Creating a Culture for Low-Carbon Innovation Adoption: A Case Study of Boots UK

Dissertation Summary

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Introduction

This dissertation explored the management of corporate sustainability in large organizations by investigating the culture surrounding low-carbon innovation adoption at Boots, a leading international health and beauty retailer headquartered in Nottingham, United Kingdom.

Positioning itself as an industry leader in corporate sustainability, Boots is engaged with sustainability innovation through the 'greening' of its product portfolio (innovation generation), as well as the integration of various low-carbon technologies and processes (innovation adoption). Addressing the latter, Boots has made a significant effort to reduce its carbon emissions and improve energy efficiency over recent years by deploying a variety of organizational and technical innovations. However, many of these innovations have failed to reach their full impact due to inconsistent adoption practices among Boots employees. To address this situation, Boots launched a company-wide employee behavior-change initiative in February 2012 with the goal of embedding carbon reduction into the working culture of the business. To aid the company's efforts, this study investigated the underlying cultural processes that impact employee engagement in the Boot's sustainability initiatives.

Research Questions

The overarching question this study aimed to address was: **How does organizational culture impact the adoption of low-carbon innovations at Boots?** This broad question was broken down into three subquestions:
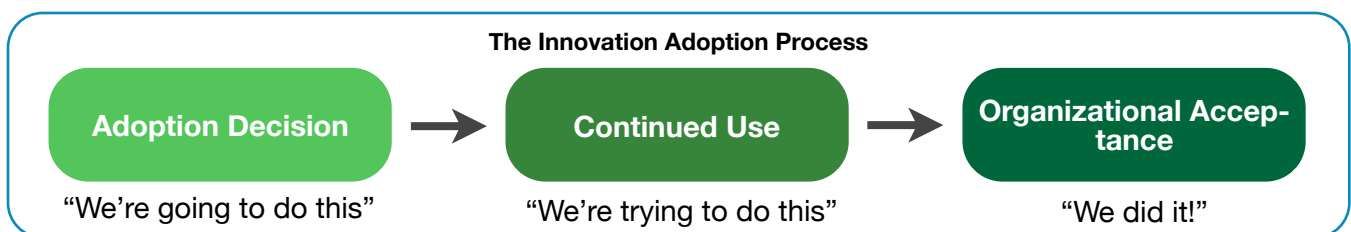
1. Do subcultures exist within Boots' organizational culture? If so, how do they differ?

2. If subcultures do exist at Boots, how should sustainability messages be communicated among these groups?

3. How does the organizational culture at Boots impact the adoption of low-carbon innovations throughout the organization, particularly in terms of energy conservation behavior among employees? And how could Boots' culture be changed to facilitate desired behavior changes?

Key Concepts

The theoretical foundation of this study was based on three major concepts: (1) innovation adoption, (2) corporate sustainability and (3) organizational culture.

Innovation Adoption

This dissertation applied the concept of innovation adoption to examine sustainability implementation at Boots. While innovation generation involves the development of new products, processes and services, innovation adoption is the process *of putting new technologies and behaviors to use within an organization*.[1] The innovation adoption process can be broken down into three phases, beginning with the company's initial **adoption decision**, followed by the **continued use** and eventual **intra-organizational acceptance** of the innovation. Intra-organizational acceptance is as a state in which a technology or behavior *is accepted and integrated into the organization and target adopters demonstrate commitment by continuing to use the product over a period of time.*[2]

The Innovation Adoption Process

| **Adoption Decision** | → | **Continued Use** | → | **Organizational Acceptance** |

"We're going to do this"   "We're trying to do this"   "We did it!"

