Exploring Open Social Innovation (Abstract)

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Abstract
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Kindly,

Martin
Exploring the Possibilities of ‘Open Social Innovation’

WORKING PAPER, 2020 DRUID PHD ACADEMY CONFERENCE

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ABSTRACT

Social innovation initiatives are notoriously hard to sustain and scale without resources. In order to reach a level where they can provide systemic changes to social issues, they must rely on a continuous supply of external funding. This article analyses how Social Innovation can make use of Open Innovation tactics in order to facilitate stakeholder inclusiveness, foster trust and mitigate risk associated with dealing with often complex social issues – leading to investor weariness. Intended for use by the Innovation Unit of the University of the Faroe Islands for quickly auditing and scoring different aspects of sustainability of upcoming projects, an operational framework that utilises Open Social Innovation as a core component is presented along with an example of how the framework can be utilised.

It should be noted that due to the scope of all the different theoretical and conceptual elements used in the development of the operational framework discussed, a thorough systematic literature review of the concept of “Open Social Innovation” has yet to be completed.

KEYWORDS: Open Innovation, Social Innovation, Open Social Innovation, sustainability, innovation, entrepreneurship
Introduction

The concepts of Open Innovation and Social Innovation, while relatively new in an academic sense, have reached a level of maturity where they are being employed by universities, industry and NGOs around the world as operational frameworks. While Open Innovation tends to be utilised in order to maximise financial gains, Social Innovation is a method used to maximise social benefits. In recent years a few instances where these two concepts have been combined into Open Social Innovation have appeared in the literature, see for example: Chalmers (2013); Martins & De Souza Bermejo (2014); Chesbrough & Di Minin (2014) and Rayna & Striukova (2019).

At the time of writing the concept of Open Social Innovation is an emerging and promising theoretical approach to a myriad of issues concerning sustainability and the financial viability of sustainability. Where existing literature on the subject generally takes the perspective of industry or NGOs, there is a lack of focus on how the concept might be implemented academically. As there are key differences in how Open Innovation practices are approached in industry and governmental settings (Vanhaverbeke, Chesbrough & West, 2014), there is an assumption that Open Social Innovation as practiced from a university perspective must also rely on approaches different to industry and government.

I will argue that Open Social Innovation can be a useful part of a larger HEI strategy for smaller universities wishing to pursue issues of sustainability, innovation, entrepreneurship and the SDGs. To illustrate this point, I will be outlining the preliminary work being done at the Innovation Unit at the University of the Faroe Islands that aims to tie Open Social Innovation to the SDGs, university mission statements and helix models in order to encourage and cultivate technical and social innovation in such a manner that the university can begin to aim at being a leading advocate and facilitator of economic, environmental and social sustainability in the Faroe Islands.

First I will give a short overview of how Open Innovation is defined and some of its main benefits. I will then give a similar overview of Social Innovation, its different stages and an attempt to explain why social and community-based organisations often run the risk of failing before they even get their project off the ground. This will be followed by a longer analysis of how Open Innovation and Social Innovation can be combined to form a much more robust framework in the form of Open Social Innovation, a conceptual framework that is much better at mitigating risk and fostering stakeholder trust. I will then move on to illustrate how early attempts to conceptualise how Open Social Innovation could benefit attempts at sustainability, can be modified into an operational project framework for small universities aiming to maximise the output of initiated projects while at the same time minimising the reliance on additional resources. A simple, early, case where this framework is utilised from the perspective of the University of the Faroe Islands is presented and benefits and implementation viability will be discussed.

Open Innovation

The initial ideas relating to open innovation date back to the 1960’s onset of the Information Age and the spread of computers, but the formalised
term used in reference to industry opening up their silo’s of research and development to external researchers and developers in order to licence, spin out and divest products, was conceptualised and coined by Henry Chesbrough in 2003 (see Chesbrough, H. 2003). While Chesbrough’s initial conceptualisation was heavily slanted towards accelerated development of new technologies and goods by making an organisation’s boundaries more permeable and hopefully more profitable (ibid), later refinements of the term argue that the process can also be a useful way of managing the flow of knowledge across organisational boundaries both internally and externally simultaneously using “pecuniary and non-pecuniary mechanisms in line with the organization’s business model” (Chesbrough and Bogers 2014) – that is, measured in both monetary and non-monetary terms.

