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THE ROLE OF PERFORMANCE MANAGEMENT IN CREATING AND MAINTAINING A HIGH-PERFORMANCE ORGANIZATION

ANDRÉ A. DE WAAL • BÉATRICE I.J.M. VAN DER HEIJDEN

Abstract: There is still a good deal of confusion in the literature about how the use of a performance management system affects overall organizational performance. Some researchers find that performance management enhances both the financial and non-financial results of an organization, while others do not find any positive effects or, at most, ambiguous effects. An important step toward getting more clarity in this relationship is to investigate the role performance management plays in creating and maintaining a high-performance organization (HPO). The purpose of this study is to integrate performance management analysis (PMA) and high-performance organization (HPO). A questionnaire combining questions on PMA dimensions and HPO factors was administered to two European-based multinational firms. Based on 468 valid questionnaires, a correlation analysis was performed on the PMA dimensions and the HPO factors in order to test the impact of performance management on the factors of high organizational performance. The results show strong and significant correlations between all the PMA dimensions and all the HPO factors, indicating that a performance management system that fosters performance-driven behavior in the organization is of critical importance to strengthen overall financial and non-financial performance.

Keywords: Performance management, performance-driven behavior, performance management analysis, high-performance organization

Research on the effects of performance management on organizational performance has produced conflicting results (Neely, 2005), suggesting that the impact of performance management is still not well understood (Pavlov & Bourne, 2011). A recent review by de Waal and Kourtit (2013) lists both financial advantages (revenue and profits increase while costs decrease) and non-financial advantages (improved communication, closer collaboration, better knowledge sharing, stronger focus on what really matters and on the achievement of results, better strategic alignment, higher operational efficiency, higher commitment of organizational members, more innovation, higher employee and customer satisfaction, and a strengthened organizational reputation). On the other hand, the same review also found disadvantages of using a performance management system, including information overload, too much subjectivity, too much financial and backward-looking information, and an expensive, bureaucratic management approach.

Rangone (1997) remarked that the link between the use of performance measures and organizational effectiveness has been widely recognized but that explanations for this relationship are constrained by the lack of a clear theoretical foundation. Almost two decades later, lack of theory still seems to be an issue, judging from Brudan's (2010: 110) lament that "the lack of standards regarding the definition, classification and usage of specific tools make both research and application of performance management principles difficult." Pavlov and Bourne (2011) pointed out that the literature thus far has not demonstrated how performance

management systems are linked to overall organizational performance. Choong (2014) takes this viewpoint even further when he says that most researchers in the field of performance measurement have not articulated the performance management system as a complete entity, and because of this we do not have a clear understanding of the interaction of activities of sub-systems within the organization. Moreover, according to Taticchi, Balachandran, and Tonelli (2012), achieving this understanding might be hampered by the fact that there is still a limited understanding of the cause-effect relationships between the performance management system and organizational results.

Pavlov and Bourne (2011: 105) concluded that there is still “a black box” that separates performance management from organizational outcomes and that “opening this black box would allow researchers to elucidate the process through which performance management affects performance...” and “in order to understand the mechanism of the impact of performance management on performance, one needs to understand how performance management affects these organizational processes.” An important step toward opening the black box is to investigate the role performance management plays in creating and maintaining a high-performance organization (HPO). An HPO is defined as an organization that achieves financial and non-financial results that exceed those of its peer group over a period of five years or more, by focusing in a disciplined way on what really matters to the organization (de Waal, 2012). In order to create a sustainable HPO, managers and employees alike have to behave in such a way that the objectives and goals of the organization are achieved on a high level. In practice, this implies that the organization’s performance management systems have to be designed in such a way that they provide constructive information and feedback so that organization members can behave in a performance-driven manner.

In this article, we examine the relationship between performance management and the high-performance organization using Performance Management Analysis (de Waal, 2010) and the HPO framework (de Waal, 2012). The goal of the empirical study presented here is to evaluate which dimensions of performance management help to create a high-performance organization. This is important to know because the outcomes of such research can be used by organizations to shape their performance management systems which, in turn, will help them in their quest to become and stay a high-performance organization. The article is organized as follows. First, we describe the Performance Management Analysis and the High-Performance Organization frameworks and the theoretical link between them. Then we describe a worldwide study of two companies with roughly comparable performance management systems. Based on the study findings, we offer several recommendations for future research and practice.

PERFORMANCE MANAGEMENT ANALYSIS

A technique that can be used to assess the impact of performance management in an organization is the Performance Management Analysis (PMA) (de Waal, 2010). The PMA makes a distinction between structural and behavioral aspects of performance management. The structural aspect refers to the system’s architecture, which needs to be in place in order to use performance management. This usually involves determining Critical Success Factors (CSF) and Key Performance Indicators (KPI) as well as designing a Balanced Scorecard (Kaplan & Norton, 1996). The behavioral aspect refers to the organization’s members and their use of the performance management system. The PMA is based on the principle that the two aspects of performance management, structural and behavioral, need to be given equal attention in order to establish a performance-driven organization. There are many things that can be measured and reported in an organization, but they will be of little value if organization members do not use this information to improve performance. Conversely, goodwill of organization members does not count for much when they cannot access the performance information needed to display performance-driven behavior. The PMA enables an organization to actually assess the degree of performance-driven behavior (Elzinga, Albronda, & Kluijtmans, 2009).

The PMA is a comprehensive survey instrument currently divided into nine dimensions. These dimensions are briefly described below (for a more detailed description see Appendix 1).

1. *Responsibility structure* (structural dimension): A clear parenting style; tasks and responsibilities have been defined and are applied consistently at all management levels.
2. *Content* (structural): Organization members use a set of financial and non-financial performance information that has a strategic focus (e.g., CSFs and KPIs).
3. *Integrity* (structural): The performance information is reliable, timely, and consistent.
4. *Manageability* (structural): Management reports and performance management systems are user-friendly, and more detailed performance information is easily accessible through ICT systems.
5. *Alignment* (structural): Other management systems, such as the human resource management system, are aligned with performance management, so what is important to the organization is regularly evaluated and rewarded.
6. *Accountability* (behavioral): Organization members feel responsible for the results of the KPIs of both their own responsibility areas and the organization as a whole.
7. *Management style* (behavioral): Senior management is proactive and involved in the performance of organization members and stimulates an improvement culture. At the same time, management consistently confronts organization members who are under-performing.
8. *Action orientation* (behavioral): Performance information is integrated into the daily activities of organization members in such a way that problems are immediately addressed, and corrective or preventive actions are taken.
9. *Communication* (behavioral): Communication about the results (top-down and bottom-up) takes place at regular intervals as well as the sharing of knowledge and performance information between organizational units.

THE HIGH-PERFORMANCE ORGANIZATION

The HPO framework is based on a literature review of 290 academic and practitioner publications about high-performance organizations (de Waal, 2012; de Waal et al., 2014). Out of each of the reviewed publications, elements were identified that the authors regarded as essential to becoming an HPO. Because the authors of the various scholarly contributions often used different terminology, the identified elements were grouped into categories that constituted possible HPO characteristics. For each of the possible HPO characteristics, its weighted importance was calculated (i.e., the number of times that it was mentioned in the publications). Lastly, the possible HPO characteristics with the highest weighted importance were included in an HPO questionnaire that was administered worldwide and included more than 3,200 respondents. In this questionnaire, respondents graded (on a scale of 1 to 10) how well they thought their organizations were performing with respect to the HPO characteristics. They also graded their performance results compared to their peer group of organizations. By performing a statistical analysis, we identified 35 characteristics that had the strongest correlation with organizational performance. High-performing organizations scored higher on the 35 HPO characteristics in comparison with low-performing organizations. This means that organizations that pay more attention to these 35 characteristics achieve better results than their peers in every industry, sector, and country across the world. Conversely, organizations that scored low on the characteristics appeared to rank at the bottom of their industry, performance wise (de Waal, 2012).

A factor analysis, performed during the statistical analysis, resulted in the determination of five distinct HPO factors. These five factors are described below (for a more detailed description see Appendix 2).

1. *Management Quality*. In an HPO, belief and trust in others and fair treatment are encouraged. Managers are trustworthy; behave with integrity; show commitment, enthusiasm, and respect; and have a decisive, action-oriented decision-making style. Management holds people accountable for their results by maintaining clear

accountability for performance. Values and strategy are communicated throughout the organization so that everyone knows and embraces these organizational features.

2. *Openness and Action-Orientedness.* HPOs have an open culture, which means that management values the opinions of employees and involves them in important organizational processes. Making mistakes is allowed and is regarded as an opportunity to learn. Employees spend a lot of time on dialogue, knowledge exchange, and learning in order to develop new ideas aimed at increasing their performance and making the organization performance-driven. Managers are personally involved in experimentation, thereby fostering receptivity to change in the organization.
3. *Long-Term Orientation.* An HPO grows through partnerships with suppliers and customers so that long-term commitment is extended to all stakeholders. Job vacancies are filled by high-potential internal candidates, and people are encouraged to become leaders. The HPO creates a safe and secure workplace (both physical and mental) and lays off people only as a last resort.
4. *Continuous Improvement and Renewal.* An HPO compensates for struggling strategies by renewing them and making them unique. The organization continuously improves, simplifies and aligns its processes, and develops new products and services, thereby creating sources of competitive advantage to respond to market changes. Furthermore, the HPO manages its core competencies efficiently and outsources non-core competencies.
5. *Workforce Quality.* An HPO assembles a diverse and complementary management team and workforce with maximum work flexibility. The workforce is trained to be resilient and flexible. Employees are encouraged to develop their skills to accomplish extraordinary results and are held responsible for their performance. As a result, creativity increases, leading to better results.

The HPO framework is built upon the idea that there is a direct and positive relationship between the identified HPO factors and organizational performance: the higher the HPO scores, the better the performance of the organization, and vice versa. An organization can empirically investigate its HPO status by having management and employees fill in an HPO questionnaire and calculating the average scores on the HPO factors. Our own analyses have shown that several characteristics have a direct relation to performance management:

- The organization is performance-driven
- Management focuses on achieving results
- Everything that matters to the organization's performance is explicitly reported
- Both financial and non-financial information is reported to organization members
- Management inspires and coaches organization members to achieve extraordinary results.

Thus, theoretically, a strong correlation between performance management and a high-performance organization can be expected. To evaluate whether this is the case in a particular organization, the performance management system of the organization has to be empirically tested on its ability to support the organization in achieving high performance. This can be accomplished by relating the HPO framework to the PMA.

THEORETICAL RELATIONSHIP BETWEEN PMA AND HPO

Relating the PMA and the HPO frameworks, the first obvious link is in the HPO factor *Continuous Improvement and Renewal* which contains two characteristics that have to do directly with performance measurement: "In the organization everything that matters to performance is explicitly reported," and "In the organization both financial and non-financial information is reported to organization members." The first characteristic matches with the PMA dimension *Content* while the second characteristic matches with the PMA dimension *Manageability*. Further, other HPO factors also show theoretical links with PMA. According to the HPO factor *Management Quality*, in organizations that score high on this, managers are results-oriented, and they deal decisively with non-performers, which matches with the PMA dimensions *Responsibility Structure*, *Accountability*, and *Management Style*. Regarding the HPO factor *Workforce Quality*, in organizations that score high on this, employees feel

responsible for their results, which also matches with the PMA dimension *Accountability*. Regarding the HPO factor *Openness and Action-Orientedness*, in organizations scoring high on this, employees spend a lot of time on dialogue, knowledge exchange, and learning in order to make the organization more performance-driven. This matches with the PMA dimensions *Action Orientation* and *Communication*. Finally, for the HPO factor *Long-Term Orientation*, in organizations with a high score on this, there is no obvious link with PMA. However, the argument could be made that an effective performance management system helps maintain and safeguard the sustainability of the organization and thereby its long-term survival.

RESEARCH METHOD

In the present study, the PMA and HPO frameworks were combined into one questionnaire, which was then distributed to two multinational companies operating in Europe. One company is a bank of which the Dutch branch offices participated. The other company is a car rental agency of which the sales offices in five countries (Netherlands, UK, Spain, Germany, France) participated. The performance management systems of both companies were roughly comparable in the sense that: (a) both systems were designed to capture information from multiple units which was then aggregated to the company level; (b) in both companies standardized financial and non-financial information was collected and reported, in the form of key performance indicators (KPIs), per month and per quarter, per country, and per office; (c) many of the KPIs were the same for both companies, and in addition to the obvious financial indicators, non-financial indicators such as customer satisfaction and employee satisfaction were applied in both companies as well; and (d) the KPI reports were discussed every month at both companies. As such, the performance management systems and their usage were quite homogeneous for both multinational companies.

Sample and Procedure

In the questionnaire, managers and employees of each organization were asked to rate their organization on the 35 HPO characteristics and the nine PMA characteristics, on a scale of 1 (the organization does not satisfy the characteristic at all) to 10 (the organization satisfies the characteristic completely). The scores of all respondents were averaged for the five HPO factors and the nine PMA dimensions. In total, 468 valid questionnaires were received, out of a possible total of 2,024 respondents, resulting in a response rate of 23.1 percent. Using the final valid sample of 468 respondents, a correlation analysis was performed on the HPO factors and the PMA dimensions.

Measures

The reliability of the PMA dimensions and the HPO factors, calculated as Cronbach's alpha, is shown in Table 1. As can be seen, all PMA dimensions and all HPO factors (with the exception of Workforce Quality) show a high reliability. This means that a relevant correlation analysis can be performed.

Table 1. Reliabilities of PMA Dimensions and HPO Factors

Dimensions/Factors	Number of Items	Cronbach's Alpha
<i>PMA dimensions</i>		
Responsibility structure	4	.732
Content	5	.722
Integrity	5	.872
Manageability	5	.823
Alignment	5	.709
Accountability	5	.881
Management style	5	.819
Action orientation	5	.823
Communication	5	.804

<i>HPO factors</i>		
Management Quality	12	.897
Openness and Action-Orientedness	6	.783
Long-Term Orientation	4	.818
Continuous Improvement	8	.877
Workforce Quality	4	.651

FINDINGS

Based on their theoretical relationship, strong correlations between the PMA dimensions and the HPO factors were predicted. As can be seen in Table 2, there are strong and significant correlations (one-tailed Pearson's *r* correlations) between all the PMA dimensions and all the HPO factors, indicating that a performance management system that fosters performance-driven behavior is indeed of critical importance to creating and sustaining a high-performance organization.

Table 2. Correlations Between the PMA Dimensions and the HPO Factors

Factors/ Dimensions	Management Quality	Openness and Action Orientation	Long-Term Orientation	Continuous Improvement	Workforce Quality
Responsibility Structure	.499	.414	.403	.469	.400
Content	.473	.465	.443	.520	.396
Integrity	.402	.437	.420	.526	.340
Manageability	.401	.431	.370	.481	.375
Alignment	.477	.510	.381	.391	.397
Accountability	.503	.482	.449	.523	.440
Management Style	.456	.397	.307	.305	.367
Action Orientation	.353	.353	.323	.329	.312
Communication	.440	.547	.402	.487	.418

Note: All correlations are significant at the .01 level.

