the visual

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inspection; the second will do the thickness inspection using ultrasound technology.

### **How does the robot work?**

It uses magnets to hold on to the steel walls, and that gives us enough traction to use wheels to climb up. There's a tether that comes down to the base control station, and the user has a little joystick control box. The video signal from the robot comes down to a monitor in the control station. The user has another joystick for the camera, which is like a security camera. They can watch the video in real time.

### **Could this have other applications?**

It's widely applicable for different kinds of power plants, such as nuclear plants, or for cell phone tower inspections. For now, we're not pursuing these; that's for the future.

### **What resources did you take advantage of to get the business started?**

There is a program on entrepreneurship at our college called [VentureLab](#) [a collaboration between the Center for Entrepreneurship and Innovation at [Grove City College](#) and the Highmark Business Innovation Team]. We applied and got into the program, and were able to get some grant funding there, which allowed us to buy our initial tools and supplies and set up for the business. It also gave us contacts for legal advice, as well as business mentors.

We have a space in the [eCenter@LindenPointe](#) in Hermitage (about an hour northwest of Pittsburgh, near the Ohio border), which is part of the program.

[Ben Franklin Technology Partners of Central and Northern Pennsylvania](#) told us there was a seed investment grant for \$10,000 available, which was easier to get than the next level up. The \$10,000 was enough money to build a prototype of our next design, test it, and go prove the concept to a power plant, with data to back it up.

### **What has been the biggest challenge so far?**

The biggest challenge has been just the persistence to keep going. Every week there's a new problem or a new issue or something else to figure out or to teach myself.

### **Where are you at this point in your entrepreneurial journey?**

We officially founded the company in May 2013. We're still in the incubator, and it's just the two of us so far. We're going to be contracting with a robotics firm to build the prototype.

We hope to have this done by the end of April. We have an initial customer (Scrubgrass Generating Company). Then we need to market to other plants in the region. At some point, once we do inspections, we'll have to hire people to do that. If we manufacture in-house, then that would be another place where we'd hire people.

Our business model is more based on providing the inspection service. We'll probably continue contracting out for the manufacturing.

We'd like to be able to do inspections by next fall or spring, since those are the seasons for inspections.

**What is the big differentiator for your company?**

There are a number of people doing tank inspections. I haven't found anyone doing the exact same thing we're trying to do. As far as I can tell, the technology exists -- at least the component parts you need to integrate -- but I haven't found anyone who has put it all together and made it work.

*Writer: Susan L. Pena*

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