

Final evaluation of Industrial Postdoc project

Project name: Critical Success Factors for Knowledge and Innovation Management in the Sustainable Energy Consulting Sector

Reference number: 5190-00006B

Project participants: Danish Energy Management (DEM), Aalborg University, Aarhus University, University of California, Berkeley

Project period: Aug. 1, 2016 – July 31, 2019

This is the form for the final evaluation of Industrial Postdoc projects.

The Industrial Postdoc, the company and the research institution jointly conduct a final evaluation that describes the project's starting point, execution, results and impact in an accessible manner.

The financial project report is not part of the final evaluation and is submitted separately.

The project's success criteria

Please state the project's general success criteria at project start

Please state any later adjustments along with the date of the adjustment

For Danish Energy Management (DEM), the general success criteria at the project start was to 1) incorporate knowledge and innovation into work processes, 2) develop a system for improved knowledge and innovation flow, and 3) create a business model framework for attracting clients with innovative services. Academically, the general success criteria of the project was to publish peer-reviewed articles regarding 1) networked actors' role in shaping knowledge and innovation *processes*; 2) knowledge sharing *systems* in networked partnerships, and; 3) a new business process *framework* for knowledge in action. These general success criteria remained the same for the duration of the project, with one exception. This exception is that the systems related article (point 2) became an article regarding the new concept of sustainable visioning, for which the collaboration partner at Aarhus University remained the same.

The three most important research results

Article: **Business Model Innovation and the Global Ecosystem for Sustainable Development. This article has been submitted to the Journal of Cleaner Production.**

ABSTRACT

Business models have historically been informed by linear concepts in which functional units perform their individual tasks, and all work is structured into a sequential value chain. This focus has contributed to the formation of organizational "silos" where knowledge sharing and learning within, much less between, organizations becomes difficult. With an increasingly dynamic, turbulent and interconnected global economy, today's business models benefit more from concepts that look beyond traditional linear thinking. Current literature on business model innovation highlights critical success factors that include creativity, innovation, networks and a deeper understanding of the ecosystems in which they exist. This article combines each of these elements to create a new framework with which to view business model innovation. This framework is then applied to the case of Danish Energy Management (DEM), a consultancy company reorienting its core business logic around sustainable development in support of

existing services as well as developing new, innovative services. To conclude, the broader ecosystem for sustainable development is illustrated and analyzed, to better understand the benefits that this approach can provide.

*The case study of DEM titled “A Case study of DEM titled: Danish Energy Management and the Global Ecosystem for Sustainable Development” was prepared for Harvard Business School (HBS) together with Professor Lynda Applegate, but was not able to be published at HBS due to conflict of interest (the Postdoc was conducted with the case company, and therefore the case company was not eligible for publication). This process has facilitated strong ties with researchers at Harvard University, and the case is being published as part of the business model article above.

RESEARCH IMPACTS

In addition to the article itself, this process also facilitated the development of relationships at Harvard University (with professor Lynda Applegate) and at the University of California, Berkeley (with Professor Homa Bahrami and Professor Richard Strand). Professor Richard Strand also has ties to Copenhagen Business School, which were also facilitated through this collaboration.

LINK TO DEM BUSINESS IMPACTS

Through the recursive process of studying research *and* action, many of DEMs business model components were informed by research and consequently developed further. This included linking strategy and value proposition to the SDGs, developing new sustainability management services and providing new sustainability management services to clients in a wide range of industries. Ecosystem components were also affected by this process, contributing to growing the ecosystem for sustainable development in Denmark and the US (at Harvard University and in the building sector in New York, New York). This included holding SDG workshops and presentations at conferences, seminars for students and University representatives, and a number of meetings with business and organization representatives to inform about the benefits of working directly with the UN SDGs.

