
ENHANCING INNOVATION COMPETENCIES

A GUIDE TO UNIVERSITY COMPANY CO-OPERATION (D 3.1)

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Authors:		Sue Baines and Jennie Shorely		Date:		31/10/2017	

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Executive summary

About the FINCODA pilots

Innovation is a high priority in Europe. Innovative individuals and organisations are essential to meet the changing needs and practices of working life. FINCODA brought together universities and companies from Finland, Germany, the Netherlands, Spain and the UK to cooperate on addressing the need to enhance innovation competencies and measure individuals' capacity for innovation. At the heart of the project was the creation of the FINCODA Innovation Barometer Assessment Tool. In addition to technical development underpinned by systematic analysis and validation, FINCODA included a workpackage entitled *Innovators education and recruitment* (WP3). This was an important component of the project because it applied the Barometer in real life settings and facilitated learning across the partnership. It did this through a series of pilots involving company leaders, employees, university teachers and students. This document is the main output of *Innovators, educators and recruitment*. It draws together experiences from the FINCODA pilots, with an emphasis on lessons learned and practical guidance.

FINCODA built upon the earlier INCODE project which developed an innovation assessment tool to for universities to use with students. The FINCODA Innovation Barometer Assessment Tool extends INCODE by widening its benefits to innovation-oriented companies. Its intended applications include the assessment of innovation for existing employees as well as the recruitment of graduates. The pilots fall into two groups broadly relating to students and to employees:

New forms of enhancing and assessing innovation competencies in universities (two pilots). These pilots involved companies working closely with innovative educators to meet the project aim to “provide solutions for creating a solid path for forthcoming innovators from university to companies”.

New forms of enhancing and assessing innovation competencies in companies (three pilots). These pilots delivered on the project’s ambition for European added value by helping companies (project partners and others) to assess, update and enhance skills and competencies of their personnel.

From the interest attracted by companies beyond the partnership there is evidence that the assessment of innovation is a ‘hot topic’ and that the FINCODA tool is set to meet some key needs in companies as well as in educational programmes. The pilots pioneered the Barometer’s application in different ways in various settings. This guide documents the implementation and outcomes of each pilot with insights drawn from observations on-site and testimonies of participants including educators, students, project teams, company employees and company decision makers. It offers practical lessons and guidance for university-company cooperation in enhancing innovation competencies. Learning points are presented with supporting evidence and links to resources including audio visual material.

Key learning points and guidance: University company cooperation for innovation

Incorporate real challenges from industry into the learning experience

The two FINCODA pilots that worked with students demonstrated ways universities can link education to real professional challenges coming from industry. This was achieved in different ways: through a module taught over a semester and in a once-off, day long 'challenge' involving companies, students and teachers.

The FINCODA Barometer is a strong framework for supporting students in articulating their own competence levels

This was demonstrated by testing it in the context of a 2nd year module implemented with university-company cooperation. In the module students innovated new solutions for real, problem-based assignments coming from a company.

University company cooperation is not simply a one-way transfer of expertise from HEIs to companies

In the FINCODA pilots, knowledge between universities and companies moved in more varied ways than implied in linear models of technology transfer. Collaborations between universities and companies can be instigated through a teaching route as well as extending knowledge from research. Some successful workshops utilising the Barometer drew upon both university and company expertise.

Universities can reach out to many kinds of businesses

The pilots extended the project's benefits far beyond the partnership and demonstrated that the Barometer can be useful for many kinds of company with an interest in innovation. Companies that took part ranged from a FTSE 100 business with more than 9000 employees to small and micro enterprises. They also included an international non-profit. Strong testimonials from companies in all these categories highlight the practical value their leaders and employees gained from Barometer inspired events.

The Barometer can be used creatively and in ways not envisaged in the project plan.

Although recruitment was emphasised in the proposal and seen as a priority by company partners early in the project, it had only a limited part in the pilots. Real life pilots with companies applied the barometer creatively in facilitated workshop events for individual and shared reflection on innovative behaviour. Use in this way was not foreseen at the outset, yet it was one of the most powerful achievements of the Barometer evidenced in the pilots.

I think that before this workshop the people were already aware that the world is changing around them and that Rexel needs to adapt but their own role in this transformation becomes more clear now (*Testimonial from Esmé Valk, Human resource manager Rexel*)

University company cooperation is time-consuming It is important to remember that there is no shortcut: the more time invested the more likely rewards will accrue.

