

Managing for innovation:

Insights into a successful company

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Abstract

This case explores work climate and its relation with innovativeness in a small U.S. secondary wood products company. The primary objective of this in-depth stage of a larger study was to preliminarily validate the components and relationships of a theoretical model describing the links among work climate and innovativeness. The company is one of three companies studied in depth after the theoretical model was developed and was chosen based on the researchers' familiarity with its innovativeness and creative climate. The study included a quantitative survey, plus qualitative interviews. Overall, 70 percent of the company's workforce responded to the survey, representing hourly workers, management, and office staff. Findings supported the theoretical model, and qualitative data provided additional insight. The following six factors appeared to adequately indicate a pro-innovation climate: supervisor encouragement, team cohesion, challenge, autonomy, openness to innovation, and availability of resources. Organizational commitment and job satisfaction show positive and significant correlations with climate for innovation. This illustrates the synergistic effect of management actively leading for innovation as a way to build competitiveness, while simultaneously creating a positive work climate. The case company profiled here illustrates this leadership very clearly.

It is generally agreed that the forest products industry is facing tremendous challenges to remain competitive (Hansen and Juslin 2006). This calls for modern management approaches aimed at improving all stages of the production and commercialization process (Carlson et al. 2006). In this context, innovation is at the center of many initiatives (Frans and Meulenberg 2004), and the forest products industry is no exception to this (Hansen et al. 2006, Korhonen 2006). A successful commercial innovation is born from ideas that find their way through the organization and are accepted by the market. Some of these innovations will be a response to market needs and opportunities while others will be a response to internal needs and will remain within the organization in the form of administrative changes, new business systems, etc.

This study is part of a larger effort aimed at better understanding how organizational culture and work climate influence innovativeness and how these can be fostered in the workplace. The larger study is based on a survey targeting the U.S. forest products industry. The underlying model includes innovation strategy and climate for innovation as antecedents to innovativeness, which in turn affects firm performance. Our approach is similar to that of Hurley and Hult (1998) in the sense of viewing innovativeness as a cultural phenomenon. It is hoped that a clear understanding of this relationship can better inform

managers and decision makers so that they can effectively foster innovation in the workplace.

This case study explores how one company thrives, despite increased competition, through effective management, commitment to innovation, and differentiation in the marketplace. Special attention is devoted to characterizing organizational culture and work climate within the company. We aimed at identifying those factors that promote or prevent creativity among employees, and their relationship with other factors such as organizational commitment, business strategy, and the structure of the innovation process.

Innovativeness can be manifested in the form of new products, new processes, or new business systems (Hovgaard and Hansen 2004). The innovation can be new to the company, as in the case of an adoption of an existing technology or product, or new to the market, as in the case of an invention.

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Study objective and frame of reference

The objective of this study was to develop an enhanced understanding of the relationships between work climate and innovativeness. A comprehensive study involving three companies validated the model and scales used in a nationwide study of the relationships among the two constructs mentioned above (Crespell and Hansen 2007). The most innovative company of the three was selected for this case study based on quantitative results (the highest of the three companies on the scale for innovativeness,) and on a personal appraisal of the dominant culture. This strategy can be classified as purposeful (intensity) sampling, where rich information is collected for an in-depth study (Miles and Huberman 1994). Furthermore, the high response rate (70 percent) provides more confidence in the derived results and conclusions. This case is unique in terms of providing insight into management practices and cultural features of a thriving company that may explain its success despite a turbulent marketplace. We hope that by telling this story, other small businesses may follow this example and embrace creativity and innovation in the workplace.

Theoretical background

Definitions

The terms organizational culture and work climate are used throughout the following text, so we provide brief definitions of these related concepts. Organizational culture is seen as the common set of symbols, rules, thoughts, values, and beliefs shared by individuals from an organization to give meaning and order to their experience (Feldman 1986, Deshpande and Webster 1989). Work climate is recognized as the practical and readily observable face of an organization's culture (Cameron and Quinn 1998). Certain cultures will produce climates more likely to foster innovation (Damanpour and Gopalakrishnan 2001). These authors give the example of how an organization, highly interested in quality control and re-engineering, may tend to favor process innovation over product innovation as a way to improve competitiveness.

Recent attempts to operationalize the concept of organizational culture have resorted to a model known as "The Competing Values Framework" (Cameron and Quinn 1998). In this framework, organizational culture is described in terms of its values for flexibility vs. control and internal orientation vs. external orientation (Fig. 1). From this framework, four dominant culture types emerge:

The Hierarchy Culture (Bureaucracy): Characteristic of Europe in the 1800s. Key features: rules-oriented, rigid structures and procedures, impersonal.

The Market Culture: Became popular in the late 1960s as a result of increased competition. Key features: externally oriented, results-based (bottom line), competitive, high productivity.

The Clan Culture: Born in Japan in the late 1960s and early 1970s. Key features: teamwork, high organizational commitment, pluralistic.

The Adhocracy Culture (Entrepreneurial): Typical of the Information Age. Key features: entrepreneurial, innovative, fast to adapt, individualistic.