Piolet Study: Harvard University and the Sustainable Development Goals

OBJECTIVE OF THE STUDY

The objective of this study was to show that at Harvard University, the UN Sustainable Development Goals (SDGs) can be used as a platform to define a common framework for action and communication across projects, between schools and in teaching. Harvard’s Office for Sustainability can use the SDGs to provide a common language for those reporting in on projects and activities – from researchers, to students, to campus operations personnel. The Office for Sustainability can also use the SDGs to communicate out, providing alignment for Harvard’s decentralized campus around a holistic vision, and fostering an innovation ecosystem for sustainability.

THE STUDY’S RESEARCH DELIVERABLES

- Harvard University Sustainability Plan Sustainable Development Goal materiality assessment
- SDG Climate Action Plan Alignment
- SDG Case: Harvard University Sustainable Healthful Food Standards and the Global Goals
- SDG Case: Harvard University Living Lab and the Global Goals

BENEFITS OF USING THE SDGS AT HARVARD

1. Creating a platform for aligning diverse activities and fostering innovation
2. Making sure that big sustainability issues don’t fall through the cracks

3. Not re-inventing the wheel – using existing standards to report and gain inspiration for new sustainability activities
4. Providing an easy communication tool for Harvard’s leaders

RESEARCH IMPACTS

This research facilitated a direct link with Harvard’s Office for Sustainability, including a connection to the Office’s Director Heather Henriksen, and a number of Office employees including David Havelick, and ties to the T.H. Chan School of Public Health, Harvard Business School, and Harvard Kennedy School through student representatives who worked on cases for this collaboration.

LINK TO DEM BUSINESS IMPACTS

This pilot study provided the opportunity to test newly developed SDG services within DEM. This pilot study provided positive results for three newly developed services in the service area of Sustainability Management, a service area which has been developed as an outcome of this Innovation Fund project.

Article: **Sustainable Visioning - Re-framing Strategic Vision and the Role of Sustainability within Organizations.**

ABSTRACT

The United Nations Sustainable Development Goals (SDGs), adopted by all UN Member States in 2015, provide a global platform that is increasingly being used by organizations to work strategically and take action in line with social responsibility. This study examines how a transition, from sustainability as a standalone business function to sustainability as a strategic orienting principal, emerged. The paper re-frames and integrates the concepts of strategic vision and sustainability within organizations. In so doing, sustainable visioning is introduced as the glue that holds together organizational commitments that are centered on social, economic and environmental principals. The Danish based multinational enterprise, Ørsted, serves as the focal case to show how sustainable visioning has been used to strategically reinvent an energy company primarily based on fossil fuels into what is today one of the largest renewable energy companies (by capacity) in the world. Ørsted has used sustainable visioning to (i) spur innovation and new technologies that have substantially reduced the cost of offshore wind, (ii) grow their business and investment portfolio, and (iii) help them to attract financing and position themselves within the growing ecosystem for sustainable development. To conclude, the implications of sustainable visioning are discussed along with the opportunities for future research on the topic.

Key words: Sustainability, SDGs, MNEs, Strategic Vision, Business Model Innovation, Network Innovation, Sustainable Visioning

*This article was written upon request for a special issue of the Journal of Cleaner Production.

RESEARCH IMPACTS

In addition to the article itself, this process also facilitated the development of relationships at Aarhus University with Professor John Ulhøi and Associate Professor Jessica Aschemann-Witzel, as well as a direct connection to the Aarhus University Director Arnold Boon and office representatives.



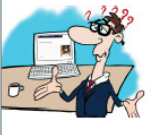







LINK TO DEM BUSINESS IMPACTS

Although this article could not include DEM as the focal case (because the focus of the special issue was on MNEs), the concepts that it discusses are still very relevant (and hold true) for DEM. Through this collaboration with Aarhus University and with Professor John Ulhøi specifically, the company also benefitted from two interns from the Aarhus School of Business and Social Sciences (BSS). An ongoing dialogue with Aarhus University’s Director’s Office has also been facilitated, with relation to opportunities for incorporate the Sustainable Development Goals as a campus-wide activity.