In short, as Chesbrough and Bogers argue, Open Innovation is based on the premise that the drive for innovation and the sources of knowledge that can drive innovation are dispersed widely in society and the economy. They invoke Bill Joy’s (co-founder of Sun Microsystems) Law that states that “most of the smartest people work for someone else” (ibid). Open Innovation, briefly, is a way to scale the boundaries of otherwise closed off organisations in order to allow for novel approaches to stagnant problems by outside expertise. In practice this involves industry establishing an Open Business Model (see Vanhaverbeke and Chesbrough. 2014) that is inclusive to external stakeholders and innovators. This type of model sets up a “division of innovation labour” where one party might research and develop a new idea – and another party in turn carries it to market (ibid:52-3). Vanhaverbeke and Chesbrough (2014) give a number of examples of how this approach can be useful; inside-out modes that result in licensing agreements and spin-offs, outside-in modes that draw in external expertise and combine it with an existing business model and modes where an industry makes use of external or internal knowledge to develop entirely new business models (ibid:54). While Chesbrough’s definition of the term is generally applied to a commercial setting – the notion that very capable and innovative actors are to be found outside the boundaries of an organisation is just as likely to hold true to non-commercial organisations such as a university, a municipality or an NGO. While the literature on Open Innovation is too broad and varied to cover extensively here, this main takeaway of being able to look beyond institutional and organisational walls for expertise and inspiration is key. While the more typical combination of Open Innovation and academia is fairly commonplace at many technical universities and business schools around the world – applying the same mindset of openness that a business might employ to further commercial interest to an academic reality allows for even more and more diverse collaborative arrangements when combined with the ideals of Social Innovation.

Social Innovation

As noted, Open Innovation is, at least from a theoretical standpoint, very much tied to business innovations which in turn are motivated by profit maximisation. Social Innovation, on the other hand, is predominantly motivated by the goal of meeting social needs (Mulgan, G. 2006:146). Social Innovation can be defined as "innovations that are social both in their ends and their means. [They are] new ideas (products, services and models) that simultaneously meet social needs and create new social relationships or collaborations. In other words, they are innovations that are both good for society and enhance society’s capacity to act” (Murray, Caulier-Grice and Mulgan. 2010:3).

A very different aspect to Social Innovation, as opposed to innovation in a more broad sense, is that Social Innovations need not be wholly new
ideas – but can be new to those benefiting from them. Further, Social Innovations tend not to be inherently new in and of themselves, but rather a combination of already available technologies or solutions (Mulgan, G. 2006:151). Boelman, V. et al (2015:6) also argue for this newness criteria along with the requirements that Social Innovations should meet a social need in positive ways, they should be put into practice, they should engage and mobilise beneficiaries through governance and they should transform social relations through greater access to power and resources. They further argue that Social Innovations (ibid:7) can take many different forms; new services, products, practices, processes, rules, regulations and organisational forms.

A core distinction between Open Innovation and Social Innovation, is that Social Innovation aims to solve issues not generally solved by commercial interests (Nicholls, Simon and Gabriel (eds) 2015:3). They can be issues such as human rights, environmental concerns, healthcare or education – often in developing or remote regions of the world.

According to Murray, Cauier-Grice and Mulgan (2010) and Rayna & Striukova (2019) the Social Innovation process can be broken down into six different stages:

1. **Prompts, inspirations and diagnoses**: Initial stage during which various factors trigger the need for innovation, after which a diagnostic of the problem and the framing of the question ensue.

2. **Proposals and ideas**: Idea generation stage using a variety of methods based on insight and experience.

3. **Prototyping and pilots**: Stage during which ideas are put into practice to be tested and, subsequently, refined.

4. **Sustaining**: Stage at which the idea is adopted for everyday use and is, as a result, streamlined. Income streams are identified at this stage.

5. **Scaling and diffusion**: Stage at which there is an attempt to scale-up and diffuse the innovation beyond its original test bed.