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[1] Damanpour & Wischnevsky (2006)

[2] Frambach & Schillewaert (2002)

Corporate Sustainability

Corporate sustainability is defined as *the management of business in a way that recognizes and accounts for a company's embeddedness in social, environmental and economic systems*.[3]

Innovation adoption is an important theoretical lens for examining sustainability implementation, since many scholars agree that sustainable innovation is the highest level of cultural integration of corporate sustainability.[4] In other words, the ultimate goal of sustainable business management is to harness sustainability as a source of innovation while simultaneously improving social, environmental and economic performance.
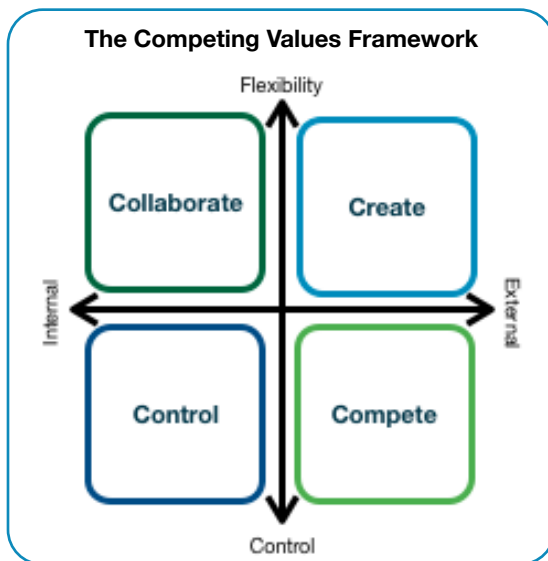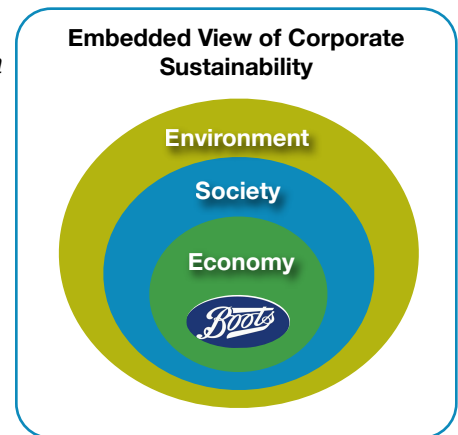
Organizational Culture

Organizational culture is defined as *an interdependent set of values and ways of behaving that are common in a community and that tend to perpetuate themselves, sometimes over long periods of time.*[5] Companies tend to portray their corporate culture as homogenous and integrated throughout every level of the organization, but this is usually not the case. Often, multiple **subcultures** exist within an organization due to variations in employee background, location and job function.[6] These fragmentations in organizational culture can inhibit corporate sustainability efforts by impeding the diffusion of a common set of sustainability values, beliefs and behaviors.[7]

Research Design

Theoretical Framework

In order to examine the contents of Boots' organizational culture, and identify any fragmentation that might exist between Boots' head-office and store employees, two recognized cultural frameworks were used: the Competing Values Framework, and Schein's three levels of organizational culture.

Competing Values Framework

The Competing Values Framework (CVF) is a sense-making device to help organizations understand their 'cultural personality'. Using universal metrics, the CVF identifies an organization's degree of emphasis in each of four quadrants: **Control**, **Compete**, **Create**, and **Collaborate**. Each quadrant represents the way people in an organization process information, learn about their environment, organize, lead, and create value for customers (see the table below for a definition of each 'cultural profile). The CVF has been used for more than twenty years in a variety of geographies and industries. In a search of literature from 2000 to present, the CVF was applied 44 times in journals across applications as diverse as hospitals, TQM, engineering, real estate, and higher education.[8,9]

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[3] Roome (1998)

[4] e.g. van Kleef & Roome (2008)

[5] Kotter & Heskett (1992)

[6] Martin (2002)

[7] Linnenluecke *et al.* (2009)

