Implementation of an Organizational Innovation Assessment Survey

by

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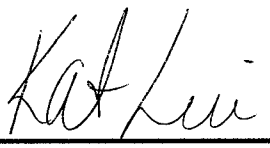

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ABSTRACT

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The purpose of this study is to investigate the state of creativity and innovation in Minneapolis – Saint Paul, MN (Twin Cities) companies. Innovation has become a significant competitive advantage for companies in the face of growing global competition but there has been some confusion as to what innovation is and how it can be used as a competitive advantage.

A 15-question survey was used and distributed to all members of the American Society of Training and Development – Twin Cities Chapter (ASTD-TCC), for a total of 604 subjects. A total of 131 responses were received, for a response rate of 22%.

Survey results were collected by the researcher and examined by using percentages of responses that definitely agreed, somewhat agreed, somewhat disagreed or definitely disagreed with each statement, with the final item asking for additional comments.

It was concluded that over 90% or respondents generally agreed that creativity and innovation are important parts of their everyday job, but that the process of innovation is poorly understood and generally not managed.

Additional research would be to focus on measuring and evaluating the culture of innovation, as this has been found to the single largest factor of influence in the innovation process.

Acknowledgments

As so many of us have observed, a project such as this one is the result of a team effort, with many members of that team playing a long-standing supportive role. There are so many more people that have been instrumental in the success of this work that it would take much more space to acknowledge than I have here. A few, however, have gone above and beyond the call and deserve special mention.

To all the members of ASTD-TCC, thank you all for your responses and support. Without your input, this simply would not have happened. I hope this information is shared and debated for many years to come, your insights and feedback have showed me that we have found a topic of significant interest to all of us.

To the faculty and staff of UW-Stout that I have had the pleasure of working with, I will truly miss all of you. Stout has been like a second home for me of late, and while I was still employed in a previous career it was a place where I could freely express and debate my still-developing philosophies. I have never had a better educational experience in my entire life.

To my advisor and mentor, Kat. All of this started in your office a few years back when you thought it would be really neat to read a thesis about creativity. Well, here it is. I cannot even begin to express the gratitude that I have for your patience, compassion and expertise that made this project so much better than it could have been if I had done it all on my own. I am truly honored to work with you.

To my parents, Henry B. and Antoinette W. Suydam, I thank you for the opportunity that you have given me to pursue a higher education. Not only did you give me the opportunity to go to college, but you also modeled for me a great curiosity of

things mechanical (Dad), a great love of reading in general (Mom). Without your sacrifices, patience and love, I would never have made it as far as I have.

To my wife and life partner Sue; I thank you for your patience (which has been tested more times than I care to admit), support and love, and the occasional teddy bear. Such is the nature of true love and dedication. After all these years, I have finally achieved my long sought-after goal. Now it's your turn!

This project is dedicated to the memory of Howard Stephen. A more genuine man I have never met. You left us way too soon and we miss you dearly.

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Chapter I: Introduction

Consider the following hypothetical posting to an online discussion board of an international corporate training and development discussion board:

"I'm a training and development manager for a medium-size manufacturing company (let's call it ACME Manufacturing) in the upper Midwest. I love my company and I love my job. The employees are all personable, ambitious workers and they care about their work and our company. Our management team is well liked and respected, and we have minimal turnover. My boss is the VP of HR and she's done wonders helping our organization to achieve real high performance. We live in a small city (50,000 people) and, in general, life is good here.

About six months ago, I watched a video about a very innovative product development company, and it gave me the idea that maybe we could develop a training program here at ACME to help us develop better, more innovative products ourselves. I showed the video to our senior management team and, although they were quite interested and generally excited about the whole idea, they decided that we could not afford the time or resources to implement such a program at the time, as we were ramping up to a new product launch. That was six months ago.

About a month ago, we had a major product introduction at a Tokyo trade show. While we were expecting a lot of positive press coverage about a product that we felt was one of our best ever, we apparently were in for a rude surprise. When our CEO in particular noticed the difference between our products and those of our competitors, he was not at all pleased. By comparison, our products seemed dull, boring and lifeless

compared to competitor's products (especially from overseas) that were also of higher quality for a similar price.

As if that weren't enough, two weeks ago the quarterly sales numbers came out and the news was almost all bad. International sales were down by fourteen percent, and North American sales were flat. Margins for all products continue to shrink as overhead in general and utility expenses in particular have continued to rise.

Clearly, we had to do something and fast.

Last week, the senior management team met to strategize a way to revitalize the company. My boss saw this as an opportunity to implement a new training program in organizational creativity and innovation. Yesterday, she called me in to her office to tell me that a new company-wide program, called INNOVATE OR DIE! will be launched in four months (at the beginning of the corporate fiscal year). It is now up to me to develop a training program for the entire company and have it ready to go to coincide with the launch of the new corporate initiative.

Don't get me wrong, I love the idea and have been pushing for this program ever since I saw that video. The problem is this. We're looking to find some companies that have launched a successful innovation intervention. How did they do it? I read about how all these companies are being so innovative and about all these great new products and processes that they are supposedly developing, but has anyone out there in the real world actually done this? Is the new culture of innovation for real? Or, is this just another theoretical construct that will never make it to the light of day?"

Although this is a hypothetical example, organizational innovation has been getting a lot of attention lately, and for good reason. In today's competitive business

climate, an organization needs to use every advantage it can to survive, let alone thrive. Historically speaking, a competitive advantage of access to natural resources, cheap labor, or protections such as government tariffs on competitive products, is no longer sufficient to insure long-term survival. Instead, organizations are increasingly becoming aware that their greatest advantages are no longer tangible assets, the so-called bricks and mortar of their organizations, but rather from the intangible assets of the knowledge and resourcefulness of their employees (Pfeffer, 1995).

In its seventy-fifth anniversary issue, Business Week magazine (2004) proclaimed that innovation is about continually pushing back the boundaries of what is possible. The key, according to an interview with Steve Jobs, co-founder of Apple Computer, is to have good people with a passion for excellence. If you hire good people and challenge each other every day you make the best products possible. If this is true, how many organizations today embrace this way of thinking?

Organizations in today's competitive environment need to do everything that they can to bring new and exciting products and service into the marketplace, gaining a strategic advantage in both time-to-market and the development of new and innovative features. If they don't, the competition surely will. The successful organization will shorten the pipeline of product and process development to sustain their competitive advantage (Cook, 1998).

One particular aspect of this performance has to do with the organization's ability to continually develop new and better ideas. It has even been argued that ideas are really the only strategic advantage left. Today, we are now living in the idea economy since

ideas are the only thing that truly distinguishes a successful product or service from the unsuccessful (Godin, 2000).

The popular opinion is that innovation is becoming a critical component organizational strategy, but is that really true? What are organizations in the Twin Cities doing about it? Are they actively managing the innovation process? Do they even have a process for the management of product and process knowledge? Does it even matter? In other words, what is the state of innovation within organizations in the Twin Cities area?

Statement of the Problem

The problem of this study is to get an accurate assessment of the state of innovation in Twin Cities organizations. In order to do so, a commercially available survey tool (Hattori and Wycoff, 2004) will be used to collect information as it relates to this study. In addition, a literature review will be done according to the definition and framework of innovation as defined in this tool in an effort to assess both the accuracy and relevance of the data collected. The information gathered must be relevant, timely, and be able to help an organization pinpoint specific areas in which improvements can be made that will directly affect business goals.

This study is clearly needed due to continuing obligation for organizations to increase performance in the face of on-going global competition. Any company that can streamline operations to bring new, innovative products or services to market faster than the competition will have a significant strategic advantage. Any company that does not simply will not survive in the long term.

Purpose of the Study

The purpose of this study is to find out what the state of innovation is among Twin Cities area organizations. Organizations need a way to measure innovation for three basic purposes:

1. To generate a benchmark pre-assessment prior to any intervention process.
2. To find a way to actually measure innovation itself.
3. To have a tool available to measure on-going improvements and highlight areas where improvements can be made.

