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Published in:
Proceedings of APMS 2010

Publication date:
2010

Document Version
Early version, also known as pre-print

[Link to publication from Aalborg University](#)

Citation for published version (APA):

Meulengracht Jensen, P., Wæhrens, B. V., & Johansen, J. (2010). Pursuing Corporate Sustainability Synergies within a Global Operations Network. In M. Taisch (Ed.), *Proceedings of APMS 2010: Advances in Production Management Systems* (pp. 1-8). University of Stavanger.

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Pursuing Corporate Sustainability Synergies within a Global Operations Network

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Abstract: The paper explores the corporate pursuit of establishing sustainable production within a global operations network. It introduces and describes a number of capability phases, which draws our attention to the increasing importance of moving beyond the technical and tool-focused regime and thus approach sustainability as an organizational problem. There are clear indications that companies are experiencing problems with lifting their sustainability efforts to an organizational level and, thereby, fail to obtain results, which are in line with the strategic ambitions.

Key words: Global operations networks, sustainability, program management

1 Introduction

A phenomenon, which has received much attention in the academic literature, is the acceleration of the globalization process, and how it has altered the industrial landscape [1, 2]. Companies have now spread out their activities, which has given birth to a new dominant organizational form, namely the global operations network¹. One of the most apparent consequences of the widespread of activities is a dramatic increase in the complexity of the organization and following from this, the need for conscious corporate governance and governance-mechanisms [3]. The managerial mechanisms required to orchestrate these networks are currently poorly understood [3, 4].

One contemporary agenda where this comes to show is the increased focus on sustainability². Consensus is rapidly forming that sustainability is manifesting itself as an important competitive parameter for the future [8]. Tools and techniques related to sustainability, e.g. ISO 14.001 and life cycle assessment (LCA), have been developed

¹ Global operations networks: The organizational form of multinational corporations (MNCs) and we refer to the internal network; hence external suppliers, contractors and customers are not included [3, 4, 5].

² Sustainability: The ability to balance the social, environmental and business-related aspects, in a way that meets the needs of the present without compromising the ability of future generations to meet their own needs [6, 7]

and matured over the past twenty years and on an operational level, these are quite effective. However, considering the realities of the global operations network, companies struggle to effectively implement sustainability in their global operations, where the efforts currently may largely be described as sporadic projects without sufficient anchoring in the distributed organization and as a result fail to produce significant sustainability results [9].

One way to describe this problem phenomenon is from a process maturity perspective [10]. Within single-site organizations the alignment of activities and obtainment of synergies is of course much simpler compared to achieving these within the multi-site and distributed operations networks. It can be argued that the managerial tools and techniques, in the context of a global operations network and sustainability, have not yet matured to a level comparable to the tools and techniques applicable at a factory level [3, 4]; hence companies struggle with corporate alignment and realization of synergies.

An emerging theoretical field, program management (PM) [11], investigate the organizational solutions companies execute in order to connect the strategic ambitions, e.g. implementation of sustainability, to the operational daily tasks and projects. The essential purpose of PM is to direct the numerous (dispersed) projects so that they not only support the global strategy, but also support a systematic competence and capability build-up in the organization [ibid.]. This is done through balancing between global support and guidelines (e.g. tool-box development, knowledge-sharing platforms, control mechanisms and resource allocation) and local emergent initiatives, incitement and ownership. The field of PM is far from developed [12] and in practical terms, programs often come to show as rigid, control-focused project management structures; structures that does encompass the dynamic nature of global operations networks [3] and emerging competitive parameters [5].

This paper strives to achieve two key objectives. First we explore how the sustainability agenda matures over time in a MNC and how the MNC re-configures key organizational dimensions in order to meet the changing demands and objectives. Secondly, based on the observed challenges, we propose a research direction in order for MNCs to successfully achieve a competitive advantage by implementing sustainability their global operations networks.