The results depicted in Table 2 can be rearranged to show which PMA dimensions have the strongest impact on which HPO factors. Table 3 shows the results of this rearrangement in qualitative terms.

Table 3. Order of Impact of the PMA Dimensions on Each HPO Factor

Factors/ Order of Impact	Management Quality	Openness and Action- Orientation	Long-Term Orientation	Continuous Improvement	Workforce Quality
1	Accountability	Communication	Accountability	Accountability	Accountability
2	Responsibility structure	Alignment	Content	Integrity	Communication
3	Alignment	Accountability	Integrity	Content	Responsibility structure
4	Content	Content	Responsibility structure	Communication	Alignment
5	Management style	Integrity	Communication	Manageability	Content
6	Communication	Manageability	Alignment	Responsibility structure	Manageability
7	Integrity	Responsibility structure	Manageability	Alignment	Management style
8	Manageability	Management style	Action orientation	Action orientation	Integrity
9	Action orientation	Action orientation	Management style	Management style	Action orientation

Using the information shown in Table 3, a ranking can be made of the PMA dimensions according to their impact on the HPO factors (see Table 4).

Table 4. Impact Ranking of the PMA Dimensions

Order of Impact	PMA Dimension	Type of Dimension
1	Accountability	Behavioral
2	Communication	Behavioral
3	Content	Structural
4	Responsibility Structure	Structural
5	Alignment	Structural
6	Integrity	Structural
7	Manageability	Structural
8	Management Style	Behavioral
9	Action Orientation	Behavioral

It is clear from Table 4 that the PMA dimension Accountability has the strongest positive effect on creating and maintaining a HPO. This is in line with the outcomes as reported by many authors who found a positive relationship between accountability and performance (e.g., GAO, 2005; Hochwarter et al., 2007; Marsh, 2010; Wunsche, 2007). For each of the other HPO factors, there is a different order of impact of the PMA dimensions. This undoubtedly has to do with the specific nature of each HPO factor. It is interesting to note that the behavioral dimensions “bracket” the structural dimensions of the performance management system. It seems clear that certain behavioral aspects of the people in the organization are decisive for creating high performance, but this behavior has to be rooted in a robust performance management structure.

When an organization pays attention to strengthening the PMA dimensions, the HPO factors will be strengthened as well, helping to improve the organization’s overall results. To illustrate, Table 3 has been depicted schematically (see Figure 1). This figure shows relationships among the dimensions of performance management, factors of high-performance organizations, and overall organizational performance. The relationships shown between the PMA dimensions and the HPO factors originate from research done by de Waal (2012). This schematic constitutes a first and important step in opening the aforementioned “black box” of performance management and sheds light on the process through which a performance management system affects overall organizational performance (Pavlov & Bourne, 2011).

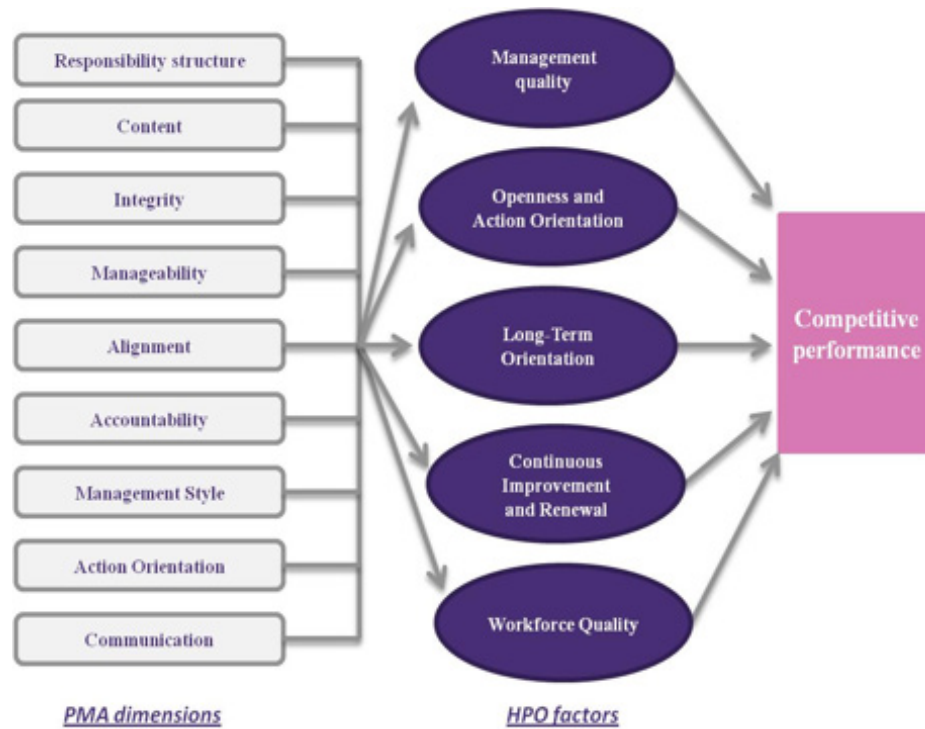


Fig. 1. Relationships Among the PMA Dimensions, HPO Factors, and Organizational Performance

STUDY LIMITATIONS AND FUTURE RESEARCH

An important limitation of this study is that only two for-profit companies, both of which operate in different industries in the Western world and comprise large cooperations, have been investigated. This means that future research is needed that focuses on empirically investigating the performance systems in use in organizations in various industries, including the non-profit and governmental sectors, in order to evaluate how they support the high-performance organization. Other opportunities include studying whether there is a relationship between performance management and HPO in a non-European context, and whether this relationship exists for small and medium-size companies as well. A final limitation is that we cannot rule out endogeneity and therefore cannot answer the issue of causality: does the use of performance management help to create an HPO, or is an HPO in a better position to implement performance management? Much literature in the field of performance management suggests that its application does help to improve the results of an organization and, as such, helps to create HPO. Therefore, in Figure 1, we have put the PMA dimensions before the HPO factors. However, further research is needed to gain more insight into the direction of causality.

CONCLUSION

Now that the correlational pattern between PMA and HPO has been established, an organization knows which dimensions of its performance management system positively affect organizational success and therefore have to be strengthened. Moreover, based on the findings of our study, there is more insight into the order in which the PMA dimensions have to be improved in order to optimize the chance to strengthen specific HPO factors. Our study contributes to the literature in that the characteristics of a performance management system have now been correlated with the factors of high performance. This makes it possible for practitioners to work in a more systematic and targeted manner on improving the organization's performance management system and thus on strengthening the organization.

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APPENDIX 1. THE PERFORMANCE MANAGEMENT ANALYSIS

In this Appendix, the nine dimensions and 44 characteristics of the PMA are listed.

<u>Structural dimension: Responsibility structure of the organization</u>	
1.	The organization has a clear parenting style
2.	There are clear tasks and responsibilities in the organization
3.	There are clear guidelines for the planning and target-setting process
4.	The chosen parenting style is consistently applied
<u>Structural dimension: Content of the performance information</u>	
5.	There is a balance of financial and non-financial information
6.	A strategic focus is created through applying CSFs and KPIs
7.	There is strategic alignment throughout the organization
8.	The targets are ambitious and relative to the competition
9.	Ranking between organizational units is applied
<u>Structural dimension: Integrity of the performance information</u>	
10.	The information is reliable
11.	User needs are regularly inventoried
12.	The information is always on time
13.	There is high consistency between data elements
14.	Relevant data elements are standardized
<u>Structural dimension: Manageability of the performance information</u>	
15.	The information is user-friendly
16.	The volume of information is limited
17.	Exception reporting is used
18.	Accessibility of underlying data is high
19.	Tools for information presentation are integrated
<u>Behavioral dimension: Accountability</u>	
20.	Relevance of information to users is high
21.	Managers use KPIs continuously
22.	The influence of users on KPI results is high
23.	Commitment of users to achieve results is high
24.	User involvement in changing KPIs is high
<u>Behavioral dimension: Management style</u>	
25.	Commitment of managers to achieving results is very visible
26.	Managers have high interest in employees' results
27.	There exists a continuous improvement culture in the organization
28.	Coaching by management is frequent
29.	There is high consistency in management's behavior
<u>Behavioral dimension: Action-orientation of the organization</u>	
30.	There is frequent analysis of results
31.	Performance information is used daily
32.	Corrective action is always taken
33.	Prognoses are frequently made
34.	Decision-making is always based on information
<u>Behavioral dimension: Communication about performance</u>	
35.	There is frequent top-down communication about results
36.	There is frequent bottom-up communication about results
37.	There is an open communication structure in place
38.	There is frequent knowledge sharing between units
39.	Strategy formulation always takes place in cooperation with organizational units
<u>Alignment</u>	
40.	The evaluation system is linked to the performance management system
41.	The reward system is linked to the performance management system
42.	The training system is linked to the performance management system
43.	The organization achieves improved results through the use of the performance management system
44.	The attitude of people towards performance management is positive

APPENDIX 2. THE HPO FRAMEWORK

In this Appendix, the five HPO factors and their 35 characteristics are listed.

HPO FACTORS AND CHARACTERISTICS	
<u>Continuous Improvement and Renewal</u>	
1.	The organization has adopted a strategy that sets it clearly apart from other organizations.
2.	In the organization, processes are continuously improved.
3.	In the organization, processes are continuously simplified.
4.	In the organization, processes are continuously aligned.
5.	In the organization, everything that matters to performance is explicitly reported.
6.	In the organization, both financial and non-financial information is reported to organizational members.
7.	The organization continuously innovates its core competencies.
8.	The organization continuously innovates its products, processes and services.
<u>Openness and Action-Oriented</u>	
9.	Management frequently engages in a dialogue with employees.
10.	Organizational members spend much time on communication, knowledge exchange and learning.
11.	Organizational members are always involved in important processes.
12.	Management allows making mistakes.
13.	Management welcomes change.
14.	The organization is performance driven.
<u>Management Quality</u>	
15.	Management is trusted by organization members.
16.	Management has integrity.
17.	Management is a role model for organization members.
18.	Management applies fast decision-making.
19.	Management applies fast action-taking.
20.	Management coaches organization members to achieve exceptional results.
21.	Management focuses on achieving results.
22.	Management is very effective.
23.	Management applies strong leadership.
24.	Management is confident.
25.	Management is decisive with regard to non-performers.
26.	Management always holds organization members responsible for their results
<u>Workforce Quality</u>	
27.	Management inspires organization members to accomplish extraordinary results.
28.	Organization members are trained to be resilient and flexible.
29.	The organization has a diverse and complementary workforce.
30.	The organization grows through partnerships with suppliers and/or customers.
<u>Long-Term Orientation</u>	
31.	The organization maintains good and long-term relationships with all stakeholders.
32.	The organization is aimed at servicing customers as best as possible.
33.	Management has been with the company for a long time.
34.	New management is promoted from within the organization.
35.	The organization is a secure workplace for organization members.



ALLIANCE PERFORMANCE MANAGEMENT IN SERVICE LOGISTICS

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Abstract: This study explores the management of stakeholder values for alliance success. A multiple-case study method is used to analyze – within six organizations attempting to form alliances – how the management of inter-organizational dimensions of stakeholder value adds to the success of an alliance business strategy. Our study focuses on the establishment of vertical service alliances within the Dutch maritime sector, including private-private as well as public-private initiatives. The findings point toward the usefulness of developing an inter-organizational success map. Because of its comprehensive multi-stakeholder orientation, a success map can be used by alliance managers to understand management’s considerations, including the trade-offs among an alliance’s various performance drivers. This new conceptual thinking can enhance research and best practices on inter-organizational design.

Keywords: Alliance performance, performance management, stakeholder management, inter-organizational values, success map design

In a globally connected world, organizations increasingly work with partners to reinforce their strategic positioning (Parmigiani & Rivera-Santos, 2011). Many managers recognize the need for inter-organizational cooperation to create new business opportunities (Taplin, 2006). An alliance can serve to access complementary resources and skills that reside within other companies (Caldwell & Howard, 2010; Dyer, Kale, & Singh, 2001) and to contribute to an organization’s own strategy (Pintelon, Pinjala, & Vereecke, 2006). As such, alliance management constitutes a strategic activity (Schiffrin, 2001), and it increasingly extends beyond a firm’s boundaries (Bititci et al., 2005; Bobbink & Hartmann, 2014).

Working in alliances poses new management challenges. Challenges may result from alliance managers finding it difficult to manage multiple alliance stakeholders; partners having incompatible views of the alliance; business process coordination becoming too complex and costly; and potential synergistic advantages failing to materialize (Gulati, Khanna, & Nohria, 1994; Gulati, Wohlgezogen, & Zhelyazkov, 2012; Schilke & Goerzen, 2010). In addition, CEOs may be hesitant to invest in strategic partnerships without a clear prospect of value being added. (We use ‘value’ and the plural ‘values’ in relation to organizational performance, not abstract principles an organization adheres to.)

While existing research offers rich insights into the management of a wide variety of business models (Bacharach, Bamberger, & Sonnenstuhl, 1996; Neely, Adams, & Crowe, 2001; Solaimani & Bouwman, 2012), managing the combination of the partner’s processes and capabilities suggests two important research questions: Can alliances be managed according to existing business models and success factors? What kinds of opportunities for value creation do alliances enable (Bititci et al., 2005; Weiller & Neely, 2013)?

The objective of our study is to explore in the context of alliance performance management the role partners’ values play in ensuring their own and collective success. Alliances affect the participating organizations both internally and externally. For example, an alliance can have a positive impact internally by providing access to new or complementary expertise

(Gnyawali & Park, 2011). Externally, combining products and services can underpin new value propositions (Harrison, Hitt, & Hoskisson, 2001; Ye, Priem, & Alshwer, 2012). Conceptually, we draw on the research literatures on alliances, value creation, and performance management. We also conducted empirical qualitative research in the Dutch maritime sector, examining managers' strategic motivations for forming alliances and their conceptualization of alliance success in relation to their organizations' values. In the sections below, we first discuss value creation and performance management in alliances. Then we describe the method used to investigate six public and private organizations in the Dutch maritime sector as they sought to form alliances. Lastly, we discuss our findings and derive their implications for theory and practice.

ALLIANCE PERFORMANCE MANAGEMENT: CONCEPTUAL FRAMING

The term 'alliance' covers a broad range of relationships, from short-term projects to long-lasting partnerships (Long & Zhai, 2010). In general, alliances as a cooperative initiative aim at synergy, expecting benefits obtained to exceed individual organizations' efforts (Ireland, Hitt, & Vaidyanath, 2002). An alliance can be distinguished from other inter-organizational relationships. It can be positioned between transactional exchanges (simple, discrete, one-time events) and 'relational' organizational forms such as networks or joint ventures. Alliances can be shaped by informal handshake agreements as well as formal contracts (Geyskens, Steenkamp, & Kumar, 2006; Kale & Puranam, 2013). Alliances are ultimately based on each participant's self-interest (Chang, Chen, & Lai, 2008) but can become a breeding ground for potential 'win-win' business opportunities (Taplin, 2006).

