The Great Convergence of data science and the utility industry is near

By Tom Martin
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I have a question for your consideration. How long will it take before the incremental gains utilities are making today using data science snowball into something radically better—something that not only moves the needle but changes the game altogether?

Data science and utilities: The Great Convergence is near

It won't be long before the proven benefits of data science are part of the narrative uniting all utilities in their quest to become more environmentally responsible and reliable.

Read more in Tom's article Data Science and Utilities: The Great Convergence is Near, published by T&D World.

Read the article

Based on the groundbreaking work I've seen E Source do with utilities across the US and Canada, and the sentiments expressed by utility executives at our latest summit, I would say we're quickly approaching that tipping point (at least on the grid operations side) where data science becomes the invisible driver of *every* operating decision.

Through a data-science-based approach called risk-spend efficiency, it's now possible for a utility to ask—and answer with certainty—the question, Where can I get the biggest bang for my buck for every million dollars in my O&M or capital expenditure budget?

Really? Yes!

Accurately measure the financial, reliability, and service impacts of every dollar

spent with data science

Over the last five years, we've built the platform, applications, and know-how that enable utilities to do granular scenario planning on a precise digital replica of their grid to measure the financial, reliability, and service impacts of every dollar they spend to maintain it. It's worth noting that we've developed a similar approach to optimizing customer engagement—one that's fundamentally different from anything else in the industry—called Audience of One, but that will have to wait for another post.

At its heart, this approach builds on something we've learned over time: the data and algorithms needed to solve a vegetation management optimization question are very similar to those needed to optimally place avian guards or underground wires across the grid. This commonality has led some of our most successful clients to move quickly from standing up 1 data science project to 2, then 4, then 16, building game-changing momentum—and results that impact service levels, reliability, and the bottom line—with every success.

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Once the foundation of the digital replica is in place, the variety of algorithms needed to optimize activity on that replica—then on your physical grid—are either readily available, readily configurable, or ready to be developed quickly based on the need.

Nearly every utility now has at least one data science line in the water—now start catching fish by the boatful

This is where the "it takes two" concept I wrote about previously becomes incredibly valuable. E Source certainly hasn't built every possible data science solution that every utility might need, but once a utility has brought in some of our tried-and-true solutions around vegetation, storm, capital optimization—you name it—and laid the foundation for how data-driven decision-making can support the organization more broadly, then internal analytics teams can start rapidly building additional use cases on top of that risk-spend efficiency approach.

I call this rapid and exponential increase in the use and usefulness of data science the Great Convergence. Its impending approach—if not every nuance of its application and impact—is as inevitable and transformative as the Industrial and Mobile Revolutions of the last two centuries.

Ready to get to know data science better?

Fill out this short form to start a conversation about your needs and how we can help.

That may seem like a big claim, but the utility industry is at its heart an industry of fast followers. Once something works, resistance to it falls. Nearly every utility now has at least one data science line in the water. Many are catching fish. Some are now catching fish by the boatful.

It won't be long before this bounty—the *proven* benefits of data science—is part of the narrative uniting

all utilities in their quest to becoming more environmentally responsible, reliable, and equitable on their journey to becoming the Sustainable Utility. Data science and, by extension, AI are here today for utilities, and there isn't a downside to the improvements they'll drive.

The story doesn't end there! Check out my article Data Science and Utilities: The Great Convergence is Near, published by T&D World, for even more information.