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Part 1: University company co-operation: developing pilots

Rationales for university company co-operation

The FINCODA project responds to the importance of innovation for both the business and academic worlds. Companies need to employ innovative individuals. Educators need to ensure that students gain the innovation competencies that are becoming more and more essential for working life. Universities have increased the teaching and learning of employability skills but evidence casts doubt on assumptions that these can be effectively developed in classrooms (Cranmer, 2006). Real life learning experiences and employer involvement in curricula, in contrast, have been shown to support graduates into employment (Tudor and Mendez, 2014; Penttilä and Lyytinen, 2016). The most obvious and pressing reasons for universities to cooperate more closely with businesses are to enhance the student experience and bridge the gap between higher education and the workplace.

Universities, however, fulfil many roles in addition to the core business of educating students. They are employers, investors, purchasers of goods and services, new business incubators and stakeholders in regional economic strategies (Johnston et al., 2008; Culkin, 2016). They have significant impact on employment, the built environment, wider society, and business innovation (Goddard and Vallance, 2013). Universities have been described as “anchor” institutions, regionally embedded and spatially immobile with an anchoring function for the sustainability, development and growth of regional economies (Birch et al, 2013; Goddard et al., 2014). This notion of the university as a highly engaged institution has become a key element in the modern academy:

The concept of higher education has certainly morphed from the old and rather “unengaged” ivory tower notion to a new, highly engaged, place-based or community-based concept (Birch et al, 2013: 13)

To deliver on such expectations, universities and other institutions need to develop and nurture closer linkages “for economic and wider social benefit” (Pugh et al., 2016, p.1358). Means to do this include co-development of research, teaching and enterprise, all of which bring mutual benefits although there are inevitably some tensions within these relationships (Benneworth and Cunha, 2015).

Ecosystems for innovation are highly complex and increasingly rely upon inter-organizational cooperation and alliances (Moore, 2006). Knowledge Transfer used to refer to a linear model of university research-based expertise being taken up for industrial applications. More sophisticated developments in thinking recognise much more variation and complexity in how organisations interact and how knowledge is accessed and mobilised (Hardill and Baines, 2009; Bannister and Hardill, 2013). ‘Reach-in’ from industry into a university setting, for example, stresses a mechanism whereby collaborations can be instigated by businesses through a teaching route in contrast to research-based outreach from HEIs to regional industries (Whitehurst et al. 2008).

All these developments in teaching, research and knowledge mobilisation suggest many possibilities and opportunities for universities and companies to work together in new ways.

Choosing and piloting the most promising ways for university-company cooperation

A “Sea challenge” was organised by the Turku University of Applied Sciences (TUAS) team in Sept 2015. This day long workshop (called a “Sea challenge” because it took place on a Viking ferry) involved HEI and company partners who were challenged to explore in an imaginative way potential ideas for university / company cooperation in their regions. The facilitators encouraged teams from each country to take a broad view of university company co-operation, not necessarily tied closely to the Barometer.

As an example, TUAS shared the Research Hatchery concept which has taken place at that university for ten years. It is based on the principles of Innovation Pedagogy with the core idea of bridging the gap between educational contexts and working life (Räsänen, 2013). The key principles of the Hatchery are:

- learning is based on real working life assignments coming from external stakeholders;
- learning takes place in groups of students
- the role of the teacher is to coach students and facilitate the learning process
- the work in research hatcheries serves the local economy
- In learning new skills, students also help solve problems companies face
- innovation competences have a big role in Research Hatchery work

Teams from each country made lists of different existing and potential examples of cooperation between the university and companies, and assessed them for characteristics such as innovativeness, employability opportunities and client leadership. The Man Met team, for example, proposed developing the idea of ‘Student Business Brokers’ and also further work on the new Degree Apprenticeship programme for which the university is a UK trailblazer. Universitat Politècnica de València (UPV) participants reported that they have many examples eg. role reversal, telematics simulation, hiring students. They proposed developing a “speed networking” event for students and companies and also a one-day challenge in which students would respond to challenges set by companies and be assessed on the Barometer dimensions (see Figure 1).

Company and university partners contributed to the Sea challenge together. Company representatives made observations about some of the benefits of university – company collaboration for them, for example that they value conversations about training and comments from students about their perceptions of the company, its image and brand. The Sea challenge concluded with an outline from each country of preliminary plans for a pilot to enhance university-company cooperation.