Value of Alliances

To date, the literature has mostly explored *why* organizations focus on business cooperation as a means of value creation. Theoretical perspectives such as inter-organizational cooperation theory (Jones & Lichtenstein, 2008; Oliver, 1991), alliance theory (Dyer et al., 2001) or the extended resource-based view (Caldwell & Howard, 2010) offer conceptual underpinnings for cooperation as a business model. Less attention has been paid to the value generation and appropriation process in alliances. In order to ensure the alliance's legitimacy, alliance managers need to secure the support of all relevant stakeholders such as shareholders and investors, employees, customers, suppliers (including the alliance partners), competitors, and public organizations (Chang et al., 2008; Hillman & Keim, 2001). The success of the alliance depends on the ability to take into account the underlying economic and social interests of stakeholders. This requires partners to have insight into each other's stakeholders and to manage values in such a manner that the alliance's entire system is supported (Draulans, De Man, & Volberda, 2003; Tjemkes, Vos, & Burgers, 2012).

An important issue is how alliance managers can manage the trade-off between maximizing alliance value and at the same time serving their own stakeholders' interests. Research has shown that alliance failures are mostly related to the motives for cooperation and the alliance's scope. Scope is one of the most challenging and critical activities in alliance performance management (Joncas, Kelly, & Schaan, 2002). The process of 'scoping' includes coming to know stakeholders' values and preferences for outcomes. Uncovering, shaping, and reinforcing the contribution of stakeholders' value is crucial to the accomplishment of strategic efforts (Schein, 1990). Since values can influence performance outcomes, they can be considered factors enabling or disabling the alliance strategy. Managing these factors is important to the organization's success (MacIntosh & Spence, 2012). At the same time, we would argue, coming to know the partners' values increases trust (by understanding why the partner acts as it does), and managing values is important to alliance performance. Stakeholder value refers to the desired wealth of the focal party, such as employees' job satisfaction. There are different methods for identifying stakeholder value (see the Appendix).

Following Rokeach's (1973) framework regarding individual values, a distinction can be made between an alliance's *instrumental* values ('facilitating capabilities' in organizational terms) and *terminal* values ('strategic objectives' in alliance terms). Moreover, Rokeach

(1973) was one of the first to emphasize that values interact. Congruence in values occurs when there is a high level of agreement about the connections between instrumental and terminal values (Adkins, Ravlin, & Meglino, 1996), and value congruence facilitates the achievement of long-term objectives. Further, understanding the incongruence of values helps managers to determine actions that could decrease operational differences (Adkins, Ravlin, & Meglino, 1996).

Operationalizing Value: Towards Alliance Performance Management

Since an alliance consists of inter-organizational exchanges, partners must understand the different values of all participating organizations. Assessment of alliance performance, however, often lacks metrics to assess the congruence of underlying strategic values (Tjemkes et al., 2012). In operationalizing value, we seek to bridge both strategic topics (e.g., stakeholders, business models) and operational measurement. Performance management frameworks such as the PRISM framework (Neely et al., 2001) offer a good starting point. This framework is built on five views and questions (Neely, Adams, & Kennerley, 2002):

1. Stakeholder satisfaction: Who are our stakeholders, and what do they want and need?
2. Stakeholder contribution: What do we want and need from our stakeholders?
3. Strategies: What strategies do we need to put in place to satisfy these sets of wants and needs?
4. Processes: What processes do we need to put in place to satisfy these sets of wants and needs?
5. Capabilities: What capabilities – bundles of people, practices, technology and infrastructure – do we need to put in place to allow us to operate our processes more effectively and efficiently?

The PRISM framework helps organizations develop their own success maps – a logical, abstracted structure for understanding the drivers of performance. “The success map encapsulates those things that the business has to deliver if it is to achieve its overall financial goals” (Neely et al., 2001). Based on a success map, organizations can develop approaches to performance data collection and analysis. Alliance managers identify factors that presumably drive revenues and costs, and they articulate their reasoning on how these factors are related. Organizations, both public and private, can thereby improve their strategic focus and internal coherence (Bacharach et al., 1996; Baden-Fuller & Morgan, 2010). An example of a success map is shown in Figure 1.

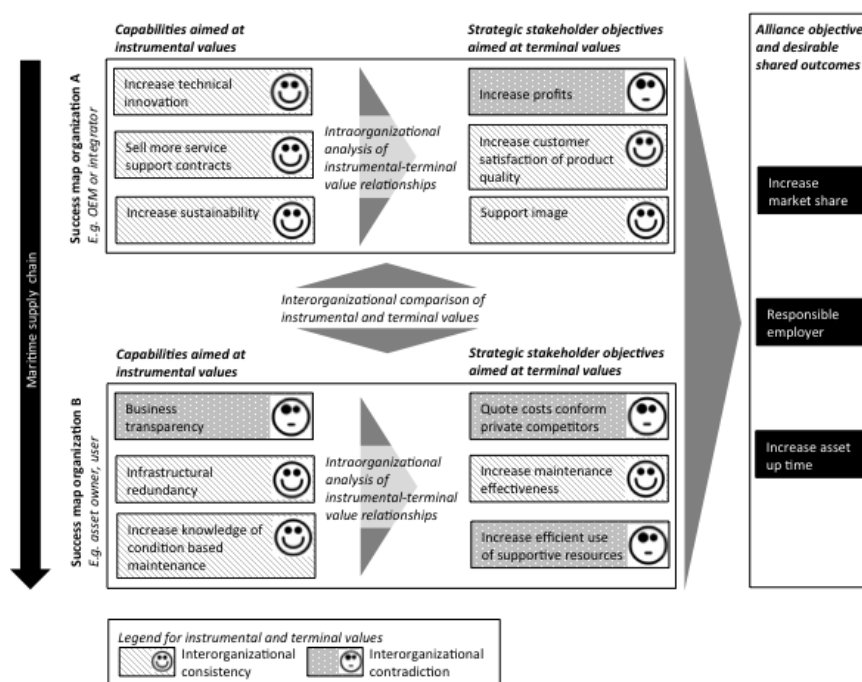


Fig. 1. Alliance success map

We envision organizations moving back and forth between their own success map and inter-organizational dimensions of value during the formation stages of an alliance. (See Table 1.) They can consider the structural features of their success map and insert these into the alliance process (inside out). Conversely, the alliance is likely to impact their success map (outside in) because it affects existing values and may create new or unexpected values. Our empirical work examines these dynamics in the Dutch maritime service logistics sector.

Table 1. Alliance life cycle phases and performance management

LIFE CYCLE PHASE		SCOPE	
	Organizational success map	Alliance impact on organizational success map	Inter-organizational cooperation for materializing alliance value
Pre-Alliance	Partners develop their own organizational success maps		
Business Case	Partners consider the alliance's potential for impacting their organizational success maps		
Partner Assessment and Selection	Partners initiate cooperation		
Alliance Negotiation and Governance	Partners consider impact on their organizational success maps		Partners elaborate on alliance's cooperation framework
Alliance Management	Partners may adapt their organizational success maps based on alliance experiences		
Assessment and Termination	Partners may decide to terminate the alliance due to a lack of positive effects on their organizational success maps		

METHOD

To investigate how organizations' values relate to potential alliance partners' values and how an alliance can contribute to each partner's success, we used a multiple-case study research method (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). The cases were drawn from a large study focused on alliance formation within the Dutch maritime sector. In exploring the success factors for service logistics alliances, we traced the most significant intra-organizational strategic values and underlying capabilities. We focused specifically on vertical service alliances between different types of organizations. Given involvement in the assets' (i.e., ships) total life cycle, organizations have the opportunity not only to strengthen their individual performance but also to influence organizations upstream or downstream in the alliance. 'Vertical' here means sequentially linked contributors to value creation. In the maritime sector, *original equipment manufacturers* of naval systems (e.g., radar, engines), *system integrators* (e.g., shipyards, service suppliers), and *asset owners* who use the systems for business purposes (e.g., tug towing, offshore investigation services) constitute the vertical alliance. The maritime sector has boosted efforts to form service alliances as a strategy to improve maintenance processes. The sector's ambition is driven by the observation that maintenance constitutes a significant part of a ship's exploitation costs and that system downtime may lead to a substantial loss of revenues for asset owners (Peeters et al., 2012). In the past, top management tended to ignore maintenance costs by considering them to be part of manufacturing overhead (Pintelon et al., 2006). In today's environment, maintenance and overhaul costs are viewed from a broader angle, as part of innovative strategies for designing, modifying, and maintaining assets.

Data Collection

We collected data at the organizational level from multiple sources: interviews, inter-organizational project meetings, and secondary sources (e.g., corporate documents and academic theses). Face-to-face interviews were conducted with 20 managers from six public and private organizations. We interviewed experts representing different functions and responsibilities, such as purchase managers, service managers, lawyers, and senior executives. Interviews were conducted using a semi-structured protocol in order to give room for the interviewees' thoughts and perspectives. Interview protocols were written in the respondent's native language (Dutch) to prevent misunderstandings. As mentioned earlier, we focused on the initial stages of alliance formation, exploring the values of stakeholders and their motivation in the sense of preferences for alliance outcomes and the relationship between organizational capabilities and alliance strategy. We also attended a number of inter-organizational meetings from which we drafted field notes. Trying to ensure that accurate information was provided, we promised that neither the interviewees' nor the organizations' names would be disclosed.

Data Analysis

To analyze relationships among alliance objectives, strategic values, and organizational capabilities, we content analyzed our data, which is "... a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding" (Stemler, 2001). From this, we constructed a structured data table to present the findings on organizational processes and capabilities, stakeholder requirements, and alliance contributions across the six organizations.

To examine how intra-organizational performance relates to alliance success and vice versa, we drafted alliance success maps to explore intra- and inter-organizational relationships between different values and strategic objectives. Our initial approach of success maps evolved during the analysis phase into a model for examining the congruence of instrumental and terminal values within organizations, and to relate these values across organizations. We analyzed alliance objectives and instrumental-terminal values for the three categories of stakeholders (original equipment manufacturers, system integrators, and asset owners). In some cases, terminal values changed over time, and we analyzed how this influenced the alliance formation process.

Validity and Reliability

In order to increase the validity and reliability of the interview data, all respondents were asked to read and, if necessary, revise the transcripts. The same procedure was adopted for the drafted field notes. To supplement the primary data gathered by interviews and informal conversations, secondary data were collected by examining a broad range of corporate documents and maritime newspapers, and by studying masters and bachelors theses tied to the research project. All of the secondary data were triangulated with the primary data to increase validity and reliability (Yin, 2009).

FINDINGS

Our data deal with the early stages of alliance formation. The first set of findings presented below focuses on the organizational values and alliance objectives of the main types of alliance partners: original equipment manufacturers, system integrators, and asset owners. The second set of findings focuses on the processes and capabilities, stakeholder requirements, and alliance contributions of the six organizations studied.

Organizational Values and Alliance Objectives

Organizations considering an alliance explore inter-organizational relationships that move beyond traditional quid-pro-quo exchanges (Jones & Lichtenstein, 2008; Sobrero & Schrader, 1998; Tjemkes et al., 2012). In the case of Dutch maritime services logistics, expertise and information from customers allowed original equipment manufacturers (OEM) and system

integrators (SI) to improve their organizational learning and product/service development processes. Asset owners (AO), on the other hand, were most interested in learning about products and services that would extend their own knowledge about maintenance processes. Organizational success maps express what an organization wants to achieve and which drivers may contribute to or hinder success (Neely et al., 2001). In order to understand how an alliance could contribute to the success of an organization, we first explored the intra-organizational interrelations between organizations' values and objectives. We found that success maps – limited here to values – are characterized by organizations' positioning in maritime supply chains. Most OEMs adopt an alliance strategy as a supportive (secondary) strategy to improve the quality of their differentiation or cost strategy. In addition, we found that OEMs struggle to resolve internal strategic ambivalence (e.g., partially moving from product towards service business models, shifting from a go-it-alone approach towards alliances). As success drivers change with shifting business strategies, the design of organizational processes shifts as well (Gerritse, Bergsma, & Groen, 2014). Consequently, fitting processes and capabilities to new business strategies presents a formidable challenge (Bacharach et al., 1996). Product-oriented OEMs face operational tensions when partially shifting towards a service-based business model. Most OEMs focus on cooperation with a customer rather than with system integrators and service providers, as these relationships tend to become competitive.

With respect to how an organization's values relate to a potential alliance partner's values, our findings showed a common interest in seeking new knowledge by means of cooperating with (horizontal) partners having complementary knowledge. Partners' strategies for forming an alliance are caused by an emphasis on service and by a shift towards a 'customer function' orientation (e.g., how does an asset support operational customer functions such as 'power' for transporting). These notions have surfaced in the literature on procurement and industrial marketing (Bacharach et al., 1996; Grönroos, 2011; Neely, 2008). Value for customers takes center stage rather than the offering itself (Chandler & Vargo, 2011). Alliance outcomes are primarily focused on service innovation and expansion of services packages. Since the input from organizations within the alliance involves core capabilities, to expand their quality requires an equal commitment from their partner(s). Furthermore, in comparison to both OEMs and SIs, most asset owners and users seem to have a different approach towards motivating alliance participation. Depending upon their capabilities, asset owners seek other suppliers to improve organizational performance.

Private asset owners are being confronted with OEMs' and SIs' desire to experiment with new business models (Caldwell & Howard, 2010). This might also explain their approach when exploring partners' inputs to the alliance. To counter possible relationship asymmetry, private asset owners tend to focus on balancing the alliance outcome by inserting risk and reward penalties as a means to balance power. This formalizes the relationship and limits the development of new values. In contrast, public asset owners face different market dynamics. For example, the Dutch Navy has been facing budget cuts that jeopardize its own maintenance base. Fewer ships mean less maintenance work; this threatens long-term sustainability of maintenance capabilities. Moreover, the Navy needs to consider elaborate public regulation on procurement aimed at transparency rather than relationship building with particular upstream providers. At the same time, SIs and OEMs may seek to benefit from the Navy's expertise and resources (e.g., for testing). Agreeing on value exchange thus represents a formidable challenge.

The findings on organizational values and alliance objectives are summarized in Table 2.

Table 2. Alliance Objectives and Instrumental/Terminal Values

Category of Organizations	Instrumental Values	Terminal Values	Alliance Objectives
Original Equipment Manufacturer (OEM)	Aimed at extending customer-centric, full service offering	Best product offering → New terminal values: servitization, globalization	Using core capabilities to provide products and services to AOs
System Integrator (SI)	Aimed at locating equipment for asset owners	Services with a transaction focus → New terminal values: collaborative services (relationship focus) with horizontal partners	Acquiring extended knowledge for and by providing services to AOs
Asset Owner (AO)	Aimed at business transactions with OEMs instead of cooperation	Public organizations: asset availability, independence → New terminal values: capability sustainment, avoidance of lock-in and strong dependence on suppliers, cost effectiveness Private organizations: asset availability → New terminal values: reliability, minimal disruption of operations, collaboration with upstream partners, cost effectiveness, avoidance of lock-in and strong dependence on suppliers	Provided with cost-effective products and services from OEMs and/or SIs

Dynamics Among Alliance Partners

Alliance formation confronts two sets of values and success maps: those of an organization considering an alliance and those of its potential partner(s). Dependencies begin to appear between the organizations, which could lead to collaborative success maps. Our findings in maritime services logistics support the opinion that different values and success maps can nurture alliance formation. The alliance success map articulates areas of cooperation while leaving room for each organization to assess ‘integration’ or the ‘interlocking of value horizons’ (Henneberg & Mouzas, 2008). Recent work on control towers in logistics makes this notion palpable: operations from different organizations are at least virtually integrated (Pieri, 2012). In the alliance projects we studied, such multi-organizational concepts are being introduced. This echoes earlier work on network orchestration (Busquets, 2010; Dhanaraj & Parkhe, 2006) and virtual organizations – organizations that coordinate their business processes and services without losing their own identity and legal structure (Danesh et al., 2013; Katzy & Crowston, 2007).