Assumptions of the Study

The assumptions that this study is based upon are as follows:

- Any organization wanting to improve their performance has an organizational culture that will support innovation efforts.
- Communication within the organization is open and honest.
- Employees care about the financial future of their company.
- Employees know and understand that their input matters and will be handled discreetly and in confidence.
- Employees want to contribute to the success of their organization.
- Both employees and management understand that a mutually beneficial outcome is the only viable long-term solution.
- Employees and management will approach the process with an open mind.
- The culture of the organization is based upon mutual respect and trust among all employees.
- Management understands how their behavior can influence an organization.

- The synergy of the whole of an organization can be greater than the sum of its parts.
- People can understand and accept possible paradoxes, if only temporarily.
- People are willing to grow and learn.
- People are capable of positive change.
- Everyone is unique, therefore everyone has a unique and valuable gift for insight that no one else can have.
- Creativity can be accurately quantitatively measured.
- Creativity can be improved through a well-developed training program.

Definition of Terms

ASTD-TCC: American Society of Training and Development – Twin Cities Chapter.

Brainstorming: The process of developing new ideas without judgment or censorship (Kelley, 2000).

Creativity: The process of discovering new ideas, or new applications or combinations of old ideas (Amabile, 1998)

Innovation: The purposeful and organized search for changes, and the systemic analysis of the opportunities such changes might offer (Drucker, 1985).

KEYS: A creativity survey tool (Center for Creative Leadership, 2004)

Organizational Culture: a set of shared values, beliefs, norms and artifacts that are used to interpret the environment as a guide of all kinds of behavior (Desimone, Werner and Harris, 2002)

SWOT: Strengths, Weaknesses, Opportunities and Threats

Limitations of the Study

The basic limitations of this study are time, resources and information as follows.

- The research is limited to a single, heterogeneous organization.
- The research will only indicate general patterns or beliefs among the survey participants and, as such, it will not be possible to make specific recommendations.
- The research will also be limited by the number of member of ASTD-TCC who feel that this assessment is useful and worth the effort to participate in.
- The survey instrument will be available only from November 30, 2004 until December 10, 2004.

Methodology

In an effort to understand the importance of innovation among organizations in the Twin Cities area, a survey will be administered to members of ASTD-TCC. The survey will be administered from November 30 until December 10, 2004. The survey will be adopted from Hattori and Wycoff (2004) and administered via an online survey administration Web site, www.questionpro.com.

Chapter II: Literature Review

Introduction

Innovation is a complex system that incorporates everything about an organization – and more. Yet, innovation in and of itself does not happen in a vacuum, as such is its very nature. If this is the case, how does one define what how innovation works or how to improve it if one cannot even define such an obscure process? It is much too important to be ignored, as the consequences can be disastrous (Hamel, 2000):

> "Somewhere out there is a bullet with your company's name on it. Somewhere out there is a competitor, unborn and unknown, that will render your strategy obsolete. You can't dodge the bullet – you're going to have to shoot first. You're going to have to out-innovate the innovators. Those who live by the sword will be shot by those who don't."

This literature review was undertaken in an effort to find out what the latest research and opinion was on subjects as they relate to the problem statement. Hattori and Wycoff (2004) have developed a survey instrument that will be used for this field problem, which defines innovation as a framework of the following principles:

- Operational principles
    - Challenge
    - Customer focus
    - Creativity
    - Communication
    - Collaboration
    - Completion

  - Contemplation
- Culture
  - Leadership
  - People
  - Basic values
  - Innovation values
- Context

These principles of innovation also compare to Cook's (1998) factors of organizational creativity, Roffe's (1999) range of skills necessary to implement innovation and creativity training and Andriopoulos' (2001) determinants of organizational creativity.

This section of the field problem will review current literature as it relates to each of the previously mentioned principles, which in turn will be compared to the survey results.

Operational principles

The operational principles are the basic components of innovation that are at the very core of the process. These principles include challenge, customer focus, creativity, communication, collaboration, completion and contemplation (Hattori and Wycoff, 2004).

Challenge

The first of the operational principles of innovation is the challenge. This is the driving force that pulls innovation forward, the promise of what could be: new products, new services, shorter lead times, being closer to the customer, cutting costs and

streamlining operations. Challenge is also motivation, the idea the people have some internal drive to do what they do.

Motivation comes in two forms, extrinsic and intrinsic. Extrinsic motivation come from outside the individual, whether it's the offer of a bonus for completing a project ahead of schedule or the threat of punishment if it runs late. Intrinsic motivation comes from within the individual, from a person's abiding interest in certain activities or a deep love of a particular challenge.

Amabile (1998) argues that intrinsic motivation is the key to the process of creativity, a critical component of the innovation process. She also has shown that extrinsic motivation (a bonus for instance) only works up until the point where the creative person might feel that their talents are being bought and that beyond this point the extrinsic motivation may actually de-motivate the employee with the feeling of being bribed to accomplish a certain task. The task is match the right people with the right assignments, allocate appropriate amounts of time and project resources, and let employees know that what they do matters.

Customer Focus

Drucker (1985) admonished his readers to look for innovative opportunities both inside and outside of their organizations. His three sources of innovation that involve change outside the enterprise of industry are:

- Demographics (population changes)
- Changes in perception, mood and meaning
- New knowledge, both scientific and nonscientific

Any organization today needs to anticipate their customers' needs, as any organization that simply satisfies the customer will lost business to the organization that truly delights them. At the leading-edge design firm, IDEO, things are done a bit differently as Kelley (2000) describes their five-step methodology:

1. Understand the market, the client, the technology, and the perceived constraints of the problem.
2. Observe real people in real-life situations to find out what makes them tick: what confuses them, what they like, what they hate, where they have latent needs not addressed by current products and services.
3. Visualize new-to-the-world concepts and the customers who will use them.
4. Evaluate and refine the prototypes in a series of quick iterations. We watch for what works and what doesn't, what confuses people, what they seem to like, and we incrementally improve the product in the next round.
5. Implement the new concept for commercialization.

As the expression goes, the customer is your best source of funding. Actually making the effort to find out what the customer wants is critical to any organization's success. Yet, there still are those revolutionary products that totally reinvent existing markets, or even create completely new ones. Godin (2003) suggests that if you keep making average products for average people, you're going to fail. In this age of continual change and upheaval, it's less risky to be risky and it's not safe to be safe.

Creativity

From ancient times, mankind has recognized the personal, even spiritual aspect of creativity (Cleary, 1996):

"The Great Spirit has made us what we are: it is not his will that we should be changed. If it was his will, he would let us know; if it is not his will, it would be wrong for us to attempt it, nor could we, by any art, change our nature - Seneca Proverb"

Everything created by mankind, from a bridge to a poem to a new market strategy for the near east market for next year always starts as an idea. As human beings, we are hard-wired for creativity (Petrowski, 2000). Creativity is not about perfectionism where there is only one right answer; rather there are many possible solutions with different benefits and drawbacks. Also creativity, by it's own nature, at different times may require privacy, novelty, new experience or stimulation by exposure to new and different ideas and experiences.

Although we, as human beings are curious and creative by our very nature, our organizations typically are not. Alder (1994) found that many large companies have a hierarchical, top-down command and control mindset that "continue to waste the inherent creativity of all or most of the workforce...One-sided thinking is insufficient to cope with the changing, competitive world." The organizational culture has a critical influence on creativity's ability to grow and thrive.