In a follow up workshop in Valencia (26th January 2016) the teams came together again and shared their progress with developing their ideas into pilots. Participants were also asked to articulate their own criteria for success with regard to university company cooperation. The following list emerged from lively discussion:

- More emphasis on transferrable skills for students to prepare them for working life.
- Communicate the idea of HEI as an ‘authentic’ learning environment

- Inter-faculty involvement of teachers from different degree programmes;
- Integration of the FINCODA tool in university-business projects;
- Impact of the FINCODA tool and project – as evidenced through interest in this work from other universities and businesses beyond the FINCODA partnership

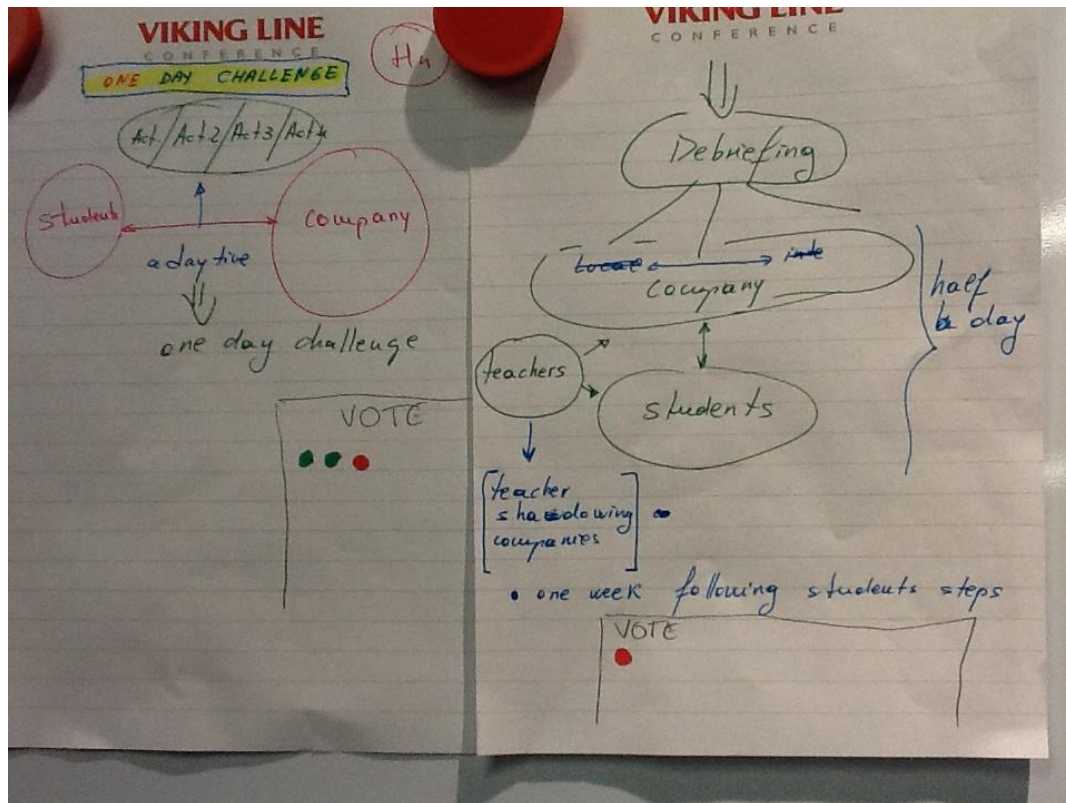


Figure 1: initial pilot ideas from UPV developed in the Sea Challenge

Part 2: Supporting pathways of students as (future) innovators

Pilots in Finland and Spain had in common a focus upon students and their transition as forthcoming innovators from university to companies. Thus, they meet the FINCODA aim to “create a solid path for forthcoming innovators from university to companies”. The two universities and their company partners approached this theme in very different ways.

Turku: A new module with a company partner

Teachers at TUAS created and implemented a new Product Design Development module (15 ECTS) together with the company partner Elomatic, a leading European consulting & engineering company. The elective module was offered to 2nd year ‘Energy and Environmental Engineering’ students in the autumn semester 2016. It consisted of three taught course elements plus real-life assignments based upon Elomatic’s current research and development needs. The students worked with authentic, problem-based assignments, and innovated solutions for the company. The contact lessons combined theory, working with the assignments, learning in teams, and different active learning methods that supported performance of the development assignment. The structure of the module is illustrated in Figure 2.