The three most important business impacts

Process Impact

At the outset of this project, seven key areas for organizational process improvement were identified by Ms. Madsen together with the CEO and Knowledge & Innovation Steering Committee, and a ‘knowledge and innovation’ survey was developed and distributed to all employees for the purpose of ‘building a solid foundation and synergy’ for knowledge sharing and innovation within the company. This survey had an 80% response rate, with both qualitative and quantitative responses. Responses were gathered, and five focus areas were identified for further action. This process formed the development and implementation of an ‘Action Plan for Knowledge and Innovation’ in the company, containing the following action points:

| | | |
|--|---|---|
|  <p>Finding information quickly and easily</p> <ul style="list-style-type: none"> • Office 365 • Skype For Business • Dynamics CRM • WorkPoint • Graphic designer • Mind map  |  <p>Familiarity with Service range & additional sales</p> <ul style="list-style-type: none"> • Weekly news • Admin/Econ + new employees attend Inland/Udland meetings • SWAT & FAB analysis for Market areas • Consultancy Sales workshops • Sales manager • Transformation Map  | |
|  <p>Sharing and using lessons learned</p> <ul style="list-style-type: none"> • Face-to-Face project startup meetings • Project evaluation templates • Lunch-and-Learns  |  <p>Sharing and using new information</p> <ul style="list-style-type: none"> • Knowledge sharing policy & guidelines • Yammer • Consultancy Sales workshops  |  <p>Understanding how services fit together and contribute to our vision</p> <ul style="list-style-type: none"> • Inland / Udland meeting presentations • Knowledge Communities • Regular communications from management • Info screens  |

This plan had a major impact on the organization in terms of how knowledge was shared, and new knowledge and innovation was generated. For example, with relation to sharing and using lessons learned, project start-up and evaluation templates were created for the purpose of creating a common approach to evaluating projects across the organization. This means that the company is now able to start and evaluate projects in a common way, making evaluation of lessons learned much easier, and also making sure that key project areas are not overlooked. Lunch-and-learns were also implemented, allowing employees to learn from one another and gain a better understanding of the diverse projects and services provided by the company. With relation to facilitating a better understanding of the service range provided by each of the market areas, senior managers conducted SWAT and FAB analyses,

facilitating a better understanding of client needs, and how services could best fit together and contribute to additional sales.

BUSINESS IMPACTS

The design and implementation of the DEM Knowledge and Innovation Survey and Action Plan facilitated a very clear overview of where the company needed to focus with regard to knowledge and innovation processes. With relation to the survey, it was distributed for three years in a row, with substantial improvements observed in areas of sharing and using new information and understanding how services fit together and contribute to overall vision. These actions are still being followed-up and implemented at all levels of the organization – by management, consultants and support staff.

LINK TO RESEARCH IMPACTS

The process of designing and implementing an action plan for knowledge and innovation facilitated a very deep understanding of the organization, which was subsequently used to describe the organization in the DEM Case Study. Future research could usefully publish results of the survey and discuss organizational change processes with relation to knowledge and innovation in greater detail.

Systems Impact

Year two of the project focused on systems, when Ms. Madsen developed the specifications for a new document handling system and customer relationship management (CRM) system within DEM (relating back to ‘finding information quickly and easily’ in the Action Plan above. Both of these systems were a move from Google to Office 365, with a range of system solutions that needed to be created or replaced. Ms. Madsen was the Project Manager for implementing the new Dynamics CRM system for public and private marketing processes within DEM. This CRM system replaced a number of diverse internal processes that had not been previously handled in one system.

The implementation of this system means, in practice, that tendering and private market client acquisition processes are now streamlined in one central location. Information about public and private clients is now written down in this system rather than remaining only in the heads of individual consultants. This CRM system has also made it easier to follow-up on actions, and identify where tenders, bids, and private client leads are with relation to the acquisition of new contracts. For complex tendering processes, each activity is now explicitly identified, meaning that new team members (or team members taking over a tendering process from a colleague) will be able to quickly gain an overview and pick up where someone else left off. This system also provides updates and overviews, helping employees to identify new developments and execute next steps more easily.