Communication

Communication is critical to the health of any organization. The open and honest communication of ideas, information and emotions is another critical component of the process of innovation. In the realm of innovation when it comes to generating new ideas,

most companies rely on brainstorming sessions. This is a good strategy, and again Kelley (2000) and IDEO have developed the following techniques for getting the most out a brainstorming session:

1. Sharpen the focus – Good brainstormers start with well-honed statement of the problem. This can be as simple as a question.
2. Playful rules – Don't start to critique or debate ideas. It can sap the energy of the session pretty quickly. You need a way to turn aside critiques without turning off critiquers completely.
3. Number your ideas – Numbering the ideas that bubble up in a brainstorm helps in two ways. First, it's a tool to motivate the participants before and during the session. Second, it's a great way to jump back and forth from idea to idea without losing track of where you are.
4. Build and jump – Watch for chances to "build" and "jump". High-energy brainstormers tend to follow a series of steep "power" curves, in which momentum builds slowly, then intensely, then starts to plateau.
5. The space remembers – Great brainstorm leaders understand the power of spatial memory. Write the flow of ideas down in a medium visible to the whole group.
6. Stretch your mental muscles – People are busy. Time is short. Is it worthwhile to "burn" some time at the beginning of a brainstorm doing some form of group warm-up? Maybe.

7. Get physical – Good brainstorms are extremely visual. They include sketching, mind mapping, diagrams, and stick figures. You don't have to be an artist to get your point across with a sketch or diagram. Leave your performance anxieties at the door and jump in with whatever visual tools you have available.

Although this is all well and good for a company that can fit the entire team in the same room with coffee and doughnuts, Kay (1995) has found that electronic brainstorming (EBS) can be an effective tool as well, even if all participants are within the same building. Traditional brainstorming is useful, but can be dominated by overzealous individuals or management's scrutiny of ideas, and sometimes it is simply difficult if not impossible to schedule a meeting that will allow everyone to attend at the same time and place. EBS allows people within groups to submit ideas anonymously, allows members to work together simultaneously, and also allows the automatic recording of ideas for later use.

Collaboration

Innovation is a group activity. Any restrictions in ideas, methods or processes will dampen the spirit and the effectiveness of the process. Williams (2002) found that people will often self-censor their own ideas, even before they allow them to be brought forward and presented to a group as a viable alternative. He found this to be because of a number of reasons such as the fear or negative criticism, low self-esteem or the fear that someone else may steal their ideas. It is critical that managers, trainers and facilitators bear in mind that self-doubt and a critical environment will impair creative performance.

In an observation of how Toyota develops new cars, Sobek, Liker and Ward (1998), found that:

> "Many observers, managers and engineers claim that face-to-face interaction is the richest, most appropriate form of communication for product development. Numerous companies now colocate functional experts so that interaction can occur with much greater ease and frequency."

This is not to imply that collaboration requires all involved to come to a unanimous agreement. One Toyota engineer that was interviewed when asked what makes a good car replied "Lots of conflict". In this context, however, Sobek et al (1998) found that conflict meant that people from different functional areas were simply clearly representing the issues from a different perspective.

Completion

Innovation is more than just coming up with great ideas, there has to be a positive, profitable outcome that benefits the organization in order for the effort to be considered a success. Levitt (2002) found that:

> "The trouble with much of the advice business is getting today about the need to be more vigorously creative is, essentially, that its advocates have generally failed to distinguish between the relatively easy process of being creative in the abstract and the infinitely more difficult process of being innovationist in the concrete."

More than just coming up with new ideas, employees need to understand what resources might be available, what costs may be involved and what benefits might be achieved if the effort is successful.

The challenge, according to Stata (2004) is to balance a culture of accountability with a culture of learning in experiential businesses. By nourishing the interaction between the established and the experiential businesses, each can learn and benefit from each other while the conflicting cultures can maintain their independent identities.

Finally, for many innovative ventures, by the time they reach production state they are merely shadows of their initial ideas. Does this imply that the initial idea was a failure? Hardly. Farson and Keyes (2002) propose the ideas that the successful manager will confront failure as much as success. Although that may not sound like a great success rate, the difference is that the successful manager understands that failures are necessary steps taken toward eventual success. A new enlightened approach, known as productive mistake-making, may be the only way to both manage risk and also learn from setbacks on the way to the eventual success.

Contemplation

After the end of a major project, how many companies review how things went in an effort to find the lessons learned? How many are willing to not only generate a list of those lessons, but also disseminate them to all team members involved? How many actually will proactively try to learn from those lessons in the future? Not enough.

The experience, both good and bad, of all project team members, their ability to access information, innovate and think creatively is a key competitive advantage that many companies simply do not take advantage of (Facilities, 1997). That experience, if collected and distributed among team members, can formulate the foundation for new and successful programs, even if prior efforts were less than successful.

Successful innovation is also about taking the time and energy to create the environment in which the process can occur. Although some may object to what at first may seem like unrealistic or even ridiculous measures, the results can be impressive (Smolensky, 1995):

> "Dr. Yoshiro NakaMats, the most prolific inventor of all time, used environment particularly well. One of his more than 2,300 patents includes the floppy disk, which he licensed to IBM. Dr. NakaMats divides his creative process into three parts, each of which is represented by a separate place. His static room, filled with natural things such as plants and running water, provides him with complete tranquility for free-associating. His dynamic room features special audio and video equipment, and is used for listening to music which helps to bring ideas together. Finally, since his best thinking is done in a swimming pool, he developed an underwater notepad so that he can jot down his ideas as he swims."

The successful completion of an innovational project is by no means a guarantee from the outset (Cozijnsen, Vrakking and Ifzerloo, 2000). Many innovations fail as measured against their original objective. Even in their research of fifty innovation projects in Dutch companies, Cozijnsen et al (2000) found no unambiguous influence on the success or failure of any type of innovation project.

If this is indeed the case, what can be done to create future innovation success? Caudron (2001) suggests the following tips:

1. Forget what worked in the past.
2. Recognize that you're your own worst enemy.
3. Think like an external consultant.

4. Learn about the business.
5. Become and expert in something.
6. Learn how to market yourself
7. Pursue continuing education
8. Recognize that you don't have to have all the answers.
9. Don't innovate just for the sake of innovation.
10. Accept that you'll fail sometimes.

Perhaps the most important concept of all is to understand that innovation is a process of continual learning from failures as well as successes. Today's failure may become the stepping-stone of tomorrow's success or perhaps lessons learned from other projects can broaden our perspective to take a longer-range view of what is defined as a successful venture. It even could be argued that a project that is a failure today could be tomorrow's success. If that is the case, is the overall effort a success? What does this say about our timeline for evaluation of such projects?

Culture

Culture is a critical component of any innovation initiative, and Cook (1998) asserts that culture can impact eighty percent of the total innovation process. Organizational culture is defined as "a set of shared values, beliefs, norms and artifacts that are used to interpret the environment as a safe guide for all kinds of behavior." (Desimone, Werner and Harris, 2002). Hattori and Wycoff (2004) define culture as being made up of four components: leadership, people, basic values and innovation values.

Leadership

According to Mandell (2004), in the innovative enterprise, it all comes back to leadership. Many organizations say they value innovation and creativity, but the way they behave undermines and kills risk-taking and new ideas. The successful leader needs to understand that their employees often have more creative ability than they allow themselves to appreciate. The effort needs to be made to encourage employees to develop and implement more original thinking, and to get them to share more of their ideas.

Employees' creativity can also be increased by training their managers (Williams, 2001). Some practices that can encourage creativity and innovation in the workplace are allocating enough resources for a project, designing diverse work groups and encouraging new, even strange, ideas. Since managers have a direct influence on their employees' creativity, it should be a primary goal of any intervention to make sure that managers understand how their management style can directly influence creativity and innovation in their organization.

Organizational leaders also need to understand that creativity is truly a manageable business asset (Management Development Review, 1998):

> "Rather than leaving creativity to grow by itself into something tangible, managers should work to bring a rigor into the management of ideas, much as the bring a rigor to the management of finances and long-term as well as short-term assets."

Effective leaders of creative groups are skilled team builders and outstanding leaders (King, 1995). They place a high emphasis on selection, rather than simply the management, of a creative team. They also understand that what they do is more

influential than what they say. And, they understand that freedom and responsibility without domination and control of management is critical for the success of any creative group, while protecting that group from the rest of the organization.

