

ENVIRONMENTAL COLLABORATION IN PRACTICE – LESSONS LEARNED FROM KALMAR

*Joacim Rosenlund*¹
*William Hogland*¹

¹*Faculty of Health and Life Sciences, Linnaeus University, Sweden*

ABSTRACT

The Triple Helix platform project 2011-2014 further developed the wastewater treatment in the wood industry. Research was also carried out to study the actual practice of such collaboration between sectors. While the main project consisted of industry-university collaboration, initiatives to increase the unofficial regional networks of Triple Helix collaboration were also studied. Interactive research method was used to be able to work in this process and to gain access to the practical knowledge the participants have about this kind of work. Results from this show the importance of informal contacts and forums for discussion between sectors. Other important areas were the financing and time frames which are different and how such differences surface in the interaction between sectors. The changing role of university meant that researchers had the responsibility of creating knowledge with industry and other actors in society, reaching practical results and results of societal relevance. This increased emphasis on the practical relevance of knowledge had to be balanced with the traditional goals for research. Whether or not this is talked about as a Triple Helix there are several points of interest that can be related to wider changes in the way research and the third task is conducted and the context in which research is performed affects the day to day activities of the people working in such an environment.

KEYWORDS

Triple Helix, environmental science, interactive research, university-industry collaboration

INTRODUCTION

From waste to water management no single actor can provide the right solution. Governmental initiatives can promote environmental change and authorities can enforce legislation in different areas. Some solutions are yet to be found and to find this additional research is necessary from the university sector. Collaborations can narrow the distance between the actual practice of problems and solutions to these and such efforts can benefit all partners and in the end the

environment itself. For the big issues of the contemporary world researchers also need to acknowledge the civil society and general public.

This paper used a case of wastewater management collaboration in the Kalmar region, where research was extended from a university-industry collaboration to include other actors in society. The author of this paper worked with interactive research (1) to be able to study this collaboration at the same time as being a part of it. Such an approach to methodology is one way to bridge the conceived gap between research-society and theory-practice. This is done by including the participants in the project in the knowledge-creation process, in short by including the knowledge of the participants and their reflections upon the results.

THEORETICAL CONTEXT

The Triple Helix is a perspective on the role of innovation in society. The starting point for the Triple Helix model was the work of Henry Etzkowitz and Loet Leydesdorff (2,3) which aimed to put forward a perspective on innovation and growth where the interaction of university, industry and governmental institutions play key roles. The Triple Helix model refer to the collaboration between these three sectors as a motor for innovation, with university as the key sector and knowledge as a key ingredient for innovation. Ideally no actor should be above the others in such a collaborative effort and the idea is for the different spheres to solve problems and support each other in a cooperative manner. This idea has become part of Swedish policy and is sometimes used almost as a recipe for success (4).

Collaborations between the Triple Helix sectors have mostly been studied on analytical level thus leaving the actual practice of such interactions up to debate (5,6). When collaborating cross such sector borders participants reflect upon the certain expectations, conflict and solutions this brings. The Triple Helix is a model that is supposed to improve the innovation and regional development however there are no instructions for using it on a project level. Thus it is interesting to explore how the Triple Helix model is used by actors from different sectors.

This leaves us with questions of how such ideas like the Triple Helix are actually used and how this performs in practice. In addition to this there are no clear answers on to how to manage collaborations that are influenced by such ideas. Such actor-oriented perspective is less regarded in the previous literature on such collaborations especially concerned the influence such interactions through the conducted research. This research aims to fill this knowledge gap about environmental cross-sector collaborations.

ENVIRONMENTAL COLLABORATION IN KALMAR

The studied case started as collaboration between a research group in environmental science and technology and a wood based industry. In addition to the wood industry other industries and companies were included. The aim of this collaboration was to gain more knowledge about wastewater issues and to provide wastewater treatment onsite in industry. After three years, in 2011, this was extended by a new EU-funded project with the aim of disseminating these solutions to other actors in society as seen in Figure 1 below:

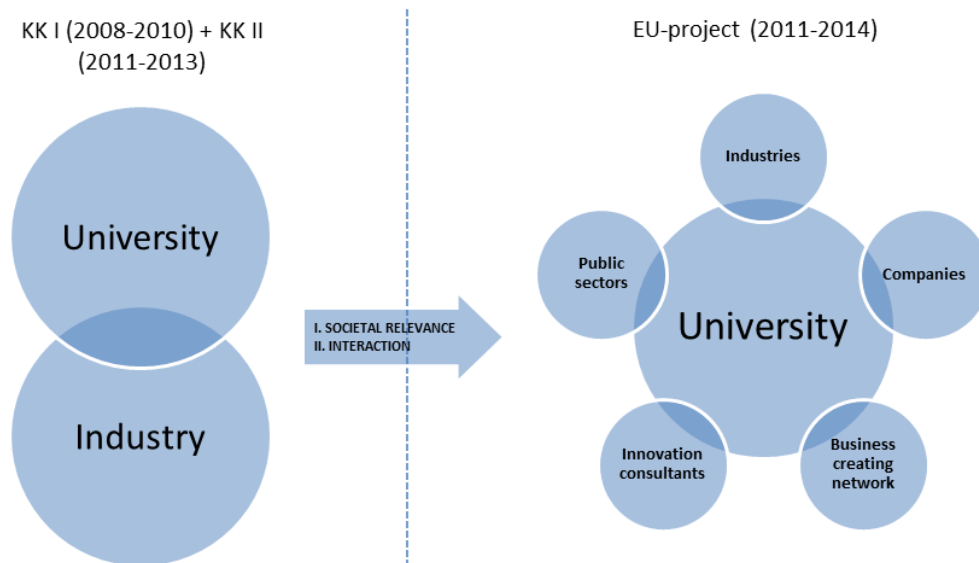


Figure 1. Extending the collaboration

The collaboration was extended to include more interactions and to get input on the results from a wider range of actors in society. During this project the ideas of the researchers were tested against industries, companies, innovation consultants and other actors. In doing so the goal was to create a demonstration plant to be used by other industries. Another idea was to be able to commercialise the research to be able to reach a broader market. The challenges of collaboration between university and other sectors have been recognised previously concerning time-frames (7), values and ways of working (8,9) and the protection of traditional academic values (10).

PRACTICAL LESSONS

Interactions between the different actors were sparked by the interactive research approach. The actors from different sectors expressed concerns, conflicts and solutions regarding their work in cross-sector collaborations. These results are presented in Table 1 below:

	EXPRESSION
CONCERN	Pressure to perform the third task and useful science Environmental problems as a common issue Incentive from research funding agencies for collaboration
CONFLICT	Conflict between consulting role and academic role Entrepreneurship/commercialisation vs publishing Conflicting goals, values, time frames and ways of working Complexity of financial structures
SOLUTION	University need to open up and be able to communicate with all sectors Third task need to be merited and the idea of usefulness need to be expanded Need arenas and coordination to manage differences Importance of openness, informal contacts and networks

Table 1. Expressions of collaboration among the Triple Helix actors

Concerns often came from a structural level where for example research funding agencies and university policy put a pressure on research collaborations. This pressure can be for researchers to perform their research in collaboration with other actors in society and being able to disseminate their knowledge to these. However there are also common concerns that all sectors share about solving the environmental problems that exists. This is important to actually create incentives for environmental collaborations.

The conflicts are shown regarding conflicting goals values and time frames some of which have been recognised by earlier studies. The goals of industry are often to earn money or improve on products while public sector needs to enforce legislation and do what's best for the citizens. Representatives from university also had some issues with merging the traditional academic role with a more entrepreneurial one. As the main goals are to publish and produce results, the processes of commercialisation and Third Task activities are less merited and can be distracting for the researchers. By industry, company and public sector participants the financial funding structures were seen as too complex as well. This in part is problematic when funding collaboration projects.

Solutions were often considered in the form of interactions and interpersonal relations. What is more surprising it was also found that many outside the university sector thought it was hard to get in touch with researchers. In a seminar during the project fourteen participants talked about the role informal networks and arenas to meet in played for collaborations. Developing these informal networks seems to be a key to build up and sustain collaborations and to bridge differences between sectors.

CONCLUSIONS

Collaborations between university and other sectors in society provide opportunities as well as challenges. It is through the interactions of such collaborations that the differences and similarities between sectors can be recognised. While there are no ultimate solutions for a smooth running collaboration there are some lessons that can be learned from this case. One is to recognise the importance of informal contacts and networks for this to work. The other is to be able to have a dialogue about the differences and similarities between sectors and to early on discuss the common goals or indeed to find these. Ideally there should be an ongoing dialogue between the participants to constantly develop the collaboration and to be able to catch conflicts and bring these to the table. These results are presented in full in an upcoming paper and licentiate thesis to be presented in January 2015 by the main author.

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