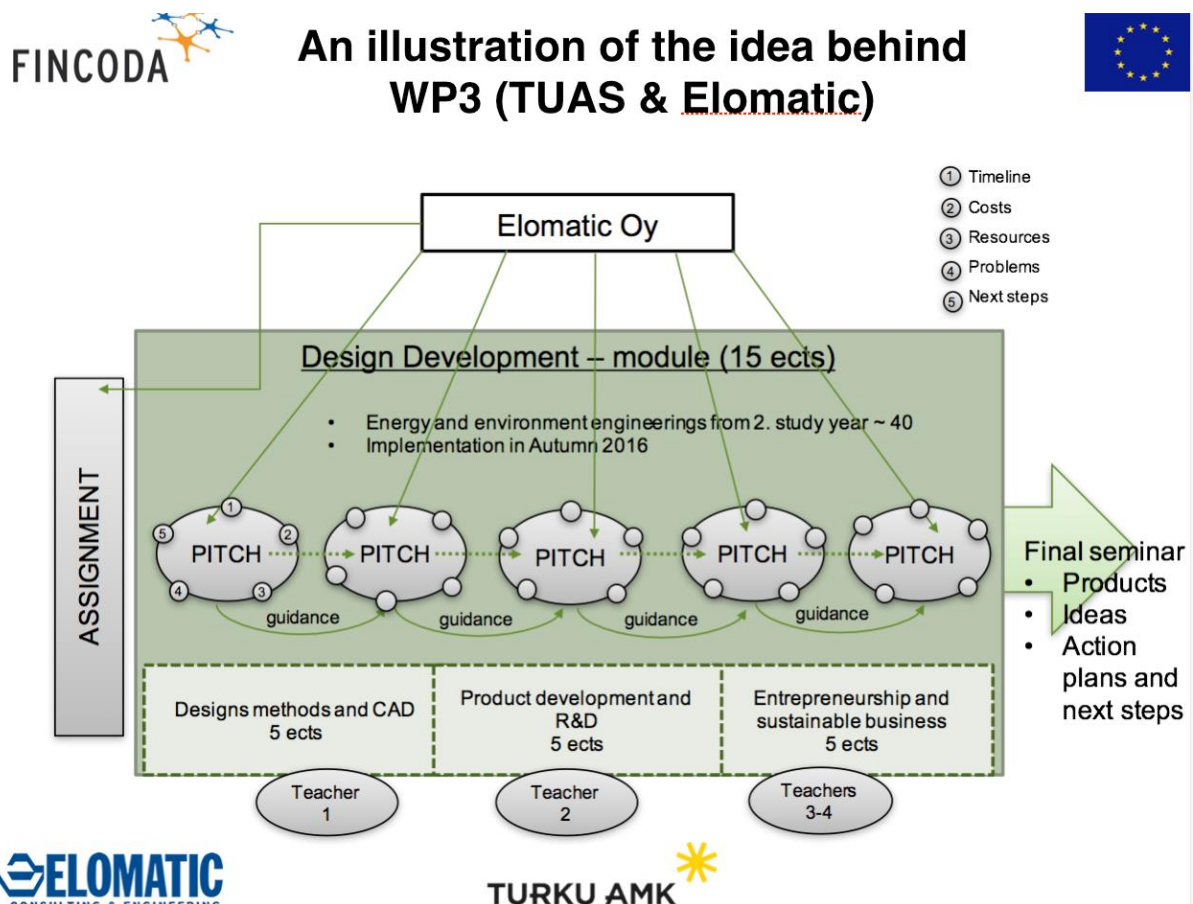


Figure 2: Illustration of the Design Development Module

Forty students took the module. Elomatic provided six different assignments, all concerned with product development challenges associated with a waste flow monitoring system

which the company had in a pilot phase. Students worked on the assignments in teams. They were new to the subject of design and development but each team was led by more experienced students from ‘Mechanical and Production Engineering’ and ‘Industrial Management Engineering’ courses. The groups also had the opportunity to work with three design students in a consultancy capacity. University teachers coached the student teams and professionals from Elomatic mentored them. Once every fortnight, the student teams had to pitch their work to Elomatic experts who were able to give feedback and support to them.

Feedback about the module from participants – teachers, students and company staff – was overall positive.

- “Many different and unexpected ideas came up..... [student projects] provide important information for Elomatic’s product development” (Elomatic staff member)
- “I had some doubts on working together with a big, international company and how flexible it can be. But in this project I was surprised how involved the company was and really gave their time and effort for the students. It also brought value to the students” (university teacher)
- “All the [student] projects exceeded expectations. The product development, software development and report design results were of a professional level” (university teacher)
- “We did get to participate in the development process of a real product by a real company and we got tutoring and feedback from the employees of said company” (student).

The pilot offers features that could be replicated. Collaboration in the student groups worked particularly well. Real life assignments and contacts with the company motivated students and teachers alike.

Although company staff reported that the results from the assignments were mainly promising, there were comments that students’ solutions were too non-commercial. One Elomatic staff member, for example, reported that “the most important requirement, affordability, got forgotten along the way”. It was also noted how much more demanding this kind of involvement with undergraduate students is for company staff than familiar ways of working with universities such as hosting doctoral students. One company participant in the module, on the other hand, thought that company influence was not strong enough and should be further extended to influence to students’ grades. Students appreciated the close and frequent company contact but there were some reservations. One student, for example, thought that while some Elomatic staff seemed interested in and appreciative others didn’t seem to value their efforts and did not give feedback on the things they thought should be improved on.

