Chapter 1

THE CALL FOR A SUSTAINABLE WORLD

Tó éí iiná (Water is Life)

—Navajo saying

Amid the chaos, fear, and confusion of the early days of the COVID-19 pandemic lockdowns, something unforeseen appeared: clean air. People around the globe found themselves in various states of lockdown as offices, restaurants, schools, theaters, and almost everything else shut down. With nowhere for drivers to go, the number of cars on the road plummeted. The result? Global levels of PM 2.5, the particulate matter that generates haze in both skies and lungs, declined by 30–40% and concentrations of the nasty pollutant sulfur dioxide fell 25–60% worldwide.[1] In the crazy days of spring 2020, people from Tokyo to Tacoma, and from Boston to Buenos Aires breathed easier during the first months of a policy-induced global economic coma.

That global breath of fresh air reinforced two prevailing ideas about building a sustainable economy, in terms of both ecological renewal and human health. The first cemented the notion that dramatically reducing, if not eliminating, the fossil-fuel-powered internal combustion engine is an essential element. The second emerged from our collective consciousness as we experienced the outside world through Apple's Facetime, Facebook, Skype, Teams, or Zoom: digital technology would pave a golden road to a more sustainable world.

The pandemic experience validated the first idea; the second, less so. Consumer-facing apps from Amazon through Zillow can reduce travel, fuel usage, and foul air, as well as accidents, breathing disorders, and the stress and general mayhem that all come with commuting. That pristine view of the digital-economy-as-sustainable-economy gets murkier the farther we go back in the internet value chain. Movement from software to hardware reveals an expensive and extensive web of "server farms" that enable us to seamlessly connect to and transact over the web. As of 2020, there were 3 million of these farms, known as data centers, around the world, but 600 or so constitute the largest type, hyperscale data centers. These behemoths occupy up to 400,000 square feet (about 10 acres) and house up to 5,000 servers. An average data center may use up to 50MW of electricity a year, enough to power 32,500 homes in a developed country. All that electricity generates heat, and if the temperature in a center gets too high, the problems begin. At best, a center goes offline – at a cost of $8,000 per minute in lost revenue; at worst, 5,000 servers melt, at a cost of $75,000 to $100,000 each. Keeping those servers cool and functional

requires massive air conditioning capacity, and an average center will use *200 million gallons* of very clean water every year to keep servers cool. That's a year's worth of drinking water for up to 667,000 people, or a city the size of Portland, Oregon.[2] With the amount of data being produced and stored expected to grow *50 times* between 2019 and 2030, the expanding backbone of the internet presents its own sustainability challenge.

Where do the world's biggest server "farmers," from mega player Microsoft to specialist Digital Realty, turn to for help with managing their water needs? These "new economy" companies partner with a very "old economy" company for the most sophisticated and sustainable water management tools on the planet: Ecolab, founded in 1923, and its younger sister and subsidiary Nalco Water, founded in 1928. A sustainable digital economy depends very much on the deep knowledge, skills, and talents of companies with decades of experience in a sustainable industrial economy. The experience of Digital Realty, a San Francisco, California–based owner and operator of over 280 data centers in 50 metro areas around the globe, highlights the value of this knowledge and skill.

The core of the air conditioning system is a cooling tower, a very large unit that allows hot water – the heat generated by the servers – to cool by transferring that heat to the air. Digital Realty pays for the water it puts into that system and the water it discharges as sewage. The physics of a cooling tower, however, means that 80% of the input water evaporates during cooling, leaving Digital Realty to pay sewage charges for water it never returns to the system. Several US states, including California, offer an evaporation credit if a company can document its evaporation loss. Walter Leclerc, director of Environment Health and Safety for the company, brought in Nalco specialists to help document and claim those credits for one of its small centers in Los Angeles. The business result? Digital Realty now claims over $150,000 in annual evaporation credits just for that site.

That work, begun in 2015, established what is now a long-term partnership. Leclerc and Ecolab team members used tools such as the Smart Water Navigator™ to create a global water use plan, and they deployed Nalco's 3D TRASAR™ technology to implement the program along with Ecolab3D™ technology to document results. The partners worked together to create and implement a global water strategy and solution for data center management. As of 2022, Digital Realty used 30 million fewer gallons of water each year, consumed 17MW less electricity, and emitted 12,000 metric tons fewer greenhouse gases. That's good for the

environment and the health of those living nearby. It's also good for the bottom line. Digital Realty has saved $8 million to date, for an ROI of 60%.[3] Walter Leclerc says of his experience with Ecolab, "I could not have done it without them. Their technology is fantastic, but it's the people that make the difference."

