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THE ENGINEERING SOCIETY OF DETROIT

Spring 2024

FEATURE



URBAN SCIENCE®

Harnessing Vast Data for EV Success

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from U.P. Wins
Future City

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The Roots and
Realities of Artificial
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AI Technology
in Sports, Arts and
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Volunteer judges learned about middle schooler's cities of the future at the Future City Competition in January. See page 15.

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URBAN SCIENCE®

From Dots on a Map... to Guiding Short- and Long-Term EV Success

Urban Science harnesses unrivaled data, scientific approach to anticipate the future and ground high-stakes decisions in confidence.

Data. It is everywhere, and it can be overwhelming—particularly in the fast-moving automotive industry, which is evolving faster than ever. But when data is meshed with proven scientific processes and methodologies, and industry expertise gained over more than 40 years—as it is at Detroit-based Urban Science—it can be transformative.

Urban Science is a leading automotive consultancy and technology firm that serves automotive original equipment manufacturers (OEMs) and dealers—and the advertising technology companies that support them. Headquartered in Detroit and operating in 21 office locations worldwide, the company taps the power of science—and its unrivaled data, solution offerings, and industry expertise—to provide clients the tools to make decisions with confidence in even the most chaotic market conditions. It's the only company with industry sales data that's updated daily to help its clients achieve confident, quick, decisive decision-making.

It All Began with Dots on a Map

In 1977, Urban Science founder and CEO Jim Anderson was determined to solve a mission-critical challenge for Cadillac Automotive Company. The company's leadership wanted to identify 37,000 car buyers in Chicago on a map.

Right: CEO Jim Anderson, who founded Urban Science in 1977.



“A fact in itself is nothing. It is valuable only for the idea attached to it, or for the proof which it furnishes.” — Claude Bernard

At the time, it could only be done manually with push pins. Anderson instead pioneered a science-driven process, which started with the invention of computer-generated dot mapping. With that invention, he founded Urban Science to deliver the solution to the car manufacturer, and a retail network planning revolution was born.

Urban Science grew from this innovative approach, which focuses on optimizing the number and location of retail outlets to drive efficiency and profitability across an automaker’s retail footprint. One man and one computer expanded to more than 800 employees in 21 offices spanning the globe, and an enterprise with deep long-term relationships with nearly every OEM globally. Anderson’s invention of computer dot mapping and modern network planning proved once again that science could solve previously unsolvable problems.

“What Jim managed to solve was a conundrum that absorbed a lot of OEMs’ time—working out a system to pinpoint where they were selling the most vehicles consistently, and making sure their dealers were where they were needed,” said Simon Bradley, Global Practice Director-Network, at Urban Science. “Until then, at OEMs, an employee painstakingly placed pins on a map one by one to show where sales were occurring. Urban Science—located in the heart of Detroit—was one of the first companies, if not the first, to put dots—and data—on a map electronically.”

“This sounds so simple but it was revolutionary in introducing spatial (mapping) analysis to the automotive industry and the broader retail space,” he said.

What They Do with the “Dots”...

Fast forward to 2024, and Urban Science is still a leader in utilizing science-driven insights to help companies enhance their performance and efficiency and identify new challenges and opportunities they may not have seen otherwise. This includes working with each of the major OEMs across the globe to enhance an OEM’s retail network planning and competitiveness, and dealership performance; helping dealers sell more vehicles and eliminate waste in their processes; and empowering

automotive marketers to optimize their media spends, to name a few.

Urban Science excels in harnessing the power of its unrivaled data and scientific approach to uncover valuable insights, but that’s only part of what makes this firm unique. It combines these elements—unique in their own respects—with deep industry expertise to solve complex business challenges now and in the future.

Bradley explained that Urban Science validates and analyzes all data gathered to deeply understand consumer sales and service behavior and create corrective network actions. “We want to ensure customers stay brand loyal, leading to aftersales opportunities and repeat purchases,” he said. “One way of delivering this is to ensure convenience is not a barrier or an obstacle to achieving that goal.”

That loyalty can also be achieved in terms of automotive repair. Service departments are a primary source of dealership profit and drive customer loyalty—leading to improved vehicle sales and higher dealer performance levels. Urban Science delivers solutions that identify and analyze key service metrics to build an accurate picture of performance across the aftersales network and empower dealers to win more opportunities in their regions.

Driving Success, Long Term

In addition to Urban Science’s data and technology solutions, the company delivers consultancy services through its team of automotive business scientists to guide clients to enhanced operations across their enterprises. The company’s experts collaborate with each client to help them develop tailored strategies that ensure the seamless integration of data analytics and science-driven insights and consulting into the client’s operations.

Urban Science’s approach is proving to be as valuable as ever as OEMs evaluate high-stakes decisions in a quickly evolving global marketplace.

“As the world continues to become smaller and global and domestic firms evaluate expansion opportunities, one of the most daunting prospects is entering a new country and accurately ascertaining the cost and potential success in that location,” Bradley said. “They have to ask, ‘how successful will we be if we build a retail network given the return on investment for entry into a country is measured in decades.’ We look at the scope of opportunity first. We ascertain which vehicles and segments they plan to sell and then assess the demand for those offerings at a granular level. This provides the critical blueprint for



Simon Bradley



location priority, considering sales volume potential, unit allocation, and importantly, network growth, among other critical factors that can make or break a new venture.”