A good example from a real life company can illustrate just how important the role is that a true leader plays in an innovative organization (Kouzes and Posner, 1995):

> "Work even with ideas that sound strange initially. Say "Yes, if..." scenario from a utility company trying to brainstorm an idea of how to clear ice of off transmission lines so that the weight of the ice doesn't damage the lines:
>
> Team Member: Let's train bears to climb utility poles in winter to shake off the ice that breaks transmission wires. (Guess how long a suggestion of this nature would survive in most companies?)
>
> Leader: Yes, if you can explain how we could get the bears to climb the poles.
>
> Team Member: We could put pots of honey on top of them.
>
> Leader: Yet, if you can come up with a way to get the honey up there.
>
> Team Member: We could use helicopters.
>
> Leader: Wouldn't the downdraft from the helicopters blow the pots off the poles?
>
> Team Member: Yes. It would also blow the ice off the transmission lines as well. Forget the bears; let's use the helicopters to clear the lines.
>
> If people have trouble handling the "if" questions, they will arrive at "no" all by themselves."

People

Ask most organizations what they believe to be their most important asset, and they're likely to tell you it's their people. When you have copycat corporations that can quickly replicate your core competencies, what do you have left? The knowledge of key people, their ability to access information and their ability to innovate and think creatively (Facilities, 1997).

In an age where traditional competitive advantages such as closed markets, access to capital or limited natural resources have all but disappeared, people are the only true advantage any company has left. Pfeffer (1995) lists the following principles for the successful management of people:

1. Employment security
2. Selectivity in recruiting
3. High wages
4. Incentive pay
5. Employee ownership
6. Information sharing
7. Participation and empowerment
8. Teams and job redesign
9. Training and skill development
10. Cross-utilization and cross-training
11. Symbolic egalitarianism
12. Wage compression
13. Promotion from within
14. Long-term perspective

15. Measurement of the practices

16. Overarching philosophy

Each individual employee brings with them a distinct and unique set of talents and abilities that no other organization can duplicate. The core creative genius of the individual is unlike any other (MacKenzie, 1996):

> "Our creative genius is the fountainhead of originality. It fires out compulsion to evolve. It inspires us to challenge norms. Creative genius is about flying to new heights on untested wings. It is about the danger of crashing. It is amorphous, magical, unmeasurable and unpredictable."

Likewise, any organization is the collective being of all of its employees' creative genius, with its own unique personality. Perhaps more than any other, this competitive advantage will determine the future success of any organization not only because of competitive pressures, but also because of the unique and incredible talent that any organization has simply because of the people who are a part of it.

Basic Values

It is basically understood that all people want to be loved, respected and trusted in their daily lives. In addition, employees want to contribute and to be a part of the organization, as they feel that they have unique gifts and talents and they want to contribute to the organization's success (Pfeffer, 1995).

Among the attributes of excellent companies that Peters and Waterman (1982) found that were critical to their success was the respect for the individual, where every individual is seen as a source of ideas, not just acting as a pair of hands. Indeed, who

would possibly know more about the customer than the sales reps, order clerks and shipping people who deal with them every day?

There are two basic ideas at work here. First, people are important and they should be treated as such. If employees are to be trustworthy, then they must first be trusted. Second, every employee has ideas that they are willing and able to share. The successful innovative venture will capitalize on both of these ideas. And, it will definitely be a better place to work.

Drucker (1998) also highlighted another core value that is critical to the success of innovation: determination. "Above all, innovation is work rather than genius. It requires knowledge. It often requires ingenuity. And it requires focus."

Innovation values

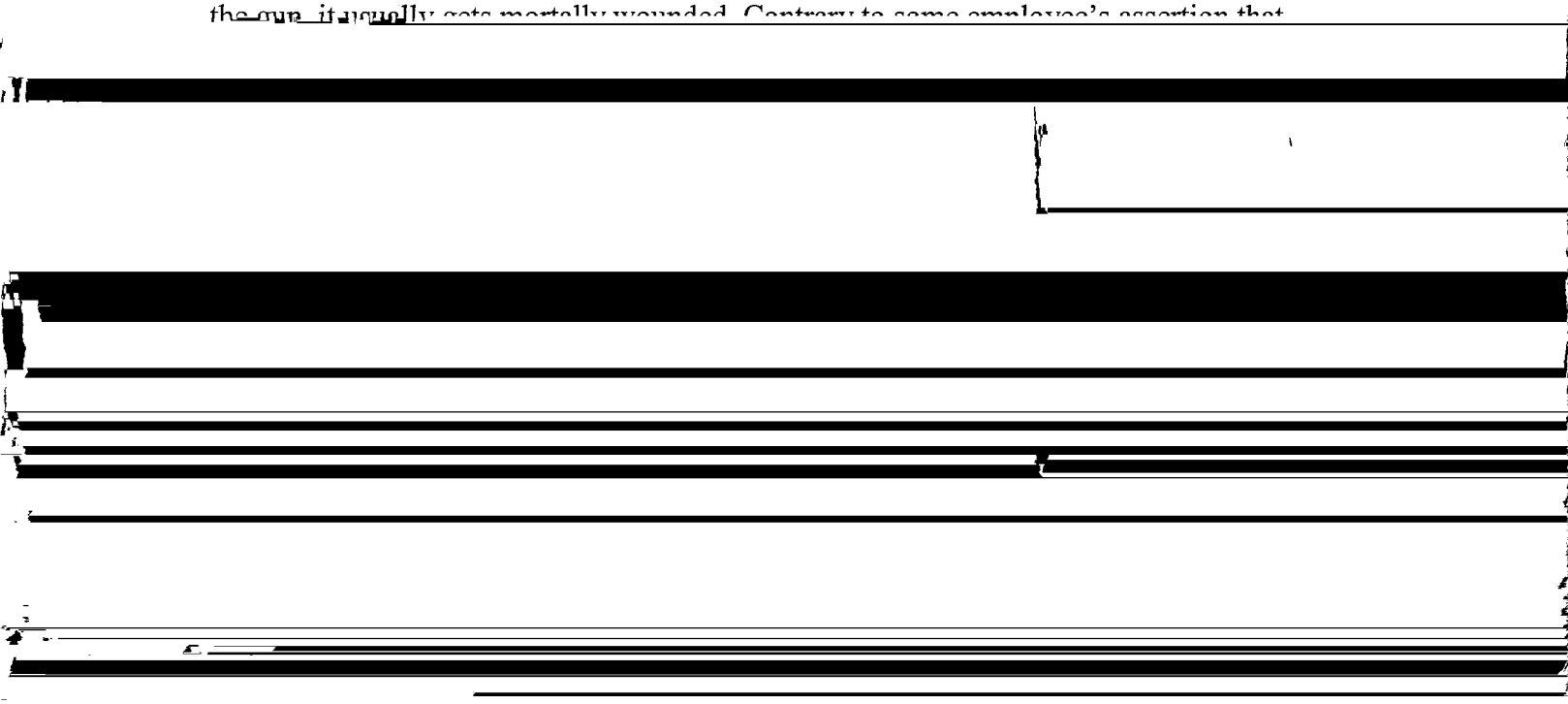
Innovation requires a different mindset than business as usual. Freedom to explore, try and fail new possibilities, intuition and fun are all new values that must be incorporated into the very mindset of any innovative enterprise. Innovation clearly involves creativity and creativity involves play, but creativity is also hard work (Woudhuysen, 2001).

To enhance innovation, the organization needs to adopt new traits such as curiosity, diligence and openness, while being aware of obstacles such as lack of time and resources to be creative, fear of change and fear of negative evaluation (Bernacki, 2001). Innovation is a not like any other business process, and much of what has worked for years as the corporate norm may need to be re-evaluated.

Managing for innovation means taking much of what we know and standing it on its head, such as hiring misfits, throwing resources at long-odds projects and getting your

happiest employees to argue (Harvard Business Review, 2002). These highly unconventional practices work because they make companies vary their thinking, see old things in new ways and force them to break from the past, whether they like it or not.

