

Future Vehicle Technologies

The Transportation Revolution

The series hybrid is not a new idea. At the age of twenty-five Ferdinand Porsche entered the 1900 Paris World Exhibition with his all-electric car. It was heralded as the "most innovative invention" of the show and consequently filled over 300 orders for his cars. This amazing car would routinely achieve a (staggering for the time) top speed of thirty-one mph. Since the motors were an in-wheel system, there was really no problem including a second set of motors in the back for the purposes of racing. He later added an on-board generator to another car to provide unlimited range. Unfortunately battery technology was limited, and the battery pack required for this vehicle weighed 1800 lbs. As a result, the internal combustion engine became the drive system of choice for the next 100 years. Gasoline was cheap, plentiful, and produced much less refuse than the horse and carriage!



Today, FVT wants to reenergize and modernize Porsche's twentieth century all-electric vehicle. We want to bring it into the twenty-first century as the future of transportation. Electric vehicles (EV) are environmentally friendly, fast, quiet, powerful, low maintenance, and inexpensive to operate. Electricity is the perfect power source as it is clean, renewable, and powerful.

The word *revolution* comes from the Latin *revolutio*, which means "a turnaround". It is a complete and irreversible change that occurs in a relatively short period of time. Revolutions are fueled by a frustration with the status quo, combined with a perceived opportunity to seize the moment and alter it. There is a revolution taking place in the transportation industry- particularly the automotive sector. A changing market, financial turmoil, peak oil and regulatory conditions have changed the automotive landscape. The auto industry currently uses over 45% of the world's oil supply. It is only a matter of very little time before we reach "peak oil" consumption. There will be no choice but to find a viable alternative to gasoline. Many companies want to believe this is just a phase or a fad. It isn't. New transportation innovations are coming and they are going to completely change the way the automobile impacts us and our world.

FVT is part of this revolution. We believe the reason the automobile has not fundamentally changed for decades is that no small North American company has been able to grow into a big carmaker in the past fifty years. Imagine what the computer industry would be like today if Wang, Data General and DEC were still the only manufacturers. North America desperately needs the inventors, the small groups of passionate people who push the envelope and bring disruptive innovations to the world. This industry needs a group of mavericks!

There are technologies today previously only available to large companies. Materials such as carbon fiber and Kevlar have become affordable and readily available. Specialty parts can be designed, molded, produced and delivered to the small companies like FVT with a 2 day turn-around. Cars can now be designed, engineered, and put through crash testing simulations using software. Technology is enabling small companies to compete in an industry dominated by large corporations.

The competition ranges from heavily funded Silicon Valley start-ups, to large established auto giants, to small groups of passionate enthusiasts. All are competing for a place in the new automotive order, but few have published results comparable to the eVaro's. Take a closer look under most electric car's hood and you will find very few companies producing electric drives and components for what will, arguably, be the world's largest industry. So although the public, the government and the environment are demanding electric cars only a handful of companies are working on solutions. FVT intends to not only bring unique vehicles to market, but to also bring new innovations.



It is FVT's intention to improve the lives of everyone in its footprint: employees, investors, suppliers, customers, supporting communities, and the planet. FVT sees this upcoming revolution as an opportunity to become leaders in the next generation of transportation solutions. We know the competition and we can help revolutionize them.

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