I open with data centers because this business highlights two issues that I'll come back to throughout the book. First, the challenge of sustainability is multifaceted and complex and will require a mix of both simple and complex, industrial and digital innovations and solutions. Second, very "old line" companies like Ecolab and Nalco will play a significant role in creating a truly sustainable world. My research on water management led me to Ecolab, a 100-year-old company that developed, expanded, and nurtured a sustainable business model as it grew from a single employee to a team of over 48,000, each of whom possesses and deploys world-class expertise in environmental and human health. That expertise drives product, process, and service innovations that keep Ecolab in the vanguard of companies pioneering a sustainable future.

Sustainability may be a recent concept, but the principles that deliver it are ageless. In what follows, you'll see that Ecolab's success relies on a disciplined, integrated, long-term, and sophisticated approach to business. These aren't just one-off or timely tactics; the roots of Ecolab's success come from its application of enduring principles of business success. Whether you are online or old-line, you can adopt these principles to help your organization and people create the expertise we all need to build a truly sustainable world.

THE CHALLENGE OF SUSTAINABILITY

Neither Emilio nor I know if the sustainability movement has an undisputed birthday, but we both trace a pivot point in sustainability to the first Earth Day in the United States, April 22, 1970. A burning oil slick on Cleveland, Ohio's Cuyahoga River in the summer of 1969 dramatically illustrated the extent to which the natural environment had been used as an industrial dumping ground, and that first Earth Day catalyzed the need for change.

Fast forward to 1987; the United Nations joined the growing movement by appointing the Brundtland Commission to propel progress through a clear definition. That group defined a sustainable economy as one "that meets the needs of the present without compromising the

ability of future generations to meet their own needs."[4] That definition of sustainability holds today, but like most things in this space, it continues to be debated – refined by adherents and rejected by critics. At its core, a sustainable economy represents a complex compromise between two very old and deeply embedded ideas: progress and conservation.

The idea of progress, according to South African historian Jacobus Du Pisani, traces its roots back to the earliest days of the Hebrew (and eventually Christian) conception of history that portrayed time as linear and inevitably moving forward toward a clear end state. To the religious, that end state was either salvation or damnation. Progress, writ large, indicated blessing – and thus spiritual salvation. As the world secularized during the modern era, progress became embodied in the notion that economic, scientific, and social innovation would benefit people through an ever-improving material standard of living. The growth of the global population, increasing personal income, and increased longevity since the dawn of the Industrial Revolution in the late eighteenth century provide, for its advocates, powerful evidence of beneficial progress.

The need to offset the impact of progress through conservation traces back to ancient times as well. Indeed, Plato, Pliny, and other classical writers tutored their followers about the dangers of deforestation and environmental degradation caused by ever-encroaching human activity. The Industrial Revolution marked a pivot point where the scale and scope of economic activity began to seriously outstrip the planet's and its societies' ability to renew needed resources. Historians mark the industrial age beginning in 1800 and peaking around 1970, with perhaps the burning Cuyahoga symbolizing a high-water mark in the havoc the industrial economy could wreak. During that time, global population more than trebled from just under 980 million to 3.6 billion; however, manufacturing output grew *1730 times* over the same period.[5] That first Earth Day in 1970 – perhaps the beginning of the end of the industrial age – catalyzed a growing global concern for the potential dire outcomes for both people and the planet if societies failed to stabilize progress and conserve/preserve our natural and social resources.

The Brundtland Commission's definition sought to balance the demands of many, including those representing billions living in so-called "developing" countries, for an upgraded standard of living with those who argued that the total cost of a standard life would end up destroying the planet and human societies. The commission's work acknowledged the importance of continued economic growth but recognized that

decision-makers needed to include the long-term impacts of that growth on human and natural environments. Making trade-offs would become critical. A truly sustainable world would require policymakers, business leaders, and citizens to draw a fine line that separated meaningful from unchecked progress and cut precisely at the joint between appropriate versus stifling conservation. Many of the debates we see today showcase our collective struggle in drawing those lines and our imprecision in cutting at that joint. The conversations and arguments about how to make those trade-offs have become more sophisticated and more pressing as the years go by.

At a macro level, sustainability gave voice to two previously voiceless stakeholders: the natural environment and future generations. At an individual level, sustainability invited each of us, in our personal and professional roles, to adopt a much longer time horizon and broader view as we thought about what to buy, where to invest, and how to define our own progress. For business leaders, the Brundtland report birthed the concept of a triple bottom line, one focused on economic (profit), one on social (people), and one on environmental (planet) sustainability, or the 3Ps.