6. **Systemic change**: This stage is the ultimate goal of social innovation, but also the most difficult to achieve due to its wide scale, the large number of stakeholders it involves and the multiple barriers to change that exist.

Of these six stages, the first three are relatively straightforward even in resource-poor situations and areas. Broadly they rely on idea generation as a response to social issues that can be undertaken by even small groups of people or even individuals. In a small-scale academic setting, this is generally how far a group of students would be expected to be able to push a project for an assignment or the level of refinement a group of independent volunteers might be able to develop a project funded by a small municipality or government (of which I have taken part in more than my fair share). It is only in the last stages of the innovation process that any meaningful impact will be seen. A main reason for failure at steps 4 and beyond is often the obvious lack of income streams for projects that aim to do social good in areas where there tends to be little in terms of economic value. While these types of small-scale projects can be a good way to illustrate proofs-of-concept (free communal urban gardens, for example), they quickly tend to fizzle out after only a short time do to a lack of resources.

Another, perhaps not so obvious, reason for failure at this crucial point in the process is often the absence of supportive networks. Mulgan, G. et al (2007) and Rayna & Striukova (2019) point out that failures to connect with networks that can
provide expertise and experience are a common pitfall for social innovation processes. Similar to how industry might employ Open Innovation as a means to entice external expertise into the fold – they argue that this is a tactic that could be extremely applicable in terms of bringing social innovation to market, so to speak. Rayna & Striukova (2019:385) argue that “[b]y enabling access to a larger pool of resources and skills, as well as diffusion paths, applying open innovation paradigm to social innovation could enable to overcome critical challenges at all six stages of the social innovation process”.

Open Social Innovation

I have argued that Open Innovation and Social Innovation are two rather different strands of innovation frameworks that serve very different needs. Yet the similarities of bringing products to market tie the two processes together in more ways than one. In both cases, maximising profits and maximising social good, the processes hinge on networking, external expertise and novel business models. While commercial enterprises make use of business models in order to turn a profit, social innovations will ultimately have to rely on some form of operational resources (likely in the form of monetary funding) in order to sustain themselves and in turn scale, diffuse and enact systemic changes.

The concept of Open Social Innovation seems to be first proposed by Dominic Chalmers (2013). In his article, he argues for similarities between the Open and Social Innovation similar to the ones noted above. As argued above, some main reason for failures to launch social innovation processes are lack of long-term operation resources and a lack of expert networking. Chalmers expands upon the knowledge searching and networking issues by arguing that social innovators would do well to focus more on their users as well as initiating boundary-spanning knowledge searches that look for expertise and innovation that exist beyond their organisation's traditional domains in order to combat “industry blindness” (ibid:25).

Chalmers goes on to identify a third stumbling block (related to resources) that is common for social innovation processes; risk aversion. He argues that a common barrier "to the adoption of social innovation lies in the risk associated with disruptive innovation [in that] those offering support to social innovators in the form of capital are institutionally conditioned to favour incremental 'safer' forms of innovation" (ibid:26). In order to combat risk aversion, Chalmers argues for five different propositions for social and community-based organisations (ibid:27-8):

1. Adopting a more ‘open’ approach will mitigate risks associated with introducing new innovations.
2. Adopting problem solutions from different domains will reduce the risk of new innovations failing.
3. Incorporating user knowledge into the innovation process will increase their chances of success.
4. Participating in some form of open, networked innovation will be more effective at developing innovations addressing the root causes of social problems.
5. Engaging in ‘open source’ collaboration will be more effective in tackling vested interests and dominant competitors.

Here we see the beginnings of merging of Open and Social Innovation. In applying Open Innovation mechanisms to the issues facing Social Innovation, social innovators should adhere to a networking paradigm that involves multiple boundary-spanning stakeholders – which in turn would help mitigate risk aversion from investors and funders.
Martins & De Souza Bermejo (2014) follow up on Chalmers work and argue as a main point that "when Social Innovation is seen from a collaborative point of view, organizations become more porous structures that make it possible to overcome the barriers that prevent communities from innovation from the bottom up. Thus, when organizations are open they strengthen localism and provide a means for civil society to become involved in finding solutions" (ibid). They go further to attempt a conceptual model of the relationship between Open Innovation and Social Innovation (Below, adapted from: Martins & De Souza Bermejo (2014):