Reverting to the organizational level success maps, values may be similar and aligned or perhaps contradictory (Tatham, 2013), and they can change during the alliance formation process. We examined how organizations’ values relate to potential alliance partners’ values. (See Table 3.) We compared the intra-organizational success maps between alliance partners to examine the similarities and differences between their values. We found that organizations face several challenges by analyzing both inter-organizational and intra-organizational instrumental and terminal values.

Table 3. Comparison of Features Across the Six Potential Alliance Partners

Organizations	Processes and capabilities: What capabilities influence our achievements (instrumental values)?	Stakeholder requirements: What are our main strategic objectives (terminal values)?	Alliance contributions: What do we want and need from the alliance?
Original Equipment Manufacturer			
PC	• Knowledge of intermediate and depot level maintenance • Cooperative activities with integrators • Customer-centric downstream focus and lock-in by sub-supplier contracts • Innovative and qualitative product development • Provides services without penalty risks/rewards due to goodwill (experience-based trust) • New complementary service strategy requires process renewal and new capabilities (personnel, machinery, infrastructure) • Lack of activity-based costing • “Turnover” culture; service awareness but • 9-5 mentality in providing it • Limited service performance measurements • Good relationship with DM (system integrator)	• Offer service level agreements to customers with maintenance knowledge but insufficient capacity • Interested in working with system integrator in the development of innovative maintenance methods to improve service quality	• Service provision that is complementary to the differentiation strategy (new innovative products or increased quality of renowned products) • Maximal system up-time by performing effective preventive maintenance. In addition, when total care is provided (control of operational planning), maintenance costs might be decreased.
TH	• Design and production of innovative electronics • Strive for quicker service response times via problem analysis • New service strategy requires process renewal and resources to be sourced (additional service personnel, machinery, infrastructure, spare stocks) • Minor investments in service development since its significance is uncertain • Lead service contracts with sub-suppliers occur occasionally • Sub-supplier selection and product design are insufficiently based on service requirements and costs • Good relationship with RN (asset owner)	• Maintain primary knowledge focus in the field of production • Ambition to provide life service support and to deliver to customers requiring maximal system up-time (primarily not for cost reduction) • Close cooperation with customers to explore and understand operational interests and requirements • Despite alliance, jobs and job positions need to be preserved	• Desire intermediate maintenance support to increase product service quality • Offer to share depot level maintenance knowledge

System Integrator			
AL	• Tailor-made product integration and interface development • Customer-centric downstream focus • Long-term, efficient intermediate or depot level maintenance; training offering on behalf of suppliers or on customer request • Good relationship with PC (original equipment manufacturer) • Limited global support capabilities (distribution network) • Installation of sensors at systems to attain operational performance data for condition-based maintenance. • Maintenance and spare part planning	• Expand global (scaled) service offerings.	• Interested in working with horizontal partner with complementary knowledge to increase service package offering (market expansion) • Interested in working with asset owner on new systems to obtain data and develop and test efficient maintenance plan (instead of purchasing performance knowledge from OEM)
DM	• Technological and product development and integration • Customer-centric downstream focus • Provision of performance-based maintenance advice and contracts • Enough experienced personnel, material, and infrastructure	• Increase effectiveness of preventive and condition-based maintenance • Increase efficiency of logistics maintenance support • Exploit previous customer experience in new product or service offerings to improve company image	• Desire to extend product quality through life-time to increase customer satisfaction and thereby increase market share
Asset Owner			
RN	• 24/7 service mentality • Business transparency • Flexible operations and strategic volatility due to political dynamics • Infrastructure redundancy • Shortage of technical and purchasing specialists • Limited process registration • Large amount of business interactions on the basis of break-fix maintenance • Desire to increase knowledge of condition-based maintenance	• Increase intermediate level maintenance knowledge (system analysis, project management) • Quick results to motivate stakeholders • Increase stock response times and decrease costs • Maintain redundancy of personnel for JIT intermediate level maintenance • Share infrastructure, machinery, and performance data to reduce costs • Maintain control over operational performance • Not interested in total care service contracts • Scheduling to solve expensive market mechanisms • Interested in working with OEM to share infrastructure and maintenance knowledge	• Desire to increase maintenance effectiveness for maximal system up-time (profits) • Increase efficient condition-based maintenance • Decrease and share system failure risks • Achieve long-term results • Offer to provide infrastructure
SL	• Local maintenance personnel (cultural differences) • Personnel incapable of conducting efficient intermediate level maintenance • Large amount of business interactions on the basis of break-fix maintenance • Limited amount of spare parts locally stored • Central storage of spare parts and global distribution network	• Increase intermediate level maintenance knowledge (system analysis, project management) • Increase efficient planned maintenance • Increase JIT spare parts • Maintain control over operational performance • Not interested in total- care service contracts • Estimate maintenance quality or cost improvement to motivate CEO • Interested in working with OEM to obtain knowledge	• Desire efficient planned maintenance to maximize up-time for increased profits and decreased costs • Offer system performance data

Note: The names of the six organizations have been disguised for confidentiality.

Considering the inter-organizational comparison of the value drivers behind the shared alliance objectives, two instrumental and two terminal values seemed to be opposite to each other. With respect to the terminal values, we found a case where the public asset owner

considered offering services to third parties, that is, customers of the OEM. This would be organized under the umbrella of a service alliance between the OEM and the public asset owner. In terms of value, however, the OEM desired maximum profits. This was in conflict with the public asset owner who is required by regulation to offer third-party services that conform to market prices. Here the instrumental values leading to the terminal values were in conflict: the OEM strives for technological innovation and secrecy, whereas the public asset owner tries to share information so that it is easier for others to see what activities are being performed.

Again, the qualification of value differences is important to understand whether there is a tendency for cohesion enhancement or disruption in achieving alliance success. Since these differences represent existing rather than new values, the initiative might tend to overlook the underlying drivers. Nevertheless, proper attention must be given to sort them out; otherwise they will become bottlenecks in a successful partnership. Furthermore, the mixture of similar and conflicting values implies that external management of processes and capabilities will become difficult when the alliance commences. A fine line separates external activities that serve similar values and those incurring the risk of asymmetrically benefitting one of the partners. As such, partners need to demarcate their area of cooperation, assign responsibilities, draw contracts or at least settle on gentlemen agreements, and operationalize risk management and the allocation of benefits and costs (Doz, 1996; Yadav, Miller, & Schmidt, 2003).

Concerning the intra-organizational comparison of values, organizations need to understand the relationship between instrumental and terminal values. Rather than thinking of alliance formation as a one-time effort, our findings suggest that it should be a continuing process to monitor partners' alignment of intra-organizational values. Terminal values keep evolving as organizations push their strategic and innovation agendas. We found organizations struggling with the organizational implications of new strategic concepts (e.g., 'servitization' (Neely, 2008)) and new strategic realities (e.g., budget reductions in the Navy). Conflicting intra-organizational values are an early sign of business discontinuity and upcoming change, having an effect on the alliance coherence. Obtaining insight into conflicting intra-organizational values is valuable in understanding where to focus managerial attention when negotiating and monitoring alliance performance.

DISCUSSION AND IMPLICATIONS FOR RESEARCH AND PRACTICE

As organizations consider or embark on the path of alliance relationships, opportunity and risk go hand in hand. With organizational level performance in mind, our study explores how six public and private organizations in the maritime supply chain go about forming alliances. Their interest stems from market conditions (e.g., shrinking defense budgets), new concepts (e.g., servitization), and sourcing innovations (e.g., performance-based contracting). Our findings help to explain the role values play in alliances.

Alliances and Value: Towards Inter-organizational Performance Management

Current research increasingly acknowledges the external dimension of organizational performance. This includes both external societal impacts of organizational activities (Gopalakrishnan et al., 2012; Wolf, 2011), performance across supply chains (Craighead, Hult, & Ketchen, 2009; Trkman et al., 2010), and performance of the 'extended enterprise' (Bititci et al., 2005; Bobbink & Hartmann, 2014). Our findings indicate that alliance managers need to take multiple stakeholder interests into account and encompass an integrated view, rather than emphasizing outcome measures such as costs and productivity (Bititci et al., 2012). Moreover, with customer orientation taking center stage for all organizations, performance management intersects with inter-organizational value relationships (Chandler & Vargo, 2011; Peronard, 2014). Our findings on alliance formation underscore this trend, yet they reveal the complex environment in which managers try to serve their organizations' objectives while opening up the organization to external cooperation.

Our findings cut across three levels: intra-organizational, inter-organizational, and alliance. Organizations strategize on alliance formation and articulate their joint intentions. Our findings suggest that future research should combine intra-organizational analysis of performance management and success drivers with inter-organizational analysis of value drivers. Compared with non-cooperative transactions where performance boils down to achievement against service levels, alliances call for more external transparency. Also, alliance success is likely to depend on weighing contradictory values against those that are consistent across organizations. Dealing with only partial consistency of values across organizations is an increasingly acknowledged feature of organizational coordination (Bacharach et al., 1996; Donnellon, Gray, & Bougon, 1986) and inter-organizational cooperation (Uiterwijk, Soeters, & van Fenema, 2013).

Governance and Strategic Relationship Management

Traditional research on governance has presented clear-cut options for control and coordination: markets (buy), hierarchies (make), and clans (ally) (Ouchi, 1980; Williamson & Ouchi, 1981). An alliance could fit the clan option, yet theory's emphasis on relationships and trust obscures the complexities from a value perspective. Moreover, categorization of ideal forms has given way to theories that show these complexities and the blurring of inter-organizational boundaries (Bradach & Eccles, 1989; Caldwell & Howard, 2010; Ghoshal & Moran, 1996). Reflecting on our findings, an alliance has market aspects in that organizations look for a good deal that serves their terminal values. They are also aware of power differences and drivers of each organization's business model. An alliance has hierarchical properties as organizations are expected to share ideas and operational information and to co-innovate. These complexities imply that organizations move slowly during alliance formation. Middle managers test the ground for potential tensions, search for areas of commonality, and solidify internal approval from top management and employees. Organizations seem to clash, at least somewhat, on the type of relationship they seek. Most upstream organizations, such as original equipment manufacturers and system integrators, tend to look for input from downstream organizations to improve their products and services. In addition, some strive for long-term partnerships in a cooperative fashion. Downstream organizations, such as asset owners, act according to a customer-centric logic. They expect upstream organizations to increase transparency and develop a cooperative attitude. Downstream organizations, focused on their core business, may neglect the development of their own marketing and operational strategies to exchange resources with upstream partners.

Our findings suggest that the alliance formation process can be facilitated by universities and consultancy firms. Future research might investigate how relationships evolve in an industrial sector (Berends, van Burg, & van Raaij, 2011), how stakeholders are engaged (Ho, 2007), and to what extent organizations 'open up' to counterparts. Moreover, our vertical supply chain study can be extended towards horizontal alliances (van Fenema, Keers, & Zijm, 2014). An example of a horizontal alliance would be 'co-opetitive' relationships aimed at joint procurement or co-development of products and services (Gnyawali & Park, 2011; van Fenema & Loebbecke, 2014).

Operationalizing Value in Alliances

Our findings show that new alliances must address two main issues in operationalizing value. First, the participating organizations may shift from traditional procurement towards performance-based service contracts (Kleemann & Essig, 2013). While the procurement mode offers well-known routines for specifying work and tendering, performance-based contracts present new alliance partners with challenges. For suppliers, performance-based contracting could present a major risk or it could offer opportunities for controlling customer operations and making a good profit. For customers, the comfort of being taken care of may be threatened by a concern for paying too much and by hesitation in trusting the supplier. Alliances wanting to use performance-based contracts could draw on the IT and manufacturing literatures where outsourcing is commonplace (Dedrick & Kraemer, 2010; Oshri et al., 2007). Service-based performance management would build on the detailed

measurement of operations and on linking data to business, technical, and service metrics (Keller & Ludwig, 2003).

Second, organizations transitioning towards a cooperative mode have to develop criteria for joint operations and measures for organizational and alliance level performance. Alliance partners must specify their ‘common playground’, avoiding areas with conflicting instrumental and terminal values. Demarcating the common playground from no-go areas will ease concerns of an alliance moving in a direction that does not serve partners’ interests. Alliance activities can be limited to particular products and services; measurement then depends on internal data being cleansed for external use. Organizations move step by step to ensure that their interests are being met as long-term investments pay off. Future research might explore how measurement relates to the direction an alliance takes, which information processing challenges are to be taken care of, and who should be involved in operationalization.

Methods for Alliance Performance Research: Process and the Role of Concepts

Our role as researchers transformed during the course of the study. We started off with a round of analysis-oriented interviews befitting a traditional case study. Gradually, our role is shifting towards a co-facilitator of the alliance formation process. This role shift has implications on the conceptual side as well. Analysis-oriented research aims at developing a model to describe and explain reality and to extend theory (Romme & Endenburg, 2006). The co-facilitator role suggests an action research approach aimed at designing and influencing organizations’ reality (Bititci et al., 2005). As such, we will test the relevance of our success map concept for alliance formation by conducting workshops with alliance partners. The concept then becomes a vehicle for presenting new concepts to organizations to influence their thinking, in the tradition of management concepts such as the Balanced Scorecard (Kaplan & Norton, 1996). Obviously, both approaches can work in a mutually reinforcing manner, with analysis feeding design, design impacting organizations, and analysis studying the impact (Romme & Endenburg, 2006). Future research may explore how researchers can take on different roles in studying and influencing values measurement.

Implications for Practice

Our findings encourage practitioners to reflect on their organization’s success map, eliciting the inter-organizational influences on intra-organizational instrumental and terminal values. When relating to alliance partners, the collective understanding of consistent and contradictory values could demarcate why and how cooperation could benefit all organizations. Once the alliance kicks off, ongoing monitoring of value performance and impact is crucial for sustaining the alliance. Alliance managers face, in addition to their external work, a complex internal role of rallying business units, top management, and employees to support the alliance. Their communication and cognitive skills have to be outstanding in order to support boundary-crossing processes (O’Mahony & Bechky, 2008). Moreover, an entrepreneurial attitude is paramount when chartering new ground.

CONCLUSION

Our study found that values represent a complex architecture for organizations in alliances. Different levels of organizations are involved in the process of constructing this architecture. Moreover, new stakeholders may have to be taken into account such as international headquarters and the national government. Alliance success thus requires careful navigation and major efforts to sufficiently – not perfectly – align and protect stakeholder interests.