U.S. market forecasting is similar.

“Preferences vary so much across the United States—you’ve got metro and rural needs, East and West Coast, Midwest, you name it. It’s essential to use science—no speculation—to properly quantify market potential,” he said. “Once we’ve done that, we understand which markets are a priority and build action plans accordingly.”

The future is always at the forefront of planning.

“We don’t just look at the here and now. We say, ‘Today you are here; in five years, you will want to be here; in 10 years, you will want to expand to be in these locations. We leave the markets with enough space to grow the brand to expectations,’” Bradley said.

Predicting the Future Amid the EV Revolution

It is difficult to look at the future of the automotive industry and not think about electric vehicles (EVs). Staying ahead of the curve in the shift towards EVs is crucial for manufacturers and dealers.

The company’s commitment to innovation is evident in its continuous exploration of new technologies. Urban Science embraces artificial intelligence, machine learning, and advanced analytics to stay ahead of industry trends like EV. This forward-thinking approach ensures clients are prepared—at the network and dealership levels—to address consumer preferences and needs, which continue to shift drastically as the EV future materializes.

In recent years, Bradley said, places like San Diego and the Seattle-Tacoma market have seen substantial increases in retail EV market share. But other hotbeds have emerged as well; while EV adoption surges in these areas may surprise many, Urban Science accurately forecasted these trends ahead of their electrification ascents.

“Even states like North Carolina and Texas, where many wouldn’t expect steep adoption curves, are witnessing impressive growth, with markets like Charlotte, Dallas, and Houston showing the highest growth percentages, with over 50% EV share growth last year,” he explained. “This trend transcends regional boundaries and includes diverse demographics, indicating the widespread appeal of EVs. Urban Science can predict consumer trends, giving clients a crystal ball—with up to 98% accuracy—to find their current and future EV customers.”

“With electrification, that planning horizon of 10 years now becomes ever more important. Through our unrivaled industry sales data and proven science-driven approach, we understand where pay dirt is for OEMs and dealers, and we help them get—and stay—there.” Bradley said.

Thomas L. Kondrat, Advanced Analytics Global Lead, said current trends in EV adoption mirror those we’ve seen before.

“Technology adoption happens as a social process over time. Geographically, we see clearly formed patterns in the geographic adoption of electric vehicles,” he said. “But this isn’t new. When you look at the auto industry’s past, for example, the Ford Model T, Ford started its production in 1908. By the 1930s, about 50 percent of the country had adopted the automobile, but for about 20 years after that, adoption rates stagnated and it wasn’t until the 1950s we finally passed 60 percent adoption. When infrastructure investment came in, the convenience of the automobile increased, and we saw adoption progress.”



Thomas Kondrat



A similar process will likely happen with EV, Kondrat said, emphasizing the analysis of watching consumer interest grow, infrastructure establishment happen, and convenience and decreasing cost all meld together.

“We study these things—product availability, consumer awareness, and how technology can make people’s lives easier and more convenient,” he said.

Bradley said convenience to charging stations will be necessary for some—like people who live in apartments—who will need increased confidence that they will always have a place to charge their EV conveniently and securely.

“The dealerships should have an assessment of their local landscape to understand the unique charging needs of their customers,” he said.

“They may have to consider how, as a dealer, they make home installation easy or how they can work with the local municipality to install public charging that will benefit those customers who will depend on access to safe, reliable, affordable charging.”

Randall Tallerico, Chief Marketing Officer at Urban Science, said this type of long-term forecasting and diligence solidifies the ongoing relationships the company has forged with clients over many years.

“Our clients have a sense of confidence knowing there’s a scientific process and proven approach behind our EV forecasting capabilities,” Tallerico said. “Jim (Anderson) knew early on that we needed a standardized scientific process to perform rigorous, accurate and repeatable market analysis. That’s what Urban Science created, and it continues to guide our clients to business certainty more than 40 years later.”



Randall Tallerico

Future Outlook

As Urban Science continues to evolve—and help clients thrive—in the rapidly changing automotive landscape, its future outlook remains promising. The company’s emphasis on innovation, global collaboration, and social responsibility positions it as a leader in the dynamic field of automotive consulting and technology.

In addition to its well-established portfolios of OEM solutions, the company also offers direct-to-dealer solutions, including the capability to tap the power of the company’s unrivaled data to help dealers identify leads lost to same- and competitive-brand stores on a daily basis. The result: no more time spent pursuing leads that are no longer in the market. This offering is an industry first (and only) and a must-have in any dealership’s technology arsenal.

In the advertising technology space, Urban Science leverages the power of its data to help automotive marketers target vehicle shoppers more precisely and effectively by empowering them to better understand who’s in the market, and of those potential customers, which are predicted to buy the vehicle they’re selling. Urban Science also empowers marketers to tie those campaign touchpoints back to the metric that matters most: vehicle sales—all in near real time.

“We’re proud to say we are a global company headquartered in Detroit. All our technology, which has led the auto industry through many evolutions and revolutions, has come from here—in Detroit.” said Tallerico. “This is becoming a tech town, and we’re competing with Silicon Valley. This all started in the late 70s with a single computer. Since then, there have been maybe two or three companies in the world that even consider geographic information systems or mapping analysis as part of their repertoire. Urban Science is one of the pioneers and leaders in this space.”

Visit UrbanScience.com for more information about the company and its offerings to OEM, dealers and advertising technology clients.