



For you and other retailers with facilities like yours, there exists an opportunity to lead when it comes to overall energy efficiency. And like you've learned with your recent upgrade to LED lighting, it's a challenge that can be seized for the betterment of your space and for the more efficient operation of your business overall. Your role doesn't stop with lighting, and it doesn't stop with today's technology. As the rapid evolution of LED has demonstrated, new technologies for efficiency are perpetually cropping up. So what's on the horizon?

Five Things to Know About the Connected Future

By Jim Carroll

When it comes to acceleration, we live in one of the most fascinating periods in history, where the rate of technology change is absolutely staggering.

So what trends are driving this acceleration, and how are smart businesses adapting to not only survive but thrive in an ever-connected world? Read on to learn Five Things to Know About the Connected Future—and how you can stay ahead.

Five Things to Know About the Connected Future (cont'd)

1 | Acceleration: Today is the slowest day of technology change for the rest of your life.

Bill Gates once observed that most people tend to overestimate the rate of change that's going to occur in a two-year basis, but underestimate the rate of change that will occur in a 10-year basis. A few years ago I used to speak about 3D printing as if it were science fiction. Now, it's part of many businesses' day-to-day operations.

In the not-so-distant future, we will likely have connectivity in cars that researches 3-bedroom, 2-bath homes for sale in your neighborhood, and then drives you directly to each house for a tour. We already have augmented reality displays built into ski visors and goggles that tell you, in real-time, how fast and far you've skied—this same technology will be integrated into automobiles in the not-too-distant future.

It's important to be ready for this acceleration. Your opportunity in dealing with this is continuing to ingest new ideas, new technologies and new methodologies to solve problems.

2 | Hyper-Connectivity... and endless possibilities.

Every industry is set to be transformed as an era of hyper-connectivity becomes the new norm. The result? Massive business model disruption; industries in which customers empowered with mobile devices control a wide variety of other devices that are a part of their daily lives; unique opportunities for deep analytical insight into trends and opportunities emerging in industries; and a reinvention of manufacturing, logistics, retail, healthcare and other industries because of consumers who are empowered, connected and enabled with a new form of lifestyle management that we've never witnessed before.

Every device that is part of our daily life is becoming plugged into the Internet. We are becoming aware of its location and its status. And while this has been a trend for a while, it is today's businesses that are primed to turn this momentum into big wins.

By the year 2020, there will be more than 50 billion devices connected to the Internet. That's roughly six devices per person.

The Internet of Things is happening everywhere; it is real, and it is unfolding at a blistering pace. We're in the era of connected thermostats that link to an intelligent energy grid; autonomous vehicle technology that is self-aware and networked into sophisticated, intelligent highway flow control systems; a connected trucking fleet that is self-diagnostic, predictive and built for zero downtime.

We have scales that record our body mass index, transmit it to a password-protected website and create custom charts on our health. We have ceiling fans that will slow down when owners go to sleep. We have barbeques that send us text messages when the meat needs to be flipped.

These are staggering trends, and what it means is the possibilities are endless for growth and innovation.

3 | Momentum and the potential for big wins.

When it comes to lighting, we're in the era of revolutionary new opportunities. The potential for significant efficiency and cost savings through deep analytical insight into usage patterns and detailed, specific-spot addressability and management is real.

New LED technologies change our very concept of lighting and individual addressability as the level of the light bulb leads us to an era that is unlike anything we've ever known. Consider these statistics:

- Right now, lighting accounts for 12–15 percent of annual global power consumption, creating 1.7 billion tons of CO₂ emissions per year.
- According to the International Energy Agency, improving lighting efficiency by 20 percent can reduce total power consumption by 3.8 percent and cut total CO₂ emissions by 0.8 percent.
- According to industry reports, the global LED lighting market is expected to grow from \$7 billion in 2010 to \$40 billion in 2016.

There is so much momentum behind these changes because the potential for big wins is huge.

4 | The next generation.

Today's younger generation—those under age 25—have never known a world without a mobile device that lets them access incredible amounts of information at their fingertips. They are globally wired, entrepreneurial, collaborative... and they thrive on change.

Gone are the days of MS DOS copy and computer courses like COBOL. This generational trend is crucial to businesses that need to communicate with customers and employees who are used to receiving information in vastly different ways. Additionally, this generation is starting to drive rapid business model change and industry transformation as they move into executive positions.

According to author Cathy Davidson, 65 percent of children today will work in a career that doesn't yet exist. Think about titles like "water usage audit analysts," "energyusage audit architects" and "location intelligence professionals." We are at the forefront of a remarkable time in history as the next generation uses connectivity to advance some of the biggest energy successes.

5 | The future belongs to those who are fast.

As new technology, intelligent lighting and infrastructure emerge, the key phrase businesses need to remember is to Think Big, Start Small and Scale Fast. Take on a small-scale, experimental project in your municipality, industrial location or retail store. Test out a new technology with a target group of customers.

By starting small and learning to scale fast, you can adopt an innovation mantra and build a business plan that leads to success.

About the Author:

Jim Carroll is one of the world's leading international futurists, trends and innovation experts, with a client list that ranges from Northrop Grumman to Johnson & Johnson; the Swiss Innovation Forum to the National Australia Bank; the Walt Disney Organization to NASA. His focus is on helping to transform growth-oriented organizations into high-velocity innovation heroes. Jim has operated J.A. Carroll Consulting since October 1990 and has authored numerous books, including "The Future Belongs to Those Who Are Fast." For more information, visit www.jimcarroll.com.