

# Transportation

The big picture problem is that we have an inherently unsustainable transportation system. So this challenge is an enormous opportunity to totally alter the way that we transport ourselves.

The transportation industry is moving towards the electrification of transportation. Wo it's just a matter of finding ways to plug the car into that electric grid.

*NARRATOR: As transportation systems expand and energy costs rise, the system has a greater and greater impact on the environment. Many creative people and companies are rising to the challenge of creating efficient transportation.*

## ***Electric Vehicles***

Arcimoto's mission is to build products that help shift to a sustainable transportation system. First product is a very efficient vehicle for everyday driving, not just a replacement for the car. We're actually creating a form that weighs less, much more aerodynamic, has less rolling resistance. So we gain both the benefit of the electric drive and a new form factor that's more efficient by design.

Many of the jobs are going to be the same between the conventional vehicle industry and the new electric vehicle industry. It's everything from design, engineering, product assembly and manufacture, assembly supervision, marketing, all the way through the creation of the product.

For students who are looking to get involved from a product creation point of view, there are a wide degree of skills that would be useful to have. A strong grasp of mathematics and physics, an understanding of mechanical dynamics, basic 3D modeling and design are all skills that would be useful.

I work with auto manufacturers and charging station manufacturers to get electric vehicle infrastructure out there so people can charge their electric cars. There are going to be a lot of different opportunities all the way from designing the charging stations to fabricating the parts that go in the charging stations to the people who are going to be putting those together and be installing them. So there's a lot of traditional jobs that are out there that are just going to have more opportunities for employment.

*NARRATOR: While it's crucial to make our individual cars more efficient, it's not enough. We will also need to make our mass transit systems more efficient, and more convenient.*

## ***Mass Transportation***

TriMet is a relatively large transit agency. We have about 650 buses and we also have about 120 light rail vehicles.

We do have a lot of opportunities to reduce our impact when our mechanics and our bus drivers and others really focus on how efficiently they run our buses and our light rail vehicles. We can save quite a lot of energy and reduce a lot of pollution.

We've seen a real growth in demand, and that means our system has to continue to grow. So we have a lot of need for more operators and more mechanics, people that help design how the system will continue to grow. There are a lot of jobs for construction and engineers, landscape architects and designers that can help to build that system out in a cost effective and environmentally sound way.

## ***Street Cars***

United Streetcar has fabricated the first modern, American-made car in more than 58 years. A streetcar runs on electricity. There's no emissions, so it's not fossil fuel dependent.

As the streetcar is implemented in different cities, you see a spectrum of jobs being created and those are local jobs.

As a project manager, I work with the mechanical design of the project. I do everything from procurement to testing, and help make it come together as a complete unit.

If you're interested in mechanical things, if you like to figure out how things work, mechanical engineering can open up a lot of doors. There's plenty of job opportunities in the U.S. coming up with green technology.

*NARRATOR: Electric vehicles and mass transit are only a sample of the industries within transportation. For us to meet the challenges our world faces, we will need innovation across all transportation systems, and there will be hundreds of thousands of green jobs for decades to come.*