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APPENDIX

Stakeholder analysis begins with stakeholder identification. Primary and secondary stakeholders are distinguished. Primary stakeholders have a formal or contractual relationship with the organization and are vital for its survival, whereas secondary stakeholders merely affect, or are affected by, the organization. Primary stakeholders include owners, employees, customers, government, local community, and business partners. Usually, relationships between alliance stakeholders are interactive – for example, the government regulates the market, but organizations also influence political decision-making. According to Ho (2007), it is helpful to identify stakeholders and their relation to performance by categorizing them according to their interest and impact (power). Stakeholders can have positive or negative interests in the organization's strategy, while the depth of the relationship influences stakeholder impact. Through understanding interest and impact, managers can develop competitive or cooperative strategies for managing stakeholders.

Jensen (2001) proposes long-term value maximization of the organization as the key objective and a criterion for selecting pivotal strategic values. He calls this approach 'enlightened value maximization', as it is a combination of value maximization and stakeholder theory. He suggests defining a true single-dimensional score for measuring performance for the organization or division which is consistent with the overall strategy, and then to measure the most important stakeholders' values (as performance drivers) to understand how to maximize the score. In contrast, Earl and Clift (1999) propose to weigh value trade-offs for reflecting different stakeholders' priorities. Their basic premise is that important attributes to maximize an alliance's objectives are given high weights, while less important attributes are given low weights.



EXPLORING AN INNOVATION PROJECT AS A SOURCE OF CHANGE IN ORGANIZATION DESIGN

JACOB BRIX • LOIS S. PETERS

Abstract: This study builds new empirically based theory on how the processing of an innovation project with a high degree of uncertainty induces change in key components in organization design. By using an embedded case study as our research strategy and organization design theory as our analytical lens, we construct ten propositions that determine how the organization design of our case organization was influenced because of their innovation project. These changes represent: a) improved competencies for exploration activities, b) improved competencies for exploiting new knowledge, and c) increased readiness for change.

Keywords: Organization design, innovation project, case study, public-private collaboration

Many public and private organizations today are experiencing stress and uncertainty because of environmental changes and turbulence (Huber, 2011). Innovation is often advocated as a means of responding to external challenges or to put pressure on competitors (Shelton & Percival, 2013; Tushman et al., 2010), and there is an extensive literature on how managers can organize for innovation (e.g., Anthony et al., 2008). In the innovation study presented here, however, the usual scholarly focus is inverted. That is, instead of exploring innovation outcomes and how they are produced, we focus on how an innovation project affects the design of the organization itself.

Our study was inspired by the limited number of previous studies of the effects of innovation on the producing organizations themselves (e.g., Arthur, DeFilippi, & Jones, 2001; Battisti & Iona, 2009; Brady & Davies, 2004; Brix & Peters, 2015; Shenar & Dvir, 1996; Wheelwright & Clark, 1992). Because these earlier studies determined that innovation projects can act as a catalyst to organizational change, the purpose of our study is to deepen current understanding by exploring how an innovation project influences organization design elements. We obtained access to uniquely relevant data regarding this research question by getting permission to observe a public-private collaboration on a high-uncertainty innovation project between the Center for Ideas and Innovation at the Danish Technological Institute and the Division for Education Management in the municipality of Ikast-Brande, situated in the central region of Denmark. The purpose of the project was to increase student learning outcomes by at least 20 percent through new means of childcare both before and after school.

The article is organized as follows. First, we describe the innovation project and the study's research method. Then we present the results of the study and discuss their implications for the theory and practice of organization design. Lastly, we note the study's limitations and present our conclusions.

THE INNOVATION PROJECT

Using OECD's (2005) definition of innovation types, the Ikast-Brande project concerned new product/service development and/or the significant improvement of existing products/services offered to the municipality's inhabitants. Since earlier innovation initiatives in the municipality had focused on 1-2 percent improvement per year, this particular innovation project represented a major initiative containing a high amount of uncertainty for the Division for Education Management (DEM). Hence, the DEM contracted with the Danish Technological Institute (DTI) for two senior innovation consultants to advise and guide the municipality's team in a systematic innovation process led by the DTI (see further description below). The municipal team comprised a total of five persons from the DEM who were all affiliated with different institutions and/or departments in the Division. The team consisted of two managers from different caretaking institutions, one senior consultant from the Family Department, a senior consultant from the Administration, and a project manager from the Management Department. The unit of analysis was the actions and behaviors of the employees and the managers in each of these five institutions/departments participating in the project, which according to Yin (2009) represents a single case study with an embedded case design. Here an in-depth understanding of the actions and the impact of those actions within a singular entity is constructed, and the empirical evidence is used as a phenomenological foundation for the discovery of new insights to our research question (Eisenhardt, 1989, 1991; Yin, 2009).

RESEARCH METHOD

The Principal Investigator (first author) was a participant observer in the process from the project's inception in August 2012 until the presentation of 14 project concepts to the City Council of Ikast-Brande in January 2013. One advantage of not having both investigators from the research team immersed in case details is that a more critical and objective focus can be given to the analysis of the empirical evidence (Eisenhardt, 1989). Throughout the process, the DTI's consultants applied Brix and Jakobsen's (2013) Creative Idea Solution framework to make a systematic, disciplined approach to the innovation project. Here the team was guided from focusing on the purpose of their innovation project to creating an idea and concept portfolio of recognized and developed opportunities. The idea and concept portfolio then was used to create different outlines of new business models (Brix & Jakobsen, 2015). In total, the team presented 14 different business model outlines to Ikast-Brande's City Council in January 2013. Figure 1 shows a timeline of the key activities of the entire project.

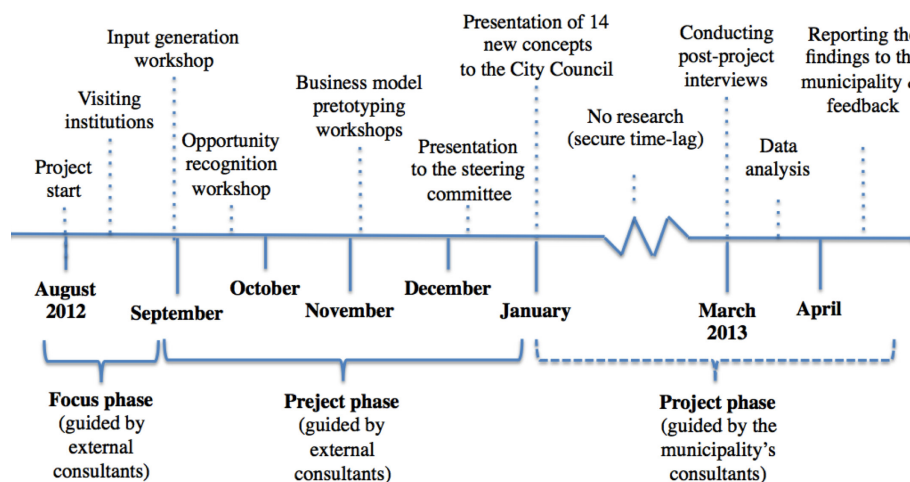


Fig. 1. Innovation Project Timeline

Study Data

Insights arose during field observations along with the collection of rich, diverse, and large amounts of data. In total, the Principal Investigator (PI) took part in (a) 72 hours of meetings concerning planning, task assignments, the internal dissemination of new insights, creation and development of ideas, etc.; (b) 20 hours of fieldtrips to different institutions and locations including various places within and outside the municipality; and (c) 18 hours of workshops to generate inputs for ideas and new business model outlines. The empirical evidence from the data collection process included pictures, video and audio clips, field observations, and notes from unstructured interviews. These data give insight about changes of individual habits and behaviors for participating team members and how they started to change the way they managed their employees and acted when dealing with managers above them. The DEM management allowed the PI to conduct post-project interviews with each of the five participating team members about the potential impact of the projects on their institution/department. To enable this, the research team used the data from the participatory process to develop an interview protocol that consisted of semi-structured questions embedded in a structured interview guide. The focus of the post-project interviews was directed at the behaviors of the staff in the respective departments/institutions of the team members, and these behaviors were all centered on key organization design elements (explained in more detail in the next section). The post-project interviews were conducted in March 2013 after two and a half months of time lag according to Guest's (2011) recommendations to identify what had become a new or changed routine in the informant's department. Here 15 hours of post-project interviews with the five team members from the DEM were conducted by the PI, and an estimated 90 hours of interview-related activities concerning transcription, feedback from informants, and dissemination of insights was conducted by the research team. It is data from the five post-project interviews that serve as the key source of empirical evidence used to answer our research question. Moreover, to underline the importance of the value of the participatory research strategy, the PI used the insight from the project participation to challenge the informants during the post-project interviews if/when a mismatch was identified between the informants' responses and stories regarding the espoused actions and the actual theories-in-use applied in their institution/department (Argyris & Schön, 1999; Whittington, 2006).

It is important to note that the findings generated from each interview could not have been obtained if the PI did not participate actively in the entire project, since the respondents sometimes did not realize that they had changed their behavior during the innovation project. Hence the results of the interviews and the following analysis could not have been realized with the same degree of robustness (Eisenhardt, 1991) if it was not for the longitudinal and participative research process that helped the research team challenge the assumptions of the informants (Eisenhardt, 1989). The main value of our methodological approach is that we utilize rich, longitudinal data deriving from participant observations to build empirically based theory (Colquitt & Zapata-Phelan, 2007; Crossan & Apaydin, 2010; Langley, 1999; Whittington, 2006).

Variables and Measures

We chose an organization design perspective to inspire the questions in the structured interview guide to ensure coverage of key organizational domains and bound our inquiries aimed at identifying behavioral changes on an institutional/departmental level of analysis. We followed the Burton, Obel and DeSanctis (2011) multi-contingency approach for several reasons. First, the concepts and the constructs utilized in their multi-contingency approach to organization design are well established in the literature (Burton & Obel, 2004; Håkansson et al., 2008). Second, their framework views organizations as dynamic entities, which allowed us to assume that changes in organization design could occur because of innovation projects. Third, their approach is applicable to all types of organizations, both public and private, which fits our case organization. Fourth, the framework allows for the analysis of multiple layers within organizations, which also represents a theoretical fit to our embedded case design, where we move from the individual level of observation toward an institutional/departmental

level of analysis. Based on Burton et al. (2011), Table 1 is divided into strategic, tactical, and operational levels of analysis, containing 14 components each of which is measured by two elements. This results in a total of 28 organization design elements defined individually in the right-hand column of Table 1.

Table 1. Organization Design Elements

Strategic Level	Organization Design Element	Description
Goals	Efficiency	Focus on inputs, resources, and costs
	Effectiveness	Focus on outputs, products/services, and revenues
Operationalization of Goals	Exploration	Degree of search, variation, risk-taking, and innovation
	Exploitation	Degree of refinement, efficiency, selection, and implementation
Environment	Complexity	Number of factors in the environment and their interdependency
	Unpredictability	Degree of understanding of the environment

Tactical Level	Organization Design Element	Description
Configuration	Functional	Degree to which work is divided by specialized activities
	User oriented	Degree to which work is divided by product/customer names
Organizational Complexity	Vertical differentiation	Height of the hierarchy
	Horizontal differentiation	Degree of task specialization across the hierarchy
Geographic Distribution	Optimal sourcing	The approach to manage across distance in terms of customer contact, cost efficiency, human resources skills need and other objectives
	Local responsiveness	Distributing work in many local settings versus consolidating work in one or few centralized locations
Knowledge Exchange	ICT-infused	The degree to which the organization is reliable of ICT equipment and software to manage knowledge
	Virtualization	The degree of boundary-spanning and “reach” used as basis of knowledge exchange
Task Design	Repetitiveness	The degree of standardization of execution of tasks
	Divisibility	The degree to which a subtask need coordination
People	Number of people	The number of people in the unit of analysis
	Professionalization	The collective skill level and the capabilities to solve work tasks
Leadership Style	Uncertainty avoidance	The degree to which top-management shuns to take action or make choices that involve major risk
	Preference for delegation	The degree to which top management encourages lower-level managers or other employees to make decisions
Organizational Climate	Tension	The degree to which there is a sense of stress or psychological ‘edge’ in the work atmosphere
	Readiness for change	The degree to which people in the organization are likely to shift direction or adjust work habits to meet new, unanticipated challenges

Operational Level	Organization Design Element	Description
Control and Coordination	Formalization	The degree to which the organization specifies rules and/or codes of conduct to govern how work is done
	Decentralization	The degree to which responsibility for coordination and control lies in the sub-units and at the individual managers
Information Systems	Amount of information	The overall volume of data and information that must be collected, processed and stored on a regular basis
	Tacitness of information	The degree to which it is difficult to codify and transfer information in an understandable manner
Incentives	Target of incentives	The degree to which individual or group/team performance is rewarded
	Basis of evaluation	The degree to which it is behavior and/or results that are rewarded

Source: Adapted from Burton, Obel, and DeSanctis (2011)

Structured Interview Guide

Having defined the 28 organization design elements, it is possible to have a systems-level understanding of the case organization and its innovation project. Data matrixes based on Table 1 were utilized to create the structured interview guide that could assist us in determining the way the employees in a department/institution focused their behaviors on a post-project basis. The structured interview guide contained questions related to strategic, tactical, and operational level behaviors. Questioning began by asking individuals to rate the ‘associated behaviors with the organization design element’ in their department (and not their individual/personal habits) on a pre-project basis and then afterwards on a post-project basis. Ratings were made on a scale ranging from 1-5 including half-measures. The pre- and post-project behaviors associated with the 28 organization design elements determine how a high-uncertainty innovation project influences each individual element by (a) changing it, (b) affirming the correctness of the behavior(s) associated with that element, or (c) the innovation project does not influence the design element. Additional details about the structured interview guide are presented in the Appendix.

Building ‘Simple Theory’

Following Whetten’s (1989) recommendations for building ‘simple theory’, we used each of the 28 organization design elements listed in Table 1 as a singular level of analysis representing ‘the what’. We used the influence the innovation project induced on each element as ‘the how’, and we used statements from the interviews following the analytical process described above to demonstrate the reason for change – ‘the why’. Answering these three interrelated questions – *what, how and why* – helps us build empirically based theory.

A limitation important to stress is that the purpose of the structured interview is to identify areas of change and influence, not to document the degree of change. The degree of change will be interesting to study in future research, but it is not the focus of the present study. Therefore, the elements presented in Table 1 are treated in a qualitative manner to get at the nuances of change related to a high-uncertainty innovation project.

RESULTS AND PROPOSITIONS

The results are divided into four sections in which the innovation project is a source of change in organization design: (1) strategic level, (2) tactical level, (3) operational level, and (4) effects across all levels. After presenting the results at each level of analysis, we build ‘simple theory’ (Whetten, 1989) at that level in the form of propositions.

