

Toward a circular economy in food

The French food and water company Danone has a history of environmental awareness. In this interview with McKinsey partner Clarisse Magnin, CEO Emmanuel Faber discusses his commitment to resource efficiency.

McKinsey Quarterly: *What inspired Danone's current thinking?*

Emmanuel Faber: Three things. My own upbringing and convictions, the culture and history of Danone, and the overwhelming case for change.

I grew up in the Alps, where the beauty of the natural cycles seeded in me the underlying importance of something that we as managers can often lose sight of—namely, that life is more than ideas, mathematical models, and software. I later spent three years in Asia, including Indonesia and China, where I saw firsthand how fast resources were being depleted in emerging markets.

Danone's commitment to tackling these problems is not new, so it was always fitting that I should join such a company. More than 40 years ago, in Marseille, Antoine Riboud, our founding CEO, made a speech in which he pointed out that we only have one Earth, that it's our responsibility to look after it, and that as a business we would pursue a dual economic and social agenda.

Last, the world is changing. Cheap, low-quality calories have dominated the industrial-food business for nearly 100 years, but we are reaching the end of this era. Consumer tastes and behavior are evolving, and as part of this evolution consumers expect us to act differently.

McKinsey Quarterly: Can you say more about these changes?

Emmanuel Faber: Supply chains are increasingly global, which means there are systemic risks that we don't see. While we've been able to improve food security in many regions, this has also led to other issues, such as declining soil fertility and threats to the biodiversity of our planet. At the same time, we cannot continue to reduce the costs of agricultural production. The volatility of input prices is much greater than it used to be, and food inflation is rising. The price of milk, our major raw material, was near an all-time low in 2009 but has gone up three times since and 18 months ago almost hit an all-time high.

On top of that, we need to address the needs of a growing population, new regulatory requirements in the area of public health, and the increasing impact of diseases such as obesity and diabetes. Some companies are turning to big data management and ERP¹ to meet these challenges. But I believe this is the wrong approach. We need a comprehensive response to tackle growing resource scarcity, which both drives the efficient use of those resources through the supply chain and brings healthy food to as many people as possible. Danone's approach rests on what we call consumption ecosystems, taking into account every stage in the life of products, from the production of raw material to the "second life" of packaging.

McKinsey Quarterly: What does that mean in practice for the way you make products and source materials?

Emmanuel Faber: To embed the principles of the circular economy in our operations, we have started managing our three key resources—water, milk, and plastic—as cycles rather than as conventional linear supply chains.

One example of this is what we are doing in yogurt. To make Greek yogurt, you use a "strained" technology with a membrane, extracting a lot of acid whey. Instead of just seeing this acid whey as an effluent, we are testing technology solutions in five or six countries and working with different partners to find ways to use whey as a resource. We are already using whey protein, for instance, in our Early Life Nutrition business, and we will soon be able to use it for animal feed, fertilizers, and energy. What we're doing is turning something that is a challenge today into something that will have value tomorrow.

¹ Enterprise resource planning.

EMMANUEL FABER



Vital statistics

Born January 22, 1964, in Grenoble, France

Married, with three children

Education

Graduated with bachelor's degree in business administration from HEC Paris

Career highlights

Danone Group

(1997–present)

CEO (2014–present)

Vice chairman, board of directors (2011–present)

Deputy general manager (2008–14)

Vice president, Asia-Pacific region (2005–08)

Head of finance, strategies, and information systems (1997–2005)

Legris Industries

(1993–97)

Chief executive officer (1996–97)

Chief administrative and financial officer (1993–96)

Fast facts

Director, danone. communities mutual-investment fund (SICAV)

Member, steering committee, Danone Ecosystem Fund

Member, steering committee,

Livelihoods Fund

Under a new partnership with Veolia, a global waste-management company, we are working together on building a circular economy around water and packaging waste, testing new ideas and investigating new technology. One project, for example, aims to optimize recycling techniques so we can build plants with zero liquid discharge.