Yet, innovation remains a delicate process. When and innovate process is under the gun, it usually gets mortally wounded. Contrary to some employee's assertion that



they do their best work under stress, research has shown that creativity suffers under extreme time pressure (Amabile, Hadley and Kramer, 2002). When creativity and innovation is under the gun, perhaps the best strategy is to dodge the bullets – if you can. A more effective strategy is to make sure that enough time is allotted in the first place, if at all possible.

Solutions to pressing organization problems lie not in yesterday's thinking and behavior, but in entirely new ways of seeing, perceiving and behaving. The study of creativity and innovation inevitably leads to the desire to know and understand just how far we can develop our organizations (White, 1994):

"When, and only when, our culture becomes truly creative and open to learning will we be able to grow and thrive. Once we have become wide-eyed learners aware of the unlimited potential which openness and collaborative learning provide, will we fall in

the good doctor (Seuss) had it right all along (Geisel, 1975): "Think left and think right and think low and think high. Oh, the thinks you can think if only you try!"

Context

Context is the world around the organization. Being aware of changes economic, technological, or political environment are critical to any organization, not only for SWOT (Strengths, Weaknesses, Opportunity, Threat) analysis, but also for keeping an eye out for ideas from disparate sources that could lead to new and potentially successful products or services.

Disruptive innovations, or innovative ideas that upset the status quo, are creating the paradoxical challenge of dualism: an organization needs to continue functioning today while simultaneously planning for a potentially different tomorrow (Paap and Katz, 2004). It may even be required that a company must sacrifice a current success in order to take advantage of a new and improved technology that will make their current products obsolete sooner rather than later. Successful organizations must overcome the tyranny of success, as other organizations are constantly looking to gain the advantage.

Flexibility is critical. The concept comes to us from wisdom over the ages, and these words are as instructive today as when they were first written (Lao-Tze, 2000):

"Men are born soft and supple; dead, they are stiff and hard.

Plants are born tender and pliant; dead, they are brittle and dry.

Thus whoever is stiff and inflexible is a disciple of death.

Whoever is soft and yielding is a disciple of life.

The hard and the stiff will be broken.

The soft and supple will prevail."

Change requires the innovative organization to adapt and improve, not only because yesterday's methods no longer are sufficient, but also because today there are opportunities and methods that can create new solutions to old problems. Today's emergent corporate leaders are emphasizing technological engineering over financial engineering, product over marketing and real science over junk science (Sonnenfeld, 2004). The art of the deal is fading, while the value of the idea is rising

In yet another twist on the idea of how innovation is allowing companies to exploit new concepts that were not possible only a few years ago. With the opportunity to partner with customers as software beta testers and evaluators of potential new products, innovative companies are finding ways to strategically partner with their suppliers and customers in a way which, in reality, amounts to an innovation subsidy (Schrage, 2004). Such thinking only a few years ago was considered ridiculous at best and impossible at worst. A whole new way of thinking has evolved, and while the glamorous side of innovation may be high rewards for high risks, the pragmatic enterprise will find ways to distribute costs and risks as it seeks profitability.

Innovation is a paradoxical combination of internal and external forces and influences. Even what passes for cutting-edge today tomorrow may become obsolete and inefficient. Those who can expand their processes and their ways of thinking will be in the best position to survive in the long run, possibly even blurring the traditional lines between suppliers, organizations, and customers.

Chapter III: Methodology

Innovation is a critical aspect of survival for in today's global corporate climate. Still, such an affective discipline has, up until this point, been difficult to identify, let alone quantify. In order to find out more about the culture of innovation in Twin Cities organizations, a survey was used to query a cross-functional group of professionals to assess the current climate for innovation.

There are many well-documented survey instruments that were first considered for this assessment such as Buckingham and Coffman (1999) and KEYS (Center for Creative Leadership, 2004). The tool had to be easy to implement, be low cost and, most importantly, be an accurate assessment of organizational innovation, as opposed to overall employee satisfaction, engagement, or personal creative ability.

Subject Selection and Description

To give this study a well-distributed, heterogeneous population from among Twin Cities organizations, the subjects of the study were selected from among the membership of the American Society of Training and Development – Twin Cities Chapter (ASTD-TCC). There are three reasons for this. First is the matter of having a diversity of industries that these people represent in the Twin Cities area. Second is the availability of e-mail contact information, since the researcher is a member of this organization. Third is the implication that the subjects should have an active interest in this subject and results of the survey will be made available to all ASTD-TCC members upon its completion.

For a population of this size (six hundred and four members), a statistically significant sample size (n) would have to be approximately two hundred responses, or

about thirty percent. Knowing the response rates for surveys in general are usually quite low, the entire population will be sent an invitation to participate on November 30, 2004.

Also knowing the dismal response rates for surveys, a small incentive will be added. Any ASTD-TCC member who requests it will receive a copy of an executive summary report of the survey on January 10, 2005. Not only will this encourage people to participate, but also it may help them to encourage others in the population to participate as well in an effort to get more statistically significant response. Nowhere in either the e-mail or the Web site will specify that participation in the survey is required to receive the report, both because the researcher would like to openly disseminate the information, but also that there will be no way to know who has actually taken the survey due to anonymity safeguards.

Instrumentation

The survey instrument itself was adapted from Hattori and Wycoff (2004) with a few minor changes. To reiterate, here are the basic principles of innovation from their model that serve as the framework for the working definition of innovation as well as the structure of the survey instrument:

- Operational principles
    - Challenge
    - Customer focus
    - Creativity
    - Communication
    - Collaboration
    - Completion

- Contemplation

- Culture
  - Leadership
  - People
  - Basic values
  - Innovation values

- Context

First, the survey was administered online through a survey Web site in order to facilitate both data collection and the guarantee of anonymity. Second, the likert scale of the survey was changed from:

1 = Never True

2 = Sometimes True

3 = Frequently True

4 = True Most of the Time

5 = Always True

to a scale as follows:

1 = Definitely Agree

2 = Somewhat Agree

3 = Somewhat Disagree

4 = Definitely Disagree

The main reason for this change is to effectively force respondents to take either a positive or negative response, and to eliminate the tendency for respondents to "sit on the

fence" by choosing a median response. Also, this will allow us to generate an overall scale of generally agree vs. generally disagree as a means to see general tendencies.

The third change was the addition of one last survey question, "If you have any additional comments, questions, or suggestions about innovation, feel free to add them here." Bachmann, Elfrink and Vazzana (2000) found that in an e-mail survey, respondents are more likely to add comments than with traditional mail-based surveys.

Data Collection Procedures

A 15-question survey was administered via QuestionPro (www.questionpro.com) on November 30, 2004. A follow-up request for participation was sent on Tuesday, December 10 (exactly one week later) with a survey response deadline of 11:00 PM on Friday, December 10. The survey was administered in such a way that all responses to the actual survey e-mail would go back to the researcher's e-mail address (suydamr@uwstout.edu) in case of comment, question or concern. The final Microsoft Excel report of raw data was generated automatically and sent to the researcher on Saturday, December 11, 2004.

Data Analysis

Due to the nature of the data collected, only basic data analysis (standard deviation and variance) was done in order to pinpoint areas where there might have been either a large variance (indicating a general disagreement) or a small variance (indicating general agreement) on any specific issue.

Limitations

There are many limitations to both the data collection method and also the sample population selection. First, survey response is limited by time and by access to e-mail.

For any respondents that are on vacation or otherwise not able to answer, the time or technology constraints will definitively limit the sample size. Second, the initial survey is limited only to e-mail addresses that are provided through ASTD-TCC. Should any of these e-mail addresses be out-of-date or otherwise out of commission, that also will limit sample size. Third, it is up to the discretion of the respondent to decide if innovation is of any interest to them or has any bearing on their job at all. Finally, there is the unique challenge of those that may not respond simply because they do not feel that their responses would be valid. Such respondents might be independent contractors / consultants, students or anyone who might currently be unemployed.