These critical comments can be born in mind to inform future developments based on this kind of co-operation. The comment on the non-commercial character of students’ innovation ideas is particularly interesting as it reflects the input of companies into the needs analysis (reported in D 2.2). This could be addressed in various ways, for example involving students and teachers for other disciplines such as business and management, or modifying the briefings to put more emphasis on commercial constraints, which may be obvious to employees but not to students.



Figure3: A student team presenting to Elomatic

The students completed the Barometer self-assessment before the project work and again at the end of the semester. The Barometer was also used as a framework for group discussions in the middle phase of the work. Student groups were asked to think in depth about the indicators and dimensions of the Barometer. The discussion groups showed that the Barometer was understood in the way it was supposed to be. Students taking the module were able to demonstrate concrete examples of their innovation competencies using the Barometer. In general, the post module assessment indicated that some innovation competencies had been developed within the student groups. TUAS educators reflected that authentic assignments and cooperation with the company seemed to work as a natural platform for learning innovation competencies.

Valencia: An engineering challenge day

Universitat Politècnica de València (UPV) designed and piloted a one-day 'engineering challenge' to improve procedures for companies to recruit and select students for internships. The overall aims were strengthening relationships between the university and companies, attracting students' interest, improving their professional competences, and providing evidence for students' learning. The three main participating organisations were UPV and two partner companies, Schneider Electric and Celestica. On the day of the event, there were also representatives of three other organisations including companies from different sectors and an automotive cluster.

Seventeen students took part. They were from the Bachelor's Degree in Industrial Organisation Engineering (GIOI) and the Master's Degree in Industrial Engineering (MII). GIOI is the degree with the highest percentage of students doing internships according to the UPV's Employment Service databases. During the challenge, the people from the companies and the teachers of the degree observed student behaviour using the FINCODA

framework. Prior to the session students self-assessed their innovation competences. The challenge day was structured as follows:

The morning: Students were presented with challenges and worked on them in teams for four hours. One teacher and three company representatives assessed each student on the five FINCODA dimensions. The four observers compared their impressions and identified students who stood out in some dimension.

The afternoon: Students presented their solutions to a panel of six people in charge of operations and human resources in industrial companies. After the presentations, the professionals made comments and gave students some feedback. One group of students was selected for paid internships in the participant companies. This 'prize' was awarded on the basis of the presentations to the panel, observation during the morning session, and the students' Barometer scores.

Post session: The academic Director of the GIOI remained with the students for two more hours to review the day's work, to provide all the students with specific feedback, and to make comments on positive aspects and those that could be improved.



Figure 4: The Engineering Challenge Day in Valencia

All the companies assessed the challenge day very positively and would like such activities to be repeated. Feedback from students themselves was also very favourable.

"These actions should be organised much more often because the more proximity there is between companies and the academic world, the more opportunities to learn and allow us to enter the world of work" (Company participant in the Valencia pilot)

"Although I had not received the prize, which is always gratifying, the prize for me was being able to participate in the event" (student participant)

University staff were somewhat more critical. In their view, students were not able to demonstrate their capacities and treated the event as an exam. The solutions they proposed for the challenge were quite conventional and tended not to utilise innovative capacities as expected. Moreover, several students were not clear about the style to use to present a professional image (for example in dress and behaviour). Nevertheless the challenge was a valuable experience for students as “a pre-socialisation process for the workplace” (Marin-Garcia et al., 2016: 135)

Working with future innovators (students): Summary of learning and guidance

- The FINCODA partners identified raising perceptions of HEI as an ‘authentic’ learning environment as an indicator on success. Both the student pilots achieved progress in this direction and some of their activities could be replicated.
- Testing of the FINCODA Barometer in the context of a 2nd year module demonstrated that its items constitute a strong framework for supporting students in articulating their own competence levels.
- Using the Barometer to provide evidence for students’ learning for recruitment purposes was only a part of one of the pilots, which applied it within a selection process for internships. It is too soon to evaluate the success of the FINCODA framework for this purpose. There is potential for further development this area in future.

Resources

View Elomatic’s testimony on a successful project

<https://www.youtube.com/watch?v=kAWuzqYcrWg>

Read the full report of the Valencia student engineering challenge day

<https://polipapers.upv.es/index.php/WPOM/article/view/6549>

Part 3: Working with companies to assess and advance innovation for current employees

Current company employees were the focus of pilots in the UK, the Netherlands, and Germany. In addition, a further pilot in Finland commenced in September 2017. The UK and the Netherlands partners designed and facilitated once-off workshops on innovation utilising the Barometer. The approach was rather different in Hamburg where HAW and the company partner Lactoprot cooperated on employee innovation projects within Lactoprot over a five-month period.

