



Challenges and Opportunities in Agri-Food in times of crisis

Innovation as a solution and Capagro as an Open Innovation tool for its investor-partners.

Context: a pandemic with human and economic impacts...

Along with the heavy human and social toll of the COVID-19 pandemic came the impact on economic activity and global trade.

Though economic activity has been significantly reduced globally, Europe in particular has been hit. It suffered a 7.8% contraction in activity in 2020¹, one of the largest declines since World War II.

...and a pandemic driving innovation...

The unequivocally negative impacts of the pandemic have also provided the opportunity for positive change.

Indeed, the over-allocation of resources - whether financial or human - is no longer sufficient to overcome the challenges posed by crisis of such magnitude. Our ways of doing need to evolve and new tools need to be created. A paradigm shift is needed. Innovation then becomes a key element of the answer, enabling in particular the identification of new solutions and the shortening of deployment times.

During this crisis, the need to innovate has naturally been expressed, primarily in the health field, whether by the adoption of new technologies to produce a vaccine (Messenger RNA by Moderna for example) or by the modification of approval processes allowing a faster deployment of vaccination.

¹ Autumn 2020 Economic Forecast, Nov. 5, 2020, European Commission

Innovation is a solution to the impacts of the crisis and a way to ensure the sustainability of companies that integrate and disseminate it...

Innovation in times of crisis becomes an indispensable tool for governments and businesses, both in the immediate search for solutions to a given problem and in the long-term aim of sustainability. It is then no surprise that the market performance of technology companies that embody innovation - at least in the numerical sense of the term - have outperformed the market in 2020².

This desire for innovation has been concretely reflected in well-established companies that have recognized the need to continue their R&D efforts. By way of illustration, in the first quarter of 2020 the median R&D spending of the 30 largest companies in the United States increased by 6% compared to the quarter of the previous year³.

However, as the pandemic continues, R&D spending - other than in certain industries such as healthcare - is likely to decline as it is traditionally the case in times of crisis.

The crisis will foster the emergence of new entrants and intensify competition...

This will allow new innovative companies to emerge, as was the case for other innovative companies during previous crises such as: Uber (2009), Microsoft (1975), Disney (1923), General Motors (1908) or General Electric (1890).

This expected and observed contraction of the economy can be bridged by a recovery, as was the case during the crisis of the 1930s or the post-war expansion period. Productivity gains are one of the key drivers of recoveries. They are primarily driven by capital investment, education and innovation.

Recent innovations in robotics, cloud computing and artificial intelligence have yet to generate significant productivity improvements. The time it takes to integrate these new technologies into the processes or ways of doing⁴ is probably the cause. However, it is encouraging to note that, according to a WEF survey⁵, more than 80% of companies are planning to adopt cloud computing, big-data analysis, IOT, cyber-security and artificial intelligence by 2025.

By accelerating the adoption of new technologies, the pandemic has the potential to generate productivity gains. Once the crisis is over, innovative companies will be in the best position to survive or even maintain and deepen their lead.

² The NASDAQ index of technology companies increased by 44% in 2020, the best performance since 2019, and the S&P 500 index of information technology companies increased by 41%, both outperforming the S&P 500 index which increased by 16% during the period.

³ "Big pharma is having a good crisis. Drug innovation is back in fashion", The Economist May 23, 2020

⁴ Phenomenon called "Productivity-J-curve" according to a recent study by Erik Brynjolfsson of MIT and Chad Syverson from the University of Chicago

⁵ « The Future of Job Report », 2020

The health sector will benefit from the shock of the crisis...

The pandemic gave an electric jolt to the health sector: from the use of new technologies for vaccine production, to remote patient monitoring, and the spread of telemedicine (Ping An Good Doctor, a Chinese health portal, registered more than 1.1 billion visits at the height of the pandemic).

Investors saw this as an opportunity and deployed \$8 billion in venture capital only in Q3 2020. On November 17, 2020, Amazon unveiled its intention to engage in healthcare to “disrupt” the model of an industry dominated by major pharmaceutical companies and intermediaries.

Innovation in the health sector, a model for the Agri-Food sector

Like health, the Agri-Food sector has been significantly affected by the pandemic. This impact is all the more worrying because it adds to the financial challenges the Agri-Food industry already faces, namely: improving yields to feed a growing population, reducing the carbon footprint of agriculture⁶, changes in consumption patterns and the fight against the rising costs of all diseases related to poor nutrition⁷.