2 Methodology

The research is carried out as an exploratory case study [13] detailing the efforts of one MNC, to achieve competitive advantages from sustainable global operations. We have chosen one of the frontrunners in the Danish manufacturing industry, who has worked with the sustainability agenda explicitly for more than fifteen years and management attention has been drawn towards sustainability as a key competitive requirement for the future. The company is a global organization, with operations and activities in more than forty-five countries and employs 10.000+ people worldwide.

The data is collected through interviews with employees in the global organization and were directed by a semi-structured interview-guide and an overall research

protocol. The selected interviewees have all been involved and/or responsible for the sustainability efforts and may be classified as “key-actors”. To obtain a nuanced picture, interviewees were spread out vertically and horizontally in the global organization and results were cross-checked with archival records.

3 Case Study

A value-based beginning: The work with the sustainability agenda in the case company can be dated back to the early years of the company. The founder built a company based on values such as “responsible thinking”, “efficient use of resources” and “paying back to the community” and at that point in time the sustainability agenda relied heavily on his visions and ideas. An example from the sixties is e.g. how the founder dragged socially marginalized members of the local community into the factory and offered them different job positions. However, the agenda relied more on informal, behavioral elements which slowly, but steady, manifested itself as part of the organizational culture and values at the HQ location.

Commercialization: In the late eighties/early nineties, as the company also accelerated its internationalization process, the western society began to show an increasing interest in both the social aspects, e.g. child labor and safe work environments, but also the environmental aspects of sustainability, e.g. proper waste disposal and energy efficiency. As the interest from the external environment grew, the company eyed an opportunity to differentiate themselves from the competition by responding to this growing interest. Initially this came to show in “product sustainability” e.g. energy-efficiency and environment-friendly material composition of the products, but also initiatives relating to the manufacturing processes, such as ISO 14.001 certification, was completed in this time period. The ISO 14.001 certifications served several purposes. Firstly, they presented a branding opportunity for the company. Secondly, they served as a waste removal tool by reducing e.g. water, electricity and other utility costs. Thirdly, it was an attempt to transfer the values and culture present at the HQ location to the foreign sites, where these were ill-anchored due to different local cultures and competence levels. However, as the news-value related to e.g. ISO 14.001 and to some extent (sustainability-related issues in general) faded in the late nineties, so did the company’s commitment to uphold and follow up on the sustainability-related initiatives.

Strategic integration: As the surrounding environment took a new and accelerating interest in sustainability (especially the environmental aspects) in the post millennium years, the company made the strategic decision to commit further to sustainability and integrate it as a part of the business foundation and not just a secondary agenda. In order to achieve this, consensus on a corporate level was sought, that sustainability could not be narrowed to e.g. energy-efficiency or material composition but a broad and nuanced understanding was required. A corporate function was established with the purpose of formulating and formalizing a sustainability-strategy. However, incorporation of sustainability with the business foundation turned out to be challenging and ended up having a negative effect on the operational results due to

the complex and dynamic nature of the term sustainability. The company experienced a period which can be described as “one step forward and two steps back”.

Operationalisation: Recently the approach “learning by doing” was initiated in order to get the change process going and obtain visible operational results. Instead of focusing on the corporate strategy, focus was moved to the operations strategy, where a number of sustainability related KPIs were introduced as direct control mechanisms. The tasks were highly decentralized in order to create ownership and alter the incitement structure in the global organization. This accelerated and highly operational approach implied that relatively simple tools and techniques were applied. However, when comparing the ambition of making sustainability a central part of the business foundation and an opportunity for new business these were clearly underdeveloped. In addition, a number of managerial challenges and dilemmas presented themselves to the company as the sustainability agenda was “put in play”. Examples of challenges include avoidance of misaligned project deployment, lack of local competencies and resources and waste of resources from “reinvention of the wheel” at several locations. In terms of dilemmas, these include automation and how improved production efficiency is achieved at the expense of higher CO2-emission. Also technology transfers and the impact on CO2 emission at the sending and receiving business units, presents a managerial dilemma. Other examples include time-to-market vs. sustainable solutions, manufacturing footprint vs. carbon footprint, purchase of green energy vs. “green wash” and handling of non-sustainable long-term suppliers and partners.