McKinsey Quarterly: *What are you doing with plastic waste?*

Emmanuel Faber: At the moment, nearly 30 percent of our total packaging comes from recycled materials, and as much as 80 percent in the case of cartons, but we continue to make progress. For plastics, the endgame could be the creation of a net-positive cycle in partnership with other large companies, which would mean recycling more plastics than we put on the market in the first place.

Plastics are interesting because they highlight an important challenge of a circular economy, namely managing the “hierarchy of degradation.” If, say, we allow virgin PET² to go into landfills, its reusability potential ends up being low. But if we save it in a closed-loop system, it will continue to be of food-grade quality, good enough to reuse in food packaging. This means it stays at a high level in the hierarchy of degradation. Our ambition is to create a second life for all the plastic packaging we put on the market, so that we move toward 100 percent recycling in this respect. Part of the plan is also to launch a 100 percent biosourced second-generation plastic.

***McKinsey Quarterly:** What changes have you made to Danone’s organization to reflect the new ways of working?*

Emmanuel Faber: We have created a position in the executive committee in charge of our Strategic Resources Cycles unit. This person oversees separate internal units for the milk cycle, the water cycle, and the plastic cycle. This organizational change has already started to transform the way we work, because it is cross-divisional and cross-functional.

We have also created a Milk Technology Center that reports to the Milk Cycle Organization—part of the Strategic Resources Cycles unit—not to R&D or to the dairy business, as it might under a conventional structure. The aim here is to achieve a step change in our ability to maximize the value of milk and limit the waste from milk production.

***McKinsey Quarterly:** How do you change Danone’s culture to embrace circular-economy thinking?*

Emmanuel Faber: Danone has circular-economy principles in its DNA, and people join Danone because of its unique culture and heritage. We do, however, need to continue to create the conditions for new generations to embrace our founding principles of business success and social progress.

The time horizon is critical. You won’t start anything if you only think of the next three months; it’s got to be something for the next 30 years. At the same time, you need breakthrough objectives. We would never have made as much progress with our CO₂ reduction program in 2008 if we had just gone for a 2 percent reduction per year rather than 30 percent over five years, which we set ourselves. We actually achieved 42 percent.

² Polyethylene terephthalate.


If you know at the outset how you are going to achieve an objective, you're not aiming high enough to get the organization to start working differently. You have to come up with an objective which is aspirational—something that is too far away to know how it will be reached. That was our intent when we announced, in December last year, that we would target zero net carbon emissions on our full scope of responsibility by 2050.

You also need an investment-payback period that is longer than it is in today's traditional model—five years instead of three; seven years instead of five. For our CO₂ reduction program, we created a special green CapEx category with this in mind. Some bets may have no payback at all. It's about getting a balance between the short, the medium, and the long term.

Incentives are also an important part of the culture because they really show that the leadership team means what it says. A few years ago, the annual incentive program for the 1,500 top managers at Danone encompassed the CO₂ reduction objective, to the point where, broadly speaking, the yearly bonus attached to CO₂ reduction was equivalent to the yearly bonus attached to profit generation. This is just one example of how we're using incentives to embed our vision across the business.

On top of this, and in order to foster change with Danone's 100,000 employees, the company launched a manifesto to underpin the way we intend to deliver on our mission. This manifesto aims at deepening and enriching Danone's mission, to bring it to the next level of impact, through a series of initiatives across the company and outside it. For instance, a dedicated internal website has been created where people can post ideas and thoughts related to the manifesto and contribute to Danone's journey. To support and coordinate the establishment of the manifesto across Danone's teams and local communities worldwide, the role of chief manifesto catalyst has been created to maximize the potential of this process and catalyze bottom-up innovation.

***McKinsey Quarterly:** How do you think this approach will ultimately benefit Danone, as well as society and the environment?*

Emmanuel Faber: Consumers are interested in what is at work in the products they eat, how these products were produced and delivered, and what is their effect on the body. I believe there is a ladder of brand equity in food. There is a lot attached to the values and culture. Ultimately, the brand should be the link with the consumer and tell the story. 

This interview was conducted by **Clarisse Magnin**, a principal in McKinsey's Paris office.