Influence on Organization Design at the Strategic Level

The results show that most of the organization design elements in the participating institutions/departments were viewed as appropriate in terms of their prioritization of efficiency and effectiveness (see Table 2). This confirmation of being ‘on the right track’ was valuable to the managers leading these institutions/departments. For example, one of the managers stated: *“I found that our institution was on the right track based on the project because the preliminary results and the insights we got from the ‘challenge of assumptions’ really made it clear to me that the purpose of a future institution is not only caretaking but also learning.”* Moreover, the innovation project gave the Division Management new tools and systematic methods to balance future work with innovation (effectiveness) in relation to improving the utilization of internal resources (efficiency). There was also confirmation that the Family Department could use the same tools and methods to make new initiatives more specific and thus more implementable. To back up this claim, a manager in the Administration said: *“We have started to focus much more on the outcomes of the resources we use on development projects, and the systematic process we have been through in our innovation process really made it clear to us that following such a systematic [process] to make progress was better than not having a clear guideline for the next step in different projects. We had tried controlled processes before, but not as systematic as this one, and our experiences have acknowledged the need for strict management of such projects.”*

Table 2. Changes in Behavior at the Strategic Level

Strategic Level	Organization Design Element	Institution A	Institution B	Admin.	Family Department	Division Management
Goal(s)	Efficiency	√	√	√		+
	Effectiveness	√	√	√	+	
Operationalization of Goals	Exploration	+	+	√	+	+
	Exploitation	+	√	√	+	+
Environment	Complexity	-		-	-	√
	Unpredictability					

Legend: + = new behavior or more of the same behavior compared to pre-project;
 - = less focus on this behavior than pre-project;
 √ = confirmed that behavior is correct via the project;
 (-blank-) = non-influenced

In relation to these strategic priorities, the behaviors in the institutions/departments on exploration and exploitation were also influenced by the innovation project. Here, the concrete methods used to search for new knowledge and to challenge assumptions influenced the behaviors in the participating institution/departments as well, since the institutions/departments had started to search and explore for new knowledge in other places than the pre-project context. In addition, the results of exploration were utilized more directly in daily operations (e.g., to improve a particular internal process or start up new initiatives). A concrete example to demonstrate this claim is presented by an institution manager: *“After having completed the innovation project we have started to be much more focused on exploring to get insight and we have learned new methods, which can help us in reaching our goals. Also, it has been excellent to experience that all the things we worked with six months ago are now more or less directly implementable to meet the pressure from our external environment (the new school reform), and we feel that we are ready to change, instead of before, where we would have been much more critical and skeptical of the changes forced from outside.”*

Finally, the results show that the participating institutions/departments were less challenged by changes or new demands in the external environment, since the learning that occurred during the completion of the innovation project helped the institutions/departments react promptly to changes. This is argued via the following statement: *“Based on the experience of participating in the project, my staff and I feel much more ready to face the future and whatever changes that may emerge from external forces. By having worked with the whole perspective of rethinking our tasks and the outcomes of our tasks in solving our goals, we are now much more used to having the thoughts of a different looking future, and the thoughts are actually not as scary as they would have been one year ago pre-project.”* The DEM was months in front of other municipalities in terms of its ability to change because of the innovation project.

Building simple theory of strategic-level design. The analysis of the pre- and post-project results on the strategic level of analysis reveal that an innovation project with high degrees of uncertainty can act as a positive source of change to organization design elements. These influences are: (a) verification of organizational goals, (b) improvement of exploration and exploitation activities, and (c) reduction of external uncertainty. Based on this identification, three propositions are developed to guide future research.

The first proposition is developed on the premise that the in-depth questioning and challenge of assumptions by organization members can assist in removing illusions and/or verifying current actions and directions. Moreover, there is evidence in the interview data that suggests the tools used in Brix and Jakobsen’s (2013, forthcoming) systematic innovation approach can improve the behaviors needed to reach the required degree of efficiency and effectiveness in the participating organization.

Proposition 1: The behaviors associated with efficiency and effectiveness can be improved by systematically processing an innovation project characterized by a high degree of uncertainty.

The second proposition is based on the premise that the respondents, because of the innovation project, learned new methods and tools they could utilize to construct new knowledge, and to develop and exploit that knowledge. Moreover, the areas of inquiry in the search for new knowledge went beyond the pre-project boundaries of the institution/departments and allowed for more cooperation and collaboration with new partners.

Proposition 2: Behaviors associated with exploration and exploitation are improved by systematically processing an innovation project characterized by a high degree of uncertainty.

The third proposition is based on the premise that the proactive search for a different future changed the mind-set of the employees and the management in the institution/departments. The employees had started to realize that the status quo could not be maintained, and because of the innovation project they found it more useful to create their own future instead of responding reactively to external contingencies such as new regulations and legislation.

Proposition 3: Complexity in the external environment is reduced by systematically processing an innovation project characterized by a high degree of uncertainty.

Influence on Organization Design at the Tactical Level

The organization design elements in the institutions/departments that were especially affected at the tactical level of analysis were knowledge exchange, leadership style, and organizational climate (see Table 3). In relation to knowledge exchange, particularly ‘virtualization’, the participating institutions/departments have started to work more professionally with knowledge creation as well as improving the process of decision making. During the innovation project, they experienced the value of collaborating with people, both internally and externally to the DEM, who had strong expertise. One manager in Institution A said: *“Before, I did try to challenge the way in which we worked in our institutions in the municipality, but it never really made any significant difference – perhaps because we all are alike and that we are from the same division and therefore influenced by similar ways of thinking. So our participation in the innovation project with external consultants as project leaders was a real eye-opener, since they were not colored by our ways of thinking.”* The same argument was made by the project member from the Family Department: *“The project created a healthy disturbance in our department, because we had never been used to working so long time in a pre-project phase – that is, we are used to making quick decisions here in the municipality, but the method and the collaboration with the external consultants gave us some thoroughly prepared concepts, and it is quite certain that we will collaborate more with external consultants in the future, simply because of this healthy provocative disturbance.”*

Table 3. Changes in Behavior at the Tactical Level

Tactical Level	Organization Design Element	Institution A	Institution B	Admin.	Family Department	Division Management
Configuration	Functional			√		+
	User oriented					
Organizational Complexity	Vertical differentiation					
	Horizontal differentiation					
Geographic Distribution	Optimal sourcing					
	Local responsiveness					
Knowledge Exchange	ICT-infused	+	√			
	Virtualization	+	√	√	+	√
Task Design	Standardized					
	Divisibility					
People	Number of people					
	Professionalization		√	√		
Leadership Style	Risk avoidance	√	-		√	
	Delegation of responsibility	+				
Organizational Climate	Tension					
	Readiness for change	+	+	+	√	√

Legend: + = new behavior or more of the same behavior compared to pre-project;
 - = less focus on this behavior than pre-project;
 √ = confirmed that behavior is correct via the project;
 (-blank-) = non-influenced

With respect to leadership style and organizational climate, the participating institutions/departments experienced an increase in the search for new ways of working by the staff and the intensified mandate from management to initiate exploration of new activities. A manager in Institution A claimed: *“The project has affected the institution in such a way that the readiness to change has increased since we have learned to see the potential in exploring new ways of working, instead of being reactive to changes as they occur. Right now the culture in our institution has changed to be more conducive to searching for new things and also to trying to integrate the new things (...) we are not self-satisfied as much as before – normally we did not have to change anything because everything was nice, the parents were happy, and the children kept coming. But now, we are ready to offer an even better service to the children and the parents, and the self-satisfaction is lower, since the inspiration that occurs is in the context of searching for new insights.”* In line with changes in the organizational climate, the project manager from the Division Management spoke about leadership: *“There is a clear result in the ‘readiness to change’ now, after the project, compared to before we initiated the innovation project. Before, the leaders were more reactive, and now they are more ready to change. Still, the ones who are most ready to change are the managers who were on the innovation team, then the managers who participated in the workshops, etc. But on a general scale, most of the managers are more ready to change. And this immediate result is excellent, because in the future there will be additional changes, and the requirement for change-preparedness will be even higher.”* Hence, the increase in readiness to change has boosted the desire for change from previously being reactive and resistant towards the desire to lead change proactively – to co-create rather than adjust.

Building simple theory on the tactical level. The analysis of the pre- and post-project results on the tactical level of analysis reveals that an innovation project with a high degree of uncertainty can act as a source of change to organization design elements. At the tactical level, these influences are the (a) co-creation and use of knowledge with/from external sources and partners, and (b) increase of readiness for change. These influences lead to three theoretical propositions.

The first proposition is based on the premise that concrete experiences, as well as the tools and methods utilized in the innovation project, assisted organization members in refining their behaviors to create valuable outcomes in their institutions/departments.

Proposition 4: The behaviors used to search for and construct new knowledge with external partners are improved by systematically processing an innovation project characterized by a high degree of uncertainty.

The next two propositions are based on respondents' claims that 'readiness for change' in their institutions had transformed to a more open and proactive approach compared to pre-project attitudes and behaviors. Moreover, the new insights in the departments/institutions demonstrate that pro-activeness assists in molding the future.

Proposition 5: Readiness to change via an open attitude towards adaptation is increased by systematically processing an innovation project characterized by a high degree of uncertainty.

Proposition 6: Readiness to change via a proactive orientation towards creating organizational changes is increased by systematically processing an innovation project characterized by a high degree of uncertainty.

Influence on Organization Design at the Operational Level

The changes that occurred to behaviors on the operational level of the participating institutions/departments were centered on two organization design elements: information systems (particularly 'tacitness of information') and incentives (particularly 'basis of evaluation'). As the professionalization of knowledge generation and management improved, the 'tacitness of information' increased in the institutions/departments. For example, the 14 new business model concepts made it more difficult to explain the background and the expected outcomes of the project to teams and to the project's stakeholders. Changes in behavior regarding expert knowledge search and integration challenged the previous way of working, since the new knowledge had to be translated into terminology relevant to different stakeholders. A manager from Institution A said: *"The complexity of our communication has increased since we are starting to work with more goal-oriented activities than before, and we have prioritized a more professional approach to doing our tasks as compared to before. And both my colleagues and I will do the best to deliver excellent value to the children – and to the parents, since they are the actual customers."* A manager in Institution B made a similar argument: *"The project has made some of the information we need to communicate more complex because insights from other knowledge areas have been integrated into our daily lives here at the institution. The 14 ideas we proposed in the innovation team had to be made more understandable for our staff, and also for other stakeholders, and this has been a complex situation. We have to translate some of the things so they can be understood by the staff."* The project manager from the Division Management stated that: *"We have via our experiences in the project found that it is important to communicate at all levels about new initiatives, and not only to the City Council or to the inhabitants of the municipality. If we want to make sure that the things we develop do not get misinterpreted by people afraid of change, on all levels, then we need to accept that it is quite complex to share this kind of information to different types of people who have different backgrounds and who are or could be affected differently by the implementation of such initiatives."*

The managers in the institutions as well as in the Division Management changed their approach regarding the basis of evaluation in the context of incentives. The project manager acknowledged that the way in which the Division Management gave incentives to its employees needed to fit promotion of the desired behavior. This argument was made clear because the managers stated that they had started to positively reinforce their staff based on their behavior rather than only on the results of their behavior. For example, the project manager from the Division Management said: *"We will begin to focus more on the acknowledgement of good behavior and not only good results, simply because if we desire ideas beyond the usual, then we need to foster experimental behavior among our employees."*

Building simple theory on the operational level. As with the strategic and tactical levels of analysis, the analysis of the pre- and post-project results on the operational level of analysis reveal that an innovation project with a high degree of uncertainty can influence behaviors associated with organization design. Here the influences are (a) tacitness of information and (b) basis of evaluation. These influences lead to two propositions.

The first proposition is based on the finding that new knowledge constructed during the idea and concepts development phase was difficult to communicate to stakeholders. This knowledge was both complex and unfamiliar to the participating institutions/departments.

Proposition 7: The tacitness of information that needs to be communicated to project stakeholders (and understood by them) increases by systematically processing an innovation project characterized by a high degree of uncertainty.

The second proposition is based on the finding that managers on the innovation team changed their behavior because of incentives. Previous projects that lacked significant incentives resulted in ‘short-termism’ and small improvements. In this project, managers experienced the ‘incentive’ of the employees’ proactive and knowledge-seeking attitudes to the development of new innovation proposals and concepts. Such attitudes made it quicker and more effective to implement new initiatives.

Proposition 8: The basis of incentives moves from a result-oriented evaluation towards a behavior-oriented evaluation when systematically processing an innovation project characterized by a high degree of uncertainty.

Effects Across All Levels of Analysis

At the strategic level, all organization design elements except ‘unpredictability’ were impacted by the innovation project in at least four out of the five departments. Therefore:

Proposition 9: The majority of strategic-level organization design elements are impacted by systematically processing an innovation project characterized by a high degree of uncertainty.

At the tactical level, seven out of 14 organization design elements were impacted to some degree by the innovation project, and all departments noted an impact with respect to knowledge exchange and readiness for change. At the operational level, three out of six organizational processes were impacted to some degree by the innovation project. Therefore:

Proposition 10: The impact on strategic-level behaviors is greater than on tactical and operational behaviors when systematically processing an innovation project characterized by a high degree of uncertainty.

DISCUSSION

Our participatory theory-building research strategy represents a useful methodology to uncover the dynamics of organization design elements when they are faced with the systematic processing of an innovation project with high degrees of uncertainty (here cf. Brix and Jakobsen, 2013; Brix and Jakobsen 2015). We could be at the foundation of a new research agenda that provides indications to study the dynamic influence and change in organization design because of an innovation project, as opposed to the organization design’s impact on an innovation project, cf. Obel, Burton and Lauridsen (2004), Tushman et al. (2010) and Phelps, Bessant and Jones (2006). This is argued, since our discovery, explanation and development of ten propositions help us claim knowledge to the question: *‘how does the processing of a high uncertainty innovation project affect organization design?’*.

First, the overall results correspond hitherto research on the relationship between an innovation project and its affects on an organization e.g. Shenhar and Dvir, (1996), Arthur, DeFilippi and Jones (2001), and Brix and Peters (2015), since the systematic processing of the case study’s innovation project did represent a change within the organization by having influenced multiple organization design elements. Moreover, the informants claimed

that all the changes represented beneficial side effects except for the increased ‘tacitness of knowledge’, which was regarded as a downside stemming from the project. An explanation to this singular negative phenomenon can be found in the context of ‘managing uncertainty’ cf. Van de Ven (1986) and O’Connor and Rice (2013). Here information processing (Galbraith, 1974) or more precisely communication about (radical) new initiatives represents higher degree of uncertainty because more unknown factors need to be understood by the projects stakeholders compared to small-scale improvement projects where many variables are known (also cf. Talke and O’Connor, 2011; Brix, 2014). Even though this downside emerges it is not a central problem in itself; however, it will be a central problem if it is not managed appropriately cf. Eppler (2006) and O’Connor and Rice (2013).

Second, we establish that the learning and change of behavior that occurs during an innovation project is adopted, both noticed and unnoticed, into the behaviors of the staff in the departments participating in the projects and is reflected in organizational design elements. Here our findings advance current understanding on how project-led learning acts as vehicle for change in the organization, cf. Shenhar and Dvir (1996), because our research extends their work by determining that the overall ‘readiness to change’ is increased in the participating departments, because of the innovation project. Here we suggest that it is the change in leadership style focusing on exploration rather than exploitation that could have been the impetus for change cf. Obel, Burton and Lauridsen (2004).

Third, our study reveals that knowledge and behaviors related to ‘new tools and processes to manage innovation’ are absorbed into the participating institutions and departments without a formal transition period where project-led learning is transitioned towards business-led learning and more importantly, without formal requirements or incentives to do so (cf. Brady and Davies, 2004). Our contribution here lies within the ‘automatic transition’ of process-oriented knowledge, and not technical or factual knowledge (e.g. Brix, 2014) related to the development of the new products or services that were developed to reach the purpose of the public-private collaboration on innovation.