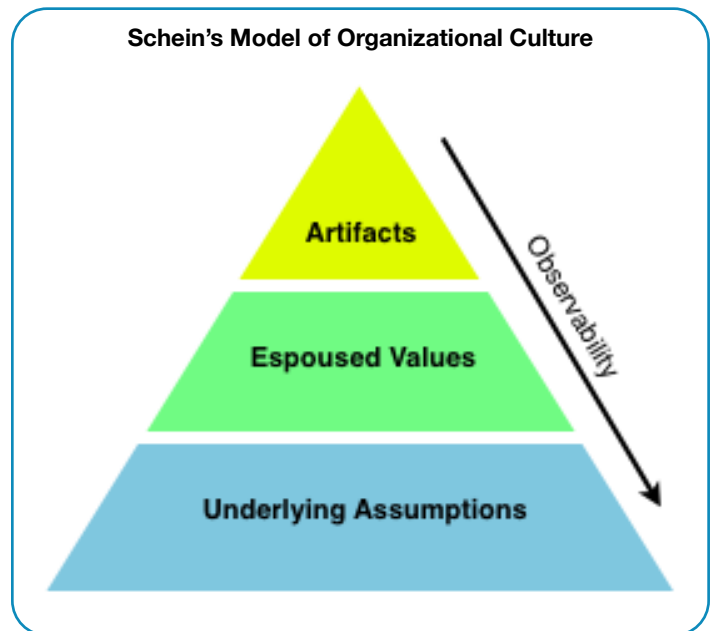[8] Cameron & Quinn (2006) PDF available here

[9] Abbett *et al.* (2010)

Collaborate	A very friendly place to work where people share a lot of themselves. It is like an extended family. The leaders, or head of the organization, are considered to be mentors and, maybe even, parent figures. The organization is held together by loyalty or tradition. Commitment is high. The organization emphasizes the long-term benefit of human resource development and attaches great importance to cohesion and morale.
Create	A dynamic, entrepreneurial, and creative place to work. People stick their necks out and take risks. The leaders are considered to be innovators and risk takers. The glue that holds the organization together is commitment to experimentation and innovation. The emphasis is on being on the leading edge. The organization's long-term emphasis is on growth and acquiring new resources.
Compete	A results-oriented organization. The major concern is getting the job done. People are competitive and goal-oriented. The leaders are hard drivers, producers, and competitors. They are tough and demanding. The glue that holds the organization together is an emphasis on winning. Reputation and success are common concerns. The long-term focus is on competitive actions and achievement of measurable goals and targets.
Control	A very formalized and structured place to work. Procedures govern what people do. The leaders pride themselves on being good coordinators and organizers, who are efficiency-minded. Maintaining a smooth-running organization is most critical. Formal rules and policies hold the organization together. The long-term concern is on stability and performance with efficient, smooth operations.

Schein's Three Levels

While the CVF positions the cultural traits of a group along universal parameters, Schein's framework describes the contents of an organization's culture under categories based on observability.

At the top of the model, **artifacts** are the easiest element of organizational culture to observe and consist of visible organizational structures and processes such as the architecture of a company's physical environment, corporate policies and procedures, and formalized rituals and ceremonies. When leaders within an organization make decisions, they directly or indirectly espouse a particular set of **values** (the second level of culture). If these decisions are perceived to be successful over a long period of time by organization members, values will become embedded into the third, deepest level of organizational culture, **underlying assumptions**. Because they exist at the subconscious level, underlying assumptions cannot be confronted directly. They are only revealed when artifacts and behavior within an organization conflicts with, or fails to be explained by, its espoused values.[11]

Schein's Model of Organizational Culture

Artifacts

Espoused Values

Underlying Assumptions

Observability

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[10] Cameron & Quinn (2006) PDF available here
[11] Schein (2004)

Data Collection

This dissertation employed a case study methodology consisting of both qualitative and quantitative data collection techniques to investigate the culture surrounding the adoption of energy conservation behavior at Boots.

Desk-Based Research

The first phase of this study involved a literature review focusing on three broad concepts: innovation adoption, sustainability implementation and organizational culture. This exercise identified the cultural systems known to facilitate innovation adoption and corporate sustainability implementation.