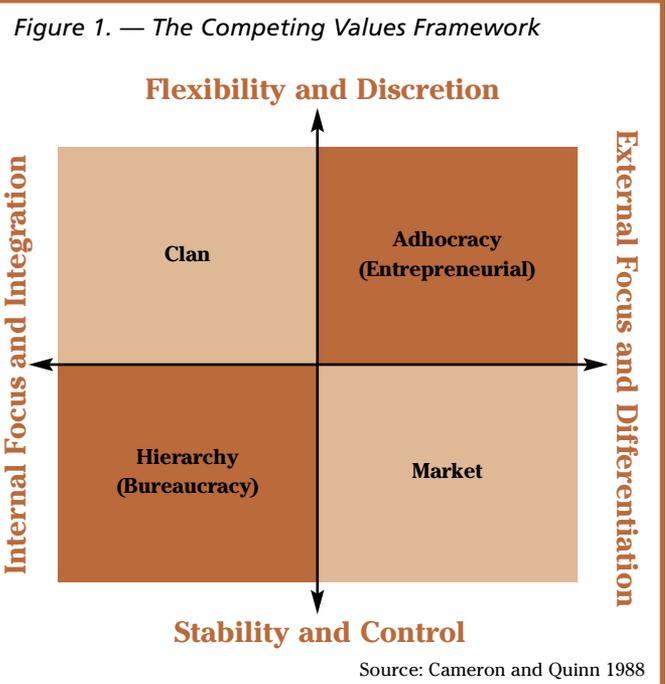
Similar to the concepts of work climate and organizational culture, creativity, innovativeness, and innovation are all related concepts that are frequently used interchangeably. Even from early definitions (Rogers 1954), creativity was understood to be a function of individual characteristics and the environment.

In this study, the definitions for creativity and innovation provided by Leonard and Swap (1999) were used. According to these authors, creativity is defined as "a process of developing and expressing novel ideas that are likely to be used." Amabile et al. (1996) and West and Farr (1990) emphasize the notions of appropriateness, purpose, and intended benefit of a new idea. Innovation is defined as the "embodiment, combination and/or synthesis of knowledge in novel, relevant, valued new products, processes or services." Innovation has been defined in several ways: by types (for example, radical vs. incremental or continuous), by rates of adoption (Rogers 2003), and by type of approach to a given problem (for example, adaptors vs. innovators in Kirton (1976)).

In summary, creativity is seen as the ideation component of innovation, whereas innovation encompasses both the proposal and implementation of new ideas. This definition of innovation is consistent with that often used in forest products academic literature (Hovgaard and Hansen 2004). Innovativeness has been seen as a component of an organization's culture. It is defined as "the notion of openness to new ideas" or as the organization's orientation toward innovation (Hurley and Hult 1998). Similarly, current approaches in the forest products industry look at innovativeness as an organization's propensity to adopt and/or develop innovations in products, services, processes, and business systems (Crespell et al. 2006, Knowles et al. 2007). This is the definition we used in this study.

Organizational change

Innovation is change, but not all change is innovation (West and Farr 1990). A great deal of effort in the discipline



of organizational behavior has been devoted to the study of change. Change is separated into two categories: transformational change, which is radical and affects the whole organization, and incremental change, a more frequent and less traumatic process. The latter includes the introduction of new products, new technologies, and new systems and processes (Schermerhorn et al. 2004). The same authors argue that the likelihood of success with any planned change initiative depends on its agents. Change agents are those individuals who lead and support the change process. They can take the form of managers, external consultants, or internal champions, the latter understood as highly committed individuals who lead the implementation of a given initiative.

Unplanned change is also important, and leaders must constantly watch for it, minimize any negative consequences of it, and maximize its benefits. An effective change agent must recognize and comply with three stages of change: unfreezing, moving (change), and refreezing (Lewin 1947). This is known as the three-step model and helps to understand how to deal with the natural resistance to change. Resistance to change is due to the need to feel safe and control the known. Therefore, it is the change agent's responsibility to prepare employees for change, disconfirming existing attitudes and behaviors to align them around the proposed initiative. Only after this is accomplished, employees can see the value brought about by the initiative. The second stage is the change itself. Finally, during refreezing, actions are taken to ensure change continuity so that people do not revert to past behavior.

One feature of change is its side chain effects. Modern and effective organizations are deeply intertwined so any planned change must address any effects on the organization, such as technology, organizational structure (for example communication and authority patterns), and knowledge and skills required from employees.

Assessing creativity and innovation

Several disciplines have attempted to assess creativity and innovation. Traditional psychology has concentrated on individual creativity (for example, the classic work by Torrance (1962), or more recently, Amabile (1983, 1996), and Sternberg (2006)). Organizational psychology and sociology consider innovation at a broader level, either groups or organizations. Notable examples are Cooper and Jayatilaka (2006) on group creativity and motivation in the workplace and West et al. (1989, 1996) on innovation at work.

The theoretical background for this study rests on the componential model of organizational creativity and innovation by Amabile (1996, 1997) to assess work climate for innovation. The model is based on the principle that even though personality plays an important role, the social environment can also significantly impact a person's level of intrinsic motivation, and hence his or her creativity. Intrinsic motivation is the innate propensity to engage in activities where there is no reward other than the interest and enjoyment that accompanies them. It naturally emerges from psychological needs (for example, satisfaction, competency, self-determination), curiosity, and innate striving for growth (Reeve 2001). Malone and