As the twenty-first century proceeds into its third decade, the language of sustainability has changed again. The 3Ps are still the same, but the focus has shifted from societal outcomes to corporate actions. The new terminology calls for environmental, social, and governance (ESG) performance. Activists, investors, and regulators each work to measure current ESG performance and encourage change and progress along each dimension at the business level. ESG measures provide a snapshot in time of how each company contributes to the 3Ps, and when ESG reporting becomes commonplace, the combined snapshots essentially become a movie that captures dynamic progress toward sustainable 3Ps.

Sustainability as a Business Problem

Managing a triple bottom line presents executives and leaders with a complex business challenge, and today no company or executive team can claim mastery. Sustainable business practices are and will remain a work in progress. Although complex, leaders approach the challenge from one of two well-known starting perspectives, one that views sustainability as a financial, physical, or technological problem to be engineered and the other that sees it as a set of natural relationships to be nurtured. Building a bridge requires a technical mindset, for example, while saving a failing

marriage involves a relational one. The technical approach focuses on developing and deploying bundles of money and steel designed to solve the problem while relational approaches seek to influence the human psyche or social culture. Each mindset presents a different set of problems, proposes different processes, and opens a different opportunity set. Each constitutes a *weltanschauung*, a worldview or simply a perspective.

I'll talk much more about mindsets and perspectives in Chapters 2 and 3, but I'll lay out a few important elements here.

First, a purely technical or relational mindset captures the essence of very few problems. Building a bridge invites a technical approach, but new bridges change the relationships in a biological ecosystem, economic transactions in and between communities, and social relationships in affected families and groups. Engineers who fail to engage in relational analysis usually face stiff opposition, even when their technical specifications are impeccable.

Similarly, rescuing a sinking marriage always requires attention to relationship skills and status but often includes technical elements such as new jobs, new housing, and new knowledge. Surveys indicate that while relational issues lead to most marital breakups, money plays a leading role in almost one-fourth of divorces, and wise therapists explore economic as well as emotional and erotic challenges in relationships. Put simply, a single- (simple-?) minded approach to problems usually leads to simplistic and partial solutions.

Second, in terms of process, the technical view adopts a *coercive* approach to problem-solving. A knowing, independent actor can deploy technical resources to provide adequate (and sometimes exceptional) targeted solutions to isolated business problems driven by downside risk management or compliance with existing rules. In contrast, the relational view invites *collaborative* problem-solving. Interdependent actors marshal both objective (knowledge) and subjective (cultural) human and social capital to develop holistic approaches that recognize the larger system in which the problem lives. The relational approach emphasizes lasting solutions at the system, rather than merely the problem, level.

Third, technical and relational mindsets complement each other; each has advantages that overcome the disadvantages of the other. The technical attends to discrete problems and conceives efficient, cost-effective solutions to problems. However, my experience teaches that a tight, technical focus tends toward a whack-a-mole approach to thorny issues. The relational view uncovers elements that require time and energy to

understand the inherent complexity of any issue and more time to build consensus around both underlying problems and solutions. Speed is not a feature of the relational approach. The upside? That focus on systemic and continuous contexts of issues means that solutions identify and center on core, causal human and social drivers of sustainability challenges. The time spent building consensus helps people make and follow through with the tough decisions that lead to meaningful progress.

Real and lasting progress around sustainability, financial performance, product development, productivity, or any other business challenge leverages the power of *both* views and seeks solutions that address technical and relational elements. Technical solutions provide the tangible and time-bound assets and actions required to solve problems such as sustainability while the relational element works to change the priorities and processes that constitute the deep causal structure of problems. Technical solutions look different than relational ones, but both contribute vital elements to lasting solutions.

Finally, which viewpoint opens the conversation matters because each mindset uncovers different opportunities and solution sets. The holistic approach of the relational view naturally invites us to consider the role technical elements can play in a solution. Marriage partners working on their relationship will eventually uncover needed financial or occupational adjustments. The converse, however, is not true. The technical view, with its analytic backbone, isolates and compartmentalizes problems; it often obscures a broader view of the larger human issues and undervalues the systemic context that surrounds any issue. The complex engineering specs that create a stable and lasting bridge are independent of the impacts of a changed commute on individuals and families, and the technical view will not naturally lead to a relational one. Which frame you employ first determines if and how well you'll see the other.

I spent so much time discussing these two overarching worldviews because they form the foundation of Ecolab's success. From its earliest days, the company has operated from a relational *weltanschauung*, and the ability to see its business and the world as first and foremost a set of relationships. That's how and why they've been practicing sustainability for a century. Your ability to adopt a similar perspective will, I believe, ultimately determine your success in driving sustainability into the bones of your organization. To foreshadow what you'll learn in Chapter 2, Merritt J. (MJ) Osborn founded the business that eventually became Ecolab on two fundamental beliefs: the dignity and common humanity of all

people and the fact that the world is an integrated, interconnected, and interrelated system.

