The immediate effects of a triple helix collaboration

An impact case study of the Creative Idea Solution (CIS) Framework

Brix, Jacob

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Institution: Aalborg University, Department of Learning and Philosophy.
Case written by: Jacob Brix – brix@learning.aau.dk
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1. Summary of the impact

Below I list the direct and indirect impacts gained by a number of organizations based on my work as researcher in the intersection between theory and practice. I collaborated with the Danish Technological Institute to improve the innovation process sold to their customers. Here I synthesised the experiences and insights gained from the consultants and their practical work into a new version of the DTI innovation model. This model (the CIS framework) was sold and used by the DTI consultants in a number of projects with their public and private customers.

Figure 1: A triple helix set-up of my study

My host organization (GTS – network institution)

The private and public organizations studied

My host university

It is data collected in these projects I report on in the studies cited below. Hence, I assisted in making applied research applicable and I did longitudinal studies documenting the direct and indirect learning that occurred at the DTI and in their customer’s companies.

2. Underpinning research

1) I co-developed a new innovation model (the CIS framework) with the DTI consultants.
2) A number of projects were sold based on the updated model
3) I got access to follow the DTI consultants and their practical work with innovation in the customer’s innovation projects as participant observer in the entire process.
4) I created ‘post project review reports’ identifying direct and indirect learning outcomes for the customers.

Hence, I report on two types of impact: Model Creation and Model Usage. The impact (learning) stemming from the usage of the model in practice leads me to identify both direct and/or indirect types of impact.

Short on the research process (setting the stage)

I applied a participatory research strategy and documented the process of work and the actions and behaviours of the customers’ innovation team. Moreover, I got access to study the data in the idea management system utilized to structure and make progress in the innovation project. Here I followed the projects from their definition to the presentation of new concepts to the decision-makers. Based on this research strategy I made ‘post project learning review reports’ of the projects and I presented these to the DTI and their customers. In these reports I presented the behaviours I had observed of the employees and the managers at the company. In addition, I identified the organizational-related barriers and opportunities for the adoption and/or non-adoption by relying on organization design theory to discuss if and how the products/services developed in the innovation project were more likely to be realized. (These reports serve as important empirical evidence for my research papers – see section 3).
Impact case study (REF3b)

**TYPES OF IMPACT AND THEIR MAGNITUDE:**

**IMPACT for Project co-sponsor (DTI):**
Product development of the CIS framework
Knowledge about increasing the adoption rate of new products/services at the customers
Increased sales – my documentation of “cases” facilitated the sales argument
Maintaining customers by arranging specialized events about innovation processes
Increase in LinkedIn-group: +500 members signed up after I started blogging and inviting for public seminars about my research and its outcomes.

**DIRECT IMPACT 2\(^{nd}\) degree:**
The case companies developed new ideas and business models that were commercialized or implemented
The case companies identified and developed a portfolio of ideas and business concepts ready for further development or commercialization
The case companies extended their professional network via the DTI collaboration

**INDIRECT IMPACT 2\(^{nd}\) degree:**
The employees in the project team improved their competencies for exploration
The employees in the project team and their closest colleagues experienced an increased *readiness for change* because of the project
The management experienced that their traditional incentives had to be aligned to create innovation (a former managerial misfit identified during the study causing decision-makers not to adopt new projects).

**IMPACT 3\(^{rd}\) degree:**
*AWARENESS:* 140 business people showed up to three “after-work seminars” in which I presented the CIS framework as a revitalized innovation model and the preliminary findings of ongoing projects. We distributed slide decks including a “two-pager” hands on version of the model. We got positive feedback and many contacts returned to ask for a meeting = new sales opportunity for the DTI and new data collection opportunity for me. The awareness of my research collaboration gave me access to visit 14 different business councils and network associations to present my research. Moreover, +1300 unique downloads have been made of my PhD dissertation since its publication. Finally, I published articles in Børsen, Jyllands-Posten and a range of local newspapers in Central Region Denmark covering different aspects of topics deriving from this research.