Looking forward: What the company strives to achieve in the future, is strategic alignment and synchronization of operational activities so that the “the power of common direction” is released in the network; and hence the corporate ambitions and goals are realized. While the independent SBUs have to take ownership for the individual projects to ensure operational results, HQ should support the SBUs by ensuring systematic competence/toolbox development, sufficient allocated resources, foundation for knowledge-sharing etc. In addition, the global and strategic processes located early in the vertical value chain, e.g. product or process development, global purchase, technology transfers, etc. are investigated on a corporate level, creating the foundation for further local project improvement, but also radical, innovative developments. This is based on the premise that optimization of exiting technology will only yield results to a certain extent (sufficient in the short-term), but in order to make “frog-leaps” sustainability needs to be incorporated in “next generation” technology from the early development processes.

4 Discussion and implications

The retrospective case study brings an illustration that the case company historically has undergone different phases primarily triggered by what the company strives to achieve at a given time period. An interesting perspective is how the case company at different points in time reconfigures key organizational dimensions in order to meet the goals which can be derived from the changing stakeholder and market demands. In the yearly years, the founder strived to built a company based on morally right

values and managed to anchor his beliefs at the HQ location through the company culture. Later, as sustainability started to possess commercial value and the organization expands; a more systematic and formalized approach is implemented in order to capitalize on the value and transfer the company culture to the international sites. As sustainability becomes a strategic parameter, the need arises to integrate with existing organizational solution and lift the efforts from technical project initiatives to an ongoing organizational process.

This is also reflected in how the company commits to sustainability. In the early years, the commitment is based on informal organizational behavior and culture and the founder's personal values. Later, the commitment becomes more trend-based and branding oriented in order to capitalize on the different commercial aspects. Finally, as sustainability is viewed as more than just a fad, the commitment becomes more strategic and long-term. However, a severe challenge presents itself, as sustainability become a strategic parameter and begins to influence other competitive parameters. The fundamental question is how far the case company is willing to go in terms of sustainability and how much sustainability can compromise other strategic agendas. Incorporating sustainability has a price, both in terms of investments, allocation of scarce resources, etc., but also in terms of developing a sustainable solution against the goals of quality, time-to-market, manufacturing footprint, etc. This is part of the reason why the management faces some difficult business dilemmas when striving to integrate sustainability as a competitive parameter: to what extent should the case company commit to sustainability? If sustainability is implemented at the expense of a decrease in other competitive parameters, e.g. quality, availability or price, the company has strong fears of loosing competitive momentum.

Another interesting dimension is the level of control and coordination. The initial control mechanism, the organizational culture, entails very little direct control and coordination and proved only efficient in the yearly years since the company was a small single-site location. As the company begins to spread out activities, the culture becomes heterogeneous and additional control and coordination mechanisms are required. The ISO certification and audit assessment processes are initiated partly as a response to this. However, the effectiveness of these audits is very much dependent on the level of control executed from the HQ and there is little or no local ownership and incitement which entails little or no follow-up as soon as HQ focus is removed. As the ownership for projects are decentralized and local KPIs are introduced as control mechanisms, the case company begins to struggle with synchronization of projects in order to avoid "reinvention of the wheel. In addition, misunderstandings and misperceptions of the task at hand leads to misaligned projects, which do only to a limited degree support the global strategy and the optimization goals of the company.

Also a development trajectory can be observed in the tools and methods which are put in play in the organization. Even though a development from simple and intuitive techniques to sophisticated and complex techniques can be spotted, a clearer trajectory can be spotted as to how the sustainability agenda evolves from focusing on tools and techniques in the initial phases, to becoming part of the organizational

processes. As the company moves towards incorporating sustainability as a competitive parameter, so does the need to integrate the tools, techniques and the understanding of sustainability with other organizational tools and techniques, e.g. incorporating in the development processes through re-engineering, sustainability as strategic KPIs, etc. It is no longer sufficient to place the agenda in a single department or confine it to a few environmental engineers. Sustainability needs to be thought in and considered in literary all business processes from R&D to production-engineering, logistics, sales and strategy formulation.