Other systems being implemented within the company include Yammer, where knowledge communities focusing on specific strategic and technical issues were created. Within these communities, employees now share and discuss relevant news articles or other material in the media. This is a transition from the previous method of sending emails to specific individuals, where the material is only seen by a few individuals, and can be difficult to find later. The Yammer system now also provides an archive where new information and the surrounding discussions are catalogued and can be tracked over time.

Skype for Business also replaced Skype within the company, and because only half of the company previously used Skype, the move to Skype for Business meant that the chat and call function became accessible to all colleagues. This change was beneficial for making colleagues sitting in different locations more easily accessible.

BUSINESS IMPACTS

The new systems which are now in place at DEM have provided a streamlining of activities, better overviews, easier access to information and individuals when needed, and better oversight with regard to key organizational processes. However, it will be up to continued organizational discipline to ensure that systems are used and used properly. This project has created the foundation for an organizational shift to streamlined systems (and the streamlining of processes that they support), as well as a clean-up of existing information within DEM.

LINK TO RESEARCH IMPACTS

Although the systems portion of this postdoctoral work did not yield any direct subject matter impact, ties to Aarhus University and Professor John Ulhøi (the researcher who was connected to this section of the postdoctoral application), yielded positive research results. In addition to knowledge sharing between Aarhus University and DEM, Professor Ulhøi was also a collaboration partner for an article on strategic visioning.

Business Model Impact

At the time that this project started, DEM was in the final stages of formulating a new company strategy. This strategy set specific focus on energy and sustainability, and the UN Sustainable Development Goals (SDGs) in particular. Because Ms. Madsen had previous experience working with sustainability, she became deeply involved with embedding sustainability (and the SDGs) into DEM's business model.

Ms. Madsen began by incorporating four of the Sustainable Development Goals (SDGs) into the four company values, and then re-branded the company history to place focus on sustainability. Next, Ms. Madsen led the development and implemented of a new online system to measure impact across all company projects in line with the Sustainable Development Goals, SDG Targets and unique DEM sustainability indicators. Ms. Madsen also signed DEM up to the Global Compact, and then used results from the online SDG system to produce Annual Sustainability Reports, which were delivered to the Global Compact each year over the three years of this project. DEM became actively involved with the Global Compact, and a member of the company Steering Committee for this project now sits on the Board of Directors for the Global Compact Network Denmark.

With relation to DEM's business model, Ms. Madsen's next step was to develop a full range of services for a new Sustainability Management service area. Once these services were developed, Ms. Madsen worked with Harvard University on a pilot project to test a number of these services. While the new service range was being launched, Ms. Madsen also participated in client meetings, and provided consultancy and project management services to clients in a broad range of industries including higher education, engineering consultancy, food services, information technology and government agencies. Today, other market areas within DEM also incorporate the company's unique sustainability services into tenders and client contracts.

BUSINESS IMPACTS

This business model impact of incorporating sustainability and the SDGs into DEM's value proposition, value delivery and value capture is perhaps the largest business impact achieved by this project. The company has gained recognition as a market leader with relation to providing UN SDG services in Denmark, and has also gained recognition for their capabilities in New York, New York. The ambition of DEM is to make the Sustainability Management service area profitable.

LINK TO RESEARCH IMPACTS

The process of embedding the SDGs into company strategy and history, and subsequently designing and implementing an new and innovative service range at DEM facilitated a very deep understanding of business models, and each business model component. This knowledge was used to develop a theoretical article on business model innovation and the global ecosystem for sustainable development. This new knowledge was also used to write a case story about DEM and the global ecosystem for sustainable development, which was later incorporated into the theory development article on the same subject. This process was also the inspiration for the article written together with Professor Ulhøi regarding sustainable visioning, as it was the vision of DEMs CEO Jørn Lykou which launched Ms. Madsen on this journey.

