

Will the Evolution of Battery Power Create a Revolution in Brands?

By Dean Halverson – CEO, Leede Research

Think about how many batteries there are in your life. Phones, computers, tablets, power tools, outdoor equipment, even automobiles are powered by batteries. They get better every year and we are entering a new technology revolution that promises to extend the presence of batteries even further.

There is no arguing that the way we are using battery power is advancing every year. Is the rising demand based on better technology or is the better technology based on rising demand? Regardless of the drivers, the fact is that battery power has become a realistic and popular option in many categories of products. Will batteries fully replace other power options in the future? Have you thought about what this means for your products and services?



source: McKinsey Global Institute

Leede Research is fortunate to work with a variety of clients across both consumer and commercial categories, looking at the value of battery power and how it will change the future of many of the products we use every day. We are starting to see the competitive brands changing leaders that will evolve out of this significant shift in many categories of products. Battery power will not only change our lives, but it will also change the brand landscape as we know it, creating new winners and losers.

In this whitepaper we explore what changes in battery technology will mean in our daily lives, and the

significant impact it will have on the future of many categories of products in the not-so-distant future. It is a lesson in what happens when disruptive technology mainstreams and changes our lives, often without us even noticing it.

Disruptive Technology







We live in a time of unprecedented change and growth in technology. Very few categories of products and business can survive without looking to the future and using these advancements to keep them competitive and appealing to customers. Sometimes these changes are gradual, comfortable, incremental, allowing all to adapt over time. Occasionally, these advancements drive something called “disruptive technology”, which leap-frogs’ things to another level, with massive impact to existing structure.

Wikipedia notes this: “In business theory, a disruptive innovation is an innovation that creates a new market and value network and eventually disrupts an existing market and value network,

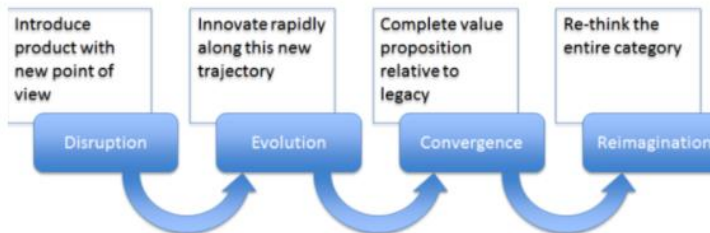
displacing established market-leading firms, products, and alliances.[2] The term was defined and first analyzed by the American scholar Clayton M. Christensen and his collaborators beginning in 1995,[3] and has been called the most influential business idea of the early 21st century.[4] ”

Battery power and the broader category of energy storage are advancing rapidly and several advancements in this area clearly have the potential to change the way we generate, store, and use energy to power things in our daily lives. Companies are working to create better batteries that are lighter,

more powerful, last longer and are made with sustainable materials. They promise phones that last a month on a single charge. Electric vehicles that recharge in less than an hour and can travel a thousand miles on a single charge. They will truly change the world as we know it.

	<ul style="list-style-type: none"> Advanced Lead acid batteries 	<ul style="list-style-type: none"> (+) Economical, cycle life, safety, recyclability (-) Low energy density
	<ul style="list-style-type: none"> Ni-MH Batteries 	<ul style="list-style-type: none"> (+) Reliability, cycle life, Safety, (-) Expensive of alloy and self discharge
	<ul style="list-style-type: none"> Lithium-ion batteries 	<ul style="list-style-type: none"> (+) High energy/power densities, cycle life (-) Expensive and safety, complexity in recycling process
	<ul style="list-style-type: none"> Flow Batteries 	<ul style="list-style-type: none"> (+) Flexibility in Design, Green chemistry (-) Lower energy density & Expensive, limited players
	<ul style="list-style-type: none"> Sodium sulfur batteries 	<ul style="list-style-type: none"> (+) Green technology, Cycle life, Economical (-) Operates at 300 °C (viable @25°C) & Very limited players
	<ul style="list-style-type: none"> Metal air Batteries 	<ul style="list-style-type: none"> Research and Developmental stage

Even without those disruptive changes, we are subtly and significantly changing the way we use battery power in the products we use as consumers. The interesting component of battery advancement is that batteries are or can be a core component of almost any product the requires some type of power source to operate. That can be electric, or fuel based.



source: Shane Wall

As we have seen in recent years, batteries are allowing us to cut the cord to the power outlet or replace the gas engine that required fuel and maintenance. This has changed the way we use the related products, increasing convenience, reducing weight and more. They address current and future environmental concerns, creating a cleaner and quieter environment.