Based on this discussion of central dimensions, we have modeled the development trajectory of the sustainability agenda in the case company (see figure1). The stages and their underlying organizational configurations respond to four historic phases and also include a futuristic perspective, which represents aims and goals of the company's sustainability efforts.

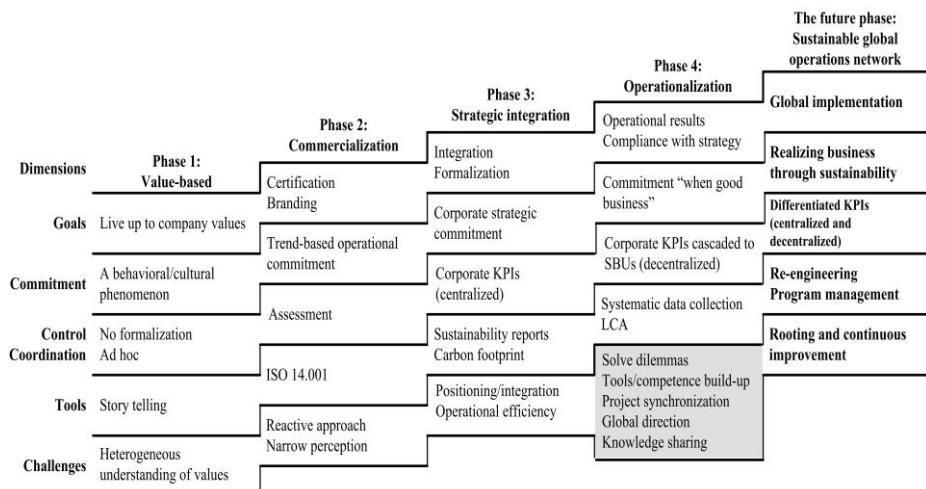


Fig. 1. Sustainability efforts in the case company towards a sustainability-maturity model

As showed in figure 1, the primary goals of a given phase, give birth to a certain configuration of three central dimensions. As the organizational context and/or the goals and demands from the market changes, a set of challenges presents themselves to the company, which in effect causes the company to establish a new set of goals and reconfigure the organization in order to comply with those goals. As highlighted in the figure, some severe challenges present themselves as the global organization strives to move beyond sustainability as a secondary agenda in the organization and the "easy" results, but wish to base future business on incorporation of sustainability in all processes of the organization and view it as an important competitive parameter for the future. Based on the observations in the case company, and the literature reviewed, we suggest that the challenges and dilemmas do not solely relate to the sustainability agenda, but as the company's sustainability efforts mature it increasingly relate to organizational solutions in terms of structures, competence build-up, knowledge sharing platforms, etc. From a strategic perspective it also

implies that the sustainability agenda becomes intertwined with other corporate agendas such as efficiency, quality, location, cost etc. This means that the basic challenge remains to convert the theoretical propositions to functional practical solutions, where organizational dilemmas present themselves as the efforts need to embrace both the efficient management of global operations and sustainable operations.

5 Conclusion

The study suggests that the challenges a global operations network faces are not only related to the challenges in the theoretical sphere of sustainability, but also related to challenges of managing and organizing global operations networks. Besides developing new sustainable tools and technologies, the solutions should be integrated with existing other organizational solutions and assist in developing them further. The emerging field of PM is potentially directed at solving these very issues. PM gives the promise of connecting the strategic ambitions with the operational projects through e.g. learning and communication platforms [12], delivering the required support, direction and alignment by handling the strategic tensions and thereby obtainment of synergies through local project deployment and global synchronization [ibid]. In an industrial era of increased dispersion of corporate activities the development and realization of strategic corporate performance criteria within the context of the distributed operations network has become a key factor. There are clear indications in the case study, which is also supported by the literature reviewed, suggesting that companies are experiencing problems with lifting their sustainability efforts to an organizational level and, thereby, fail to obtain results, which are in line with the strategic ambitions. We propose that research efforts should be directed towards developing PM techniques applicable in the context of global operations and in the sustainability problems sphere, in order to meet this demand.

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