A relationship-first perspective grounded Osborn's private world of hearth and home, the system of commitments that created an employee-centered business firm, the transactions between that firm and its many stakeholders, and the final impact on local, regional, national, and international communities. One of those critical communities has been and continues to be the natural environment. For Ecolab, it's relationships first, technical solutions second. The goal of an earnest, honest, and mutually beneficial relationship with each stakeholder determines which technical solutions and what chemistry the company brings to the table in each case.

Sustainability as a Leadership Problem

You may believe you can find the perfect blend of technical and relational solutions to the problems you face; however, my experience teaches that no one (at least no one I know) perfectly balances a technical and relational orientation along a razor's edge. Instead, genetics, upbringing, education, and life experiences predispose us to either a technical or relational default setting of how we view the world. As we confront and manage problems and lead others toward solutions, either the technical or the relational perspective serves as our baseline for action, and as our paradigm of choice leads us to success – and each one leads to its own type of success – our commitment to that baseline waxes stronger. Over time, our perspective, or *weltanschauung*, becomes more stable and frames our approach to leadership and management.

This book is about leadership and management because they represent, in both my and Emilio's view, two keys that unlock the door to creating sustainable businesses and societies. I'll avoid quips and false comparisons, such as "management is doing things right; leadership is doing right things."[6] I'll also avoid simplistic ideas such as "management is simply controlling others or driving results," or "leadership is about motivating people and getting out of the way." Emilio and I have accumulated years of experience as leaders, and much of that work involved management; they fit hand in glove.

Leadership is the work that mobilizes people in a process of action, learning and change to improve the long-term viability and vitality of the organization in three ways: purpose, people, and productivity. *Purpose* is

realized more effectively, *people* experience increased personal growth, meaning and purpose in their work and lives, and *productivity* is strengthened.[7] Management is a set of tools leaders employ to accomplish their work: they *allocate resources* based on purpose and priorities, they design *processes and products* that enable people to grow and thrive, and they *measure/report* the viability and vitality of their organizations in terms of productivity and performance.

Figure 1.1 illustrates the proper relationships between these elements in a thriving organization. I've employed alliteration to make the elements of Figure 1.1 easy to remember, and I'll return to each level of the pyramid throughout the book as I explain the principles Ecolab follows to create a sustainable enterprise. Your ability to execute on the different Ps of sustainable advantage will, to a large extent, determine your ability to create a sustainable organization and economy. The most important thing to remember is the base of the pyramid: How we lead and manage depends on our fundamental perspective.

Perspective provides the bedrock or core that informs everything that we do, whether individually or in relationships, from family to firm. That perspective generates a defined purpose and set of priorities, what we really want to accomplish. Purpose and priorities enable us to build a set of processes and products that in turn realize our ultimate aims. The right processes and products allow people to productively engage with markets

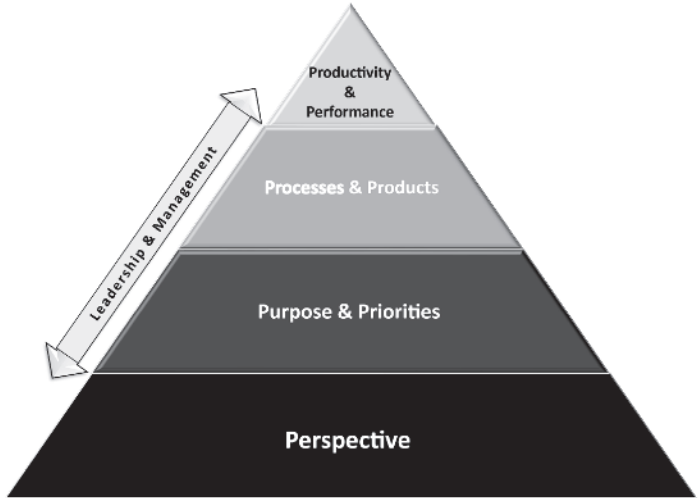

Figure 1.1 Creating a Sustainable Advantage

and stakeholders. Productivity drives performance. Leadership and management provide the fuel that brings the pyramid into being and keeps it aligned over time. Note that the arrow representing leadership and management runs both ways. Leadership enables performance, but performance informs and molds perspective. Positive performance deepens our commitment to our worldview while negative performance invites us to reexamine that view. Everything you read from here on in (and I encourage you to read every word!) builds on Figure 1.1.