Figure 2. — Componential Model of Creativity and Innovation in Organizations

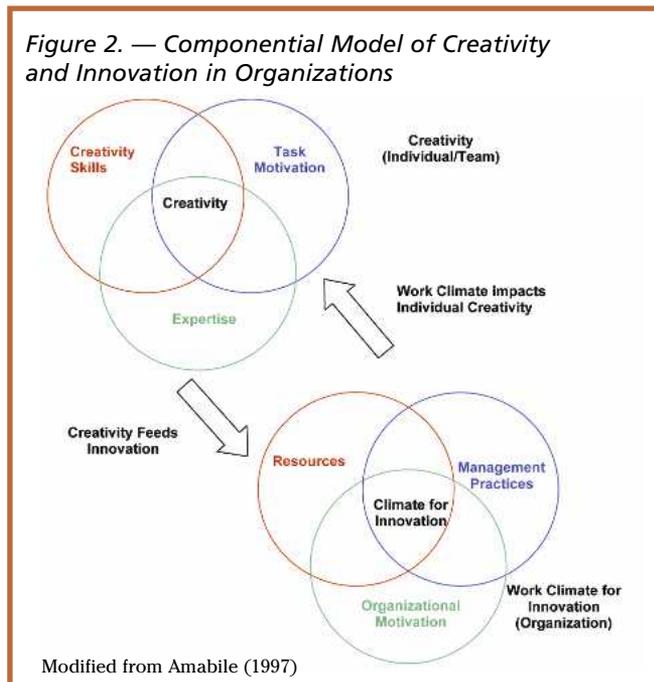
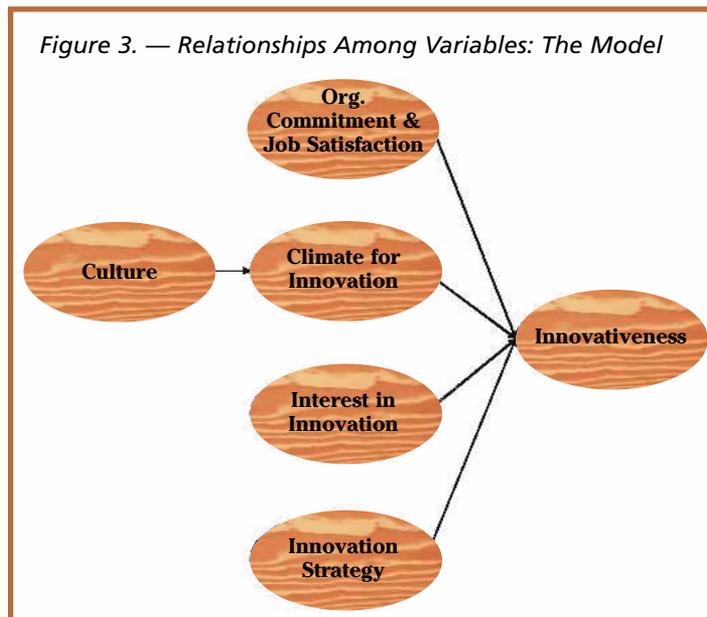


Figure 3. — Relationships Among Variables: The Model



Lepper (1987) identify the following factors as promoting intrinsic motivation: challenge, curiosity, the need for control, fantasy, competition, cooperation, and recognition.

Drawing from past research on intrinsic motivation and organizational psychology, Amabile's componential model of creativity tries to unify past findings in a coherent and integrative framework (Amabile 1983, 1996). The model includes three major components of individual or team creativity. These components are: expertise, creative-thinking skill, and task motivation. The model predicts that creativity occurs when these three components overlap and will rise as the three components increase.

In taking on the issue of organizational innovation, the Componential Model of Individual Creativity is incorporated into a broader model, including the work environment (Fig. 2). The model states that elements of the work environment will impact the creativity of individuals. These

elements are: resources, management practices, and organizational motivation. Task motivation is the component affected the most by work environment, through its impact on role perception (Lawler and Porter, 1967a). In summary, the model proposes that innovation is a direct result of creativity produced by individuals, through their interaction with their work climate.

Innovativeness has traditionally been measured using proxies such as R&D expenditure or number of patents (Archibugi and Pianta 1996). However, this approach does not capture the broader definition of innovativeness and cannot be universally employed. Consequently, other measures have been developed. For some examples, see: Patterson et al. (2004, 2005), Isaksen et al. (1999, 2000), Burton et al. (1999), Ekvall and Ryhammar (1999), Ekvall (1987,1996), and Zammuto and Krakower (1991). For examples within the forest products industry, the reader is referred to Fell et al. (2003), Crespell and Hansen (2007), Crespell et al. (2006), Hovgaard and Hansen (2004), Välimäki (2004), Lee et al. (1999), and West and Sinclair (1991).

Figure 3 shows the theoretical model for this study. All four variables on the left part of the model act as antecedent variables to innovativeness. In other words, innovativeness is seen as a response to the combination of organizational and personal factors depicted in the model. The assumption is that without positive attitudes toward change and improvement (interest in innovation), ideas are never fully implemented. Similarly, without organizational commitment, people lack motivation for change.

Innovation strategy is expected to capture a leadership style for change and improvement. In such a culture, innovation is at the core of the company's way of doing business. Other variables, not drawn in the figure, are intended to be used in the model as control variables. They are: business strategy, company size, sales level, and industry sector (for example sawmills, furniture, millwork, etc.).

Operationalization

All scales, except job satisfaction, were based on an interval response scale from 1 to 7, where 1= strongly disagree, to 7=strongly agree, with no anchors in between. The midpoint (4) represents a neutral position.

Innovativeness was defined as the propensity to adopt and/or create new products, processes, or business systems. A new measure of innovativeness has been developed based on this definition (Knowles 2007). The scale used to assess interest in innovation was developed specifically for this study. It consists of six items tapping into an individual propensity for new ways of doing things at work. This construct is also known as “ego involvement” in the organizational sociology literature (Pierce and Delbecq 1977).