Regardless of where the prompt originates; industry, government, academia or civil society – social innovation and socially innovative projects more broadly will mostly follow the six steps outlined above. They will need to pass through a phase of idea generation, prototyping and testing phase, and eventually a process of sustaining itself so that it can scale and hopefully change society for the better. As has been noted, most of these socially conscious community-based efforts at change will likely struggle to move beyond the initial prototyping and proof of concept stages due to the lack of operation resources. And as Chalmers (2013) argues, it can be hard to find

They argue that the collaborative interplay between Open and Social Innovation not only has the capacity to produce new solutions to social problems and changes to social practices, but at the same time is also able to facilitate and stimulate new technical innovations in the form of new products, services or processes that in turn result in economic development.

At the same time, Chesbrough, H. and Di Minin, A. (2014:170) venture a definition of the concept. They defined Open Social Innovation (OSI) to be “the application of either inbound or outbound open innovation strategies, along with innovations in the associated business model of the organisation, to social challenges”. They argue that Open Social Innovation is especially apt at solving stages 3-5 of the Social Innovation process; 3. Prototyping, 4. Sustaining, and 5. Scaling. They then go on to illustrate this point by illustrating how two NGOs (Italian humanitarian organisation Emergency and US based Ashoka) and the City of Birmingham how made use of Open Innovation tactic in order to foster collaborative entrepreneurship and sustainable innovation through the use of outside-in and inside-out practices, community engagement and network-building.
funding for risky disruptive innovation aimed at a segment of society that might not be seen as very profitable, politically incorrect or otherwise unpalatable for whatever reason.

Before moving on the how this might look from an academic perspective, I hope that (albeit brief) the arguments for utilising Open Innovation tactics in conjunction with Social Innovation processes will seem compelling. How they can be made to push Social Innovation initiatives beyond stages of initial prototyping and proof-of-concept, how they can mitigate risk and how they can break down institutional borders and attract external expertise.

None of the examples used so far have concerning themselves with academia. They have all focus on industry and NGOs. On profit and social good. What is wholly absent from the literature is a perspective from within academia. In the following I will attempt to outline how the concept of Open Social Innovation might be approached from the vantage point of a small resource-weak university in the North Atlantic.

An Academic Perspective

As I have noted above, Open and Social Innovation tactics are generally considered to belong in the domains of commercial enterprises and action-oriented civic groups such as NGOs or governmental agencies. Rarely does the literature attempt to shine a light on how these tactics could be employed by academia in an effort to pursue issues of sustainability, innovation, entrepreneurship or social change.

The University of the Faroe Islands is comparable to a number of Arctic universities. It is a small publicly funded university servicing around 800 students in five different departments. Apart from offering courses in social sciences, economy, law, natural science and Faroese, it also houses a teacher’s college and a degree in nursing. In relation to mainland Europe and the Arctic region broadly it is a geographically isolated university with a relatively low level of contact with other institutions of higher learning in the region.

At the time of writing, the University is facing a number of issues. It is seeking to modernise, systematise and professionalise a wide array of operational aspects of the organisation, this also includes to development of a new university strategy and updated mission statements. It is also attempting to broaden its local, regional and international reach in terms of collaborations, research networking and funding with very limited resources. Further, the university is also reacting to a recent review of emerging trends within the Arctic academic environment. This review, conducted by a trans-Arctic group of researchers and staff from the University of Greenland, University of the Faroe Islands and the Technical University of Denmark (see Blaxekjær et al (2018) for more) clearly shows a growing demand for innovation and sustainability to be included in both curricula and university operations, a wish to go beyond the three missions statements of teaching, researching and transferral of knowledge towards an inclusive co-creation for sustainability, a clear interest in the implementation of the UN's Sustainable Development Goals as a guiding framework for curricula and operations and finally increased participation in the growing number of projects, conferences, networks, and funding opportunities within the Arctic and beyond.

