

From Digital Twins to Quantum Computing: Technology Drives Food Industry Competitiveness at Expo FoodTech

Leaders from Siemens, Hijos de Rivera (Estrella Galicia), Deoleo and Tecnalía shared practical strategies for transforming the food value chain using AI and data

Expo Foodtech 2026 is showcasing this week the technologies that are redefining food production and distribution

Bilbao, May 28, 2026 – [Expo Foodtech 2026](#) and [Pick&Pack for Food Industry](#), the leading technology fairs for the food industry, opened the doors to their sixth edition on Wednesday in Bilbao, Spain. The two industry events will bring together **more than 8,000 professionals and 261 exhibiting companies on May 27 and 28**, to showcase more than 490 innovations and cutting-edge solutions aimed at helping the food and beverage industry boost productivity through the automation and digitalization of its production facilities.

In this regard, technology has evolved from being merely a tool for efficiency to becoming a strategic asset capable of generating sustainable competitive advantages. The landscape has changed, and organizations now make decisions based on technological integration that are transforming operations, business models, and the relationships with end consumers. This was evident during the first day of the event, when industry experts and executives shared real-world examples that are having a tangible impact on competitiveness, agility, efficiency, and innovation capacity.

Data analytics, AI, traceability and automation are already driving companies to rethink their production and business models. According to **Manuel Vicente Cadenas**, Consumer Packaged Goods Vertical Manager at **Siemens**, *“we’ve been supporting the sector for over 30 years in production and across the supply chain. That’s where we began developing the digital twin and implementing AI at all levels of manufacturing and operations, both in the factory and throughout the supply chain. We are fostering a dialogue between humans and the digital, and this is undoubtedly a disruptive change comparable to the advent of electricity”*. In this context, we are already discussing autonomous elements that interact in production, such as *“quadrupeds conducting maintenance rounds, humanoids operating in coordination with the digital twin, or AI jointly managing autonomous routes”*.

Andrés Pascual, Director of Innovation at the **AINIA** technology center, agreed with this point, emphasizing that *“technology is a tool that companies use to develop their strategies, and we must focus on those with transformative potential, even if they involve taking on some risk. The industry’s vision is clearer: technology is applied to generate competitive advantages, sometimes individually and other times collaboratively”*. But technology will generate competitive advantages only if it is strategically integrated, since *“the solutions already exist, but the need to implement them is emerging. Europe is investing heavily in data spaces; small and medium-sized enterprises are beginning to decide what data to collect, while large companies are moving toward full adoption”*, noted **Susana Ferreiro**, Senior Data Scientist at the **Tekniker Foundation**.

Quantum Computing and Machine Learning in the Food Industry

Beyond efficiency, quantum computing, along with machine learning and advanced analytics, is enabling companies to anticipate challenges and develop precise, sustainable solutions, thereby boosting competitiveness in an increasingly demanding global market. **María Paredes**, R&D Scientist at **Hijos de Rivera**, explained how these technologies are applied to product innovation: *“Quantum computing and machine learning allow us to identify the optimal bioactive molecules in our functional beverages. We’re not looking for speed, but precision, and each technology is used specifically depending on the problem we’re addressing”*. Along these same lines, **Eneko Osaba**, Principal Researcher in Quantum Technologies at **Tecnalia**, added that *“the future is hybrid: combining quantum and classical computing allows us to explore multiple solutions simultaneously and solve complex optimization problems, ranging from logistics to shift planning and container distribution”*.

Both agreed that integrating these technologies requires investment in data infrastructure, AI literacy and a clear strategic approach. *“If you don’t get into quantum computing now, you’re already losing your competitive edge. We must get started before the technological wave sweeps us away, providing experts with all the tools they need to explore potential solutions”*, added Paredes. For his part, Osaba highlighted the importance of regional ecosystems, as *“they are essential for companies to implement technology in a tangible way, relying on real-world use cases, solid data, and collaboration between universities, research centers and companies”*.

Artificial Intelligence Is Being Adopted at an Accelerating Pace in the Food Industry

Another major technology revolutionizing the industry is artificial intelligence. **Enrique Pérez**, Head of Information Technology at **Deoleo**, explained how they are applying AI in their plants: *“The AI-driven transformation began as part of a broader strategic vision: to become a more innovative, data-driven, and forward-looking organization. A key priority along this path has been empowering our people through training and upskilling in AI technologies, ensuring that innovation is integrated throughout the company and its daily operations”*. For his part, **David Revilla**, Managing Director of Supply Chain & Engineering at **Accenture**, noted that *“the food industry generates a lot of information, and the current challenge is how to connect this data with real-world decisions. The AI ecosystem in the food industry includes planning, production, efficiency, sustainability, quality, and waste management. This is where it becomes interesting to see how to integrate AI”*.

That said, we must overcome the barriers that are holding back the implementation of AI and other technologies in the industry. In this regard, Revilla noted that *“we don’t need more pilot projects; we need to scale up in the industry”* while Pérez pointed to *“the cost of this technology as a major challenge. AI isn’t free, and every time we use an AI agent, we consume tokens and computational resources. As organizations, we’re still learning to manage and optimize this consumption efficiently. The challenge isn’t just adopting AI, but also understanding how to use it strategically, sustainably, and at scale”*.

[About Expo FoodTech](#) (May 27 and 28, 2026, BEC-Bilbao): this is the leading innovation event for professionals across the entire value chain of the food and beverage sector. Over two days, F4F – Expo Foodtech will bring together food industry professionals at the Bilbao Exhibition Centre (BEC) to learn about the latest solutions in foodtech, robotics and automation, processing and packaging machinery for different segments of the food industry, as well as food safety and science. It will also host the Food 4 Future World Summit, the largest European congress where you can discover the latest trends, success stories, and tools to transform the food



and beverage industry. F4F - Expo Foodtech, organized by NEBEXT and AZTI, will be held simultaneously with [Pick&Pack for Food Industry](#), the only event in Spain specializing in packaging and logistics solutions for the food industry.

[About NEBEXT](#): Next Business Exhibitions (NEBEXT) is Spain's largest private organizer of professional events specializing in technology, innovation, and sustainability for various industries.

[About AZTI](#): AZTI is a science and technology center that develops high-impact transformation projects and businesses with organizations aligned with the 2030 SDGs. Specializing in the marine environment and food, it provides cutting-edge, value-added products and technologies based on solid science and research.