Organizational commitment was operationalized assessing three constructs. These are:

- loyalty: affection for and attachment to the organization, a sense of belongingness manifested as “a wish to stay”;
- Identification: pride in the organization and internalization of the organization's goals and values); and

Table 1. — Questionnaire Structure

Construct	Dimension	Number of items	Construct description
Innovativeness	Products	4	Mill/company tendency to adopt/create (dimension types) (1–7)
	Processes	4	
	Business systems	4	
Interest in innovation	Interest in innovation	6	Individual interest in pursuing new ideas (1–7)
Organizational commitment	Loyalty	3	Feeling of belongingness and attachment to the company (1–7)
	Identification	3	
	Involvement	3	
Job satisfaction	Job satisfaction	1	Self descriptive (1–5)
Climate for Innovation	Team cohesion	4	Elements perceived by employees known to enhance creativity in the workplace (1–7)
	Supervisor encouragement	4	
	Autonomy	4	
	Challenge	4	
	Openness to innovation	4	
	Resources	4	
Organizational culture	Dominant characteristics	4	Types: Bureaucracy, Entrepreneurial, Market, Clan (1–7)
	Leadership	4	
	Management of employees	4	
	Company glue	4	
Innovation strategy	Products	1	Degree of integration of Innovation in the strategy of the company (1–7)
	Processes	1	
	Business systems	1	
	R&D expenditure	1	
Business strategy	Low cost/Differentiation	1	Self descriptive (1–7)

- involvement (psychological absorption in the activities of one's role). (Buchanan 1974, Cook and Wall 1980).

To assess *Climate for innovation*, a scale was refined, drawing from work by Amabile (1996, 1997) and others (for example, Ekvall 1996). Six factors were assessed: autonomy, openness to innovation, challenge, resources, supervisor encouragement, and team cohesion.

The scale used to assess *Organizational culture* was based on Quinn and Cameron's Organizational Culture Assessment Inventory (Cameron and Quinn 1998). In the original instrument, 100 points were allocated among four items, each item tapping four different types of dominant cultures: Adhocracy (Entrepreneurial), Market, Clan, and Hierarchy (Bureaucracy). Due to analysis considerations, our modified version used an interval scale from 1 to 7, as described above.

Job satisfaction was assessed using a one-item, graphic scale, as past research reports this strategy to be valuable, less cumbersome, and less prone to response bias (Castle and Engberg 2004, Patrician 2004). The item is composed of five faces, from a smiley face to a grumpy face.

Innovation strategy was defined as the degree to which innovation, in the form of products, processes, and business systems, is embedded in the unit's management values and priorities. The degree of expenditure on R&D was also a component of this construct.

Business strategy was operationalized following Porter's (1980) approach, namely, low cost or differentiation. Each strategy was rated from 1 to 7.

Additionally, the questionnaire included open-ended questions allowing respondents to identify what they felt to be factors promoting and preventing innovation in the workplace. Respondents also provided suggestions regarding how to foster innovation in their company. **Table 1** displays the questionnaire structure.

Description of the company

The company, hereafter referred to as *Innovate Inc.*, is a secondary manufacturer of value-added, wood products for both residential and commercial installations, and is located in the state of Oregon. At the time of the study it had just over 100 on-site employees, roughly 35 percent of whom were Hispanic. **Table 2** displays demographic information for the sample of hourly employees.

Innovate Inc. was founded 50 years ago. Since then, it has grown into a position of national leadership in its product line. In 1986, the company became employee-owned, and significant changes have taken place since 1993, when a new management team took over. All products are made to specification and are sold through various channels of distribution, with no direct sales.

Architects and interior designers are identified as key players in the company's success, so the company actively informs them about available products. Most advertising material, such as the Web site and brochures, are designed with this target group in mind. Its business strategy can be defined as a differentiation strategy, based on product uniqueness as a competitive advantage (Porter 1980). The company has several product lines with variable levels of competition for each. It has sales representatives in 23 U.S. states plus Canada. The remaining U.S. states are covered by three full-time salespeople.

Lean thinking is at the core of Innovate Inc.'s culture. This business philosophy is centered on efficiency and quality. The implementation of lean thinking is evidence of the innovativeness of Innovate Inc. Since implementing lean thinking in the spring of 2004, the company has reaped great benefits in terms of efficiency, timely delivery, safety, and cleanliness. Environmental responsibility is also central, with processes in place to encourage recycling and significantly reduce volatile organic compounds (VOCs) emissions, energy consumption, and waste water production.

Table 2. — Demographics for Hourly Employees (n)

Gender	Age		Education		Salary		
Male	39	<26	2	Incomplete High School	11	<30k	21
Female	19	26–35	13	High School	26	30–40k	15
		36–45	20	Incomplete College	20	40–50k	2
		46–55	16	College	4	50–60k	2
		56–65	10	Post Graduate	0	>60k	0
Missing	18	Missing	15	Missing	15	Missing	36
Total	76	Total	76	Total	76	Total	76

Table 3. — Demographics of Interviewees

Number	Position	Ethnicity	Gender	Age
1	Management	Caucasian	Male	>40
2	Management	Caucasian	Male	30–40
3	Management	Caucasian	Male	>40
4	Employee (office staff)	Caucasian	Female	<30
5	Employee	Hispanic	Male	<30
6	Employee	Hispanic	Male	<30
7	Employee	Caucasian	Male	30–40

The company has thus extended this philosophy beyond the domains of the company itself, reaching out to its community. In this way, it has become a “lean enterprise” (Czabke 2007).

Data and analysis

Sampling

This study combined quantitative and qualitative techniques. A paper questionnaire was provided to every floor employee, supervisor, staff, and member of upper management. This process was coordinated by the manager of the company, who allowed employees time out and a location to complete the questionnaire after explaining its objectives. A cover letter gave a general explanation of the study and addressed confidentiality and informed-consent issues. In total, 85 responses were collected, with a high response rate of 71 percent. A Spanish version of the questionnaire was made available, and 16 responses were received, representing a 40 percent response rate, whereas the English-speaking group yielded a response rate of 86 percent. **Table 1** shows the instrument’s structure. A more detailed description can be found in Crespell and Hansen (2007).