Employee Questionnaire

The purpose of the initial employee questionnaire was to quickly identify any cultural fragmentation that might exist between Boots' head-office and store employees. As mentioned above, cultural segmentation impedes sustainability implementation, since individual employees will have different understandings and assumptions about sustainability depending on their cultural orientation. Cameron and Quinn's Organizational Culture Assessment Instrument (OCAI) provides an established, survey-based tool for diagnosing corporate culture under the CVF. To identify variations within Alliance Boots' organizational culture, the OCAI was administered to 22 employees in the Nottingham office, and 18 employees in four Boots stores in London.

Employee Interviews

While the employee questionnaires were meant to identify any differences between Boots' head-office and store culture, employee interviews were used to further characterize these cultural systems and their compatibility with sustainable innovation adoption. This phase relied on Schein's three-level model of organizational culture consisting of artifacts, values and basic assumptions. Semi-structured interviews were conducted with nine employees in Boots' Nottingham office, and nine in its London stores.
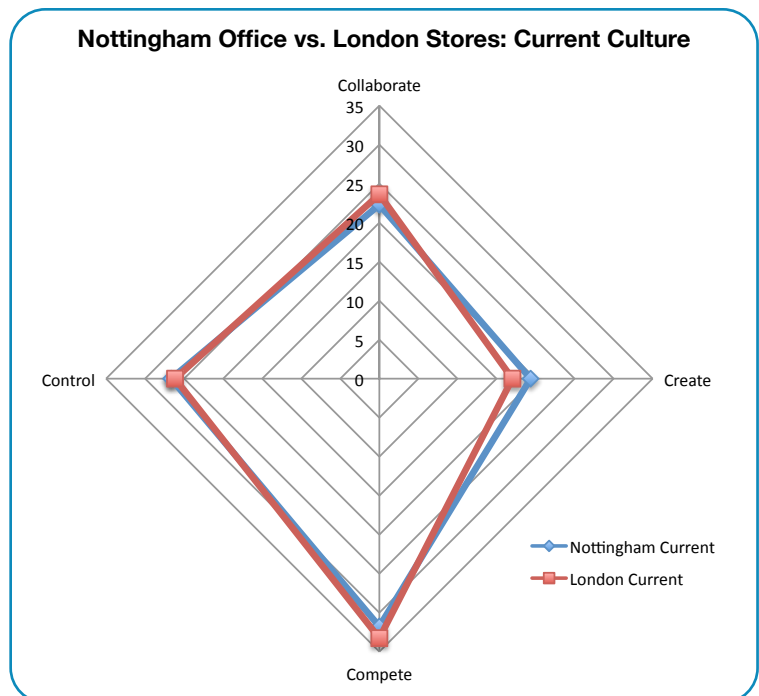
Findings

Quantitative Findings

The OCAI asked respondents to score aspects their organization in its current state, as well as how they would like things to change in the next five years in order to identify areas of needed change. The results of the Nottingham and London questionnaires were mapped separately and compared to identify any significant differences[12] in the organizations' current and preferred organizational culture.

Current Culture

The OCAI questionnaire revealed a high degree of cultural alignment between the Nottingham and London groups, with both groups favoring the 'Compete' type as the dominant cultural type, and 'Control' as the second-most dominant.

Nottingham Office vs. London Stores: Current Culture

(Radar chart with axes: Collaborate, Create, Compete, Control; scale 0–35. Legend: Nottingham Current, London Current)

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[12] Cameron & Quinn (2006) note that cultural differences of more than 10 points are considered statistically significant.

Preferred Culture

Greater differences were revealed when the 'preferred' cultures of the Nottingham office and London stores were compared. Employees in the Nottingham office desired a slightly increased emphasis on both the 'Collaborate' and 'Create' culture types, accompanied by a slightly decreased emphasis on 'Compete' and 'Control'. On the other hand, London employees desired a significantly increased emphasis on the 'Collaborate' type, but preferred to maintain its current emphasis on 'Create' and 'Control', while significantly decreasing its emphasis on the 'Compete' type.

