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# **Innovation for Agro-Food Clusters**

**A Guide on Innovation Management for  
Agro-Food Clusters in the Danube Region**



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Katrín Hochberg, Daniela Chiran, Valerie Bahr*  
Innovation for Agro-Food Clusters

Project co-funded by European Union Funds (ERDF, IPA, ENI)

Project website: [www.interreg-danube.eu/danube-s3-cluster](http://www.interreg-danube.eu/danube-s3-cluster)

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## **Imprint**

2020 Steinbeis-Edition

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1<sup>st</sup> edition, 2020 | Steinbeis-Edition, Stuttgart  
ISBN 978-3-95663-192-4

Layout: Steinbeis-Edition  
Design of graphics: Alina Klingel/Steinbeis 2i GmbH  
Cover picture: Ruslan Ivantsov/shutterstock.com

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213205-2020-10 | [www.steinbeis-edition.de](http://www.steinbeis-edition.de)

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## Executive Summary

With a great number of challenges including climate change and resource scarcity but also increasingly complex interdependencies in agro-food ecosystems in the European Union and worldwide, come great opportunities for organisations to create new, adapt or improve their existing products, processes and business models, and find new ways to collaborate with various other organisations along their value and supply chains.

The need for a more responsible economic, social and environmental behaviour to protect future generations and the soils that will feed them is imposing diverse challenges on producers, processors and consumers. Transparent supply chains, circular economy models, eco labels and digitalisation are good and important concepts, but require many efforts and resources, especially from the production and processing companies. Yet, these challenges can boost local food production and consumption, increased sustainability efforts and new technological advancements, which help strengthening agricultural regions and stakeholders. To stay ahead and contribute to the future ways of working, agro-food organisations need to focus their innovation efforts and pool resources for joint success.

Clusters often provide an environment that promotes innovation and joint knowledge creation because the physical proximity of the organisations allows for fast and easy sharing of information, tacit capabilities, specialised know-how and personnel, and other resources. The cluster itself needs to promote innovation and know-how to support cluster members in implementing their own projects. Innovation needs the right environment to thrive and organisations that want to innovate need the appropriate capabilities to manage innovation internally and in relation to their environment. Clusters and their member organisations should follow a structured approach for innovation and innovation performance measurement. This guide will present a selection of pertinent innovation management tools, including theoretical backgrounds, reference literature and useful examples (green boxes) that can support agro-food organisations in their innovation activities. The structure of the guide will follow A.T. Kearney's five innovation management dimensions and complement these with relevant principles of open innovation and knowledge sharing which can enhance innovation processes along the way.

# 1 Innovation in Agro-food Clusters: An Introduction

The agro-food sector, including agriculture and food processing, is an important economic driver for many European regions and has become one of the most prominent domains within the smart specialization strategies of EU regions. In many European countries, agriculture and food contribute to achieving shared prosperity, providing employment and development opportunities for the labour force.<sup>1</sup> At same time, the stronger growth in demand and constant productivity and market pressures, force organisations in the agro-food sector to enhance their competitiveness and innovation capacities. In that, even though agriculture is often seen as a traditional sector, it is now speeding up developments and innovations towards higher efficiency and value in production and distribution.

The agro-food sector, just like all other sectors, is facing new industrial, demographic, ecological and political challenges, which demand for change. Global commodity price trends shifted fundamentally since 2000: after having declined by an average of 0.7 percent per year over the 20<sup>th</sup> century, nominal food prices rose at an average of 6 percent annually between 2000 and 2013.<sup>2</sup> Although many factors influence these price fluctuations, we see that with today's global demand to satisfy growing populations, quantities of agro-food products and services needed in the market can exceed the capacity of farmers and agribusinesses to respond.

## Agro-food Clusters

One possible solution to these pressures and new challenges is the creation of clusters as they bring together the innovation potential of various organisations within the agricultural value chain, supporting relationships between them, and with other facilitating organisations (such as research institutions and local governments). The Food and Agriculture Organization of the United Nations (FAO)

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- 1 Ketels, C., Protsiv, S. 2017. Priority Sector Report: Agrofood, p. 1. European Cluster Observatory Report. Center for Strategy and Competitiveness Stockholm School of Economics. [https://www.clustercollaboration.eu/sites/default/files/eu\\_initiatives/psr\\_agrofood\\_sp\\_20170707.pdf](https://www.clustercollaboration.eu/sites/default/files/eu_initiatives/psr_agrofood_sp_20170707.pdf). Based on the Presentation about the Agri-Food Platform by Katerina Ciampi Stancova, DG JRC.
  - 2 Richard Dobbs et al. 2013. Resource Revolution: Tracking global commodity markets, p. 25. McKinsey Global Institute. <https://www.mckinsey.com/business-functions/sustainability/our-insights/resource-revolution-tracking-global-commodity-markets>.

As important economic driver for many European regions, the agro-food sector (including agriculture, food processing and disciplines beyond that) is at a turning point - now accelerating innovation activities to drive the transformation towards more efficient and sustainable practices. This transformation is synonymous with great challenges for the producing and processing businesses in the sector. With the increasing pressures of global markets and prices, but also higher standards for production and processing, diverse organisations along the agro-food value chain need to join forces to keep pace with the current and future technological, economic and social developments.

Innovation and economic growth are often spurred by geographically concentrated economic activity. This suggests that organisations can benefit from the membership and active engagement in clusters, tapping into their infrastructure and networks, and participating in the targeted activities they offer.

Based on the need for improved innovation management knowledge and capabilities among agro-food organisations in the Danube Region, this guide aggregates knowledge and tools to support the innovation management in agro-food organisation and the clusters they are a part of. This shall support the efforts being made within the Smart Specialization Strategies of the Danube region, implementing agro-food related priorities relating to health, environment, bioeconomy, and sustainability.