The study’s qualitative component took the form of semi-structured interviews, which were audio recorded. In total, seven people were interviewed, representing all ranks, gender, and ethnicity (**Table 3**). They were chosen randomly from a list of 20 people who had expressed their willingness to participate by filling out a detachable slip from the questionnaire.

The semi-structured interviews took between 30 and 60 minutes, and were performed during paid company time around the following protocol:

a. Management

Do you consider your company to be innovative?
(Why?, Drivers/sources, stories of successful innovations?)

Do people perceive innovativeness as a value of your company? How?

How could you improve the work climate to foster creativity and innovativeness?

Do you have any examples of collaboration with other firms, suppliers, machinery manufacturers, customers that have driven innovation?

b. Floor employees and staff

How would you define the culture/climate at *Innovate Inc.*?

Is innovativeness promoted?

What are the barriers to innovativeness?

Can you tell me a story of a successful innovation?

To what extent do these factors drive your own creativity?

Incentives

Interest in the common good of *Innovate Inc.*

Personal interest in innovation

Others

Analysis

The questionnaire was analyzed using descriptive statistics and correlation analysis. Simple tests to compare

means were also performed (*t* test). The open-ended questions were coded and frequency tables created. This was an iterative process, aggregating and classifying responses into higher order nodes used to tally the responses. The interview recordings were subsequently converted into notes, extracting the relevant material in its pure form. These notes were then coded using the same codes identified in the previous step. Management and employees were treated at the same level.

This process was done by the principal researcher, so inter-rater agreement was not an issue (Miles and Huberman 1994). The use of frequency tables and the subsequent reporting of only those significant findings (frequency equal or greater than three) limits researcher bias. Comparison of interviews with data collected from the survey acted as a method of triangulation. The authors were given copies of written material (brochures, etc.) that were also used in triangulation. Finally, upper management received a project report and a copy of this article and provided feedback to the researchers supporting the findings’ validity (Yin 1994).

Results and discussion

Descriptive statistics

The company ranked above the scale’s midpoint for innovativeness, with product innovativeness being the highest (**Table 4a**). This result contrasts with what has been previously reported in the forest products industry, especially among primary manufacturers following a commodity product strategy, where process innovativeness is consistently highest. For example, Crespell et al. (2006) studied innovativeness in the U.S. sawmilling industry and found process innovativeness to be the most important. This makes sense for a commodity-oriented industry, where lowering costs and improving yield may appear as the most straightforward way to innovate.

When compared to hourly employees, management generally indicated higher levels for most variables (**Tables 4a and 4b, Fig. 4**). However, interest in innovation and innovativeness was higher among hourly employees, although only significant for business systems. This finding is consistent with several comments made in the interviews and in the open-ended questions, where respondents reported a certain resistance to change from supervisors, who make up most of the group we called “management.” Commitment and job satisfaction showed very high levels, with most respondents falling in the higher classes (**Figs. 4 and 5**). Some items showed high levels of consistency among respondents, as illustrated in **Table 5** (on page 14). It is worth noting, that in the eyes of the president of the company, process innovation has the highest priority from a strategic point of view, followed by business systems, and then products.

As an employee-owned and operated company, employee pride runs high at *Innovate Inc.* Employees call themselves “owner-artisans” and strive for excellence, customer satisfaction, and economic value.

Relationships among variables

We looked at the correlation among the different constructs, looking for evidence in favor or against the hypothesized model. **Table 6** (on page 15) shows the correlations among variables.

Table 4a. — Descriptive Statistics by Type of Respondent

Construct	Sub-variable	<i>n</i> Respondents		Mean		<i>p</i> value t test ¹
		Man- agement	Emple- yees	Man- agement	Emple- yees	
Innovativeness (1–7)	Product	9	76	4.9*	5.2*	.32
	Process	9	76	4.3	4.7*	.15
	Bus. Systems	9	76	4.1	4.9*	.01
	Composite	9	76	4.4	5.0*	.07
Interest in Innovation (1–7)	Interest in Innovation	9	75	4.9*	5.1*	.61
Organizational commitment (1–7)	Identification	9	75	6.4*	5.5*	.01
	Loyalty	9	75	5.8*	4.4*	.00
	Involvement	9	75	6.5*	5.9*	.05
	Composite	9	75	6.2*	5.3*	.00
Job Satisfaction (1–5)	Job Satisfaction	9	67	4.8*	3.9*	.01
Organizational Culture (1–7)	Clan	9	75	5.2*	4.5*	.10
	Entrepreneurial	9	75	4.1	4.3*	.60
	Market	9	75	4.1	4.1	.96
	Hierarchy	9	75	4.8*	4.6*	.72
Creative Climate (1–7)	Supervisor Encouragement	9	75	5.2*	4.9*	.22
	Resources	9	75	5.3*	5.4*	.89
	Team Cohesion	9	75	5.3*	4.8*	.10
	Challenge	9	75	4.7*	4.3*	.26
	Openness to Innovation	9	75	4.2	4.4*	.32
	Autonomy	9	75	4.9*	4.6*	.44
	Composite	9	75	4.9*	4.7*	.18

* Significantly different from the midpoint of the scale (neutral position)
¹ Values less than 0.05 mean a significant difference between the two groups of respondents

Table 4b. — Ratings for Constructs Assessed Only by the President of the Company

Construct	Indicator	Rating
Business Strategy (1–6)	1: Low cost	6
	6: Differentiation	
Innovation Strategy (1–7)	Product	3
	Process	6
	Bus. Systems	5
	R&D	4
	Composite	4.5
New Product Performance (1–7)	Revenue	1
	Sales Growth	1
	Profits	1
	Composite	1

The positive and significant correlations provide support for the model. Particularly insightful is the positive relationship between variables such as organizational commitment and job satisfaction with a creative climate. In other words, high levels of climate dimensions (listed in **Table 1**) are positively associated with job satisfaction and organizational commitment (loyalty, identification, involvement). This means management can foster a creative environment while at the same time increasing job satisfaction and commitment. This is expected to have a positive domino effect on productivity, efficiency, and safety (Mathews and Shepherd 2002, De Cuyper and De Witte 2006).