ECOLAB AS AN EXAMPLE OF SUSTAINABILITY

MJ Osborn worked as a pharmaceutical salesman for most of the first decade of the twentieth century. Osborn noticed that the hotels he stayed in took rooms out of service for up to two weeks every time they cleaned their carpets. Osborn developed a carpet cleaner – *Absorbit* – that cleaned carpets in less time and required less labor and water, meaning that rooms would be back in service much sooner. Although customers paid more for *Absorbit*, their total cost of cleaning – factoring in labor, water usage, and downtime – declined enough that profits increased.[8] The product proved a boon for hotels, but not for Osborn – a container of *Absorbit* was so economical that Osborn saw few follow-on sales.

Osborn named his nascent company Economics Laboratory (EL) – "Economic" because it saved customers time, labor, and material costs, and "Laboratory" because the products were backed by laboratory research. In 1924, he acquired a chemical formula from a University of Minnesota chemist and introduced *Soilax*, an easy-to-use and measure dishwashing detergent. In 1928, Osborn rolled out a line of *Soilax* dispensers and other dishwashing equipment. EL became a provider of dishwashing solutions, not just products.[9]

Over the next century, the company developed and deployed a rather simple business model: Identify a pressing customer problem in cleaning/sanitation and develop a scientific solution that would save customers labor, maintenance, and downtime and preserve equipment. Customers would pay a premium for the company's products because the savings and regular on-site service provided by EL would more than make up for the price premium of the products. Sales grew from $35,000 in 1924 ($554,917 in 2021 dollars) to $12.733 billion in 2021: a nominal cumulative annual growth rate of 14% and a real (if we hold dollars constant) 11% CAGR. That's one of many impressive measures of Ecolab's economic success.

Economic Sustainability (the "Profit" Element of the 3Ps)

Osborn founded what would become Economics Laboratory – condensed to Ecolab in 1986 – when he was 44 years old; definitely not his first rodeo. He had enough experience in business to know what constituted a "good" business from a customer, employee, and investor perspective. You've already read about the company's sales growth, but there's more to the business story. MJ, as he preferred to be called, imbued his company with a perspective focused on profitable, prudent growth. We'll just hit the highlights, beginning with growth. EL entered *Fortune* magazine's ranking of the 500 largest industrial corporations in 1976 at number 500, and its revenue qualified it to be on that list through 2021, where it ranked 237th. Of the 500 firms on that list in 1976, only 69 (14%) remained on the list 45 years later. Of those 69, 36 fell in relative rank and 24 climbed up the list. Ecolab topped that list of climbers, moving up 263 spots against an average ascent of 87. Put simply, Ecolab grew in absolute sales, *and* it experienced the highest growth rate among a peer group of the country's largest companies.

In 1927, MJ laid out his primary measure of the firm's profit performance, a return on equity of 20%. His son and later CEO Edward B. Osborn refined that goal into a 20% return on beginning equity and added two more metrics: a return on sales of 7% and a prudent balance sheet that would be rated "investment grade." Table 1.1 presents data on Ecolab's historical performance. Return on beginning equity (ROBE) approximates 20% over the six and a half decades Ecolab has been publicly traded.[10] Return on Sales (ROS) misses the 7% mark over the long-term; however, since the second decade of the millennium, ROS averaged over 8%.

Table 1.1 Ecolab Financial Performance Through the Years

	Period	ROS	ROBE	Debt/ Equity	ROA	CapEx/ Sales	CapEx/ EBIT
Ecolab Average	Total	5.17%	19.16%	1.16	8.79%	5.60%	46.95%
Ecolab Average	> 2009	8.39%	18.38%	1.67	6.29%	5.03%	34.00%
Industry Top 1/4	> 2009	6.94%			5.38%		
Industry Median	> 2009	–12.32%			–13.75%		
Industry Median	No Date		16.00%			4.20%	36.93%
Investment Grade				2 or less			

Comparison industry is specialty chemicals.

An "investment grade" balance sheet proved too difficult to determine, and so I use Debt/Equity to measure balance sheet strength. Ecolab has maintained a strong balance sheet over its lifetime, well under the rule-of-thumb ratio of 2 that typifies an investment grade financial structure. I've added three other measures to compare Ecolab with its peers in the specialty chemicals industry: return on assets (ROA), capital expenditures as a percentage of sales (CapEx/ Sales), and capital expenditures as a percentage of cash flow, excepting depreciation (defined as Earnings Before Interest, Taxes, CapEx/EBIT)). Ecolab outperforms its peer group on every measure.