As a reaction to these issues; modernisation, a new strategy, networking efforts, external funding, innovation, sustainability, community engagement and implementation of the SDGs – the university has decided to establish an Innovation Unit to assist with attaining some of these goals. The unit consists of only a few core members of staff that operate independently of departments but is overseen by the administration and the new rector. For its projects the unit calls on a cross-section of staff members from all the different departments on an ad hoc basis.

In order to address many of the issues mentioned, the Innovation Unit quickly came to the realisation
that a flexible and systematic approach was needed in order to maximise the output of initiated projects while at the same time minimising the reliance on additional resources. Through informal interviews with colleagues and partners in the Arctic region, the unit also came to the realisation that this need to minimise input while at the same time maximising output due to the lack of resources – holds true throughout the region.

The small size of the University of the Faroe Islands and other similar universities in the Arctic that often exist to service the local population and seldom profile themselves in a manner that would attract an international student body or sizeable amounts of external funding, must often make do with local networks and draw on local sources of funding for research – or relegate themselves to taking on smaller and often non-technical roles within larger European or Arctic research projects.

The current lack of much international research presence facing many of the smaller Arctic universities does, however, allow them to occupy academic niche positions relating to local knowledge and development. This hyper-specialisation and localisation of knowledge has, especially in recent years, become a growing trend within the Arctic (see for example: Huntington, H. 2011; Armitage, D. et al. 2011 and Brunet, N. D. et al. 2014) and often sees small Arctic universities being able to punch above their weight and participating in a much more level footing on their home turf due to valuable local insights and expertise.

Coming to terms with how valuable these smaller universities are to their local communities and how much social good they are able to initiate through socially conscious activities would not only maximise organisational output, but it would also have the added benefit of building up local competences and credibility with regards to regional and international collaborations.

Taking inspiration from the activist stance of the College of the Atlantic (www.coa.edu), a small private liberal-arts college on Mount Desert Islands in Maine, the Innovation Unit of the University of the Faroe Islands began working on an operational framework intended to systematise and maximise local social innovation to a much greater extent than it is currently able to do. The College of the Atlantic was established expressly to serve the communities on the island where it is located. It offers only a single degree (in Human Ecology) but allows students to design their own education across a number of disciplines where innovation and sustainability are always core components (Trotter, B. 2012; COA. nd). Teaching is often hyper-localised and sees students grapple with issues of sustainability from a local perspective, encouraging them to develop sustainable local business or solutions the local issues that impact the community around the school directly.

(A draft of the strategy will be made public and open for comments in early 2020, this paragraph is subject to changes) With the University of the Faroe Islands working on a new strategy for the years to come, the Innovation Unit has taken the stance that such a strategy would do well to have activistic sustainable social innovation that aims to impact the local community as an overarching theme. This would allow all departments to target the same goal and also to pool their efforts and cooperate – not only between departments, but with local stakeholders.

In order to operate optimally, such an operational framework would need to be functional on a number of levels in order to deliver practical lasting results. If the output is to be sustainable social innovation, it must cover the three general aspects of sustainability; economic, environmental and social. To reach that level it must therefore encompass some form of technological innovation that creates local jobs or adds positively to the economy in the form of new products or services and it must also contain an element of social innovation that results in new sustainable practices or developments (see Martins’ & De Souza Bermejo’s (2014) conceptual model above). However, in order to have commercial and social
innovations complement each other in a sustainable way, university lead initiatives will need to rely on a collaborative process with industry on one side and civil society and government on the other. This process, the Innovation Unit argues, fits perfectly with the mechanisms of Open Innovation. It is here that university-led Open Innovation is able to facilitate openness, dialogue, networking, risk and stakeholder management, and a collaborative effort to push projects beyond stages four and five of the social innovation track (see above).