Work climate, organizational culture, and innovativeness

Work climate was perceived as favorable for innovation, with values of 4.7 and 4.9 for management and employees, respectively (in a 1 to 7 scale). Supervisor encouragement, team cohesion, and resources were rated highest among assessed factors. Of some concern are values around 4 (midpoint of the scale) for Openness to innovation for

Figure 4. — Paired Comparisons Between Management and Hourly Employees

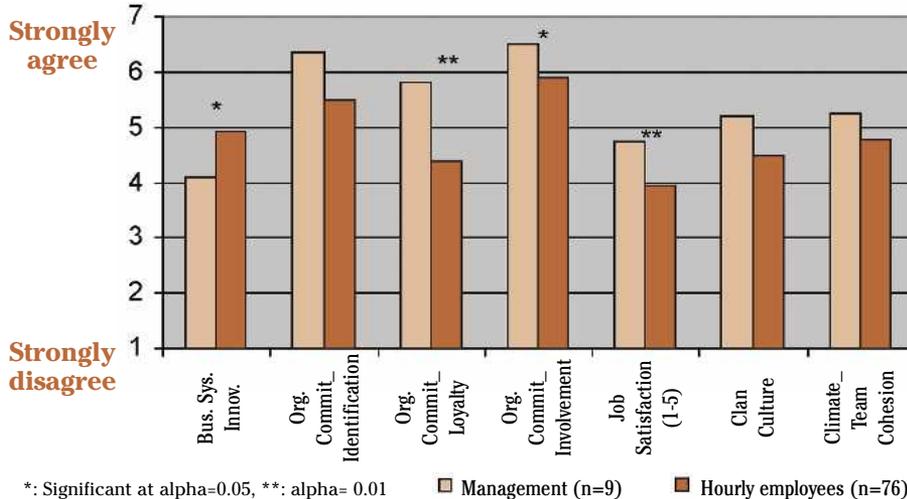


Figure 5. — Job Satisfaction by Type of Respondent

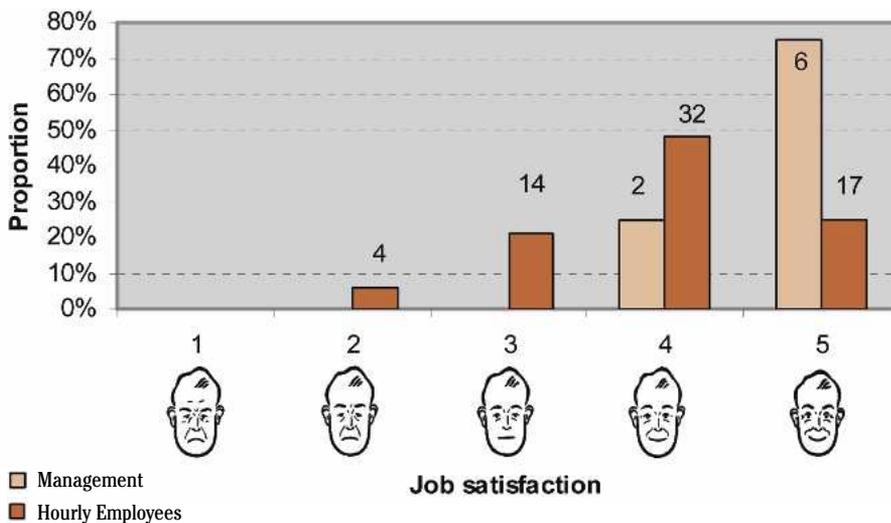
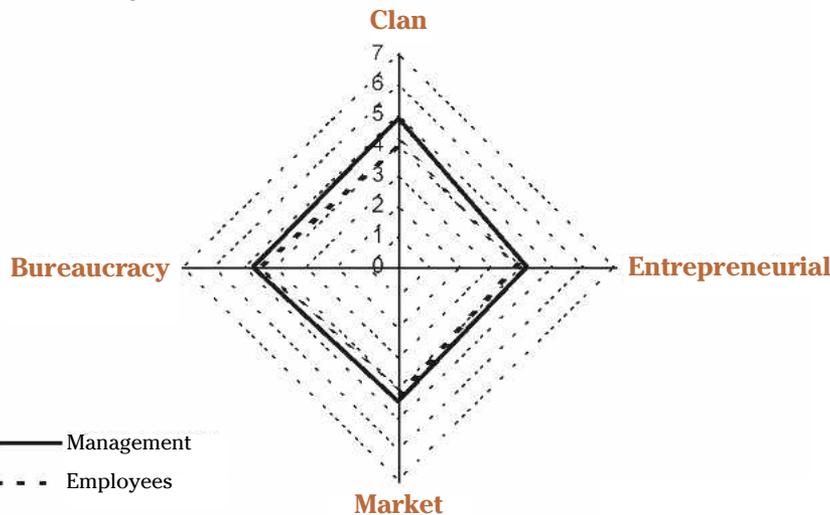


Figure 6. — Organizational Culture Profile for Innovate, Inc.



supervisors. This suggests that there is room to promote the value of innovation within this influential group.