To make sense of Table 1.2, imagine two families living in St. Paul, EL's hometown in 1956. They learn that on January 1, 1957, shares of EL will be publicly available at $15 each. Each family sets up a fund for their posterity that invests $100 on January 1 of every decade and holds that investment until January 1, 2020. One family chooses to buy EL stock, the other buys shares in the low-risk S&P 500. Table 1.2 presents the results, by decade, of those investment choices.[11] In the most recent decade, our Ecolab investor more than doubled total shareholder return (price appreciation plus dividends less initial cost) compared with the S&P, $451 to $232. By the year 2020, the original Ecolab investment is 34.6 times the value of the S&P investment, almost $250K to $7,213. MJ would be pleased to see that his emphasis on shareholder return has played well through the decades.

Environmental Sustainability (the "Planet" in the 3Ps)

Ecolab's economic success has benefited thousands of shareholders; its work on environmental sustainability impacts billions. The company measures what it refers to as "clean revenue," revenue coming from products and services that have a demonstrated, and often certified, environmental or social benefit. Ecolab classified almost two-thirds of its 2020 revenue as "clean." Products that help manage water and the energy to move it, heat it, or cool it represent the major source of clean revenue. Packaging and delivery innovations also counted as "clean" revenue as they reduced the amount of solid waste generated.

During the pandemic year of 2020, Ecolab's products and services helped customers conserve over 206 *billion* gallons of water, enough to meet the drinking water needs of 686 *million* people – basically the combined population of the United States, Russia, Germany, the United

Table 1.2 Ecolab Stock Returns over Time – $100 Investment

		1957–2020	1957–1960	1960–1970	1970–1980	1980–1990	1990–2000	2000–2010	2010–2020
Benchmark	Opening Value	$100	$100	$100	$100	$100	$100	$100	$100
S&P 500	Ending Value	$7,213	$125	$5,800	$3,794	$2,825	$980	$231	$232
	CAGR	7.03%	7.54%	7.00%	7.54%	8.71%	7.91%	4.28%	8.76%
Ecolab	Number of Shares--open	6.67	6.67	4.84	3.03	4.29	3.42	2.65	2.21
Over Time	Number of Shares--2020	1,200.73	7.72	753.07	96.97	68.67	27.35	5.31	2.21
	Closing Price	$190.23	$20.66	$190.23	$190.23	$190.23	$190.23	$190.23	$190.23
	Appreciation	$228,314.05	$59.44	$143,157.00	$18,346.55	$12,963.00	$5,102.87	$909.45	$320.40
	Total Dividends	$21,456.81	$0.07	$13,457.27	$1,732.72	$1,225.82	$486.53	$92.33	$30.99
	Total Shareholder Return	$249,870.86	$159.51	$156,714.27	$20,179.26	$14,288.83	$5,689.40	$1,101.77	$451.39
	CAGR	13.22%	16.84%	13.05%	11.20%	13.21%	14.42%	12.75%	16.27%

Kingdom, and Italy. Customers burned 43 *trillion* fewer BTUs of energy, enough to power 672,000 US homes for a year – a city the size of Phoenix, Arizona. They avoided coughing up 3.5 million metric tons of CO_2 emissions, the equivalent of taking 389,000 cars off the road, or every private car in the state of South Dakota in 2021, and they discarded 77 million fewer pounds of waste in landfills, the equivalent of the waste produced by 43,000 US citizens, or the population of Mankato, Minnesota.[12] Those are annual numbers, so with each passing year, Ecolab's contribution to saving and renewing our planet grows. Osborn would be pleased with the direction he set with the water-saving *Absorbit* in 1923.

Social Sustainability (the "People" in the 3Ps)

EL garnered its first award for creating social benefits in 1970. EB Osborn wrote that year:

> I believe the stockholders will be interested in the role the Company plays in its attempt to do its part as a good citizen and to take an active corporate role in helping to reduce social problems. It was made the recipient of the Distinguished Service Award by President Nixon's Committee on Employment of the Handicapped [individuals suffering from mental and physical disabilities].

That program actually began in 1966 when company leaders designed a vocational training program for people with (primarily) cognitive disabilities in the Twin Cities. The program expanded nationwide in 1968, and in 1969 the company dedicated full-time corporate staff to the effort. "In accepting the above award," Osborn noted, "through joint industry-government cooperation we can expand this as well as other programs even further and can encourage other industries to exercise their corporate social commitments in this area."[13]

By 2020, that integral "corporate social commitment" landed Ecolab on several "best of" lists for corporate citizenship, including *Ethisphere's* list of Worlds Most Ethical Companies (14 years running), *Corporate Social Responsibility* magazine's Best Corporate Citizen list (7 years), *Fortune's* Most Admired Companies (6 years), *Selling Power* magazine's list of Best Companies to Sell For (5 years), and *Forbes* Best Employers for Women (3 years). If I wanted to give more than a sketch here, I could point to nine additional national or global social and environmental sustainability awards and recognition the company received in 2020.

