Chapter 12
Agder as Mutual Competence Builders: Developing Sustainability as a Competitive Advantage

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12.1 Introduction

The introduction to this book noted that universities are well positioned to enter into, and open up, debate about what efforts should be taken to create a sustainable society. This may include initiatives where the universities build their own and others' competence on sustainability in a collaborative manner with external work life organisations. In this chapter we explore in detail the sustainability commitment by a large industry cluster in the Agder region (the Eyde cluster) and we assess the co-operation on sustainability that it has entered into with the University of Agder. We also ask what approach the Eyde cluster takes to sustainability, and whether it foresees the likely change associated with sustainability as gradual or radical.

We find that a collaborative and open partnership between the university and the industry allows both parties to gradually build their capacity on sustainability in a way that is, indeed, mutually beneficial. Moreover, by partnering with the industry sector, the university staff is brought up to speed on contemporary concerns and initiatives in the business sector. The collaboration also bestows the university the privileged opportunity to moderately influence how the regional process industry addresses sustainability. However, the collaborative partnership on sustainability is not entirely without potential pitfalls, and we attempt to identify some of the key challenges.

We start the chapter by a short discussion of relevant theories of sustainability in the business sector and then present an outline of the Eyde cluster's work on sustainability and its cooperation with the University of Agder. We end the chapter

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by discussing what light the Eyde case sheds on the theory and on the overall theme of the book: mutual competence building on sustainability.

The chapter draws on material generated for a prior study of sustainability practices among businesses based in the Agder region, including two interviews with company representatives from the Eyde cluster. However, we also draw on insights generated through our own involvement in the cluster's activities. Karen Landmark and Marianne Rodveldt have worked extensively with the Eyde network since its inception in 2008, including on the initial CEO exploration of the Vision 2050 framework and its potential relevance for the Eyde cluster (see below). Stina Torjesen is involved as an organiser, lecturer and term paper supervisor in the leadership development programme which the university offers the Eyde cluster (see below). Needless to say our deep involvement with the case creates substantial biases in our description and analysis. At the same time we believe the insights we have gained hold a high degree of relevance to the present book. We therefore choose to present our material, but with the caveat that we are very much part of the activities we seek to reflect on.

12.2 Description

Two themes from the literature hold particular relevance for our case: the reasoning behind corporate social responsibility initiatives and debates about the likely scale and pace of change as society and business attempt to transition towards sustainability. The literature on Corporate Social Responsibility (CSR) looks at the role of business in society from the firm level perspective. At its core lies the question of what impacts companies may have on society, either positive or negative, and the extent to which, and how, companies need to address, or even utilise further, these impacts. There are at least three ways to think about the role of companies in relation to society.

The first perspective holds that companies should constrain or adjust their behaviour so that this conforms to prevailing social norms or distinct ethical frameworks. In this perspective companies are seen as facing a set of ethical expectations that go beyond pure legal requirements. These ethical requirements can be formulated differently depending of which type of ethical reasoning one may want to adopt (i.e. utilitarian, Kantian or other) or depending on what type of social norms would prevail in a given context. Seen from an Integrative Social Contract Theory perspective, for example, the moral consensus in many societies have shifted, so that companies are not only expected to focus on producing goods and services at reasonable prices, but also address other issues, including environmental footprint, provision of decent work throughout a company's supply chain or the consequences of work and management patterns in a company on racial or gender inequality (Donaldson and Dunfee 2002).

Carroll (1999), in a similar manner, holds that companies need to adhere to what is expected by society (ethical responsibilities) and also, ideally, contribute to

society through additional charitable acts (philanthropic acts). In an overview on 'Ethical CSR' Bryan–Kjær (2012) also finds that a key subset within the CSR body of literature, stakeholder theory (Freeman 1984) can been seen as ethical CSR. Importantly, this strand in the literature acknowledges that the ethically imposed restrictions or additional contributions that companies allow for may very well, in some cases, result in additional costs or missed business opportunities.