In terms of culture, the results suggested a balanced culture, with a combination of all four types assessed. In other words, there is no dominant culture, but a combination of the four types. These results are strongly supported by the data collected on site (survey plus interviews) and are consistent with previous work that suggests most successful firms are those having a balanced mix of all types of cultures (Cameron and Quinn 1998). According to these authors, this balanced culture is described as friendly and encouraging (clan), innovative (entrepreneurial), results oriented (market), with strong leadership and clear procedures (bureaucracy) (Fig. 6).

In terms of organizational values, the following were identified in the interviews as the most important for Innovate Inc.: customer satisfaction (quality and timeliness), respect and caring for their people (recognition, autonomy, and open communication), innovation, safety, and social responsibility.

As mentioned before, the questionnaire included three open-ended questions probing for climate factors that promote/prevent innovativeness in the workplace. Some factors do not strictly belong to work climate, but certainly influence it, and were kept to show what is important to the respondents (Tables 7a and 7b, on page 16).

Many similarities exist with the findings of Hansen et al. (2007). They interviewed 35 forest product industry managers from North America, Europe and Oceania assessing what managers perceive to be attributes of innovative companies. They emphasized the importance of internal communication, having a positive managerial attitude toward change, having a skillful workforce, and fostering a pro-innovation work climate, among other factors less related to this study. The most important hurdle to innovation is resistance to change, which is also consistent with this study's findings.

When asked for suggestions for fostering innovation in the workplace, people normally emphasized the same factors already mentioned as promoting or preventing innovation. However, several responses stand by themselves and are worth mentioning. The following points summarize responses

Table 5. — Example of Items with High Consistency Among Respondents

Variable	Item	Proportion of responses by category	
		6–7 (Extremely Agree)	1–2 (Extremely Disagree)
Innovativeness (Products)	Over the past three years, our company has been better than before regarding developing of new products	65%	5%
Interest in innovation	I often try out, on my own, a better or faster way of doing something on the job	54%	5%
Organizational commitment (Identification)	I am quite proud to tell people that I work for <i>Innovate Inc.</i>	69%	2%
Organizational commitment (Involvement)	In my work, I like to feel that I am making some effort not just for myself, but for the organization as well	82%	0%
Organizational commitment (Involvement)	To know that my own work had made a contribution to the good of the organization would please me	80%	1%
Climate (Challenge)	Most tasks at work are easy to execute ¹	5%	50%

¹This item has to be reversed, so 1–2 is the “desirable” response (a higher value for the concept of interest)

obtained from 28 respondents, who provided suggestions. They suggested:

- Encouraging telling successful stories of innovation.
- Job rotation as a way for employees to get fresh ideas and a better understanding of the whole picture.
- A more accessible upper management (“*modest, personable, genuine*”), open to change and timely in its responses.
- Better and more structured channels of communication, in the form of brainstorming meetings and a suggestion box (for ideas and complaints).
- More autonomy, but not at the expense of good communication (that is, more independence from supervisors).

Qualitative results: insights from personnel

The interviews yielded additional information that provides insight into the work climate at Innovate Inc. Interviewees identified several drivers of innovation, with foreign competition (notably China) being the most relevant. At a more personal level, ownership was paramount. Other factors, of an internal motivation nature, were mentioned, such as the need to become valuable to the company, or the satisfaction found in being challenged by the task at hand.

“I enjoy coming to work everyday . . . I enjoy the atmosphere. It is a big happy family...They are open, I feel appreciated and my work is recognized...I don't get to work for a bonus [not the main motivation]...It's nice to have, but it is something for the long run” (Young female staff)

Hispanic interviewees showed high levels of commitment and job satisfaction. One major difference was the weight they placed on external motivation such as salary, rewards, and stock share. They feel recognized and are aware of management's high appreciation of them. In fact, one top manager had this to say about Hispanics:

“I don't think the company would be here if it wasn't for the Hispanic population moving into this area.”

This demographic shift occurred about 15 years ago, when the company was growing and most Caucasians were being attracted by hi-tech companies, so Innovate Inc. resorted to the Hispanic population, aided by a bilingual internal champion of Hispanic origin. The same manager adds:

“. . . I have never seen any sign of discrimination..., their work ethic is amazing.”

Two Hispanic employees said:

“We love the company. They care for each and every one.” (Translated from Spanish¹)

Upper management showed awareness of the need to better train their supervisors. Areas identified as requiring reinforcement are: people skills (communication), handling of power conflicts, and openness to innovation. Supervisors call for better skills for handling visits by upper management, since they currently react by turning nervous and bossy as a way to demonstrate control over people under their direction.

When asked about sources of innovation, outside sources were found to be the most important. Sources mentioned were vendor sales representatives, customers, and end users. The company has a prolific record of product innovations as a direct request or challenge from end users. To implement those innovations, management normally has resorted to outside assistance in the form of external consultants. This is a rather new approach (within the last three years), as they previously followed an in-house strategy. Management is also active in attending trade shows and staying up to date with relevant magazines. Likewise, they have invested heavily in brand equity by recently updating their Website and brochures, which are sent out to over 5,000 architects and designers. People from Marketing and Sales spend a great deal of time on the road.

¹ Original text in Spanish: ‘Amamos la compañía. Se preocupan de todos y cada uno’

“We are always on the lookout for new channels that can take us to specific niche markets” (VP Marketing and Sales).

However, they take time at the mill to talk with manufacturing. The Marketing and Sales Department is deemed so critical that, in preparing for a VP’s retirement, they have been training a successor for several years.