Merritt J. Osborn's original objective in the social sphere was to create a company where employees wanted to work for their entire careers and where they wanted to become owners. He began a bonus program and one of the first employee stock purchase programs back in the 1930s, in the midst of the Great Depression, long before EL was a public company. That commitment to people lives on.

THE JOURNEY TO SUSTAINABILITY

The ensuing chapters build on the core architecture of Figure 1.1. How leaders design and execute their strategy, from perspective to processes, will determine their sustainability successes in terms of people, planet, and profits. Chapter 2 provides a detailed description of Ecolab's foundational perspective. No surprise here, but MJ Osborn imbued his company with what I term the RIGHT perspective during his 30 years at the helm. We'll travel back to the very beginning of the Osborn family in the United States and trace the origins of MJ's weltanschauung. Chapter 3 extends this discussion and describes how that perspective became, and remains, Ecolab's purpose and priorities.

Chapter 4 focuses on the role of executive leadership in creating a sustainable Ecolab, and I'll focus on the top, the six CEOs who completed a full term of service at the company. The company's success relied on more than just a single insightful or hard-working executive, and I'll tease out the fundamental and timeless leadership principles that these leaders used to grow the company over its first century. As Walter Leclerc noted in his work with Ecolab, "It's the people that make the difference." Those people who make the difference provide leadership at every level of the organization, people like Heather DuBois in the data center business. Chapter 5 illustrates the policies and the principles that allow Ecolab's people to grow as leaders, and how they help customers, suppliers, and communities to improve their own operations. Ecolab's 48,000+ leaders all help build a sustainable enterprise, and people inside and outside the company's ecosystem reap the benefits. All told, Chapters 2–5 focus on the leadership principles that will propel Ecolab into its second century.

That focus turns to management tools in Chapters 6–9. I'll take up products writ large in Chapter 6. The company has developed and sold hundreds, if not thousands, of products over its first century. While individually interesting, those products represent snapshots in time; the real story is the motion picture that details how Ecolab was, and continues to be, an Economics Laboratory of innovation and solutions to benefit each

of the 3Ps. I'll complete that discussion with a discussion of the principles that drive the company's legendary customer service.

Osborn's company has used acquisition as a way to grow since the 1930s. The first acquisition was a license to sell Calgon, a competitive cleaning solution that, for a few years at least, offered customers a superior product. Ecolab would later develop a superior product and exit that arrangement. Since going public in 1957, acquisitions have become a staple of growth for the company; they've also provided a way for the company to acquire key technology and knowledge that all contribute to its ability to move the dial in each of the 3Ps. Chapter 7 considers how and when you can buy your way into greater sustainability.

It would be a truly awesome story if I could write that Ecolab had an unbroken string of successful acquisitions. They haven't. When they've made poor choices, whether a financial failure or just a strategic misfit, they've divested. Chapter 8 will tell some great stories about the failures, but I'll focus – as you can guess by now – on the principles that guide the company through the decision to shrink. Sometimes, paradoxically, we grow best through subtraction.

As the twenty-first century rolls on, the processes and skills needed to act effectively and intentionally in the "nonmarket" areas where firms operate become more important. You may be thinking of lobbying, but it's much more than just a simple relationship with the government. Relationships include working with individuals or organizations in both the public and nonprofit sectors of the economy. Chapter 9 will highlight Ecolab's work in multi-stakeholder collaborations, or collaboration on steroids. These require many of the same "non-market" processes and skills but deploy those skills across multiple groups of stakeholders in the private, public, and nonprofit sectors to create lasting, large-scale change.

As I noted in the preface, how Ecolab's leaders pulled those levers over time created a yarn-dyed commitment to a sustainable business, from perspective to performance. I hope to tease out lessons from Ecolab's experience that can help your organization move toward that same deep, yarn-dyed commitment to sustainability.

CONCLUSION

I end where I began, by thinking about Ecolab's work in the data center industry. Nalco products, services, and complete water management solutions help server farm owners win through reduced downtime, lower

water and energy costs, and longer asset lives. Ecolab wins as it is organically growing a new and profitable business unit. The environment wins at two levels, when products and services reduce the impact of individual server farms and when they contribute to a sustainable digital economy. People win as well, particularly those working in server farms who have a cleaner and safer workspace.