The second perspective argues that companies will improve their risk management if they engage with social actors to 'do good'. This perspective finds that 'doing good' will be costly, but that such activities are nevertheless justified because they can 'integrate companies into the social fabric of local communities' in a way that 'strengthen social bonds' (Fombrun et al. 2000). Moreover, and crucially, engaging with non-profit actors and communities will build 'reputational capital', which in turn may strengthen a company's ability to 'negotiate more attractive contracts with suppliers and governments, to charge premium prices for its products, and to reduce its cost of capital'(Ibid, p. 1). Here, even if there are tangible and immediate costs associated with CSR, these are likely to pay off in the long run: even if these benefits will be hard to measure in quantitative terms.

The third perspective stresses that companies can transform social problems into business opportunities. This implies attempting to solve critical social challenges while simultaneously seeking to increase the profitability of the firm. A number of writers have contributed to this strand in the literature. Harvard professor Porter and Kramer (2011a, b) hold a particularly prominent position due to their widely referred concept of Creating Shared Value (CSV). Porter and Kramer. Here, all social and environmental challenges facing local or global communities constitute potential business opportunities that should be addressed at the strategic management level and as part of forging competitive business strategies. Given the profound social and environmental challenges facing communities across the globe, Porter and Kramer predict that CSV will 'drive the next wave of innovation and productivity growth in the global economy'. In more detailed terms CSV may entail strategies to re-conceive products and markets so that these can solve social or environmental problems; redefining productivity in the value chain by increasing the social, environmental and economic performance of supply chain members; and foster local cluster development in areas where key suppliers are located.

The above three themes outline different perspectives on why the corporate sector might want to address sustainability issues. The three perspectives save for the third one, say little about the scale of the sustainability challenge. In the first and second perspective in particular we are left with an impression that sustainability matters pose relatively minor challenges to businesses. Other authors writing on business and sustainability take a very different perspective. The starting point for the recent World Watch Institute report on sustainability was the question 'is sustainability still possible?' (World Watch Institute 2013). The contributors highlight the scale of human impact on the environment at present and note that business, government and other actors need to undertake 'vastly larger changes than we have seen so far' in order to avert ecological crisis. Andrew Winston, in a recent Harvard Business Review special issue on sustainability, spells out the

business implications of environmental changes. He uses the increased frequencies of extreme weather incidents and rising volatility of commodity prices as starting points for an exploration of how 'climate change and increasing limits on resources are both having an unprecedented impact, threatening corporate profits and global prosperity' (Winston 2014). Winston stresses that such 'mega challenges' will require companies to fundamentally rethink their strategies: 'an extreme world calls for extreme change' (Ibid.)

Finally, in addition to the above perspectives from the literature, we note the introduction's discussion of the role of universities in general, and as participant in efforts to discuss and bring about a more sustainable society. A particularly useful approach is one where clusters of expertise within the university enter into collaborative relations with industry or other work life institutions. Moreover, universities endow students with professional and life skills that can help them enact or cope with change. Executive education, as noted in the introduction, may be particularly important, as former graduates and workers seek to upgrade and reframe their skillsets in a period of rapid change.

12.2.1 The Eyde Cluster

The Eyde cluster comprise of nine processing industries, which have total turnover of around ten billion NOK. The Eyde cluster was established in 2007 by CEOs in the process industry in the Agder Region to increase the member companies' competitiveness through internal and external collaboration. The companies belong to different global value chains within the metallurgical sector, but share a number of similar constraints and opportunities.

The cluster has evolved incrementally over several years, as illustrated in Fig. 12.1. While the initial period built trust and dialogue among the companies, the current phase is one where the companies work jointly to enhance their capacity for innovation, reduce environmental footprint and develop their business models. The co-operating partners have arrived at a shared understanding that global threats and opportunities linked to resource scarcity and climate change will profoundly affect the business conditions of the cluster members in the period ahead. Maintaining global competitiveness under these conditions will require the ability to organise production in the most resource and energy efficient way. Using this shared understanding as their starting point, the CEOs of the member companies has identified a vision for the cluster: to become the world leading knowledge hub for the sustainable process industry by 2020.