The innovation process has traditionally followed an informal approach (open door policy); however, brainstorming does occur on a regular basis and involves small groups of people. Some believe that a more formal idea system might help more introverted employees to bring up ideas or elaborate on them in advance, improving their chance of implementation. Hispanics also felt it might be good for individuals less fluent in English.

The lean thinking philosophy was consistently mentioned as a key aspect of innovation in Innovate Inc. Besides being highly successful, it was a very inclusive process, where people learned first-hand the benefits of change. They now reportedly work with less effort, faster, and safer.

“Lean succeeded in passing the notion that everybody is involved” (Senior Manager).

Final remarks

Innovate Inc. is a company with a balanced, strong, and learning culture that quickly adopts new management practices (for example, lean manufacturing). The company is continuously listening to the marketplace, customers, and suppliers. It also has a clear strategic direction (mission and vision), is internally focused, empowers its people, and prides itself on the quality of its products and relationships. In recent years, the company has moved from an internally oriented organization into a company seeking help from external sources when needed (for example, engineering, consultants, certification agencies, and advertising agencies). It has improved its brand equity and is constantly reinventing itself to face a complex environment.

Upper management has a great deal of support and leverage, and uses it actively as a change agent. The key to the company’s successful innovativeness has been management’s ability to get enough buy-in and alignment among employees before, during, and after the implementation of innovations (for example, lean manufacturing). Work climate is characterized by the feeling of belonging to something bigger than individuals, where every opinion counts and receives attention. In their own words, it can be defined as “caring, safe, rewarding, serious, gratifying, satisfying, challenging, fun, easygoing, and respectful.” Upper management strongly believes in open channels of communication and has promoted a culture where collective interest is put before individual interest. At the time of the field visit, an effort was underway to collectively develop a

corporate “guiding statement.” This all-inclusive approach was purposively planned as a tool to align everyone around a shared sense of mission and values. The company kindly allowed the authors to see some of the preliminary results of this process. The following quotes are excerpts from the guiding statement as of February 2007:

“Our goal is to sustain a secure future through innovative new products and increased customer satisfaction which ultimately results in increased business”

“To provide opportunity for people to grow with mutual respect and a desire to constantly improve through involvement and education”

“At Innovate Inc. we are committed to respecting and honoring everyone we work with and do business with. At Innovate Inc employees and management trust and appreciate each other and everyone is treated fairly and has pride in what they contribute to the company. Everyone has an equal opportunity to succeed. This is what makes our company stand apart from all the others”

The recent acquisition of a company with strong R&D capabilities is likely to foster innovation even further, an impression consistently expressed by employees. A follow-up interview with the company’s president confirmed the smoothness of the process, especially in terms of the integration of both workforces. It is the president’s belief that the fact of being an employee-owned company has proven to ignite people’s commitment, ownership, and openness to change and continuous improvement. This idea seems to be shared by some employees, as shown by this statement:

“Employees work toward innovation, because as employee owners, it pays to be innovative and successful” (Hourly employee, male)

The study of this innovative company gave preliminary support to the proposed theoretical model in terms of factors involved and their inter-relationships. In the case of *Climate for innovation*, all six factors of the scale were found to play a key role at Innovate Inc. In this

Table 6. — Pearson’s Coefficient of Correlation (r) Among Variables of Interest

	Innovativeness	Interest in innovation	Job Satisfaction	Creative Climate	Organizational Commitment
Innovativeness	1				
Interest in Innovation	.24*	1			
Job satisfaction	.26*	.32**	1		
Creative Climate	.49**	.26*	.58**	1	
Organizational commitment	.28**	.23*	.63**	.51**	1

(*) = Significant at alpha= .05

(**) = Significant at alpha= .01

Table 7a. — Factors that Support Innovation. Frequency of Responses (n=45)

Factor	Sub-factor	Frequency
Effective upper management	Leadership	3
	Support	9
	Vision	3
	Openness	4
	Excellence	4
	Total	23
Lean manufacturing		6
Autonomy		4
Communications (Open/Clear)		3
New product development		4
Need to remain competitive		3
Openness to innovation of employees		4
Employee's skills		3

Table 7b. — Factors that Prevent Innovation. Frequency of Responses (n=40)

Factor	Sub-factor	Frequency
Fear to change (old school of thinking)	Age, history, other	10
Ineffective management	Not open to innovation	3
	Others	6
	Total	9
Poor communications	Hierarchical barriers	3
	Insufficient discussion	3
	Other	3
	Total	9

respect, the only observation made by the company's president was that "Challenge" should be focused on how to improve processes rather than on the task itself. Lean thinking is at the core of that belief. Further research will test the model with appropriate statistical analyses and a sound sample size.

Managerial implications

No recipes can be given as to how to manage for innovation. However, managers of small businesses can learn from this case how active leadership and a pro-innovation culture can foster innovativeness. A synergistic effect may allow a favorable impact on financial performance, while building commitment and job satisfaction at the same time.

This case shows how managers willing to become change agents must first believe in the wealth of knowledge, skills, and creativity among their employees. This realization must then be turned into trust and higher levels of autonomy and open communication. Employees are likely to react

favorably to such treatment, allowing for further changes in the form of new product lines, new markets, and/or new technologies, among others. The pursuit of a pro-innovation culture will likely demand the organic transformation of the organization, in order to integrate its culture (values), strategy, structure, and functions in a harmonic whole.

Limitations

By its nature and design, this study is exploratory and no inferences to a larger population are made beyond the support of a theoretical model assessing work climate for innovation and innovativeness. Associations are not proof of causality. The study lacks a time component and therefore no longitudinal analysis is possible. The results may be appropriately applied only to comparable groups in terms of demographics and cultural background. More interviewers may have meant higher reliability and validity of the results.

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