Summary

Considering the size of the sample population and the time frame, a response rate of twenty two percent is above average for an e-mail survey (Sheehan and McMillan, 1999). Using mean scores and standard deviation has allowed the interpretation of the data for the discovery of broad trends or issues as they relate to the survey questions.

Chapter IV: Results

The purpose of this field problem was to find and implement an effective organizational innovation assessment tool to use with Twin Cities companies as represented by ASTD-TCC. A suitable assessment survey was found (Hattori and Wycoff, 2004), modified, and adapted for a Web-based survey company (www.questionpro.com). From an original survey population of six hundred and four possible e-mail addresses, the final results tabulated one hundred and thirty one responses, which gives a response rate of twenty two percent. The raw data and analysis of each item in the survey follows.

Item Analysis

The data from each survey question was downloaded directly from www.questionpro.com. From this data, exported directly into Microsoft Excel, charts were generated in addition to response data in order to truly see if there were any strong trends for if any one particular question generated a more differentiated response than any other.

Table 1: Results ordered by statement number

Statement Number	Definitely Agree %	Somewhat Agree %	Somewhat Disagree %	Definitely Disagree %	Mean	Standard Deviation
1	45.8	42.75	10.69	0.76	1.66	0.7
2	31.3	24.43	21.37	22.9	2.36	1.15
3	33.85	51.54	13.85	0.77	1.82	0.69
4	47.69	44.62	7.69	0	1.6	0.63
5	49.23	40.77	7.69	2.31	1.63	0.73
6	9.16	32.82	33.59	24.43	2.73	0.93
7	30	46.15	20	3.85	1.98	0.81
8	29.01	48.09	16.03	6.97	2.01	0.85
9	17.56	54.2	22.9	5.34	2.16	0.77
10	3.82	28.24	28.24	39.69	3.04	0.91
11	12.31	46.15	26.92	14.62	2.44	0.89
12	17.56	46.56	28.24	7.63	2.26	0.84
13	41.98	38.93	14.5	4.58	1.82	0.85
14	40.77	45.38	12.31	1.54	1.75	0.73

This table shows results on a question-by-question basis. A copy of the original survey can be found in appendix A.

Table 2: Results ordered by average (mean) score

Statement Number	Definitely Agree %	Somewhat Agree %	Somewhat Disagree %	Definitely Disagree %	Mean	Standard Deviation
4	47.69	44.62	7.69	0	1.6	0.63
5	49.23	40.77	7.69	2.31	1.63	0.73
1	45.8	42.75	10.69	0.76	1.66	0.7
14	40.77	45.38	12.31	1.54	1.75	0.73
3	33.85	51.54	13.85	0.77	1.82	0.69
13	41.98	38.93	14.5	4.58	1.82	0.85
7	30	46.15	20	3.85	1.98	0.81
8	29.01	48.09	16.03	6.97	2.01	0.85
9	17.56	54.2	22.9	5.34	2.16	0.77
12	17.56	46.56	28.24	7.63	2.26	0.84
2	31.3	24.43	21.37	22.9	2.36	1.15
11	12.31	46.15	26.92	14.62	2.44	0.89
6	9.16	32.82	33.59	24.43	2.73	0.93
10	3.82	28.24	28.24	39.69	3.04	0.91

Table 2 was generated in order to find the answer to the question: which statements were the respondents most likely to agree with? Which statements were they least likely to agree with? If an average score (a perfect distribution among all scores), meaning that the respondents were perfectly neutral is 2.5, were the scores generally more likely to agree of disagree with the statement?

This table shows results by average score. The lower the average score, the more likely the respondents were to agree with the statement. The higher the average score, the more likely the participants were to disagree with the statement.

The implications of this ranking are that the population was most likely to agree with statement four and least likely to agree with statement ten. Statements six and ten were the only ones to have a generally negative (did not agree with) response. In all other statements the population, to a greater or lesser extent, agreed with the statement.

Table 3: Results ordered by standard deviation

Statement Number	Definitely Agree %	Somewhat Agree %	Somewhat Disagree %	Definitely Disagree %	Mean	Standard Deviation
4	47.69	44.62	7.69	0	1.6	0.63
3	33.85	51.54	13.85	0.77	1.82	0.69
1	45.8	42.75	10.69	0.76	1.66	0.7
5	49.23	40.77	7.69	2.31	1.63	0.73
14	40.77	45.38	12.31	1.54	1.75	0.73
9	17.56	54.2	22.9	5.34	2.16	0.77
7	30	46.15	20	3.85	1.98	0.81
12	17.56	46.56	28.24	7.63	2.26	0.84
8	29.01	48.09	16.03	6.97	2.01	0.85
13	41.98	38.93	14.5	4.58	1.82	0.85
11	12.31	46.15	26.92	14.62	2.44	0.89
10	3.82	28.24	28.24	39.69	3.04	0.91
6	9.16	32.82	33.59	24.43	2.73	0.93
2	31.3	24.43	21.37	22.9	2.36	1.15

This table shows us the general tendency for all respondents to have a similar generally positive or negative opinion of the statement, regardless of whether they agreed with the statement or not. The implications are that the lower the standard deviation, the higher the likelihood of consensus (again, generally positively or negatively) on any particular issue. Another way of looking at is was the higher the standard deviation, the more evenly distributed the responses were among the four choices.

Respondents were most likely to agree with each other on their response to statements four, three and one, while they were least likely to agree on statement two.

In an effort to link the results of the survey with the framework used in chapter 3, each question is listed along with the innovation principle it is related to. On a question-by-question basis, here now are some indicators and implications.

Statement 1: Our organization has exciting and interesting challenges that energize us.

Innovation principle: challenge

Average (mean) score: 1.66 (generally agree)

Standard deviation: 0.7 (third lowest)

This statement basically asks: are you motivated by your work? Do you feel that you're challenged and energized by what you're doing? It's inspiring that most people (almost 89%) generally agreed although one definitely did not. The main premise here is that if an employee is not motivated to do what they do, there is no way that they will be doing their best work. This may be for a number of reasons, of course, but finding the job that matches the employees' skills and interests is usually one the easiest if not best ways of helping them to be more motivated at work.

Statement 2: My work group understands the importance of innovation to our organization.

Innovation principle: innovation values

Average (mean) score: 2.36 (generally agree)

Standard deviation: 1.15 (highest)

This statement brought some interesting responses. Not only did the population score almost neutral (only statement eleven was closer to neutral), but it also had the

highest standard deviation of all questions, indicating that there was a great disparity of opinion on the subject.

From the data collected (as well as some additional input from statement fifteen which asked for additional input), it could be concluded that most organizations really don't understand the importance of innovation to their organization. This could be either one of two forms.

First, it is possible that people don't know how their organization can apply innovation to their business. It's not that respondents don't use their own creativity at work (see statement 5), but that the process of managing innovation is not present within their organizations (see statement 6).

Second, it could be that people do not know how to categorize innovation. Indeed, one comment came back asking, basically, what comprises innovation? There seems to be no lack of understanding of creativity, but there does seem to be a real lack of understanding of the concept of innovation as a business concept.

Statement 3: We stay abreast of changes in technology, our industry, and the world around us.

Innovation principle: context

Average (mean) score: 1.82 (generally agree)

Standard deviation: 0.69 (second lowest)

This statement is asking, are you aware of the context of your work as it applies to your industry in particular and the world in general? This statement received the second lowest mean score, meaning that respondent generally agreed with the statement. This

statement also had the second lowest standard deviation, meaning that there was a pretty good general consensus of opinion on the subject.

The response here was hardly surprising, but encouraging nonetheless. If people are staying abreast of changes as they affect their business, they are more likely to be aware of trends and technologies that they might use to their advantage in their day-to-day jobs. It is important, if not critical, that employees understand how the outside world can affect their work. It is more important, however, that they be able to impact their jobs and their organizations based upon this information. After all, many of these employees actually work with the customers every day and can be a critical source of real business intelligence.

Statement 4: People here know who our customers are and understand how their work helps create customer value.