Innovation workshops in the Netherlands

The Utrecht team organised and facilitated a series of innovation workshops for company employees. These were

- Rexel, September, 2016
- ECDL, De Associatie & eX:plain, December, 2016
- Light of the world, April 2017

A fourth workshop took place at the University of Applied Sciences Nijmegen with a group of 26 students in September 2017.

The format of each workshop was built around the Barometer. After a short introduction to the Barometer, participants were encouraged to assess themselves individually on each of the five dimensions and then share their self-assessment with others, working in groups of four or five. Scores were recorded and displayed on a screen for discussion (aggregate not individual scores). The self-assessments were used as a basis for an individual five minute 'pitch' by each participant in turn on their own innovative strengths and weaknesses. Each made a poster, displayed it on a wall, and then spoke about it (see Figure 5). At the end of the session, the facilitator offered thoughts on innovative strengths and weaknesses within the organisation as a whole, based on the scores and pitches.

Esmé Valk, Human resource manager, Rexel reported that:

The workshop was informative, not too theoretical and a nice balance between listening, presenting and analysing. The workshop gave them [employees] insights on how innovative they are operating currently and how important this is for Rexel as a wholesaler. Furthermore, it showed that even though they all have the same position, they have a different view on innovation. During the pitches it was made clear several times that they realise that change starts with themselves and it gives new possibilities.

Following two workshops with commercial companies, the Utrecht team organised a workshop with Light of the World, an international NGO working on disability issues. The NGO has examples of innovation in their disability work but consider that innovation is not core. Eighteen staff members attended the workshop which took place during a week-long event in Utrecht for Light of the World staff from various overseas projects.



Figure 5: Tweet from the Rexel workshop – participants prepare their ‘pitches’

The Light of the World participants’ scores were highest on teamwork but relatively low on networking. The facilitator proposed that the organisation could improve innovation capacity by getting “more energy from outside”. According to the report of external observers from Manchester Metropolitan, “this provoked lively discussion and some disagreement but seemed to be warmly welcomed as a contribution”. The observers documented what happened next:

There was animated discussion of what it means in the context of an international NGO to be part of a ‘team’ or of a network - some think of partners they work with daily in the field who are not Light of the World staff as within their team. It was generally agreed that there is some room for improvement with regard to innovation through more attention to external networks.

Overall feedback was very positive from all the participating companies in the workshops. There were a few suggestions for changes in matters of detail. One Light of the World participant suggested that the posters could be made more interesting by using pictures as well as words. Tamara Hooijman, account manager of De Associatie, commented that time within the workshop was rather limited and it would have been nice to take the scores home.

The final workshop with students in September 2017 was able to test the final web based version of the Barometer, unlike the earlier workshops which used a paper version. This workshop included assignments for personal competency development (for example interview exercises) as well as the pitch. The feedback was that it was that although it was a useful workshop the format appeared somewhat less suitable for students than employees.

[Innovation workshops in Manchester and Cardiff](#)

Carter Corson and Manchester Metropolitan University together facilitated a half-day workshop for Small and Medium Enterprises (SMEs) on 29th November 2016 at Manchester

Met Business School. The workshop was inspired by the five areas in the FINCODA Barometer. It comprised.

- Ideas generation
- How to critically evaluate ideas participants generate
- Building behavioural skills for team working and influencing



Figure 6: Feedback from the Manchester Workshop with SME leaders

The aim was to increase individuals' capacity to innovate. The event drew on Carter Corson's expertise in behaviour change in the workplace and the Manchester Metropolitan team's experience of supporting innovation and growth for SMEs, in addition to the FINCODA Barometer. Invitations to participate were for selected businesses based on interest in and capacity for innovation. All five Barometer dimensions were introduced but activities focussed on creativity, critical thinking and team working. The FINCODA Barometer was supplemented with material on the psychology of influencing, utilising resources created by Carter Corson. Twelve businesses attended ranging from micro-businesses (0-9 employees) to medium sized ones with more than 50 employees. Participants were owner managers or members of their senior teams. They reported that the workshop was helpful and some declared specific intentions to implement what they had learned in their businesses (see Figure 6).

Juan Marin-Garcia from UPV and two representatives from the Spanish company partners, Cristina Medrano and Myriam Carrasco, attended this workshop as observers. The company attendees reported that it provided "deep knowledge of the competencies and how to apply them in our organization in order to improve some of our process". Juan Marin-Garcia commented on "clear explanations" and "group dynamics to reflect and compare points of view against others". He reported his intention to implement some of the "tips & tricks" in his own research group.