Batteries do have issues. They may not run as long as their alternate power sources. This means we often need two batteries in ensure we can do the work we need. They also start to short-cycle over time requiring replacement. This has been a barrier to growth. This has improved with battery technology.

Consumer Evolution of Battery Power

While we may not realize it, all of us have participated in the evolution of battery power each time we purchased a product. Leede has conducted interviews with thousands of consumers regarding battery equipment. We have seen a very clear and understandable pattern of development and acceptance of battery power in our everyday lives.

First, some products, like our smartphones, tablets and laptops give us no choice but to use battery power. While our experience may be mixed with this power source, we have come to accept it and see the advancements in batteries as we update these items.

Another common thread in our personal evolution in battery power generally comes from using power tools. Most homes have a battery drill, screwdriver, or other similar tools. That ownership has impacted our impression of battery power, some positively and others not. We have learned though that 18V is better than 12V and 40V is better than 18V. We have also learned through this and our traditional purchase of batteries, that lithium-ion batteries are better and last longer than traditional versions. This base of experience is growing and slowly improving our impression of battery power in our daily lives. It is also leading us to purchase more tools in the category.

Another key step in the evolution identified by Leede's national consumer work is outdoor power equipment. As our experience and comfort increases, we become willing, even interested in battery versions of things like string trimmers, leaf blowers, even chainsaws. That experience is leading some to try battery walk-behind mowers and even riders. The concept of no noise, fuel, or maintenance is attractive to the right consumers. Outdoor Power Equipment is an exploding category, especially as batteries improve in power and durability.



We are also seeing battery technology tapping the growing trend of autonomous equipment, app controls and GPS locators to create lawn mowers that are basically like robotic vacuums for our lawns. While still in their infancy, these mowers hold the promise of labor free lawncare in some settings.



Another area developing quickly in the power equipment space is snowblowers. It started with small, single stage machines but is advancing with newer, more powerful batteries to two-stage machines. It is interesting to note that in many of these categories, it is not the existing brands leading the charge. It is upstarts focusing on battery power that are starting to put pressure on leading brands in many categories.

Batteries Powering Brands

As battery power continues to improve and expand in share, they are creating waves in the market that have begun quietly and are now getting noticed across many product categories. Who would have thought that after over 100 years there would be a new automotive brand that was not only successful but created a company and brand shown to be one of the most valuable in the world? Tesla went from a startup to a highly competitive automaker, who is leading the way in electric vehicles.



Tesla is one of the companies that are opening doors for other brands to be successful as the consumer acknowledges the potential for hybrids and electric vehicles of all kinds. They are also improving the image and increasing positive experiences with battery power. This is helping to drive change in other categories as well.

Battery power and battery options in products is a form of disruptive technology. It has cracked the armor of many top brands and allowed newcomers and new competition to enter categories they would not have had access to before. It has also created a unique pressure on existing brands to improve or adapt or risk being left behind by the consumer.

Battery power has also allowed for product and category expansion for peripheral brands. For example, traditional power tool makers are now leveraging their success and experience in battery powered tools to outdoor power tools with things like trimmers, leaf-blowers and even walk behind mowers. They have learned that their credibility with consumers allow them to enter new product categories based on experience and satisfaction with their traditional battery power tools.