Innovation principle: customer focus

Average (mean) score: 1.6 (lowest – most likely to agree)

Standard deviation: 0.63 (lowest)

No doubt about it, people know who their customers are and how their work creates customer value. With so many companies developing programs to listen to the voice of the customer and get close to the customer in order to provide better products and services, this is a clear indication that employees know and understand just how important this is.

Notice that the specification was not made as to whether or not the customer is internal or external. While there is no way to know if the responses were influenced by

this possibility, the inference is that the customer is external to the company. In future studies it might be interesting to see if there would be a difference here.

Statement 5: Creative thinking and innovation are important parts of my everyday job.

Innovation principle: creativity

Average (mean) score: 1.63 (second lowest mean score - generally agree)

Standard deviation: 0.73

This one was a bit surprising but again was encouraging. Fully ninety percent of all respondents agreed with the statement that creativity and innovation are important parts of their everyday job. This directly opposes statement two about how the employees work group understands the importance of innovation to their organization. Perhaps the key word here is understands. It would seem that employees understand the importance of creativity and innovation, while their organizations my not be adept at managing the innovation process. That's the bad news. The good news is that the process can be managed. The reality is that not many companies are doing it.

Statement 6: We have an effective system for capturing, cataloging, and acknowledging new ideas and suggestions.

Innovation principle: creativity

Average (mean) score: 2.73 (second highest mean score - generally disagree)

Standard deviation: 0.93 (second highest)

From the literature review, it was expected that this might be one of the areas where people were most likely to either disagree with the statement or have varying

opinions, and the results showed both. Although this is arguably a nebulous question, still the point remains that, generally, most companies do not have a system in place for capturing new ideas and suggestions.

This statement really covers three basic questions: do you have a system in place for capturing ideas, do you have a way of cataloging ideas and do you acknowledge new ideas and suggestions? Knowledge and ideas need to come in from all over the organization, and then be somehow catalogued and then distributed to anyone who can possibly use them for their advantage.

The interesting aspect of this statement is that statement seven has respondents generally agreeing that their organizations are openly sharing information, so it is not a matter that the communication is not there. The implication may be that ideas and input are simply not being collected in their own right. Creativity, communication and collaboration together make up a powerful strategic advantage for any organization that can harness these powers.

Statement 7: Our organization openly shares information with employees, customers, and other stakeholders.

Innovation principle: communication

Average (mean) score: 1.98 (generally agree)

Standard deviation: 0.81

Both the mean score and the standard deviation of this statement fell pretty much in the center of the results spectrum. Still, fully seventy six percent of respondents agreed

with the statement. This implies that information, in general, is openly shared among all stakeholders.

In any organization, communication is critical to success. If the systems are in place and people are actively sharing their thoughts and ideas, everyone benefits. Perhaps, as was mentioned in the discussion of statement 6, this openness of communication can help to share more than just operational information across the organization.

Statement 8: People here have opportunities to work with and learn from people in other departments or functional areas.

Innovation principle: collaboration

Average (mean) score: 2.01 (generally agree)

Standard deviation: 0.85

Collaboration is a critical aspect of any organization success. The synergy of a group can develop to a point where the whole is many times greater than the sum of the parts. As much as respondents generally agreed here, the standard deviation was above average for the entire survey, which leads to the question: just how collaborative are these organizations? With the largest segment being somewhat agree (forty eight percent), there is collaboration but this in an area that probably could be improved. The development of cross-functional teams or job rotation programs could help break down the traditional barriers between departments and allow new ideas and partnerships to grow as a result.

Statement 9: People here often work on interesting new projects and have developed good project management skills

Innovation principle: completion

Average (mean) score: 2.16 (generally agree)

Standard deviation: 0.77

The largest segment here again was somewhat agree, and the overall average does agree with the statement. Project management skills are important to all employees are encouraged to improve these skills as they can. Maybe it would have been better to ask two separate questions, as it is entirely possible that people have great project management skills but work on boring projects. How would a typical respondent answer then?

Statement 10: We have a defined process of innovation that is widely used throughout the organization.

Innovation principle: completion

Average (mean) score: 3.04 (highest score - generally disagree)

Standard deviation: 0.91 (third highest)

This question earned the highest overall mean score, meaning that respondents were most likely to disagree with this statement. Again, this goes back to the challenge of how to define innovation as a process and how to use it. It is difficult, if not impossible to tell if the problem here is a lack of an understanding of what innovation is or a lack of actually putting the concept into practice.

Statement 11: We regularly review projects, both successful and unsuccessful, to identify lessons learned.

Innovation principle: contemplation

Average (mean) score: 2.44 (third highest score, generally agree)

Standard deviation: 0.89

This overall score was the closest to neutral of any statement in the survey, yet the standard deviation was the fourth highest. The basic issue here is, are these organizations taking advantage of lesions learned? In addition, are they implementing those lessons learned? The largest section by far was somewhat agree with forty-six percent. Although most respondents generally agree, most of those that agree do not exactly agree wholeheartedly. Perhaps more attention should be paid to taking the time to review such projects as the input could directly improve future project effectiveness.

Statement 12: Our leadership provides the encouragement, infrastructure, resources, and support that enables innovation to happen here.

Innovation principle: leadership

Average (mean) score: 2.26 (generally agree)

Standard deviation: 0.84

As leadership goes, so often goes the organization. Leaders provide vision, infrastructure and support that help the organization to move forward toward its goals. Once again, the general feedback is that yes, the leaders provide encouragement and resources but the enthusiasm for innovation is a bit lacking. Again, perhaps it is the lack

of general understanding of what innovation is and what can be done to improve it as an organization strategy that needs to be improved.

Statement 13: People here have many opportunities to learn and grow.

Innovation principle: people

Average (mean) score: 1.82 (generally agree)

Standard deviation: 0.85

If employees do not have the opportunity to learn and grow, the organization is facing a significant roadblock to their success. Fully eighty percent of the respondents agreed with this statement, which indicates that the opportunities do exist. The largest segment, with almost forty two percent was definitely agree, and again this is a good indication that people can learn and grow with their organizations.

Statement 14: People here trust and respect each other and generally enjoy working together.

Innovation principle: basic values

Average (mean) score: 1.75 (fourth lowest mean score - generally agree)

Standard deviation: 0.73 (fourth lowest)

This is a good indicator of the overall general health of the organizational culture among the respondents. Mutual respect and trust among people working together is critical for the success of any enterprise. Fully forty percent answered definitely agree and that is a very good sign indeed.

Chapter V: Discussion

The purpose of this field problem was to find and implement an effective organizational innovation assessment tool for companies within the Twin Cities. An acceptable assessment survey was found (Hattori and Wycoff, 2004), modified and implemented using a Web-based survey tool.

This tool generated responses to fourteen questions multiple-choice questions, as well as one open ended question that simply asked for comments.

Limitations

The basic limitations of the study are the sample population (limited to ASTD-TCC members), time constraints (November 30 to December 10, 2004) and, of course, budgetary constraints. A statistically valid sample population would have been approximately two hundred, but due to the historically low response rates of surveys in general and e-mail surveys in particular, the entire population (six hundred and four) was used.

Conclusions

Organizational innovation continues to get a lot of attention, but is it making any difference? As expected, there were several questions to which there was a great deal of agreement, and somewhere there was some disagreement.

In general, it can be seen from the results as well as the comments that creativity and innovation are important to most respondents' (ninety percent) everyday jobs. However, it can also be seen that there is generally no systematic process to manage innovation among these respondents' organizations and there even is some confusion (still) about what innovation is and how it can be managed. Not surprisingly, the review

of literature also points this out; many organizations are still evolving from bureaucratic, command-and-control management methods.

A brief mention should be made here about the nature of the few comments (statement 15) that were received. If an overall assessment can be made from these comments alone, three significant themes stand out.

First, it has been mentioned by several respondents that innovation may exist in pockets of an organization, but generally there is no over-arching strategy for the definition or management of the innovation process. There also seems to be some confusion as to what innovation actually is and how it is measured: it is new ideas or successful new products? And, since innovation is such a subjective term, it is difficult for respondents to formulate an answer depending upon their own opinion of the term.

