



**Name:** Voltaic Drive Systems  
**Sector:** Automotive Equipment Supplier (EVs)  
**Prototype:** Honda Accord with V-EV Drive Train  
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The global automotive industry is rapidly shifting away from traditional gas-powered vehicles and toward electric vehicles. The development costs associated with producing electric vehicles (EVs) prohibit many manufacturers from breaking into this market. Voltaic's novel solution, the Voltaic Electric Vehicle unit (V-EV), decreases the risk and expense involved in entering the electric vehicle market by creating a drive train that can be scaled to fit vehicles of any size.

## Enabling Electric Vehicles: The V-EV Solution

The V-EV system uses modular components that can be easily tailored to fit a car company's requirements. The V-EV has been engineered to replace the existing gas engine with minimal modification to the existing chassis, axle, suspension, and braking components. The V-EV system will be installed during the initial assembly process for the vehicle, allowing companies to easily produce electric versions of their popular models. In order to demonstrate the V-EV unit's viability, the Voltaic team has created a fully electric Honda Accord using a V-EV drive module. The fully functional EV will be debuted at the University of Washington Environmental Innovation Challenge to demonstrate both the engineering capabilities of Voltaic and our product's ease of implementation.



## Breaking into the EV Market with the V-EV

The V-EV will make it significantly easier for both U.S. and burgeoning overseas companies to enter the growing EV market. Rather than pouring money into research and capital costs, car companies can simply purchase a V-EV unit that meets their requirements and install it in existing vehicle models during the car assembly process. Due to its versatility, the V-EV is well-suited for a variety of domestic and international markets. Voltaic plans to focus on key EV markets that are projected to increase significantly in the coming years: the United States, China, and India. The US EV market is projected to see over 300% growth by 2020, compared to 7.3% in the traditional auto market. The Indian automobile market is the second fastest growing market in world, growing at nearly 30 percent this year. The Chinese government plans to spend roughly \$14.7 billion through 2020 to help domestic companies develop alternative-fuel vehicles, many of which are ideal customers for Voltaic. These three markets collectively produced roughly 41 million vehicles in 2010. By helping transform even a small fraction of these units into EV's, Voltaic will put many companies on the road to greener fleets.

## The Voltaic Advantage

	OUTSOURCED CUSTOM DRIVETRAIN	<b>VOLTAIC</b>	INTERNAL R&D
Modular Components		V	
Low Upfront Capital	V	V	
Upgradeable Parts		V	
Plug-in Hybrid Option	V	V	V
Mass Production Ready	V	V	V
Highly Scalable Design		V	

## Voltaic's Core Team

### Trevor Crain - M.S.M.E at UW, expected 2013

Trevor has been Voltaic's President and Founder since he helped develop the V-EV's predecessor in 2009.

### Rich Wurden - B.S.M.E at UW, expected 2011

Rich has experience designing electric sport motorcycles and has proven invaluable in the design process.

### Vivek Gowri - B.S.M.E at UW, expected 2011

Vivek serves as our auto industry analyst while providing support using his small business experience.

### Zach Lynch - B.A. Business at UW, expected 2011

Zach is our leading analyst for succeeding in a variety of international markets and product development.

### James Barger - B.S.M.E. & B.A. Business at UW, 2014

James is in charge of identifying and managing risks to Voltaic's business model along with financial modeling.

Voltaic has the ability to quickly and inexpensively adapt and deliver our modular drive system for a range of requirements. Among other benefits, the V-EV system also decreases initial capital risks companies encounter when introducing new, unproven technology. Our V-EV system costs 20 times less than outsourcing research and development and 5 times less than purchasing competing drive train models.