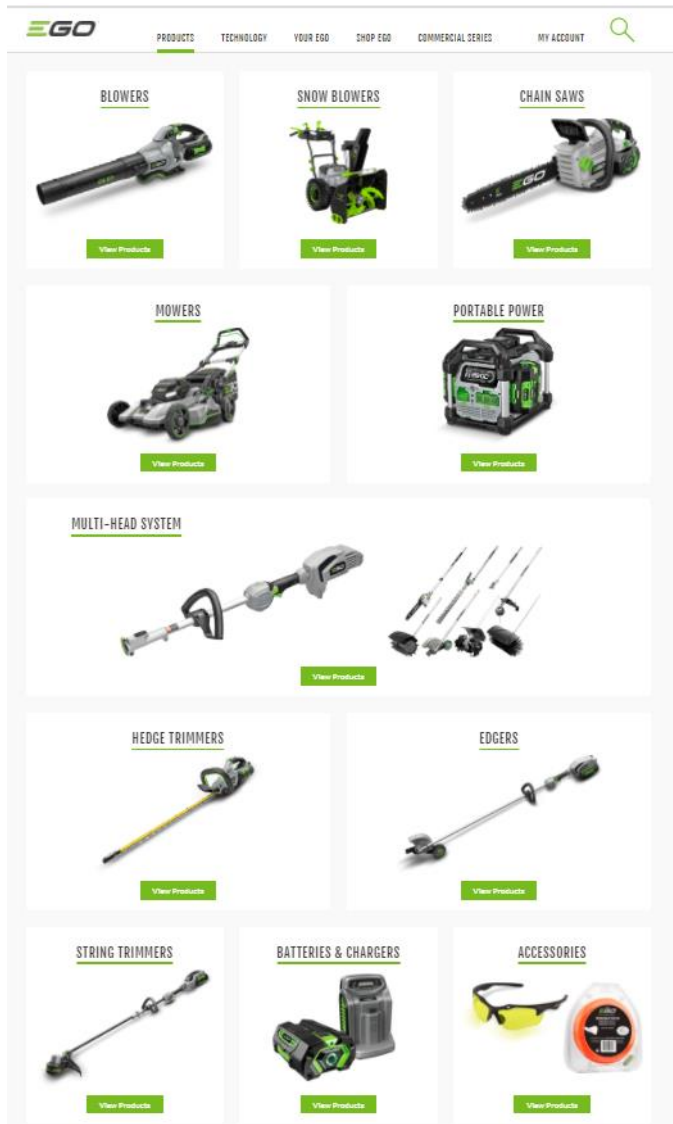


The entry of these new players will further fragment categories and put increasing pressure on category leaders to defend their position by adding their own battery lines.

Brands Changing Categories Forever

This once subtle evolution of products and brands is now creating a revolution in some businesses and categories that are likely to drive permanent change. Beyond competition from tertiary brands, there are

new brand evolving focused solely on battery powered tools and equipment. Just like Tesla provided disruptive to the auto industry, these brands are providing to be disruptive in traditional spaces with outdoor equipment. EGO is one of the leaders in this new space and have now generated major distribution channels allowing them to expand their reach and get in front of consumers make product decisions.



Other brands in this space include Snow Joe, Worx, and Greenworks, who have found success in offering multiple tools that can share common batteries and charging. As the consumer decides that battery power makes sense for their product needs, these brands are gaining strength.



They will compete with many successful brands in the related space who are now also developing battery power and options to better compete in a future that could see the end of the combustion engine in our lifetime. This disruptive technology will change the brand landscape for years to come. Those that adapt will survive, while others could be left behinds.

Navigating Uncharted Territory Requires a Strong Partner

Leede Research has the experience and tools necessary to help clients compete in this brave new world. Over half our annual volume ties to the development space. We work in product and service development. We help clients in packaging, marketing communications, displays and branding. This includes extensive work on the outdoor power equipment space.

Leede is an online panel expert with access to over 19 million consumer households and B2B panels in 38 countries. We know how to reach key audiences, and have even built our own proprietary Landscaper Panel, to give our clients better information from the commercial marketplace. We are full-service with both quantitative and qualitative tools and services. We are a national leader in Usability, helping clients with product, website, and app functionality. We welcome the opportunity to discuss how we can be a partner in your information future.

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