Carter Corson also organised and facilitated a workshop for employees of Admiral at the company's head office in Cardiff in August 2017. Admiral is one of the UK's three leading car insurers and also offers home insurance, loans and other financial services. It has more than 9000 employees worldwide and is the only FTSE 100 Company currently head quartered in Wales. It publically emphasises its "thirst for innovation by continuously launching new brands and products"¹.

The format was similar to the Manchester workshop but the facilitator adapted it to meet the particular needs of this large company and the participant employees, who were more familiar with innovation than the attendees in Manchester. Another significant difference affecting the workshop dynamic was that unlike in Manchester the participants knew each other. The feedback was positive, as indicated in Table1.

Table 1: Feedback from the Cardiff Innovation workshop

ROLE	COMMENT
BUSINESS DEVELOPMENT MANAGER	"I liked working towards a specific problem and the interactivity of the session"
PARTNERSHIP & INNOVATION MANAGER	"It was engaging and thought-provoking"
BUSINESS DEVELOPMENT MANAGER	"It was interactive and focused on practical use"
BUSINESS DEVELOPMENT MANAGER	"It made me realise the things we need to apply in our team, and the things that I can keep revisiting throughout my career"
EXECUTIVE RECRUITMENT OFFICER	"It was good to assess my own team, the things we do and how we can be better"

Workshop pilots compared

Both pilots in the UK and three in the Netherlands were in the form of Barometer-inspired, facilitated workshops with companies. In all these cases, the Barometer was introduced to companies outside the partnership. Similarities were interactive working with small groups (fewer than 30), a mixture of facilitator led explanation and task-based group activities, and an introduction to the Barometer. There were some differences. In the Netherlands and in Cardiff participants were employees from large organisations (including one non-profit) whereas in Manchester they were SME leaders. The workshops organised by the Utrecht team included 'pitching' by individuals about their own strengths and weaknesses to the whole group. There was no equivalent in Manchester or Cardiff of this exercise. In the Netherlands workshops, but not the UK ones, the facilitator offered commentary about what Barometer scores and pitches highlighted for a company's innovative potential and development needs. In Cardiff and in Manchester the workshop facilitator brought in relevant material extraneous to the Barometer.

¹ <https://admiraljobs.co.uk/about-us/>

The six workshop pilots in companies in two countries all demonstrate that the FINCODA project meets a practical need for innovation assessment in the context of personnel development. Moreover they show that the Barometer successfully serves as a ‘boundary object’ between the worlds of education and practice (Butter and Van Beest, 2017b).

Hamburg: employee projects

Lactoprot is the FINCODA company partner in Hamburg. It specialises in the production of caseinate (a soluble milk protein) for numerous different areas of application throughout the food industry. The company has 150 employees. Using innovative technologies to optimize production processes and quality, Lactoprot has become a global player in the dairy market. Steffen Rode, the Managing Director, cooperates closely with Northern Germany’s Universities and continually trains the staff to keep them updated on the latest quality and processing procedures. Under his leadership the creation of innovative learning processes is an important part of Lactoprot’s personnel policy.

Thirty Lactoprot employees undertook projects working in groups of five to six, spending four hours per week over a five month period (September 2016 to February 2017). The project members came from two of Lactoprot’s four locations and the groups mixed people from the office and shop floor workers. Each group was expected to work on an idea relevant for short and long-term development of the business. The project ideas were chosen by the employees. Each employee had to announce two project preferences and the teams were created on the basis of these preferences. The five selected project themes were:

- Knowledge Management: Customer relationship management.
- Idea management – generate a process for collecting and implementing ideas
- Knowledge management: Production and technology
- New social rooms and social areas at Lactoprot/ Leezen
- Communication and information at Lactoprot

At the end of the five months, each team shared its project with the others in a one-day event on 24.2.2017. Each team made a 30 minute presentation, followed by time for discussion and a facilitated “world café” session in which the groups was encouraged to offer ideas on all the projects.

It was originally envisaged that the FINCODA Barometer would be used before and after but due to technical reasons the German version was not ready in time. Nevertheless the pilot was highly successful in its aim to encourage innovative skills. An external observer reported:

Each team had to work together, new ideas were born. Initiative was encouraged. Critical thinking ensured that only the best, most feasible plans were described .. [and] thanks to the projects in which several project members worked together, “we-feeling” was more visible and tangible (Source Carla Mostard EDCL Nederland, visit to Lactoprot 24.2.17)

The April event was followed up in in June 2017 with “innovation day” at Lactoprot, where the FINCODA barometer was used, demonstrating ongoing interest in this innovation

activity. To further strengthen the university-company-cooperation, HAW built on the results of the Lactoprot pilot with related projects for university students during the summer semester 2017.