To get to a point where this facilitation of sustainable development between academia, industry and civil society becomes possible, the university must progress through a preparatory phase of internal auditing that ensures the inclusiveness of stakeholders, the strategic value for the university and a strict adherence to sustainability throughout the process. Before the Open Innovation tactics can be utilised in an open collaborative process, the university and key stakeholders should conduct a Helix-model audit. Following a Triple Helix model (Etzkowitz. 1993; Etzkowitz & Leydesdorff. 1995) stakeholders would only include academia, government and industry. Using a Quadruple Helix model (Carayannis and Campbell. 2009) would include civil society in the process. Even better, by utilising a Quintuple Helix model (Carayannis and Campbell. 2010) the university is able to include a fifth sphere of influence; the environment. While the Triple- and Quadruple Helix models concern themselves mainly with economic and cultural innovations and gains, the Quintuple Helix model adds elements of sustainable development and social ecology, and ultimately argues that this added level of the model has the ability to structure the Helix model approach in such a way that it can allow stakeholders to concern themselves with eco-innovation and eco-entrepreneurship (ibid:58-63). A prerequisite for successful Helix model collaborations led by the university, is of course that the university takes on an active and participatory role. In order for the university to do so, projects must have a strategic value that complement university missions statements of education, research and dissemination. In order to boost impact the Innovation Unit advocates that the university goes beyond these three common mission statements and initiates a fourth mission statement of sustainable co-creation as is put forward by Trencher, G. et al (2013). They argue that “the idea of societal contribution is today widely perceived and promoted as being chiefly an economic contribution” championed by OECD efforts to “emphasize the economic benefits and gains in international competitiveness for governments when universities focus their third- stream activities on innovation transfer and spurring regional development” (ibid). In their critique of the third-mission regime, they conclude that efforts to introduce the concept of sustainability and green innovation into the existing third mission has yet to produce much in the way of results – likely due to the fact that the majority of funding and knowledge transfer relates to medicine, biomedical- and computer research. Based on their analysis of the current state of the third-mission, their “position is that the potential of the third mission regime to function as a useful guiding concept or propelling force in the quest for low-carbon development and sustainable transformation of individual towns, cities and regions is yet to be proven” (ibid). They (ibid:157-9) then argue for a fourth mission statement; one of co-creation for sustainability. They do not argue that this new mission should supplant the third mission, but rather supplement it in compounding the effects all four mission statement by transforming entrepreneurial universities into transformative universities (see ibid:169) that weave together: teaching, research, dissemination and co-creation for sustainability. One of the differentiating factors to this fourth mission, is the involvement of not only academia and industry – but also government, civic society, media and the environment – which is, of course, a Quintuple Helix approach.

As noted above, there is a clear wish from a number of Arctic universities that the UN Sustainable Development Goals be implemented as a guiding framework for curricula and daily
operations. If the output of this operational framework is to be sustainability in its different forms, then the SDGs are currently likely the best way to audit the sustainability of initiatives. The SDGs are simple, easy to understand, give participants a common language through their goals and targets and are at the same time not very confrontational as a tool. As a yardstick, simply asking whether a project or an initiative would be counter to the tenets found in the SDGs would be a good start. If so, it should be reconsidered or scrapped. If a project is not counter to the SDGs, an audit and analysis of how well the project is in line with the SDGs, how many goals and targets it will cover and a measurement of impact should be produced (see: Laurent A. et al. 2019). Also, the university should consider how participation in the project or initiative and subsequent adherence to the SDGs might positively impact internal operations and governance of the organisation and the institution, how it might be used for educational purposes, for research purposes – and how it might be used as a way for the university, along with stakeholders, to illustrate leadership and commitment towards sustainability within the community (paraphrased from SDSN Australia Pacific. 2017:10-30). All these different components and mechanisms can be added to Martins’ & De Souza Bermejo’s (2014) conceptual model from earlier to produce a modified model that takes the perspective of a university and focuses heavily on outputting sustainable solutions. A preliminary model can be seen in Figure 3 below:

<table>
<thead>
<tr>
<th>Initiation</th>
<th>Auditing</th>
<th>Processing</th>
<th>Output</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>INITIATING ACTOR</td>
<td>PROJECT PROMPT</td>
<td>PROJECT OWNER</td>
<td>SDGs</td>
<td>HELIX MODELS</td>
</tr>
<tr>
<td>INTERNAL, EXTERNAL, INDIVIDUAL, MINISTRY, CIVIL SOCIETY INDUSTRY</td>
<td>SOLVE ISSUE, PARTICIPATE, ORGANIZE, PROPOSAL</td>
<td>INNOVATION UNIT, INDIVIDUAL THINKING GROUP, MANAGEMENT BOARD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUMBER OF SDGs Addressed</td>
<td>MINIMUM OF ONE SDG</td>
<td>EDUCATION, RESEARCH, DISSEMINATION</td>
<td>OPEN INNOVATION</td>
<td></td>
</tr>
<tr>
<td>INTERNAL OPERATIONS / GOVERNANCE</td>
<td>CAN ADHERENCE, SUPPORT STUDENTS OR STAFF</td>
<td>CO-CREATION, SOLVE LOCAL ISSUES, ENGAGE STAKEHOLDER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUCATION AND RESEARCH</td>
<td>CAN ADHERENCE, INITIATE PUBLIC ENGAGEMENT</td>
<td>COLLABORATIVE PROCESS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXTERNAL LEADERSHIP</td>
<td>NEW PRODUCT, SERVICE OR PROCESS</td>
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At the time of writing, this framework has not yet been implemented at the University of the Faroe Islands in any capacity and remains a possible theoretical solution to a number of the issues the university is currently dealing with; stakeholder engagement, modernisation, implementation of the Sustainable Development Goals, sustainability, innovation and entrepreneurship. In order to illustrate how the framework might be used to evaluate new projects and initiatives, we can compare the different sequences to an upcoming project currently being worked on by a number of Arctic Universities.
Arctic EntrepreneurSHIP

As a proof of concept, the Innovation Unit has slowly started to apply this framework to some of the upcoming projects it is working on. One such project is the Arctic EntrepreneurSHIP project slated to begin in mid-2020. Growing out of a previous collaborative project between the Technical University of Denmark, the University of the Faroe Islands, the University of Greenland and the College of the Atlantic called Educating Arctic Entrepreneurs (DTU. 2019), the Arctic EntrepreneurSHIP project will engage students from Denmark, the Faroe Islands, Greenland, Iceland and the US in sustainable entrepreneurship while sailing down the coast of Greenland for a three-week summer course. Students will be grouped and tasked with solving real-world issues relating to sustainability and asked to come up with technical and social innovations that will impact the local communities which they encounter during their trip. At the end of the course, the best projects will be awarded seed funding in hopes of their projects being realised (ibid:14).

As a case-study for the implementation of the operational framework, the upcoming Arctic EntrepreneurSHIP project is a perfect fit. It is both simple and complex at the same – simple in the sense that it has a defined start and end, and complex in the sense that it still consists of a multitude of moving parts that will need to be executed within a short timeframe. The main goal of the project is localised sustainability, it involves a number of universities with each their own strategies and missions and it also involves a vast number of different local and regional stakeholders; universities, students, staff, governments, municipalities, industries, media, civil society actors and the environment. With the intended output being sustainability through technical and/or social innovation, students will be forced to collaborate with several local stakeholders in order to develop a convincing business case or strategy that will allow them to bring their project beyond the pilot-testing phase of the course. They will need to convince a panel of judges that their social innovation idea with a focus on local sustainability can indeed scale and bring on systemic and lasting change. Since the project is in development at the time of writing, there is no way of knowing what types of projects students will decide to work on and any prognosis will therefore be somewhat hypothetical. It is nevertheless possible to run the project as-is through the operational framework in order to tease out its viability in terms of value. Is would be possible to audit the framework on a larger regional scale, analysing the output in terms of the combined effort of all students and stakeholders, but for the sake of simplicity I would online give a shortened overview of how participation in the project would affect the University of the Faroe Islands.

Following Figure 3 above, initiations and allocation of ownership has already been dealt with. Following this, an audit of adherence to the Sustainable Development Goals shows that the project will make use of the SDGs as a core teaching element, requiring students to pick one or more SDGs to base their own projects on. As we do not yet know what type of projects students will be working on, it is unclear if the will impact the governance of the university. Participation in the project will definitely add to more awareness of the SDGs in terms of education and research as students and university staff will take part in advancing and learning about the SDGs. Similarly, dissemination efforts will also inevitably include knowledge about the SDGs and strengthen the university’s image as a sustainability conscious organisation.

