Final conclusion

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The numerous and valuable contributions during the conference showed that scientists throughout Europe have taken the need for knowledge distribution and diffusion as a basis for innovation within the agri-food sector and beyond very seriously. Many efforts have gone into trying to include the different players, aspects, drivers, interests and respective problems of creating a platform of mutual understanding and exchange. Clear interest has been shown by our contributors and imperatives have been outlined to identify and tackle the many (moral) dilemmas, trade-offs and constraints that climate change and continued global population growth imposes on our societies and changing demands. The arising opportunities, social as well as technological, were expressed and weighed against the costs, both cultural and economic, and potential pathways for innovations were outlined (Griffon, Bitsch, Scholten and Ekelund). Specific cases and practical solutions where successful communication was achieved were shared while tools for cooperation between different "knowledge" contributors were developed.

All the contributions in this book share one major message: there is no one solution; multiple strategies must be employed, depending on the particular case and/or area of knowledge creation (Etgen). But knowledge is fodder for developing these solutions and strategies (Bell). Diffusion of innovation does not follow a uniform scheme but needs to be adapted to specific obstacles within specific networks of players in specific areas of activity (Bokelmann). Not least, regional specificities of innovation systems require diverse approaches to successfully implement innovation and/or remedy unsustainable "ways of doing" (Woywode).

Furthermore, innovation must be implemented across the entire value chain (Bokelmann); the primary producer is part of the story told/to be told by the salesman. This will also determine the "value" created by the value chain beyond the purely financial/commercial, including the cultural, geographic and sustainability aspects of a given product and/or service.

However, how is it possible to foster an innovative climate? Innovation requires networks of interested parties that focus on the "whole" problem with its multiple facets and complexities (Crumley). Multi-stakeholder approaches in research have been introduced into H2020 and the European Innovation Partnerships (EIPs) aim to engage farmers in problem formulation. And yet, the complexity of the problems to be tackled within a complex matrix of players with very different, complex and far from symmetric power relations in very different areas is scientifically, commercially, geographically and socially challenging. Fostering sustainable innovations that can be implemented is a substantial challenge that goes beyond knowledge creation and diffusion.

The involvement of social sciences and the humanities (SSH) in the formulation of many research approaches would be greatly supportive. For example, they can help with methods, perspectives and in-depth interviews for stakeholder involvement (Woywode). Existing networks link environmental sciences, economics, anthropology, history and geography within an ethical framework, but they need to be applied more widely. And last but not least the natural sciences must include SSH beyond the merely economic dimension in its solution-oriented thinking to improve the diffusion and impact of its research.

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The different actors in diffusion and innovation matrices are not only hampered by limited interactions between players but also by conflicting regulations and other constraints beyond their influence that narrow their room to manoeuvre. Private-public partnerships are gaining in popularity and may overcome and/or make visible some of the related problems (Ekelund, Guyomard).

In order to overcome all these challenges the bioeconomy is and should act as necessary vision (Griffon). It will give guidance where direction can easily be lost; when the forest is difficult to see for all the trees.