While consistent technological breakthroughs in the food industry have allowed humanity to grow and feed itself, the industry has no other choice today than to combat its negative externalities. From upstream (seeds, agricultural practices, etc.) to downstream (food product formulation and distribution, for example), incumbents must adopt innovation at the risk of losing consumers, the ultimate judges of the system.

The health and food sectors share many common points: low digital penetration⁸, a large workforce, strong intermediation, binding regulations, a direct impact on human health, a long product development time and resistance to change.

As the health sector has done, the Agri-Food sector must also embrace innovation and transform itself. It is a reallocation of resources towards innovation rather than an over-allocation of financial and human resources on the existing model that will allow us to rise to the challenge and seize the opportunities.

The amounts allocated to venture capital will be decisive in order to develop the innovation that will make Agri-Food more productive, more profitable and more sustainable. Increasing R&D through outsourcing will definitely benefit industry.

⁶ Agriculture as practiced today is responsible for around 20-25% of all greenhouse gas emissions.

⁷ Obesity, in particular, from which 13% of the world population suffers, is mainly responsible for diabetic and cardiovascular diseases.

⁸ The healthcare and consumer staples sectors have the two lowest digital penetration rates at 24% and 28% respectively.

The development and adoption of these innovations in the market will depend on the ability of regulatory authorities to establish a favorable framework and on economic players to deploy resources to finance these opportunities and train prescribers and users.

Some players have already reacted by innovating. For example, the shortage of certain raw materials in factories has prompted some corporates to review their processes and offer creative and more sustainable alternatives to traditional packaging. In another case, retailers relaxed the terms of their specifications for poultry producers in order to compensate for egg shortages.

Businesses in the Agri-Food sector that are already innovative will need to increase their efforts to improve their productivity, address sustainable development issues and changes in consumer habits. In the face of the liberalization of agriculture initiated by the members of the World Trade Agreement since 1995 and reaffirmed in 2015, the decrease in protectionism⁹, which historically had created conditions of artificial performance, will have the virtue of forcing the development and adoption of innovation.

Capagro an open-innovation tool for Agri-Food partners of the fund...

Capagro has become an open-innovation tool for its partner investors; one of the building blocks of their open-innovation strategy. Capagro offers technology watch, a view on market trends and the opportunity to integrate these innovative solutions with a goal of improving productivity or seeking growth drivers.

Capagro's strategy, as a venture capital fund, is to invest and support innovative start-ups and thus disseminate through our portfolio companies the solutions designed to promote smart agriculture and better food. In doing so, Capagro's group of corporate partners/investors, all key players in the Agri-Food sector, are a major asset in the successful promotion and deployment of innovation.

With its investors/partners, Capagro pursues the ambition to transform the Agri-Food sector from upstream to downstream through innovation by focusing on the key issues of the sector and the most promising markets...

With 12 holding companies today, from agricultural robotics (Naio Technologies, EcoRobotix), to above-ground cultivation (CleanGreens, Prêt à Pousser), to new food products (Yooji, Nick's) and new distribution models (Agriconomie, La Belle Vie, Japhy) and food security (BoMill, Eprovenance), Capagro and its 13 partners/investors in the Agri-Food sector, proudly and actively contribute to the development of innovation in the sector.

⁹ Reference is made in particular to changes to the CAP since 2014

Capagro has been funding innovative start-ups since 2014 and will continue to promote innovation through its successor funds in order to promote smart agriculture and better nutrition in a sustainable and low-carbon approach...

At Capagro, we firmly believe that innovation, as in the health sector, is a key element in responding to the challenges and opportunities facing the Agri-Food sector. We are also convinced that the players who will be able to integrate and deploy these innovations and who will give themselves additional means through partnerships with innovative funds such as Capagro, have a competitive advantage necessary for their survival in a world where regulatory barriers are no longer a solution for poor economic models or products.

Beyond their survival, the most innovative companies will be able to seize the opportunities offered by new ways of producing, distributing or consuming, and will gain competitiveness in international markets while generating the economies of scale needed to pay for risk.

Capagro continues to engage with its partners/investors in a process of development and deployment of innovation whether incremental, adjacent, radical or disruptive.

Since 2014, Capagro has been working with the Capagro Innovation Fund I and will continue doing so, with the support of its investors-partners, via its successor funds to help Capagro's investors-partners seize the opportunities to create a better world...!

To be followed...

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