I hope I've convinced you to remain curious about sustainability and about how Ecolab has been a practitioner long before the concept as we know it today became popular. I promise you a thoughtful and productive read; I'll offer summary and managerial insights along the way. I will offer my insights into the core text of what you read, and Emilio will close each chapter with his personal and unique comments based on a career at Nalco and Ecolab that spans five decades. After you read his thoughts below, turn the page and we'll take up the genesis of a sustainable *weltanschauung*.

EMILIO'S THOUGHTS

Doing Well by Our Customers to Make the World a Better Place

In the first chapter of this book, Professor Godfrey sketched out some of Ecolab's early history. In doing so, he highlighted several key themes and questions about sustainability, such as: What are the key characteristics of a sustainable business? What are the challenges from a business and management perspective? And how has Ecolab served as an example of sustainability in action?

In 100 years of doing business, one thing remains central to our purpose and our business model. Ecolab has both the ability and the responsibility to drive positive change in the world, within our company and with our customers and the communities in which we live and work. Our associates act with purpose and, together, we continue to do our part to help change the world.

Ecolab has always operated where sustainability and economic benefits align, helping our customers do more with less and living up to our responsibilities in our own operations. As he traces the history of Ecolab, Professor Godfrey recounts how our sustainability journey began. Environmental concerns weren't at the forefront for Ecolab or most businesses back in the 1920s. Or certainly not in the way they are now. Yet Ecolab did provide customers with many benefits that would now be defined as

sustainability. Take for example a product such as *Absorbit* for cleaning contaminants out of hotel carpets or Nalco's sodium aluminate products, which were used to manage water on steam locomotives. Both led to sustainability benefits before sustainability was a business buzzword or top priority. As you'll discover throughout the book, both Ecolab and Nalco have had a consistent approach over the past century in building success sustainably by:

- *Working closely with our customers to uncover challenges as well as opportunities*. With nearly half of our 48,000+ employees partnering with customers at more than 3 million locations, Ecolab has a frontline view of the operational challenges that they face around water, energy, climate, waste, and costs. These close working relationships enable us to build trust and that, in turn, leads to partnerships that enhance our ability to solve complex industry problems.

  A case in point: our partnership with Digital Realty required a thorough understanding of how much water was being used, and where, in its more than 290 global data centers. That required a close collaboration with corporate and facility leaders across the enterprise to create and implement a global water strategy to improve and protect its operations, watersheds, and the communities in which it operates. Ecolab leveraged best-in-class tools such as the Smart Water Navigator™ and other unique solutions to minimize overall water risk, ensure reliable performance, and protect Digital Realty's operations.

  As this example demonstrates, we have a unique business strategy. We develop solutions for specific concerns that can then be applied to other customers as well as our own operations. This maximizes the reach of our solutions as well as our impact on the world.
- *Adopting a science- and evidence-based approach to solving customer problems*. From the very beginning, Ecolab's success has stemmed from two core benefits of our solutions. First, our expertise and approach to serving the customer are grounded in science. And second, we help our customers save time, labor, and material costs. The 2008 Nalco tagline "people you trust delivering results," remains true today. Personal service is still central to our business model and a strong relationship between customers and their Ecolab territory managers is key to our ability to deliver technical solutions, reliability and cost savings for customers. From water

chemistry to health and hygiene, Ecolab has always been known for its expertise in helping customers solve complex problems through science. For instance, our high-technology field representatives use the basics of water chemistry to pinpoint solutions that enable customers such as Digital Realty and other large-scale data centers in water-stressed areas to optimize and conserve water. And our Ecolab Science Certified™ program, established in 2020, helps advance public health and food safety in hotels, restaurants, and other locations.

- *Making the business case for sustainability*. Value creation is the primary aim of any business. Because value drives growth. At Ecolab, we *know* that operational and sustainability goals can coexist without trade-offs. The solutions we provide deliver an exponential return on investment (eROI), which is how we quantify customer value at Ecolab. For Digital Realty, that meant gaining enterprise-wide visibility, measurement, and monitoring of water use. This enabled the company to track, trend, and compare water use across all data centers and quantify savings from water projects. Value creation also supports a positive, meaningful impact for our customers, partners, and communities. It illustrates our ability to deliver the best possible outcomes at the highest total return. In doing so, we help protect and advance people, the planet, and business health.

As the chief sustainability officer of the company today, I apply the same principles I did back when I was starting out as a newly graduated Nalco application engineer in 1984. Sustainability is embedded in our culture at Ecolab – it's core to everything we do. We act with purpose, we work together, and we do our part to help change the world. Although we didn't refer to it as sustainability back in 1984, the principle is the same: doing well by our customers to make the world a better place.