Second, innovation generally comes from the bottom up (the best ideas tend to come right from people who work with the customers or products every day), while it is managed from the top down. This was a very important insight from more than one respondent and illustrates the need for communication and collaboration in the successful innovation initiative.

Finally, there were several references to trust or the lack thereof. The culture of fear (one respondent actually used this term) is still prevalent in some organizations and is killing organizational performance in general and innovation in particular. If employees are not trustful of their leaders and engaged in their work, this will create a mood of basic survival versus the desire for higher performance. Innovation is a high-level process that depends upon the foundation of a high-performance organization to begin withn.

Organizational culture is difficult to change in the best of times, but the global economy has made it imperative that today's successful enterprise must be aware of changes as they arise, be able to take advantage of them, and be able to adjust accordingly. Such is the stock in trade of innovation itself.

Recommendations

Innovation is a complex, people-centric process that is difficult to define, and more difficult to measure. In this field problem, the attempt was made to put forth a basic framework of innovation (Hattori and Wycoff, 2004) and use that as the basis of the investigation. From the review of literature and the survey results, five main ideas have sprung forth time and again:

- Organizational innovation is a manageable, measurable process. As such, it can be improved upon and initiatives to improve innovation can be tied to and measured by concrete business goals.
- Innovation is a skill that can be learned by everyone in the organization. Everyone has the ability to be more creative and innovative, and there are a number of ways to help people to do this.
- There is literally no product or service organization that cannot be improved by the systematic implementation of innovation.
- The culture of the organization is critical for innovational success. Beyond the high-performance organization, innovation builds upon this foundation to achieve a higher level of effectiveness, productivity, and employee satisfaction.
- Innovation is everyone's business. From the CEO with over thirty years with the company to the third-shift machine operator right out of high school, everyone

can contribute great ideas. The challenge is to collect those ideas and then act upon them.

It is important to reiterate here that innovation is a complex process that requires communication, collaboration, trust and respect among all employees to begin with. These are aspects of any high-performance organization and need to be present in any innovative venture. The culture of fear must be eliminated and replaced with an atmosphere of trust and respect in order for any organizational system to possibly achieve high performance.

It is easy for employees to say that their organization may not permit them to exercise their full creative abilities in an effort to improve organizational performance. Although this may be true on the surface, in reality creativity comes from within and innovation comes from creativity. Anyone can learn to enhance their own creativity and come up with new and better ideas. Still, the organizational culture must be such that it encourages and accepts ideas and suggestions, as their employees will always be their most important assets.

Finally, additional research should be done on the culture of innovation. With so many indicators in both the review of literature and the survey data itself showing how much of an impact organizational culture has on innovation, more work should be done to find out how to diagnose and change organizational culture for the benefit of all. All human beings are born with incredible creative talents. If an organization can develop a culture that nurtures and promotes that individual creativity into organizational innovation, they will have a competitive advantage that is no other company from anywhere in the world could ever hope to match.

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Appendix A: Survey Questions

Innovation Survey

This survey can help you and your organization understand where to start in efforts to increase your organization's innovational capabilities.

Instructions: Using your recent experience (last twelve months) with your organization as the basis, please rate the following statements according to the following scale:

1 – Definitely disagree
2 – Somewhat disagree
3 – Somewhat agree
4 – Definitely agree

	Statement	Rating
1.	Our organization has exciting and interesting challenges that energize us.	1 2 3 4
2.	My work group understands the importance of innovation to our organization.	1 2 3 4
3.	We stay abreast of changes in technology, our industry, and the world around us.	1 2 3 4
4.	People here know who our customers are and understand how their work helps create customer value.	1 2 3 4
5.	Creative thinking and innovation are important parts of my everyday job.	1 2 3 4
6.	We have an effective system for capturing, cataloging, and acknowledging new ideas and suggestions.	1 2 3 4
7.	Our organization openly shares information with employees, customers, and other stakeholders.	1 2 3 4
8.	People here have opportunities to work with and learn from people in other departments or functional areas.	1 2 3 4
9.	People here often work on interesting new projects and have developed good project management skills	1 2 3 4

10.	We have a defined process of innovation that is widely used throughout the organization.	1 2 3 4
11.	We regularly review projects, both successful and unsuccessful, to identify lessons learned.	1 2 3 4
12.	Our leadership provides the encouragement, infrastructure, resources, and support that enables innovation to happen here.	1 2 3 4
13.	People here have many opportunities to learn and grow.	1 2 3 4
14.	People here trust and respect each other and generally enjoy working together.	1 2 3 4

Please use the following space for any additional comments that you would like to make:

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Appendix B: Initial Survey E-mail, November 30, 2004

Hello,

As a fellow ASTD-TCC member and UW-Stout grad student, I am asking for your participation in an online survey about the state of innovation in your organization. I have been an avid student of organizational creativity and innovation for several years now, and my field problem (thesis) is entitled 'Implementation of an Organizational Innovation Assessment Survey'.

As you well know, innovation is a hot topic in business today; some would say it's the only real competitive advantage an organization has left. In order to find out more of what innovation is and how to promote it within organizations, I have put together a brief survey in order to find out more about the state of innovation within organizations in the Twin Cities area.

The survey is only 15 questions and should not take longer than 5 minutes to complete.

By using an independent, professional survey administration service, there will be no way that any survey participant can be identified by name or company represented. All information is strictly anonymous and totally confidential.

Your participation in this survey is strictly voluntary. You may choose not to participate without any adverse consequences to you. However, should you choose to participate and then later with to withdraw from the study, there is no way to identify your anonymous document after it has been submitted to the investigator.

This study has been reviewed and approved by the University of Wisconsin-Stout's Institutional Review Board (IRB). The IRB has determined that this study meets the ethical obligations required by federal law and University policies. If you have questions, concerns, or reports regarding your rights as a research subject, please contact the IRB Administrator

As a small token of my appreciation, I will send to anyone who requests it a copy of the survey results (paper or electronic, your choice) as I feel that this information is important to all of us and should be distributed freely. These results will be available on 10Jan2005.

Should you have any further comments or questions, please feel free to contact me at:

suydamr@uwstout.edu or 651-245-1383

Thank you for your time!

Rick Suydam

Appendix C: Reminder E-mail, December 7, 2004

Hello,

If you have already responded to our survey - you can go ahead and delete this e-mail and we THANK YOU for your help!

If you have not, we are still collecting responses until 11:00 PM on Friday, December 10 2004. Every response counts!

As a fellow ASTD-TCC member and UW-Stout grad student, I am asking for your participation in an online survey about the state of innovation in your organization. I have been an avid student of organizational creativity and innovation for several years now, and my field problem (thesis) is entitled 'Implementation of an Organizational Innovation Assessment Survey'.

As you well know, innovation is a hot topic in business today; some would say it's the only real competitive advantage an organization has left. In order to find out more of what innovation is and how to promote it within organizations, I have put together a brief survey in order to find out more about the state of innovation within organizations in the Twin Cities area.

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you have questions, concerns, or reports regarding your rights as a research subject, please contact the IRB Administrator

As a small token of my appreciation, I will send to anyone who requests it a copy of the survey results (paper or electronic, your choice) as I feel that this information is important to all of us and should be distributed freely. These results will be available on 10Jan2005.

Appendix D: Survey Start-up Page

Hello:

You have been invited to participate in our survey "Twin Cities Innovation". In this survey, approximately six hundred people from ASTD-TCC will be asked to complete a survey that asks questions about innovation within their organizations. It will take approximately five minutes to complete the questionnaire.

Your participation in this study is completely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can withdraw from the survey at any point. It is very important for us to learn your opinions.

Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential. If you have questions at any time about the survey or the procedures, you may contact Rick Suydam at 651-245-1383 or by email at suydamr@uwstout.edu.

Thank you very much for your time and support. Please start with the survey now by clicking on the **Continue** button below.