The three most significant experiences about the collaboration and the project process

Focusing on Innovation and knowledge resources. DEM is an organization that has always had innovation at its core. This project has enabled a positive impact to be made by focusing on, and structuring, knowledge and innovation processes. This has been a broad organizational collaboration, which has resulted in ex. company standards for starting and evaluating projects and developing methods for easily sharing new information and ideas with relevant colleagues. For all concerned, it has facilitated learning, sparring and optimization opportunities that would not have otherwise been possible.

Experiencing an extremely wide range of cross-fertilization opportunities between universities and industry. This Postdoc has facilitated a number of University collaborations, where a pilot study was conducted with Harvard University's Office for Sustainability, student interns were attracted from Aalborg and Aarhus University, and cross-fertilization happened in a number of meetings, conference presentations and university events. DEM was an active participant in the university environment, and presentations and sparring were given by Ms. Madsen, the CEO, Sales and Marketing Manager, and a range of other company experts working with both domestic and international markets.

Opportunities to learn and develop the business. For Ms. Madsen, this Postdoc allowed her to be involved in an extremely wide range of company activities, including project development, project management, business development, sales & marketing, network presentation and discussion with a wide range of stakeholders. This was an invaluable process for developing ideas and gaining new skills. For DEM, this Postdoc allowed the company to develop their business. A new system was developed to measure impact in line with the SDGs, which has also given project managers knowledge about how to concretely measure and understand different aspects of sustainability within their projects. Innovative Sustainability Management services were developed and delivered on the market, and DEM learned a lot about the need to adapt services and be open to new opportunities on the private market.

Research

Please describe briefly

- The point of departure at the beginning of the grant period - the original research questions and hypotheses
- The development in the grant period with regard to these questions and hypotheses
- The most important research tasks and challenges in further development of the project and results

Point of Departure

At the outset, there were three research questions that centered around processes, systems and frameworks:

1. What is critically important for actors wanting to develop efficient and effective knowledge and innovation management through the work **processes** that they create and navigate, and what role does this play in transforming the sustainable energy consultancy sector?
2. What is critically important for knowledge and innovation to flow within and between networks involved in sustainable energy, and how can a relevant **system** facilitate or hinder this flow?
3. What is critically important for knowledge and innovation to be evaluated and incorporated into sustainable energy consultancy projects, and how could a new business process **framework** help to bring sustainable energy products and services to market more quickly and effectively?

Development of Research Questions and Hypotheses

During the grant period, research was first developed to look at the first research question regarding knowledge and innovation processes. A case study was written about DEM, examining how senior managers create and navigate innovation processes in the ecosystem for sustainable development (slightly changed from the narrower sustainable energy consultancy sector described in the application). This was written based on a collaboration with Lynda Applegate from Harvard University, and the findings provide both richness and depth to innovation management literature.

For the third research question, a theoretical paper was developed identifying a new business model framework, and the greater ecosystem within which business model innovation exists. This research highlights critically important knowledge and innovation to be incorporated into a business at each business model stage including value creation, value delivery and value capture. It also highlights critical success factors for innovation in the dynamic networks that exist within the broader business ecosystem.

For the second research question, the collaborating professor from Aarhus University John Ulhøi was an active partner as specified in the application. The nature of the resulting article, however, changed to focus on a new concept, namely sustainable visioning. Ms. Madsen was asked at a conference to write an article for a special issue of the Journal of Cleaner Production that focused on SDGs and MNEs. Ms. Madsen took this opportunity to collaborate with one of the postdoctoral partners and write this article.