Preferred Culture Change in Nottingham Office and London Stores

Left: Preferred changes to Nottingham office culture:
- Slightly increase 'Collaborate' (22 to 29 points)
- Slightly increase 'Create' (19 to 28 points)
- Slightly decrease 'Compete' (32 to 23 points)
- Slightly decrease 'Control' (27 to 20 points)

Right: Preferred changes to London stores culture:
- Significantly increase 'Collaborate' (24 to 35 points)
- Maintain 'Create' (17 to 20 points)
- Significantly decrease 'Compete' (33 to 21 points)
- Maintain 'Control' (26 to 24 points)

Degrees of change: Significant ⬆/⬇ = difference more than 10; Slight ⬆/⬇ = difference more than 3 and less than 10; Maintain (=) = difference less than three

While cultural fragmentation is generally considered negative, in Boots' case it could be argued that the OCAI results reflect the need for a higher degree of differentiation between head-office and store cultures. Since employees working in Boots stores have very different work environments and job functions than their Nottingham counterparts, it makes sense that their optimal cultures would differ. For example, the OCAI results indicate that store employees are far more content with the current emphasis on the 'Control' culture type, while Nottingham employees would like to see this aspect of the company's culture decrease dramatically. This is a logical difference given the nature of the work environment found in Boots' stores, where a strong emphasis on standards and low levels of employee discretion are required to maintain efficiency and brand image across thousands of retail locations.

Qualitative Findings

In order to better understand the content of the organizational culture at Boots, semi-structured interviews based on Schein's (2004) three-level model of organizational culture were conducted with employees in the head-office and London stores. The findings of the employee interviews are presented below with respect to each level of culture.

Artifacts

At the first level of organizational culture, the Nottingham employees were able to identify far more artifacts related to CSR and sustainability, indicating a higher level of awareness among these employees compared to their London colleagues, as well as a greater degree of visibility in the head offices' CSR effort. However, it is important to note that the majority of the colleagues interviewed were directly involved with Boots' energy management or CSR efforts. Knowledge of the company's sustainability and carbon reduction initiatives initiatives was dramatically decreased among the wider population of Nottingham employees—an issue that several interview subjects were acutely aware of. As a colleague from the energy management team noted:

> "I think if you ask people from outside this department, they'll probably say that company doesn't do anything to actively engage employees on energy matters."

Cultural Artifacts in Boots' Nottingham Office and London Stores

Nottingham Office	London Stores
• **CSR/Sustainability:** Recycling and rubbish bins; two-step printing system; Green Ambassadors program; on-site organic garden; product portfolio and evaluation system; Macmillan partnership; CSR training materials • **Energy and Carbon:** Annual Pavilion event for Energy Week; Mayday Network participation and carbon reduction commitments; on-site energy generation facility; technical upgrades such as automatic lights; training materials on the company intranet; delivery policies to save petrol; employee ride-sharing scheme.	• **CSR/Sustainability:** Recycling and waste separation processes; carrier bag policy; environmentally friendly products • **Energy and Carbon:** carbon reduction technologies (i.e. lights, EMS); posters and signs; controllable expenses; petrol-saving policy for pharmacy deliveries; dedicated e-learning module.

Values

At the level of values, the Nottingham and London cultures were very much aligned in terms of their strong emphasis on customer care, health, trust and employee development. However, heritage and brand value were emphasized far more in the head office's cultural values, while top-down processes and control values were stronger among London employees.

