The Value Shift

Your innovation strategy has a blind spot. It's called nature.

By Karim Haggar, PhD

Here is a fact worth sitting with: in 2026, Earth Overshoot Day, the date by which humanity is expected to have consumed more from nature than the planet can regenerate in a full year, is expected to fall on July 30.

The first time we overshot was 1970. In half a century, we have gone from living within our means to consuming the equivalent of 1.7 Earths per year—and the trajectory shows no sign of reversing.

But the engine driving it is not greed or indifference. It is the way we innovate.

I spent years studying exactly that. My PhD, part of the largest management research project in Canadian history at the time, took me to China, Taiwan, India, Switzerland, France, and California to study how nations and organizations compete through innovation: how they create value, capture it, and govern the partnerships that bring new technologies to market.

What the field had almost nothing to say about, back then, was nature. The frameworks we used to map the logic of innovation were entirely disconnected from ecological systems. That absence, I now believe, was a fundamental flaw; one that businesses can no longer afford to ignore.

The science is unambiguous: there is no economy without nature. Every product, every service, every technology ultimately rests on ecosystem function. The companies that recognize this first will gain a durable competitive edge. Those that do not will face growing regulatory, reputational, and supply chain risks that no amount of clever marketing will fix.

THE DESIGN STAGE IS WHERE THE GAME IS WON OR LOST

Austrian economist Joseph Schumpeter described innovation as "creative destruction." What he could not have anticipated was the ecological toll of that destruction. As Yvon Chouinard of Patagonia has observed, 90 percent of a product's environmental footprint is determined at the design stage. This is where businesses have the most leverage, and where most still leave enormous value on the table.

The RISE framework, developed from years of cross-sector innovation research and advisory, offers a practical approach for innovating with nature rather than against it. Here's what RISE stands for:

• **Reduce resource extraction.** Design products to consume fewer natural resources from the outset, accounting for the full ecological cost of extraction, not just financial cost. Design for durability and longevity—every year added to a product's lifespan is raw material not extracted, energy not consumed, waste not generated. France was the first country to criminalize planned obsolescence; Canada followed, and the European Union (EU) is now requiring all member states to adopt equivalent legislation.

• **Integrate circularity.** Linear systems that extract, produce, and discard must give way to designs that eliminate waste from the outset. Extended Producer Responsibility (EPR) schemes, which hold manufacturers accountable for the full end-of-life impact of their products, now exist across the EU, Japan, India, and beyond.

• **Systemize lifecycle thinking.** No product exists in isolation. A full lifecycle approach accounts for all direct and indirect ecological costs across supply chains, requiring genuine collaboration with clients, suppliers, and the ecosystems they depend on.

• **Emulate and enrich ecosystems.** The net-positive step: innovation that actively repairs and enriches what has been damaged in nature, and that emulates what has developed over 3.8 billion years of research and development. Companies using invasive seaweed or ocean plastic as raw materials exemplify the first logic, turning ecological liabilities into design assets. Biomimicry and biophilic design embody the second, learning from nature's own solutions to develop products that are not only more innovative but inherently more efficient, closing the loop back to the first principle of the framework.

Businesses adopting this framework gain competitive advantage on multiple fronts: appealing to increasingly conscious consumers, attracting talent that chooses employers on purpose as much as pay, reducing costs through material efficiency and longer product lifespans, and staying ahead of tightening disclosure requirements, including the Taskforce on Nature-related Financial Disclosures (TNFD).

THE BRIDGE WE HAVE BEEN MISSING

The barrier to implementing nature-positive innovation has always been informational. Engineers and ecologists rarely share a classroom, let alone a design table. Artificial intelligence (AI) is beginning to change that in three concrete ways:

• **Knowledge integration.** AI can help organizations collect and analyze the biodiversity data required to identify nature risks and opportunities across their operations and supply chains. This dramatically accelerates adoption of frameworks like the TNFD, translating complex ecological dependencies into financial terms that boardrooms can act on.

• **Direct conservation.** AI-powered monitoring tools combining computer vision, satellite imagery, and acoustic sensors are making ecosystem monitoring faster and more accurate. Google's SpeciesNet can identify nearly 2,500 species from camera trap images, allowing research teams to process millions of photographs in days rather than years.

• **Decoupling prosperity from demographic growth.** Japan's Society 5.0, a human-centered vision harnessing AI and robotics to sustain economic productivity despite a shrinking population, points toward a future where prosperity no longer requires more people consuming more resources, and where reversing the overshoot trajectory becomes an economic possibility rather than a sacrifice.

THE COMPETITIVE WINDOW IS OPEN—BUT NOT INDEFINITELY

The field is catching up, even if the broader economy has not yet followed. Sustainable innovation is now a recognized discipline, with leading institutions from the MIT Sloan School of Management to Cambridge's Institute for Sustainability Leadership building programs around the nature-positive economy. The regulatory landscape is tightening on every continent. Consumer expectations are shifting. And the talent market is already voting with its feet.

Companies that move now, embedding nature-positive innovation into their design processes through frameworks like RISE, investing in AI-enabled biodiversity intelligence, and building supplier partnerships around circular principles, will be positioned as the standard-setters. Those that wait for regulation to force the issue will be playing catch-up in a market that has already moved on.

The old parable tells us we work and build and grow so that one day we can afford to stop and go fishing. The deeper problem is that we have been treating nature as the backdrop to our economy rather than its foundation. Innovation that ignores this is not innovation; it is a liability with a delay.

We do not need to stop innovating to go fishing. We just need to make sure there are still fish left when we do.

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IMAGE SUPPLIED

Karim Haggar, PhD, is an author, advisor, entrepreneur, and investor working at the intersection of sustainability and innovation. He is a Senior Advisor at Roland Berger, where he focuses on sustainability strategy and nature conservation and is an active member of the International Union for the Conservation of Nature (IUCN), the world's leading nature conservation authority.

As an investor and mentor, Haggar supports impact-driven entrepreneurs in circularity, nature tech and conservation solutions, environmental education, and ESG/sustainability solutions. He previously co-founded an award-winning ecotourism and educational travel company in Canada, scaling it to operations in over 30 countries. He holds a PhD in strategy and innovation and has taught entrepreneurship at McGill University.

Beyond his professional work, Haggar is an explorer and nature traveler who writes essays about his journeys through some of the world's most remote and wild destinations, often alongside his two sons.