Most Important Research Tasks and Challenges in Further Development

The most important research tasks were to participate in and document organizational processes, conduct semi-structured interviews, and have regular feedback sessions with management. Case study and action research methodology is extremely inciteful for providing depth and openness to explore research questions. By keeping a timeline of organizational change, the complexity of evolving events was well documented, and could be easily referenced for writing purposes. Having monthly Steering Group meetings for this project (including the CEO and selected business representatives) was also invaluable, enabling members to set a course for action and follow-up. It was also during these meetings where members could discuss what was working in practice, what needed adjustment, and why. Lessons learned through this process are vital for the literature on innovation management. The challenge in further development will be to find the right opportunities and channels to disseminate project results.

Business

Please describe briefly

- The point of departure and the development during the grant period, incl. e.g. position relative to competitors, patents, strategic changes, markets, customers and collaboration partners
- The company's strategy for commercializing the project results, incl. specific initiatives (e.g. making of business plan, sales, product launch, recruitment) as a consequence of the project results
- Probable sources of further investment in the project (e.g. project parties, investors, customers, councils, funds, etc.)

This is the area of the project that experienced the most significant change with relation to the postdoctoral project's point of departure. The project was set to focus on the public tendering process within the company (DEM), but instead became focused on developing a new market area, namely Sustainability Management. The Sustainability Management services that have been developed are:



SDG Business Strategy – providing the means to steer in a more sustainable direction

SDG Materiality Screening/ Assessment – mapping key Sustainable Development Goals (SDGs) and targets

SDG SMART Indicator (KPI) Identification – for simple, consistent measurement and reporting

SDG Impact Tracking Cases/ Reports – providing visual representation of sustainable impact

SDG Measurement System – a web-based system for tracking and reporting sustainable impact

SDG Workshops – training, education and hands-on case development

With relation to competitors, DEM was a first mover in this space offering services related directly to the Sustainable Development Goals. And although DEM has received some recognition because of being an early entrant on the market, large competitors with a considerable amount of additional resources are now beginning to threaten the company's position. However, it is also first now that these services are being understood requested on the B2B market, so this is a critical period for DEM, which will likely determine whether this will become a profitable market area for the company. Another possibility for profiting from these new services will be to include them as an innovative element when bidding on or offering contracts. In this way, DEM can set themselves apart from the competition in the building energy sector with unique service offerings.

As part of this postdoctoral project, a number of Universities acted as collaboration partners for the development of Sustainable Management services. At Aarhus University, Ms. Madsen gave presentations at seminars and held lectures for courses at the Department of Business and Social Science (BSS). One outcome of this was additional research being done by an intern from Aarhus BSS. At Aalborg University, Ms. Madsen gave a series of lectures regarding Business and the SDGs, both to students, the International Business Center (IBC), and at a conference arranged by IBC (where DEMs CEO also gave a presentation). A Piolet study was also conducted in collaboration with Harvard

University's Office for Sustainability. This collaboration allowed Ms. Madsen to test and deliver some of the newly developed Sustainability Management services. Collaboration with these universities is ongoing.

With relation to commercializing these results, DEM first recruited a graphic designer, allowing Sustainability Management and other company material to be developed with a streamlined and professional look. Having this in-house competency also meant that Sustainability Management services could focus on communication services to a greater extent, with info graphics and visually appealing materials. The following year DEM also recruited a sales & marketing manager, which offered support to the entire organization with relation to building competencies in reaching the private market, as well as general marketing of services provided by DEM (with a large focus placed on Sustainability Management services). Because DEM had historically focused on public tendering, it was deemed important to gain new competencies in attracting private market clients.

The implementation of the CRM system was also part of the commercialization strategy to increase the understanding and efficiency of sales and marketing activities in the company. This system not only clarified processes for private market clients, but also streamlined the complex public tendering processes with which DEM is involved.

Probable sources of further investment will be to continue to market Sustainability Management services to clients, to participate on relevant boards and councils, as well as hiring new talent who can incorporate new services into traditional service offerings.