Cultural Values in Boots' Nottingham Office and London Stores

Nottingham Office	London Stores
• Customer care, health and trust • Heritage and brand value • Employee development	• Customer care, health and trust • Employee development • Top-Down Processes and controls

Underlying Assumptions

At the deepest level of organizational culture, Nottingham and London employees both held the assumption that 'energy and carbon are just one part of the larger sustainability picture.' However, they differed in their assumptions about Boots' motivations for pursuing sustainability. While London employees focused solely on the economic reasons behind Boots' efforts, Nottingham employees tended to apply both economic and normative reasoning to the company's actions. The remaining disparities found in the cultural assumptions of Boots' head office and London stores were largely a result of the differing organizational structures comprising these work environments, and cannot be as compared as easily the first two assumptions. For example, Nottingham employees held the assumptions that 'issues and and events outside of my department are not a major concern for me', and 'environmental issues are usually viewed as a peripheral concern, but this is starting to change'. On the other hand, London employees held the assumptions that 'If my manager cares about sustainability than so do I', and 'sustainability is not part of my job description'. The last two assumptions found in Boots' head-office culture reflect the fact that the Nottingham office is managed through a complex corporate hierarchy comprised of a wide array of divisions, departments and teams concerned with governing Boots' overall corporate strategy. On the other hand, the last two assumptions found in the London stores reflect the more narrowly focused nature of the retail job function.

Underlying Assumptions in Boots' Nottingham Office and London Stores

Nottingham Office	London Stores
• *Environmental issues are usually viewed as a peripheral concern, but this is starting to change.* • *The motivations behind Boots' sustainability efforts are both economic and normative.* • *Issues and events outside of my department are not a major concern for me.* • *Energy and carbon are just one part of the larger sustainability picture.*	• *Energy and carbon are just one part of the larger sustainability picture.* • *If my manager cares about sustainability, then so do I.* • *Sustainability is not part of my job description.* • *The motivation for Boots' sustainability efforts is mostly financial.*

Discussion

This section analyzes the case study's findings against the previously stated research questions.

Subcultures at Boots

The first question this dissertation sought to answer was: *Do subcultures exist within Boots' organizational culture? If so, how do they differ?* In order to detect the presence of cultural fragmentation between employees in Boots' Nottingham office and its London stores, the OCAI questionnaire was administered to employees in both groups. The high degree of alignment found between the head-office and London store cultures indicate that very little cultural fragmentation exists. However, the significant differences in these groups' preferred culture reveal disparities in employee motivations and work styles that may have significant bearing on Boots' employee engagement efforts.

In addition to the cultural differences revealed by the OCAI, the employee interviews revealed even greater disparities in the cultural content of Boots' head office and the London stores. At the first level of organizational culture, the Nottingham employees were able to identify far more artifacts related to CSR and sustainability, indicating a higher level of awareness among these employees compared to their London colleagues, as well as a greater degree of visibility in the head offices' CSR effort. At the level of values, the Nottingham and London cultures were very much aligned in terms of their emphasis on customer care, health, trust and employee development. However, heritage and brand value were emphasized far more in

the head office's cultural values, while top-down processes and control values were stronger among London employees. At the deepest level of organizational culture, Nottingham and London employees both held the assumption that 'energy and carbon are just one part of the larger sustainability picture.' However, they differed in their assumptions about Boots' motivations for pursuing sustainability. While London employees focused solely on the economic reasons behind Boots' efforts, Nottingham employees tended to apply both economic and normative reasoning to the company's actions.

Crossing the Cultural Divide: Sustainability Communication at Boots

The second research question this study aimed to address was: *how should sustainability messages be communicated among the subcultures that exist at Boots?* While presence of subcultures may disrupt sustainability implementation, the negative impacts of cultural fragmentation may be mitigated by tailoring campaigns and messages to appeal to the viewpoints of each organizational subculture.[13] Given the cultural disparities that were found between Boots' Nottingham office and London stores, the company's employee engagement initiatives should adopt a slightly different approach for each group.