The World Business Council for Sustainable Development's *Vision 2050* has provided the framework for the companies' common dialogue on sustainability. The *Vision 2050* report lays out a pathway leading to a global population of some nine billion people living well within the resource limits of the planet by 2050. The scenarios in *Vision 2050* matched the Eyde-cluster thinking on sustainability: it acknowledges that the future will need their products and that these products can

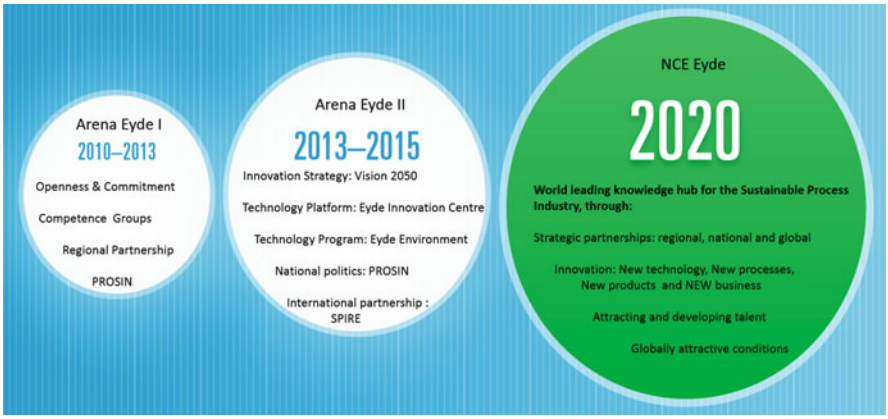

Fig. 12.1 Arena Eyde development process

and must fit a low-emission world. A key feature of *Vision 2050* is an identification of relevant business opportunities as societies move towards a sustainable future.

Two underlying drivers have helped shaped the companies' interest in the sustainability agenda. First, Norway has a surplus of hydropower, and all the companies in the cluster all have access to clean and renewable energy. This makes it easier to develop credible positions as sustainability champions within their industries. Second, the companies in the cluster are mostly foreign owned (owners include Alcoa, GE, Saint Gobain and Glencore) and many of these large multinationals have adopted ambitious positions on sustainability. The Agder based subsidiaries therefore have an interest in answering their headquarters call for sustainable production. Indeed, the Eyde companies' strong sustainability performance may help to secure continued head quarter commitment to maintain operations in Norway, where high operation costs are a serious concern.

The cluster has taken a number of practical measures in order to build a strong sustainability position. In 2012 a designated Eyde Environmental Programme was set in operation. The programme was established to house the different ongoing projects that the cluster has linked to sustainability, innovation and change. The programme houses initiatives include Eyde 0 Waste (cost efficient treatments of bi-products), Eyde bicarbon (replace fossil carbon with bicarbon) and Eyde Waste Heat (minimise and utilise waste heat so as to lower total energy consumption). In addition the project 'the Eyde Model' aims to create a common culture among management and workers of the need for change and the key demands associated with an ambitious sustainability strategy. More recently the Eyde Innovation Centre has been launched, which aims to scale up the activities within the Eyde Environmental programmes through joint R&D activities. In addition, the cluster has worked to enhance government support for a sustainable process industry by suggesting a national strategy exercise (*Process 21*) for the sector. The federation of Norwegian Industries (Norsk Industri) is an important partner in these efforts.

The Eyde cluster has had considerable co-operation with the University of Agder and also two independent and applied research institutes in the region: Teknova (natural sciences) and the university-owned Agder Research (applied social sciences). This co-operation has evolved alongside the changes in the cluster's focus areas and general development and maturing. Representatives from the research institutes and the university have, from the very start, been part of the clusters' extended board and participated in relevant forums, workshops and strategy processes. When the cluster started it had its base at Agder Research and the project manager was employed by the research institute. The cluster then became a legal entity, but the co-operation continued.