[New pilot to deepen company-university cooperation](#)

In addition to the five pilots discussed in this guide, a new pilot in Finland commenced in September 2017. This is a collaboration between TUAS and the company partner Meyer, a specialist in building cruise ships, passenger ferries and special ships. The pilot aims to identify good practice for the future for Meyer, and students have a significant role. Groups of students work in Meyer's premises, using the Barometer as a framework to observe and record work practices and culture. TUAS will combine the students' reports, analyze the data and present the result for Meyer. Anticipated outcomes include:

- Meyer could use results for developing their working practices to better support employees' innovation competences
- The information will help Mayer to build their company image and make it more attractive for new employees, especially graduates.
- Students will deepen their knowledge of innovation competences and become more aware of their own level of these competences.
- As with the Elomatic pilot, students will gain experiences to prepare them to work as innovators in their future careers with companies.

As this new pilot is still ongoing at the time of writing (October 2017) it is not possible to report results. The ambitious plan does however further demonstrate the appetite for cooperation on the part of universities and companies. It also suggests potential in future for merging interactions involving company employees and students in novel ways.

[Working with exiting personnel: Summary of learning and guidance](#)

Once-off activities requiring a short time commitment were able to involve many companies, in contrast to longer more intensive involvement within a single company.

The Barometer can be used as the sole basis of an event, or as an inspiration combined with additional material. These different approaches were equally successful and demonstrate that it is more flexible resource than originally imagined.

The Barometer was adopted in real life pilots with companies for identifying innovative strengths and weaknesses and reflecting on areas for individual and organisational improvement. It was shown to be a powerful tool for these purposes.

The Barometer was used within companies entirely for developmental purposes. It was not used during the piloting with companies for recruitment or selection, as envisaged in the project proposal. This does not entirely rule out the possibility of such applications in future. It does however demonstrate that it has a valuable place for personnel development, to a much greater extent than was imagined at the outset.

Well planned and facilitated events such as the workshops in the UK and the Netherlands take time to organise. Their success depended on flexible delivery tailored for needs of a particular company and participants. These pilots were free of cost to companies. They have potential to be embedded in future activities, for example in the offer Carter Corson, a

partner involved in workplace in assessment and training, offer to clients. Other ways to sustain them beyond the funded period of the project need to be examined such as the possibility of creating bespoke events for a charge, or incorporating elements into professional programmes.

Resources

View a short film of the Manchester Innovation Workshop

<https://www.youtube.com/watch?v=uW22zzcKnzE>

Listen to Meyer's reasons for joining FINCODA

<https://www.youtube.com/watch?v=OJHihDPNzjk>

See an interview with René Butte, HU University of Applied Sciences. René talks about how FINCODA is special in bringing together universities and companies to help people develop as innovators. He also explains how the pilot supported Rexel middle managers to reflect on their innovation competencies.

<https://www.youtube.com/watch?v=iSuWtXOWYto&feature=youtu.be>

Concluding Remarks

The FINCODA pilots created and implemented a wide range of ways to build university company cooperation in general and cooperation for the advancement of innovation competencies in particular. They delivered real life instances of new forms of enhancing and assessing innovation competencies in companies, as well as in universities. Universities and companies have a shared interest in innovators of the future. In the pilots, they worked creatively together to enhance innovation despite occasional differences in expectations and assumptions. Company personnel, university teachers and students all reported that new interactions occasioned by the pilots were positive and should be continued.

It must be emphasised that these were pilots undertaken during the lifetime of the FINCODA project while some development work was still in progress. The FINCODA Barometer concepts were fully refined but the software application was not ready to use. With the exception of one event with students in the Netherlands in September 2017, the pilot activities used paper-based versions of the Barometer. In doing this, they evidenced its positive reception and versatility. Students were able to apply it to help articulate their competencies, and companies found it valuable for personnel development. It was not possible to test the on-line version which is the final FINCODA output, and this is a limitation.

As illustrated throughout this guide, the FINCODA tool and project attracted interest from other universities and businesses beyond the partnership. This was achieved by working directly with organisations in activities designed for the purpose. In addition, reach from higher education into companies was expanded by means of well-placed publication. The team from the University of Applied Sciences Utrecht (Netherlands) published an article about the intermediary form of the FINCODA tool in a journal of management development (Butter & van Beest, 2017a). As a direct result of this, they were requested to organise a readers' meeting, at which approximately 30 companies and readers of the journal were

invited to discuss the project and encouraged to collaborate on future testing of the tool. This illustrates the value of being alert to opportunities for raising awareness of the achievements of university – company cooperation in FINCODA, and widening its benefits to more companies.

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