3. References to the research


The journal papers listed above all build on data collected during my Industrial PhD education sponsored by “Forsknings- og Innovationsstyrelsen” Case number: 10-084158. Data collected extending the time of my industrial research project has been made as part of my ordinary research activity.
Impact case study (REF3b)

4. Details of the impact

The details of the impact in relation to the DTI and the direct impact for the case companies are well documented, justified and explained in the journal papers cited above. (Classified Project reports (in Danish, written by the DTI consultants) can be forwarded on request and with permission of the case companies). Here is a brief summary including details:

Summary of Direct Impact:
Public organizations perspective
The municipality of Ikast-Brande initiated three innovation projects relying on the updated DTI innovation model. These projects generated a portfolio of new opportunities with a total of 54 new opportunities; hereof 30 concepts with incremental potential, 15 concepts with moderate potential, and 9 concepts with potential for strategic renewal. Six of these concepts are implemented/being implemented (see Ikast-Brande homepage link below).

Private organization perspective
One of the private organizations developed a portfolio of 31 new opportunities; hereof 11 concepts with incremental potential, 11 concepts with moderate potential, and 9 concepts with potential for strategic renewal. The organization decided to seek strategic renewal and used the new knowledge created in the project to buy a new technology from another industry, which resulted in a + 70 per cent performance improvement compared to the existing technology.

International perspective:
As part of a European project five Lithuanian companies and a group of specially invited researchers from four Lithuanian Universities got 32 days of innovation training based on the updated DTI model. (Project Uninova, lead by the DTI, Saulentikos Slenis (Sunrise Valley Lithuania), and Vilnius Gediminas Technical University). The innovation training entailed an open innovation approach to collaborate on new product development for the five SMEs. One SME (Aedelis UAB) commercialized a major innovation because of the innovation training See this link; the remaining four SMEs got incremental product optimization because of the project.

Documenting the indirect impact:
Interesting is my effort to identify and document the indirect learning (impact) that occurred because of the innovation projects (see especially Brix and Peters (2015a and 2015b): I did pre- and post project measures of the actions and behaviours of the innovation team which determined that the innovation team – and their closest colleagues – had changed behaviour and attitude towards strategic renewal (see page one, indirect impact 2nd degree). These insights could not have been identified if I had not followed the project as participant observer: I experienced a large difference in both the behaviour and the mind-set of the innovation team as the project progressed in time; changes that the employees did not notice themselves. These insights I used in a structured post project interview and I determined that the innovation project had positive effects on the case company that had occurred unnoticed.

From indirect impact to justification for high uncertainty projects:
The identification of the indirect impact, both in Brix and Peters (2015a &b) has led to extra sales of projects for the DTI, since the findings of these papers document and justify, that an innovation project with high uncertainty can create value for an organization before commercialization and/or implementation of new products/processes. Especially for municipalities and public organizations this is an important finding, since they need strategic renewal, but cannot justify high uncertainty projects in their tight budgets. For the Municipality of Ikast-Brande, my documentation of indirect impact led to the initiation of two new projects that aimed at strategic renewal of two other divisions in the Municipality.
5. Sources to corroborate the impact

**Public sources:**
1) The journal papers listed above act as corroborative sources since they are all published in peer reviewed BFI-rewarding journals.
2) The homepage ikast-brande.dk/om-kommunen/mental-frikommune has information about some of the projects reported on in this case study.

**People sources**
Henning Sejer Jakobsen – Senior Consultant, Danish Technological Institute, +45 7220 1433 hja@teknologisk.dk

Henning Hansen – Chief Executive Officer, Ikast-Brande Kommune, +45 9960 4011 hehan@ikast-brande.dk

Lisa Gramkow Østergaard – Chief Consultant, Ikast-Brande Kommune +45 99604164 ligra@ikast-brande.dk

Johannes Kjærgaard – Head of Development, Metso, +45 76266453 johannes.kjaergaard@metso.dk

Raimundas Slavinskas – CEO, AEDELIS UAB +370 5274 2707 raimundas.slavinskas@aedelis.lt

Laurynas Braskus, Head of Innovation, Sunrise Valley +370 6981 0072 laurynas.braskus@sunrisevalley.lt