Researchers from Agder Research contributed to a mapping of the cluster companies' Corporate Social Responsibility tools and routines, and also with the promotion of the Vision 2050 framework. The cooperation with the university has also evolved along with the cluster's general development. In the early years co-operation centred on specific research initiatives within areas such as lean management and Human Resource related issues, where the company and university staff pooled their insights to suggest new production and management techniques. The university also conducted a mapping of work presence and absence in all Eyde companies. This report was an important input to the cluster: it elevated the interest in human resource related questions and was used as input to the sustainability and innovation strategies. The manager of the cluster's secretariat also serves as a government appointed external board member at the University of Agder. The board member has argued for further emphasis on sustainability related issues in the university's research and course offerings.

In 2014 the Eyde cluster signed a contract with the University of Agder that envisages more substantial co-operation within a number of fields, in particular the development of study programmes and joint research. Sustainability related themes are prominent in both areas. Moreover, and importantly, a bespoke executive education programme at the University of Agder was initiated in autumn 2014. Mid-level managers and team leaders from the cluster are exposed to key ideas related to sustainability, organisational development and lean management in the programme. It draws on the network's own experiences with improving their environmental footprint, and seeks to inspire further change and bottom up initiatives on sustainable innovation.

The bespoke leadership programme stems from an acknowledgement by the CEOs in the cluster that without a common ground, a common understanding of the challenges the companies are facing today, including in relation to sustainability, they will not succeed in reaching their goals. A need for change in the whole company organisations was identified. The leadership development programme was developed jointly by cluster representatives and university staff. The cluster brought their challenges and needs to the table and the university tried to match this with relevant recourses. The University has mobilised scholars specialising in various sub-disciplines such as change management, lean and sustainability and these are serving as lecturers and term chapter supervisors on the programme. While the scholars hold considerable general knowledge on sustainability and

other themes, a key task for the scholars have been to understand how the sustainability challenge appears in the cluster companies, and then tailor their input in teaching and supervisions accordingly. Group work, presentations and a term chapter form central parts of the course. This mobilises the participants to share their knowledge on the state of existing efforts in areas such as energy efficiency, waste management and lean production to other colleagues in the network and the university scholars. The knowledge that is generated and shared provides the university scholars with unique insights into a 'live' case. This increases their understanding of the sustainability field and allow for an updating of existing knowledge.

12.3 Discussion

At the outset of this chapter we highlighted key insights from the sustainability literature, and flagged three themes that hold relevance for this book: why companies might want to address sustainability issues, what kind of change might be associated with the sustainability agenda, and how universities can address sustainability through mutual competence building. How do these three themes play out in the case material on the Eyde cluster?

In the initial short literature review at the outset of this chapter, we noted that companies engage with sustainability related themes for different reasons: ethical reasons, risk mitigation/relations building and strategic positioning. The Eyde cluster is firmly situated within the third category: strategic positioning. The Eyde cluster identifies likely future changes in regulation, resources access and customer demand and responds to these presumed future changes by attempting to develop a strong position on sustainable production. Indeed, the explicit aim of the Eyde cluster is to become the world leading knowledge hub on sustainable process industry. Attention to company survival is a central underlying driver of this response. The companies face considerable competition and pressure within the larger multinational corporations they form part of, other business units might outcompete the Norwegian units due to superior performance on cost. The ability to answer to the headquarters' aims to increase the overall sustainability performance, and provide tangible sustainable innovation that enacts these, help ensure continuity of the Norwegian business units. Survival also comes into play in a more basic sense: the cluster anticipates that goods produced in an unsustainable manner will generate reduced demand. With long investments horizons for technology and production upgrades the companies need to make adjustments now for likely changes that may come in the market place a decade or more from now. In this way the perspectives put forward by Porter and Kramer resonates strongly with the approach taken by the Eyde cluster. Environmental pressures are framed as potential business challenges that are addressed at the strategic management level, with the responses attempted integrated into core company competencies and company cultures.

