



INNOVATION RESEARCH
INTERCHANGE

Accelerating Value Creation

The Innovation Challenge to Advantage Series

Catching Up with Dr. T. Edwin Freeman

Profile: 2026 Innovation Research Interchange Innovation Leadership Award

When Dr. T. Edwin Freeman was in 4th grade, he conducted one of his first science experiments. Growing up near his father's natural rubber farm in Liberia, he used lemon juice to coagulate natural latex. It was a small moment of discovery, but one that foreshadowed a career of turning curiosity into breakthroughs and questions into solutions.

The recipient of the 2026 Innovation Research Interchange Innovation Leadership Award, Edwin's work reflects a combination of deep technical expertise and human-centered leadership from pioneering sustainable packaging technologies at Mars to co-founding a STEAM-focused school in Liberia.



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**— T. Edwin Freeman, Ph.D., Technical
Fellow, Sustainable Materials and
Technologies, Mars**

As a globally respected technical leader in advanced material science and sustainable packaging, Edwin transformed how organizations think about fiberization, circular materials, and greenhouse gas reduction. His work developing technology platforms for the transition from conventional polyolefin packaging to fiber-based alternatives has helped establish new pathways for sustainable packaging innovation, elevating packaging into a strategic innovation capability.

Behind Edwin's technical achievements is a perspective on sustainability that was shaped long before the term became commonplace in corporate strategies. In Liberia, Edwin grew up in a culture where resourcefulness was woven into everyday life. Nothing was thrown away before it had served its purpose, and people routinely found creative ways to maximize the value of available resources. Those experiences planted the seeds for a career devoted to materials science and, ultimately, to developing more sustainable solutions for industry.

At the core of Dr. Edwin Freeman's leadership are 5 key principles:

1. Connecting scientific insight to tangible business outcomes:

Beyond Edwin's significant technical accomplishments, he mentors emerging scientists and helps them navigate the intersection of science and business. He provides invaluable insights into how organizations assess risk, allocate resources, manage timelines, and evaluate return on investment.

His message is consistent: great science and strong business outcomes are not competing objectives. Successful innovation requires both. "Scientists have to show a connection between science and business," he emphasizes. "They must have a line of sight and be open and honest."

2. Creating conditions for collaborations and better ideas:

Edwin has built extensive partnerships with universities, research institutions, industry consortiums, and start-ups to accelerate breakthroughs in materials science and sustainable packaging. Underlying these efforts is a fundamental belief that breakthrough innovation cannot happen in isolation; it requires diverse perspectives, shared learning, and strong relationships built on mutual respect and trust.

In his work, Edwin emphasizes psychological safety and open dialogue as essential ingredients for innovation. He encourages team members to challenge assumptions, contribute ideas, and engage in constructive debate. Whether in peer reviews, technical discussions, or project meetings, he works intentionally to ensure every voice is heard. “For me, being intentional about building relationships starts with curiosity and respect for different people and what they bring to the table,” Edwin says. Through this approach, Edwin has cultivated a leadership style that empowers individuals, strengthens collaboration, and creates the conditions for innovation to flourish.

This approach shapes how teams operate:

- Dissent is expected, not avoided.
- Early-stage ideas are surfaced without fear of criticism.
- Peer discussions become opportunities to test and refine thinking.

3. Tailoring scientific messaging without losing rigor:

Edwin believes that even the most groundbreaking scientific breakthrough will struggle to gain traction if its value cannot be communicated effectively to decision-makers. Helping researchers tailor their message to different audiences without sacrificing scientific rigor is one of his signature leadership strengths. “If you can't explain the brilliance of your science to a business leader or an outside partner, the impact of that science may end up being trapped in the lab forever.”

4. Expanding perspective through systems thinking:

For emerging leaders, Edwin emphasizes systems thinking. He often advises scientists to leave the laboratory and experience the broader systems their innovations are intended to influence. “I encourage scientists to see the whole value chain when they are trying to find a solution so they can understand the impacts of their choices” Edwin explains. Leadership is not simply about finding the correct technical answer; it is about understanding the broader consequences of that answer and helping others see them as well.

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5. Extending impact and creating opportunities beyond the workspace:

In 2012, Edwin helped establish a STEAM-focused school in Liberia called Education First with the goal of expanding educational opportunities for young people. What began with just 40 kindergarten students has grown into an institution serving more than 400 students through twelfth grade. Supported through a nonprofit foundation and community partnerships, the school reflects Edwin's deeply held belief that leadership is ultimately about creating opportunities for others. Watching students envision futures that previously seemed out of reach reinforces his belief that investing in the next generation is among the most powerful forms of leadership.

Throughout his career, Dr. T. Edwin Freeman has demonstrated that breakthrough innovation is not solely about developing new technologies; it is also about building cultures, partnerships, and teams capable of turning ideas into meaningful impact. His ability to combine scientific excellence, business acumen, mentorship, and human-centered leadership is what distinguishes him as an exceptional innovation leader. Across every chapter of Edwin's career one theme remains constant: innovation achieves its greatest impact when it creates possibilities not only for businesses, but also for people.