Collaboration

Please describe briefly

- How the project collaboration has worked (incl. interactions, project management, knowledge exchange, facility usage, meeting frequency etc.)
- Concrete teaching points from the collaboration

Collaboration

From the first of March, 2016, Ms. Madsen began sitting in the same open office space as the rest of the engineers and staff from DEM. In practical terms, this meant that Ms. Madsen was also able to observe and participate with all staff members at the main office in Aarhus. On May 30th, 2016 Ms. Madsen began regularly attending "Monday meeting - INDLAND", which are twice-monthly meetings during which all projects on the domestic market are reviewed, and each staff member gives an overview of what they are working on. Any general or ongoing issues are also discussed at these meetings, and presentations are given approx. once a month to explain what someone is working on in more detail. On Aug. 18th 2016, Ms. Madsen began attending weekly "Friday meetings – UDLAND" dealing with foreign projects, which include staff members sitting in a number of different locations around the world. On Nov. 21st 2016, Ms. Madsen began attending "Weekly management meetings", including the CEO and senior managers where new market opportunities are discussed, along with practical managerial issues. Participating in these meetings was very beneficial in terms of identifying where key focus areas were for the company, as well as how to assist strategically with relation to achieving project objectives.

On Dec. 19th, 2016 Ms. Madsen began holding monthly "Knowledge & Innovation Steering Committee Meetings" with the CEO and organizational members selected to be part of the steering committee for this knowledge & innovation project. Then in Jan. 2017, a knowledge and Innovation survey was

distributed to all employees, which was answered with an 80% response rate. Results were presented to all employees in Aug. - Sept. 2017, along with a list of actions based on each of the areas identified as an obstacle to knowledge and innovation in the company. At the end of September 2017, an Actions Report was created based on the Knowledge & Innovation survey actions, and an end date was identified for each action, in order to set focus on when each action should be completed. The survey was distributed each year, and the actions report was also followed to the end of the project period, achieving most of the action points. Ms. Madsen also made a number of trips to DEM offices in Copenhagen and Sønderborg. In all offices, Ms. Madsen conducted semi-structured interviews, held presentations about the results of the Knowledge & Innovation surveys and Action Plan, as well as holding seminars regarding DEMs focus on sustainability and Sustainable Management services.

With relation to the University collaboration, the university advisor Olav Jull Sørensen came to DEM for meetings at least twice a year, and Ms. Madsen also went to Aalborg university at regular intervals to meet with her advisor, as well as to attend relevant research seminars which are held once a month. Ms. Madsen held a presentation for all researchers at the International Business Center (Aalborg University), related to her research project, and then again regarding ways in which researchers at Aalborg University could work with the Sustainable Development Goals. Ms. Madsen also presented her first article at a conference hosted by the International Business Center at Aalborg University, where she was asked to write an additional article for a special issue of the Journal of Cleaner Production. DEM's CEO Jørn Lykou was also present at this conference and presented DEM's approach to innovation and working with the Sustainable Development Goals. Ms. Madsen also held presentations at Aarhus University for business students, and one of them became an intern at DEM. Ms. Madsen and other DEM employees also participated in an annual sustainability event at Aalborg University for students, where presentations were made, and small group sessions were facilitated.

Overall, this project has had a very fruitful collaboration.

Teaching points

Teaching & presentations that resulted from this research include:

| Date | Title/ *Role | Location/ *Contact |
|----------------|--|--|
| 29. Sept. 2016 | Actors and Interactive Learning Processes in the Sustainable Energy Consulting Sector – A case of interpreneurship *Presentation to IBC Research Group | International Business Center Aalborg University, Denmark *for IBC research group |
| 28. Oct. 2016 | Organizational Sustainability: Measuring and Managing Impact *lecture and group break-out sessions | Aarhus BSS, Business and Sustainability Course, Denmark *for Associate Professor Jessica Aschemann-Witzel |
| 20. Dec. 2016 | Organizational Sustainability: For More Sustainable Impact *lecture and internship opportunities – intern from Feb. 2017 – June 2017 | Aarhus BSS, Department of Management, Denmark *for Professor John Parm Ulhøi |
| 17 Nov. 2017 | UN SDGs: What are they, why do companies care, and how can they add value to IBC at AAU *Presentation to IBC Research Group | International Business Center Aalborg University, Denmark *for IBC research group |
| 27. Feb. 2018 | Sustainable Business Models *Discussion at Harvard Business School | Harvard Business School, Harvard University, USA * with Professor Lynda Applegate |
| 13 April, 2018 | SDGs applied in organizations *Presentation to Masters Students | International Business Center, Aalborg University, Denmark *for Associate Professor Reimer Ivang |
| 3 May, 2018 | Sustainability at Harvard University *Presentation of collaboration results including Sustainability Plan SDG Materiality Assessment, Food & Energy SDG case studies, Climate Action Plan Alignment with SDGs | Harvard University's Office for Sustainability, USA *for management and involved students |
| 30 May, 2018 | Sustainability and the Global Ecosystem for Sustainable Development *Paper presentation/ conference participation | International Business Conference, Rebild Bakker, Denmark *for conference and session participants |
| 6 Sept., 2018 | Sustainable Development Goals Applied In Organizations *Presentation and rapid innovation breakout session | International Business Center, Aalborg University, Denmark *for Associate Professor Reimer Ivang |

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|--------------------------|---|---|
| 3. Oct., 2018 | A look at SDGs in the Industry: Innovation and New Business Opportunities *Presentation at Building Energy NYC conference workshop | Building Energy NYC 2018 Conference, New York, New York, USA *for workshop participants |
| 4. Oct., 2018 | Demonstrating Impact Through SDG Cases: Creating Common Language and Shared Purpose Across Campus *Presentation at AASHE Conference | Association for the Advancement of Sustainability in Higher Education Conference, Pittsburgh Pennsylvania, USA *for session participants |
| 30. Oct., 2018 | Using the SDGs as a platform to achieve strategic impact with Nordic Partnerships *Presentation to the Global Compact Nordic Network | Global Compact Nordic Network Meeting, Novo Nordisk Headquarters, Copenhagen, Denmark *for network participants |
| 7. Dec., 2018 | The role of government & industry in meeting climate targets and SDGs *DEM sustainability presentation & interview – publication in Danish NytFocus: http://www.nytfokus.nu/nummer-13/ and in English on LinkedIn: https://www.linkedin.com/pulse/interview-danish-parliament-mogens-lykketoft-speaks-up-madsen/ | Danish Parliament building, Copenhagen, Denmark *meeting with Danish Member of Parliament Mogens Lykketoft |
| 4. Feb., 2019 | Partnerships for a Sustainable Future *DEM/Harvard Case presentation/ conference participation | University-wide Conference at Aarhus University, Aarhus Denmark *for conference participants |
| 2. April, 2019 | Business Model Innovation and the Global Ecosystem for Sustainable Development *Session Chair/ paper presentation | International Symposium on Business and Management (ISBM), Fukuoka Japan *for conference participants |
| 25. June – 1. July, 2019 | Super-Flexibility of Organizations and Sustainable Business Models *discussions with Homa Bahrami | Hass School of Business, University of California, Berkeley, USA *meetings with Professor Homa Bahrami |
| 2. – 15. July, 2019 | Sustainability within Organizations *discussions with Alfred Marcus | Carlson School of Management, University of Minnesota, USA *meetings with Professor Alfred Marcus |
| 23. July, 2019 | achieving sustainable impact with Nordic Partnerships *Presentation for students/ discussion with Robert Strand from the University of California, Berkeley | Copenhagen Business School, summer school course, Copenhagen Denmark *meeting with and presentation for Professor Robert Strand |

List of research publications and patents as results of the project

Research Publications

Madsen, H.L. (2019). Business Model Innovation and the Global Ecosystem for Sustainable Development. Under review with the *Journal of Cleaner Production*.

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