The second major theme we identified is that of the likely gradual or disruptive change that a move towards sustainability might bring about. The Eyde cluster's anticipation of, and preparation for change is split. One the one hand the adoption of the Vision 2050 framework ensures that the cluster has familiarised itself with the predictions for potentially sweeping change that industries might face in the medium term to long term. However, the sustainability innovations and co-operation initiatives undertaken so far are typically characterised by step-by-step approaches. Few resources set aside to explore more radical and game changing technologies and approaches.

The third theme we highlighted was that of the potential for mutual competence building on sustainability. The case material above provides a rich illustration of how such mutual competence building might play out. Cluster company staff and university researchers have engaged in specific research projects; the Agder Research and the university have helped formulate the ambitious sustainability strategies for the cluster, and the university have developed an executive education programme where sustainability is placed at the core. This programme is to a large extent co-created by the Eyde cluster representatives, university staff and the course participants.

These activities are all strongly collaborative in nature, and they allow, to some degree, for debate and discussion of what sustainability might entail. In this way the case manifests a pattern where the university is able to address sustainability through mutual competence building with work life institutions. Moreover, the scholars are able to shape, to some degree, how the industry cluster relates to sustainability. Agder Research, has, for example, been a key promoter and supporter of the Vision 2050 framework, which in turn has been a major influence on the cluster's thinking on sustainability.

It bears stressing however, that collaboration, trust and knowledge sharing are central to the way the cluster operates, not only in its relation with the university but also between companies and as it relates to the government. This is a key asset associated with the cluster, which also serves as an important pre-condition for the mutual competence building with the university which is currently unfolding. The cluster, rather than the university, should take credit for establishing this culture of trust, sharing and collaboration.

Moreover, the initiatives and the university's role in these are not without problems or concerns. One is the extent to which the university groups of expertise are indeed holders of relevant and sufficiently in-depth and up to date knowledge for it to be of use to the Eyde network. A notable feature of the collaboration has been the Eyde cluster's pro-activeness, while the university has largely been responding to the needs and request of the industry. This weakness the credibility of the university and makes it less able to promote critical and open debates about sustainability in industrial activity in the region. With so many parameters and sophisticated thinking undertaken by Eyde ahead of the large co-operation initiatives, the university is less able to set the parameters for debate, inquiry and teaching, or alternatively ensure that these parameters are up for debate.

Finally, there is a risk that the shared commitment and enthusiasm that is generated in the collaborative activities between university staff and cluster company representatives may prevent the participating scholars from thinking critically about the cluster companies overall performance. Much of the joint work on sustainability pertains to ambitions, strategies and quests for change that lie in the future but as yet unrealised. The companies' current sustainability performance, and potential weakness, is addressed in less detail.

12.4 Conclusion

The Eyde cluster and University of Agder case is useful, in that it illustrates how mutual competence building on sustainability might play out. It also adds insights on how companies come to engage with sustainability on the strategic management level.

Some broader points might also be distilled from the chapter. The split approach by the Eyde network to the possible change, associated with the move towards sustainability that was identified above, brings attention to one of the opening theme of this book, namely that sustainability is tightly liked to large scale societal change. The Eyde cluster's response has been one where it on the one hand anticipates and prepares strategically for large-scale change within their industries. At the same time many of their key initiatives are primarily incremental in nature. How would the university perform if we assessed the university in a similar manner? The university is less restrained by financial and market limitations than the business in the Eyde network and more able to engage with long term and utopian ideas. However, the University of Agder seems to be to a much lesser degree interested in exploring future scenarios and potential societal transformations.

Finally, the case pertains to the university's collaboration with the Eyde cluster. Would the university have been able to enter into credible co-operation on sustainability with the regional oil and gas network (NODE)? And is the current collaboration with NODE in other fields in accordance with the University's approach to sustainability? At the very least the university might initiate a debate on this, but also in this respect the institution remains largely passive and disinterested. This does little to build a credible position on the part of the university on sustainability.