The stronger 'Control' orientation found in the dominant characteristics of the London culture indicates that sustainability campaigns in Boots stores should be administered in a more structured and top-down fashion than in the head office. On the other hand, the stronger 'Collaborate' orientation found in the dominant characteristics of the Nottingham culture indicates a need for Boots to adopt a more personal, collaborative approach in its head-office sustainability initiatives. Furthermore, the discrepancy between the Nottingham office and London stores in terms of 'criteria for success' indicates that Nottingham employees will be more motivated than London employees by initiatives in which success is judged and rewarded based on measurable progress along predetermined metrics.

Creating a Culture of Energy Conservation at Boots

The final question this dissertation aimed to address was: *How does the organizational culture at Boots impact the adoption of low-carbon innovations throughout the organization, particularly in terms of energy conservation behavior among employees? And how could Boots' culture be changed to facilitate desired behavior changes?* To address these questions, the study compared Boots' CVF cultural orientations and cultural content at Schein's three levels (artifacts, values and assumptions) with existing theories surrounding organizational culture and sustainable innovation adoption.

The literature advocates an 'ambidextrous' organizational culture to facilitate organizational innovation, with with scholars finding complimentary advantages to both internal and external value orientations, as well as flexible and controlled management styles.[14] While the OCAI results indicated a high degree of ambidexterity in terms of internal and external value orientation, they showed far less balance between Boots' flexibility and control orientations, with the company showing a particularly weak orientation toward the 'Create' culture type. This over-dominance of Boots' control orientation is particularly evident in the culture of the London stores, where 'top-down processes and control' values are particularly visible.

The sustainability literature reinforces the need for Boots to develop its flexibility orientation to better facilitate its 'green' culture-change efforts, since only the 'Collaborate' and 'Create' organizational cultures are capable understanding their organization's embededness in non-economic systems.[15] Thus, Boots' strong orientation toward the 'Compete' and 'Control' culture types indicate that its sustainability efforts are largely profit-driven, with growth and efficiency being the primary focus. However, other elements of Boots' organizational culture indicate a more dynamic understanding of sustainability than the OCAI results might imply. For example, the majority of values found in the employee interviews, including customer care, health, trust and employee development, are more indicative of a 'Collaborate' sustainability strategy. However, the assumptions that underly Boots' organizational culture for the most part reflect a profit-centered view of sustainability.

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[13] Abbett *et al.* (2010)

[14] e.g. Brandi & Hasse (2010); Khazanchi *et al.* (2007)

[15] Baumgartner (2009)

Recommendations

This study concluded with three recommendations for Boots' employee engagement efforts.

Recommendation 1: Create a Recognizable Brand to Unite Sustainability Initiatives

The tendency among Boots employees to group carbon and energy management issues with the wider sustainability agenda implies a need for the company to develop a more recognizable brand identity to unite its CSR initiatives. Even though Boots' energy and carbon initiatives are managed by a separate department from the its philanthropic endeavors or its product sustainability efforts, the employee interviews found that employees do not think of these as separate issues at all. Therefore, by presenting all of its CSR efforts as parts of one overarching campaign, Boots could increase the saliency its entire corporate sustainability effort.

As the case study found, there are vast disparities in employee awareness from one sustainability initiative to the next, which was illustrated by the fact that, when asked about sustainability artifacts at Boots, all employees mentioned recycling bins, while only a few mentioned the company's sustainable product portfolio or Mayday carbon reduction commitment. However, Boots would increase awareness of some of its less-prominent initiatives by tying them to its more-recognizable efforts. This way, Boots employees would be more likely to take notice of previously overlooked artifacts such as Boots' annual CSR report, or one store's energy-efficient lighting upgrades, since they would be tied to the company's most visible environmental and social initiatives, like its recycling program and the Macmillan campaign.

One best-practice example of successful sustainability branding is Marks & Spencer's 'Plan A' campaign. While M&S is engaged in many of the same CSR initiatives as Boots, including waste reduction, carbon management and community outreach, the retailer uses the 'Plan A' label to unite all of it's sustainability efforts under one easily recognizable brand, as illustrated below.