In terms of adherence to the university strategy and its missions, the project will focus heavily on entrepreneurship, sustainability, innovation and teaching at a local level. It will also include Faroese researchers that will be able to use the project as a case-study. Once completed, the project and any output is easily disseminated due to the fascinating nature of the trip. And, if implemented, the project is a straightforward example of Trencher, G. et al’s (2013) concept of a fourth mission statement on sustainable co-creation in action.
Do to the international scale of the project, students will have to navigate both local and foreign stakeholders. While Faroese students must engage with Greenlandic stakeholders, Danish students and American teachers – they will also have to consider interests local to the Faroe Islands; their own university, applicability of projects in terms of Faroese commercial interests, collaborations with local municipalities and government and even the local media or possible interference from local NGOs. In order to produce a viable solution to possibly complex issues of sustainability, the university and its students will be forced to consider a robust and inclusive Helix model approach not only leading up to the project – but, importantly, also following the end of the course in order to sustain and scale any resulting outputs; agreements with incubators, investors, mentors and possible customers or users.

Whether students end up developing solutions to issues based on technical innovation, social innovation or, most likely, a mixture of the two – broad backing of relevant stakeholders from different areas of society will be crucial in order to successfully launch what is expected to be alternative and novel solutions to issues of sustainability. The possible element of risk associated with projects that focus on segments of the economy that tend to be underfunded or otherwise lack an immediate commercial value is, as has been noted above, best mitigated through extensive networking and an inclusive approach to collaboration. Utilising an Open Innovation approach that stresses openness and dialogue between stakeholders is sure to ease this process.

Finally, during the course students will likely be encouraged to come up with solutions that are practical in nature. These can take the form of physical products, digital services such as apps or websites or otherwise technical processes that can be made viable and economically sustainable for the developers. Since the theme of the course relies heavily on implementation of the SDGs, it is highly likely that these are also solutions that advance and cultivate new social or community practices. Depending on the projects students decided to work on, it is also highly likely that any output will benefit the environment.

Conclusion

As I have shown above, Martins' & De Souza Bermejo's (2014) conceptual framework for the interaction between Open and Social Innovation can be adapted to produce a useful framework for quickly auditing and scoring the different aspects of sustainability of upcoming projects. An overview of each of the steps in the framework, such as the one demonstrated above, is also a simple way to produce a preliminary project description that in turn would allow for a quick evaluation of the viability of a number of potential projects.

Using the University of the Faroe Islands as a case study for how the operational framework could be used, I have also illustrated the benefits of applying the mechanisms of Open Innovation to the ideals of Social Innovation through what has been conceptualised as Open Social Innovation. While Social entrepreneurship and innovation is fraught with difficulties due to its catering to resource-poor segments of society, dealing with politically or socially complex issues and a reliance on novel, alternative and risky means of solving issues – investments and funding that can help elevate projects beyond initial prototyping and proof-of-concept stages are often hard to come by. The problematic of actively tackling social issues and engaging in projects that can be instrumental in producing practical social change is something that is an ideal ambition for academia, but the risk of wasting resources on initiatives with a high failure rate is equally unattractive to universities as it is to industry or government. By engaging stakeholders broadly and working towards clearly identifiable goals of economic, environmental and social sustainability, universities can position
themselves as a sustainable fulcrum around which community stakeholders gather to solve difficult issues.

The Arctic EntrepreneurSHIP project as described above is an example of an initiative that has the potential to hit all the marks in terms of sustainability, stakeholder engagement, entrepreneurship, locally inspired innovation and viable development. Analysing it through the operational framework, the value of combining technical innovations that can accumulate much needed resources in order to further systemic changes on a social level become apparent. It also shows how a university can systematise its approach to student and researcher involvement through clearly highlighting steps of the process where they should be accounted for and included – and at the same time it also operationalises the university strategy and its mission statements.

The hope is that this adaptation to an operational framework of Martins’ & De Souza Bermejo’s original conceptual framework will not only be useful to other small universities, but can be adapted further to serve the needs of NGOs, municipalities, governments and industry. For this, only slight alterations would be needed.

References


COA (nd) *Areas of Study*. College of the Atlantic [www.coa.edu/academics/areas-of-study/] Accessed 8 December 2019.