Fourth, we uncover six concrete organizational design elements that are positively influenced because of the innovation project, e.g. the change of giving incentives based on behavior and not results. These organization design changes relate to improved behaviors for exploration and exploitation cf. March, 1991 and Tushman et al. (2010), to an more open approach to collaboration with external partners, and an increased focus of the ‘readiness to change’ by 1) adapting to – or 2) proactively challenging status quo in relation to uncertainties in the external environmental cf. Obel, Burton and Lauridsen (2004) and Cui and O’Connor (2012).

The fifth contribution is that our research lead us to identify hitherto undocumented change in organization design elements, which traditionally are not at the conscious forefront of managers, such as increased recognition of the importance of behavior, and more specifically, behavioral changes that can increase the efficient use of human resources in relation to both exploring new potential futures and learning to exploit the knowledge that has been constructed. Based on this perspective, we boldly claim that even though an innovation project might fail concerning the intended purpose, the multiple emerging changes in behavior and/or verification of organization design elements influence the organization in such way that success on an organizational level of analysis is evident because internal contingencies and design elements (cf. Burton and Obel, 2004) are adapted to fit future changes. More research is needed to back up this claim.

IMPLICATIONS

To the extent that the identified dynamic change of behaviors are equivalent or similar to organizational routines, we argue that our findings are in line with Feldman (2000), Pentland and Feldman (2005) and Pentland, Hærem and Hillison’s (2011) research on the dynamic nature of organizational routines, since the influenced behaviors are not only verified and changed through nuanced actions; they are also developed to induce future changes via proactive exploration and search for new insight. Here research on organization design and its necessary fit with organization routines cf. Helfat and Karim (2014) could represent a

beneficial avenue for research in understanding how change of individual behaviors induce change on the organizational routines because of an innovation project, so that internal contingencies are better fit to adopt the results of the project. More research is needed to understand this nexus.

STUDY LIMITATIONS

The main limitation of our study is that it explores only a single project and its impact on a few organizations. In addition, we monitored the institutions and departments until the changes they made were solidly in place, but we do not know if those changes fostered additional outcomes, either positive or negative. There is a need for further research to explore if these are general tendencies across other public institutions, if the effect on private sector organizations is different from public organizations, and if the effect on national organizations is different from international ones, as well as if the effect differs when comparing large versus small and medium-sized enterprises. The ten propositions represent interesting phenomena to organization science that could be beneficial to further understand.

CONCLUSION

We studied a public-private innovation initiative, where the Department of Education Management (DEM) in the municipality of Ikast-Brande contracted with the Danish Technological Institute (a private consultancy) to rethink how the DEM could provide a better learning context for children and adolescents in the municipality. Within this context, we took a unique perspective on the innovation process in that we explored the effects of innovation on the organization rather than the outcomes of the innovation project.

Our study contributes to the organization design literature in several ways. First, we introduced a new perspective – how an organization is affected by planning and implementing an innovation project. Second, our research identified six concrete design elements that changed because of the innovation project, some of them unnoticed by management. These changes were considered beneficial for DEM managers and employees because the changes represented new or adjusted behaviors that could result in a more efficient use of human resources in the five participating departments. Third, we found that information processing becomes increasingly complex among project stakeholders as the project develops – new ideas emerge that are more complex and unpredictable compared to earlier outputs of the municipality's innovation projects. Finally, we set the stage for understanding how a high-uncertainty innovation project impacts the performance of an organization by exploring the behaviors associated with the strategic, tactical, and operational levels of the organization.

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APPENDIX

With respect to the structured interview guide, the two examples below exemplify how a change (+/-) is registered in the dataset and how a behavior is affirmed as being correct (✓) according to the existing situation of the institution/department within the DEM.

The first example demonstrates the documentation used to identify a change in an organization design element while interviewing a team member from Institution B, who is a manager in that institution. The question derives from the structured part of the interview, and it relates to the tactical level of analysis where it is the 'organization climate' that is in question. Here the two elements in the data matrix are 'tension' and 'readiness to change' (Burton et al., 2011). In the interview protocol, the PI registered an increase in 'readiness to change' for the employees in the institution on a post-project basis. The reason for this is based on the informant's statement during the interview, where he claimed that 'readiness to change' on a pre-project basis is a '3' and that it had increased to a '4' on the 1-5 scale ranking because of the innovation project. The quote below demonstrates the answer given by the manager to the question: What is the reason for a changed mindset in your institution in relation to 'readiness to change'?

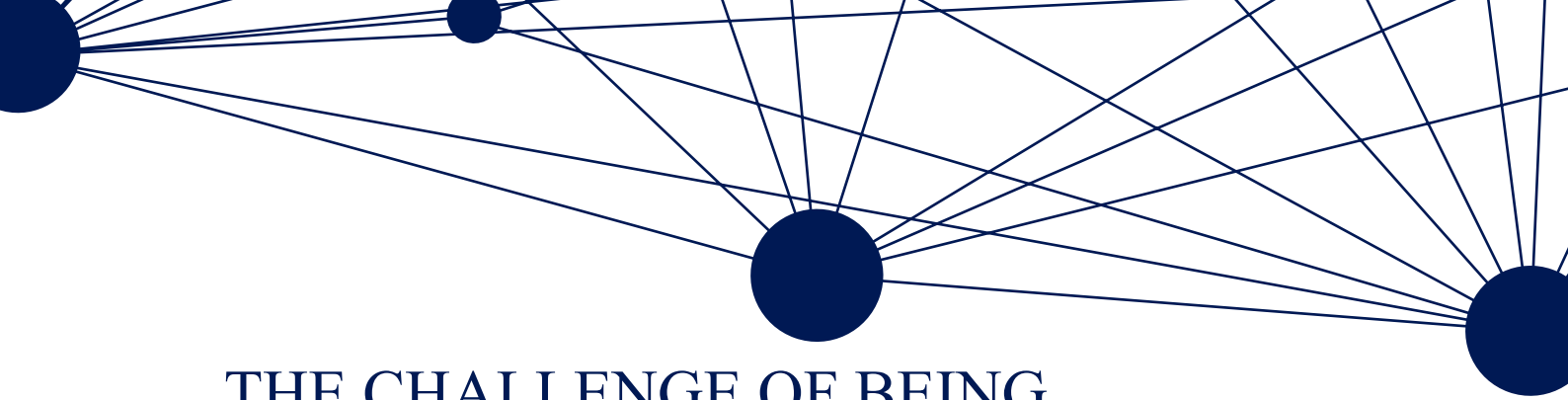
"There is no doubt that my personal readiness to change has exploded because of the project, and I am sure and aware that this readiness to change is influential to the staff – no one is rolling their eyeballs anymore when new ways of working or new initiatives are suggested, simply because they have been positively surprised with some of the ideas we worked on in the project. Now the staff is much more moldable to future changes, since they see the potential in at least some of the new ideas we presented based on the project."

Since the structured interview was created as a critical inquiry, a change claimed by the informant was not accepted if he or she could not give a concrete example of the change in behavior in relation to the claim. The statement above represents such claims since concrete examples were said to have occurred during the innovation project. The arguments used to substantiate the acceptance of change in the domain of 'readiness to change' are based on the respondent's three claims: (a) 'decrease of eyeball rolling', (b) 'positively surprised with some of the ideas', and (c) 'much more moldable to future changes (...) based on the project'.

The second example demonstrates the documentation utilized to determine how a behavior was acknowledged as being relevant and in line with the current reality of the department. Here the organization design elements 'ICT infusion' and 'virtualization' represent the elements in the data matrix concerning 'knowledge exchange' (Burton et al., 2011). According to the informant, the innovation project had not per se changed any behaviors in relation to the specific organization design elements, but the project had created awareness of the behaviors associated with the elements. During the post-project interview, the informant claimed:

"During the project, we confirmed that we are on the right track when we explore and create new opportunities with external partners. There is a certain value in cooperating with people external to the municipality, because of the critical questioning by these people, who are not biased by the culture, etc." Principal Investigator: Could you give me a concrete example? Respondent: "(...) yes, before our project, some of the managers from different institutions tried to collaborate to find new ways of restructuring some parts of a work task [classified], but the suggestions they presented to the division management were not, by us at least, considered radical. So when we had the external consultants come in and help us, we finally got the 14 new quite radical concepts, which we presented to the City Council – so I guess that is a good example."

In the interview, the respondent demonstrated two things that made him aware that existing actions and behaviors regarding 'virtualization' were still appropriate. The first was 'the managers attempt to create radical innovation unsuccessfully', and the second was 'the 14 new more or less radical concepts that were developed in collaboration with external partners'. Even though there is no change of perspective in the organization design elements, the respondent found the acknowledgement valuable to the Division Management in that they confirmed the appropriateness of their actions and behaviors in relation to 'knowledge exchange'.



THE CHALLENGE OF BEING OUTSTANDING

A LOOK BACK AND AHEAD AFTER 25 YEARS OF GUIDING BUSINESS EXCELLENCE

HARRY S. HERTZ

Abstract: The management of organizational performance is a challenge faced by every business, nonprofit, and government organization. The attributes of an outstanding organization have evolved over time as complexity has increased and change has become constant. The Baldrige Performance Excellence Program has closely tracked these attributes and changes to always reflect the leading edge of management practice. What these attributes and changes are, the challenges CEOs and organizations face today, and performance management areas that will need attention in the future are explored.

Keywords: Baldrige Award, Baldrige criteria, CEO challenges, total quality management, organizational performance management, organizational change, organizational excellence

Leading an organization to excellent performance has been a challenge faced by business executives for as long as competition has existed. Measuring critical aspects of performance, choosing the right metrics, and designing the organization's structures and processes are integral to improving performance and striving for excellence. As global competitiveness has spread, as customer demands have increased, and as organizational challenges and complexity have grown, a constant redefinition of the attributes of excellence has been necessary. For more than 25 years, the Baldrige Performance Excellence Program (BPEP) has been at the forefront of organizational performance management, reflecting the constantly changing, leading edge of validated management practice. Using the BPEP perspective, I will explore how the leading edge of total quality management has evolved, the challenges it presents to organizations and organizational design today, and the potential challenges that lie ahead.

PERFORMANCE EXCELLENCE AND THE BALDRIGE PERFORMANCE EXCELLENCE PROGRAM

The Baldrige Performance Excellence Program (2013) defines performance excellence as an integrated approach to organizational performance management that results in (a) the delivery of ever-improving value to customers and stakeholders, contributing to organizational sustainability; (b) the improvement of overall organizational effectiveness and capabilities; and (c) organizational and individual learning. This definition is, firstly, results-oriented. Performance excellence requires processes that are well designed and coupled with the measurement of key results. A feedback loop from results achieved to process improvement makes sure that approaches and results keep pace with increasing demands and opportunity for growth and profitability. Secondly, performance excellence is related to dynamic organizational design. Excellence requires an organizational design that is responsive from the customers' viewpoint, that is characterized by internal effectiveness

and operational efficiency, and that achieves organizational learning and allows organization members to learn and grow.

The Baldrige Program and Excellence Criteria

The Baldrige Program was created in 1987 by an act of the U.S. Congress as a public-private partnership charged with three ongoing tasks: (1) identifying role model organizations and recognizing them with a Presidential award, (2) disseminating and sharing best practices from those organizations, and (3) establishing criteria for evaluating performance achievement and excellence. These Baldrige Criteria for Performance Excellence (“the Criteria”) have been an evolving instrument for use by any organization wishing to take a systems approach to performance management and to self-assess strengths and opportunities for improvement. Originally designed for use just by business, the Criteria have been adapted over the last 25 years to address organizations in every sector of the economy (business, education, health care, nonprofits, and government). The Criteria comprise a set of inter-related questions organized into seven categories in the framework shown in Figure 1.



Source: Baldrige Performance Excellence Program. 2013-2014. Criteria for Performance Excellence. Gaithersburg, MD, U.S. Department of Commerce, National Institute of Standards and Technology. (http://www.nist.gov/baldrige/publications/business_nonprofit_criteria.cfm)

Fig. 1. Baldrige Criteria for Performance Excellence Framework

Categories 1, 2, and 3 are called the “leadership triad” because leaders have to set the tone and vision for the organization. They must make strategic decisions that set and keep the organization on track. They have to lead the focus on customers and design an organizational structure that encourages an emphasis on customers at every level of the organization, including front-line employees who are empowered to make decisions for the customer. Categories 5, 6, and 7 are called the “results triad” because they comprise the critical results (in the areas of product, service, and process; customers; workforce, leadership and governance; and financial and marketplace) as well as the workforce and operational processes that achieve those results. Category 4 is shown as the foundation of the system because an organization must manage by evidence, using data, analysis, and organizational knowledge as the basis for decision-making. Shown at the top of the framework is the Organizational Profile. Responses to the questions in this section set the organizational context for responding to all the questions in Categories 1-7. The Organizational Profile questions provide a snapshot of the organization, key influences on how it operates, and the main challenges it faces. The horizontal arrow in the center of Figure 1 indicates the feedback loop between the two triads

and the need for leadership to focus on and be guided by results. Both the framework and the Criteria questions have evolved over 25 years from an initial focus on product and process quality to the current focus on organizational performance and excellence.

Twenty-five Years of Change

Before describing the history of performance management and change as reflected in the 25 years of BPEP's operation, it is important to look at the larger history of the quality movement. The history of quality can be traced to 1959 and U.S. Mil-Q-9858 (Mil-Q-9858A, 1963). This military document was the quality specifications document attached to military procurements starting in 1959. In the 1980s, American products were characterized by unsatisfactory quality, customer dissatisfaction, and cost overruns. The U.S. turned to the quality tools that had led other countries, like Japan, to deliver superior products at significantly lower cost. During this time period, the ISO 9000 series of standards (ISO 9000 – Quality Management) were first implemented and were based on many of the requirements contained in Mil-Q-9858A. Also during this period, the law was passed that created the Baldrige Program. True to the needs of the time and the then-current leading edge of validated practice, the first version of the Criteria was focused on product and process quality improvement and delivering customer satisfaction by providing high-quality products.

In the early 1990s, quality tools gave way to a more systematic approach called total quality management or TQM. While not intended in its design, in practice TQM resulted in many process improvements that may or may not have been strategically important. By the late 1990s, TQM was considered by many to be just another fad like HBO, ZBB, and other three-letter acronyms. In the 21st-century, the quality movement is still active and continues to evolve. In the minds of its thought leaders, quality has evolved to its current focus on overall organizational performance management and excellence.

Performance Excellence Then and Now

Twenty-five years ago being outstanding in the individual categories of the Criteria made for a role model organization. This placed little strain on organizational structure, since each piece of the organization operated somewhat independently. Now the Criteria are characterized as a system, indicated by the two-way arrows in Figure 1. It is these interrelationships that cause effectiveness as an organization, delivering value to all stakeholders.

Over the past 25 years, product quality assurance gave way to quality management and now to overall organizational excellence. Managers used to talk about human resource utilization. Now they focus on the workforce as a vital stakeholder, that of an internal customer. There has been a similar evolution in focus on the customer. Satisfying customers with the product or service when it is delivered is not enough. Today, the goal is to engage customers for the long-term so they will be loyal, repeat customers and even advocates for your brand. This means not only having all workforce members capable of delivering excellent service to the customer at the time and point of contact, but also playing a role in long-term customer relationship management.