Artifacts from M&S's 'Plan A' Campaign

Recommendation 2: Recruit and Train 'Green Ambassadors'

The second recommendation for Boots' employee engagement efforts is to recruit existing store managers to act as 'Green Ambassadors'. While Boots has already launched a Green Ambassadors initiative in its Nottingham office, the development of a similar program for the retail side is the only realistic mechanism for managing employee engagement in Boots' 2,600 UK retail locations. The purpose of the retail Green Ambassadors program would be to mobilize existing store managers to promote Boots' sustainability initiatives at the grassroots (i.e. store) level.

In line with the prevailing best practices[16], Boots' retail Green Ambassador program would equip at least one manager at every Boots location to lead sustainability implementation in their own store. Unlike the

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[16] e.g. Willard (2009)

head-office Green Ambassadors program, in-store ambassadors would be managed through a more top-down, controlled fashion, ideally utilizing Boots' existing hierarchy of area, regional and store managers.

While the task of defining the specific duties that would be carried out by Boots' retail Green Ambassadors falls beyond the scope of this report, the findings of the literature review and case study offer important insights into the ideal traits of a Green Ambassador. For example, the organizational culture in Boots' London stores demonstrates a need for Green Ambassadors to be recruited from a pool of current managers, and it is important for them to possess managerial traits that are compatible with Boots' current and preferred cultural orientation.

Recommendation 3: Connect Boots' Sustainability Efforts to Existing Normative Values

As the case study demonstrated, a profit-centered understanding of sustainability fostered by Boots' over-emphasis on control values has created a less favorable organizational culture for energy conservation at Boots. In addition to limiting the visionary potential of the company's sustainability strategy overall, this underdeveloped understanding of Boots' social and environmental embeddedness among its colleagues greatly reduced their motivations for engaging in energy conservation behavior, since financial savings alone were not enough to inspire employees to action. To combat this issue, the final recommendation for Boots' employee engagement efforts is to link the company's sustainability strategy to normative values that are already present in the organizational culture.

As the interviews demonstrated, the principles of customer care, health and trust are already very strong among Boots employees, and employee understanding of these values is strongly grounded in moral rather than economic reasoning. If Boots could connect its CSR efforts with these normative values in the minds of its employees, future sustainability messages would resonate more strongly. This technique would combat the assumption among the London interviewees that 'sustainability is not part of my job description'. Since store employees are taught to view actions that do not link directly to Boots' customer care, trust and health values as lower priority, sustainability will always be viewed as a peripheral concern if a stronger connection to these existing values is not drawn. Heritage and brand value were also found to be strong elements of Boots' head-office culture, and the connection between energy conservation and these values is a bit more obvious. Therefore, heritage and brand value are viable 'horses' that Boots could 'hitch its emissions-reduction wagon to' in the Nottingham office, but more investigation is needed to know whether these values are strong enough among store employees to inspire meaningful change in the retail sphere.

Conclusion

As this dissertation demonstrated, organizational culture plays an important role in facilitating (or inhibiting) innovation toward corporate sustainability, particularly in the realm of employee behavior change. By untangling the value orientations and contextual elements underlying organizational culture, it is possible to identify and articulate the social barriers that could inhibit employee engagement on sustainability issues, as well as detect areas of cultural fragmentation that might disrupt clear communication around sustainability issues. In the case of Boots, a variety of values and assumptions relevant to its energy conservation efforts were identified. While some elements of Boots' culture were found to be overtly problematic for the company's engagement efforts, like the assumption that sustainability was outside of the job description of store employees, others elements, like employees' failure to differentiate between different sustainability issues, may be astutely manipulated by Boots' energy management team in an effort change employee behavior.

It is this author's hope that Boots' energy management and CSR teams will find value in this dissertation's findings and apply them to its energy conservation campaign and other employee engagement efforts around its CSR strategy. Boots could also view this research as a starting point for designing more calculated strategies for its cultural engineering efforts in the future.