At the systems level, several profound changes have occurred. Organizations have superseded quality planning departments, with a life of their own, with strategic planning and thinking processes that look holistically at delivering total value to the customer, the workforce, the community, and the stockholders or owners. With a need to deliver ever-greater value, continuous improvement of processes has been complemented by a focus on innovation that leads to breakthrough (discontinuous) change in products, services, processes, and business models.

CHALLENGES

In 2012 (Leading Through Connections, 2012) and in 2013 (The Customer-Activated Enterprise, 2013), IBM conducted CEO and C-suite studies, respectively. The 2012 study involved 1,700 leaders globally in face-to-face interviews. The 2013 study involved 4,000 C-suite executives in 70 countries. The purpose of both studies was to understand

what leaders saw as the key performance management challenges and the focal points for them as leaders. The outcomes of these studies align with many of the challenges we have addressed in the evolution of the Criteria and in how leading organizations are approaching their operations. Both studies address issues of connectivity and the need for design of work systems that go beyond the traditional organizational structures and boundaries. Both studies conclude that organizations need to engage more consistently and strategically with customers. Organizations need the analytics and knowledge to engage with customers as individuals. They need to open up their systems to more customer influence, engaging them in collaboration at the boardroom level and in contributing to business strategy. Front-line employees need to be empowered through the organization's values to share in a sense of purpose, so they can be responsible decision-makers for the organization. Leaders place an increasing focus on social and digital networks to spur innovation and interaction. Lastly, these studies conclude that organizations have to look for partnerships with customers and others outside their boundaries to spur innovation and cause disruptive thinking.

The IBM findings parallel very closely recent changes to the criteria which encompass mastering the use of social media, cultivating and managing innovation, and designing effective work systems that involve employees, partners, suppliers, and collaborators. Social media play important roles in these processes: reaching customers and potential customers, connecting employees with leaders and each other, coordinating with suppliers and partners, and as a source of data and research information. To foster innovation, senior leaders need to set the climate. They need to provide resources and infrastructure support. They need to prioritize and re-prioritize to focus the organization's resources. And, leaders need to have a tolerance for failure. They should reward significant efforts that succeed and encourage intelligent risk-taking. The design of work systems is a strategic concept that maximizes workforce potential, protects intellectual property, and seeks efficiency through partnerships and effective use of suppliers.

Lessons Learned

Some of the lessons learned from 25 years of observing organizational excellence have a profound impact on organizational structure and design. To meet today's needs, organizations need to appreciate that change is occurring more rapidly. They need to be agile and have the ability to reconfigure aspects of their operations and interactions to address challenges and opportunities. Organizations have to deal with more complexity than ever before, complexity that arises from customer desires, market demands, regulatory requirements, and partnering relationships. Lastly, organizations have to anticipate that the bar is always being raised. The best organizations are accelerating their performance, and newer competitors are closing the gap.

Challenges Ahead

While I obviously have no crystal ball for predicting the future, I would like to speculate on some of the changes ahead that will once again challenge organizations and organizational design. Social responsibility is becoming an increasing influence on business choices. It is a growing driver in the selection of suppliers, customer decisions on purchases, and business-to-business relationships. With growth in global markets, and the competing interests of protecting national and regional economies, there will be growing tension between globalization and local protectionism. This will drive pressures for local sourcing and will lead to dynamic and varying policies and customs in the developed and emerging economies. There has long been regional enterprise integration in some countries, such as the keiretsu in Japan. The tension between globalization and regionalism may foster more of these relationships in the future. Lastly, the protection of intellectual property may lead to modifications in IP laws and law enforcement as well as decisions that favor insourcing rather than outsourcing of manufacturing.

Organizational leadership and performance management are already complex. To address the substantial challenges that organizations will face in the years ahead, every organization should ask itself on an ongoing basis:

1. Is our organization doing as well as it could?
2. How do we know?
3. What and how should our organization improve or change?
4. What structures and processes will support the redesigned organization?

PERFORMANCE EXCELLENCE AND ORGANIZATION DESIGN

Recently, Burton (2013) synthesized the future of organizational design in three themes. It is worth exploring the challenges ahead as they impact each of these themes.

Creating a Cohesive Sociotechnical System

I discussed above the increase in complexity of work system design resulting from the challenges that C-suite executives face. Dividing the work to perform it both inside and outside the organization, in the most effective and efficient manner, and then assembling a meaningful whole will require continual agility to accommodate both globalization and regional protectionism. Global partnering and supply chains will likely be impacted by the location of the supplier and the changing business and legal/regulatory environment in that country or region. Evolving IP policies and practices will permit more outsourcing or encourage protecting IP through partnering only in certain countries and/or expanding the work done inside the organization.

Boundaries of Newer Organizational Forms

Organizations may look for more formal structures with their partners, perhaps including a merger, to seek efficiencies, guarantee supply chains, and protect IP. Social responsibility and the need for transparency will encourage greater customer influence in the boardroom. What organizational structures might be envisioned to accomplish these relationships and to be agile as key customers or markets change?

Time, Change, and Innovation

As confirmed in the IBM reports cited above, in order to be successful in the future ideas and innovations will have to come from the organization's workforce, partners, suppliers, and customers. This will result in new relationships, and when valuable IP is developed, ownership has to be shared. There could be significant challenges when these developments are across regions or cultures with different laws and customs. Remaining agile while locking in intellectual property and partnerships is key to making decisions today while preserving tomorrow's opportunities.

The need for cohesive sociotechnical systems, new organizational forms, and speed and agility will be major considerations in ongoing strategy development and are likely to result in shorter planning and execution cycles. Organizations will be looking for simplicity in their processes to handle complexity in the global business environment as they seek to achieve high performance and organizational excellence.

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RESUME OF INTERVIEW WITH PROFESSOR CHARLES SNOW

DORTHE DØJBÆK HÅKONSSON

This interview is with Professor Charles Snow. Snow is Professor Emeritus of Strategy and Organization at Penn State University. He was a professor at Penn State from 1974 to 2012. The interview was conducted in 2013 while he was visiting professor at ICOA (Interdisciplinary Center for Organizational Architecture) at Aarhus University. Professor Snow is a founding member of the Organizational Design Community and co-editor of the *Journal of Organization Design*. He is a Fellow of the Academy of Management and is listed in *Who's Who in the Management Sciences* and *Great Writers on Organizations*.

The interview covers his seminal book, *Organizational Strategy, Structure, and Process*, which he wrote with Professor Raymond Miles; moves on to discuss his research on collaborative communities and how this work helped establish the Organizational Design Community (ODC); and finishes with a discussion of what Snow sees as the major challenges for organizations and for organization design research in the future.

ORGANIZATIONAL STRATEGY, STRUCTURE, AND PROCESS

In the interview, Snow talks about how he came to write the book *Organizational Strategy, Structure, and Process*¹ with Professor Raymond Miles. Snow was a doctoral student at Berkeley in the late 1960s. At that time, most organization theory was conducted at the micro level, and the focus was not so much on how the entire enterprise navigated its way through the industrial environment. Snow, however, was interested in how organizations adapt. He developed a general model of how top managers perceived the environment, and he expected that managerial perceptions would affect how the organization was structured, how the organization made decisions, etc. In 1970, Snow met Miles, and they gained an interest in each other around the topic of organizational adaptation, and Miles agreed to be Snow's doctoral supervisor.

To study organizational adaptation, they needed a growing industry, one which would have variation in how managers perceived the industry. They ended up collecting data from 62 top managers in 16 firms in the college textbook publishing industry. In analyzing how these 16 firms behaved, they came up with the typology of prospectors, analyzers, and defenders.

The 1978 book came out of Snow's dissertation as well as two subsequent dissertations of Alan Meyer and Henry Coleman. These three pieces of research, covering four different industries, tended to demonstrate the same type of strategic behaviors. Because all of the specific findings could not be covered in a single article, that's how the book came about.

The book grew rapidly in visibility among academics, and also among practitioners. The first managerial use was at Canadian Pacific, where the corporate HR Department developed an instrument to measure the strategy of each of the company's 80 business units. They did not use the labels of prospector, defender, and analyzer, but instead called them A, B, and AB.

Much has happened in the global economy since the book was first published. When asked whether the typology still applies, Snow mentions that the primary change in organizations since the 1970s is the appearance and development of network organizations. Prospecting, analyzing, and defending became functions inside of network organizations.

1 Miles RE, Snow CC. 1978. *Organizational Strategy, Structure, and Process*. McGraw-Hill, New York, NY.

COLLABORATIVE COMMUNITIES OF FIRMS

Miles and Snow anticipated the emergence of collaborative communities of firms even before their appearance. This came out of an interest in understanding how firms could become not just innovative but *continuously* innovative. Not being able to find an organization that was continuously innovative, they started pulling features from the most innovative firms they could find and welded them together into a description of a specific organizational form. Grant Miles joined their research team, and the result of their project was the 2005 book, *Collaborative Entrepreneurship*². In this book, Miles, Miles, and Snow basically invented an organization which they named OpWin Global Network (short for “opening the window” of innovation). In this fictitious organization, three founding firms got together to achieve continuous innovation by creating a platform for other firms to get together and collaborate, using services that the founding firms provided.

In late 2006, Raymond Miles received a telephone call from Blade.org. They had read the book and found that they looked a lot like OpWin. Miles gave a keynote speech at Blade.org’s first birthday party in February 2007. Upon his return, he called Snow, told him about Blade.org, and they decided to study it.

In June 2011, Blade.org ceased operations because its mission had been accomplished. As we know it from Miles, Snow and colleagues’ descriptions, Blade.org at one time had 200 member firms. The core of Blade.org, however, was the 70 firms in the computer server market that were all complementary to one another. Some were software firms, others hardware firms, and others resellers. They had been invited by IBM and seven other founding firms to join a collaborative community of firms. IBM had provided a platform to collaborate on innovation projects and established a Principal Office that could provide services to the member firms.

The Organizational Design Community (ODC) was established in 2009. Charles Snow and Raymond Miles were both among the founding members. ODC’s mission is to make organization design more visible. It takes a community of scholars as well as practitioners to achieve this purpose. ODC builds on the ideas of Blade.org, how it was organized and operated. ODC members share an interest in the topic of organization design and are willing to contribute to its advancement both theoretically and practically. ODC has had a number of accomplishments including the establishment of the *Journal of Organization Design*. And, unlike Blade.org, ODC’s story isn’t over yet!

MAJOR CHALLENGES FOR ORGANIZATION DESIGN RESEARCH IN THE FUTURE

According to Snow, the biggest challenge for ODC is to continue to push the topic of organization design. In the first editorial statement of the *Journal of Organization Design*, the need for the field of organization design to focus more on the future was urged. Organization design has traditionally focused mostly on the past, trying to explain and theorize about what has happened rather than what may happen. Adopting a future orientation, we need some way to build and test prototypes of new organizations that are needed for the future, to speed up the process of their development.

A second challenge that he sees is making organization design knowledge actionable. Organization design has always had a concern with both theory and practice. But we need to bridge that gap even better than we have in the past.

A third challenge is collaboration, both within and across organizations. We need to learn more about how to organize large-scale, multi-party collaborative processes.

As Snow concludes the interview, he notes that these are exciting times for the field of organization design.

2 Miles RE, Miles G, Snow CC. 2005. *Collaborative Entrepreneurship: How Communities of Networked Firms Use Continuous Innovation to Create Economic Wealth*. Stanford University Press, Stanford, CA.



RESUME OF INTERVIEW WITH PROFESSORS RICHARD BURTON AND BØRGE OBEL

DORTHE DØJBÆK HÅKONSSON

This interview is with Professors Richard Burton and Børge Obel. Professor Burton is Professor Emeritus at The Fuqua School of Business, Duke University. Previously, he was senior editor at *Organization Science*. Currently, he is an associate editor of the *Strategic Management Journal* and associate editor of the *Journal of Organization Design*. Professor Obel is Professor at Aarhus University and Director of the Interdisciplinary Center for Organizational Architecture (ICOA) which he founded in 2011. He is co-editor of the *Journal of Organization Design*. He is the former Dean of the Aarhus School of Business. The interview was conducted in 2013 when Professor Burton was a visiting Professor at ICOA.

The interview begins with a discussion of Burton and Obel's seminal work on the multi-contingency model of organization design and the expert system, OrgCon moves on to discuss their work with simulation models to investigate organizational design issues, and concludes with their views on the major challenges for organization design research in the future.

THE MULTI-CONTINGENCY MODEL AND ORGCON

Burton and Obel's multi-contingency model was first introduced in their 1995 book, *Strategic Organization Diagnosis and Design: Developing Theory for Application*¹. The multi-contingency model is a systems model oriented towards practice and the integration of basic elements in organization design: strategy, structure, people, and technology. Its origin rests upon earlier theories of strategy and structure and of information processing. The practical part of the model is its development of the interdependencies of the various contingencies and how they fit together. Burton and Obel's empirical research has found a strong relationship between fit and performance. OrgCon is an expert system that can diagnose organizational fit. A computer software program based on the multi-contingency model. OrgCon, is a diagnostic design tool that takes the complexity out of the design process.

Burton, DeSanctis, and Obel's recent book, *Organizational Design: A Step by Step Approach*², is built on the same theory and processes as their earlier work. This book presents theory and tools in a way that is easy to use in practice, particularly by MBAs and managers. Working with practitioners – being informed by and informing practitioners - is essential to Burton and Obel's work. It helps the academic world to understand better what it does and what it should do better. Working with practitioners was also part of the motivation for Burton and Obel as founding members of the Organizational Design Community (ODC).

SIMULATION MODELS

Simulation models have been central to Burton and Obel's development of the multi-contingency model. In the multi-contingency model, there is a set of rules that relates contingency variables to design variables. Many of these rules were tested in simulation

1 Burton RM, Obel B. 2004. *Strategic Organizational Diagnosis and Design: Developing Theory for Application*. Kluwer Academic Publishers, Dordrecht, Netherlands.

2 Burton RM, DeSanctis G, Obel B. 2015. *Organizational Design: A Step-by-Step Approach*. 3rd edition. Cambridge University Press, Cambridge, UK.

studies. Burton and Obel view simulation as a laboratory for experimentation. Simulation models also allow researchers to take the word “design” seriously – to look at what might be – and not just explain what has happened in the past.

Burton and Obel see simulation models as part of a triangulation approach that allows designers to address organizational issues using empirical, simulation, and laboratory studies. Tying different methods together, they argue, enhances and strengthens the basis for making design recommendations.

CHALLENGES FOR ORGANIZATION DESIGN IN THE FUTURE

Burton and Obel believe that organizational research in the future should put increased emphasis on design. The field of organization design has been criticized for only trying to explain what happened years ago; the field has done less well in laying out possible futures – how we might think about future design possibilities and how to create and test them. Doing so requires a different mindset, one of looking at what is possible and then making it real.

A second challenge relates to implementation. The world of design has to look at not only designing what should be in the future but also implementing it - and implementing it much faster than in the past.